1964 Annual Report

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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1964

Annual Report

U.S. Department of Health, Education, and Welfare

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

As of June 30, 1964

ANTHONY J. CELEBREZZE, *Secretary*

IVAN A. NESTINGEN, *Under Secretary*

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PHILIP H. DES MARAIS	*Deputy Assistant Secretary.*
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ROBERT A. KEVAN	*Deputy Assistant Secretary for International Affairs.*
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JAMES F. KELLY	*Deputy Administrative Assistant Secretary and Comptroller.*[3]
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DEAN SNYDER	*Defense Coordinator.*

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VICTOR CHRISTGAU	*Executive Director.*
J. DEANE GANNON	*Director, Bureau of Federal Credit Unions.*
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BERNARD RUSSELL	*Director, Office of Juvenile Delinquency and Youth Development.*
JOHN F. THOMAS	*Director, Cuban Refugee Program Staff.*
KATHERINE B. OETTINGER	*Chief, Children's Bureau.*
FRED H. STEININGER	*Director, Bureau of Family Services.*

[1] Position filled by Shelton B. Granger, Jan. 10, 1965.
[2] Title changed to Assistant Secretary for Administration, July 5, 1964.
[3] Title changed to Deputy Assistant Secretary for Administration and Comptroller, July 5, 1964.
[4] Position filled by Edward W. Dempsey, Sept. 28, 1964.

PUBLIC HEALTH SERVICE

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John L. Harvey	*Deputy Commissioner of Food and Drugs.*

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Patrick J. Doyle	*Deputy Commissioner of Vocational Rehabilitation.*

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Dale C. Cameron	*Superintendent.*
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Leonard M. Elstad	*President, Gallaudet College.*
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Letter of Transmittal

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., December 1, 1964.

DEAR MR. PRESIDENT: I have the honor to submit herewith the annual report of the Department of Health, Education, and Welfare for the fiscal year ending June 30, 1964.

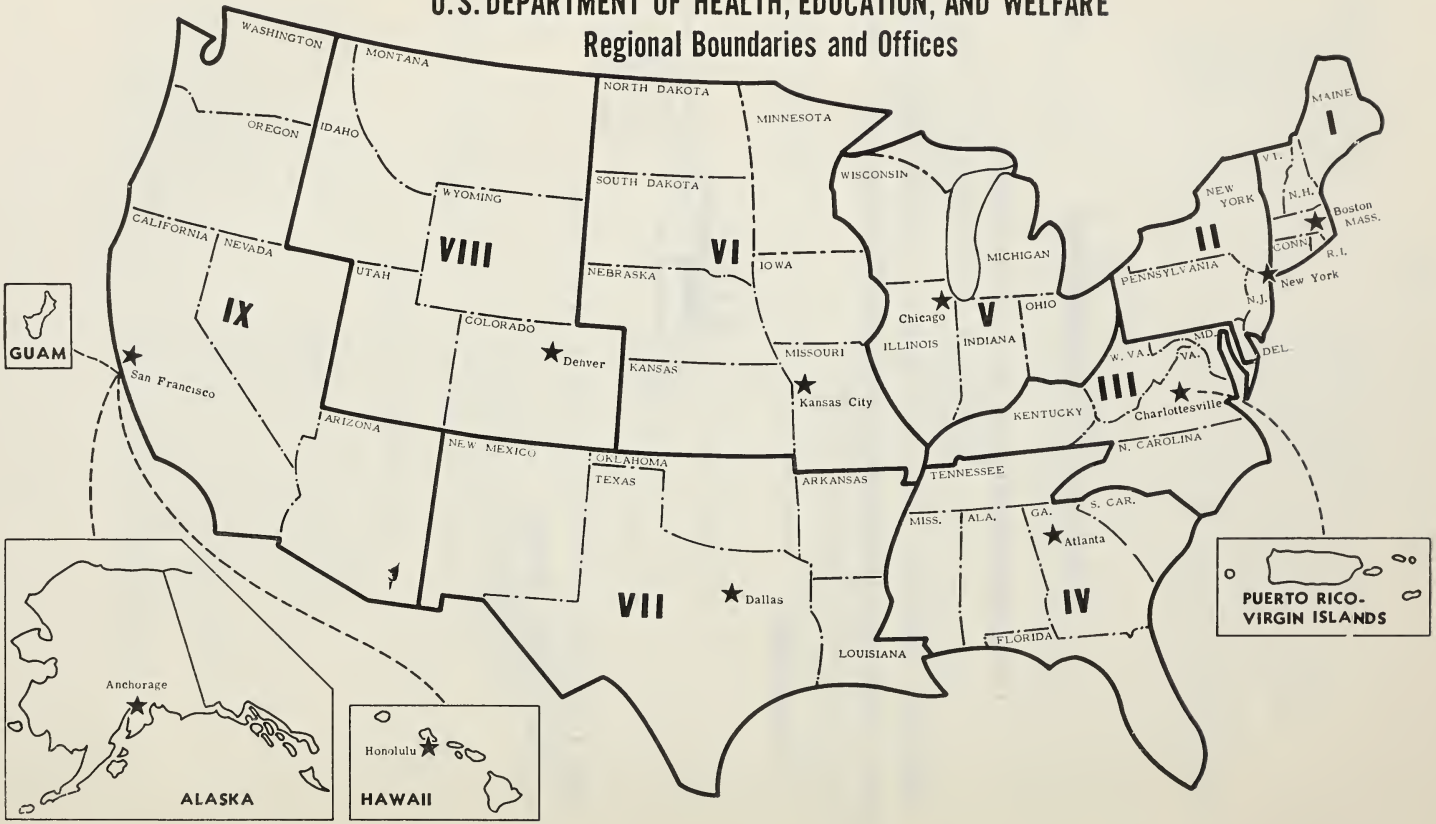
Respectfully,



Secretary.

THE PRESIDENT,
THE WHITE HOUSE,
Washington, D.C.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Regional Boundaries and Offices



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The Secretary's Report

From the start, the people of the United States have constantly adhered to two guiding ideas—the greatest possible individual freedom for each citizen and deep compassion for every fellow citizen in need.

These principles are clearly reflected in the work of the Department of Health, Education, and Welfare—the Federal agency with the major responsibility for carrying out the national responsibilities with respect to health, education, and economic security.

In these areas, as in other aspects of our national life, nothing is static. As some problems are solved, others emerge. Needs are constantly changing, and new means for meeting those needs are constantly being developed. Our society has been growing and changing at an unprecedented rate. So have programs to safeguard health, to strengthen education, to improve the economic well-being of the American people.

Obligations of the Department of Health, Education, and Welfare totaled $5.6 billion in fiscal year 1964. This was approximately 6 percent of the total Federal budget and just a little over 1 percent of the Nation's gross national product for that year.

Most of the Department's funds—90 percent, in fact—were channeled to State and local governments, institutions, and individuals for use in improving the health, education, and well-being of the American people. An additional $563 million was spent directly by the Department for various health services and for medical and social research.

At the same time, efficiency in the administration of these programs continued to increase, with administrative costs of the Department for fiscal year 1964 being held to $37 million, or less than 1 percent of the total HEW budget.

The Department's work, however, cannot be evaluated in terms of money alone. The value of an education, the saving of a life, greater hope for the future—these are benefits that dollars alone cannot measure.

As a result of programs administered by the Department of Health, Education, and Welfare in fiscal year 1964:

—More hospitals were built.

—Medical research against mankind's enemies of illness and disease was advanced.

—Talented and needy students were enabled to begin or advance their college education.

—Needed classrooms and other facilities were added to our institutions of higher education.

—Disabled or handicapped men and women were enabled to go to work through vocational rehabilitation.

—The battle to control pollution of our streams and rivers was intensified.

—Economic security and well-being of the needy aged, disabled, and young among us were improved.

—Additional steps to safeguard the purity, safety, and effectiveness of drugs were taken.

In these, and in a hundred other ways, the Department reinvested 7 percent of the Federal tax dollar in this country and its people—improving the quality of American life.

Moreover, in June, the last month of fiscal year 1964, the Department was paying 19 million people monthly social security benefits totaling $1.25 billion from the trust fund programs of old-age, survivors, and disability insurance. The recipients of these benefits—benefits earned and paid for by American workers—are the retired, the disabled, and the widows and orphans. The administration costs of the Federal social insurance program were 2.3 percent in 1964.

Thus, it is with pride that the Department can report that many of the ill in our land are now receiving help and treatment that they might not have received, that medical research uncovered knowledge that otherwise would await discovery, that much human misery was prevented, that the knowledge of the American people was increased, and that our land and our environment are the better—because of the Department's work and activities in fiscal year 1964.

This is not to say that misery does not still exist—it does, too often and among too many Americans. This is not to say that all our people live in the best of possible health—they don't. This is not to say that the power of education is available to all our people—it isn't.

So as Americans rightly reflect with pride on that which has been accomplished, so must they weigh that which remains undone but which must be done if we are to realize the full promise of America.

President Johnson has pledged the Nation's efforts toward that goal. He has said we are a people with the energy, the resources, and the will to create for ourselves a great society and that, together, we can, in our time, achieve such a goal.

In the following pages, we have detailed the progress made in the past year and the problems we face in the present one. In essence, we are talking about opportunity:

—The opportunity for all Americans to grow, through education, to the full extent of their talents and desires.

—The opportunity for all Americans to enjoy the best possible health and to live in an environment that contributes to, rather than lessens, good health.

—The opportunity for all Americans to achieve a full measure of well-being throughout their lives, from childhood through advanced age.

Most Americans, at most times, have these opportunities and use them. But in a great society, most is not enough. Opportunity must be available to all Americans at all stages of their lives.

To achieve such greatness takes effort, time, money, dedication, and interest on the part of every citizen, every community, every State, and the National Government. That we are willing to make this necessary investment in our future is evident from the progress of the past year and the eagerness with which we are moving to meet our unmet needs in the fields of health, education, and welfare.

Table 1.—*Grants to States: Total grants under all Department of Health, Education, and Welfare programs, fiscal year 1964*

[On checks-issued basis]

States	Total	Welfare Administration	Public Health Service [1]	Office of Education	Vocational Rehabilitation Administration	American Printing House for the Blind [2]
Total	$3,981,570,275	$3,028,015,601	$394,874,768	$470,362,439	$87,573,467	$744,000
Alabama	116,719,135	90,440,849	13,288,051	9,202,096	3,774,487	13,652
Alaska	17,629,245	3,317,787	1,268,175	12,855,044	188,153	86
Arizona	34,483,704	21,411,530	2,770,160	9,569,397	726,564	6,053
Arkansas	63,283,782	48,987,442	6,811,691	4,468,784	3,008,953	6,912
California	484,303,908	396,393,086	20,929,711	62,495,390	4,413,553	72,168
Colorado	63,328,600	46,577,870	4,690,917	10,768,133	1,283,738	7,942
Connecticut	41,423,759	33,685,080	2,932,941	4,298,093	490,988	16,657
Delaware	7,727,364	4,154,668	1,544,424	1,836,844	189,582	1,846
District of Columbia	14,823,938	10,908,010	2,108,842	1,163,496	641,443	2,147
Florida	106,789,551	77,117,437	10,925,333	15,649,735	3,075,280	21,766
Georgia	108,927,329	81,738,650	10,120,308	11,695,643	5,353,752	18,976
Hawaii	16,954,998	6,909,945	2,953,814	6,629,082	458,894	3,263
Idaho	15,671,702	10,010,618	1,899,205	3,489,106	271,485	1,288
Illinois	170,157,718	141,410,991	13,770,260	11,948,696	2,996,388	31,383
Indiana	44,636,336	30,971,611	7,626,601	5,257,670	764,870	15,584
Iowa	47,508,459	36,386,150	5,282,686	4,581,056	1,249,079	9,488
Kansas	45,018,522	30,513,034	5,340,987	8,423,651	728,185	12,665
Kentucky	81,759,298	65,770,011	9,720,424	4,811,088	1,449,275	8,500
Louisiana	155,728,653	138,402,487	12,215,064	3,067,781	2,029,969	13,352
Maine	26,665,742	17,793,343	4,911,939	3,588,278	369,091	3,091
Maryland	58,004,212	31,682,106	5,944,381	19,349,117	1,011,049	17,559
Massachusetts	129,849,860	105,693,631	10,649,870	11,826,573	1,651,365	28,421
Michigan	113,581,307	86,850,493	16,530,513	8,264,436	1,905,427	30,438
Minnesota	61,857,166	48,310,583	7,988,222	3,927,526	1,617,355	13,480
Mississippi	61,187,303	49,160,958	6,582,648	3,849,548	1,586,593	7,556
Missouri	123,468,147	104,926,268	9,761,036	7,355,898	1,412,710	12,235
Montana	13,390,605	7,022,457	1,903,836	4,054,827	407,296	2,189
Nebraska	26,548,399	16,618,347	3,949,277	5,474,871	501,353	4,551
Nevada	8,925,252	3,744,093	1,132,684	3,895,686	151,759	1,030
New Hampshire	10,874,968	5,509,880	2,789,812	2,429,855	142,974	2,447
New Jersey	73,013,271	50,630,843	9,674,133	10,842,345	1,834,567	31,383
New Mexico	31,094,381	20,705,590	2,722,446	7,255,171	406,022	5,152
New York	299,695,556	253,895,071	22,577,778	17,282,565	5,869,949	70,193
North Carolina	94,846,041	66,446,433	13,712,012	10,548,022	4,116,863	22,711
North Dakota	16,506,919	10,262,651	2,670,199	3,141,284	431,239	1,546
Ohio	142,589,876	113,379,391	12,147,314	15,047,194	1,981,503	34,474
Oklahoma	120,487,140	99,803,913	7,476,715	11,392,718	1,808,342	5,452
Oregon	33,040,803	24,157,131	4,575,886	3,281,893	1,015,375	10,518
Pennsylvania	193,249,212	146,176,922	26,934,909	12,572,346	7,512,058	52,977
Rhode Island	22,177,738	13,327,808	4,849,522	3,239,545	756,913	3,950
South Carolina	44,695,920	28,093,907	6,880,254	7,329,122	2,383,879	8,758
South Dakota	17,435,888	9,674,133	2,168,171	5,075,376	515,375	2,833
Tennessee	67,581,733	50,804,229	7,852,258	6,656,878	2,255,145	13,223
Texas	222,602,230	176,291,219	18,873,860	24,366,496	3,040,947	29,708
Utah	23,600,744	14,454,687	2,529,722	6,142,686	469,914	3,735
Vermont	10,129,418	6,449,245	2,527,168	823,655	328,577	773
Virginia	62,164,049	29,201,153	8,019,203	22,891,483	2,033,792	18,418
Washington	78,019,578	59,469,534	6,011,657	11,291,733	1,233,174	13,480
West Virginia	57,372,566	44,374,958	8,341,848	2,299,249	2,345,649	10,862
Wisconsin	53,414,423	39,132,965	8,571,304	3,871,469	1,826,450	12,235
Wyoming	5,791,124	3,433,995	597,901	1,576,292	181,648	1,288
Canal Zone	43					43
Guam	762,635	288,318	112,466	312,890	48,961	
Puerto Rico	24,433,123	14,432,345	6,523,671	2,193,185	1,280,359	3,563
Virgin Islands	1,094,122	709,745	180,559	158,662	45,156	
Undistributed	14,530,817			14,530,817		
American Samoa	11,963			11,963		

[1] Excludes $250,874 paid to water pollution interstate agencies.
[2] Includes permanent annual appropriation of $10,000.

Social Security Administration

Introduction

The Social Security Administration administers the Federal program of old-age, survivors, and disability insurance, which covers almost all of the families of the Nation. This program provides income insurance which replaces some of the income lost to the family when the breadwinner retires, becomes severely disabled, or dies.

The provisions of the Federal Credit Union Act are administered by the Social Security Administration's Bureau of Federal Credit Unions. Under the Federal credit union program, groups may secure Federal charters for credit unions. A Federal credit union provides for its members an outlet for investing their savings and a source from which they may borrow easily and at reasonable rates of interest.

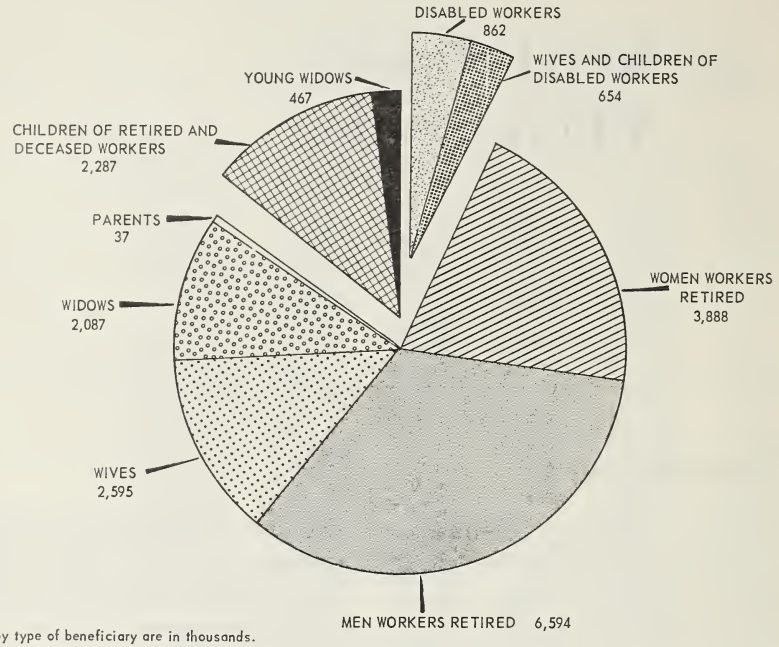
The Old-Age, Survivors, and Disability Insurance Program

This program is now most often referred to simply as "social security."

Most Americans now look to the social security program as the major source of protection for themselves and their families when work income is cut off or sharply reduced because of old age, death, or total disability. Nine out of ten workers in paid employment are covered by the program. At the end of fiscal year 1964, 19.5 million people were receiving monthly benefits. (See chart 1.) About 15.2 million of these beneficiaries were age 62 or over. Payments made during the year totaled $15.8 billion.

CHART 1.—19.5 MILLION BENEFICIARIES

Numbers by type of beneficiary are in thousands.



Numbers by type of beneficiary are in thousands.

JUNE 1964

The amount of the benefits payable under the program to the worker and his family is related to his earnings in covered work. The benefits are paid without regard to the beneficiary's income from savings, pensions, and the like. As a result, the program is in line with our system of economic incentives: The worker builds his own protection under the program as he works and, when possible, supplements this protection by personal savings and investments. Because the worker earns this protection by his own work and contributions, he and his family look upon their future benefits as an earned right.

This financial participation encourages a responsible attitude among those covered by the program. The contributor knows that the benefits payable to him and his family are made possible by the payment of social security taxes, and this knowledge gives him a personal interest in the soundness of the program.

The program is completely financed by the contributions paid by wage earners, their employers, and self-employed people and by the interest accruing from the investment of these funds. Each time the social security law has been amended, the Congress has been careful to make provision for adequate financing of changes so that the pro-

gram would remain self-supporting. To assure that it remains financially sound, in 1956 the Congress directed that the program be studied at regular intervals by specially appointed Advisory Councils on Social Security. These councils are charged with reporting their findings and making recommendations to the Board of Trustees of the social security trust funds.

The Advisory Council appointed in June 1963 was specifically directed by Congress to expand its study of the status of the trust funds to include all aspects of the program. The detailed and careful study that the Council has been conducting throughout the 1964 fiscal year is the first such comprehensive study since that made by the Advisory Council appointed by the Senate Committee on Finance in 1948. The current Council will report its findings and recommendations to the Board of Trustees of the social security trust funds by January 1, 1965.

During the year, there was full congressional consideration of major amendments to the Social Security Act. The House of Representatives passed a bill providing for a general 5-percent benefit increase and for other changes in the program, but made no provision for hospital insurance for the aged. The Senate, on the other hand, passed a bill providing for a $7 increase in primary benefit amounts (with corresponding increases for dependents), providing for hospital insurance for the aged, and making other changes that were not included in the House bill. The legislation was not enacted, however, because the House and Senate conferees were unable to reconcile differences in the two versions of the bill before the Congress adjourned. The fiscal year ended with hospital insurance for the aged still the greatest unmet need in social security protection. There was also a pressing need for increases in cash social security benefits.

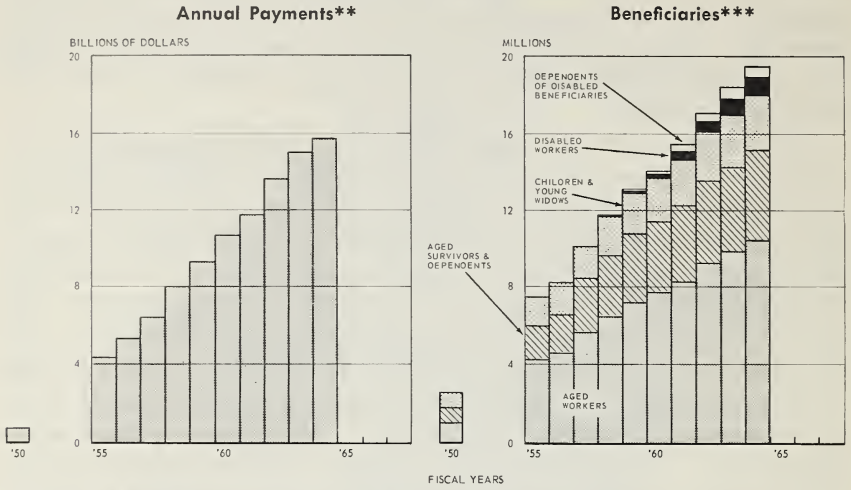
The XVth General Assembly of the International Social Security Association was held in Washington in September 1964. The Social Security Administration was host for the meeting of this group, which represents over 200 separate social security systems, covering about one-half billion people in about 90 countries. This was the first time this world assembly has been held in the United States.

What the Program Is Doing

Beneficiaries and Benefit Amounts

During the fiscal year ended June 30, 1964, benefits paid under the old-age, survivors, and disability insurance program totaled $15,830 million—an increase of $815 million over the amount paid in the preceding fiscal year. Total benefit payments to disabled workers and

CHART 2.—BOTH OASDI BENEFIT PAYMENTS AND NUMBER OF BENEFICIARIES HAVE INCREASED RAPIDLY SINCE 1950*



*The 1950 amendments made major improvements in the program.
**Payments in fiscal year. Includes lump-sum death payments.
***Beneficiaries on the rolls at the end of the fiscal year.

their dependents were 7 percent higher than in fiscal year 1963 and totaled $1,251 million. Old-age and survivors insurance monthly benefits rose 5 percent to $14,365 million; lump-sum death payments amounted to $215 million, about $19 million higher than in the previous fiscal year (chart 2).

More than 2.6 million monthly benefits were awarded in fiscal year 1964, about 217,000 less than the number awarded in the preceding year. Old-age (retired worker) benefits (1,102,000) accounted for two-fifths of the awards. Mother's benefit awards numbered 107,000, about 5,000 more than the previous high recorded in fiscal year 1963. The 423,000 monthly benefits awarded to disabled workers and their wives, husbands, and children were almost 60,000 fewer than the number awarded in the preceding fiscal year.

Almost 1,068,000 lump-sum death payments were awarded in fiscal year 1964. About 1,005,000 deceased workers were represented in these awards; the average lump-sum payment per worker was $213.54.

The number and amount of monthly benefits in current-payment status increased steadily during fiscal year 1964. The number of monthly benefits went up 5 percent (862,000) and the monthly rate of payment rose 6 percent ($70 million). At the end of June 1964, 19.5 million beneficiaries were receiving benefits at a monthly rate of $1,296 million. A year earlier, monthly benefits totaling $1,226 million were going to 18.6 million beneficiaries (chart 2).

At the end of June 1964, about 15.2 million persons aged 62 and over were receiving old-age, survivors, and disability insurance monthly benefits—640,000 (4 percent) more than in June 1963. Old-age (retired worker) benefits were going to 69 percent of the aged group, wife's or husband's benefits to 16 percent, widow's or widower's benefits to 14 percent, disabled worker's benefits to 1 percent, and the remainder—primarily parent's benefits—to less than one-half of 1 percent. The number of persons under age 62 receiving monthly benefits increased almost 6 percent (224,000) during the fiscal year and totaled 4.2 million at the end of June 1964. About 65 percent of these beneficiaries were persons receiving child's benefits, 16 percent were disabled workers, 11 percent were mothers of orphaned child beneficiaries, and 7 percent were wives of disabled or retired-worker beneficiaries with child beneficiaries in their care.

In June 1964, the average old-age benefit being paid to a retired worker who had no dependents also receiving benefits was $73.60 a month. When the worker and his wife were both receiving benefits, the average family benefit was $130.10. For families composed of a disabled worker and a wife under age 65 with one or more entitled children in her care, the average was $193.60; and for families consisting of a widowed mother and two children, the average benefit was $193.90. The average monthly benefit for an aged widow alone was $67.40 in June. Among beneficiaries on the rolls at the end of June 1964 whose benefits were based on earnings after 1950, the average family benefit being paid was $80.60 for a retired worker with no dependents receiving benefits; $137.30 for an aged couple, $200.10 for a disabled worker and a wife under age 65 with one or more entitled children in her care, $212.60 for a widowed mother and two children and $77.70 for an aged widow alone.

At the end of June 1964, the proportion of all retired-worker families receiving benefits based on earnings after 1950 was 77 percent; for disabled-worker families, it was 87 percent, and for survivor-beneficiary families, 61 percent.

Disability Provisions

During the fiscal year, about 218,000 workers were found to be disabled. This was 24,000 fewer than the number in the preceding fiscal year. About 22,000 disabled persons aged 18 or over who had applied for child's monthly benefits were found to have a disability that began before they were 18 years of age; the number was 2,000 smaller than in fiscal year 1963. Since the beginning of the program, almost 2 million persons have been found to meet the disability requirements of the law.

748-869—65——2

The number of disabled workers receiving monthly benefits rose 9 percent in the fiscal year and reached 862,000 at the end of June. About 654,000 benefits were being paid to the wives, husbands, and children of these beneficiaries—an 11-percent increase. By the end of June 1964, child's monthly benefits were being paid at a monthly rate of $8.2 million to 175,000 disabled persons aged 18 and over—dependent sons or daughters of deceased, disabled, or retired insured workers—whose disability began before age 18. About 19,000 women were receiving wife's or mother's benefits solely because they were the mothers of disabled persons receiving child's benefits.

A preliminary estimate indicates that at the end of June 1964 the old-age benefits of about 212,000 persons had been increased because their earnings records were frozen for periods of no earnings while disabled before reaching retirement age. The increase averaged $9 a month.

About 78,000 wives, husbands, and children of retired workers and about 168,000 widows, widowers, children, and parents of workers who had their records frozen before death were also receiving larger monthly benefits because the worker was determined to have been disabled for a period of time before his death. For the same reason, lump-sum death payments based on the earnings records of 35,000 deceased workers were increased by an average of about $27 per worker in fiscal year 1964.

The Protection Provided

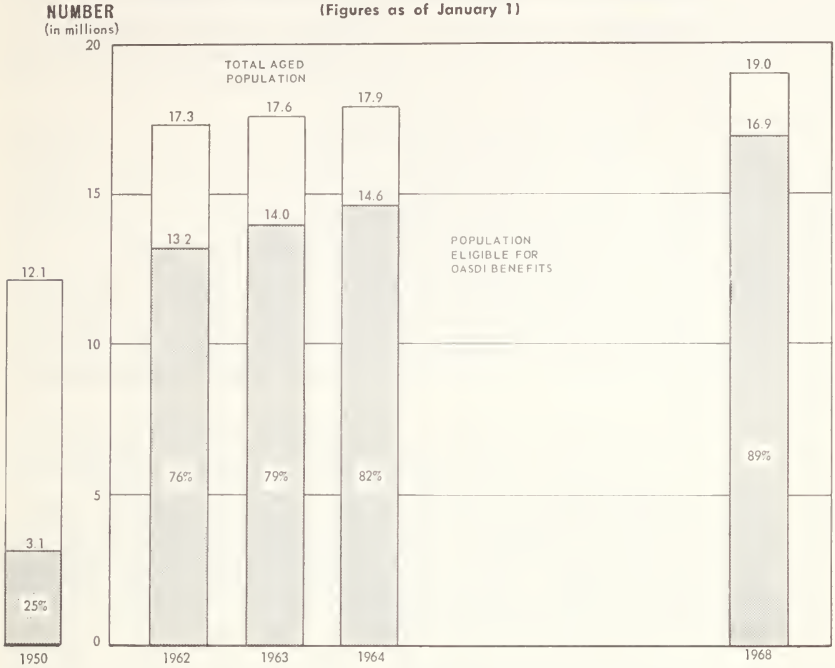
At the beginning of calendar year 1964, about 92 million people had worked long enough in covered employment to be insured for benefits under the program in the event of retirement, disability, or death. Some 57 million of these people were permanently insured—that is, whether or not they continue to work in covered jobs, either they are already eligible for benefits or they will be when they reach retirement age, and their families are protected if they die. The remaining 35 million were insured but must continue in covered work for an additional period to be permanently insured. Nine out of ten mothers and young children in the Nation can count on receiving monthly survivors insurance benefits if the family breadwinner should die.

Of the population under age 65, an estimated 82 million were insured. Some 46 million of them were permanently insured, including about 1.9 million men and 1.2 million women aged 62–64 who were already eligible for old-age benefits but on a reduced basis. About 53 million persons under age 65 had worked long enough and recently enough to be protected in the event of long-term and severe disability.

Of the 17.9 million people aged 65 and over in the United States at

CHART 3.—OF THE POPULATION AGED 65 AND OVER, BOTH THE NUMBER AND THE PROPORTION ELIGIBLE FOR OASDI BENEFITS ARE INCREASING

(Figures as of January 1)



the beginning of 1964, 82 percent were eligible for benefits under the program (chart 3). Some 73 percent were actually receiving benefits, and about 9 percent were not receiving benefits because either they or their spouses were receiving substantial income from work. The proportion of aged persons who are eligible is expected to rise to 89 percent by the beginning of 1968.

Income and Disbursements

Expenditures from the Federal old-age and survivors insurance trust fund during fiscal year 1964 totaled $15,285 million, of which $14,579 million was for benefit payments, $403 million for transfers to the railroad retirement account and $303 million for administrative expenses, including Treasury Department costs. Total receipts were $16,044 million including $15,503 million in net contributions and $542 million in interest on investments. Receipts exceeded disbursements by $760 million, the amount of the increase in the trust fund during the year. At the end of June 1964 this fund totaled $19.7 billion.

Total assets of the old-age and survivors insurance trust fund, except for $1.4 billion held in cash, were invested in U.S. Government

securities as required by law; $3.5 billion was invested in public issues (identical to Treasury securities owned by private investors), and $14.8 billion was invested in securities of varying maturities issued solely for purchase by the trust fund. The average interest rate, based on the coupon rate and face amount of all investments of this fund at the end of the fiscal year, was 3.12 percent.

Expenditures from the Federal disability insurance trust fund during fiscal year 1964 totaled $1,338 million, of which $1,251 million was for benefit payments, $19 million for transfers to the railroad retirement account, and $68 million for administrative expenses. Total receipts were $1,208 million, including $1,143 million in net contributions and $65 million in net interest on investments. Disbursements exceeded receipts by $130 million, the amount of decrease in the fund during the year. At the end of June 1964, the fund totaled $2,264 million.

Assets of the disability insurance trust fund consisted of $2,139 million in U.S. Government securities and a cash balance of $125 million. The invested assets consisted of $236 million in public issues and $1,903 million in securities of varying maturities issued solely for purchase by the trust fund. The average interest rate, based on the coupon rate and face amount of all investments of this fund at the end of the fiscal year, was 3.22 percent.

Financing the Program

The old-age, survivors, and disability insurance system, as a whole, has an estimated benefit cost that is very closely in balance with contribution income. In enacting changes in the program, Congress has repeatedly made clear its intent that the program be fully supported by contributions of covered workers and employers and interest on invested assets. A comprehensive review of the intermediate-range and long-range actuarial cost estimates for the program has recently been completed. These estimates show that the program continues to be financed on an actuarially sound basis throughout the foreseeable future.

The difficulties involved in making exact predictions of the actuarial status of a program that reaches into the distant future are widely recognized. If different assumptions as to, say, interest, mortality, retirement, disability, or earnings had been used, different results would have been obtained. Accordingly, no one set of estimates should be looked upon as final, in view of the fact that future experience may vary from the actuarial assumptions. It is the Department's policy continually to reexamine the cost estimates of the program in the light of the latest information available. Even though

absolute precision in long-range cost estimating is not possible, the intent that the system be actuarially sound can be expressed in law by a contribution schedule that, according to the intermediate-cost estimate, results in the system being substantially in balance, and the law has such a contribution schedule.

Old-Age and Survivors Insurance Benefits

The level cost of old-age and survivors insurance benefits after 1963, on an intermediate basis, assuming interest of 3.50 percent and earnings at about the levels that prevailed during 1963, is estimated at 8.71 percent of payroll (after adjustments to allow for administrative expenses and interest earnings on the existing trust fund). The level contribution rate, equivalent to the graduated rates in the law, is estimated at 8.61 percent of payroll, leaving a small actuarial insufficiency of 0.10 percent of payroll.

Disability Insurance Benefits

The Social Security Amendments of 1956 established a system for financing disability benefits which is separate from the financing of old-age and survivors insurance benefits. The estimated level cost of the disability benefits (adjusted to allow for administrative expenses and interest earnings on the existing trust fund) on an intermediate basis is 0.64 percent of payroll. Contribution income has been specifically allocated to finance these benefits; this income is equivalent to 0.50 percent of payroll, leaving an actuarial insufficiency of 0.14 percent of payroll.

As indicated above, the new estimates show that the system as a whole will have an income from contributions (based on the schedule now in the law) and from interest earned on investments approximately sufficient to meet total expenditures indefinitely into the long-range future. However, the Trustees have recommended an adjustment of the allocation of total contribution rate between the two parts of the program to make for a more reasonable subdivision of future income which would in no way affect the overall actuarial balance of the system. This Department believes that such an adjustment should be made.

Administering the Program

Fiscal year 1964 in the Social Security Administration was a period of relative stability. The absence of major new legislation made it possible to put into effect improvements which had been successfully tested for improved administration and a higher quality of public

service. The processing of claims for benefit payments was improved. The search for and installation of equipment to increase productivity, improve accuracy, and speed processing was continued.

Workloads, Manpower, and Resources

Almost 2.8 million old-age and survivors insurance claims were received and processed in fiscal year 1964, and nearly 700,000 claims for disability insurance benefits from disabled workers and their dependents were received and processed. This is a decrease of about 7 percent over fiscal year 1963 in the number of old-age and survivors insurance claims filed by workers, their dependents, and their survivors, while the number of disability claims remained about the same as in fiscal year 1963. More than 15 million inquiries about the old-age, survivors, and disability insurance program were answered in social security district offices in all parts of the country.

The number of actions necessary to maintain the correct names, addresses, and benefit amounts for the growing number of beneficiaries on the benefit rolls continued to increase. In fiscal year 1964, over 10 million separate actions were required to keep the benefit rolls up to date. These actions included 2 million change-of-address notices; 3.2 million notices to cancel benefit checks; 3 million changes in benefit amounts, or reinstatements; 1.7 million terminations of benefits because of death, attainment of age 18, marriage, divorce, etc.; and 453,000 suspensions of benefits because the beneficiary returned to work and expected to earn enough to cause some reduction in his benefit under the retirement test.

There was a substantial increase in the number of new social security accounts established for individuals. Of the 7.6 million new accounts, approximately 4 million were in cooperation with the Internal Revenue Service program to use social security account numbers as identification on income tax returns. Duplicate account numbers were issued to about 3.1 million persons who had lost their original cards or needed new cards for various other reasons. More than 272 million earnings items were received for posting to social security earnings accounts in fiscal year 1964.

At the end of fiscal year 1964, 34,493 people were employed to process these very large workloads. About 15,700 of these were in the 11 regional and 613 district offices which deal personally with the public. Almost 8,500 were employed in the seven payment centers which review claims for benefits and certify benefit payments. The Division of Accounting Operations, which establishes accounts and maintains earnings records, had 5,600 employees. The Division of Disability Operations, which processes claims for disability benefits,

had 1,650 employees. Almost 900 employees were involved in hearings appeals. And there were about 2,100 employees in central office headquarters positions.

STAFFING AND PRODUCTIVITY

The total work output of the Social Security Administration during fiscal year 1964 was 5.2 percent greater than in fiscal year 1963. This greater volume of work was accomplished with only a 1.4-percent increase in manpower, indicating a productivity improvement of 3.8 percent in fiscal year 1964. Continued productivity improvements have been budgeted for fiscal years 1965 and 1966. The good progress made in further automating clerical operations in SSA contributed in large measure to the productivity improvement achieved. Another contributing factor was a more stable and better trained staff than existed in 1963.

EMPLOYEE DEVELOPMENT

During fiscal year 1964, the Social Security Administration continued to place increased emphasis on the educational development of its employees in all parts of the organization. A Center for Continuing Education, established for SSA Central Office employees in cooperation with the George Washington University College of General Studies and the Baltimore County School Board, has been utilized heavily by SSA employees. During the fiscal year, a total of 375 students participated in the high school program, and 751 students participated in the college program—261 in undergraduate and 490 in graduate courses.

During the year, much activity was directed toward the establishment of centers for continuing education in all of the SSA payment center cities. Studies conducted in two payment center cities—Birmingham and Kansas City—showed that employees and local universities were quite interested in setting up evening educational programs. The Kansas City Payment Center started a program with the spring semester, and it is expected that the program will be extended to other payment center cities during fiscal year 1965.

In line with SSA's objective to assure employee understanding of the OASDI program and its administration, the Basic Training Course, which emphasizes this objective, was presented to more than 1,000 new SSA employees from all over the nation. This course orients new employees to program goals and explains to them the reasons for SSA attitudes and approaches.

During the fiscal year, special courses designed to meet special occupational needs were conducted. These courses included tax report auditing, reading improvement and vocabulary building, shorthand

theory, principles of management, advanced techniques of writing, and correspondence review. In addition, new in-service courses developed during the year included "Basic Analysis" and "Employee-Management Cooperation." Other in-service courses, including "Supervisory Development" and "Advanced Management Training," presented on a nationwide scale, were revised and strengthened.

The number of employees taking special training courses increased by more than 25 percent over the previous year. A major portion of this increase resulted from providing statistical and actuarial courses for selected employees in manpower shortage areas.

Implementation of Executive Orders

Executive Order 10925, establishing the President's Committee on Equal Employment Opportunity, dated March 6, 1961, stimulated considerable activity in the Social Security Administration throughout the year. The Commissioner of Social Security established an Advisory Committee on Personnel Practices on August 30, 1963, to make a review of SSA personnel policies and practices in Baltimore and report its findings to him. The Committee submitted its report and recommendations to the Commissioner in May 1964.

When the Committee's report was received, the Social Security Administration immediately began to put its recommendations into effect. Some of the suggestions and one of the recommendations contained in the report which concerned the posting and filling of vacancies were the subject of negotiations with AFGE Lodge No. 1923.

The Commissioner of Social Security also appointed an Advisory Work Group to study the personnel operations of the Philadelphia Payment Center and report its findings to him. The Work Group met in Philadelphia for 2 to 3 full days each week from May 25 until June 24. From June 29 to July 1, it met in the SSA headquarters in Baltimore to review the draft of its report, and to discuss its findings, conclusions, and recommendations with the Commissioner and other appropriate officials. The final report was submitted to the Commissioner after the close of fiscal year 1964.

Executive Order 10988, regarding Employee-Management Cooperation in the Federal Service, resulted in considerable activity by unions to obtain exclusive or formal recognition. AFGE Lodge No. 1923 was granted exclusive recognition for Baltimore headquarters and Baltimore Payment Center employees. Shortly after exclusive recognition was granted, a basic agreement was made with the lodge. Local employee organizations in the district offices and payment centers were granted exclusive recognition for 11 units, formal recogni-

tion for 13, and informal recognition for 2; and 8 basic agreements were negotiated and signed.

Emergency Planning

During the past fiscal year, work was continued on emergency procedures to insure continuity of the essential functions of the old-age, survivors, and disability insurance program and the Federal credit unions in the event of an enemy attack.

A procedure for informing key personnel of emergency situations has been developed and distributed to individuals concerned, and updated instructions for carrying out essential functions of the Social Security Administration under emergency conditions have been prepared and held in readiness.

To facilitate the continuity of OASDI benefit payments under emergency conditions, authority has been obtained to permit payment center chiefs to designate Special Certifying Officers and Cashiers to replace regularly designated individuals who might be unable to perform their duties because of an emergency situation.

Administrative Expenses

Expenses for administering the old-age, survivors, and disability insurance program during fiscal year 1964 amounted to approximately $370.1 million. This was about 2.3 percent of the amount of benefits paid to beneficiaries of the program during the year. Of the total administrative expenses, about $53.9 million was incurred by the Treasury Department for the collection of social security taxes, the preparation of checks for beneficiaries, and related activities.

Improvements in Service and Management

Operations Research

For the past 2 years, the Social Security Administration has employed the services of an operations research contractor for assistance in analysis and evaluation of process and organizational alternatives, and for guidance in development of a permanent internal operations research capability. SSA's work with the contractor—Clark, Cooper, Field, and Wohl, Inc., a subsidiary of Dunlap and Associates of Stamford, Connecticut—is now in its terminal phase, and the contractor's final report is in preparation. It is expected that the report will require an extended period of review and consideration by SSA management.

The internal operations research group which was developed during the course of the project is continuing its work under professional

direction. Current assignments include a number of complex analytical problems to which the operations research techniques have particular application.

EDP-IDP Developments

Fiscal year 1964 was a period of continued development, modification, and improvement in social security electronic data processing and integrated data processing operations. During the year, it became apparent that the Administration's EDP capacity was not sufficient for its projected centralized computer operations. Accordingly, a third IBM–7080 computer system was installed as a replacement for a smaller and slower IBM–705 III system. In an effort to achieve the most efficient, effective, and economical EDP operations, the Administration, after careful analysis and evaluation, purchased the two older 7080 computers. A recommendation was also made that the third 7080 system be purchased in fiscal year 1965.

During the year, new and revised programs and procedures were prepared to: (1) electronically screen and combine outstanding 1961 and 1962 beneficiary reports to provide a close scrutiny of the retirement test; (2) record on magnetic tape information in approximately 650,000 case folders released to the Federal Records Center; (3) rewrite the master beneficiary tape record to include additional data to make it possible to process electronically more post-entitlement operations; (4) electronically address annual report forms to beneficiaries for all OASI payment centers; (5) enable the direct computer processing of beneficiary change-of-address notices; and (6) furnish check writing data to the Treasury Department on magnetic tape.

The Administration also ordered an IBM–6400 electronic accounting machine to improve the internal maintenance of SSA inventory records and to integrate that function with the writing of purchase orders and the processing of personal property requisitions.

OPTICAL SCANNING

For many years, the Social Security Administration has been trying to obtain a device that would optically scan earnings reports from taxpayers and record the information on magnetic tape. This would make possible the automatic processing of these reports and avoid the manual card-punching which is now required. Rapid technological advances in optical scanning devices resulted in the Administration's inviting eight companies to submit proposals for such a multifont optical character reader. In June 1964, the Administration received authority from the Department to award a contract to the IBM Cor-

poration. The Administration is now in the process of negotiating contract specifications with this company.

The machine will be able to read and feed directly into a computer information printed or typed on social security report forms in a wide variety of type sizes and styles. It will not, however, be able to read handwritten material. The reader will be designed to process reports at a rate of 45,000 to 50,000 lines per hour, and is expected to process about one-half of the earnings items filed quarterly, or approximately 30 million items per quarter.

When the device is fully operational, sometime in fiscal year 1966, it is expected to replace about 100 key punch operators, who will be transferred to other types of work. The elimination of some key punch operations and card-to-tape functions will result in an estimated annual savings of $1,000,000.

Improperly Reported Earnings Items

Employers sometimes report earnings for an employee under an incorrect name or an incorrect social security account number. Often these errors can be corrected during computer processing or through a clerical review, but correspondence with the employer is sometimes necessary. If an employer makes these reporting errors repeatedly, a representative of the social security district office visits him to explain the need for correct reporting and to assist in the development of procedures to improve future reports.

For many years, it has been recognized that the social security representative who visits an employer for this purpose needs complete information on the history of the employer's reporting practices. Consequently, an electronic analysis of all employers' 1961 reporting records was completed in April 1963. The analysis indicated that approximately 473,000 employers had improperly reported more than 5 percent of their employees. This figure included about 75,000 employers who improperly reported more than 50 percent of their employees.

The Social Security Administration's attack on this national problem of repetitive errors now includes educational contacts by district office representatives who have available comprehensive records of the approximately 38,000 employers whose records show the highest percentage of improperly reported items.

The primary objective of these visits is long-run improvement in employer reporting. Although it will not be possible to determine the long-range effects of these visits for several years, preliminary statistics will be developed when the employers' reports have been received for the year after the district office educational visits.

Microfilm Substitute for the Form SS-5 File

In its continuing effort to develop a suitable microfilm substitute for the rapidly expanding Form SS–5 file of original account number applications and related forms, the Social Security Administration is analyzing the technical feasibility of two systems proposals it has received from private manufacturers. A proposal from a third company is expected. At least one of the three proposed systems will probably be acceptable to the Administration.

In the fiscal year 1965, the SSA hopes to obtain sufficient equipment to conduct a pilot operation involving microfilming of about 10 percent of the SS–5 file of approximately 200 million documents. This would show what further refinements in the selected system might be needed. Early action is needed; the space problem is becoming critical because of the extensive use of social security account numbers for various purposes.

Telecommunications

During fiscal year 1964, communications specialists conducted numerous studies on equipment usage and network configuration of the Social Security Administration's telecommunications system, which links all regional and district offices with the payment centers and the central headquarters and provides for the rapid transmission of data and administrative messages. As a result, 17 of the original 45 established relay centers have been eliminated, with estimated savings of $120,000 annually.

The Administration's EDP programing staff developed a computer programing technique which sorts by destination administrative messages originating in the telecommunications network. The cost of the computer sort is approximately $5,000 per year as compared with the cost of $100,000 per year for sorting paper tape. In addition to the monetary savings, this new sorting method makes available for other purposes 20 hours a year of 7080 computer time.

FIELD ORGANIZATION

The SSA provides information and assistance to claimants and other members of the public through 613 district offices in cities and towns throughout the Nation. In addition, representatives of these offices visit more than 3,600 other communities in accordance with schedules which are posted and publicized.

As part of the Administration's continuing effort to provide the best possible public service, a survey was made in fiscal year 1964 to determine if there was a need to open additional district offices. Conclusions and recommendations as to additional needs had not been completed by the end of the fiscal year.

Plans were completed for Federal construction of 25 buildings to house existing district offices. The plans and funds have been approved by the Congress, and construction of the 25 buildings will be initiated in fiscal year 1965.

"LEADS" PROGRAM

For many years, the Social Security Administration has conducted an extensive public informational program to bring pertinent information to the attention of the people concerned. However, many persons who were eligible for benefits did not claim them because they were not aware of their eligibility. This became particularly significant as a result of the 1960 and 1961 Amendments to the Social Security Act which liberalized the insured status provisions of the law.

Until 1961 it had not been considered feasible to attempt direct contact with these persons. By that year, however, developments in electronic data processing had provided a quick, economical method for selecting the most suitable cases. Names and addresses of people who seemed to be eligible but had not applied for benefits were sent to the social security district offices, who got in touch with the potential claimants. This project which became known as the "leads program," was conducted over a period of 2 years; it resulted in claims for benefits from 152,000 persons who would not otherwise have filed because they did not know that they were eligible. An additional 28,000 claims were filed as an indirect result of this program.

The same techniques were utilized in a special leads program in eastern Kentucky as part of the President's program to aid that area. More than 500 claims were taken, resulting in the payment of an estimated $300,000 in benefits per year. An additional $300,000 in retroactive benefits was also paid to these beneficiaries.

IMPROVEMENTS IN CLAIMS PROCESSING TIME

By the end of fiscal year 1964, average processing time for old-age and survivors insurance claims had been reduced by about 9 days below the average for a year earlier. Where total processing time for all awards had been about 45 days in June 1963, it was about 36 days in June 1964. The greatest improvement was made in cases where special problems or necessary additional development resulted in delays in processing. In June 1963, these cases, which represented approximately 25 percent of the total took 63 days to process. In June 1964, they took about 50 days to process.

These improvements resulted in part from lower pending loads and a more favorable ratio between workloads and staff, and from a more experienced and better trained staff in 1964 than in 1963.

Hearings and Appeals

Under the provisions of the Social Security Act, claimants who are denied social security benefits may request a hearing before a hearing examiner of the Bureau of Hearings and Appeals. This Bureau is separate and apart from those offices in the Social Security Administration which receive claims for benefits and either allow or deny them. If the decision of the hearing examiner is favorable, benefits are then paid. If not, the claimant may request the Appeals Council to review the hearing examiner's decision. If the claimant is dissatisfied with the Appeals Council's action, he may file a civil suit in a U.S. District Court.

In fiscal year 1964 the Social Security Administration redoubled its efforts to improve the quality of its service in the area of hearings and appeals and to achieve increased understanding of the entire appeals process. There was significant progress in reducing pending loads and elapsed processing times for hearings and appeals cases. This was the result of increased hearing examiner productivity, improved operating efficiency, and the simplification of procedures.

During the fiscal year, the pending case load of hearings requests was reduced by 2,000 cases (from 8,500 to 6,500), and there was a 50-day decrease in processing time to 90 days for the average case.

These reductions in case loads and processing times were especially gratifying since they were accomplished at a time when there was increased use of medical advisers and vocational consultants to improve development techniques and to document the record fully. The roster of medical advisers and vocational consultants was substantially enlarged during the year and will be further increased until each hearing examiner has available, wherever they are required, the services of capable medical specialists and vocational consultants.

Research Activities

The Social Security Act of 1935 recognized the need for continuous and forward-looking assessment of the social security of the American people and new approaches to changing problems in order to achieve the basic objectives of the act itself. It therefore placed on the administering agency a responsibility to study and make recommendations on economic security and social insurance. Throughout the history of the Social Security Administration, research conducted under this mandate has served to evaluate the effectiveness of the social security system, to relate social security to overall economic and social policy, and to contribute to broad policy formulation and program administration.

Today, the economic and social dynamics of our society are restructuring both the insecurities and the potentials for achieving security in America. New challenges are arising with population growth and improved life expectancy, technological revolution and expanding productivity, urbanization and population mobility. New opportunities have been created to attack those persistent pockets of poverty which exist even amid widespread prosperity. The growing emphasis on human resources and the drive to eradicate discrimination, the heightened aspirations and increased expectations of the people—these and associated phenomena challenge our understanding of the role and content of economic and social security in a changed and changing world.

The greater responsibilities and opportunities of the Social Security Administration in the search for deep and comprehensive knowledge of these dramatic developments and the human requirements of our progressively changing society were recognized and accepted with the January 1963 realignment of the Administration's organization for research. The reorganization provided an opportunity to develop within the Social Security Administration a center for research into the socio-economic factors and trends affecting the income and security of the individual, and the family and the implications of such trends for national policy.

Within the context of its enlarged research objectives, the Social Security Administration moved ahead with its continuing national family economic and social surveys of broad population groups such as the aged, the disabled, mother-child families, low-income groups, Negroes, and others. The surveys will provide basic information on the characteristics and circumstances of beneficiaries of existing social security and related programs as well as on persons outside those programs.

The first of the surveys, the most comprehensive study of the aged yet undertaken, was conducted by the Social Security Administration with the Bureau of the Census acting as its agent in collecting and tabulating the data. Collection was carried out in early 1963 and the first reports were released within a year after the interviews.

The 1963 Survey of the Aged was the first nationwide survey of a representative sample of all persons aged 62 and over, beneficiaries and nonbeneficiaries alike, including persons in institutions. The first-stage questionnaire covered health insurance, medical care costs, assets and debts, and income. The followup interview obtained more detail on these subjects and included additional questions on other subjects such as home tenure, living arrangements, housing and food

expenses for those living alone, and on labor-force participation and work experience, as well as special questions for recent widows.

The information obtained from these two questionnaires was supplemented by information on household composition and family income from the Current Population Survey and the Quarterly Household Survey as well as Social Security Administration records.

A limited survey of mother-child beneficiary groups was made in 1963. The next national survey was scheduled to cover the socioeconomic status of the disabled in 1965.

The survey program will serve the research purposes of the Social Security Administration and at the same time will be of significant value to others. Special tabulations of data from the 1963 Survey of the Aged, for example, will make possible detailed analyses of veterans and of public assistance recipients. The data and the methodological studies undertaken in connection with the survey program, in addition, will be of continuing value to social scientists and researchers both within and outside of government.

The first findings from the survey of the aged, concerning the income and work experience and earnings of persons aged 62 and over, were published in the March and June 1964 issues of the *Social Security Bulletin.* Among other significant articles appearing in the *Bulletin* during fiscal year 1964 were "Children of the Poor," "The Aged Negro and His Income," and articles presenting the continuing statistical series on social welfare expenditures, employee-benefit plans, wage loss from short-term sickness, consumer medical care expenditures, and the extent of health insurance coverage.

The following titles appeared in the Research Reports series, which was inaugurated in the preceding year (with publication of the report, *Slums and Social Insecurity*) as part of the Social Security Administration's plan for a strengthened research publications program:

Independent Health Insurance Plans in the United States, 1961;
Income Security Standards in Old Age;
Blue Cross-Blue Shield Nongroup Coverage for Older People;
Employment and Earnings of Self-Employed Workers Under Social Security.

International Activities

The 1964 edition of triennial publication, *Social Security Programs Throughout The World*, contained details on social security programs in 112 nations. It included information on nine nations not previously reporting, and reports on program changes in other countries during the past 3 years.

This volume and the other source materials on foreign social security programs were used by other Government agencies, by business and labor groups, and by social scientists in this country and abroad.

The Social Security Administration also provided orientation and training plans for individuals and groups coming from abroad under the auspices of the Agency for International Development, cultural and technical exchange programs, United Nations agencies, and foreign government and nongovernment agencies.

The number of visitors from abroad and the number of countries and areas of the world represented by the visitors continued to increase. During the fiscal year, 254 international guests from 56 countries were received. The visitors ranged from high-level officials of government to teenage students.

INTERNATIONAL SOCIAL SECURITY ASSOCIATION

A major international activity involved planning for the XVth General Assembly of the International Social Security Association, which was held in Washington shortly after the close of the fiscal year. This was the first such session ever held in this country.

As host agency, the Social Security Administration provided facilities, services, and administrative staff to support the General Assembly. Funds for official reception and representation expenses were provided by a special appropriation. Arrangements were made with the Department of State for the use of its International Conference Suite for meeting purposes. The technical content of the Agenda for the Assembly was determined exclusively by ISSA officials. Arrangements were also made for a series of professional-interest visits to permit observation of social security activities in the Washington vicinity and for tours of the social security headquarters in Baltimore.

Special Research Projects

Significant progress was made in the fiscal year in the review of the statistical system and its potential usefulness for management studies and for economic and social research. Progress was also made in the more rapid processing of program data, thus enhancing their value to the Social Security Administration and to other agencies.

The cooperative research and demonstration grants program which had started under the Social Security Administration was transferred in fiscal year 1964 to the Welfare Administration and continued to serve the interests of both agencies. Among the 13 grant projects in progress as of June 1964, several were of special interest to the Social Security Administration: a longitudinal study of retirement at Cornell University, a study at the University of Michigan of the determinants

of the geographical mobility of labor, and a University of Chicago study of the effect of income on expenditures for and the use of health services.

The Federal Credit Union Program

Fiscal year 1964 marked the 30th Anniversary of the Federal Credit Union Act. The first Federal credit union was established on October 1, 1934, and strong growth has characterized development of the program since that time.

Now, after three decades, credit union operations are becoming more complex, and the Bureau of Federal Credit Unions faces new challenges in meeting its responsibilities to the Federal credit union movement. Apart from its supervisory responsibilities for existing Federal credit unions, the Bureau is increasing its efforts to bring credit union services to low-income families and the elderly who do not now enjoy such services. The Bureau has also been active in lending assistance to other countries throughout the world by explaining its activities to officials of these countries and giving advice and assistance to them as they develop their own credit union programs.

There were 11,245 active Federal charters on June 30, 1964, a net increase of 366 (3.4 percent) during the year. Total assets increased 15.3 percent to $4.16 billion, and membership in Federal credit unions soared to a new high of 7¾ million.

Equally substantial gains were scored in shares, which increased 15.2 percent to $3.68 billion at the end of the fiscal year, and loans outstanding were up 13.3 percent to a new high of $3.09 billion. Average savings per member on June 30, 1964, are estimated at $475, and average loans outstanding approximated $760 as the fiscal year ended.

A new Division of Statistical Research and Analysis was set up late in the fiscal year. It collects monthly data on selected Federal and State chartered credit unions, an activity formerly performed by the Federal Reserve Board.

In fiscal year 1964, the Bureau began work with other public and private agencies to promote the organization and development of Federal credit unions to serve low-income people in economically disadvantaged areas, both urban and rural, including residents of low-income public housing projects, members of church congregations, and settlement house groups. More than 400 Federal credit unions now serve institutions of this nature.

The Bureau continued its efforts to serve Federal credit unions more effectively by improving its examination techniques and placing greater emphasis on the examiner's analysis of credit union opera-

tions, including financial condition and internal controls. These improvements have resulted in a significant reduction in the average time required to complete examinations in all size groups, which in turn has resulted in substantial savings, both to the Bureau and to the credit unions.

The Bureau provided special materials on consumer credit for the President's Committee on Consumer Interests. It also inaugurated a thrift promotion program whereby attractive Thrift Honor Certificates were awarded to Federal credit unions achieving a high degree of growth in members' individual and overall savings.

The 1964 Amendments to the Federal Credit Union Act have provided greater flexibility in helping Federal credit unions to provide a source of low-cost consumer credit to their members.

The Bureau's operating expenses are entirely covered by fees charged to the credit unions for examination, chartering, and supervision. It receives no appropriations from general taxation.

Legislative Developments During the Year

Legislation Considered

Legislative proposals that would have made major changes and improvements in the social security program were considered and passed by the two Houses. There were, though, major differences in the proposals as passed by each House. The two Houses did not reach an agreement on all the differences, and the Congress adjourned without taking final action on what would have been the Social Security Amendments of 1964.

The major provisions of the bill passed by the House were: A general 5-percent increase in benefit amounts; an increase from $4,800 to $5,400 in the amount of a worker's annual earnings that are taxable and creditable for benefit purposes; payment of benefits at age 60 to widows, actuarially reduced in amount to provide for the longer period over which benefits would be payable; payment of benefits to a dependent or surviving child during the period from age 18 until age 22 if the child is attending school; benefits at age 72 for workers who had at least 1 quarter of coverage for each year after 1950 and up to age 65, but not less than 3 quarters of coverage, and for their wives and widows who reach 72 before 1968; coverage of self-employed physicians; and coverage of tips.

The cost of the proposed liberalizations over and above the additional income produced by the increase in the taxable earnings base would have been met by increasing the scheduled social security tax

rates so that the ultimate tax rate for employees and for employers would have been 4.8 percent each instead of 4.625 percent each.

The Senate bill would have provided hospital insurance benefits for people aged 65 and over who are entitled to monthly benefits under the social security or the railroad retirement program. Hospital insurance benefits would have been provided for people 65 years of age and older and who are not entitled to monthly benefits under the social security program or the railroad retirement program, with the stipulation that this provision would apply only to people who are now 65 or over or who will reach 65 in the next few years. Among the other changes made by the Senate in the House-passed bill were: A provision for a flat $7 increase in primary benefit amounts, with a proportionate increase for dependents, instead of a 5-percent benefit increase; an increase from $5,400 to $5,600 in the amount of a worker's annual earnings that would be taxable and creditable under the program; deletion of the provisions extending coverage to self-employed physicians and covering tips as wages; and a further increase in the scheduled tax rates so that the ultimate tax rate for employees and for employers would have been 5.2 percent each instead of 4.8 percent as in the bill as passed by the House.

Legislation Enacted

Under present law, the lack of covered earnings during an established "period of disability" does not count against a worker in determining whether he is insured or in computing his benefit amount. For a worker to receive the full benefit of this provision, his established period of disability must include all of the period of total disablement. However, under a statutory provision affecting all applications for disability insurance protection filed after June 30, 1962, the beginning of a "period of disability" could not be established earlier than 18 months before the application was filed.

Public Law 88–650, enacted October 13, 1964, removed this limitation so that a period of disability may now begin as early as actual disablement, without regard to the date of application. This law will benefit 100,000 of the persons who filed applications after June 30, 1962—this number of disabled workers and their dependents will receive higher benefits or have eligibility for benefits restored. In addition, many people now applying, or applying in the future, for disability protection will also benefit.

This law also extended through April 15, 1965, the time within which social security coverage under the self-employment provisions can be elected by persons who have been in the ministry (or in practice as Christian Science practitioners) for two or more years after 1954;

validated the erroneous coverage of certain engineering aides in Oklahoma; and made a minor change in the definition of the wages that count toward benefits.

Public Law 88–350, enacted July 2, 1964, and Public Law 88–382, enacted July 23, 1964, made several changes in provisions relating to coverage of employees of State and local governments. Public Law 88–350 reinstated a provision of law which permits the State of Maine to treat teaching and nonteaching employees who are in the same retirement system as if they were under separate systems for social security coverage purposes, and added Texas to the list of States, now 19 in number, which may cover policemen and firemen under retirement systems. Public Law 88–382 included Nevada among those States which may extend social security coverage to only those retirement system members who desire coverage, excepting present members of the system who do not wish coverage but covering compulsorily all future members.

Program Improvements

There are several major areas in which the level of protection afforded by the social security program should be improved or in which additional protection should be provided if the program is to be responsive to the needs of the American people.

HOSPITAL INSURANCE FOR THE AGED

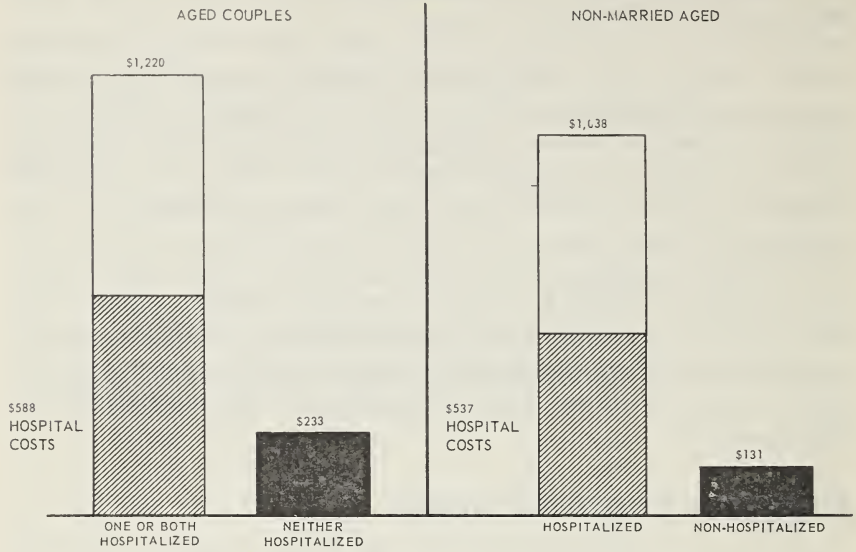
As important as social security benefits are in maintaining the income older people depend upon for their current living expenses, economic security in old age cannot be a reality so long as older people do not have adequate protection against the high health costs associated with old age.

In 1935, when the social security program was enacted, the 7.8 million people aged 65 and over represented 6.1 percent of the total population. By the end of fiscal year 1964, the aged numbered 18.0 million and represented 9.3 percent of the population.

This relative and absolute increase in the aged population reflects a vast improvement in the Nation's health resulting from improved medical care and higher standards of living. Since more people are living longer, however, larger numbers of them are exposed to the risk of the diseases that attack the aged.

Today's improved techniques and facilities for providing health care are expensive. Hospital charges, for example, are about 5¾ times what they were in 1935, while the cost of living in general is only about 2¼ times what it was in that year. Increased health costs fall heavily on the aged, who as a group experience serious illness

CHART 4.—WHEN HOSPITALIZATION BECOMES NECESSARY, HEALTH COSTS FOR THE AGED RUN HIGH



SOURCE: 1963 Survey of the Aged

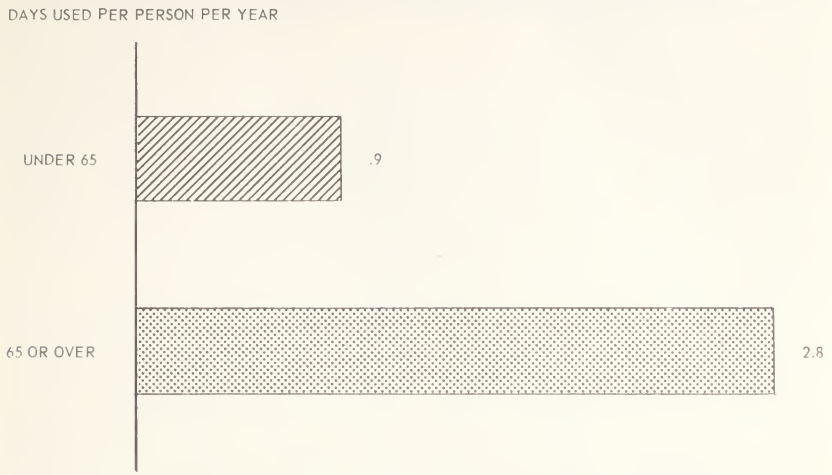
Average Medical Costs of Aged: Hospitalized vs. Nonhospitalized.

much more frequently than younger people and who use much more hospital care.

Social security benefits go a long way in helping to meet the day-to-day living expenses of aged people but they cannot be expected to meet the high costs an older person faces when he is sent to the hospital. Aged people have, on the average, two or three periods of illness requiring hospitalization after 65. A couple, on the average, would experience five such illnesses. Medical expenses for aged people who are hospitalized in a year are about five times greater than the medical bills of aged persons who are not hospitalized, and hospital costs account for the major portion of the difference (chart 4). Meeting high health-care costs is a problem that confronts virtually all aged people—not just the very poor.

When there is a risk to which all are subject but which falls unevenly and heavily on only a few, it is only natural for people to turn to insurance for protection. Unfortunately, the elderly have not been able to protect themselves as adequately through the existing health insurance arrangements as have younger people. Today about one-half of the elderly population have no health insurance protection at

CHART 5.—OLD PEOPLE USE MORE HOSPITAL CARE THAN YOUNGER PERSONS



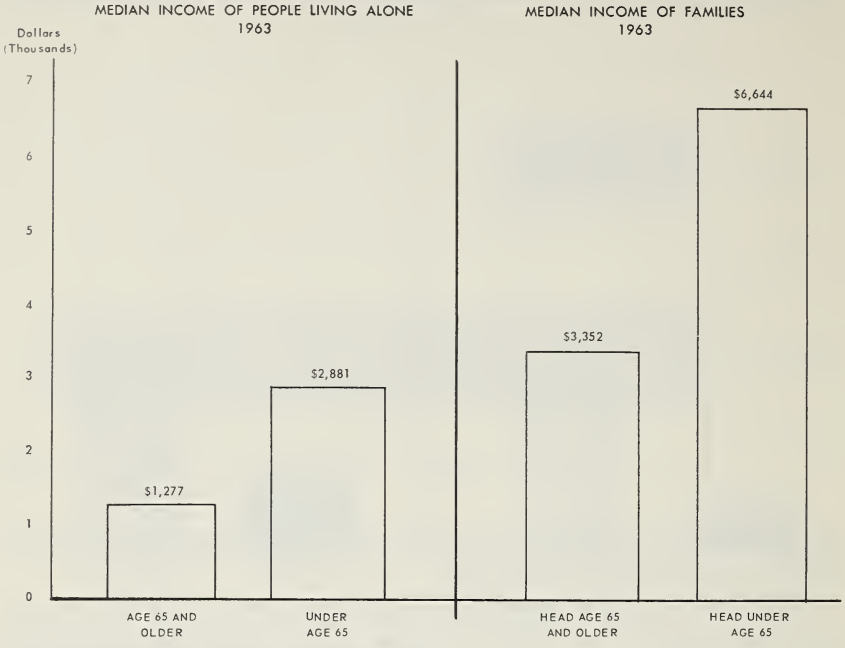
all and most who have some protection have only a minor part of their health costs covered by insurance.

Yet private health insurance cannot by itself meet the health insurance needs of the elderly because of the very high health costs and reduced incomes that are the general rule in old age. For example, older people use, on the average, three times as much hospital care as people below age 65 (chart 5). Because old age is a time of life when health costs are high, health insurance for older people is necessarily expensive. An additional factor contributing to the high costs of private health insurance for the aged is that most cannot obtain group coverage through a place of employment and must instead be insured on an individual basis. This form of coverage is necessarily very expensive—often costing twice as much as group coverage offering the same benefits. The income of older people, on the other hand, is only about half as high as the income of younger people in similar family situations (chart 6).

To close this serious gap in the economic security of older Americans, the Administration has recommended that a program of hospital insurance be made available to the aged. Inpatient hospital services (and certain alternatives to inpatient hospital care) were selected for coverage under the proposal because of the great financial strain placed on people who must go to the hospital.

Medical or hospital care through public assistance is not a sufficient solution to the widespread problem of the high cost of illness that most aged people face. Public assistance helps older people meet their health care costs only after they have used up most of their financial

CHART 6.—THE AGED HAVE ONE-HALF AS MUCH INCOME AS YOUNGER GROUPS



Median Income of Unmarried People, 1963.
Median Income of Families, 1963.

SOURCE: Current Population Survey, Bureau of the Census.

resources, and sometimes only after their children have demonstrated that they cannot help further.

Even after the aged prove that they are no longer self-reliant by meeting a means test, the assistance payments they receive are in many cases inadequate. Moreover, once an aged person has exhausted his resources to the point where he can qualify for assistance, it is practically impossible for him to replenish them and again become self-reliant. Also, a number of States do not have a program of medical assistance for the aged while many others have established very limited programs. During fiscal year 1964, five States which had one-third of the Nation's aged population accounted for 76 percent of the payments made through these medical assistance programs.

The problem is an urgent and growing one. The number and proportion of aged persons in our population are increasing. The cost of health care—and especially the cost of the most expensive element, hospital care—continues to rise. Medical technology continues to advance and health care becomes not only more valuable and more important but also more expensive.

What is needed, and what the Administration has proposed, is a system under which workers will pay contributions during their productive years toward protection against the high health costs that can be expected to beset them in their later years. With a hospital insurance program for the elderly in effect, private insurance could play an even more important role in protecting older persons than it does today. Many older people would be in a position to apply the premiums they now pay for inadequate protection against hospital costs to private insurance covering other health costs, such as physicians' care. Thus they would have, through a combination of public and private plans, a level of protection that only a very few of the aged can now afford.

While almost all of the aged will be able to stand on their own feet, as they strongly desire, when basic protection against hospital costs is made available through social insurance, medical assistance for the aged and other public assistance programs would be available to serve as a backstop to meet exceptional needs. And with the large cost of hospital care for older people removed as a burden on State finances, it would be possible to have more adequate medical assistance generally available.

BENEFIT LEVELS

Keeping benefits in line with the general level of the economy is one of the major needs of the program.

For about one-half of the present beneficiaries, the benefit represents practically their sole income; for almost all beneficiaries it represents the major source of income. Yet benefit amounts generally are now considerably below any reasonable standard of adequacy. The Bureau of Labor Statistics estimates a median cost of $1,800 for a "modest but adequate" level of living for an aged retired person living alone and of $2,500 for an aged couple. The average benefit for all retired workers under social security at the end of the year was $77 a month—$924 a year. For men who retired at age 65 or later, the benefit was about $88 a month, $1,050 a year. The average amount paid to a retired worker and his aged wife was $130 a month, $1,560 a year. Only a third of the social security beneficiary couples had incomes of $2,500 or more from all sources.

The last general benefit increase was enacted in 1958 and went into effect in January 1959. Since 1958, prices have gone up more than 7 percent and earnings have gone up 23 percent.

If benefits are to be kept in line with the general level of the economy, not only must benefit amounts be increased from time to time as earn-

ings and prices rise, but also the earnings base—the maximum amount of annual earnings which is taxable and creditable for benefits—should be increased from time to time as earnings levels rise. The last increase in the base, to $4,800, was enacted in 1958 and was effective beginning with 1959.

Failure to raise the earnings base as earnings levels rise would have two major effects. First, if the base were to remain the same, more and more workers as time goes on would have earnings above the creditable amount and these workers would have insurance protection related to a smaller and smaller part of their full earnings. Eventually the program would provide a flat benefit unrelated to actual earnings because almost everyone would be earning above the maximum creditable amount.

Second, unless the base were increased as earnings levels rise, the financial base of the program—the part of the Nation's payrolls that is subject to tax for its support—would decrease proportionately. This decrease in the taxable portion of total earnings in covered employment would mean that the contribution rate would have to be higher to finance a given level of benefits.

Furthermore, if, as price and wage levels rise, benefits at the higher levels were to be increased without increasing the contribution and benefit base, the money needed to meet the cost of the increased benefits would have to be secured solely from increases in the contribution rates applicable to lower-paid workers as well as those earning at or above the maximum. Since the tax is imposed at a flat rate, a greater part of the cost of the higher benefits would fall on the lower-paid workers—those earning less than the base—than would be true if the base were increased. It would seem, then, that when benefits are increased at the upper wage levels the fairest approach is to finance these benefit increases out of increases in the maximum contribution base.

Changes in the maximum contribution and benefit base have always lagged behind the rise in wage levels. The $3,000 base enacted in 1935 covered all of the earnings of about 97 percent of the workers in covered employment in 1938. Because no changes were made in the base while earnings levels were rising during the war and immediate post-war years, by 1950 only about 71 percent of covered workers had all their earnings covered under the $3,000 base. Nearly 94 percent of regularly employed men had all of their earnings covered in 1938, while in 1950 only 43 percent had all of their earnings covered.

The proportion of covered payrolls subject to tax has also lagged behind rising wages. In 1938, 93 percent of payrolls in covered employ-

ment was taxable under the $3,000 base, while less than 80 percent was taxable in 1950 at the $3,000 earnings base. Despite the increases to $4,200 enacted in 1954 and to $4,800 enacted in 1958, only 67 percent of all covered workers and 39 percent of regularly employed men will have all of their earnings counted toward benefits under the $4,800 base, and only 73 percent of total earnings in covered employment will be taxed for the support of the program in calendar year 1964.

DISABILITY INSURANCE

Although still relatively new, the provisions for disability insurance benefits now afford a large measure of protection to workers and their families against loss of earnings due to the long-term disability of the breadwinner. As of June 30, 1964, over 1.5 million persons were receiving benefits amounting to more than $97.5 million a month on account of their own disability or that of the family breadwinner.

There are, however, several significant gaps in the protection provided by the disability program, and proposals to close these gaps were under study during the year. Among the proposals considered, for example, was a provision under which benefits would be provided for workers who are totally disabled for extended periods but who may be expected eventually to recover.

Under present law, a totally disabled worker is not eligible for benefits unless his condition can be expected to be of long-continued and indefinite duration or to result in death. However, for the period of their incapacity the economic needs of totally disabled persons who may be expected to eventually recover are no less than those of persons with permanent disabilities.

Another proposal under study would provide benefits for widows who become totally disabled before reaching age 62. These younger disabled widows cannot qualify for benefits under the present law unless they have a child in their care, although disabled widows are, of course, in much the same position as widows aged 62 and over with respect to their ability to support themselves. The law provides for the payment of benefits to widows who are aged 62 or over because it is presumed that at age 62 a large number of them are no longer able to support themselves. A widow under age 62 with no minor children in her care may ordinarily be presumed to be able to work. Clearly, however, such a presumption is not valid if the widow is so severely disabled as to be unable to work.

Another gap in the protection afforded disabled persons affects workers who became disabled while they are still comparatively

young. Under present law, to be eligible for disability benefits a worker must have 5 years of covered work in the 10-year period before he becomes disabled. This requirement was designed to limit disability protection to persons who have had not only substantial employment but also sufficiently recent covered employment to indicate that they have been dependent upon their earnings. However, the effect of this requirement—at least 5 years of work in covered employment—in the case of a worker disabled while young is to make it extremely difficult, or even impossible, for him to qualify for disability benefits.

EXTENSION OF PROGRAM COVERAGE

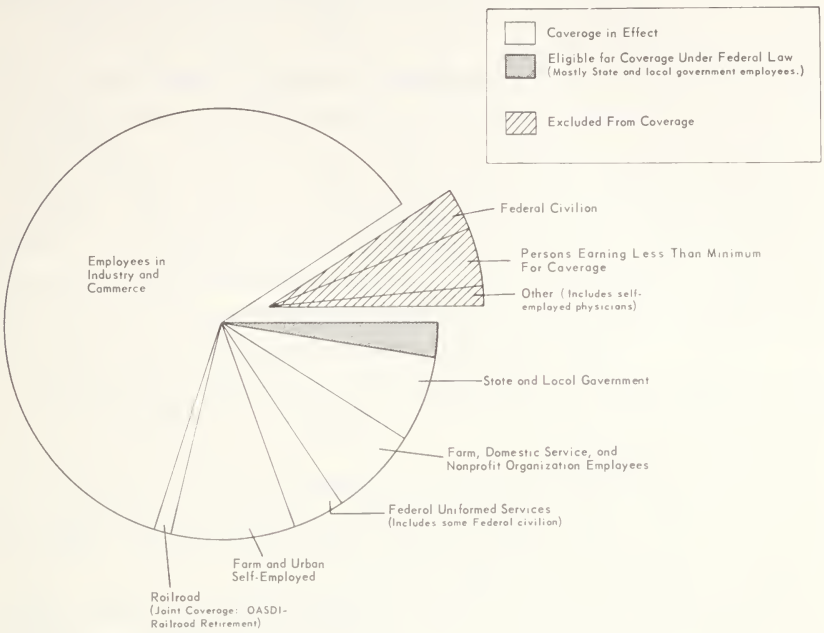
Social security can best carry out its purpose of preventing dependency and promoting economic security if it covers practically all who work. In every occupational group are many people who at one time or another will need social security protection. It cannot be foreseen, over the course of a lifetime, who will and who will not have this need.

The goal of universal coverage under social security has been largely achieved: The work of nearly 9 out of 10 persons in the paid labor force is covered. (See chart 7.) Of the work not covered by social security, about one-half is that of governmental employees—almost all of whom are covered under Federal, State or local staff retirement systems. Almost two-fifths of the work not covered is that of people who work irregularly—part-time household and farmwork performed by people who do not meet the relatively low earnings tests required for coverage in these types of employment—and self-employed people who do not have net earnings of $400 or more a year. Of the remaining work not covered by social security, the major exclusion is that of self-employment in the practice of medicine.

Thus, the great majority of the full-time workers who are still excluded from social security have coverage under governmental staff retirement systems. Coverage under such a staff retirement system, however, does not mean that social security protection is unnecessary. Most staff retirement systems, whether governmental or private, are designed primarily to provide protection for workers who have had long service with one employer. They may be quite inadequate for employees who have not completed long periods of service and for the large numbers of persons who change employers.

The largest group of full-time workers specifically excluded from social security coverage consists of the more than 2 million civilian

CHART 7.—NINE OUT OF 10 PAID WORKERS ARE COVERED BY OASDI



employees of the Federal Government whose jobs are covered only by the civil service retirement system or by one of the several smaller staff retirement programs.

The Federal staff retirement systems are mainly concerned with adequate retirement protection for those who make a career in the Federal service, and benefit amounts are closely related to the employees' length of service.

As a result, there are gaps in the protection of younger Federal employees and of those whose lifetime work is divided between the Federal service and other employment. Employees who die, become disabled, or leave Federal service before completing 5 years of service get no protection based on their Federal employment; even those who have more than 5 years of service may reach retirement without protection because they are allowed to take immediate cash refunds in lieu of deferred annuities if they leave Federal employment before retirement age.

Employees who leave Federal employment before retirement age have no disability or survivorship protection from their period of Fed-

eral service; the survivors or the disabled worker and his dependents may have no protection at all if the worker did not have enough employment after leaving the Federal service to become insured under social security. These gaps in protection could be filled through modifications in social security and in the Federal staff retirement programs.

While almost all employees of States and localities are eligible for coverage under the social security law, many have not yet been brought under Federal-State coverage agreements. Coverage for additional State and local government employment could be facilitated by making coverage available to policemen and firemen in the 31 States where such coverage is now prohibited by Federal law, and by making available to all States the option (now available to 18 States) of covering only those present members of State or local government retirement systems who wish to be covered, with compulsory coverage for all new members of the group.

The exclusion from coverage of self-employment in the practice of medicine affects about 170,000 physicians. The same reasons that led to coverage of other self-employed professional groups apply, in general, to doctors of medicine as well.

Among people whose work is not covered because they do not have the minimum earnings that are required for coverage in household employment, farm employment, or marginal self-employment, there are, of course, some who depend on that work for a living but either are not covered in some calendar quarters or, in a few cases, are not covered at all. To increase coverage of such regular workers would obviously be desirable. However, a large proportion of those who would be brought into coverage by lowering the minimum earnings that are required for coverage in the kind of work mentioned would be short-term or casual workers who ordinarily are not in the labor force and are protected as dependents of covered workers. Moreover, as earnings levels rise, there will be an automatic increase of coverage in these kinds of work.

COVERAGE OF TIPS AS WAGES

Another group for whom better protection needs to be provided is made up of over a million employees who derive a large part of their income from tips. Since tips received by employees are not generally covered by the program, these earnings cannot be credited to the employees' social security accounts. As a result, these employees' benefit amounts are not as high as they could be and often bear little relation-

ship to their previous income from earnings. A major difficulty in covering tips under the program is that employers generally do not know the exact amount of the tips paid by their customers to their employees, and the employers are reluctant to accept responsibility for reporting and paying the social security employer and employee tax on these tips.

The coverage of tips has been considered since the beginning of the program. The 1948 Advisory Council on Social Security recommended that tips be covered as wages. In 1949 an Administration-sponsored proposal defining tips as wages was passed by the House but not by the Senate. Various similar proposals were introduced in Congress during the next 10 years but not enacted.

In 1958, the Committee on Ways and Means, recognizing the need for covering tips and the problems involved, directed the Department of Health, Education, and Welfare and the Department of the Treasury to study and make recommendations on the problems. In 1960, after extensive study, the two Departments submitted a joint report to that Committee recommending the compulsory coverage of tips as wages, with the employee being required to report his tips to his employer. No congressional action was taken on this proposal. The matter was again raised this year, when the Committee on Ways and Means recommended to the House a proposal to cover tips as wages. This proposal, which was a part of the proposed Social Security Amendments of 1964, was passed by the House but was deleted by the Senate Committee on Finance. Other methods of reporting tips and paying the social security tax on them are still under study by the Social Security Administration.

Summary and Conclusions

On the eve of the 25th anniversary of the first payment of monthly benefits, the old-age, survivors, and disability insurance program has taken its place as a great public institution and an integral part of the Nation's social and economic life. It is a major source of support for the orphan, the old, the bereaved, the retired, the disabled—one out of ten in the entire population is receiving a social security check each month, and more than 9 out of 10 Americans in paid jobs are earning credits toward future benefits for themselves and their families.

However, benefit amounts are too small, and, above all, if the aged are to have real social security, the program needs to be extended to include protection against the high cost of hospital care for those past 65. The method of social security is well established and accepted; it can readily be used to make even greater contributions to the economic security of all Americans and to the *prevention* of poverty and destitution.

Table 1.—*Old-age, survivors, and disability insurance: Number of families and beneficiaries receiving benefits and average monthly benefit in current-payment status, by family group, end of December 1963 and December 1962*

[In thousands, except for average benefit]

Family classification of beneficiaries	December 31, 1963			December 31, 1962		
	Number of families	Number of beneficiaries	Average monthly amount per family	Number of families	Number of beneficiaries	Average monthly amount per family
Total	14,092.8	19,035.5		13,318.3	18,053.4	
Retired-worker families	10,263.3	13,262.2		9,738.5	12,674.9	
Worker only	7,605.7	7,605.7	$73.20	7,133.6	7,133.6	$72.50
Male	3,866.8	3,866.8	82.60	3,665.9	3,665.9	81.80
Female	3,738.9	3,738.9	63.40	3,467.7	3,467.7	62.60
Worker and wife (aged 62 and over [1])	2,368.2	4,736.5	129.40	2,323.9	4,647.8	127.90
Worker and wife (under age 65 [2])[3]	1.4	2.8	110.50	1.1	2.3	113.20
Worker and aged dependent husband	12.8	25.7	110.10	13.5	27.0	108.70
Worker and 1 or more children	77.1	175.1	120.80	73.5	167.7	118.20
Worker, wife (aged 62 and over [1]), and 1 or more children	29.3	90.5	160.60	27.2	83.7	157.60
Worker, wife (under age 65 [2]), and 1 or more children	168.6	625.5	149.50	165.7	612.5	148.80
Worker, husband, and 1 or more children	.1	.3	112.00	.1	.3	111.60
Survivor families	3,002.5	4,320.8		2,838.9	4,103.4	
Aged widow	1,983.8	1,983.8	66.90	1,835.0	1,835.0	65.90
Aged widow and 1 or more children	23.8	48.9	125.30	21.3	43.8	124.40
Aged widow and 1 aged dependent parent	.5	.9	165.90	.4	.7	166.60
Aged widow, 1 or more children, and 1 aged dependent parent	[4]	.1	254.10	0	0	0
Aged dependent widower	2.6	2.6	63.30	2.4	2.4	62.20
Widower and 1 or more children	.1	.2	115.40	.1	.2	113.20
Widowed mother only [3]	2.1	2.1	61.70	2.2	2.2	61.20
Widowed mother and 1 child	190.9	381.7	139.40	190.5	381.0	137.30
Widowed mother and 2 children	131.0	393.1	192.50	127.9	383.7	190.70
Widowed mother and 3 or more children	136.8	663.6	190.40	130.7	632.1	186.80
Widowed mother, 1 or more children, and 1 aged dependent parent	.5	1.7	205.60	.3	1.1	210.70
Divorced wife and 1 or more children	.5	1.3	174.70	.5	1.2	180.90
1 child only	309.5	309.5	63.50	314.5	314.5	62.00
2 children	111.1	222.1	129.40	108.5	217.0	126.40
3 children	45.7	137.1	172.20	43.2	129.5	166.70
4 or more children	29.0	134.8	168.40	26.4	121.6	167.80
1 or more children and 1 aged dependent parent	.8	2.0	160.20	.6	1.5	150.00
1 aged dependent parent	32.8	32.8	69.90	33.2	33.2	69.10
2 aged dependent parents	1.2	2.4	111.70	1.4	2.8	109.60
Disabled-worker families	827.0	1,452.5		740.9	1,275.1	
Worker only	598.6	598.6	88.60	542.4	542.4	88.00
Male	415.9	415.9	92.90	384.2	384.2	92.10
Female	182.7	182.7	78.80	158.3	158.3	78.10
Worker and wife (aged 62 and over [1])	26.3	52.6	138.10	25.3	50.6	137.10
Worker and wife (under age 65 [2])[3]	.6	1.1	141.80	[4]	[4]	143.70
Worker and aged dependent husband	.5	.9	121.20	.4	.8	125.00
Worker and 1 or more children	60.2	163.3	156.00	51.4	138.4	156.70
Worker, wife (aged 62 and over [1]), and 1 or more children	.4	1.3	174.50	.4	1.2	172.60
Worker, wife (under age 65 [2]), and 1 or more children	140.6	634.8	192.90	121.0	541.7	191.60

[1] Excludes wife aged 62–64 with entitled children in her care.
[2] With entitled children in her care.
[3] Benefits to children were being withheld.
[4] Less than 50.

Table 2.—*Old-age, survivors, and disability insurance: Number and amount of monthly benefits in current-payment status at the end of June 1964 and amount of benefit payments in fiscal year 1964, by State*

[In thousands]

Beneficiary's State of residence	Monthly benefits in current-payment status, June 30, 1964						Benefit payments in fiscal year 1964 [2]			
	Total		OASI [1]		DI [1]		Total	OASI [1]		DI [1]
	Number	Monthly amount	Number	Monthly amount	Number	Monthly amount		Monthly benefits	Lump-sum death payments	
Total	19,470.3	$1,296,140	17,954.1	$1,198,625	1,516.2	$97,514	$15,830,394	$14,364,624	$214,563	$1,251,207
Alabama	334.7	18,068	294.2	15,801	40.5	2,267	221,258	189,171	2,949	29,138
Alaska	8.1	489	7.6	456	.5	33	5,992	5,440	145	407
American Samoa	.2	4	.2	4	(3)	(4)	55	44	7	4
Arizona	133.2	8,870	119.1	7,930	14.1	941	107,333	93,887	1,373	12,073
Arkansas	228.3	11,933	204.9	10,669	23.4	1,264	145,354	127,703	1,751	15,900
California	1,563.4	110,135	1,458.8	102,389	104.7	7,746	1,335,117	1,217,944	18,432	98,741
Colorado	166.6	10,925	155.0	10,177	11.6	748	132,622	121,222	1,799	9,601
Connecticut	270.6	20,735	255.5	19,594	15.1	1,141	254,078	235,821	3,502	14,755
Delaware	43.5	3,018	40.0	2,787	3.5	231	36,713	33,289	492	2,932
District of Columbia	65.3	4,140	59.9	3,782	5.5	358	50,920	45,392	972	4,556
Florida	712.3	48,293	654.8	44,593	57.5	3,700	588,256	534,512	6,517	47,227
Georgia	365.2	19,688	314.8	16,986	50.4	2,702	242,032	203,867	3,764	34,401
Guam	.4	13	.4	12	(3)	1	135	121	5	9
Hawaii	41.9	2,652	38.8	2,446	3.1	206	32,070	28,913	436	2,721
Idaho	69.0	4,479	64.8	4,208	4.3	271	54,286	50,173	678	3,435
Illinois	1,057.1	76,479	988.6	71,501	68.5	4,978	936,133	857,987	13,701	64,445
Indiana	514.7	35,634	480.1	33,293	34.6	2,341	436,627	400,033	6,076	30,518
Iowa	334.7	22,123	318.8	21,095	15.9	1,027	268,920	252,498	3,295	13,127
Kansas	242.9	15,747	229.3	14,859	13.6	888	191,904	177,952	2,423	11,529
Kentucky	370.4	20,643	322.1	18,158	48.3	2,485	253,586	218,568	3,164	31,854
Louisiana	280.4	15,717	243.9	13,721	36.5	1,996	192,290	164,317	2,880	25,093
Maine	121.2	7,768	113.3	7,288	8.0	480	95,263	87,785	1,337	6,141
Maryland	258.3	17,418	240.4	16,200	17.9	1,218	212,781	193,739	3,330	15,712
Massachusetts	591.7	42,884	557.6	40,455	34.2	2,429	526,090	487,485	7,121	31,484
Michigan	801.8	58,946	743.4	54,774	58.3	4,172	721,139	658,028	9,389	53,722
Minnesota	380.2	25,060	363.0	23,930	17.2	1,131	304,454	286,031	3,786	14,637
Mississippi	232.6	10,966	207.4	9,712	25.1	1,254	134,272	116,385	1,781	16,106
Missouri	520.4	33,605	483.0	31,239	37.4	2,366	410,828	374,823	5,578	30,427

Montana	72.0	4,849	67.5	4,544	4.6	305	59,456	54,807	747	3,902
Nebraska	166.2	10,670	158.8	10,199	7.3	470	129,693	121,982	1,652	6,059
Nevada	24.0	1,677	22.4	1,559	1.6	118	20,204	18,337	361	1,506
New Hampshire	76.5	5,281	72.6	5,009	3.9	271	64,492	60,084	927	3,481
New Jersey	655.9	49,343	616.6	46,414	39.3	2,929	602,098	555,910	8,615	37,573
New Mexico	71.5	3,991	63.6	3,581	7.9	410	48,402	42,623	603	5,176
New York	1,882.2	139,164	1,760.7	130,291	121.5	8,873	1,699,775	1,561,775	23,884	114,116
North Carolina	451.6	24,488	399.5	21,647	52.1	2,841	299,505	258,815	4,394	36,296
North Dakota	65.9	4,064	62.7	3,888	3.2	176	49,646	46,878	522	2,246
Ohio	1,003.6	71,181	927.6	66,021	76.0	5,160	872,358	794,500	11,290	66,568
Oklahoma	259.5	15,724	235.5	14,265	24.1	1,459	190,824	169,923	2,605	18,296
Oregon	218.8	15,253	204.7	14,269	14.0	984	185,611	170,642	2,329	12,640
Pennsylvania	1,285.9	92,320	1,188.6	85,331	97.3	6,989	1,133,583	1,028,183	15,336	90,064
Puerto Rico	188.4	6,319	170.5	5,793	18.0	525	75,766	68,480	853	6,433
Rhode Island	102.3	7,305	95.5	6,819	6.8	486	90,093	82,516	1,265	6,312
South Carolina	217.2	11,473	187.7	9,883	29.5	1,590	140,977	118,316	2,349	20,312
South Dakota	77.7	4,797	74.1	4,589	3.6	208	58,198	54,816	732	2,650
Tennessee	379.8	20,517	339.1	18,278	40.7	2,239	251,085	218,822	3,371	28,892
Texas	869.1	51,111	797.0	46,800	72.0	4,311	621,988	557,576	8,843	55,569
Utah	72.6	4,904	68.2	4,614	4.4	289	59,322	54,943	787	3,592
Vermont	48.3	3,114	44.8	2,899	3.5	215	38,295	34,982	534	2,779
Virgin Islands	2.0	91	1.9	86	.1	5	1,082	1,019	12	51
Virginia	368.5	21,439	325.5	19,006	43.0	2,434	262,936	228,168	4,006	30,762
Washington	308.3	21,787	290.0	20,474	18.3	1,313	265,782	245,155	3,549	17,078
West Virginia	246.8	14,983	205.3	12,633	41.5	2,351	185,386	153,091	2,100	30,195
Wisconsin	465.6	32,213	439.9	30,453	25.7	1,760	392,226	364,642	4,948	22,636
Wyoming	30.2	2,005	28.3	1,884	1.9	121	24,268	22,419	321	1,528
Abroad	150.6	9,644	146.2	9,338	4.4	306	116,835	112,090	945	3,800

[1] Benefits under the old-age and survivors insurance (OASI) parts of the old-age, survivors, and disability insurance program are payable from the OASI trust fund to old-age (retired worker) beneficiaries and their dependents and to survivors of deceased workers. Benefits under the disability insurance (DI) part of the program are payable from the DI trust fund to disability (disabled worker) beneficiaries and their dependents.

[2] Distribution by State estimated.

[3] Less than 50.

[4] Less than $500.

Table 3.—*Old-age, survivors, and disability insurance: Selected data on benefits, employers, workers, and taxable earnings for specified periods, 1962–64*

[In thousands, except for average monthly benefit and average taxable earnings; corrected to November 5, 1964]

Item	1964	1963	1962
	Fiscal year		
Benefits in current-payment status (end of period):			
Number (OASI and DI) [1]	19,470.3	18,608.3	17,280.4
Number (OASI)	17,954.1	17,226.0	16,128.5
Number (DI)	1,516.2	1,382.3	1,151.8
Old-age (retired worker)	10,481.8	10,037.4	9,347.6
Disability (disabled worker)	861.9	790.4	679.3
Wife's or husband's (OASI and DI)	2,770.1	2,723.2	2,596.6
Wife's or husband's (OASI)	2,595.3	2,563.0	2,463.9
Wife's or husband's (DI)	174.8	160.2	132.7
Child's (OASI and DI) [2]	2,766.1	2,623.7	2,407.5
Child's (OASI) [2]	2,286.6	2,192.0	2,067.6
Child's (DI) [2]	479.5	431.7	339.9
Widow's or widower's	2,086.5	1,939.9	1,778.1
Mother's	467.3	456.6	434.6
Parent's	36.7	37.0	36.7
Total monthly amount (OASI and DI)	$1,296,140	$1,226,260	$1,128,166
Total monthly amount (OASI)	1,198,625	1,137,418	1,053,102
Total monthly amount (DI)	97,514	88,842	75,064
Old-age (retired worker)	810,153	769,481	710,736
Disability (disabled worker)	78,302	71,399	60,948
Wife's or husband's (OASI and DI)	109,695	107,251	101,821
Wife's or husband's (OASI)	104,082	102,086	97,489
Wife's or husband's (DI)	5,613	5,166	4,333
Child's (OASI and DI) [2]	127,209	119,702	110,061
Child's (OASI) [2]	113,610	107,425	100,277
Child's (DI) [2]	13,599	12,278	9,784
Widow's or widower's	140,543	128,786	116,317
Mother's	27,683	27,106	25,797
Parent's	2,554	2,535	2,487
Average monthly amount:			
Old-age (retired worker)	$77.29	$76.66	$76.03
Disability (disabled worker)	90.84	90.33	89.73
Wife's or husband's (OASI and DI)	39.60	39.38	39.21
Wife's or husband's (OASI)	40.10	39.83	39.57
Wife's or husband's (DI)	32.12	32.24	32.65
Child's (OASI and DI) [2]	45.99	45.62	45.71
Child's (OASI) [2]	49.69	49.01	48.50
Child's (DI) [2]	28.36	28.44	28.78
Widow's or widower's	67.36	66.39	65.42
Mother's	59.24	59.36	59.36
Parent's	69.65	68.58	67.68
Benefit payments during period:			
Monthly benefits (OASI and DI)	$15,615,831	$14,819,929	$13,495,123
Monthly benefits (OASI)	14,364,624	13,649,254	12,483,747
Monthly benefits (DI)	1,251,207	1,170,675	1,011,376
Old-age (retired worker)	9,632,944	9,139,200	8,339,881
Disability (disabled worker)	997,725	936,727	816,349
Supplementary (OASI and DI)	1,671,035	1,618,618	1,485,396
Supplementary (OASI)	1,417,553	1,384,670	1,290,369
Supplementary (DI)	253,482	233,948	195,027
Survivor	3,314,127	3,125,384	2,853,497
Lump-sum death payments	214,563	195,330	174,089
Workers insured for OASI benefits (midpoint of period—Jan. 1): [3]	92,100	90,500	89,100
Fully insured	91,400	89,900	88,500
Currently but not fully insured	700	600	500
Workers insured for disability (midpoint of period—Jan. 1): [3]	52,900	51,700	50,500
Estimated number of employers reporting taxable wages, 1st quarter of fiscal year	[4] 4,370	[4] 4,330	[4] 4,260
	Calendar year		
Estimated number of workers with taxable earnings	77,300	75,800	74,680
Estimated amount of taxable earnings	$235,800,000	$225,700,000	$219,250,000
Average taxable earnings	$3,050	$2,978	$2,936

[1] Benefits under the old-age and survivors insurance (OASI) parts of the old-age, survivors, and disability insurance program are payable from the OASI trust fund to old-age insurance (retired worker) beneficiaries and their dependents and to survivors of deceased workers. Benefits under the disability insurance (DI) part of the program are payable from the DI trust fund to disability insurance (disabled-worker) beneficiaries and their dependents.

[2] Includes benefits payable to disabled persons aged 18 or over—dependent sons and daughters of disabled, deceased, or retired workers—whose disability began before age 18.

[3] Estimates of insured workers have not been adjusted to reflect changes in insurance status arising from: (1) provisions that coordinate the old-age, survivors, and disability insurance and railroad retirement programs and (2) wage credits for military srevice. Estimates are only partially adjusted to eliminate duplicate count of persons with taxable earnings reported on more than 1 account number.

[4] Excludes agricultural employers.

Table 4.—*Federal credit unions: Assets, liabilities, and capital, Dec. 31, 1962, and Dec. 31, 1963*

Assets, liabilities, and capital	Amount			Percentage distribution	
	Dec. 31, 1963	Dec. 31, 1962	Change during year	Dec. 31, 1963	Dec. 31, 1962
Number of operating Federal credit unions	10,955	10,632	323		
Total assets	$3,916,541,104	$3,429,804,503	$486,736,601	100.0	100.0
Loans to members	2,911,159,474	2,560,721,896	350,437,578	74.3	74.7
Cash	217,052,772	193,923,961	23,128,811	5.5	5.7
U.S. Government obligations	88,059,567	84,095,259	3,964,308	2.3	2.4
Savings and loan shares	599,230,365	493,024,709	106,205,656	15.3	14.4
Loans to other credit unions	59,330,936	62,156,232	−2,825,296	1.5	1.8
Other assets	41,707,990	35,882,446	5,825,544	1.1	1.0
Total liabilities and capital	3,916,541,104	3,429,804,503	486,736,601	100.0	100.0
Notes payable	68,061,983	68,656,711	−594,728	1.7	2.0
Accounts payable and other liabilities	21,193,682	17,702,698	3,490,984	.5	.5
Shares	3,452,615,166	3,020,274,340	432,340,826	88.2	88.1
Regular reserve	191,355,233	160,365,239	30,989,994	4.9	4.7
Special reserve for delinquent loans	4,572,557	4,368,044	204,513	.1	.1
Other reserves [1]	11,975,628	9,598,729	2,376,899	.3	.3
Undivided earnings [2]	166,766,855	148,838,742	17,928,113	4.3	4.3

[1] Reserve for contingencies and special reserve for losses.
[2] Before payment of yearend dividend.

Table 5.—*Federal credit unions: Selected data on operations, as of Dec. 31, for each year 1934–63* [1]

Year	Number of operating Federal credit unions	Number of members	Assets	Shares	Loans outstanding
1934 [2]	39	3,240	$23,300	$23,100	$15,400
1935	772	119,420	2,372,100	2,228,400	1,834,200
1936	1,751	309,700	9,158,100	8,510,900	7,343,800
1937	2,313	483,920	19,264,700	17,649,700	15,695,300
1938	2,760	632,050	29,629,000	26,876,100	23,830,100
1939	3,182	850,770	47,810,600	43,326,900	37,673,000
1940	3,756	1,127,940	72,530,200	65,805,800	55,818,300
1941	4,228	1,408,880	106,052,400	97,208,900	69,484,700
1942	4,145	1,356,940	119,591,400	109,822,200	43,052,500
1943	3,938	1,311,620	127,329,200	117,339,100	35,376,200
1944	3,815	1,306,000	144,365,400	133,677,400	34,438,400
1945	3,757	1,216,625	153,103,120	140,613,962	35,155,414
1946	3,761	1,302,132	173,166,459	159,718,040	56,800,937
1947	3,845	1,445,915	210,375,571	192,410,043	91,372,197
1948	4,058	1,628,339	258,411,736	235,008,368	137,642,327
1949	4,495	1,819,606	316,362,504	285,000,934	186,218,022
1950	4,984	2,126,823	405,834,976	361,924,778	263,735,838
1951	5,398	2,463,898	504,714,580	457,402,124	299,755,775
1952	5,925	2,853,241	662,408,869	597,374,117	415,062,315
1953	6,578	3,255,422	854,232,007	767,571,092	573,973,529
1954	7,227	3,598,790	1,033,179,042	931,407,456	681,970,336
1955	7,806	4,032,220	1,267,427,045	1,135,164,876	863,042,049
1956	8,350	4,502,210	1,529,201,927	1,366,258,073	1,049,188,549
1957	8,735	4,897,689	1,788,768,332	1,589,190,585	1,257,319,328
1958	9,030	5,209,912	2,034,865,575	1,812,017,273	1,379,723,727
1959	9,447	5,643,248	2,352,813,400	2,075,055,019	1,666,525,512
1960	9,905	6,087,378	2,669,734,298	2,344,337,197	2,021,463,195
1961	10,271	6,542,603	3,028,293,938	2,673,488,298	2,245,223,299
1962	10,632	7,007,630	3,429,804,503	3,020,274,340	2,560,721,896
1963	10,955	7,499,747	3,916,541,104	3,452,615,166	2,911,159,474

[1] Data for 1934–44 on membership, assets, shares, and loans outstanding are partly estimated.
[2] First charter approved Oct. 1, 1934.

Table 6.—*Federal credit unions: Selected data on operations, by asset size and State, 1963*

Asset size and State	Number of credit unions	Number of members	Total assets (thousands)	Amount of members' shares		Amount of loans to members		
				Total (thousands)	Average per member [1]	Made during 1963		Outstanding as of Dec. 31, 1963 (thousands)
						Total (thousands)	Average [1]	
Total	10,955	7,499,747	$3,916,541	$3,452,615	$460	$4,017,102	$753	$2,911,159
Credit unions with assets of:								
Less than $5,000	621	47,272	1,584	1,481	31	1,548	128	985
$5,000 to $9,999	530	54,037	4,014	3,606	67	4,995	181	2,851
$10,000 to $24,999	1,226	170,704	20,794	18,361	108	27,201	258	15,513
$25,000 to $49,999	1,372	253,840	50,327	44,033	173	63,498	367	38,599
$50,000 to $99,999	1,665	430,897	121,168	105,570	245	138,336	483	92,121
$100,000 to $249,999	2,285	943,085	367,497	321,082	340	386,924	608	274,135
$250,000 to $499,999	1,399	1,021,932	492,752	431,032	422	507,638	702	370,334
$500,000 to $999,999	967	1,263,108	679,884	595,901	472	696,125	770	505,349
$1,000,000 to $1,999,999	544	1,262,190	755,291	665,625	527	781,072	826	565,283
$2,000,000 to $4,999,999	286	1,164,122	843,157	744,548	589	845,048	885	622,678
$5,000,000 and over	60	788,560	580,073	521,376	661	564,717	998	423,311
Credit unions located in:								
Alabama	185	104,824	49,785	42,352	404	61,109	661	39,858
Alaska	32	27,577	12,804	11,312	410	14,795	697	10,689
Arizona	84	86,983	48,271	43,150	496	55,472	868	41,628
Arkansas	64	28,731	11,523	10,164	354	18,619	678	9,437
California	1,106	1,015,808	601,294	533,445	525	611,996	810	473,297
Canal Zone	7	15,042	4,301	3,827	254	5,642	293	2,559
Colorado	150	104,214	56,378	49,800	478	58,414	903	44,741
Connecticut	307	236,781	153,743	137,560	581	128,392	749	91,806
Delaware	53	30,500	12,014	10,631	349	13,276	672	9,919
District of Columbia	150	279,333	137,003	122,701	439	144,045	857	110,555
Florida	258	241,442	112,383	98,334	407	126,871	661	91,455
Georgia	197	125,780	52,710	46,469	369	68,066	546	42,019
Guam	2	1,398	178	166	118	303	416	173
Hawaii	170	131,966	101,793	90,566	686	91,239	977	65,411
Idaho	58	32,941	17,690	15,535	472	18,298	838	14,840
Illinois	294	133,467	68,000	60,962	457	71,372	858	46,106
Indiana	389	233,723	139,143	123,740	529	134,077	776	86,568
Iowa	7	4,863	3,307	3,039	625	2,729	849	2,112
Kansas	81	69,796	41,019	36,584	524	38,446	915	33,172
Kentucky	81	35,552	13,137	11,751	331	15,586	577	9,660
Louisiana	334	158,314	78,477	68,622	433	83,062	690	57,370
Maine	128	75,640	37,015	32,070	424	39,450	734	27,588
Maryland	154	123,174	48,707	43,311	352	56,682	607	39,681

Massachusetts	310	166,803	73,594	65,653	394	71,294	626	51,254
Michigan	406	498,141	304,391	268,472	539	292,792	981	237,275
Minnesota	45	25,638	10,841	9,656	377	8,936	716	8,344
Mississippi	103	58,097	24,090	20,884	359	30,449	581	20,352
Missouri	48	30,508	15,174	13,605	446	14,059	691	10,267
Montana	111	44,315	20,738	17,630	398	17,264	774	15,703
Nebraska	97	60,671	30,288	26,664	439	28,851	783	22,332
Nevada	60	38,769	20,943	18,123	467	23,815	873	17,967
New Hampshire	28	23,252	10,075	8,736	376	10,652	647	7,686
New Jersey	467	276,035	133,229	117,068	424	110,947	650	83,238
New Mexico	57	53,439	31,925	27,751	519	40,548	882	25,721
New York	934	583,006	288,522	255,183	438	269,039	766	204,329
North Carolina	52	44,667	14,171	12,681	284	16,795	377	11,323
North Dakota	31	13,227	5,925	5,255	405	5,944	754	4,628
Ohio	596	375,177	186,585	165,875	442	180,085	766	129,719
Oklahoma	126	71,769	38,430	33,724	470	42,969	847	31,598
Oregon	195	97,613	49,361	43,239	443	53,625	860	40,067
Pennsylvania	1,078	590,130	275,268	238,343	404	282,316	706	185,833
Puerto Rico	42	19,597	7,335	6,369	425	8,530	437	6,022
Rhode Island	21	6,478	3,141	2,810	434	2,168	588	1,507
South Carolina	79	58,982	17,625	15,887	269	26,350	423	15,017
South Dakota	96	37,783	18,372	16,162	428	20,643	869	14,023
Tennessee	195	125,220	71,187	62,524	499	83,311	697	51,843
Texas	835	529,563	273,106	236,870	447	317,450	723	216,464
Utah	95	45,131	25,968	22,966	509	28,508	960	21,805
Vermont	2	1,351	672	548	406	571	442	368
Virginia	183	131,256	53,286	46,328	353	57,314	603	40,520
Virgin Islands	3	1,481	227	182	123	189	484	191
Washington	174	121,832	76,318	67,375	553	76,147	858	58,446
West Virginia	129	47,572	22,448	18,738	394	26,020	673	17,010
Wisconsin	4	1,296	557	497	384	578	801	437
Wyoming	62	23,098	12,075	10,626	460	11,002	905	9,224

[1] Based on unrounded data.

Welfare Administration

The Welfare Administration moved forward in 1964 to aid States and communities throughout the Nation to develop more comprehensive and coordinated approaches to welfare. Major emphasis was placed on the development of efforts to help persons who might otherwise become dependent to maintain their self-sufficiency, to help rehabilitate persons who are currently dependent, and to strengthen family life in order to achieve these objectives.

During its first full fiscal year of operation since it was established in January 1963, the Welfare Administration gave special attention to:

- strengthening Federal-State public welfare programs and relationships;
- strengthening Welfare Administration staff and operations in order to provide greater planning and technical services to aid States;
- encouraging and assisting States to take advantage of recent Federal legislation authorizing additional funds to enable States to extend and improve their welfare programs;
- encouraging public and voluntary agencies in the welfare field to develop coordinated efforts in attacking poverty and dependency;
- assisting in the development and support of research and demonstration projects designed to provide new information on welfare problems and new approaches to their solution;
- assisting in the development and support of training and recruitment programs designed to provide new professional workers in the welfare field and to improve the qualifications of present welfare workers.

Highlights of 1964

Among the Welfare Administration's major actions and accomplishments in fiscal 1964 were the following:

1. *Improving assistance and services.*—Significant progress was made in providing more adequate assistance and services through Federal-State public welfare programs under recent amendments to the Social Security Act in the areas of aid to the aged, blind, and disabled; medical assistance for the aged; aid to families with dependent children, including children of unemployed parents; community work and training; assistance for children in foster care; day care; maternal and child health and crippled children's services; and mental retardation.

States and communities were encouraged to develop broader programs to help meet the needs of their senior citizens and were provided with information and technical services by the Welfare Administration.

Several communities received Federal support in the development of planning and action programs to prevent and combat juvenile delinquency, and grants for training persons in youth work were made to a number of colleges, universities, and other nonprofit agencies.

Social services designed to help individuals and families move toward greater independence which received special attention during 1964 included: day care for children of working mothers; homemaker services for deprived families and the elderly; and counseling of school dropouts.

2. *Eligibility for assistance.*—Federal policy was revised to require more frequent determinations of the eligibility of families being aided under Federal-State public assistance programs. Under the new policy, eligibility must be determined at least once every 6 months rather than once a year. This is designed to guarantee greater validity of determinations and, because of a caseworker's more frequent contacts with each family, to assure greater awareness of family needs and greater opportunities for constructive counseling.

3. *Quality control.*—In a related move, a new nationwide system known as quality control was established in every State public welfare agency to assure that eligible applicants are not erroneously denied assistance and that public welfare funds are spent in strict accordance with Federal and State laws. By applying to public welfare the type of quality control systems used by private industry to maintain high standards in manufacturing operations, State agencies are able to discover the sources of any errors and to take appropriate measures to prevent their recurrence.

4. *Federal-State cooperation.*—Federal staff worked closely with State welfare agencies during the year in improving clarity of policies, efficiency of procedures, and adequacy of staff. Special emphasis was placed on developing greater utilization of existing community resources, both public and voluntary, to help meet the welfare, health, and educational needs of individuals and families.

Welfare Administration staff teams—composed of specialists in public assistance, child welfare, and aging—visited every State public welfare agency to confer with State directors and other principal staff members about each agency's major needs and problems and possible steps toward strengthening of programs. Several comprehensive orientation programs were held in Washington for newly appointed State public welfare directors.

Special attention was given to State problems of recruiting adequate welfare staffs to carry out programs effectively. Information on recruitment procedures used by various States was collected and communicated to all States. Materials were issued to encourage State and local welfare agencies to offer summer jobs to college students interested in careers in public welfare and to encourage students to apply for such jobs. States were encouraged to take advantage of federally aided educational leave programs to enable staff members to improve their qualifications.

5. *Strengthening Federal services.*—A number of steps were taken to strengthen the Welfare Administration in order to be able to provide better services to States and communities.

Responsibilities of Welfare Administration field staff were expanded. Special consultants were added to the immediate staff of the Commissioner of Welfare in the areas of medical care and cooperation between public and voluntary agencies. Staffs of the various operating units of the Welfare Administration were also strengthened.

The Division of Research in the Office of the Commissioner was fully staffed. Publication was begun in July 1963 of the monthly journal *Welfare in Review*, designed to communicate the wealth of research data and related information developed and compiled by the Welfare Administration.

A second annual meeting was held of public information officers from State public welfare agencies to review areas of urgent importance to States, such as campaigns for recruiting adequate welfare staffs, and to explore ways in which Welfare Administration information activities could be developed to assist States in their programs.

6. *Supporting research and training.*—The Welfare Administration awarded grants totaling $26.6 million during fiscal 1964 to support 232 research and demonstration projects and 202 training programs. The

recipients of the grants were public welfare and health agencies, nonprofit organizations, and colleges and universities.

The research and demonstration grants support experimental and pilot projects designed to lead to new knowledge and methods of solving problems related to public assistance, child welfare, juvenile delinquency, maternal and child health, crippled and mentally retarded children, and the aging, and to improved administration. They emphasize the development of preventive programs to help persons avoid becoming dependent and of rehabilitative programs for persons who are dependent. Various projects, for example, deal with job counseling and placement of young persons, school dropouts, and literacy training. Others are concerned with such areas as the rehabilitation of children with multiple handicaps and reducing the incidence of mental retardation.

The training grants help to finance graduate study in social work and related fields and to support special training projects for personnel in public welfare, child health and welfare, and juvenile delinquency prevention and control.

In addition to projects in the United States, the 1964 grants included 16 international research projects in social welfare and maternal and child health. Financed from U.S.-owned foreign currencies, the projects are designed to be of value both to the foreign countries involved and to the United States.

7. *Participation in overall planning.*—The Welfare Administration played an important role in a variety of broad Federal efforts which involved welfare as a major component. These included, among others: emergency assistance for Alaska following the 1964 earthquakes; proposals for reducing poverty and dependency in Appalachia; rehabilitation programs for men rejected for military service; and planning for the war on poverty.

Five Major Units

The Welfare Administration was established in order to bring together in one administrative organization the Department's principal activities in the welfare field. This reorganization reflected the increased responsibilities in public welfare resulting from the 1962 public welfare amendments to the Social Security Act and other recent legislation.

Most of the programs of the Welfare Administration are carried out through its five constituent units: the Bureau of Family Services; the Children's Bureau; the Office of Aging; the Office of Juvenile Delinquency and Youth Development; and the Cuban Refugee Program.

The activities and accomplishments of each unit are described in greater detail on the following pages.

The purpose of all of these programs is to help our Nation, States, and communities to meet adequately and equitably our social welfare needs, to provide new opportunities for people, and to prevent and reduce the poverty and dependency which are so costly not only to the individuals involved but to the Nation.

Bureau of Family Services

The Federal-State-local public assistance partnership made significant progress during 1964 in improving its efforts to help needy people.

In fulfilling its responsibility for Federal leadership, the Bureau of Family Services concentrated on encouraging States to carry out the broad changes authorized by the Public Welfare Amendments of 1962. Among them were:

- strengthening and expanding the social services that help dependent people move toward self-care and self-support;
- recruiting and training the increased number of welfare workers that are needed to provide these services; and
- promoting experimental or demonstration programs designed for finding better ways of dealing with public welfare problems.

The Bureau's other important activities during the year were related to the on-going job of improving and extending the public assistance programs. They included: increasing administrative efficiency in States through such measures as the quality control program; encouraging eight additional States to establish programs of medical assistance for the aged; urging better coordination of local public welfare and law enforcement agencies in the location of absent parents and obtaining support for their families; and promoting the improvement of aid and services to families of the unemployed.

Strengthened Social Services

As fiscal year 1964 ended, all States but one were providing some part of the social services prescribed by the Secretary of Health, Education, and Welfare to reduce and prevent dependency. By providing all of a minimum "package" of services, States received a 75 percent Federal share—instead of 50 percent as formerly—of the cost of the improved services.

Earlier, every State had complied with the two mandatory provisions of the 1962 Public Welfare Amendments: (1) that a social study

be made of each child receiving aid to families with dependent children (AFDC) to determine which have special problems or need protection and (2) that AFDC and child welfare services be coordinated on State and local levels in such areas as program planning, staff development, direct service, and community planning.

Throughout the year, Bureau staff devoted considerable efforts to reviewing State plan materials on social services. One of the problems that became evident was that many States did not have sufficient program planning staff to carry out their commitments under their social service plans. To help overcome this difficulty, the Bureau sent to all States a guide for program planning for social services. Another move was to plan a national meeting with State welfare administrators and State staff responsible for program planning. The meeting was held shortly after the end of the fiscal year, and all but four States were represented.

To help States improve the quality of the mandatory social studies of all AFDC children, the Bureau's welfare services specialists prepared a guide for conducting these studies. They also prepared guides for use in social studies of adults, thus facilitating the provision of prescribed social services under all of the public assistance titles. The guides were sent to States with a request for a year's testing to determine their usefulness.

In the fall of 1963 the Bureau held a series of meetings to clarify for regional staff the new social service and staff development policies and to discuss next steps in assisting the States in progressive program development. Regional staff of the Children's Bureau also participated. It was concluded that the major areas in which State program development directors needed further technical assistance were community planning, volunteer services, homemaker services, and the development of training materials.

The Bureau of Family Services and Children's Bureau continued joint efforts to clarify policy and guide materials on public assistance and child welfare service responsibilities and relationships under the 1960 and 1962 amendments. Policy questions were discussed at a joint field staff meeting for the purpose of identifying areas in which further guides are needed by States in effecting the coordination of services under aid to families with dependent children and child welfare services.

CASE CLASSIFICATION

To help States improve their program planning and staff utilization, a special Bureau committee drafted preliminary guide materials for a case classification system that could be administered by local agencies. The objective of the system is to enable agencies to screen their case-

loads and identify cases that require various kinds of services. It would then be possible to assign workers with the kind and degree of skill required to deal with these cases.

The committee also is developing a case schedule for nationwide use by States. It would be used to summarize key social information from social studies, for case action controls, and for feedback to guide agency administration and community planning. The committee is exploring the use of the schedule for simplified case analysis and recording, and for operational research purposes, including continuing evaluation of casework goals and accomplishments.

COMMUNITY WORK AND TRAINING

As fiscal year 1964 ended, more than 15,000 adults were engaged in community work and training programs in nine States: California, Illinois, Kansas, Maryland, Ohio, Oregon, Pennsylvania, Washington, and West Virginia. A tenth State, Kentucky, was providing community work and training in nine Appalachian counties under a demonstration project. The 15,000 families included about 57,000 children and 14,000 other adults. All were recipients of aid to families with dependent children.

Most of the 10 States provided education, training, and other services to improve the employability of the work-project participants. To encourage wider adoption of the program, Bureau staff made consultation and factfinding visits to a number of States. Staff also maintained liaison with such related Federal agencies as the Area Redevelopment Administration; the Office of Rural Areas Development, of the Department of Agriculture; the President's Appalachian Regional Commission; and the President's Task Force on the War on Poverty, forerunner to the Office of Economic Opportunity.

SERVICES FOR THE AGING

The Bureau discussed with the American Public Welfare Association, the National Council on the Aging, and several State departments of public welfare the design for a series of demonstration projects. The purpose of the projects is to clarify and evaluate the local welfare agency's role in carrying out protective services for the aging and to test some of the methods and techniques involved in the provision of protective services.

A Bureau staff member served as chairman of the Task Force on Protective Services of the President's Council on Aging and carried major responsibility for developing a brochure on protective services. A report on guardianship status of beneficiaries of Federal programs who are unable to manage their money was completed and submitted to the President's Council on Aging. Guides on the purpose and

standards of protective services were published late in the fiscal year. Guides for foster family care were under development.

Staff have been involved in the review of State plan and other materials relating to removal of older persons from State mental hospitals and caring for them by other means. In Ohio, Pennsylvania, and California special plans and proposals have been made. The Bureau's specialists in services to the aging are accumulating examples of State experience as a basis for reviewing existing policy on assistance to individuals in public institutions, services to older persons removed from institutions, and establishment of geriatric units in local public welfare agencies.

COMMUNITY PLANNING

A preliminary statement outlining the role of the local public welfare agency in community planning was developed for use of State public assistance programs electing to provide prescribed services under the 1962 amendments. Factfinding visits were made to four States to observe local planning activities. A Bureau staff member was appointed to serve as the Department liaison officer to the Interdepartmental Study Group on Rural Development.

Other activity in the field of community planning included assistance in the development of several community planning demonstration projects. Bureau specialists helped to establish a training program for community planners in North Carolina. The results of this program are to be made available to other State community planning personnel. Close working relationships were maintained with the several national community planning groups, out of which it is anticipated that some national conferences and meetings will emerge. A guide on community planning is in preparation.

VOLUNTEER SERVICES

A Welfare Administration task force to provide support for volunteer services in public welfare was established under the leadership of a Bureau staff member. This specialist provided consultation to several States, participated in national and regional meetings on volunteer services, and carried out factfinding explorations with State agencies and related programs.

HOMEMAKER SERVICES

A Bureau staff member served as conference secretary for the National Conference on Homemaker Service, held in Washington, D.C., in the spring of 1964. The meeting attracted over 700 participants. The Committee on Homemaker Services of the Welfare Administration has been active in promoting and coordinating homemaker serv-

ices. A number of interpretive materials were issued to States during the year.

SERVICES TO THE RETARDED

In the field of mental retardation, the Bureau's emphasis has been on the implementation of Public Law 88–156, which authorizes grants to States "to plan for and take other steps leading to comprehensive State and community action to combat mental retardation."

A member of the Bureau serves on the Secretary's Committee on Mental Retardation and participated in the White House Conference on Mental Retardation in September 1963. The same staff member is assigned to work with the newly formed Mental Retardation Branch of the Division of Chronic Diseases, Public Health Service. She serves as a member of the committee that reviews States' applications for mental retardation planning grants. This Bureau specialist also provided individual consultation to three State agencies to assist them in developing acceptable plans.

CONCERTED SERVICES PROJECTS

A member of the Bureau's staff continued to serve as cochairman of the Joint Task Force on Concerted Services in Public Housing, sponsored by the Department of Health, Education, and Welfare and the Housing and Home Finance Agency. Other Bureau staff also serve on the several committees of the task force. The objective of the task force is to raise the level of living—economic, social, educational, and cultural—of the approximately 2 million persons living in public housing developments in more than 2,100 communities in the United States.

During the year, three additional concerted services demonstration projects were started. They were located in public housing developments in New Haven, Conn.; Pittsburg, Calif.; and Miami, Fla. The first such project, in St. Louis, Mo., has been considerably expanded. The Joint Task Force's committee on use of program resources, of which a Bureau staff member is chairman, published the pamphlet *Services to Families in Public Housing*. It has had a second printing and approximately 40,000 copies have been distributed. A selected bibliography has been prepared as a supplement to this publication.

LOCATING ABSENT PARENTS

During the year, the Bureau called a second meeting with judges, attorneys, and representatives of public welfare departments to consider the coordination of welfare departments and law enforcement agencies. A report of the meeting was issued in a booklet form. An outline was developed for a demonstration project involving better coordination of community efforts to locate absent parents. A sched-

ule was issued to State agencies for a report on their activities in locating parents.

The Veterans Administration and the Department of Health, Education, and Welfare agreed upon an experimental 12-month project to test the feasibility of using information from Veterans Administration records to locate absent parents of children receiving aid to families with dependent children. The results will be evaluated to determine the applicability of the procedure throughout the Nation.

CHILDREN IN FOSTER CARE

With participation of the Children's Bureau, the Bureau completed the first phase of factfinding and evaluation of States' experience in implementing the 1961 and 1962 amendments authorizing foster care of children under the AFDC program. A report was made to Congress on use of public agencies other than public welfare for placement of AFDC children in foster care. Following further planning with the Children's Bureau, factfinding was continued in States that elected to provide institutional care under aid to families with dependent children.

As the year ended, 23 States were making AFDC payments in behalf of children receiving foster care. Nearly 5,000 children were receiving an average of $72 per month in assistance payments. By far the largest proportion were in foster family homes, with the remainder receiving institutional care.

Staff Development

To further the growth of State staff development efforts, the Bureau assigned a specialist in staff development to four of the nine regions. The effectiveness of this move lies in the greater accessibility and continuity of consultative services. Also, the specialists are acting as a clearinghouse for the interchange of ideas and information between the community, the State, and the region. In the four regions, they have received far more requests for assistance than had originally been anticipated. Five other specialists are assigned to work out of the Washington office, serving the other five regions.

In cooperation with the National Commission for Social Work Careers, the Bureau continued to promote recruitment for professional careers in public welfare. This brought to the surface the problem of insufficient facilities in schools of social work to meet present and future needs for trained workers. The Bureau therefore recommended that the schools make major expansions in their physical plants, faculties, and field instruction.

The Bureau has also encouraged States to develop summer career programs for college students to interest them in employment with public welfare agencies.

Reports from State agencies indicate that they are continuing to make progress toward determining how many training personnel are needed, developing internal agency training programs, designating the positions that require professional or technical education, and planning how to fill these positions.

Bureau specialists in staff development continued to prepare guide materials for use with State training personnel. One, for instance, is a syllabus that was prepared for the training of local directors of welfare agencies. Two other projects nearing completion are "Educational Standards for Functional Responsibility" and "Interim Guides for Functional Job Assignments."

During the past fiscal year, the Children's Bureau and the Bureau of Family Services held two training workshops for newly appointed State and local staff development personnel. The objective was to present basic knowledge that could be used in teaching the skills required for any job in public welfare operations.

The Bureau continued to participate in the Department of Health, Education, and Welfare Task Force on Social Work and Manpower. One of the contributions was preparation of a report on need for research in manpower problems.

Administration

As fiscal year 1964 began, Bureau staff were heavily engaged in encouraging and helping States to correct the administrative problems that had been found by the nationwide review of eligibility in the program of aid to families with dependent children. By midyear, all 50 States were carrying out a three-pronged followup on the findings of the review.

QUALITY CONTROL SYSTEM

The first of these measures was the new system of quality control of case actions. By January 1964 it was in effect in every State. The purpose is to insure that the Nation's annual expenditure of $4.5 billion for public assistance conforms strictly with Federal and State laws and that the program serves all those for whom it is intended.

Under the new system every State public welfare agency has a fully manned quality control unit which continuously reinvestigates a statistical sampling of all eligibility decisions made by local public assistance agencies throughout the State. The sampling includes decisions where assistance was denied as well as those where assistance was approved. Thus, the system assures that no eligible person is turned

away and no ineligible person receives aid. It also makes sure that the amount of the assistance payment is neither too little nor too much.

Each reinvestigation of eligibility includes a visit to the home of the person involved and a careful evaluation of living expenses, income and resources, and other factors affecting eligibility. When the State quality control unit discovers errors in local agency case actions, not only is the individual error corrected, but any necessary administrative changes are made to prevent such mistakes from happening again. The quality control system is under the close guidance of Bureau field staff.

OTHER EFFORTS BY STATES

The second of the Bureau's actions to carry out the findings of the 1963 nationwide eligibility review was to require States to redetermine the eligibility of all AFDC recipients every six months instead of once a year, as formerly. One reason for this move was the fact that most of the ineligibility and overpayment found in the 1963 review resulted from the frequent changes in circumstances that occur in AFDC families. The new requirement automatically doubles the number of redeterminations made each year in most States.

The third major move to carry out the 1963 review's findings was the actions by each State to correct its own eligibility determination problems. The Secretary of Health, Education, and Welfare directed each State to develop and put into effect a plan of corrective action directed toward its own particular problems. With the assistance of Bureau of Family Services field staff, each State determined the sources of any errors, developed plans to remedy them, and drew up a time schedule for putting the plans into effect.

Many States began the process of assessment and corrective action in advance of the Department's call for action. In addition, several States had already begun to hire additional caseworkers and build up their staff training programs, in response to the 1962 Public Welfare Amendments.

Considerable progress was reported by States in correcting their eligibility programs. In brief, the measures taken fall into these classes:

- clarification and improvement of program policies and instructions (simplifying assistance standards for determining family need and improved instructions for recording eligibility substantiation);
- strengthening personnel resources (increasing the number of staff, extending training, and improving supervision); and
- improved administration of public welfare (agency reorganization and staff reassignment, and more efficient management and controls).

The Bureau's program operations staff took strong initiative in assuring that States complied with Federal quality control requirements. They provided extensive consultative advice and training to all States. Regional training meetings for State quality control staff were held in Regions I, III, V, VI, and IX. In the other four regions, training was carried out through State-by-State visits. Central office specialist staff visited all but three regions in the installation process.

SIMPLIFIED PROCEDURES

Further effort to improve the administration of public assistance included sponsorship of a work group of State and local public welfare staff to plan ways of simplifying the job of the caseworker. This group, meeting with administrative specialists of the Bureau, identified major problems and complexities that impede caseworkers in the performance of their job. Among the recommendations were greater use of auxiliary personnel to free caseworkers from clerical duties, simplification of procedures and forms, and greater experimentation, including use of demonstration projects to try out new and simplified administrative methods.

The Bureau's specialists on administration and on welfare services met with States in Region VI to discuss simplification of standards of assistance.

To help States purchase and use most effectively the many new kinds of automatic data-processing equipment, the Bureau appointed a committee to develop policy on the rental or purchase of data-processing equipment. Under consideration is a proposal to require that States have feasibility studies made by qualified systems analysts as a condition for Federal participation in the cost of purchasing or renting the equipment.

Bureau consultants assisted in systems surveys of the welfare departments of Kentucky, Pennsylvania, and North Carolina. The consultants helped to organize and direct task force studies of automatic data-processing operations to develop the framework for new ADP systems or to solve special ADP problems.

ADVICE AND ASSISTANCE

In advising and assisting States, the Bureau's regional staff concentrated on implementation of the 1962 amendments and the general improvement of public assistance administration.

A regional office team visited each State agency to explore ways in which existing public welfare resources at both State and Federal levels may be used to combat poverty. The team consisted of the Bureau's regional representative (who is also the principal Welfare Administration regional representative) and the regional representa-

tives of the Children's Bureau and Office of Aging. The team reviewed the current situation in the State, the major obstacles to full utilization of Federal resources, and current planning for greater utilization of existing resources. The comprehensive reports of these visits provide excellent blueprints for future work.

A draft statement on coordinated field supervision of public assistance and child welfare services in States was distributed to regional representatives of the Bureau of Family Services and the Children's Bureau for use in consultation with States. Guides were developed on State responsibility for local operations and on policy manual improvement. Others underway were guides on case recording and administrative aides to the caseworker.

Typical of the technical assistance provided to States was the help given by Bureau staff in reorganizing one State department of public welfare. Bureau staff recommended organizational changes aimed at stronger coordination of the department's units. Staff also urged the State to centralize its staff functions—such as personnel, research, and financial management—to permit greater effort on program development and supervision of operations.

Chief fiscal officers of State public welfare agencies met with the Bureau of Family Services and other Welfare Administration units to explore ways of simplifying fiscal procedures and methods. Topics discussed included transmittal of public assistance recipients' checks to them in the authorized time, prompt payment of bills for medical services provided recipients, and maintaining a recordkeeping and reporting system that accurately reflects expenditures.

GRANTS TO STATES

In fiscal 1964, the Bureau of Family Services channeled $2.9 billion in Federal grants to States for public assistance. States and local governments furnished about $1.6 billion, for a total of $4.5 billion spent throughout the Nation during the year. Administrative costs for the Bureau during this period were only $4.5 million—or less than one-sixth of one percent of the Federal costs of the programs.

The regular schedule of checking and processing the States' quarterly estimates and expenditure statements, and the monthly certification of grants for payment by the U.S. Treasury Department continued throughout the year for the 228 public assistance programs in operation in the States and other areas.

In the administration of Federal public assistance grants, one of the Bureau's main concerns during 1964 was the continued review of State plan material resulting from the 1961 and 1962 amendments to the Social Security Act. States submitted plans at an accelerated rate in a wide range of program areas, particularly social services.

Demonstration Projects

Through orientation meetings, conferences, and State letters, the Bureau urged State public welfare agencies to make greater use of demonstration projects to provide new approaches, techniques, and methods to reduce or prevent dependency. The projects were authorized by Section 1115 of the 1962 amendments to the Social Security Act. By the end of the year, 97 applications had been received, 36 approved, and $1,305,000 in special demonstration project funds obligated.

The 36 approved projects were from 21 States and the District of Columbia, and included 10 back-to-school programs, 5 vocational training projects, and 3 service projects on behalf of aging citizens. Other projects covered various phases of welfare services, training and education of social workers, and the administration of public assistance agencies.

The Bureau's Advisory Committee for Demonstration Projects, which is made up of eight officials from several of the Nation's leading educational and research institutions, as well as from State public assistance departments, formulated criteria and priorities to guide the program.

The projects ranged in size from a $2,400 back-to-school program in Vermont to a $405,000 program for unemployed parents in Kentucky.

The following examples illustrate the wide variety of demonstration projects approved during the year. A North Carolina project provides funds for 25 community services consultants to coordinate local and State resources for needy persons. A West Virginia project aids vocational rehabilitation in an urban area of that State. A project in Maine provides summer camp experience for several hundred children from families receiving public assistance. In Georgia, a demonstration project provides academic and vocational training to AFDC youngsters between the ages of 16 and 19.

As the fiscal year ended, 42 demonstration projects were in various stages of preparation and action in the States.

Medical Care

During fiscal 1964, the Federal and State governments took numerous steps to insure the provision of adequate medical care to needy people. With the costs of medical care continuing to rise, public welfare agencies in many States increased payments and improved medical services to public assistance recipients.

The program of medical assistance for the aged (MAA) was put into effect in eight more jurisdictions in 1964. This brought the year-end total to 37 States and other jurisdictions. Shortly after the close

of the year, new State programs raised the total to 41. Only 7 States then lacked the legislative authority for MAA. The program, authorized by the Kerr-Mills amendments to the Social Security Act, had gone into effect in October 1960.

A development with great potential for providing medical care to the needy was the move to initiate retroactive vendor payments by 18 States. This 1962 amendment allowed Federal participation in the costs of retroactive vendor payments for medical care under various programs and for varying periods up to 3 months before the date of application.

Initiation of the new combined program of aid to the aged, blind, and disabled (AABD) by 12 States increased the rate of Federal participation in medical vendor payments under the aid to the blind and aid to the disabled programs by applying the same formula used in old-age assistance to this unified program. Uniform eligibility requirements and use of the same standards of assistance for these adult groups are substantial advantages.

The comprehensive document developed last year for reviewing medical services in all assistance categories, including medical assistance for the aged, was used by Bureau staff to complete a pilot review in Pennsylvania. The review experience is providing the basis for revising the document so that it can be used by States to report on medical care programs.

A review of medical factors of eligibility in the program of aid to the permanently and totally disabled (APTD) was completed in the State of Washington; a similar review was done in the District of Columbia.

This year, the Bureau completed a study and review in Texas of the State welfare agency's contractual arrangement with Blue Cross-Blue Shield for the administration of its medical care program. This analysis was of particular importance because it can serve as a model for future reviews of such arrangements.

Technical assistance to States was an important Bureau method for improving the quality of medical assistance and services to needy and low-income people. The Kentucky departments of health and welfare, according to contract, share a joint responsibility for the provision of medical care to public assistance recipients. A Federal team assisted these agencies in setting up an automatic data processing system to expedite payment to vendors and supply the range of facts and figures that are needed to successfully operate a program of this scope and importance. Consultants on medical care administration from the Bureau visited several States to assist in the orientation of new State medical directors and medical staff members. Bureau personnel also

assisted States in improving nursing home care for assistance recipients.

To extend and improve hospital services to recipients of old-age assistance and medical assistance for the aged, the Bureau and the American Hospital Association sponsored two regional meetings of State welfare directors and State hospital association officials. They were held in Atlanta, Ga., and Boston, Mass. The objective was to clarify the mutual responsibilities of hospital and State welfare personnel and to explain the role of the Bureau under the Kerr-Mills Act.

The Bureau's advisory committee on medical matters met in Washington, D.C., twice during the fiscal year. Among the topics considered were: the medical needs of children, care of the mentally retarded, use of health insurance, the determination of medical eligibility, and pharmaceutical services for public assistance recipients.

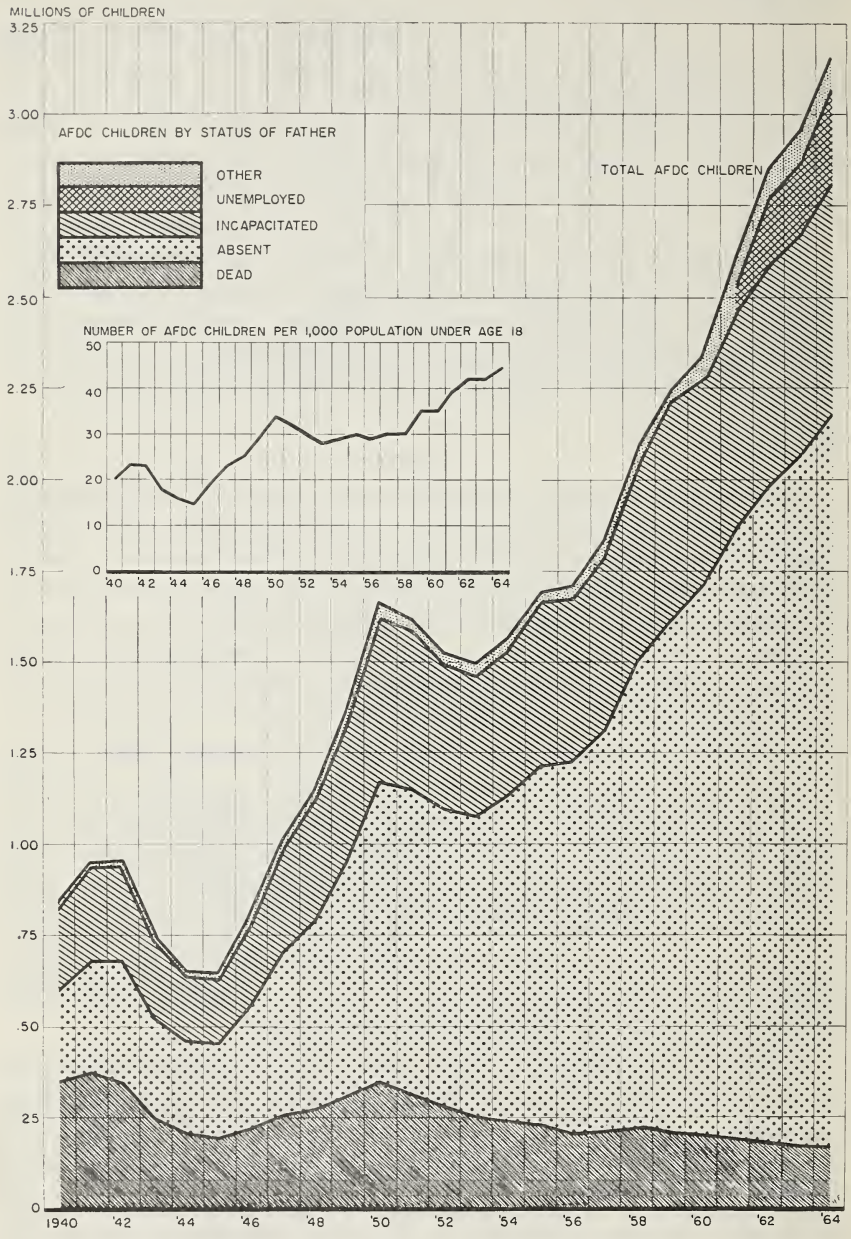
Research

The Nation's increasing concern for the plight of poor people has brought about a rising demand for new knowledge about public welfare needs and programs. Bureau efforts during the fiscal year were in these main areas: basic research in the causes and nature of poverty, increased output of statistical and analytical data for guidance of programs, and development of cost allocation methods for the new 75 percent Federal financial participation in the cost of prescribed social services.

To build a closer working relationship with State public welfare research units, the Bureau's regional research specialists met with central office staff on several occasions. Among the projects involving State cooperation are the forthcoming characteristics studies of recipients of old-age assistance and medical assistance for the aged, the compilation of information found in the nationwide social studies of recipients of aid to families with dependent children, the statistical aspects of the new quality control program, and the proposed study of unmet needs among public assistance recipients.

An advisory committee of State research and statistics directors met with Bureau staff in May to discuss plans for the study of old-age assistance recipients. On the basis of this and other advice, it was decided to use a mail questionnaire as a supplementary data collecting device. New procedures for processing the survey data also were developed. States are to place the information on punchcards, sending a duplicate set to the Bureau. In the central office, cross-tabulations of data—by States, regions, and Nation—will be prepared by computer.

CHART 1.—NUMBER OF CHILDREN RECEIVING AID TO FAMILIES WITH DEPENDENT CHILDREN BY STATUS OF FATHER, JUNE OF EACH YEAR, 1940 TO DATE



Plans for further study of the program of medical assistance for the aged also were discussed with the State research and statistics directors. The decision was reached to conduct a study in fiscal 1965 of the characteristics of recipients and the kinds of medical care they received.

The Bureau's research staff completed the processing of State reports and issued national totals and detailed State tables on the characteristics and financial circumstances of recipients of aid to the blind and aid to the permanently and totally disabled. Staff also planned detailed cross-tabulations of recipient data from punchcards furnished by States on these studies.

The Bureau released the report *Public Assistance in the Counties of the United States*, which presents the relative positions of counties in respect to recipient rates and average payments in old-age assistance, aid to families with dependent children, and aid to the permanently and totally disabled. Based on State reports and 1960 Census data, the county-by-county report shows that the highest proportions of persons assisted are in declining rural areas, especially in the southern and border States. Lowest average assistance payments are in the same areas. Highest average payments are in the far west, north central, and industrial northeast areas.

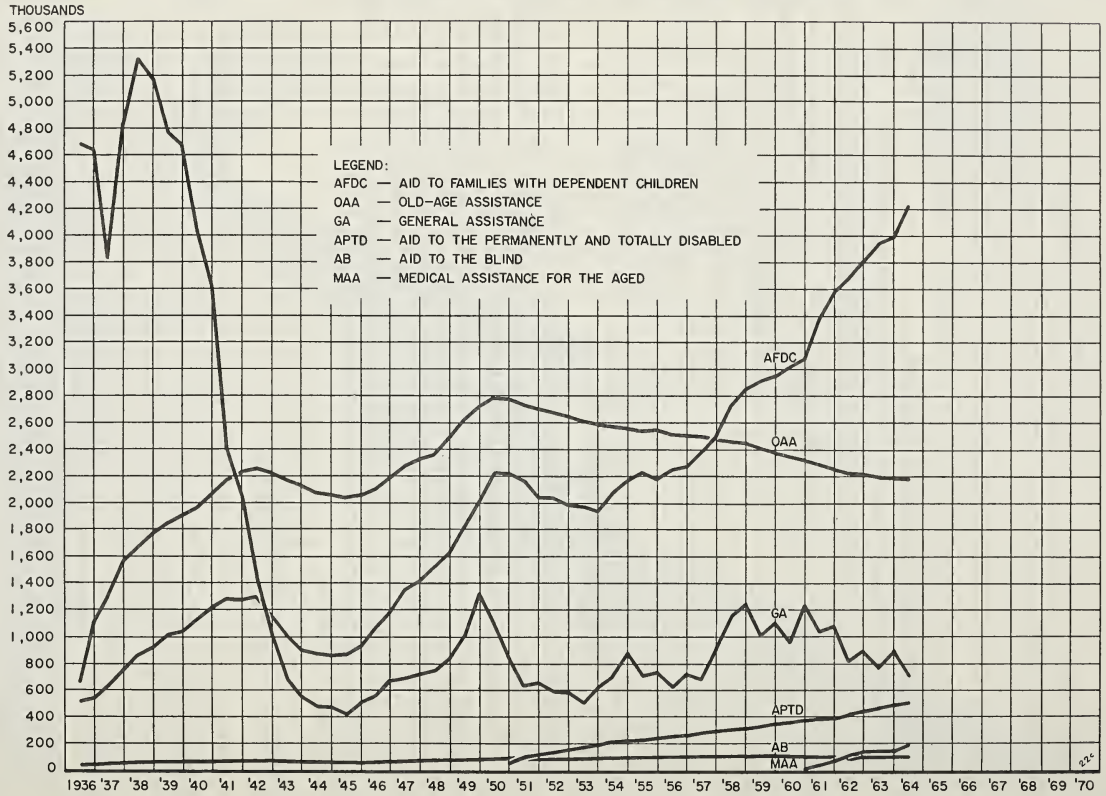
Consultation to States included helping the West Virginia public welfare department design a demonstration project on redetermination of eligibility by means of a mail questionnaire to be completed by recipients of old-age assistance. Bureau staff also consulted with the University of Kentucky and the State welfare department on their study of the effects of long-term poverty on families assisted by the community work and training demonstration project in nine eastern Kentucky counties.

1964 Program Trends

Nationwide, about 7.2 million persons were receiving aid under the federally supported public assistance programs in June 1964. This was about 350,000 more than in June 1963. The year's rise was attributable largely to the increase of 280,500 (7.1 percent) in aid to families with dependent children. In that program, there was an increase of 85,600 recipients (28.5 percent) in families aided because of a parent's unemployment, resulting from 5 additional States extending their programs. The number of recipients in families aided for other reasons rose 194,900 (5.4 percent).

For the year, assistance payments for all programs, including vendor payments for medical care, amounted to $4.5 billion, an increase of $294 million from the previous year. Total payments to

CHART 2.—NUMBER OF PUBLIC ASSISTANCE RECIPIENTS BY PROGRAM, JUNE AND DECEMBER OF EACH YEAR, 1936 TO DATE



recipients rose $115 million (8.0 percent) in aid to families with dependent children; $95 million (32.8 percent) in medical assistance for the aged; $56 million (14.3 percent) in aid to the permanently and totally disabled; $27 million (1.3 percent) in old-age assistance; and $2 million (1.8 percent) in aid to the blind.

Recipients of old-age assistance numbered 2.2 million in June 1964—0.8 percent fewer than in June 1963. The year's decrease of 17,000 reflected primarily the transfer of aged persons (generally those living in nursing homes) to programs of medical assistance for the aged in 5 States. Income from old-age and survivors' insurance continued to be a factor in the decline. Nationally, the average monthly OAA payment was $78—an increase of more than $1 for the year.

In June 1964, payments of medical assistance for the aged were made in behalf of 187,100 persons in 37 States, 51,000 more than in June a year earlier. Transfers from old-age assistance and eight new State programs accounted for more than half of the June-to-June increase. The average payment was $197 in June 1964.

In aid to the blind, the number of recipients (97,400) was 1.0 percent smaller than in June 1963. An increase of $2 brought the average payment to $84 in June 1964.

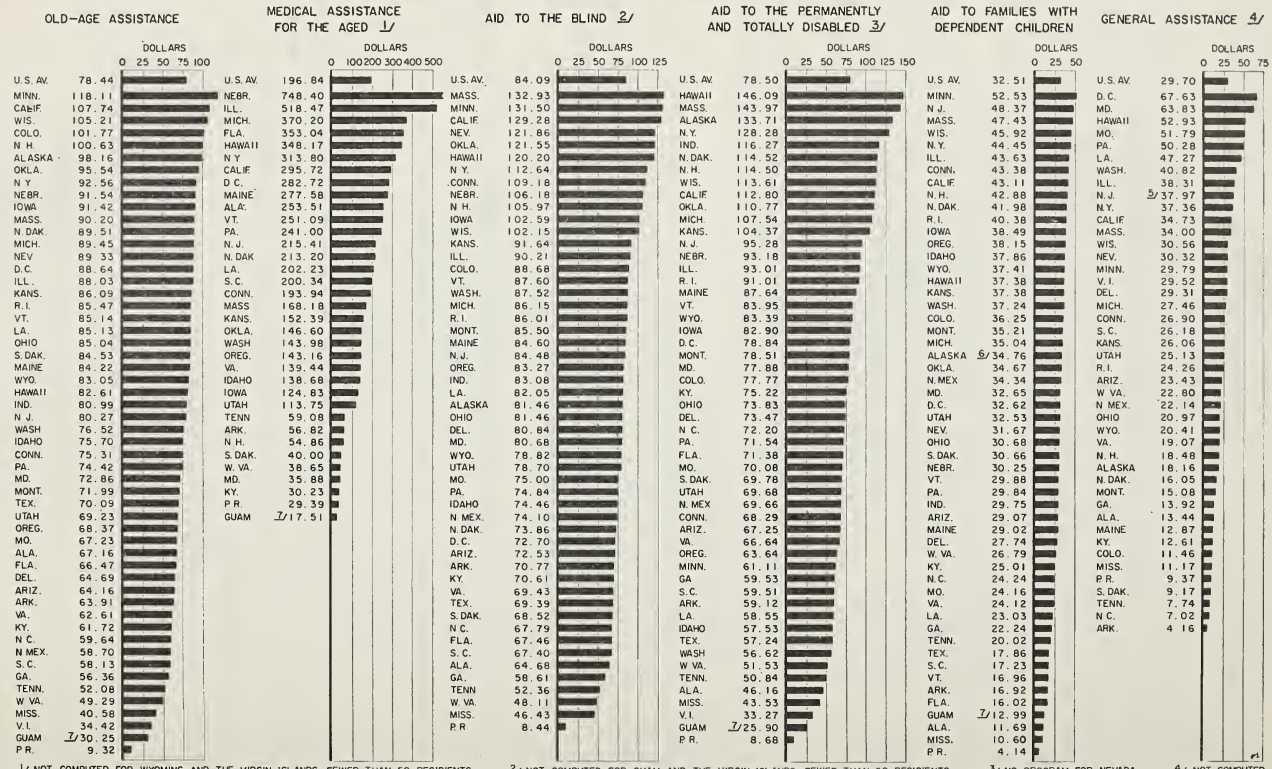
About 501,400 persons were receiving aid to the permanently and totally disabled at the end of the fiscal year—39,900 more than in June 1963. Alaska established a program for the disabled during the year; there are now 53 jurisdictions administering such programs. Nationally, the average payment rose from $75 in June 1963 to more than $78 in June 1964.

Aid to families with dependent children in June 1964 assisted 4.2 million persons, including 3.2 million children. This was 280,500 more recipients than in June 1963. During the year, five States extended their programs to include persons in need because of a parent's unemployment. In the 5 States, 18,700 families were receiving assistance under this extension in June 1964; most of them were transferred from general assistance programs. For all families receiving aid to families with dependent children in June 1964, the national average payment per recipient was $33—an increase of $2.

During 1964, some of the States took varied kinds of action to increase payments to public assistance recipients thus helping to offset the rising cost of living. In the program of old-age assistance, for example, more than a fifth of the 31 States that have maximums on individual monthly payments raised these maximums. In the programs of aid to the blind, aid to the disabled, and aid to families with dependent children a smaller proportion of the States took such action. Cost standards were increased or liberalized in one or more programs

CHART 3.—AVERAGE MONTHLY PUBLIC ASSISTANCE PAYMENT PER RECIPIENT, JUNE 1964

(EXCEPT FOR GENERAL ASSISTANCE, INCLUDES VENDOR PAYMENTS FOR MEDICAL CARE)



1/ NOT COMPUTED FOR WYOMING AND THE VIRGIN ISLANDS, FEWER THAN 50 RECIPIENTS. FOR GUAM, FEWER THAN 50 RECIPIENTS; AND FLORIDA, IDAHO, INDIANA, IOWA, NEBRASKA, OKLAHOMA, AND VERMONT, DATA NOT AVAILABLE. MEDICAL CARE, HOSPITALIZATION, AND BURIAL ONLY, AND TOTAL PAYMENTS FOR THESE SERVICES.

2/ NOT COMPUTED FOR GUAM AND THE VIRGIN ISLANDS, FEWER THAN 50 RECIPIENTS. OREGON, TEXAS, AND VERMONT, DATA NOT AVAILABLE. 5/ MAY DATA; JUNE DATA NOT AVAILABLE.

3/ NO PROGRAM FOR NEVADA. 5/ BASED ON DATA INCLUDING AN UNKNOWN NUMBER OF CASES RECEIVING 1/ MARCH DATA; LATER DATA NOT AVAILABLE.

4/ NOT COMPUTED

in one-third of all the States. Some States removed or lessened their percentage reductions in the proportion of need met by assistance payments. On the other hand, a few States paid an even lower proportion of the amount determined by them as necessary to provide a recipient's basic essentials.

Emergency Welfare Services

In 1964, the Bureau of Family Services continued its efforts to develop a national standby program of welfare aid and services to provide the necessities of life to the homeless in event of enemy attack. The program was carried on under authority delegated by the Secretary of Health, Education, and Welfare and the Commissioner of Welfare.

As the year drew to a close, the Bureau's emergency welfare services staff was readying for publication a wide assortment of technical manuals. With this work completed, the emergency welfare services program was ready to move into the next phase—planning for State and local use of the manuals in promoting emergency welfare readiness in the community.

Among the materials that were ready for the printer was the basic program manual "Emergency Welfare Services—Guidelines and Structure." Also ready was the series of guides and standards on emergency social services, emergency lodging, emergency feeding, emergency clothing, emergency welfare registration and inquiry, and fallout protection for welfare institutions.

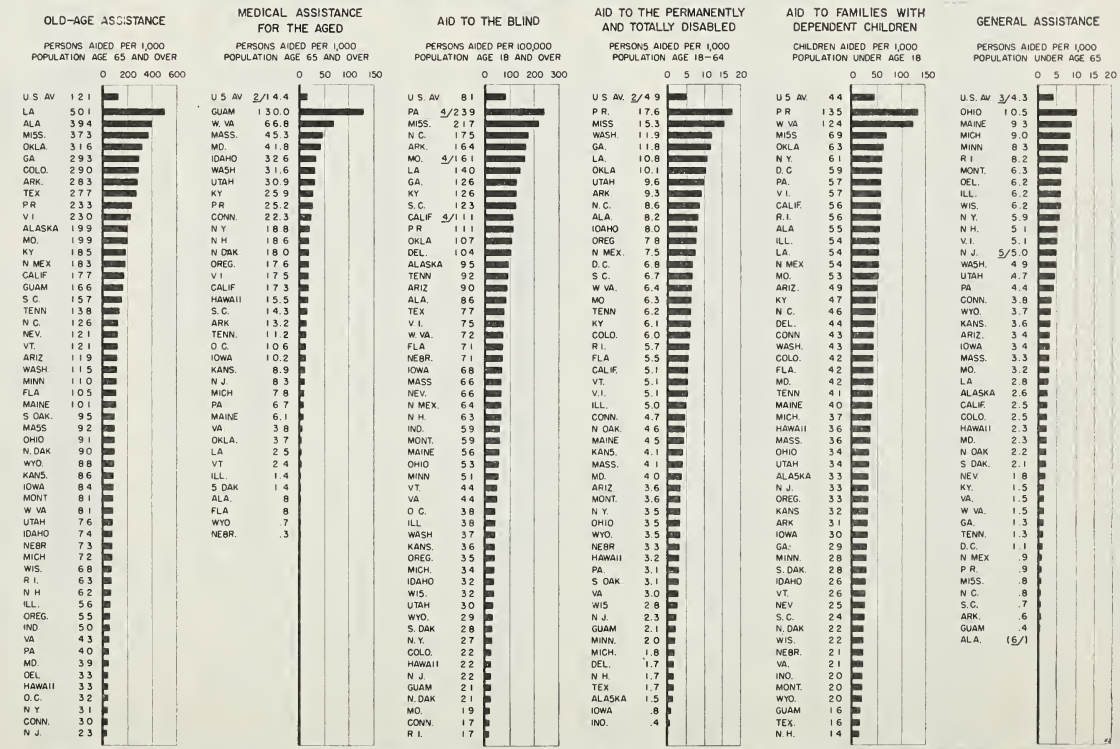
Bureau staff coordinated the emergency welfare aspects of the prototype civil defense planning study of Montgomery County, Md., which was sponsored by the Department of Defense, Office of Civil Defense. With the cooperation of the Montgomery County Department of Public Welfare and the county civil defense office, Bureau staff completed development of the Emergency Welfare Annex (including eight appendices) to the Montgomery County Operational Survival Plan. After clearance and publication by the Department of Defense, the annex will be used nationally as a guide for county emergency operations.

To determine the role public welfare departments should have in fallout shelter utilization and how much support they could give generally to civil defense operations the Bureau conducted studies in eight cities across the Nation. This project was requested by the Department of Defense, Office of Civil Defense. The findings will be issued in fiscal 1965.

Bureau staff continued with the development of plans for the reception, temporary assistance, and related services for U.S. citizens

CHART 4.—PROPORTION OF POPULATION RECEIVING PUBLIC ASSISTANCE (RECIPIENT RATES) IN THE UNITED STATES, JUNE 1964 [1]

(EXCEPT FOR GENERAL ASSISTANCE, INCLUDES RECIPIENTS RECEIVING ONLY VENDOR PAYMENTS FOR MEDICAL CARE)



1/ BASED ON CIVILIAN POPULATION AS OF JULY 1, 1964; ESTIMATED BY THE BUREAU OF THE CENSUS. 2/ BASED ON DATA FOR 37 STATES FOR MAA AND FOR 53 STATES FOR APTD; NO PROGRAM IN OPERATION IN REMAINING STATES. 3/ BASED ON DATA FOR 46 STATES. NUMBER AIDED NOT AVAILABLE FOR FLORIDA, IDAHO, INDIANA, NEBRASKA, OKLAHOMA, OREGON, TEXAS, AND VERMONT. 4/ INCLUDES RECIPIENTS OF PAYMENTS MADE WITHOUT FEDERAL PARTICIPATION RECIPIENT RATES EXCLUDING THESE RECIPIENTS ARE AS FOLLOWS: CALIFORNIA, 111; MISSOURI, 137; AND PENNSYLVANIA, 68. 5/ INCLUDES UNKNOWN NUMBER OF PERSONS RECEIVING MEDICAL CARE, HOSPITALIZATION, AND BURIAL ONLY 6/ LESS THAN 0.05

and their dependents returned to this country from overseas in emergencies. To strengthen the cooperation of the Department of Health, Education, and Welfare, the Department of Defense, and the American National Red Cross, the second and third in a series of interdepartmental and regional meetings were held. One of the results was a proposal to broaden the health, welfare, and other services provided to Department of Defense-sponsored evacuees. Also, work was initiated on a substantial revision of the emergency evacuation plan in accordance with recommendations made at the regional meetings.

At the close of the year, 19 large national voluntary welfare organizations had executed memoranda of understanding with the Bureau of Family Services. The memoranda provide for the organizations' assistance in developing a nationwide emergency welfare service program. Negotiations with three additional national organizations were underway as the year ended.

Repatriates and Refugees

In 1964, the Bureau's repatriation program gave emergency and continuing help to 428 cases of needy Americans returned from overseas because they were ill or without funds. The help was provided through State and local welfare departments at major ports of entry, such as New York, Miami, and San Francisco. Assistance included meeting the repatriates at the dock or airport, arranging for emergency lodging and feeding, and—depending on need—hospitalization or transportation back to the home State.

The program operates under a 1960 law which authorizes the Secretary of Health, Education, and Welfare to provide care and treatment to mentally ill persons whom the State Department brings home from foreign countries. Other legislation in 1961 extended assistance to United States citizens and their dependents returned because of destitution and illness of any nature.

A review of the average caseload of 55 chronically ill repatriates in Saint Elizabeths Hospital disclosed that some could be discharged or transferred to other facilities. One repatriate who had been a patient for several years was transferred to a Veterans Administration Hospital. Another was released to her family in Canada. Similar plans are underway for other repatriates.

Following exploration by Bureau staff, repayment of assistance was received from eight patients who had such resources as old-age and survivors insurance, postal savings bonds, and health insurance.

Since a number of families returning from Cuba are composed both of United States nationals and Cuban nationals, it was necessary to determine whether they should be assisted under the repatriation or

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Cuban refugee program. Citizenship of the male spouse, if he is in the United States, will determine the program from which assistance will be furnished, it was decided.

Other international activities included consultation to the American Benevolent Society of Mexico City, which administers a program of social services to destitute American citizens. At the request of the Agency for International Development, Bureau staff met with participants from Indonesia, Nepal, Pakistan, Thailand, Turkey, and Venezuela to discuss Bureau responsibilities.

Work-training experiences of from 2 to 4 months' duration were provided for nine Spanish-speaking social work supervisors from five Latin American countries.

During the year, two additional Bureau publications were translated into Spanish and republished for readers in Latin America and in Puerto Rico and other United States jurisdictions with Spanish-speaking populations.

Work With Other Agencies

The growing complexities of the public welfare program and the increase in services to needy people have increased the Bureau's responsibilities for maintaining relationships with other agencies with similar objectives and programs.

Liaison with a variety of national organizations in social welfare and related fields made it possible for the Bureau to learn of new developments and, in turn, to keep professional groups and the public informed of the latest Federal activities. For example, Bureau staff members served with President's Council on Aging committees on group residence facilities, budget standards, and protective services. Other staff members served on the advisory committee of the American Association of Homes for the Aged and on the Urban League's committee on aged members of minority groups. Staff also worked with the Secretary's Committee on Alcoholism.

Similar work was done with family and child organizations, such as the Interdepartmental Committee on Children and Youth, the President's Committee on Mental Retardation, the Child Welfare League of America, and the International Council of Home-Help Services.

The Bureau of Family Services and the Family Service Association of America worked together during the year to bring about a closer collaboration between public and voluntary agencies at both the national and local levels. The effort took the form of a proposal to establish a joint national ad hoc committee to advise on ways to improve and extend understanding and cooperative work at the local, State, and national levels.

Within the Department, continuous relationship was maintained with the Vocational Rehabilitation Administration in an effort to restore the employability of the greatest possible number of assistance recipients. Bureau staff participated in several regional meetings with staff of State vocational rehabilitation and public welfare agencies and in the development of joint demonstration projects by such agencies. To further this work, a joint guide document on cooperative agreements between State welfare and rehabilitation agencies was developed.

Work with the Department of Agriculture centered largely on the surplus food and food-stamp plan, including studies now being made on use of the stamp plan method to improve food consumption. The Bureau also has had a representative on the Panel on Consumer Education for Persons with Limited Incomes, sponsored by the President's Committee on Consumer Interests. Work with the Department of Labor concerned activities of the Women's Bureau on needs of domestic service workers and on the long-term project to develop guidelines for a national standard of assistance.

Continued close relationships were maintained during the year with the American Public Welfare Association, American Home Economics Association, United Community Funds and Councils, National Council on Homemaker Service, American Medical Association, American Hospital Association, American National Red Cross, and National Social Welfare Assembly. In addition to these organizations, Bureau staff have served with such national groups as the National Association on Services to Unmarried Parents and the National Committee on Coordination of Statistical Reporting of Social Services.

Children's Bureau

The legal base for the Children's Bureau services to the children of the United States is contained in two acts. Under its basic act of 1912, the Bureau is charged with investigating and reporting "upon all matters pertaining to the welfare of children and child life among all classes of our people." The Bureau studies many types of conditions affecting the lives of children, makes recommendations to improve practices in child health and child welfare programs, and helps establish standards for the care of children.

Under Title V of the Social Security Act, as amended, the Bureau assists the States, through technical and financial aid, in enhancing and protecting the well-being of many children through child health and welfare services.

Stemming from these two acts, but interwoven into one program, are the purposes of the Children's Bureau today:

To assemble facts needed to keep the country informed about children and matters adversely affecting their well-being.

To recommend measures that will advance the wholesome development of children and will prevent and treat the ill effects of adverse conditions.

To give technical assistance to public and voluntary agencies and to citizens' groups in improving the conditions of childhood.

To administer the grants appropriated each year under Title V of the Social Security Act to aid in building the health and welfare of children.

The Bureau's approach to the problems of children proceeds from a concern for the child with his family or wherever he may live. The interrelationship between the physical, emotional, and social factors in child growth, child health, and child welfare permeates all that the Bureau does and stimulates others to do in research and action for children.

Legislative Developments

MATERNAL AND CHILD HEALTH AND MENTAL RETARDATION PLANNING AMENDMENTS OF 1963

The passage of the Maternal and Child Health and Mental Retardation Planning Amendments of 1963 to the Social Security Act expanded substantially the Bureau's services in behalf of children. The amendments provided for:

Increasing the authorization for annual appropriations for maternal and child health services from $25 million, in steps of $5 million, to $50 million for fiscal year 1970.

Similarly increasing the authorization for annual appropriations for crippled children's services.

A 5-year program of grants to provide medical care to women who during the maternity period are unlikely to receive necessary health care because they are from families with low incomes or for other reasons. Also included is health care to mothers and infants following childbirth. The health care is available particularly to prospective mothers who have or are likely to have conditions associated with childbearing which increase the hazards to the health of mothers or their infants, including those which may cause physical or mental defects in the infants.

Grants for research projects relating to maternal and child health and crippled children's services.

Grants to assist States in developing plans for comprehensive State and community action to combat mental retardation.

Implementation of this legislation is the responsibility of the Children's Bureau, with the exception of the grants to assist States in developing plans to combat mental retardation. These planning grants are administered by the Public Health Service.

1964 APPROPRIATIONS

The amounts appropriated for the Children's Bureau for fiscal year 1964 under Public Law 88–136 and Public Law 88–268 were:

Salaries and expenses	$3,776,000
Grants for maternal and child welfare	99,443,000
Maternal and child health services	30,000,000
Crippled children's services	30,000,000
Special projects for maternity and infant care	5,000,000
Research projects relating to maternal and child health and crippled children's services	1,500,000
Child welfare services	29,000,000
Research, training, or demonstration projects in child welfare	3,943,000

Interdepartmental Committee on Children and Youth

Created at the request of President Truman in 1948, the Interdepartmental Committee on Children and Youth is composed of 37 Federal agencies having programs concerned with children and youth. The Chief of the Children's Bureau is Acting Chairman of the Committee by delegation of the Secretary of Health, Education, and Welfare, who is its Chairman. The Bureau also provides the secretariat for the Committee.

The monthly meetings continued the emphasis of the previous year—rapid changes in our life and their impact on children and youth. During the past year, particular attention was given to children disadvantaged because of poverty, isolation from the mainstream of American life, migration from rural to urban communities or from one rural community to another, or social and cultural or educational deprivation.

The Subcommittee on Community Services for Selective Service Registrants was abolished when a new Federal program was authorized by the President to provide community health, education, counseling, and employment-placement programs for registrants for Selective Service who cannot meet the minimum requirements for induction into the military service.

A Subcommittee on Services for Adolescent Girls was created.

The Subcommittee on Parent and Family Life Education concentrated its attention on services to members of low-income families. It proposed that a small group of leading practitioners become actively involved during the next fiscal year in parent and family life education programs with low-income families (1) to improve communication between local and Federal specialists in this field and (2) to develop guidelines for programs.

United Nations International Children's Fund (UNICEF)

In January, the Executive Board of UNICEF met in Bangkok. This was the first time the Board had met in a developing country in the 17 years of its existence. Prior to the meeting, small groups of Board members were guests of the Governments of India, Iran, Indonesia, Pakistan, Thailand, and the Philippines to see UNICEF projects and to become better acquainted with UNICEF programs in the field.

The Executive Board approved program assistance of $23 million in commitments and $21 million in allocations to 127 projects. About two-thirds of these were continuation or extension of ongoing UNICEF-aided projects and one-third were new projects. Health services and nutrition programs continued to form the bulk of UNICEF assistance—80 percent of the allocations at this meeting of the Executive Board. Aid to education increased, and training continued to be an important part of all programs.

Mr. Frederick DelliQuadri was Chief of the U.S. Delegation to Bangkok, and Dr. Katherine Bain of the Children's Bureau served as alternate.

In April UNICEF held a roundtable conference on Planning for the Needs of Children in Developing Countries at Bellagio, Italy. The Children's Bureau prepared a paper on the United States experience in providing for the needs of children and youth.

In June, the Executive Board approved 267 projects, of which 51 were new ones. Eighteen percent of the commitments were for aid to education.

Expenditures by UNICEF in calendar year 1963 were $39 million, exceeding income by about $7 million and representing the fulfillment of the directive to the Secretariat to utilize funds on hand in order to put the resources of UNICEF to work more rapidly. In 1963, 118 countries contributed to the UNICEF Fund, and there was increasing support from private sources, amounting to about 20 percent of total income. For the first time, a private contribution for a specific project was accepted.

National Conference on Smoking and Youth

In the spring of 1964, the Bureau called nationwide attention to the problem confronting youth, their parents, and other adults as a result of the report to the Surgeon General on *Smoking and Health.* One hundred sixteen teenagers were brought to Washington from most of the States and some of the Territories to consult with the Children's Bureau about the implications of this report to themselves, their peers, and their families and to suggest what the Bureau might do to help them. The purpose of the conference, as phrased by the group of young people who planned it, was "To Reflect Upon the Issue of Smoking From the Perspective of the Young People of America."

From April 30 through May 2, these young people lived and worked together, learning facts, sharing ideas, and drawing conclusions that would help them return to their home communities ready to help other young people, parents, teachers, and youth workers to develop information programs and a social climate that would encourage decisions about smoking with full knowledge of the scientific facts and underlying emotional factors.

Two publications—*Your Teenage Children and Smoking* and *Smoking, Health, and You*—were issued as an outgrowth of the conference.

Programs of the Bureau

RESEARCH IN CHILD LIFE

From many sources, the Children's Bureau gathers all the facts and figures that will help children's workers and citizens in the United States to know the size of their wealth in children, the extent of conditions that are adverse to them, and the trends in our society affecting child life. In addition to its own studies and cooperating in joint studies, the Bureau stimulates other agencies to undertake research in child life by formulating questions needing study, developing research methods, and providing technical assistance.

Some Facts and Figures About Children and Parents

The child population under 18 years of age in the United States increased from 67,331,000 on July 1, 1962, to 68,674,000 on July 1, 1963. An estimated 4,081,000 babies were born in the 12 months ending April 1964 as compared with 4,130,000 for the previous corresponding period.

The infant mortality rate in 1963 was provisionally 25.2, slightly lower than in the years 1960, 1961, and 1962.

Infant mortality continued to reflect differences in levels of living and acculturation. The third of the States with the lowest per capita income in the period 1960–61 had an excess in infant mortality rate

of 17 percent over the national average. The rate for the middle per capita income group of States was 3 percent below the national average, and for the higher per capita income group, 7 percent below the rate for the country as a whole. Counties with 1,000 or more live births and lowest infant mortality levels had, in the majority of cases in 1960, populations with median family incomes above those of the States, with higher numbers of years of schooling, and lower proportions of the labor force unemployed. On the other hand, counties with infant death rates as high as 40 or more per 1,000, in most cases, presented the reverse of this picture.

In the United States as a whole, the incidence of prematurity (birth weight 2,500 grams or less) increased from 7.5 percent of live-born infants in 1950–51 to 7.9 in 1960, 7.8 in 1961, and 8.0 in 1962. Among nonwhite infants, the incidence increased from 10.7 in 1951 to 13.1 in 1960. (Better reporting may have accounted for some of this increase.) Among white infants, the incidence hovered about 7.0 percent.

According to U.S. Bureau of Census projections, the ratio of children to adults will increase from 673 children under 15 years of age per 1,000 adults 25 to 64 years of age in 1960 to 737 per 1,000 in 1985.

The marriage rate jumped from 8.5 per 1,000 for the 12-month period ending April 1963 to 8.9 per 1,000 for the corresponding period ending April 1964. The divorce rate has remained an almost steady 2.2 divorces per 1,000 population for the last 6 years.

Of the 47 million families in 1962, one-fifth (some 9.3 million families) had total money incomes below $3,000, the figure used as a demarcation of the poverty line. These families contained more than 11 million children under 18 years of age. When, however, the poverty line was so calculated as to take account of differences in family size and composition and differences in cost of living on farms and in urban areas, considerably more children were found to be living in poverty—about 17 million.

More than 1.1 million of the 9.3 million families with an income under $3,000 were raising four or more children. More than 1 million children were being raised in large families (six or more children) by parents whose income was less than $2,000. About a third of the families with women breadwinners in 1962 had incomes under $2,000. About half a million women breadwinners whose husbands were absent were rearing school-age children.

In March 1963, there were 9.3 million working mothers in the United States. One out of every three mothers with children under 18 years of age was in the labor force. These included 3.6 million mothers with children under 6, and 5.7 million with children 6 to 17. Even

the mothers of very young children often worked. One out of five mothers with children under 3 years of age was in the labor force. When there was no husband in the home, the mother was much more likely to work; for example, one out of three such mothers with children under 3 was working.

According to data from the 1960 census, 88 percent of the child population under 18 years of age lived with both parents, 9 percent lived with one parent (8 percent with mother only and 1 percent with father only), and 3 percent with neither parent (most of them with other relatives).

Child Welfare Research and Demonstration Grants

During the year, 24 new projects were approved, and 26 ongoing projects were approved for continuation of supplementary funds. A total of $2,123,692 was awarded. Seven of the new projects represented programmatic research, which is research to study long-range and coordinated approaches to basic problems in the provision of services and determination of the effectiveness of services.

Final reports were received on three studies: "Children in Group Day Care—The Effect of a Dual Child-Rearing Environment (An Exploratory Study)," "Intensive Post-Partum Casework With Unwed Mothers," and "The Role of the Social Worker in a Child Protective Agency."

Child Health Research Grants

Nineteen grants totaling $1.5 million were awarded for child health research. The major portion of the funds will be used to develop programmatic research in seven schools of public health.

Howard University Study of Nursery School

Under a grant from the Children's Bureau, Howard University in Washington, D.C., began an experiment in day care for children in low-income families, converting its long-established nursery school to this purpose. The aim was to improve the children's likelihood of adequate achievement in school. The research component of the experiment will be supplied by the Children's Bureau.

The children will attend 5 days a week for 2 years and will have a "classic" nursery school program. An adult activities program for their parents will attempt to enlist parental efforts in activities that will give an impetus to the ultimate school achievement of their children. A comparison group will be tested before, during, and after the program, and later during their school years to see whether and how much this kind of early enrichment program contributes to later school achievement.

The project was based on theory and experience in relation to deprived children, their school achievement (or lack of it), and the consequences of poor school achievement on their later lives. As education became more essential to satisfactory work experience and as it because more evident that children from slum neighborhoods were at a disadvantage by the time they started school, it seemed increasingly clear that it would be valuable to make up the deficit before they entered first grade. The present project will attempt to find out whether the kind of nursery experience that middle-class children receive as a matter of course would serve to make up that initial deficit. If so, then these children can be helped without the necessity of special and expensive training for a large corps of teachers. The program will be repeated after 2 years in order to validate the findings.

Unmarried Mothers

The review of findings from studies and demonstrations concerning unmarried mothers and their children continued. Births out of wedlock to a great extent seemed to involve the problems of poverty; the corollary implication was that alleviation of poverty would probably help to alleviate problems of illegitimacy.

Children in Institutions

An analysis was in progress of recent trends in institutional care based upon the last two decennial censuses. The data being analyzed cover children in all types of institutions.

Statistical Reports

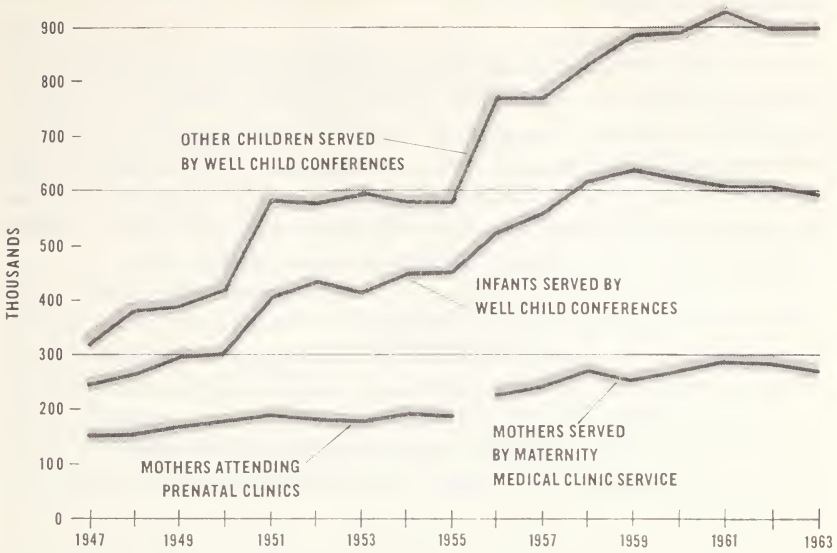
During the year, the Bureau compiled and published current statistical data on crippled children's services, institutions for delinquent children, child welfare services, and juvenile courts.

MATERNAL AND CHILD HEALTH SERVICES

Maternal and child health programs continued to broaden and expand. All States, the District of Columbia, Puerto Rico, the Virgin Islands, and Guam received Federal funds to improve services for promoting the health of mothers and children, especially in rural areas.

Approximately 271,000 expectant mothers were provided medical, prenatal, and postnatal clinic services by State maternal and child health programs in calendar year 1963. In addition, 39,000 mothers were given hospital inpatient care for complications of pregnancy. Public health nursing was provided for 534,000 maternity cases during 1963. These nursing services, which were provided in the homes or

CHART 5.—MATERNAL AND CHILD HEALTH SERVICES, 1947–63



elsewhere in the community, were in addition to nursing services at medical clinics where physicians were present.

Formalized courses in maternity care and care of the newborn were provided in 36 States. In 1963, 83,000 expectant parents attended these classes, an increase of over 30 percent for the previous year.

Well child conferences in 49 States, the District of Columbia, Puerto Rico, the Virgin Islands, and Guam provided consultation and health supervision for 1,490,000 children. Among this group were 593,000 infants.

Public health nursing service was provided for 2,831,000 children.

Dental treatment was provided for 516,000.

There were large numbers of children screened under school health programs: 7,866,000 were screened for visual defects (an increase of more than 361,000 children over 1962); 5,221,000 were screened for hearing defects (an increase of over 430,000 children); and 3,091,000 were screened for dental needs (a decrease of 40,000). Almost the same number of children were examined by physicians under school health programs in 1963 as in 1962—2,447,000 for 1963 and 2,441,000 for 1962.

Some 4,274,000 children were immunized against diphtheria under State programs; 2,499,000 against whooping cough; 4,576,000 against tetanus; and 2,592,000 against smallpox.

Implementation of Maternal and Child Health and Mental Retardation Planning Amendments of 1963

All States were using the new funds made available under the provisions of the 1963 amendments for a wide range of significant programs to provide needed additional services in the area of mental retardation. These amendments, which were adopted in response to recommendations made by the President's Panel on Mental Retardation, were part of a broad program for combating the problem of mental retardation along four major fronts—preventive service, care and treatment, research, and community planning.

By the end of the fiscal year, seven comprehensive maternity and infant care projects, totaling $4,682,686 in Federal funds, were approved with State health departments providing a minimum of 25 percent of the cost of these projects. These projects provided for an increase in the quantity and quality of services in prenatal clinics, improved accessibility of these clinics, payment for hospital care of mothers with complications, and hospitalization and followup of high-risk infants.

There was a wide variation among the maternity and infant care projects: Some provided for staffing of health department prenatal clinics by staff of teaching hospitals; one enrolled young pregnant women in a prepayment group practice clinic as private patients; another included a neighborhood center and provided for continuing care by the same obstetrician in the clinic and hospital on the same basis as private patients; another provided for a special adolescent clinic and hospital program for teenage girls; several employed nurse-midwives and also offered night clinics.

Fifteen new and revised publications implementing the 1963 amendments were issued or sent to the printer: *The Steps Ahead: Report of a Conference on Mentally Retarded Children, April 9, 1963; The Care of the Retarded Child—Therapy and Prognosis; Phenylketonuria—Detection in the Newborn Infant as a Routine Hospital Procedure; Health Services for Unmarried Mothers; Historical Perspective on Mental Retardation During the Decade 1954–1964; Clinical Programs for Mentally Retarded Children; The Clinical Team Looks at Phenylketonuria; Feeding Mentally Retarded Children: A Guide for Nurses Working With Families Who Have Mentally Retarded Children; Galactosemia—A Selected Bibliography, 1963; Grants for Maternity and Infant Care Projects—Policies and Procedures; A Guide for Public Health Nurses Working With Mentally Retarded Children; Institute on Nutrition Services in Mental Retardation Programs; Institutionalizing Mentally Retarded Children: Attitudes of Some Physicians; The Nurse's Role in Counseling Parents of Mentally*

Retarded Children; and *Phenylketonuria—A Selected Bibliography, 1963.*

Mental Retardation Services in Maternal and Child Health Programs

Major staff effort was expended in improving and extending services to mentally retarded children. In general, increased appropriations gave immediate impetus to rounding out clinical services for mentally retarded children and in meeting whatever deficiencies existed, such as insufficient nursing and nutrition services, neurological and psychiatric consultation, speech and hearing evaluation service, and dental treatment.

States were able to continue to extend their services for mentally retarded children into areas in which diagnostic, evaluation, treatment, and followup clinic services previously were not available. Seven States began to operate clinics for mentally retarded children, and six States were in the process of developing new clinics. By 1964, there were almost 80 clinics supported in whole or in part by Children's Bureau funds. Countrywide, there were 115 clinics under various auspices.

Field Trials for Screening Infants for Phenylketonuria

Because of the possibility of preventing the mental retardation caused by phenylketonuria, an inborn error of metabolism, the Children's Bureau supported a special project for screening newborn infants for PKU. The field trials of the inhibition assay method developed by Dr. Robert Guthrie and his associates at the Children's Hospital, Buffalo, N.Y., were completed as of December 31, 1963. More than 404,568 newborn infants in 29 States were screened in the period from early 1962 through the end of December 1963; 39 cases of PKU were found, a ratio of 1 out of 10,347, a higher incidence than had previously been expected. A report of the field trials was published.

The success of the field trials in detecting PKU in the newborn stimulated the initiation and expansion of screening programs in many States. Four States enacted legislation making screening of newborn infants for PKU mandatory. Other States instituted screening by requirement of the State health departments.

The Children's Bureau supported efforts to develop screening tests for other metabolic disorders in newborn babies.

Genetic Service Laboratories

A significant development which occurred as a part of mental retardation demonstration programs was the establishment of supporting laboratory services to aid in the diagnosis, evaluation, and followup

care of children suspected of having hereditary diseases. Nine specialized laboratory projects were approved to provide chromosome analyses and specialized biochemical examinations on selected children and members of their families. Each of these services was located in a university and was associated with a clinical program for mentally and physically handicapped children. Each project will also utilize the laboratory services for training a variety of professional personnel in genetics and mental retardation.

Appalachia

The low economic areas in Kentucky and West Virginia were given special attention by Federal, State, and local governments during the year. At the regional level, all Federal government agencies (with support from headquarters offices) made a concerted effort to muster resources to combat the many problems facing this area.

The Children's Bureau committed $200,000 for a "crash" program to bring emergency maternity care and pediatric services to selected counties of Kentucky. As a result, special services in the depressed area of Kentucky were expanded to include:

Three pediatric clinics staffed by professional personnel from the University of Kentucky Medical Center. These clinics provided diagnosis, consultation, and treatment. Where indicated, hospitalization was arranged.

A regional hearing center located in Knox County and serving a 20-county area.

Comprehensive maternity and pediatric care services focusing on two counties with extension planned for three additional counties.

Prenatal dental services in one county.

Children's Bureau funds were made available to West Virginia to purchase a second mobile unit to house maternal and child health clinics for remote rural areas. The mobile clinics were used in the school health program and in examination of preschool children as well as in casefinding activities for the maternity and pediatric programs.

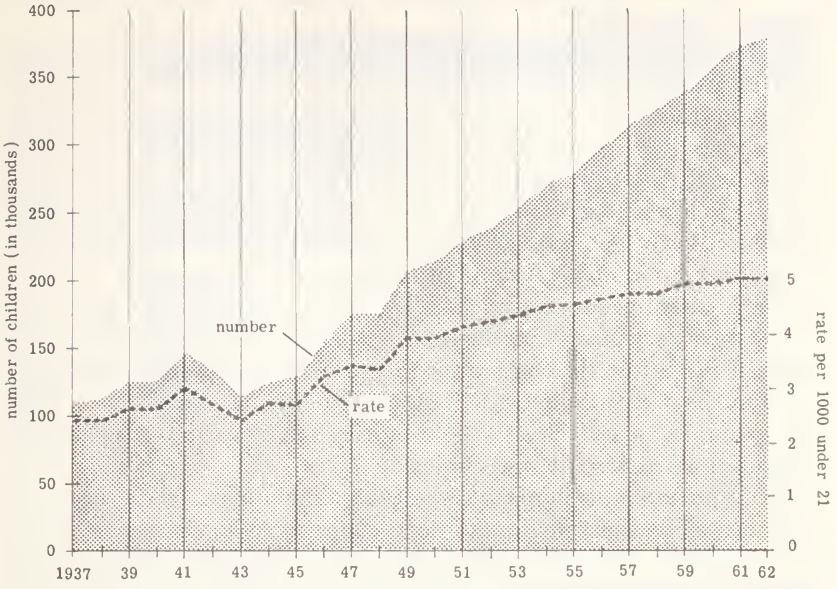
CRIPPLED CHILDREN'S SERVICES

All States (except Arizona), the District of Columbia, Puerto Rico, the Virgin Islands, and Guam participated in the crippled children's program during fiscal year 1964.

An increasing number of children received care under the crippled children's program in 1963—about 400,000.

Over half of the children diagnosed in the program were children with nonorthopedic defects. Deformities of a congenital nature con-

CHART 6.—CHILDREN SERVED IN THE CRIPPLED CHILDREN'S PROGRAM, 1937–62



tinued to be the largest single group of primary conditions among children served by the program: nearly 30 percent of all children served. Roughly 20 percent of conditions present at birth consisted of malformations of the heart and circulatory system.

Implementation of the 1963 Amendments

Because funds for crippled children's services had not kept pace with increases in child population, with increases in cost of hospital care and professional services, and with new medical knowledge, the increased funds authorized by the Maternal and Child Health and Mental Retardation Planning Amendments of 1963 helped all States to continue to extend their services to groups of children not previously covered.

Development of Services for Children With Multiple Handicaps

Because in the special clinical programs for mentally retarded children a high incidence of associated physical handicaps was found, because some crippled children's funds were earmarked for mentally retarded children, and because there was increased collaboration between maternal and child health and crippled children's services, States expanded medical care services for mentally retarded children with multiple handicaps.

In 20 States which submitted detailed reports, 251 children with monogolism and 2,194 with other mental deficiencies were reported

as receiving services under the State crippled children's program in calendar year 1963.

State crippled children's services paid increasing attention to mentally retarded children in institutions. One State initiated orthopedic clinics at the State school for mentally retarded; one expanded its clinical services to children in the State institutions. Another gave service routinely to institutionalized children. Two States established traveling clinical teams to serve the State institutions for the mentally retarded. Another planned for local public health nursing followup of children on waiting lists of institutions for the mentally retarded; public health nursing visits resulted in some emergency admissions to institutions. Many States reported a closer working relationship between State institutions for the mentally retarded and clinical services for the mentally retarded supported by the Children's Bureau. For example, in two States the majority of first admissions to State institutions are from these clinics.

An important development was the collaboration of maternal and child health and crippled children's services in some States to provide total pediatric services, particularly to the mentally retarded. To illustrate, in Prince Georges County, Md., a multiservice center was developed to integrate the well child conferences, pediatric service, and service for the children with multiple handicaps with a mental retardation component. In Puerto Rico, the service for children with multiple handicaps was an accepted part of the ongoing maternal and child health and crippled children's services.

Cystic Fibrosis

During the past 10 years, the number of States which included cystic fibrosis in their crippled children's programs increased from 3 to 26. At the end of the fiscal year, 22 of these 26 States had comprehensive programs of care; 12 of these had been added since 1960.

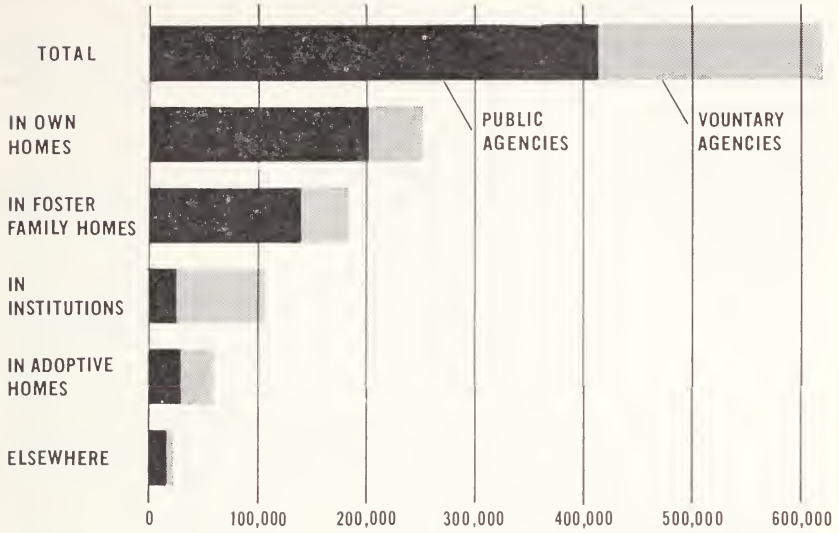
By July 1963, the cumulative number of children with cystic fibrosis receiving services through these 26 State programs was about 1,500 and ranged from 2 in Alaska to 452 in Massachusetts.

Many States which included this disease in their programs had funds earmarked for the purpose by their legislatures.

CHILD WELFARE SERVICES

The fiscal year was characterized by an increasing public awareness and concern by professional and lay groups about the social and economic problems affecting child life and child welfare. The 1962 Public Welfare Amendments continued to be instrumental in this increase in public interest and action on behalf of children.

CHART 7.—CHILD WELFARE AGENCIES PROVIDE SERVICES FOR CHILDREN, 1963



On March 31, 1963, about 619,000 children were receiving services from public and voluntary child welfare agencies and institutions in the United States, or 6 percent more than the number served 1 year earlier. Of the total number of children served, 412,500 (or 67 percent) were served primarily by public agencies, and 206,500 (or 33 percent) were served primarily by voluntary agencies.

Two-fifths of all children served lived with parents or relatives or in independent arrangements, nearly one-third in foster family homes, one-sixth in institutions, and one-tenth in adoptive homes.

The 1963 statistics showed three chief trends: An increase in the rate as well as the number of children reached by child welfare programs; a greater increase in public than in voluntary child welfare services; and, in public programs, more increase in service to children living with parents or relatives than to children in foster care or adopted.

State and local public welfare agencies spent an estimated $267.8 million in fiscal year 1963 for public child welfare services. This amount included expenditures of $135.8 million from State funds (or 51 percent of the total), $105.9 million from local funds (or 39 percent), and $26.1 million from Federal funds (or 10 percent).

An estimated $180.8 million (67 percent of the national total) was used to pay for foster care of children; $71.5 million (27 percent) for personnel; $2.4 million (1 percent) for educational leave to pro-

vide professional education for promising workers; and $13.1 million (5 percent) for other purposes.

All States, the District of Columbia, Puerto Rico, the Virgin Islands, and Guam received Federal funds to improve child welfare services.

Implementation of the 1962 Public Welfare Amendments

The first full fiscal year of operation under the 1962 Public Welfare Amendments represented a landmark in the history of public child welfare services.

Planning for the extension of child welfare services under the 1962 amendments began with an assessment of the public child welfare program by each State. Soon after the assessments were completed, a series of four regional conferences (covering all States) were held with representatives from State welfare agencies, regional representatives from the Bureau of Family Services, and representatives of the Children's Bureau to consider what needed to be done for progressive extension of child welfare services.

Approximately 9,348 persons were employed full time in professional positions in the child welfare programs of State and local public welfare agencies on June 30, 1963. Even though this was a rise of 7 percent over the number employed a year earlier, the lack of professionally qualified staff was the greatest unmet need in child welfare programs in all States.

Forty-two percent of all the counties in the United States did not have full-time public child welfare services available, not even under multicounty arrangements that spread these services over several counties. These counties without child welfare services, in which 15 percent of the Nation's children reside, were mainly rural—about five rural counties for every urban county. Progress in providing additional geographical coverage was varied because of difficult problems of insufficient funds, shortage of qualified personnel, and lack of dynamic leadership.

All States reported that their legal bases were reasonably adequate to permit the extension of child welfare in the four dimensions required: (1) Public child welfare services in every geographical area, (2) a broad range of services within the State's child welfare program, (3) the availability of child welfare services to all children who need them, and (4) the provision of services by trained personnel. However, in most States the laws did not clearly require that public child welfare services of the kind and extent desirable be provided. Almost all States needed substantive legislation to enable them to assure the range of services needed to meet the needs of all children.

Day Care Services

Significant results came from the States' first full year with earmarked day care funds. The continuing increase in the number of working mothers, the drive to eliminate poverty, and the effort to improve the educational experiences for deprived children affected the development of day care services. While evidence indicated that progress was being made in all parts of the country in the expansion of day care services, there was great variation among the States in the development of such programs. Some States had many commercial facilities but were starting to develop day care facilities under public welfare auspices. Some States were beginning to develop standards for day care in both family day care homes and day care centers and to license private and commercial day care foster homes and group homes.

The 46 States with approved plans for providing day care services through public welfare agencies moved in a variety of ways. Eighteen States planned to operate day care centers under the auspices of the public welfare agencies; 34 States planned to provide family day care for children; and 28 States planned to purchase day care in already existing day care centers.

Emphasis was placed on providing day care for children whose mothers must work to support them or to supplement the fathers' low earnings. A number of States developed projects to provide day care for deprived children while their mothers were being trained for employment or were learning homemaking skills which would improve the families' living standards.

Migrants continued to be a deprived group for whom more day care services were needed. Of the 46 States planning to use Federal day care funds, 16 planned to establish or to increase day care services for children of migrants.

The quality of day care was a serious problem. Emphasis needed to be placed on raising standards and supporting efforts to establish high-quality services under public welfare agencies.

Increased efforts were needed to develop standards for day care services to handicapped children, particularly mentally retarded children, and to establish more services for these groups.

Six publications on day care services were issued or sent to the printer during the year: *Day Care for Your Child in a Family Home; Day Care for Other People's Children in Your Home; Day Care Services; What Is Good Day Care;* and *Fees for Day Care Services*, which was issued, revised, and reissued with the title *Determining Fees for Day Care Services.*

Child Welfare Training Grants

Fifty-six schools of social work and two other institutions of higher learning received $1,805,444 in grants for 53 full-time field instruction units, 5 other faculty members, 288 traineeships, and 19 short-term training projects.

This new program of grants to institutions of higher learning for training personnel in the field of child welfare was enthusiastically welcomed by agencies, schools, and social workers. Broader efforts directed toward recruitment of workers and of candidates for social work education were initiated. Schools of social work sought consultation from the Bureau not only about their specific requests for training grants but also about their overall program in relation to child welfare.

Attack on Poverty

To meet the social and economic problems affecting family and childlife and to provide the services which parents and children need, child welfare staff must participate actively in community planning endeavors. While the factors that create social and economic problems frequently seem insurmountable, the emphasis in fiscal year 1964 on the eradication of poverty helped child welfare staffs to refocus on prevention and rehabilitation rather than stopgap treatment. Better communication and cooperation among agencies, groups, and individuals interested in the various segments of services resulted.

Representing the Welfare Administration, regional staff of the Office of Aging, the Bureau of Family Services, and the Children's Bureau made a series of team visits to each State welfare agency to consider what could be done through effective use of public welfare resources to improve the levels of living. The focus was on evaluating the current welfare program and deciding what action was needed to extend and strengthen the services provided.

Public attention was focused on the special needs of children and youth living in conditions of poverty in both urban and rural areas. Child welfare was intimately and daily involved in the problem of poverty. For example, one of the Nation's most severe problems of poverty was located within the Department's Region IV. Five of the States (Georgia, Alabama, Mississippi, Tennessee, and South Carolina) were ranked among those with the lowest per capita income within the Nation. Four of the States in the region were among the six States with the highest infant mortality rates for the Nation. Five of the States were among the seven States paying the lowest AFDC grants in the Nation. Child welfare workers in States like these were faced often with assisting families to secure the basic

essentials of shelter, food, and clothing before helping them to be better parents.

Mental Retardation Services in Child Welfare Programs

The extension of child welfare services under the 1962 amendments, the earmarked funds for day care services, and the training grants in the field of child welfare contributed to resources for providing special services for mentally retarded children. Two States developed day care centers for mentally retarded children. In one State, many parents who had their children on waiting lists for the State institution for mentally retarded children removed the children's names when day care became available and proved to be the supplement needed so that the children could remain in their own homes.

The National Conference on Homemaker Service emphasized homemaker services as another resource in providing services for mentally retarded children.

Increased attention was given by welfare agencies to other ways of helping these children lead happy lives in the community.

Physically Abused Children

There was continued concern and interdisciplinary planning to meet the needs of the physically abused child.

Early in the fiscal year, the Bureau issued *The Abused Child—Principles and Suggested Language for Legislation on Reporting of the Physically Abused Child.*

Approximately one-third of all States have passed legislation which required that all cases of suspected child abuse be reported to the appropriate police authority by the doctor who sees the child.

Homemaker Services

A National Conference on Homemaker Services was held in Washington on April 29, 30, and May 1, 1964. The cooperative work of the Bureaus within the Welfare Administration and the new National Council for Homemaker Services set a structure for continued cooperative efforts. The conference created a ground swell of interest in expanded development.

Foster Family and Group Care of Children

Reports from the States indicated that many child welfare agencies found that the underfinanced and underserviced type of foster family care which had been the usual pattern would no longer suffice to meet the needs of children. Many children were going into this type of care by default when they needed another type of care. Many in urban areas were remaining for long periods of time in shelter care and in hospitals because agencies had not recruited and retained sufficient numbers of foster family homes.

These problems of insufficient numbers of foster family homes and misuse of foster family care were due to many factors: The increase in the number of working mothers; movement to urban and suburban areas; limited space; and administrative inattention to the problems. Additional breakdown in families meant that more children coming into care were emotionally upset and in need of a better quality of family care and casework service.

Interest increased in agency-operated group homes, which combined some of the best features of the foster family home located in a community and the small institution used for diagnosis, treatment, and sound group care. This type of facility was increasingly being used for the care of adolescents.

Publications on the subject of group homes were prepared in response to widespread inquiries. One set of publications, *Agency Operated Group Homes*, included a summary of trends in these new facilities throughout the country and a casebook describing and evaluating 15 of these facilities.

As a result of the joint Child Welfare League of America-Children's Bureau project to promote standardized cost analysis methods for child-caring institutions, standardized methods were being planned or were adopted by public institutions in four States. Similar methods were being adopted by voluntary institutions in eight States.

The Children's Bureau called an all-day conference in April 1964 to prepare guide materials for child-caring institutions considering acceptance of children from minority groups. Representatives from national voluntary and sectarian organizations affirmed the need for integration. They concluded that the pace and methods used in institutional integration would have to relate to local school and church integration.

Unmarried Mothers

The 1962 estimated number of births out of wedlock was 245,100 or 5.9 percent of all live births. The ratio per live births had been rising gradually over recent years although improved reporting accounted for part of the increase. The rate had been rising also, having gone from 8 to 21 per 1,000 unmarried women of childbearing age between 1942 and 1962. The majority of women who bore children out of wedlock were not teenagers but rather women over 20 years of age.

Some States had been trying to plan for social services to be given to unmarried pregnant women, but, according to reports, many of the services reached only a small percentage. In State after State, Negro unmarried mothers were still receiving few or no casework services. Maternity homes were crowded, but only a small number of Negro women were cared for through this resource.

While there were individual differences in communities as to their provision of educational opportunities, more and more school districts were taking responsibility in planning educational opportunities for the unmarried pregnant girl. Maternity homes in general provided or arranged for schooling, for which there was a wide variety of financial plans.

Adoption Services

About 121,000 children were adopted in the United States during 1962, or 6 percent more than in the previous year. It was estimated that 62,900 of them (52 percent) were adopted by nonrelatives and 58,100 (48 percent) by relatives. In nearly two out of every three nonrelative adoptions, the child was placed in the adoptive home by a social agency.

Four-fifths of all nonrelative adoptions and one-third of all relative adoptions were of illegitimate children.

Reports continued regarding the decline in adoptive applicants. Although the number of applicants had declined, the number of children adopted had increased. More flexible policies on the part of agencies in many States prevented a crisis.

Cuban Refugee Children

The Children's Bureau continued to carry overall responsibility for child welfare services, including care and protection, for unaccompanied Cuban children. The Florida State Department of Public Welfare, acting as agent for the Department of Health, Education, and Welfare, was responsible for overall supervision and administration of the program through contractual arrangements with four voluntary agencies which accept children for placement in group or foster family care.

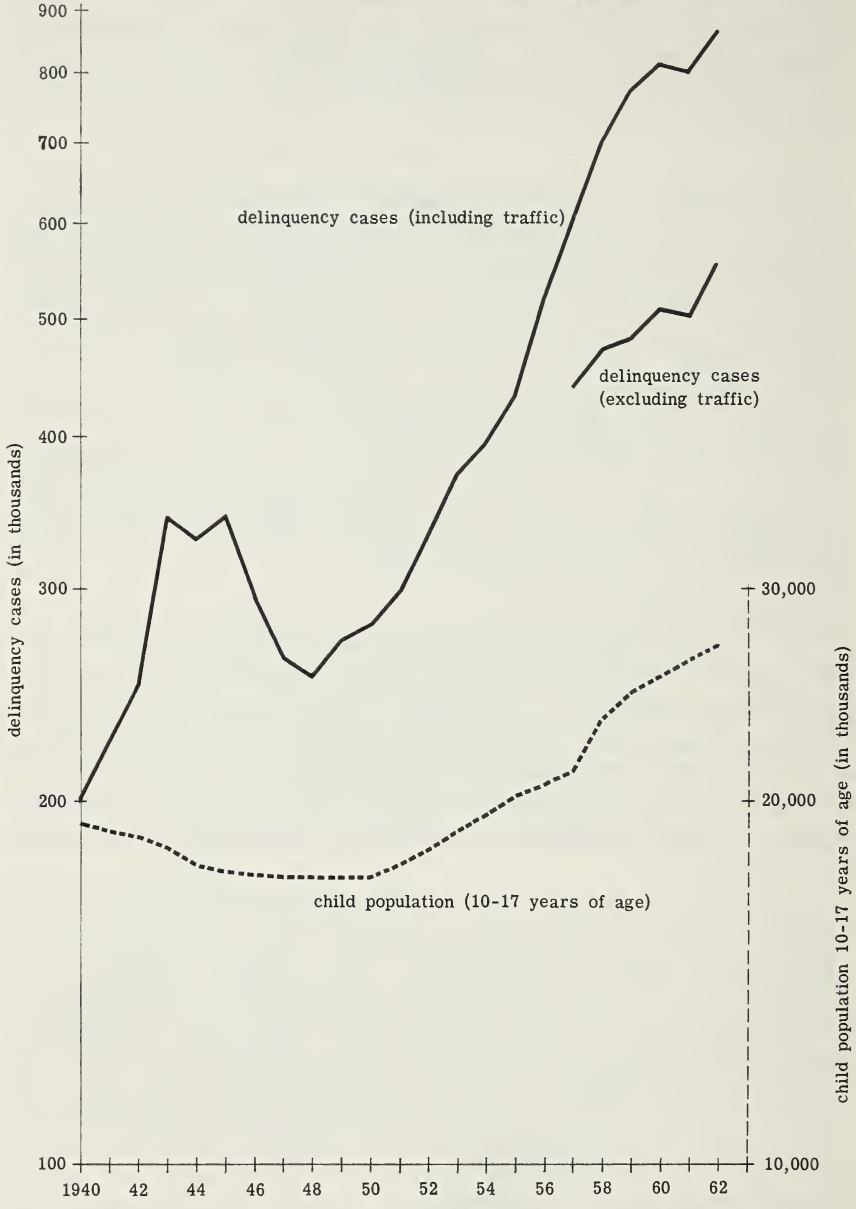
The program gradually declined from a peak of 4,100 children just before the Cuban missile crisis in October 1962 to the low point of 2,474 children reached on June 30, 1964. Neither unaccompanied children nor the parents of children already in care had been able to come to the United States in significant numbers since the regular commercial flights from Havana were stopped in October 1962. Of the total of 7,773 children who had received care since the beginning of the program, 68 percent had been discharged from care, the majority to their parents or close relatives.

JUVENILE DELINQUENCY SERVICES

National interest in and concern about juvenile delinquency problems continued.

About 555,000 juvenile delinquency cases (excluding traffic offenses) were handled by juvenile courts in the United States in 1962. The

CHART 8.—TRENDS IN JUVENILE COURT DELINQUENCY CASES AND CHILD POPULATION 10 TO 17 YEARS OF AGE, 1940–62 (semi-logarithmic scale)



estimated number of different children involved in these cases was 478,000 (the same child may have been referred more than once during the year). These children represented 1.8 percent of all children aged 10 through 17 in the country.

The year 1962 showed an increase in delinquency cases over the previous year. The increase for 1962 was 10 percent while the child population aged 10 through 17 increased by only 3½ percent. The upward trend, noted every year beginning with 1949 except for 1961, continued.

While the overall national increase in 1962 was 10 percent, the rural courts experienced a greater increase in the number of delinquency cases handled that year than did the urban courts—16 percent increase for rural courts and 10 percent for urban courts.

The rate of delinquency cases (the number of cases per 1,000 child population aged 10 through 17) was about three times higher in predominantly urban areas than in predominantly rural areas. Courts in predominantly urban areas handled more than two-thirds of all the delinquency cases in the country.

More than one-third of the delinquency cases referred to courts serving large cities were dismissed with warning or adjustment.

Delinquency cases continued to be primarily a boys' problem: Boys were referred to courts more than five times as often as girls.

Approximately 38,500 children were living in public training schools for delinquent children on June 30, 1963. This is a decrease of about 1 percent from 1962.

The average length of stay in these institutions was 9.5 months. The average annual per capita operating expenditure for caring for a child was $2,760, an increase over $2,625 for 1962.

Training school staff turnover continued to be high. Over one-fifth of all employees left their jobs in 1963, the majority of whom were treatment and educational personnel.

Training Needs

Administrators of State agencies and superintendents of institutions continued to point out the lack of trained personnel in institutions and to request funds and technical assistance for developing inservice training programs. Reports indicated that inservice training programs reduced the high turnover rate of personnel in institutions.

State, regional, national, and international organizations concerned with delinquency opened up new channels of communication through institutes and conferences devoted to a study of manpower and training needs. The many disciplines working in the correctional field found areas of agreement and in June 1964 formed a Joint Commission on

Correctional Manpower and Training to serve for a period of 3 years. The Commission will study the issues connected with the manpower shortage, educational preparation, recruitment, orientation, and retention. The interdisciplinary approach to both the staffing of agencies and the training of personnel lessened the tensions existing among personnel in the various agencies serving youth. School personnel, court staff, police, and social workers all have difficulty in understanding the appropriate functioning of the other members of the community's "team" serving youth.

Forestry Camps

An effort to identify the specific values of forestry camp experience for delinquent boys was planned in conjunction with the Training Center at Southern Illinois University. The purpose behind this national workshop included defining: (1) The place of the forestry camp in the total State rehabilitation program; (2) the criteria for selection of boys for placement in the camp; (3) the personnel requirements for the various staff needed at the camp; and (4) the effect of campsite location on programs and on staffing.

Treatment Resources

There was a need in the majority of States for a variety of treatment resources. The institution was the only treatment resource in a number of States. Some States have strengthened their programs by establishing forestry camps and halfway houses or group residences. However, other recommended resources (such as diagnostic study centers, small residential treatment centers for seriously disturbed delinquents, facilities for care of defective delinquents, foster family homes, and group homes) were in existence in only a few States. Inasmuch as a diversified program can help meet the problems of overcrowding and permit the establishment of more homogeneous treatment groups of delinquent children, States were encouraged to diversify their services.

Programs for female delinquents were less developed than those for delinquent boys. States were encouraged to strengthen their resources for the care and treatment of these girls.

INTERNATIONAL ACTIVITIES

The Bureau reaffirmed its longtime interest in and sense of responsibility for children in other countries with the establishment of a new position of Assistant Chief for International Cooperation. The Assistant Chief will be responsible for developing the Bureau's international program and for administering the Division of International Cooperation.

Cooperative agreements between the Agency for International Development and the Children's Bureau to utilize the technical competence of the Bureau were being developed.

The Children's Bureau was represented at the XII Pan-American Child Congress, Buenos Aires, December 1–7, 1963; the IX Congress of the Société Internationale de Chirurgie Orthopédique et de Traumatologie, Vienna, August 4–10, 1963; the XIII International Course in Criminology, Cairo, June 22–July 10, 1963; the Institute on Child Development in the Kibbuzim, Israel, August 4–10, 1963.

International Research

Eight projects in the field of maternal and child health were approved during the year under the program of international research made possible by the Agricultural Trade Development and Assistance Act of 1954, as amended. Three of these projects (in Pakistan, Poland, and Israel) on phenylketonuria will supplement the Children's Bureau study in the United States.

Consultation was given by five Bureau staff members to projects in Egypt, Israel, Poland, Pakistan, India, and Yugoslavia.

International Training

Training and observation programs were planned for 65 foreign professional students—47 followed programs relating to the health or medical care of mothers and/or children, 11 followed programs relating to child welfare, 4 to psychiatric and medical social work, and 3 to juvenile delinquency.

In the health professions, Indonesia and Senegal sent the largest number of participants. Most of them were physicians from medical school faculties who wanted to learn American methods of medical education as well as acquiring additional clinical skills.

A total of 258 visitors from 49 countries visited the Children's Bureau for short-term programs (from 1 hour to several weeks). Of these, 154 came in groups, the others individually. The largest single group, 93 Japanese (most of whom were connected with the Japanese Embassy in Washington), visited the agencies of the Welfare Administration.

Summary

"New" was the key word—"newness" was the theme—of the Children's Bureau's philosophy, policies, programs, and actions during fiscal year 1964.

New patterns of service were inaugurated to carry out more efficiently the Bureau's manifold responsibilities to protect the well-being

of all of our Nation's children. The year hit a new high in terms of the increased scope of our services.

The first full fiscal year of operation under the 1962 Public Welfare Amendments brought expanded child welfare services throughout the Nation. The appropriation of $4 million for day care services in fiscal year 1964 brought closer together, for a common cause in local communities, the public and voluntary health, education, and welfare agencies; the churches; housing officials; parents; and especially the concerned citizens. Forty-six States with approved plans for day care received $3,983,355. The new program of grants to institutions of higher learning for training personnel in the field of child welfare was enthusiastically received by agencies, schools, and social workers.

New and broader programs were made possible when President John F. Kennedy signed the Maternal and Child Health and Mental Retardation Planning Amendments to the Social Security Act on October 24, 1963. These amendments were succinctly described in the Act itself as being for the purpose of assisting States and communities ". . . in preventing and combating mental retardation through expansion and improvement of the maternal and child health and crippled children's programs, through provision of prenatal, maternity, and infant care for individuals with conditions associated with childbearing which may lead to mental retardation, and through planning for comprehensive action to combat mental retardation. . . ."

New research programs in child welfare, maternal and child health, and crippled children's services were made possible by both the 1962 and the 1963 amendments to the Social Security Act and by funds appropriated by the Congress in fiscal year 1964.

A new high was reached in appropriations for the programs administered by the Bureau. In fiscal year 1964, the Congress appropriated almost $100 million for grants-in-aid to the States for maternal and child health, crippled children's, and child welfare services—more than double the amount appropriated for fiscal year 1960.

Fiscal year 1964 gave the Bureau new tools with which to work, new resources on which to draw, new dimensions to our programs, and new direction.

Cuban Refugee Program

Substantial progress was made during 1964 in enabling Cuban refugees in the United States to become self-supporting, in alleviating the burden of refugees on Miami, Fla., and in reducing the Federal expenditures required on behalf of the refugees.

Background of Program

Cuban refugees have fled to the United States since the Castro regime took power in Cuba on New Year's Day of 1959. This has marked the first time in history that our Nation has become a country of first asylum for large numbers of refugees.

Almost all of the refugees have arrived in Miami in a state of destitution after having been stripped of their possessions and funds by the Cuban government. During 1959–1961, the refugee stream was composed primarily of professional persons, business executives, managerial and technical personnel, and office and skilled workers. For more than 3 years, however, every socioeconomic group on the island has been significantly represented among the refugees.

The Cuban Refugee Program was established in February 1961, after it had become clear that the growing number of refugees in the Miami area had exceeded the capacity of State and local, public and voluntary agencies for effective help and the capacity of the local labor market to provide employment.

The program has two basic objectives: (1) To provide necessary health, educational, and welfare assistance to Cuban refugees in the United States, primarily in Miami; and (2) to arrange for the resettlement of refugees from Miami to other parts of the Nation where they will have opportunities to become self-supporting during their exile.

The program provides the following: Financial assistance and health services to needy refugees in the Miami area; fifty percent of the costs incurred by the Dade County (Miami) public schools in accommodating refugee pupils; the cost of foster care of refugee children who are in the United States unaccompanied by parents or close relatives after having been sent out of Cuba by their parents in order to avoid Communist indoctrination; loans to needy Cuban college students in the United States; free English and vocational courses in Miami designed to increase the potential of refugee adults for resettlement and employment; and special retraining projects in Miami and other cities for selected groups of professionals to enable them to meet requirements for employment in this country.

Resettlement is necessary because of the lack of sufficient job opportunities in Miami. The resettlement program is really an American people's program. It is carried out by four national religious and nonsectarian agencies working under contract with the Federal Government: Catholic Relief Services; Church World Service (Protestant); United HIAS Service (Jewish); and the International Rescue Committee (nonsectarian).

Resettlements are arranged when local churches and civic organizations agree to sponsor refugees in their communities, to find jobs and at

least temporary housing for them, and to orient them to the new community. The Cuban Refugee Program provides funds to cover administrative expenses of the national resettlement agencies, transportation costs of refugees from Miami to the city of resettlement, and, to refugees who are receiving Federal assistance in Miami at the time of resettlement, a transition allowance of $100 for a family or $60 for a single person, to help them get started in their new location. The local resettlement arrangements are carried out generally on a volunteer basis, by citizens who are concerned about the plight of the refugees.

In order to prevent a refugee from becoming a burden to the community in which he resettles, because of loss of job or severe medical expenses, public assistance is made available to him through the local office of the State or county welfare department which is then reimbursed from Federal funds. The assistance to needy Cuban refugees is based on the same standards of need as apply to American citizens.

Progress During 1964

The following figures are indicative of the progress made during fiscal year 1964: A total of 6,249 refugees registered for the first time with the Cuban Refugee Center in Miami, while a total of 16,742 were resettled from Miami to other areas. The number of refugees in Miami decreased by at least 10,000 as a result of the resettlement program; the actual decrease is estimated to be somewhat greater since a number of refugees are known to have relocated on their own initiative outside the regular resettlement procedures. Local estimates placed the Miami refugee population at approximately 80,000 in June 1964.

The number of refugees receiving Federal assistance in Florida declined steadily, from 27,683 cases (families and single persons) during June 1963 to 15,573 cases during June 1964. The number of resettled refugees requiring Federal assistance rose slightly, from 1,703 cases to an estimated 2,283 cases, but remained at approximately 5 percent of those resettled.

Federal obligations for the Cuban Refugee Program decreased from $56,027,000 in fiscal 1963 to $46,012,000 in fiscal 1964. A further reduction is anticipated in fiscal 1965.

By the end of fiscal 1964, a total of 172,572 refugees had registered at the Refugee Center in Miami, and 79,230 of these had been resettled in every State, the District of Columbia, Puerto Rico, the Virgin Islands, and 24 foreign countries. Resettlements had been made in more than 1,800 communities.

Out of the total number of refugees who had registered, 33 percent required Federal assistance during June 1963. By June 1964, only 19 percent required assistance.

New Directions in 1964

Prior to October 23, 1962, refugees were arriving in Miami at a rate of about 1,800 persons a week, primarily via commercial air flights from Havana. On that date, at the time of the confrontation regarding missiles in Cuba, all flights were suspended. Since then, the lack of transportation facilities from Cuba to the United States has greatly reduced the number of arrivals of new refugees.

As a result of this factor and of the continuing resettlement of refugees from Miami to opportunities in other areas, the problems confronting the Cuban Refugee Program have changed. During the latter half of fiscal 1963 and during fiscal 1964, the program has been dealing with a rapidly decreasing caseload of needy refugees in Miami. This is a situation typical of the later stages of any refugee program—a situation in which the number of persons needing help has been reduced, but one in which the problems of those remaining tend to be significantly more complex.

In order to be able to plan effectively to aid the remaining caseload, the Cuban Refugee Program carried out a comprehensive study during 1964 of the characteristics of refugees receiving Federal assistance in Miami. Information on each case was recorded for automatic data-processing and is kept up to date on a monthly basis so long as a case continues to receive assistance. This has been designed to provide a readily accessible central file of information that will enable the Government and the resettlement agencies to identify the resettlement potential of each case and the problems that exist and to establish priorities in the resettlement processing of different types of cases.

The setting up of this central file was completed during the first half of fiscal 1964 and proved of great value during the latter half. For example: During the spring, it facilitated the identification of employable single men and enabled the resettlement agencies to concentrate on this group. During the summer, emphasis was placed on the resettlement of families with school-age children so that schooling would not be interrupted. The identification of a group of 700 single women who lacked knowledge of English and any occupational skills led to plans for the establishment of specially designed English and vocational courses which will help them to become employable and to be resettled during fiscal 1965. As a result of identifying a group of men who would have been able to be resettled except for possible medical problems, a special medical-processing unit was established for a

2-month period; the unit examined 980 cases, found that 48 percent did not suffer from any medical problems which affected their consideration for resettlement, and identified a number of medical conditions for which it was possible to arrange for treatment.

During the year, special emphasis was also placed on the establishment of retraining programs which would enable professionally trained refugees to fill positions as Spanish teachers in various States where qualified local applicants were not available. Such programs were arranged in cooperation with colleges and universities in Indiana, Iowa, and Kansas, with training ranging from 8 weeks to 1 year. Programs were also arranged in Oregon for refugee optometrists and in Kansas for librarians. In Miami, training courses which had been previously established for physicians and teachers were continued during 1964.

These projects have proved highly successful in enabling professionally trained refugees to secure the additional training necessary to enable them to fill professional positions in the United States. Some of the projects will be repeated in fiscal 1965 and additional projects for teachers will be offered in Montana, Oregon, and Pennsylvania.

Outlook for 1965

During 1965, assuming that no change occurs in the availability of transportation from Cuba, the Cuban Refugee Program anticipates further decreases in the number of refugees in Miami and the number requiring Federal assistance.

Emphasis will continue to be placed on the resettlement of refugees for whom appropriate opportunities can be found in other areas. New emphasis will be given to additional possibilities for suitable training programs for refugees who lack sufficient knowledge of English and job skills to become self-supporting and to more comprehensive planning for refugees who because of age or disability may be unable to benefit from resettlement. The program will continue to provide assistance and services for new refugees who reach our shores after escaping from Cuba and making the perilous voyage in small boats across the Florida Strait.

Office of Aging

The field of aging is a broad one, involving the general well-being of 18 million people in the United States. The Office of Aging works for these people by stimulating individuals, groups, and organizations in the field, and by providing consultation, guidance, and technical

assistance. The Office's nine Regional Representatives on Aging devote most of their time and effort to such activities, working closely with States and local communities to establish and develop programs for the elderly.

The Office, through its wide knowledge of Federal programs, is often able to steer organizations and communities with worthwhile projects to other Federal agencies able to provide financial backing. For example, one of the Office's Regional Representatives on Aging was instrumental in the planning and execution of a successful demonstration project in aging located in the rural community of Earlham, Iowa. The demonstration was financed by a grant from the Iowa State Health Department from money allotted to the State by the Public Health Service under the Community Health Services and Facilities Act. Other Regional Representatives have functioned in a similar way in their regions to the advantage of both the Federal program and the organization or community.

During the year, the Office initiated a new series of brochures describing available Federal assistance for research, demonstration, and training projects in aging. Six of the series were published, covering programs in the Welfare Administration and the Social Security Administration; the Office of Education; the Vocational Rehabilitation Administration; the National Institute of Mental Health, Public Health Service; and two in the Bureau of State Services, Public Health Service.

Cooperation at the Federal Level

The Director of the Office is the Chairman of the Secretary's Panel of Consultants on Aging. In March 1964, the panel was convened to discuss the impact of poverty on the older population of the Nation. A number of recommendations made at the meeting were prepared and submitted to the Secretary of Health, Education, and Welfare.

The President's Council on Aging, which sponsored Senior Citizens Month during May of this year, delegated responsibility for preparing promotional materials for the Month to the Office of Aging. More than 660,000 printed pieces, including the Presidential Proclamation, a poster, and a community program guidebook, were distributed, and recorded television and radio appearances of the President were broadcast throughout the country.

Reports received during May and June indicated intensive local observation of the Month across the country. The Governors of 21 States and mayors of many cities issued proclamations, and activity centers, local councils on aging, and other organizations conducted

month-long programs of events and activities in honor of older Americans.

Throughout the year, the Office worked closely with the President's Council on Aging. Representatives of the Office met regularly with the Council, and staff members served on most of its major committees, including those on housing, senior activity centers, and social services.

The Office provides secretariat services for the Departmental Committee on Aging and the Director of the Office serves as its Chairman. The Committee was especially active this year in planning for Senior Citizens Month.

The Office was represented on Government-wide committees on consumer protection, standards in housing, vocational education for jobs in the aging field, and social manpower needs.

The Office worked directly with other Government agencies on a number of projects. Staff members served with the Joint Task Force of the Department of Health, Education, and Welfare and the Housing and Home Finance Agency to bring health, social, educational, and related services to people in public housing in selected demonstrations. The Regional Representative on Aging in Kansas City was assigned this year as the principal Departmental representative at the demonstration in the Pruitt-Igoe Public Housing Development in St. Louis. This was the first demonstration initiated by the Joint Task Force in 1962. Other members of the staff have been active in the fourth demonstration, located in five housing developments in Miami, Fla. This is the first one limited to housing built specifically for older persons.

Jointly with the Public Housing Administration, the Office developed a concept of congregate housing and services for low-income older people. This was embodied in a Memorandum of Understanding issued jointly by the Commissioner of Welfare and the Commissioner of Public Housing. The Office has continued to work closely with the Public Housing Administration on project proposals submitted under this program.

The Regional Representative on Aging in Charlottesville, Va., participated in the Appalachian Development Program which included planning for the provision of a variety of services for older persons living in this depressed region.

The Office played a leading role in planning a Symposium on the Senior Driver and Pedestrian, which was conducted jointly by the University of Denver; the Office of Aging, Welfare Administration; the Vocational Rehabilitation Administration; the Office of Educa-

tion; and the Gerontology Branch of the Division of Chronic Diseases, the Division of Accident Prevention, and the National Institute of Mental Health, all of the Public Health Service.

At the request of the Department of Agriculture, the Office prepared a series of kits of selected publications on housing, health, and employment of older people for the use of Agricultural extension specialists in stimulating programs throughout the country.

Working With States

The Fourth Annual Conference of State Executives on Aging, sponsored by the Office of Aging, was held in late April in Washington, D.C., just preceding Senior Citizens Month. As in previous years, the conference was planned to help strengthen State agencies in aging. The theme for this year's conference—"Creating Opportunities for Older People"—was adapted from the theme for Senior Citizens Month. The conference served as an inservice training session for many of those attending and also provided an introduction to activities already planned to honor older people in States and local communities.

A new National Association of State Units on Aging was formed during the year and held its first formal meeting during the conference. The Office will work closely with the Association, which is scheduled to hold its major meeting again next year during the Annual Conference of State Executives on Aging.

In fiscal year 1964, four States—Florida, Hawaii, Mississippi, and West Virginia—established new State commissions on aging. In addition, the Governors of Oklahoma and North Dakota designated the State welfare departments as the point of contact on aging within those States. Also, the Commissioners of the District of Columbia appointed an Interdepartmental Committee on Aging to be responsible for planning service programs for the elderly. State units on aging are now included in a total of 41 States and 2 territories.

During the year, the Office collected comprehensive data on programs in aging from every State and territory. This information has been used to prepare a *Handbook on Aging in the States*, which was scheduled to go to press early in fiscal 1965.

At the request of State officials on aging, the Office initiated the Highlights of Legislation on Aging series last year. During the 1964 fiscal year, five publications were issued in this series.

The Regional Representatives on Aging were in part responsible for the addition of specialists on aging to the staffs of five State welfare departments.

Working With Voluntary Agencies

The Office devoted special efforts to encouraging increased interest in the field of aging on the part of national religious organizations. Conferences were held with officials of several denominations; a packet of materials on "The Older Person and Organized Religion" was prepared for the use of religious leaders; and a brief bibliography, *Organized Religion and the Older Population*, was prepared and published in the Selected References on Aging series.

Joint activities were conducted with such organizations as the American Public Welfare Association, the National Council on the Aging, the National Urban League, the Young Men's Christian Association, the American Association of Retired Persons, the National Council for Senior Citizens, the AFL–CIO, and the National Association of Housing and Redevelopment Officials.

The Office worked with the Southern Regional Education Board, the Western Interstate Commission for Higher Education, and several universities to stimulate the offering of professional education and training in gerontology. For example, in one region alone, four major universities initiated courses or programs in aging during the year, and two more were making plans for the 1965 fiscal year.

Office of Aging staff assisted in the organization of, and participated in, the Sixth International Congress of Gerontology, the 17th University of Michigan Conference on Aging, the annual meeting of the American Geriatrics Society, George Washington University's inservice training programs for nursing home administrators, an extended seminar at San Jose College, Calif., two semiannual meetings of the American Public Welfare Association's Committee on Aging, and the annual meeting of the Gerontological Society, Inc.

General Information Services

The Office serves as a focal point for the collection and dissemination of knowledge about aging and the older population, as well as information on new approaches and activities in the field.

Two new case studies were published this year in the Patterns for Progress in Aging series. *Planning for Retirement—A University-Labor Union Program*, Case Study No. 16, describes a course for persons preparing to retire, which was arranged and conducted by a labor union and a university. A major purpose of the publication is to suggest ideas to communities on preretirement programs. *A Rural County Cares for Its Aging: The Story of Aitkin County, Minn.*, Case Study No. 17, is a report of a successful program for older

people carried out by a citizens committee on aging in a rural county with a large and scattered population and meager financial resources.

During the year, the Office issued two publications in the Facts of Aging series, Supplement No. 1 to Facts on Aging No. 7, *Income of Older People, 1962*, and No. 8, *The Older Farm Population, 1962-1963*. A number of special statistical analyses were also prepared for workers and organizations in the field of aging.

The Office also published *Aging in the Modern World—An Annotated Bibliography*, compiled for it by the Departmental Library, and another publication in the Selected References on Aging series—*Basic Reference Books and Journals in Gerontology*.

Aging, the official publication of the Office of Aging, this year started using picture stories on its center spread. By permission of the Bureau of the Budget, both the number of copies printed and the number of pages used during the year were increased. A special issue in March was devoted to California programs for the aging, and another in May gave a roundup on Senior Citizens Month. The November issue, carrying a lead story on the Earlham Care Program was in such demand that the story was reprinted, the first of a planned series of reprints from *Aging*.

Early in the year, the Office produced a publication describing its work, entitled *The Office of Aging and the Many Faces of Age*. The Office produced three copies of a table-top exhibit illustrating its program for elderly people for use at national conferences and meetings. Completed in January, all three exhibits were booked solid from March until the end of the fiscal year.

A new Welfare Administration service to magazine, television, and radio writers was initiated by the Office with the publication of *Futures and Features*. The two issues published by the Office last year carried indications of new trends in the field and brief stories on developments of interest.

Consumer Reports, *Reader's Digest*, *Geriatrics*, *Journal of the American Geriatrics Society*, *Gerontology*, *Harvest Years*, and other national magazines carried articles for which the Office had furnished material, and the *International Social Science Journal* carried an article by a staff member. The National Broadcasting Company featured the Office and programs for the aging on its "Today" show in January.

At the end of the year, a new specialist was added to the Office's staff to work on the rapidly expanding area of preparation for retirement.

Office of Juvenile Delinquency and Youth Development

The Office of Juvenile Delinquency and Youth Development administers the Juvenile Delinquency and Youth Offenses Control Act of 1961.

The Act authorized $10 million a year for 3 years, to be made for demonstration and evaluation projects, for training personnel, and for technical assistance services. The Act was passed to help local communities stem the rising tide of juvenile delinquency and to meet the great shortages of trained personnel working with youth.

The Office of Juvenile Delinquency and Youth Development, working closely with the President's Committee on Juvenile Delinquency and Youth Crime, has viewed delinquency as a multifaceted problem. Unemployment, school dropouts, poor housing, family breakdown, racial discrimination are all closely related to delinquency.

Demonstration Projects

These problems are especially serious in the slum areas of our large cities. It is in these areas, therefore, that the Office of Juvenile Delinquency and Youth Development has concentrated its efforts. However, of the 18 grants to communities to develop and/or carry out comprehensive projects, 2 have been given to rural areas.

The grants were awarded to communities judged to have the capacity for developing innovative programs and able to meet the basic criteria of: (a) Comprehensiveness in scope of planning; (b) wide involvement of important local groups such as public and private agencies, universities, city government, and neighborhood leadership; (c) financial commitment; (d) transferability to other areas; and (e) built-in evaluation. These communities have gathered staffs competent in research and program planning to develop integrated programs of social action and social services, which flow logically from a sound body of research data and a viable theoretical formulation. By June 30, 1964, six of the communities—New York's Lower East Side, Cleveland, New Haven, Boston, Los Angeles, and Syracuse—were engaged in large-scale action programs to deal with these problems and to coordinate the activities of governmental and voluntary organizations which deal with children and youth.

Training Projects

Closely connected with the demonstration project efforts are the training projects being supported under the Act. The training program is seeking to help fill the shortages of trained workers by im-

proving both the quality and quantity of training, by building new knowledge, and by organizing and communicating more effectively the knowledge that is currently available.

During the first 3 years of operation, 12 university-based training centers have been established across the country. Curriculum development projects are underway in 21 locations. Workshops, institutes, seminars, and related training activities have been conducted by 32 institutions and agencies. Each project may receive—and in a number of instances projects have received—more than one grant. To date, some 12,500 persons have been trained in youth work from such areas as law enforcement, education, welfare, and recreation.

Technical Assistance

Technical assistance services provided by the Office of Juvenile Delinquency and Youth Development have been geared to help communities and institutions to design and carry out both the demonstration and training programs. The Office has supplied intensive consultation to all communities which have received grants, as well as to numerous communities which have requested assistance but which could not be given grants.

A bill to extend the Juvenile Delinquency and Youth Offenses Control Act was passed by Congress on June 29, 1964, and signed by the President on July 9. The new legislation extends the Act for 2 more years, with provision for a special study of the effects of school attendance and child labor laws on juvenile delinquency and with $5 million earmarked for a demonstration project in the District of Columbia.

Operational Programs in the Office of Commissioner

In addition to functions related to administration, management, long-range planning, legislative and informational considerations, and emergency welfare services, the Office of the Commissioner of Welfare carries operational responsibilities for international activities and for social welfare research.

International Activities

Social welfare has become a priority program in almost every country in the world, and the Welfare Administration, in response to many requests from abroad, has expanded its resources for sharing experience in social welfare administration and related fields. Of the 122 countries with independent national governments, 86 now have

some focal point at the national level for the administration of welfare services. The shortage of social workers to man the new services in the developing countries is creating an increasing demand for the expansion of training opportunities and exchange of research on social problems and for the recruitment of American experts to help train staff for new social institutions.

Intercountry research is an excellent vehicle for exchange. Thirty-one projects have been initiated overseas through the Welfare Administration's international research program, 16 of which were initiated during fiscal 1964. The projects are authorized under Public Law 480, 83d Congress, under which U.S.-owned foreign currencies derived from the sale of surplus agricultural commodities are used in the countries involved. Eight of the new projects are in the social welfare field; the other eight, in the field of maternal and child health. All are designed to be of value both to the United States and to the foreign country. Applications for grants continue to reflect special interest in the training of welfare personnel, prevention and treatment of juvenile delinquency, and alternative methods of providing community services for families and children. Among the new areas of study included in the projects initiated in 1964 are phenylketonuria and the needs of the aging.

In the exchange-of-persons programs, the Welfare Administration had contacts with professional workers from 90 different countries, primarily in providing and arranging training services for them. A total of 1,171 visitors from other countries received services from the Welfare Administration in 1964, as compared with 931 visitors in 1963. The visitors came to the United States on study grants made available by the United Nations, the Organization of American States, the U.S. Cultural and Educational Exchange, the Agency for International Development, their own governments, and various voluntary agencies. Especially impressive was the growth of interest in countries of Africa, 22 of which sent representatives to the United States for training during the fiscal year.

An increase in the number of international visitors financed by AID was largely for the purpose of participation in group seminars on urban development, social welfare planning and administration, health and welfare services, and youth development activities. The authorization for these groups in the social welfare field reflects the heightened interest of the United States in social aspects of country development. The number of international visitors in the field of maternal and child health also increased, and teams continued to be sent for training.

The Welfare Administration serves as a recruitment resource for Department of State programs using social work experts or scholars and for the United Nations. With the surge of interest in social welfare throughout the world, particularly in the developing countries, and the shortage of trained personnel, the need has become increasingly evident for systematic information on social work openings in other countries and candidates from the United States available for such positions. To help meet this need, the Welfare Administration established a clearinghouse in 1964 to handle inquiries from U.S. social workers seeking oversea opportunities and to suggest candidates for such assignments. A preliminary survey of the current role of American social workers abroad showed 225 Americans to be working in bona fide social work positions in 56 countries.

The Commissioner of Welfare convened two ad hoc advisory groups during 1964 to provide guidance for the expanding international work of the Administration. One group, composed of social welfare administrators, economists, and social scientists, was established to assist in the development of a comprehensive document on social development and the role of social welfare in various countries. When completed, the report is expected to be of value to the United States in providing guidance for U.S. participation in international meetings and in international technical assistance activities.

The second ad hoc advisory group, composed of social work educators with oversea experience, was convened to review current needs in international training and to develop recommendations with respect to the potential contribution of U.S. schools of social work in helping to meet social welfare manpower needs internationally.

Two social welfare attaché posts were established in 1963 in U.S. Embassies in New Delhi and Rio de Janeiro. During 1964 both social welfare attachés have provided a wide variety of services to the Welfare Administration. They have furnished excellent reports on current developments in India and Brazil; have assisted in the selection of exchange persons coming to the United States; and have represented their embassies in interpreting U.S. social welfare programs to key community groups in their countries of assignment.

During the year, the Welfare Administration continued to cooperate with international organizations, both governmental and nongovernmental. Among the major international conferences in which the Administration participated were the meeting of the Executive Board of the United Nations Children's Fund (UNICEF) in Bangkok in January 1964 and the International Gerontological Congress in Denmark in August 1963.

The Commissioner of Welfare was formally designated by the Department of State as U.S. representative on the United Nations Ad Hoc Group on Social Welfare to meet in advance of the U.N. Social Commission.

Welfare Research

Major efforts of the Research Division of the Office of Commissioner were directed toward: Recruitment of a multidisciplinary research staff and development of effective staffing patterns; delineation of research areas which can best meet the needs of the Welfare Administration and which can serve to integrate intramural research with the extramural grants programs; initiation and carrying out of selected priority studies; development of the monthly publication *Welfare in Review*; and coordination of research information and activities within the Welfare Administration.

Several studies were completed during the year. The first report prepared by the Division, *Converging Social Trends—Emerging Social Problems*, was published in May 1964 in connection with the National Conference on Social Welfare.

Working Paper No. 1, "Chronic Dependency: A Conceptual Analysis," was completed and published. Also completed during the year and scheduled for publication in fiscal 1965 were: Working Paper No. 2, "Alcoholism and Low-Income Groups"; Research Report Series No. 1, "Low-Income Counties and States"; and Research Report Series No. 2, "Cost of Drugs—Administrative Implications."

A number of research papers prepared by the Division were published in *Welfare in Review*.

Among the studies in process is a major intramural research project which was initiated as part of a national longitudinal survey of high school youth. As a first step in the study, data on the health, education, and welfare status of some 15,000 youths in one county will be collated for the purpose of assessing the school and work achievements of youth from families receiving public assistance.

Other studies in process include: Changing trends in general assistance; use of the indigenous nonprofessional in social welfare; work opportunities and job progression among mothers receiving Aid to Families with Dependent Children; family structure and low-income; and exploratory work in community development and community center methods in public welfare.

Under the Cooperative Research and Demonstration Grants Program which is authorized by section 1110 of the Social Security Act and administered by the Welfare Administration in cooperation with the Social Security Administration, 37 grants totaling $1.5 million

were made during fiscal 1964. These grants supported research in such areas as dependency and public assistance, gerontology, and deprivation of children and youth.

Research plans for fiscal 1965 place increased emphasis on: (1) The study of specific administrative and legislative questions of central concern in the public welfare field; and (2) programmatic research directed toward building a base of knowledge about the nature of the low-income and economically dependent population and the effectiveness of various methods and programs for prevention and reduction of dependency.

Table 1.—*Public assistance: Recipients under Federal-State programs, by program and State, June 1964*

State	Old-age assistance	Medical assistance for the aged	Aid to the blind	Aid to the permanently and totally disabled	Aid to families with dependent children [1]
Total	2,181,957	187,141	97,409	501,429	4,214,901
Alabama	110,275	235	1,761	14,522	92,124
Alaska	1,394		106	154	4,701
Arizona	13,331		832	2,922	41,642
Arkansas	58,234	2,716	1,960	9,245	29,152
California	271,876	26,566	12,564	49,348	486,855
Colorado	48,777		261	6,044	40,701
Connecticut	7,722	5,806	312	7,155	57,089
Delaware	1,252		306	431	10,874
District of Columbia	2,405	787	202	3,072	19,119
Florida	72,028	544	2,581	16,162	103,210
Georgia	92,018		3,182	26,185	64,150
Guam	166	130	6	59	671
Hawaii	1,160	544	79	1,048	13,575
Idaho	4,655	2,053	132	2,807	9,872
Illinois	58,406	1,475	2,550	28,119	262,519
Indiana	23,179		1,763	1,116	48,592
Iowa	28,686	3,467	1,190	1,135	41,744
Kansas	21,862	2,250	500	4,609	33,712
Kentucky	56,750	7,929	2,434	9,931	77,704
Louisiana	130,250	647	2,828	18,868	101,648
Maine	11,125	668	339	2,230	19,792
Maryland	9,559	10,373	397	7,402	70,565
Massachusetts	54,427	26,894	2,275	11,856	89,968
Michigan	49,772	5,403	1,683	7,574	159,135
Minnesota	42,226		1,093	3,478	47,935
Mississippi	74,139		2,898	17,414	82,871
Missouri	103,644		4,574	14,692	106,616
Montana	5,437		246	1,279	7,127
Nebraska	12,629	53	651	2,473	15,034
Nevada	2,551		165		4,777
New Hampshire	4,464	1,337	262	582	4,351
New Jersey	13,948	5,092	957	8,390	100,186
New Mexico	10,801		345	3,630	31,652
New York	56,255	34,202	3,186	35,363	489,845
North Carolina	43,612		5,070	21,981	114,358
North Dakota	5,387	1,081	81	1,464	7,272
Ohio	85,186		3,347	18,727	169,545
Oklahoma	83,469	989	1,678	13,169	73,856
Oregon	11,055	3,529	420	7,771	29,418
Pennsylvania	46,761	7,848	17,893	19,683	313,598
Puerto Rico	32,133	3,478	1,494	21,294	205,980
Rhode Island	5,953		99	2,761	23,328
South Carolina	26,113	2,381	1,786	8,605	30,895
South Dakota	7,237	106	121	1,102	10,181
Tennesseee	45,469	3,694	2,197	12,612	76,375
Texas	229,320		4,800	9,291	86,559
Utah	5,061	2,073	170	4,739	20,340
Vermont	5,447	107	113	1,086	5,441
Virgin Islands	461	35	15	91	1,156
Virginia	13,413	1,196	1,136	6,732	44,983
Washington	33,760	9,283	680	18,422	64,713
West Virginia	14,666	12,150	819	6,120	119,016
Wisconsin	29,512		810	5,873	45,026
Wyoming	2,539	20	60	611	3,353

[1] Includes as recipients the children and/or both parents or 1 caretaker relative other than a parent in families in which the requirements of such adults were considered in determining the amount of assistance.

Table 2.—*Public assistance: Average payments to recipients under Federal-State programs, by program and State, June 1964*

State	Old-age assistance	Medical assistance for the aged	Aid to the blind	Aid to the permanently and totally disabled	Aid to families with dependent children
Total	$78.44	$196.84	$84.09	$78.50	$32.51
Alabama	67.16	253.51	64.68	46.16	11.69
Alaska	98.16	----------	81.46	133.71	34.76
Arizona	64.16	----------	72.53	67.25	29.07
Arkansas	63.91	56.82	70.77	59.12	16.92
California	107.74	295.72	129.28	112.80	43.11
Colorado	101.77	----------	88.68	77.77	36.25
Connecticut	75.31	193.94	109.18	68.29	43.38
Delaware	64.69	----------	80.84	73.47	27.74
District of Columbia	88.64	282.72	72.70	78.84	32.62
Florida	66.47	353.04	67.46	71.38	16.02
Georgia	56.36	----------	58.61	59.53	22.24
Guam	30.25	17.51	(1)	25.90	12.99
Hawaii	82.61	348.17	120.20	146.09	37.38
Idaho	75.70	138.68	74.46	57.53	37.86
Illinois	88.03	518.47	90.21	93.01	43.63
Indiana	80.99	----------	83.08	116.27	29.75
Iowa	91.42	124.83	102.59	82.90	38.49
Kansas	86.09	152.39	91.64	104.37	37.38
Kentucky	61.72	30.23	70.61	75.22	25.01
Louisiana	85.13	202.23	82.05	58.55	23.03
Maine	84.22	277.58	84.60	87.64	29.02
Maryland	72.86	35.88	80.68	77.88	32.65
Massachusetts	90.20	168.18	132.93	143.97	47.43
Michigan	89.45	370.20	86.15	107.54	35.04
Minnesota	118.11	----------	131.50	61.11	52.53
Mississippi	40.58	----------	46.43	43.53	10.60
Missouri	67.23	----------	75.00	70.08	24.16
Montana	71.99	----------	85.50	78.51	35.21
Nebraska	91.54	748.40	106.18	93.18	30.25
Nevada	89.33	----------	121.86	----------	31.67
New Hampshire	100.63	54.86	105.97	114.50	42.88
New Jersey	80.27	215.41	84.48	95.28	48.37
New Mexico	58.70	----------	74.10	69.66	34.34
New York	92.56	313.80	112.64	128.28	44.45
North Carolina	59.64	----------	67.79	72.20	24.24
North Dakota	89.51	213.20	73.86	114.52	41.98
Ohio	85.04	----------	81.46	73.83	30.68
Oklahoma	95.54	146.60	121.55	110.77	34.67
Oregon	68.37	143.16	83.27	63.64	38.15
Pennsylvania	74.42	241.00	74.84	71.54	29.84
Puerto Rico	9.32	29.39	8.44	8.68	4.14
Rhode Island	85.47	----------	86.01	91.01	40.38
South Carolina	58.13	200.34	67.40	59.51	17.23
South Dakota	84.53	40.00	68.52	69.78	30.66
Tennessee	52.08	59.08	52.36	50.84	20.02
Texas	70.09	----------	69.39	57.24	17.86
Utah	69.23	113.75	78.70	69.68	32.53
Vermont	85.14	251.09	87.60	83.95	29.88
Virgin Islands	34.42	(1)	(1)	33.27	16.96
Virginia	62.61	139.44	69.43	66.64	24.12
Washington	76.52	143.98	87.52	56.62	37.24
West Virginia	49.29	38.65	48.11	51.53	26.79
Wisconsin	105.21	----------	102.15	113.61	45.92
Wyoming	83.05	(1)	78.82	83.39	37.41

[1] Average payment not computed on base of fewer than 50 recipients.

Table 3.—*Public assistance: Total payments to recipients under Federal-State programs, by State, fiscal year 1964*

State	Total (000)	Old-age assistance (000)	Medical assistance for the aged (000)	Aid to the blind (000)	Aid to the permanently and totally disabled (000)	Aid to families with dependent children (000)
Total	$4,491,783	$2,030,945	$383,648	$96,665	$442,637	$1,537,888
Alabama	111,248	88,736	767	1,109	7,809	12,827
Alaska	3,486	1,425	----------	96	110	1,854
Arizona	27,143	9,970	----------	729	2,002	14,443
Arkansas	58,214	43,239	1,603	1,609	6,219	5,545
California	718,092	347,196	80,069	19,073	55,558	216,196
Colorado	82,308	60,258	----------	258	5,177	16,615
Connecticut	58,507	7,928	13,957	413	5,939	30,270
Delaware	4,523	932	----------	267	370	2,953
District of Columbia	14,562	2,589	1,714	167	2,798	7,295
Florida	91,865	55,336	1,402	2,057	12,976	20,093
Georgia	98,026	61,224	----------	2,197	18,054	16,551
Guam	219	61	15	2	20	120
Hawaii	10,183	1,012	1,657	101	1,582	5,831
Idaho	13,731	4,278	2,910	111	1,733	4,699
Illinois	233,670	62,105	5,160	2,875	31,417	132,113
Indiana	41,135	21,878	----------	1,793	1,070	16,394
Iowa	52,180	31,227	1,375	1,474	1,024	17,080
Kansas	47,578	25,484	1,446	569	5,673	14,407
Kentucky	76,442	40,074	2,108	1,991	8,355	23,915
Louisiana	173,425	129,316	984	2,750	12,808	27,567
Maine	22,388	11,089	1,307	379	2,409	7,205
Maryland	44,423	8,151	3,738	377	6,507	25,650
Massachusetts	178,963	58,988	50,048	3,545	18,795	47,586
Michigan	138,014	48,516	22,142	1,671	8,820	56,865
Minnesota	86,521	56,798	----------	1,419	2,398	25,906
Mississippi	54,519	35,039	----------	1,581	8,511	9,389
Missouri	129,998	83,337	----------	4,077	12,133	30,451
Montana	9,036	4,730	----------	254	1,165	2,887
Nebraska	21,350	12,958	40	799	2,449	5,105
Nevada	4,758	2,693	----------	234	----------	1,831
New Hampshire	9,248	5,440	589	330	741	2,148
New Jersey	86,203	13,196	11,043	927	8,914	52,122
New Mexico	25,403	9,512	----------	359	3,462	12,069
New York	483,906	61,192	120,343	4,209	52,157	246,006
North Carolina	83,720	29,949	----------	3,911	17,640	32,220
North Dakota	13,917	5,895	2,670	83	1,837	3,434
Ohio	162,346	86,238	----------	3,370	16,691	56,047
Oklahoma	146,284	96,012	1,793	2,457	16,331	29,692
Oregon	35,261	9,696	5,865	405	5,865	13,429
Pennsylvania	207,299	42,397	21,081	16,096	15,391	112,335
Puerto Rico	16,428	3,673	970	155	2,212	9,418
Rhode Island	20,036	6,084	----------	102	2,932	10,917
South Carolina	30,869	16,254	1,984	1,273	5,363	5,995
South Dakota	12,107	7,281	4	106	898	3,818
Tennessee	57,603	28,938	2,065	1,425	7,476	17,698
Texas	220,751	191,948	----------	4,078	6,161	18,564
Utah	19,299	4,371	2,959	160	3,927	7,883
Vermont	8,691	5,512	339	95	938	1,807
Virgin Islands	528	221	26	6	38	237
Virginia	29,207	9,923	478	926	5,216	12,663
Washington	89,944	32,889	16,103	728	12,809	27,415
West Virginia	54,548	8,569	2,842	483	3,800	38,855
Wisconsin	66,910	36,610	----------	950	7,359	21,992
Wyoming	4,767	2,580	53	55	599	1,481

Table 4.—*Public assistance: Aid to families with dependent children, unemployed-parent segment; recipients and average payment, June 1964, and total payments, by State, fiscal year 1964*

State	Recipients June 1964	Average payment June 1964	Total payments, fiscal year 1964 (000)
Total	385,925	$30.50	$124,920
California	58,098	32.65	11,173
Connecticut	12,270	31.69	4,760
Delaware	2,064	26.75	656
Hawaii	1,995	29.92	759
Illinois	45,883	40.39	23,880
Kansas	1,948	29.26	594
Maryland	2,562	28.15	1,095
Massachusetts	3,687	35.43	1,441
Michigan	24,416	28.98	1,756
New York	86,769	31.50	32,547
Ohio	12,025	28.61	985
Oklahoma	148	27.31	44
Oregon	3,796	37.34	1,727
Pennsylvania	51,072	23.31	17,193
Rhode Island	3,312	34.46	1,414
Utah	4,751	20.62	1,221
Washington	12,351	26.73	3,832
West Virginia	58,778	27.15	19,842

Table 5.—*Public assistance: Aid to families with dependent children receiving foster care, number of children and average payment per child, June 1964, and total payments fiscal year 1964, by State*

State	Number of children receiving foster care, June 1964	Average payment per child, June 1964	Total payments, fiscal year 1964 (000)
Total	4,961	$72.02	$3,587
Alabama	12	[1]	6
Alaska	43	[1]	21
Arizona	179	58.09	97
California	965	92.21	1,088
Illinois	877	91.95	781
Indiana	114	38.87	39
Kansas	55	91.65	34
Kentucky	7	[1]	2
Louisiana	402	62.05	272
Maryland	362	69.04	248
Michigan	36	[1]	10
Minnesota	170	85.92	114
Missouri	73	31.75	9
New Mexico	62	64.24	52
North Carolina	35	[1]	21
Oklahoma	286	45.59	134
Oregon	140	67.76	129
Tennessee	196	68.46	46
Utah	183	52.03	119
Virginia	38	[1]	23
Washington	504	54.31	175
West Virginia	56	52.27	28
Wisconsin	166	61.03	141

[1] Average payment not computed on fewer than 50 children.

Table 6.—*Public assistance: Federal grants to States, by program, fiscal year 1964* [1]

State	Total	Aid to the aged, blind or disabled [2]	Old-age assistance	Medical assistance for the aged	Aid to families with dependent children	Aid to the blind	Aid to the permanently and totally disabled
Total	$2,921,602,465	$177,408,853	$1,232,637,782	$201,795,119	$1,018,004,080	$45,761,261	$245,995,370
Alabama	88,087,532	----------	68,874,849	640,614	11,256,655	867,864	6,447,550
Alaska	2,243,171	844,772	220,847	----------	1,162,299	15,253	----------
Arizona	20,689,144	----------	7,479,480	----------	11,201,224	536,645	1,471,795
Arkansas	47,933,322	----------	35,332,903	1,455,008	4,737,501	1,244,530	5,163,380
California	378,290,810	----------	179,557,487	39,015,273	123,441,719	7,879,304	28,397,027
Colorado	45,561,326	----------	30,624,272	----------	11,131,916	159,060	3,646,078
Connecticut	31,898,114	----------	5,228,704	6,621,430	15,661,902	181,559	4,204,519
Delaware	3,503,197	----------	673,485	----------	2,388,712	184,426	256,574
District of Columbia	10,226,679	----------	1,850,608	939,527	5,345,954	115,363	1,975,227
Florida	74,030,051	41,677,695	10,761,566	972,569	17,801,773	392,981	2,423,467
Georgia	78,219,932	----------	48,676,744	----------	13,702,932	1,706,207	14,134,049
Guam	119,630	----------	31,885	6,993	66,621	1,191	12,940
Hawaii	6,181,717	1,360,713	156,760	810,808	3,687,200	13,849	152,387
Idaho	9,412,253	----------	3,056,842	2,110,698	2,838,869	80,986	1,324,858
Illinois	138,531,670	31,053,885	21,461,560	2,245,182	74,198,778	882,216	8,690,049
Indiana	28,903,870	----------	14,552,895	----------	12,688,248	1,129,448	533,279
Iowa	34,405,044	----------	20,696,291	732,484	11,539,301	772,629	664,339
Kansas	29,162,540	----------	16,993,924	----------	8,924,097	333,886	2,910,633
Kentucky	61,990,323	30,446,866	7,711,901	1,610,975	20,304,465	379,866	1,536,250
Louisiana	135,626,427	----------	97,507,293	286,457	25,355,654	1,845,823	10,631,200
Maine	16,930,585	90,272	8,220,406	944,454	5,837,797	248,244	1,589,412
Maryland	30,091,055	2,810,228	4,158,521	1,911,286	18,026,282	175,550	3,009,188
Massachusetts	95,065,364	----------	36,691,681	24,358,856	25,595,408	1,341,026	7,078,393
Michigan	80,845,119	----------	29,151,844	10,717,467	35,759,187	964,474	4,252,147
Minnesota	46,544,690	----------	30,596,851	----------	13,439,376	678,283	1,830,180
Mississippi	47,114,580	----------	29,591,405	----------	8,901,400	1,304,142	7,317,633
Missouri	94,930,484	----------	59,859,098	----------	24,163,763	2,258,869	8,648,754
Montana	6,472,166	----------	3,416,846	----------	2,044,593	172,700	838,027
Nebraska	14,668,919	----------	8,748,328	30,232	3,909,120	417,035	1,564,204
Nevada	3,314,134	----------	1,814,919	----------	1,379,395	119,820	----------
New Hampshire	5,165,778	----------	3,151,034	309,576	1,175,299	167,427	362,442
New Jersey	47,772,377	----------	8,989,721	6,368,807	26,675,529	552,398	5,185,923
New Mexico	19,842,822	8,054,895	1,991,708	----------	9,179,887	61,231	555,101
New York	275,106,661	----------	41,246,176	65,473,574	142,711,002	2,230,638	23,445,271
North Carolina	68,446,696	----------	24,448,773	----------	27,169,284	3,151,833	13,676,806
North Dakota	9,544,852	----------	4,338,854	2,013,872	2,186,230	58,815	947,081

Ohio	109,396,916		53,811,464		42,300,259	2,200,753	11,084,440
Oklahoma	98,008,184	57,346,299	15,760,774	1,241,911	21,394,584	275,968	1,988,648
Oregon	22,849,895		7,122,416	2,425,137	8,637,042	248,018	4,417,281
Pennsylvania	140,859,513		29,084,403	10,900,532	87,351,716	2,785,391	10,737,471
Puerto Rico	9,650,734		2,058,688	475,735	5,571,615	102,843	1,441,853
Rhode Island	12,746,749	3,256,508	2,062,787		6,585,718	30,945	810,791
South Carolina	25,892,734		13,281,145	1,878,043	5,420,542	984,418	4,328,586
South Dakota	9,170,698		5,340,605	4,755	3,017,725	80,948	726,665
Tennessee	48,176,368		24,056,190	1,684,068	15,108,905	1,152,859	6,174,346
Texas	171,734,563		146,156,773		17,588,389	3,018,181	4,971,220
Utah	13,668,974		2,922,940	1,892,672	5,794,024	111,741	2,947,597
Vermont	6,532,226	466,720	3,705,788	211,464	1,496,187	62,079	589,988
Virgin Islands	324,973		126,279	31,872	143,051	2,708	21,063
Virginia	24,579,394		8,161,001	721,909	10,717,096	732,575	4,246,813
Washington	57,699,021		21,774,215	8,433,064	17,523,227	393,981	9,574,534
West Virginia	43,411,598		7,013,907	2,263,678	30,715,873	390,982	3,027,158
Wisconsin	36,853,945		20,568,389		12,102,099	529,144	3,654,313
Wyoming	3,172,946		1,763,557	54,137	946,656	32,156	376,440

[1] Based on cash advanced for the year; may differ slightly from fiscal year expenditures from Federal funds reported by the States.
[2] Cash advanced under specified types of assistance for part of year and under program of aid to the aged, blind, or disabled for part of the year.

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Table 7.—*Public assistance: Selected fiscal data relating to payments, fiscal year 1964*

State	Average per capita income, 1963	Expenditures for assistance payments from State and local funds, fiscal year 1964		Percent of assistance payments from Federal funds, fiscal year 1964
		Per inhabitant	Per $1,000 of personal income, 1963	
Total [1]	$2,449	$9.22	$3.88	60.2
Alabama	1,655	7.49	4.61	77.1
Alaska	2,839	5.54	1.97	60.3
Arizona	2,142	4.40	2.08	74.4
Arkansas	1,607	6.66	4.31	77.9
California	2,974	21.06	7.28	47.0
Colorado	2,464	19.20	7.82	54.1
Connecticut	3,185	10.78	3.51	49.0
Delaware	3,298	2.61	.82	71.7
District of Columbia	3,315	7.07	2.16	60.8
Florida	2,111	3.69	1.76	77.1
Georgia	1,864	5.10	2.84	77.6
Guam	[2]	1.52	[2]	50.0
Hawaii	2,462	6.52	2.74	55.1
Idaho	1,916	6.56	3.32	66.9
Illinois	2,948	10.50	3.67	52.9
Indiana	2,481	2.89	1.20	66.1
Iowa	2,302	7.04	3.03	62.8
Kansas	2,255	8.78	3.89	58.9
Kentucky	1,792	5.48	3.12	77.3
Louisiana	1,776	12.80	7.31	74.4
Maine	2,007	6.29	3.16	72.2
Maryland	2,786	4.80	1.80	62.9
Massachusetts	2,853	17.23	6.18	48.6
Michigan	2,541	7.59	2.98	55.5
Minnesota	2,329	12.30	5.31	49.9
Mississippi	1,390	4.40	3.20	81.3
Missouri	2,518	8.99	3.64	69.5
Montana	2,197	4.20	1.91	67.2
Nebraska	2,312	5.12	2.24	64.5
Nevada	3,386	4.46	1.46	61.8
New Hampshire	2,313	6.46	2.92	54.3
New Jersey	2,915	6.57	2.33	49.1
New Mexico	1,918	7.27	3.75	71.2
New York	3,013	14.02	4.71	48.1
North Carolina	1,807	4.01	2.26	76.8
North Dakota	2,050	7.94	3.94	63.2
Ohio	2,474	5.85	2.35	63.6
Oklahoma	1,953	21.42	10.87	63.9
Oregon	2,502	7.52	3.08	60.1
Pennsylvania	2,452	6.85	2.80	62.1
Puerto Rico	[2]	3.32	[2]	47.9
Rhode Island	2,433	9.47	4.02	56.8
South Carolina	1,588	2.44	1.58	79.8
South Dakota	1,886	4.67	2.40	72.4
Tennessee	1,783	3.12	1.80	79.5
Texas	2,068	5.30	2.58	75.0
Utah	2,119	5.82	2.77	70.1
Vermont	2,121	5.94	2.94	72.0
Virgin Islands	[2]	7.25	[2]	49.2
Virginia	2,057	1.56	.77	76.6
Washington	2,484	12.07	4.75	60.0
West Virginia	1,883	7.06	3.79	76.7
Wisconsin	2,368	8.09	3.46	50.3
Wyoming	2,475	5.64	2.32	59.4

[1] Excludes Guam, Puerto Rico, and the Virgin Islands, data on per capita and personal income not available.

[2] Data not available.

Table 8.—*Maternal and child health and welfare services: Grants for maternal and child health services, crippled children's services, and child welfare services under the Social Security Act, by program and State, fiscal year 1964* [1]

[In thousands]

State	Maternal and child health services	Crippled children's services	Child welfare services
United States	$27,249.6	$27,738.9	$28,975.6
Alabama	717.8	728.8	742.7
Alaska	163.3	166.2	97.5
Arizona	248.3		290.6
Arkansas	444.9	434.0	439.8
California	1,445.0	1,174.1	1,708.3
Colorado	486.8	326.6	364.2
Connecticut	432.1	302.3	307.3
Delaware	147.5	139.3	114.0
District of Columbia	286.0	268.2	127.1
Florida	976.7	692.1	805.4
Georgia	863.2	878.3	753.8
Guam	71.8	23.8	36.2
Hawaii	213.1	188.5	165.8
Idaho	206.0	206.8	100.0
Illinois	798.0	952.7	1,128.6
Indiana	473.0	674.5	654.3
Iowa	366.4	619.5	580.6
Kansas	276.7	321.2	405.9
Kentucky	713.5	869.9	745.6
Louisiana	648.9	668.0	651.0
Maine	220.6	158.6	200.2
Maryland	490.0	507.9	437.0
Massachusetts	555.6	527.1	733.1
Michigan	1,056.6	1,253.5	1,138.3
Minnesota	523.6	837.2	723.4
Mississippi	607.0	613.1	523.3
Missouri	570.3	541.6	714.8
Montana	160.7	159.6	162.2
Nebraska	169.9	220.8	251.3
Nevada	163.5	152.4	94.8
New Hampshire	82.7	145.9	141.7
New Jersey	453.1	449.5	650.7
New Mexico	264.2	277.6	254.9
New York	1,374.0	1,116.3	1,580.6
North Carolina	993.9	1,108.0	1,019.1
North Dakota	154.5	159.1	216.9
Ohio	1,146.5	1,140.6	1,408.1
Oklahoma	412.4	373.9	485.2
Oregon	308.5	273.9	289.8
Pennsylvania	1,228.8	1,441.1	1,384.3
Puerto Rico	710.8	753.2	655.2
Rhode Island	222.8	176.9	181.4
South Carolina	604.3	647.3	592.1
South Dakota	77.8	138.6	177.5
Tennessee	762.3	733.1	755.1
Texas	1,138.5	1,498.4	1,288.2
Utah	177.5	155.3	255.7
Vermont	135.2	147.1	144.6
Virgin Islands	115.3	110.6	76.2
Virginia	920.1	869.8	669.4
Washington	453.6	383.7	452.6
West Virginia	411.5	431.0	356.1
Wisconsin	521.0	538.3	631.8
Wyoming	83.4	63.2	111.4

[1] Based on checks-issued basis. Additional payments were made for special project grants to institutions of higher learning and to public or other nonprofit agencies and organizations as follows: Maternal and child health services, $1,301.4; crippled children's services, $1,359.5; child welfare research and demonstration, $1,145.5; child welfare training, $987.0; and maternity and infant care, $597.9.

Public Health Service

Health of the Nation

In the past year, the Public Health Service continued its efforts to improve health programs and services in the United States. A number of new responsibilities were given to the Service in response to the increasing complexity of health problems and social change.

Two significant new programs, signed into law by President Kennedy, had funds appropriated for their implementation in fiscal year 1964. The Health Professions Educational Assistance Act of 1963 (Public Law 881–29) authorizes the Service to help in the construction of professional health schools and to administer student loan programs. The Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963 (Public Law 88–164) launched a major new attack on the problems of mental illness and mental retardation. This measure authorizes Federal aid in the construction of community centers for the care of the retarded and mentally ill and provides for increased research and training in these fields.

On December 17, 1963, President Johnson signed the Clean Air Act (Public Law 88–206), which provides increased assistance to State and local governments to meet the problems of air pollution. It also authorizes accelerated research, training, and technical assistance in the field of aid pollution.

Several important health measures were also enacted in 1964. The Nurse Training Act of 1964 (Public Law 88–581) provides for the construction of new schools of nursing and the expansion of existing schools. It also authorizes loans for nursing students, provides funds to aid in curriculum development, and extends and expands the exist-

ing program of traineeships for professional nurses. The 1964 Amendments to the Hill-Burton hospital construction program (Public Law 88–443) extend this program for an additional 5-year period, authorize Federal aid in the renovation and modernization of hospitals in large cities, and encourages area-wide planning of health facilities. The professional public health traineeship program was also extended (Public Law 88–497).

Early in 1964, the Surgeon General's Advisory Committee on Smoking and Health made its report and concluded that: "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action." The Public Health Service, and many State, local, and voluntary organizations, are developing programs of research and education in response to this Report. Research on the properties of cigarette smoke and its effect on living tissues is in process and programs of public information and education have been developed. A National Interagency Council on Smoking and Health, formed by several leading national health and education agencies, has agreed to develop and implement plans and programs aimed at combating smoking as a health hazard.

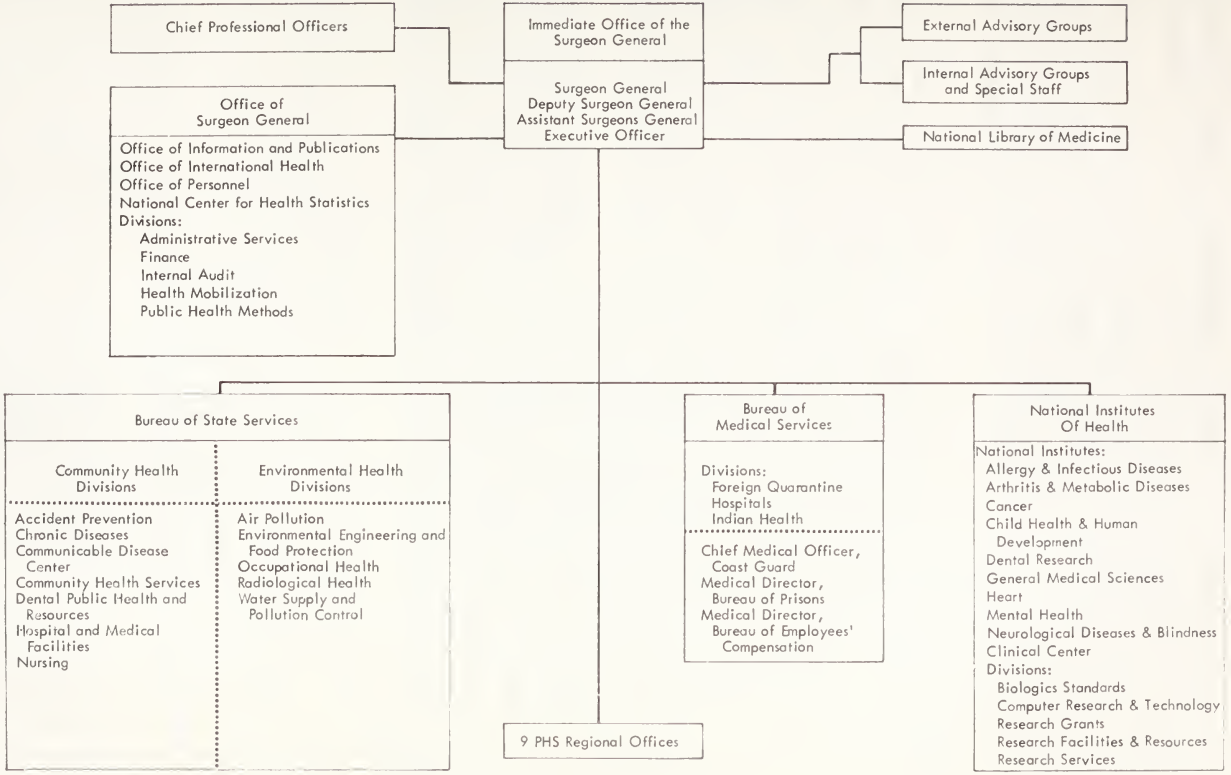
The Public Health Service meets its responsibilities for protecting and improving the Nation's health through the following organizational components: the Office of the Surgeon General, the National Library of Medicine, and three major operating bureaus, the Bureau of Medical Services, the Bureau of State Services, and the National Institutes of Health. The Bureau of Medical Services administers the medical care, foreign quarantine, and related programs of the Services. The Bureau of State Services works with States and communities to develop and improve community health and environmental health services. The National Institutes of Health is the principal research bureau of the Service, and administers a wide-ranging program of research grants and fellowships. In carrying out its responsibilities, the Public Health Service works in close partnership with State and local agencies, voluntary and professional organizations, colleges and universities, hospitals, industry and labor, civic groups, and others interested in health.

The activities and accomplishments of the Public Health Service in fiscal year 1964 are described in detail in the following pages.

Health Record

Health Interview Survey estimates for 1963 indicate that 22 million persons, or 12 percent of the Nation's civilian population, are limited in their activities as a result of chronic disease or impairment. Limitation of activity refers not only to the major activity of a per-

CHART 1.—PUBLIC HEALTH SERVICE—1964



[1] Separate organizational status similar to the National Library of Medicine is proposed under the reorganization plan.

[2] These groupings would become bureaus under the reorganization plan.

son, e.g., working, keeping house, or going to school, but also recreational, social and similar activities. Limitation was attributed most frequently, in order of decreasing importance, to heart conditions, arthritis or rheumatism, mental and nervous conditions, orthopedic impairments, or high blood pressure.

In the year ending June 1963, Americans (exclusive of the armed forces and inmates of institutions) experienced an estimated 401 million acute illnesses or injuries requiring medical attention or causing restriction of activity for at least 1 day. About 233 million of these, or 58 percent, were respiratory in nature, including 83 million cases reported as influenza.

The average American experiences in a year about 16 days of restricted activity from chronic or acute conditions, including injuries. Of these, 7 days are spent in bed. Time lost from work or school due to illness amounts to 6 days which may or may not also be bed days.

From data collected in the year ending June 1963, it is estimated that about 70 percent of the civilian noninstitutional population maintains hospital insurance and 65 percent had surgical insurance coverage. The average American spends approximately $129 annually for hospital care, medical and dental services, medicines, and other health-related services and products. This estimate includes amounts which may have been paid for by insurance.

Because the United States underwent an outbreak of influenza in early 1963, about 75,000 more deaths were recorded in January–April than during the corresponding period of 1961, the most recent year without serious influenza outbreaks. After allowing for population growth over the 2 years, the excess number of deaths during the first four months of 1963 associated with the epidemic was approximately 58,000.

The year's 1,813,000 deaths gave a death rate of 9.6 per 1,000 population.[1] Over the last 10 years the rate has been 9.5 or 9.6 in years when respiratory diseases were more prevalent (1963, 1962, 1960, 1958, and the latter part of 1957). Other years in this decade have had lower rates, but none below the 1954 rate of 9.2.

Crude death rates like those just given are affected by the age distribution of the population for which they are computed. Age-adjusted rates are rates which would have resulted had the mortality during the year for each age group been experienced by a standard population. The estimated age-adjusted rate for 1963 was 7.6 per 1,000, or about the same rate as for 1962 (7.5), although higher than the 7.3 rate for the relatively influenza-free year of 1961. After a marked decline from

[1] Except as noted vital statistics frequencies and rates are for the calendar year.

10.8 in 1940 to 8.4 in 1950, and a further decline to 7.6 in 1960, the age-adjusted rate has shown little change in recent years.

An estimated 130,610 persons died in 1963 from violent deaths—from accidents, suicides, and homicides. This was 3 percent more than the number in the preceding year. More than half of the increase results from motor vehicle accidents. For 1963, in addition to higher death rates for influenza and pneumonia and for motor vehicle accidents, significant increases also were registered for the following causes: malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues ("cancer"), bronchitis, other bronchopulmonic diseases, and cirrhosis of liver.

The death rate for hypertensive heart disease, which has declined almost steadily over the last decade, was about 5 percent lower for 1963 (32.0 deaths per 100,000 population) than for 1962.

The infant mortality rate for 1963 (25.2 deaths per 1,000 live births) was about the same as for 1962 (25.4). In 1963, as in 1962, about one infant in 40 died within a year of birth, as compared with one in 10 during 1915.

There were an estimated 1,510 maternal deaths in 1963 as compared with 1,465 in 1962, with corresponding rates of 3.7 and 3.5 per 10,000 live births respectively. The number of maternal deaths per 10,000 live births for 1940, 1950, and 1960 were, respectively, 37.6, 8.3 and 3.7.

In 1963 the expectation of life at birth was 69.9 years, slightly under the 70.0 figure for 1962, again because of the greater incidence of respiratory disease in 1962. The 1963 expectancies by color and sex were as follows: white males, 67.5 years; white females, 74.4 years; nonwhite males, 60.9 years; nonwhite females, 66.5 years. In recent years the average length of life has been increasing at a faster rate for women than for men, and at a faster rate for the nonwhite population than for the white population.

Births, Marriages, and Divorces

There were 4,098,020 registered live births in the United States in 1963, slightly under the number for 1962 and only five percent below the record number of about 4.3 million in 1957. The number of births has remained relatively stable at between 4.0 and 4.3 million per year for the past ten years.

In 1963 the birth rate was 21.7 per 1,000 population, about three percent below the 1962 rate. The general fertility rate, or number of births per 1,000 women 15 to 44 years old, was 108.4 in 1963 as compared with 112.1 in 1962. Although the 1963 rate is somewhat below the high levels of the late 1950's, it is well above the 73 to 79 range of the 1930's.

Most childbearing is concentrated among women in their 20's. Thus in 1963 about three out of five births occurred to women 20–29 years old. According to Census Bureau projections, the number of women in this age group will rise from 11.3 million in 1963 to 14.4 million in 1973, an increase of over 25 percent. With a rising number of women in the childbearing ages, the annual number of births in the United States is unlikely to drop very much, if at all, from the present level of a little over four million.

In 1963 an estimated 1,651,000 marriages were performed, as compared with 1,580,000 in 1961. The marriage rate rose to 8.8 per 1,000 population, after remaining at 8.5 from 1959 through 1962. This rise in rate is associated with the increasing numbers of children born after World War II who are now becoming old enough to marry.

There were an estimated 413,000 divorces in 1962, as compared with 414,000 in 1961. The divorce rate was 2.2 per 1,000 population in 1959, 1960, and 1962, but was 2.3 in 1961.

Funds

The total funds available to the Public Health Service in fiscal year 1964 amounted to $2,144.6 million. (See table 1, p. 226.) Appropriations and authorizations accounted for about $1,721.8 million of this amount. The balance was made up of repayments for services given to other agencies and of unobligated balances from previous years.

Almost half of the total available funds were obligated, in the form of grants and research contracts to State and local agencies, private institutions, universities, hospitals, and individuals outside the Federal government. The remainder of the funds was used to support the direct responsibilities of the Service, such as hospital and medical care for legally designated beneficiaries, foreign and interstate quarantine, and Indian health services.

Office of Personnel

Reorganization of the Office of Personnel was completed to the extent permitted by available funds and manpower. Personnel offices were established at the bureau levels. Now all of the Service's operating bureaus have personnel staffs and extensive authority for management of their civil service personnel.

The Office of Personnel made progress in establishing sound and effective personnel services. Positions occupied by commissioned officers were described and evaluated. Career development committees improved recruitment, training, utilization, and career planning and counseling. Existing recruitment activities for the Com-

missioned Corps and the civil service employment systems were brought into closer coordination and Service-wide recruitment activities were improved. Long-term training for Commissioned Corps and civil service personnel was brought under joint review and coordination. This change is expected to result in greater uniformity and balance between the two systems and in greater responsiveness to the needs of the Service. The Office intensified its efforts to apply automatic data processing techniques to personnel operations. Increased use of automatic data processing has already improved the processing of applications to the Commissioned Corps.

Personnel statistics of the Public Health Service are shown in Tables 2 and 3 on pages 228 and 230.

Management Progress

The Public Health Service gave increasing emphasis to improving the effectiveness of its work force. Early in the year, a drive was initiated to emphasize cost consciousness at all levels of supervision. Supervisors and employees joined in a common effort to increase effectiveness and improve performance. The goal was performance of more work without a corresponding increase in employment or costs. Reporting procedures were established so that achievements of one part of the Service could be made known to other parts, and useful developments could be applied in new areas. Adoption of mechanized procedures was stimulated and employees were encouraged to find new ways by which they could get their jobs done faster, better, and more economically.

The results of the drive ranged from making simple money saving improvements in laundry operations to the development of new kinds of laboratory equipment and new applications for technical equipment (particularly computers). New program applications of computers have ranged from their employment as a biomedical research tool to their use in solving highly complex problems of water quality management for watersheds through mathematical model simulation. These were in addition to new applications for administrative purposes such as property and supply management, statistical reporting, and processing controls.

Several significant organizational changes were made in the Office of the Surgeon General. A new Division of Internal Audit was created to assist in maintaining surveillance over the discharge of fiscal and administrative responsibilities throughout the organization, and to evaluate compliance with requirements set by law, regulations, or other authority. The Division of Administrative Services was

strengthened by internal reorganization and a new Systems Analysis Branch was established to give increased attention and support to computer and other mechanized systems development throughout the Service. The Office of Personnel strengthened its staff functions and delegated significant operating authority to the various bureaus where such work can be performed closer to the work site and be more responsive to the needs of management. The National Center for Health Statistics was reorganized to strengthen its data collecting and processing activities, and particularly to make more effective use of computer facilities available. Through these changes, the Office of the Surgeon General was provided with the means for more effective management of the Service as a whole.

National Center for Health Statistics

The National Center for Health Statistics provides national leadership and cooperates internationally in gathering, analyzing, and disseminating basic statistical information on the health of the country and its demographic characteristics. A major reorganization accomplished early in the fiscal year regrouped the Center's statistical programs according to their rather different techniques of obtaining data. It also centralized all the activities of data handling, from reception through all phases of preparation, including computer printout and making the material ready for final publication.

The reorganization also involved a number of executive changes to improve administrative support of the Center's program units. A Deputy Director maintains continuing oversight in planning and executing the Center's substantive programs, while an assistant Director for Professional Relations has charge of such extramural activities as the Public Health Conference on Records and Statistics and the allocation of blocked-currency funds under Public Law 480 to international statistical projects.

The Center maintains a vigorous program of research designed to develop an improved statistical methodology and to evaluate presently used statistical methods. Besides maintaining basic quality controls, current research includes special studies of computer simulation techniques, procedures for reporting discharges from hospitals, household interviewing, the nature of health indices, calibration of devices for physical measurement, and the variability of observations.

During the fiscal year, 16 statistical publications were prepared for printing in the Center's new publication series, in addition to vital statistics data for calendar years 1960, 1961, and 1962 and regular monthly publication of provisional vital statistics.

DIVISION OF VITAL STATISTICS

The Division cooperated with other parts of the Center in holding the Tenth Biennial Meeting of the Public Health Conference on Records and Statistics. More than 300 people drawn from different parts of the Federal Government, the vital statistics registration areas, other State and local agencies, and private organizations met for five days to consider demographic and public health statistics matters of current concern. A primary concern of the Conference was consideration of proposals for revision of the standard certificates of live birth, death, and fetal death, and the standard records of marriage and of divorce or annulment.

During the fiscal year, birth and death tabulations were maintained on a current schedule, while some success was registered in bringing the preparation of marriage and divorce data more nearly up to date. Much effort also is being expended toward extending the coverage of the marriage and the divorce registration areas, so that the country may obtain truly national statistics as soon as possible in the important social areas of family formation and dissolution.

DIVISION OF HEALTH INTERVIEW STATISTICS

The Health Interview Survey is conducted within a design which provides continuous sampling of the civilian, noninstitutional population through household interviewing. Its objectives are to provide data on: (1) illnesses, impairments and injuries of persons; (2) the use of medical, dental and hospital facilities; and (3) allied health-related topics. In addition, a continuing program appraises the effectiveness and efficiency with which the Survey meets its objectives, devises collection methods for new types of health-related data, and designs pilot projects for development of new and improved collection and evaluation techniques. The relationship of family income and family size to the extent of hospital insurance coverage is shown in the figure below.

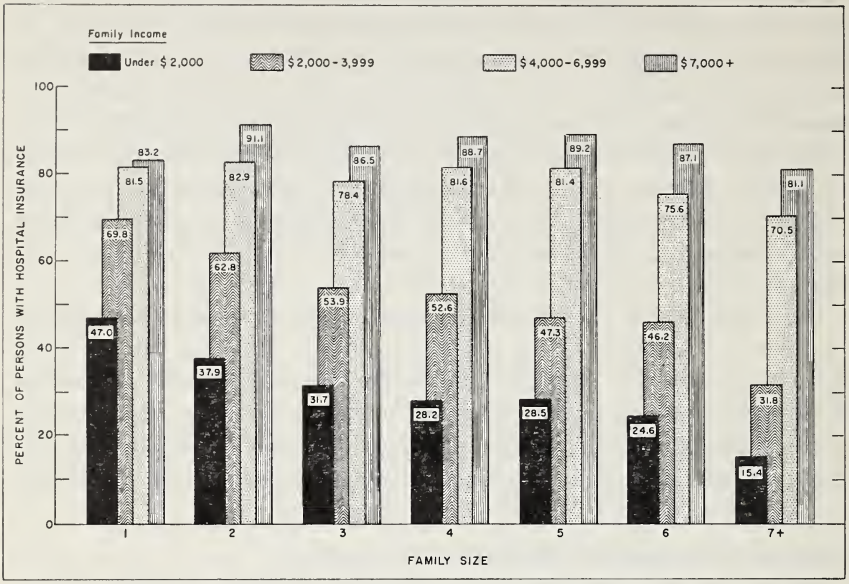
DIVISION OF HEALTH RECORDS STATISTICS

This Division is composed of three major programs:

1. The Institutional Population Survey collects health and related statistics on institutionalized persons and the services they receive. Data on a first residence place survey have been collected and are now being analyzed, covering mental institutions, long-term hospitals, nursing homes, various specialized homes, and penal institutions. A second residence place survey has been initiated covering institutions that provide services to the aging population.

2. The Hospital Discharge Survey is a continuing survey of a national sample of short-term hospitals using data abstracted from

CHART 2.—RELATIONSHIP OF FAMILY INCOME AND FAMILY SIZE TO THE EXTENT OF HOSPITAL INSURANCE COVERAGE



hospital records. The survey is designed to produce national hospital statistics which will have administrative uses and also will provide statistics on hospital morbidity.

3. The Vital Records Survey is a continuing mortality and natality survey to supplement and enrich the statistics reported on vital records. In the fiscal year, data collection for the 1963 surveys were completed on hospital utilization during the last year of life and the radiological examinations performed on expectant mothers. In 1965, the 1964 mortality survey is collecting data on socioeconomic differentials in hospital utilization during the last year of life, while the natality survey is gathering information on conception histories and the expected completed family size plans of women giving birth to live infants.

DIVISION OF HEALTH EXAMINATION STATISTICS

The Health Examination Survey attained its planned three-level operation during the fiscal year, involving simultaneous analysis of data from one program or "cycle" of health examinations, conducting examinations in a second cycle, and planning a third cycle.

Findings from the first cycle, published during the year, based on examinations of a sample population of adults aged 18 through 79 years, included reports on overall response, glucose tolerance levels, visual acuity and levels of blood pressure. In preparation are reports

on the prevalence of heart diseases and osteoarthritis, dental findings and other topics.

Following a series of pretests, in July 1963 the second cycle was initiated on a sample of children aged 6 through 11 years, with emphasis on factors of growth and development. Detailed examinations for visual and auditory acuity, examination by a pediatrician and a dentist, psychometric tests by a psychologist, and a variety of other specific tests and measurements were made.

Planning for the third cycle, on children and youth aged 12 through 17 years, was begun near the end of the fiscal year, and methodological studies to develop and calibrate portions of the examination have been started.

OFFICE OF HEALTH STATISTICS ANALYSIS

A comprehensive study of recent changes in the death rates in the United States was completed during the year. This study suggests that the leveling off of the death rate is not a transient phenomenon. It appears that large declines in mortality in the Nation cannot be expected in the future without major breakthroughs in the prevention of deaths from the chronic diseases.

Investigation is continuing to ascertain the underlying reasons for the unfavorable status of infant mortality in the United States as compared with the experience in a number of other countries.

Preparatory work on the Eighth Revision of the International Classification of Diseases is in its final stages.

Work has begun on the study of health and socioeconomic status, and on problems in the development of an index of health.

DIVISION OF DATA PROCESSING

In addition to processing the regular workload, a large volume of mortality statistics were effectively completed to provide a basis for a series of scientific monographs sponsored by the American Public Health Association to delineate problems of concern in all major areas of public health and demography.

National Library of Medicine

One of the more important high points of the National Library of Medicine's activities during fiscal year 1964 was the activation of the Medical Literature Analysis and Retrieval System (MEDLARS).

In December 1963, on schedule, MEDLARS began producing *Index Medicus*, the NLM monthly listing of articles from the world's biomedical literature. Approximately 14,000 articles a month are being indexed through the system with the annual total expected to exceed 175,000 by the end of this fiscal year.

In January 1964, the Library began laying formal plans for the uses of MEDLARS to produce recurring bibliographies in fields of immediate importance to medicine. Work has continued in this regard particularly in respect to the development of criteria for these uses of MEDLARS for the private and public sectors of the biomedical community. As of the end of fiscal year 1964, MEDLARS had carried out over 600 demand searches, in response to selected requests, for test purposes.

In June 1964, the final major piece of MEDLARS equipment was installed. This was the Graphic Arts Composing Equipment (GRACE) which is the fastest computer-driven phototypesetter in existence at a speed of 3,600 words per minute. It was developed on NLM's specifications under the overall MEDLARS contract. It is used to set and compose the type for offset printing of *Index Medicus* and recurring bibliographies. Demand searches are printed by the computer's own high-speed printer. Plans call for the medical community to be given greater access to the services and products of MEDLARS during the latter part of calendar year 1964.

The directorship of the Library changed hands during the year. At the end of August 1963, Dr. Frank B. Rogers retired to become Professor of Medical Bibliography and Director of the Denison Memorial Library at the University of Colorado in Denver. On January 1, 1964, the directorship was assumed by Dr. Martin M. Cummings, formerly of the National Institutes of Health, where he was Associate Director for Research Grants and Chief of the Office of International Research.

In March 1964, the Surgeon General authorized new activities for the Library including particularly the establishment of the Data Processing, Publications and Translations, and Research and Training Divisions. The latter two divisions are in reflection of the Library's expanded extramural programs.

Division of Public Health Methods

The Division of Public Health Methods conducts studies and investigations to identify actions needed, under changing social, economic, and scientific conditions, to maintain or improve the effectiveness of the Public Health Service in meeting its responsibility for protecting the Nation's health. The Division's charge also includes planning, policy coordination, and program development and analysis within the Service. Finally, the Division advises and assists on Service legislative matters, reviews and clears reports and comments on legislative proposals, and provides legislative reference and resource services, except for appropriations; coordinates and analyzes plans of the

several Service programs for substantive survey projects; and provides staff services to deal with current problems as they are required.

STUDIES

Two reports and several papers based on health manpower studies have been published during the year.

"Medical groups in the United States, 1959" reports on a questionnaire survey of medical group practice which was begun in the latter part of 1959. It was designed to determine trends in the numbers and characteristics of medical groups since the time of the comprehensive Public Health Service survey in 1946, and to provide an up-to-date description of groups as they existed in 1959.

Section 17 of the Health Manpower Source Book Series, "1960 Industry and Occupation Data," presents basic data on the health services industry (hospitals, clinics, health organizations, private offices, laboratories, and remaining places where medical and other health services are provided) and on 18 health occupations as reported in the 1960 Census of Population.

"Trends in Medical School Staffing," published in *Public Health Reports*, is based on three surveys: a 1942 survey of the Procurement and Assignment Service, a 1951 survey of the Association of American Medical Colleges and the Office of Civilian Defense, and a 1960 survey of the Association of American Medical Colleges.

"Negro Students in Medical Schools in the United States" was published in the *Journal of Medical Education*. "Manpower for the Health Field: what are the prospects?" was published in *Hospitals*.

A report on trends in the salary rates for medical technologists was published in *Gist*, a publication of the National Committee for Careers in Medical Technology. This is the third of such analyses; the others dealt with studies made in 1954 and 1959.

"Sanitarian Manpower," prepared in cooperation with the Bureau of State Services (Environmental Health) was published in *Public Health Reports* and the *Journal of Milk and Food Technology*. The report was based on analyses of data on sanitarians which were obtained, along with data on other health occupations, in collaboration with other units of the Service and several national professional organizations. All of these data were organized and tabulated by this Division, primarily for use by the National Resources Evaluation Center of the Office of Emergency Planning. Among the other health occupations on which data were tabulated were pharmacists. A by-product of this is the publication by the American Pharmaceutical Association of the first national "Directory of Pharmacists."

Two new studies related to medical manpower assessment are underway. One is a questionnaire survey of medical students, conducted in

cooperation with the Association of American Medical Colleges, designed to provide information on the costs to students of medical education and the sources of student support. The second, a continuance of the periodic "Weiskotten studies," is being made in cooperation with the American Medical Association. It surveys the 1955 graduates of American medical schools (the ninth class to be so surveyed, beginning with the class of 1915) to show trends in the type, method, and location of medical practice.

A paper, "Measurement of Economic Benefits from Public Health Services," was presented at an economic-benefit symposium held at the annual meeting of the American Public Health Association. The paper, along with those of the three other panel members and the views of a prepared panel discussant, will be published early next year.

OTHER ACTIVITIES

In the past the Division has frequently served as coordinator of matters in which several units of the Service were concerned. This year the number of such matters has increased substantially. The principal ones were intergovernmental relations; rural area development; the proposed Appalachian program; health aspects of housing; population planning; reconversion of industry from military to civilian uses; mental health; mental retardation; aging programs; pesticides; botulism; and availability of rare drugs, chemicals, and reagents.

In meeting the Service's responsibilities under the Federal Reports Act, 248 survey projects and data collection forms were reviewed.

Staff services were provided for the National Advisory Health Council, the Surgeon General's Conference with State and Territorial Health Officers, and the Surgeon General's Committee on Urban Health Affairs.

In addition, the Division prepared background materials for use in considering proposed legislation for aid to education for the health professions and for nursing education; served on the HEW Waiver Review Board, the Advisory Council for Manpower and Education Studies Programs of the National Science Foundation, the Interbureau Advisory Commission on Narcotics and Drug Abuse, and the Professional Advisory Committee for Health Mobilization; provided consultation in the development of a Colombian health manpower and medical education study under PAHO-Milbank auspices; prepared the Surgeon General's quarterly report to the Secretary; collected within the Service the monthly revisions for "HEW Indicators" and the annual revisions for "Trends"; and provided continuing staff services in support of the Office of the Surgeon General, including advice and assistance on legislative matters, and analysis of Service programs.

Office of International Health

During the fiscal year 1964, three representatives from the Office served on the delegation to the 17th World Health Assembly in Geneva in March 1964, and the XIV Directing Council of the Pan American Health Organization in September 1963. The United States was a member of the PAHO Executive Committee. The Director of the Office served on the WHO Executive Board until May 1964 and represented the United States at the Western Pacific Regional Meeting of the World Health Organization in Port Moresby in August 1963.

Official U.S. policies on items discussed at these meetings and on health-related matters of other international organizations were developed by the Office in consultation with the technical areas of the Service and other components of this Department, and with the Departments of State, Agriculture and other government agencies.

A Public Health Service officer was sent to Geneva in July 1963 to serve as a full-time contact between the Public Health Service and the World Health Organization.

The Office, in response to requests during the year, arranged for 80 Public Health Service technical and professional personnel to provide short-term consultation to the World Health Organization, Pan American Health Organization and other international health agencies. Seven PHS officers were on full-time detail to the World Health Organization and the Pan American Health Organization during the year to fill staff and technical positions in the central or regional offices. The Office assisted in clearing the appointment of 66 U.S. experts to serve as members of WHO Expert Advisory Panels. Of the 382 U.S. experts who served as members of WHO panels 79 were PHS officers.

During the year, 46 Public Health Service officers were on detail from the Office of International Health to the Agency for International Development in staff positions in AID headquarters, Washington, or in overseas missions. Over 80 Public Health Service technical and professional personnel were provided for short-term consultation and assistance to AID and other government agencies. Included were teams to furnish emergency assistance in epidemic aid and investigation, or immunization procedures, to the Dominican Republic, Jordan, Brazil, Bolivia and several African countries.

Public Health Service continued its support to AID in providing Surgical Care Teams from the Bureau of Medical Services to Vietnam, in the evaluation of insecticides and other related technical services by the Communicable Disease Center, and through the National Institutes of Health support of the SEATO Cholera Research

Laboratory in Pakistan. Arrangements were completed for the Public Health Service to detail three officers in the field of water supply and development to the Pan American Health Organization, in support of the Alliance for Progress objective to develop rural water supplies in Latin America.

The number of officers on detail from the Public Health Service to the Peace Corps was increased to 85 during the year to staff the central and field medical organizations of the Peace Corps. These officers are primarily responsible for the health of Peace Corps volunteers in 76 countries, and participate in local health and medical activities in host countries as conditions and time permit.

Participation of the Public Health Service in the Special International Research Program utilizing foreign available currencies to the U.S. Government increased. New participants assisted by the Office in the negotiation of projects during the year included the Division of Chronic Diseases, Division of Dental Public Health and Resources, Division of Occupational Health, the National Center for Health Statistics and the Division of Hospitals. The National Institutes of Health and the Communicable Disease Center continued to expand the number of projects in excess currency countries, which include Poland, Yugoslavia, United Arab Republic, Pakistan, India and Burma.

In carrying out the exchange agreement between the United States and the U.S.S.R., the U.S. delegations on Diseases Common to Animals and Man, Industrial Toxicology, Medical Education and Viral Encephalitides were sent to the Soviet Union, each for periods of approximately 30 days. Eight American scientists engaged in individual research projects of 2 to 3 months each in the U.S.S.R. The Exchange received and programed 2 Soviet delegations, 1 on Diseases of the Blood and 1 on Anesthesiology, while 16 individual Soviet scientists worked in the United States under the program. Two joint meetings were held in the Soviet Union, one on Cardiovascular Diseases and one on Rheumatological Diseases.

The Office also provided program and guidance services to 505 foreign visitors and students from 82 countries, involving more than 120 educational and training centers in the United States.

Division of Health Mobilization

Providing assistance and guidance to communities in emergency health preparation is the responsibility of the Division of Health Mobilization. Major emphasis this year was placed on the national Medical Stockpile Program with particular concentration on the assembly and distribution of 750 new Civil Defense Emergency Hospi-

tals. This will bring the total number of pre-positioned hospitals to 2,680. This Model–62 CDEH has a 30-day operational capacity and will serve as the prototype for all future hospitals. Earlier models are being upgraded to the same 30-day capacity.

The feasibility of parallel programing of national and natural disaster preparedness was examined. The Alaskan earthquake presented an opportunity to demonstrate the value of such programing. DHM assumed a major role in coordinating communications and furnishing medical teams and essential supplies for the stricken area. Physicians, engineers, and nurses were dispatched to meet specific problems in Alaska and additional medical teams were alerted to stand by in Seattle and San Francisco. Typhoid and smallpox vaccines and water chlorinating devices were flown to Anchorage.

Activation of health mobilization programs at the community level was encouraged by the assignment to each HEW Region of a DHM Training Officer. These men will develop Emergency Health Preparedness training courses for presentation at State and community levels, as well as provide direct assistance in the CDEH and Medical Self-Help training programs. Further assistance to communities was provided by publication of the guide, "Community Emergency Health Manpower Planning."

Studies were conducted to determine the role of dentists, veterinarians, and pharmacists in national disaster and to suggest how their present functions could be expanded to meet emergency needs. The findings will be published in a series of booklets.

A manual, "Medical Care in Shelters," produced for the Office of Civil Defense, is being placed in all federally stocked fallout shelters. This manual will also serve as a textbook for a new course developed to instruct allied health personnel and trained laymen to treat the sick and injured in a disaster situation.

A Spanish translation of all Medical Self-Help instructional material was completed and a nationwide promotional campaign was launched in an effort to reach the ultimate goal of one member in every household trained in Medical Self-Help. To date over one million persons have been trained.

Bureau of Medical Services

The Bureau of Medical Services operates hospitals, clinics, health centers, and quarantine stations at many points in this country and overseas to provide health care to large numbers of patients and to safeguard the Nation against disease that might be brought from abroad.

Medical and hospital care is provided to American seamen. A comprehensive health program is carried on for the Indians of the West and the native peoples of Alaska. Health services are provided for the men of the Coast Guard and the Coast and Geodetic Survey, and for the cadets in training at the Coast Guard and Merchant Marine Academies. Members and retired members of the Armed Forces and their families also receive care at Bureau hospitals and clinics if they are more convenient than military hospitals.

A special hospital is devoted entirely to the treatment of leprosy. Treatment for narcotic addiction is given in two neurophychiatric hospitals. The Bureau is responsible for medical and hospital care in all Federal prisons and correctional institutions throughout the country.

Medical and hospital care for civilian employees of the Government who are injured on duty or become ill from conditions of their work is administered by personnel of the Bureau of Medical Services. In another program, employee health units are operated for various Federal departments and agencies to help in protecting their employees' health.

In the Foreign Quarantine program, international travelers arriving from abroad are checked against the possibility of contagious disease. Applicants for visas to enter the United States are examined by physicians on duty at stations maintained by the Bureau in many foreign cities.

The Bureau of Medical Services also conducts clinical research and carries on training programs for medical and health personnel.

The Bureau is guided in program operations by the BMS Advisory Committee on Hospitals and Clinics and by the Indian Health Advisory Committee, made up of experts from hospitals and health programs all over the country.

In 1964 a special activity of the Bureau of Medical Services was the recruitment of Public Health Service surgical teams for service in civilian hospitals of South Vietnam, in connection with the work of the Agency for International Development of the Department of State. Teams composed of American surgeons, nurses, and medical technologists were on duty aiding civilian patients in the provincial hospitals in Can Tho, Da Nang, and Nha Trang.

Division of Hospitals

Increased emphasis on training and research in support of a broad medical care program marked the work of the Division of Hospitals. The Division is the oldest organized component of the Public Health Service.

PATIENT CARE

The 15 Service hospitals admitted 52,308 patients during fiscal 1964, and 1,383,724 outpatient visits were made to the hospitals and outpatient clinics. Admissions showed a slight decrease from the previous year. Outpatient visits increased 2.3 percent. The average daily inpatient census dropped to 4,605, which was 1.9 percent less than the previous year.

Nearly 395,000 patients are eligible for care. The majority of patients were American merchant seamen, the principal beneficiaries of the Division, for whom the hospitals were originally created as marine hospitals in the early days of the Nation. Thirty-six percent of the patients admitted to the hospitals in 1964 were uniformed service personnel and their dependents. Forty percent of the outpatient visits to hospitals and clinics were by members of this group; the number of their visits increased by more than 20,000 over the previous year's total.

PROFESSIONAL TRAINING

Thirty-eight affiliation agreements with leading university schools of medicine were in operation in 1964, indicating the Division's strong emphasis on training programs for interns and residents. Seventeen agreements were signed during the year. These included training and teaching programs in psychiatry, various clinical fields, dentistry, physical therapy, pharmacy, and nursing, and the first residency in periodontics ever established in the Public Health Service.

Ninety-eight medical interns and 38 resident physicians completed formal training in PHS hospitals. Of the interns, 67 remained in the Service. The residents completed training in: anesthesiology, dermatology, internal medicine, obstetrics-gynecology, ophthalmology, pathology, radiology, surgery, and urology. Five residents completed training in general practice. Other physicians completed training in clinical pharmacology, in research in renal disease, in cardiovascular surgery research, and in teaching methodology.

RESEARCH

Research in the Service hospitals took on added significance with the signing of an expanded collaborative cancer chemotherapy research agreement with the National Institutes of Health. Research into the effectiveness of drugs in combating hypertension was expanded, and a new study was begun of the treatment of pyelonephritis. Division medical staff conducted about 80 research projects during the year and completed 14 others, in addition to those with the National Institutes of Health. Mainly responsible for the accelerated pace of research were five full-time research directors on duty

in the larger hospitals, at Baltimore, New Orleans, San Francisco, Seattle, and on Staten Island, N.Y.

The largest screening program of its kind in exfoliative oral cytology, to detect oral cancer, moved from the pilot stage into a full-scale study. It is expected to cover more than 300,000 examinations in PHS facilities.

OTHER ACHIEVEMENTS

An important step was taken in improving the quality of medical care and providing additional research information and teaching aids for the medical staff with the implementation of a medical audit program. This provides for the screening of clinical data about certain diseases collected in connection with the care of patients. The information is fed into a computer, and the desired data are then furnished to the hospitals for evaluation and practical application.

Another progressive step was the employment of Indian practical nurses in PHS hospitals for the first time. Selected from the top of the graduating class at the Indian School of Practical Nursing, Albuquerque, N. Mex., the young nurses were assigned to the PHS Hospital on Staten Island. Success of the initial program has led to its adoption as a regular recruiting method for alleviating the hospital's personnel shortages.

The Division conducted educational programs on smoking for patients in the hospitals and urged physicians to counsel patients on the hazards of smoking.

Rehabilitation of Narcotic Addicts

A major achievement in the rehabilitation of narcotic patients at the Lexington, Ky., hospital was accomplished with the awarding of high school equivalency diplomas to six patients, at the first high school commencement program in the history of the institution. Recent accreditation of the academic program made this possible, and plans are underway to have the hospital's vocational education program accredited.

Carville Hospital for Leprosy

Better hospital care, active research, and educational programs were notable accomplishments at the hospital for leprosy patients in Carville, La. More surgical procedures were made possible by the addition of a full-time surgeon. Research activity was increased, and more research reports were published. Educational and informational activities included 71 seminars attended by 1,600 persons, 300 film showings to 2,300 persons, 11,000 visitors received, and 2,000 informational kits distributed. The hospital produced a clinical filmstrip, a revised handbook for patients, and exhibits for national or regional meetings,

and sent staff members to several international meetings on leprosy and dermatology.

FEDERAL EMPLOYEE HEALTH PROGRAM

Health protection for Federal employees has long been an important program of the Public Health Service under the direction of the Division of Hospitals. Federal Employee Health Units, operated in offices and installation of Federal agencies in about 40 locations, serve more than 63,000 employees. With particular stress on preventive medicine, the units gave about 5,200 periodic health examinations to older employees during the year. The following immunizations were given: Influenza, 23,242; poliomyelitis, 2,844; smallpox, 1,728; and tetanus, 5,733. In addition, 7,333 screening tests for diabetes, 3,325 for glaucoma, and 8,018 for visual acuity were given.

FREEDMEN'S HOSPITAL

For nearly 100 years Freedmen's Hospital, in Washington, D.C., has given extensive medical services to patients from the District, surrounding counties in Maryland and Virginia, and from other parts of the country. In addition to patient services, research, and public health functions, the hospital conducts a full schedule of educational programs in medicine, nursing, X-ray technology, dietetics, and medical social work.

Legislation passed by the 87th Congress authorized the transfer of Freedmen's Hospital from the Department of Health, Education, and Welfare to Howard University, for which it has always served as the major medical teaching facility.

There were 15,925 admissions to the hospital, 55,093 clinic visits, and 47,395 emergency room visits in 1964. There were 3,538 babies born. The hospital had an average daily census of 414.

Substantial clinical research continued in the hospital, with 43 projects in progress. Ninety-five scientific papers by the medical staff were published or were in preparation. The hospital maintained accreditation of all programs in which it has trainees.

Division of Foreign Quarantine

For the 17th year the United States was free of smallpox and other quarantinable diseases brought in from abroad. Guarded by physicians and inspectors of the Division of Foreign Quarantine who are stationed at almost 400 ports of entry, the Nation has not had an outbreak of smallpox since 1947, of plague since 1925, of yellow fever since 1905, of cholera or louse-borne typhus since 1892, or of louse-borne relapsing fever since 1871.

But the number of travelers entering the United States by jet airplane—many only a few hours after leaving countries where smallpox and the other quarantinable diseases are present—continues to grow. At no time has there been a greater need for constant vigilance by the men who protect our shores against disease. Nor has there ever been a greater need for periodic smallpox vaccination, especially of people who come in frequent contact with international travelers or with persons who are ill.

QUARANTINABLE DISEASES

Smallpox continues to be the most threatening of the quarantinable diseases. Seedbeds of smallpox are present in widespread areas of Asia and Africa and in a few countries of South America. More than 92,000 cases of smallpox were reported worldwide in 1963, an increase of 20 percent over the previous year and the highest number in 5 years. Smallpox was imported into Poland, the 10th European country to be invaded by smallpox since 1959.

Twelve countries reported 76,000 cases of cholera. The disease has taken root in most countries of Southeast Asia and the Western Pacific, except Japan, Australia, and New Zealand. The spread of cholera, which threatens international commerce and travel, has sparked a worldwide search for a better treatment and for a more effective vaccine.

There were 78 cases of yellow fever. All but one occurred in South America, mostly in Peru.

Major outbreaks of plague were reported in Bolivia, Ecuador, Peru, India, South Vietnam, and Tanganyika. Sporadic cases occurred in Brazil and a few African countries.

Plague took one life in the United States, where the disease is present in wildlife in isolated mountainous areas of the Far West; the victim was an American Indian in Arizona, who had shot and skinned a rabbit. The small town of Colma in the San Bruno Mountain area of San Mateo County, Calif., was declared infected with plague for several weeks after a plague-infected rat was found during a survey by the Public Health Service Plague Laboratory. A followup survey failed to uncover any additional infected animals in the area. In South Park, Park County, Colo., rodent extermination and flea control programs were carried out after plague broke out among prairie dogs.

For the first time in many years, a major epidemic of louse-borne typhus occurred in the central African country of Burundi, where more than 2,500 cases were reported. Ethiopia reported nearly 2,000 cases. Sporadic cases of louse-borne typhus also occurred in Bolivia,

Ecuador, Mexico, Peru, Nigeria, the United Arab Republic, Korea, and Yugoslavia.

Ethiopia reported more than 5,000 cases of louse-borne relapsing fever, nearly double the number reported the previous year. In Nigeria, the only other country reporting the disease, there were three cases.

OTHER COMMUNICABLE DISEASES

Dengue fever broke out in Puerto Rico, Jamaica, and Antigua. Despite emergency quarantine measures, the disease was brought into the United States by travelers who became ill after they arrived home. There were no secondary cases in the United States.

Aberdeen, Scotland, was struck by typhoid fever. The outbreak was believed to have been started by infected corned beef imported from South America, and more than 300 people fell ill before the outbreak was brought under control.

INTERNATIONAL TRAFFIC

Inspections of aircraft increased 5 percent, from 69,000 to 72,400. There was an increase of 20 percent in quarantine inspections of persons arriving here by airplane, from 3,111,000 to 3,725,000. Inspections of ships rose from 32,600 to 35,000. Quarantine inspections of travelers arriving by ship increased from 1,960,000 to 2,034,000.

Quarantine inspections of people arriving in the United States by all modes of travel, including many making repeated crossings of the Mexican border, totaled 117,414,000. Of this number, 111,654,000 inspections were made at Mexican border stations by the four Federal inspection agencies (Customs, Immigration, Agriculture, and Public Health) which were engaged in a joint screening program.

It was necessary to detain in isolation 40 travelers suspected of having smallpox or other quarantinable diseases, compared with 50 for the previous year. The number of travelers who were allowed to go on to their destinations in the United States—but who were placed under close watch by local health officials—increased from 199,000 to 214,400. Smallpox vaccinations were given to 747,600 persons, compared with 668,600 in the previous year.

MEDICAL EXAMINATIONS

General Program

The number of aliens applying for visas and examined by medical officers abroad decreased 9.1 percent, from 187,200 to 170,000. The decline was due mainly to a decrease in the number of Chinese refugees and Mexican nationals examined. Of all aliens examined, 97 percent were immigrants, refugees, and parolees. About 1,500 visa-applicants

were found to have diseases or conditions specified as excludable in immigration law.

Since May 1962, about 12,000 Chinese refugees have been medically examined in Hong Kong for admission to the United States under parole provisions of immigration law in accordance with a Presidential directive. In fiscal year 1964, medical officers of the Division of Foreign Quarantine examined 3,650 Chinese refugees in Hong Kong. Of these, 182, or 5 percent, were found to have excludable conditions.

Aliens examined on arrival at U.S. ports increased 17.3 percent, from 3,887,000 to 4,559,000. About 5,700 aliens were found to have excludable conditions. Nearly 13 percent of them had been so diagnosed abroad but were admitted under special provisions of immigration law. Most of the others were local Mexican border crossers or applicants for border-crossing permits.

Quarantine officials placed under special health controls 917 arriving aliens with tuberculosis whose entry was authorized by a special section of the Immigration and Nationality Act.

Mexican Farm Workers

In the program of recruiting Mexican laborers for work on American farms, 188,100 men were given preliminary medical examinations at three centers in Mexico. Of these, 2,600 were rejected. At three border reception centers in the United States, 189,900 men were examined and 1,680 were rejected. Pulmonary tuberculosis accounted for 85 percent of the rejections. Of 183,700 workers tested for syphilis at the reception centers, 9,200 had positive reactions. The rate of positive reactions increased from 45 per 1,000 workers to 50 per 1,000. Workers with positive reactions are given intensive antibiotic treatment before they are allowed to rejoin the work force.

ENTOMOLOGY AND SANITATION PROGRAMS

The yellow fever mosquito control program—which is carried out at more than 100 international traffic points in the yellow fever-receptive area of the South and in Hawaii, Puerto Rico, and the Virgin Islands—succeeded in keeping the yellow fever mosquito population at a low level.

About 12,000 mosquitoes and other insects were intercepted on aircraft arriving here from the tropics and other areas where insect-borne diseases are present. Among the species of mosquitoes captured were those which transmit Japanese B encephalitis and filariasis.

An automatic vapor method of disinsection with the insecticide DDVP was tested on aircraft making international flights to the United States. The new method is expected to be more effective and less annoying to passengers than the present practice of spraying.

The percentage of rat-infested ships entering U.S. ports increased slightly but remained small. Continuation of a sanitation program resulted in considerable improvements on many ships.

OTHER QUARANTINE ACTIVITIES

A rabies threat caused by stray dogs entering the United States from Mexico became critical in the area of Calexico, Calif., in January 1964. At one time 19 persons were receiving Pasteur rabies prophylactic treatment because they had been bitten by stray dogs. Emergency measures resulted in the capture of 40 dogs, including 7 that were rabid. The Division of Foreign Quarantine is working with other Federal and State, local, and Pan American health officials in a search for a long-term solution to the problem.

In a landmark case, a Federal district court upheld the authority of the Public Health Service to place in isolation a traveler arriving in the United States from a smallpox-infected local area without valid documentary proof of vaccination.

A revised edition of the "Manual for the Medical Examination of Aliens" was issued, incorporating changes made since 1956.

An alien medical examination unit and an area headquarters were set up in Kingston, Jamaica. The new unit will provide consultative supervision to local examining physicians in the Caribbean area and the northern rim of South America.

The Division of Foreign Quarantine set up its first two contract visa-applicant medical examination units abroad. Located in Glasgow, Scotland, and Madrid, Spain, the units are run by local physicians under the supervision of the Public Health Service European area headquarters office in Paris. The contract arrangement is expected to improve the quality of medical examinations given to aliens.

Division personnel took part in a number of national and international meetings held to find improved ways of preventing the international spread of disease and of facilitating international commerce and travel.

An intensive publicity campaign was continued to increase public understanding of the foreign quarantine program, to inform travelers about health requirements and recommendations for international travel, and to promote periodic smallpox vaccination of people whose work brings them in contact with international travelers.

Division of Indian Health

The Division of Indian Health provides comprehensive health care comprising the full range of curative, rehabilitative, and preventive

services, to more than 380,000 Indians and Alaska Natives (Indians, Eskimos, and Aleuts) whose health needs cannot otherwise be met.

The provision of these health services is handicapped by a number of factors, especially the low socioeconomic status of these Americans and their geographic and cultural isolation. Most Indians and Alaska Natives live on isolated reservations in the West and in remote villages in Alaska.

Understanding and accepting modern health concepts that are commonly known and accepted by the general population is difficult for most Indian and Alaska Natives because of their unique cultures. Most Indians think that conflicts between man and nature are the causes of illness, and ritualism and herbalism play an important part in their methods of treatment and prevention. At the clinics, patients are often observed who have first consulted religious healers before seeking the PHS physician.

MEDICAL FACILITIES

The Division operates 50 general and tuberculosis hospitals ranging in size from 14 to 400 beds, each with a busy outpatient department; 42 health centers, of which 16 are in Indian boarding schools; and several hundred field health stations.

Additional services are provided through contractual arrangements with some 200 private or community hospitals, 400 physicians, dentists and other health specialists, and 19 State and local health departments.

The number of beds in Division hospitals is 3,200, supplemented by 1,000 beds in community hospitals available through contracts.

The Division's professional staff is headed by more than 300 physicians. It includes 100 dentists, almost 400 graduate nurses, 61 pharmacists, 39 dietitians and nutritionists, 13 medical record librarians, and 64 sanitary engineers and sanitarians.

THERAPEUTIC AND PREVENTIVE SERVICES

The health team deals with the entire health spectrum from prenatal care to geriatrics. The Indian health program provides physicians with a wide range of experience in clinical and preventive medicine, public health, and medical administration. In addition to hospital and clinic treatment of the sick and injured and preventive health clinics (prenatal, postnatal, well baby, immunization, school health, and tuberculosis), special clinics are conducted for diagnosis and treatment of trachoma, diabetes, heart disease, eye and ear conditions, and disabling conditions among children.

During fiscal 1964, admissions to PHS Indian hospitals and contract hospitals totaled 90,000, up from 87,550 in 1963. Outpatient visits

to hospitals, health centers, schools, and satellite field clinics reached nearly 1,287,400.

The past year saw an extension of training for the Division's professional nurses and practical nurses. Specialized and advanced training in obstetrics and pediatrics was provided for professional nurses at Fitzsimons General Hospital in Denver.

Pharmacy services were provided for patients at 35 hospitals and 5 health centers where 89 percent of inpatients and 78 percent of outpatients who visit Indian hospitals and health centers were treated. The pharmacy workload increased by 2.3 percent.

Limited understanding among Indians and Alaska Natives of the relationship of nutrition to health, and the poor quality and amount of food available to most of them, present greater problems for the Indian health program than for most other public health programs in this country. Nutrition education in adapting cultural and acceptable food practices to nutrition needs is emphasized.

Medical social workers were especially active in 1964 in studies of better ways to alleviate medical-social problems among Indian children, the aged, the chronically ill and disabled, and the mentally ill. They helped to coordinate use of Federal and local community resources in behalf of Indians and, as a result of increased tribal interest and understanding of social problems, Indians requested extension of the medical social service program to additional reservations and participated in the solution of social problems directly affecting their own health.

MEDICAL RECORDS

Medical record librarians are on duty in each of the Division's seven area offices and at each major Indian hospital; at the smaller facilities, medical record clerks are employed. A medical record librarian educator conducted workshops and seminars in all areas for both the librarians and the clerks. In 1964 the first Indian girl was accepted for training in the school for medical record librarians at the Baltimore PHS Hospital.

HEALTH EDUCATION

The health education task is very complex and requires approaches and methods not used in community health activities. One of the functions of the staff is to make modern health practices understandable and acceptable to Indians.

Health educators also make a significant contribution by assisting the Division in obtaining the cooperation of other agencies and groups, such as the Bureau of Indian Affairs, voluntary health organizations,

and colleges and universities that are interested in the welfare of Indians and Alaska Natives.

MATERNAL AND CHILD HEALTH

Twenty percent of all Indian deaths in a single year are babies under 1 year of age. The principal causes of death are prematurity and the respiratory and digestive diseases.

The number of full-time pediatricians in the Division has been increased from 4 in 1956 to 18 in 1964. Thus Indian children who are sick receive clinical service of high quality, and the availability of health supervision for well children has been increased.

A referral system has intensified followup home visits by public health nurses after mothers and children are discharged from the hospital. Families of children with repeated hospital admissions are receiving concentrated study through a team approach to find the basis for continued health problems.

DENTAL SERVICES

The dental health program places major emphasis on preventive services to preschool children and those in school. In 1963, 53,114 topical fluoride treatments were given children in an attempt to control the incidence of dental caries; this was an increase of 113 percent over the number of treatments in the previous year. Three public water systems received water fluoridation units. Preventive programs in orthodontia and periodontia were established. Emergency care was given to all persons in need, and complete clinical services were directed toward children. There was an increase of 16 percent in services over the previous year; 446,010 services were provided to 100,000 persons, and 61,166 of them received complete care.

MAJOR ILLNESSES AND MORTALITY RATES

Important declines in mortality rates of infants, and in number of deaths from communicable diseases were shown last year among Indian and Alaska Natives. Tuberculosis, leading cause of death in 1949, has dropped to ninth place. The mortality rate among Indian infants has dropped to 42 deaths per 1,000 live births.

The lowering of infant deaths and deaths from tuberculosis has had significant influence in raising the life expectancy of American Indians; it is now 63 years, compared with 51 years in 1940. The average age at death is now 43 years, whereas it was 38 in 1958.

Leading health problems among Indians and Alaska Natives today are communicable diseases among infants and young children, excessive infant mortality, accidents, mental health problems, nutritional and dental deficiencies, problems of aging, and alcoholism.

Leading causes of death are diseases of the heart, accidents, influenza and pneumonia, malignant neoplasms, diseases of early infancy, and gastroenteric diseases.

ENVIRONMENTAL HEALTH

Scarcity of safe water for household use and lack of sanitary waste disposal facilities are common on most Indian reservations and in native villages in Alaska. About 80 percent of the Indian people have unsatisfactory water and waste facilities or none at all. Unsafe water and inadequate disposal of garbage and refuse contribute to the high rate of infectious diseases, especially among infants.

Since 1959 the Public Health Service has been authorized to make agreements with Indian tribes for construction of water supply and waste disposal systems for Indian homes and communities; the tribes contribute money, labor, and materials as they are able. The Environmental Health Branch of the Division develops the projects, negotiates agreements, and provides training in the operation and maintenance of the facilities.

In 1964 the Division received $3.9 million for such construction, which was augmented by an allocation of $1.8 million in funds under the Public Works Acceleration Act. This has permitted 55 projects to be undertaken which will serve 4,700 Indian homes or 7 percent of the known need. Since the start of the program, the 290 authorized construction projects will meet 23 percent of the total need. Indian participation represents about one-third of the total construction effort.

Related activities include assistance to tribes in adoption of sanitary codes; participation in investigation of communicable disease outbreaks; and survey of institutional sanitation facilities in Bureau of Indian Affairs and Public Health Service installations serving Indians.

CONSTRUCTION AND MAINTENANCE

The effort to achieve complete modern health facilities for Indians and Alaska Natives continued to advance.

A contract was awarded for construction of a 12-bed hospital in Barrow, Alaska. Bids were sought for construction of a 27-bed hospital in Fort Yates, N. Dak. A feasibility planning study was underway for construction of a 200-bed hospital in Phoenix, Ariz.

A health center was completed in Fort Hall, Idaho. Field health stations were completed in Peach Springs, Ariz., Arapahoe, Wyo., and Rocky Boys, Mont. Construction of field health stations at Gila Crossing and Shonto in Arizona, and in Toadlena, N. Mex., was in progress. Planning was completed for health centers at Toppenish, Wash., Hooper Bay, Alaska, and Gambell, Alaska.

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Eight personnel quarters units were completed in Browning, Mont., and Rosebud, S. Dak. Thirty-six units were under construction in Barrow, Alaska, and in Whiteriver, San Carlos, and Keams Canyon in Arizona. Planning was completed for eight units in Rosebud, S. Dak. A contract was awarded for training quarters at the PHS Indian Hospital in Gallup, N. Mex.

Hospital modernization projects were underway in Crow, Mont., and in Tahlequah, Okla. Hospital planning studies were being developed for improvements in Tuba City, Ariz. An architectural planning program was completed for improvements to the hospital in Wagner, S. Dak. An architectural engineering contract was awarded for alterations and addition to the hospital in Gallup.

Funds were reprogramed to make limited immediate emergency repairs to the Alaska Native Hospital in Anchorage because of damage from the earthquake of March 1964, and to complete an architectural engineering assessment of the earthquake damage to hospital, nurses' residence, and utility services.

TRAINING FOR INDIANS AND ALASKA NATIVES

More than half the employees of the Division are of Indian heritage, and each year an increasing number are employed as medical and health aides, practical nurses, dental assistants, sanitarian aides, community health workers, and in other positions in the Division.

In-service training for these staff members was increased last year. Advanced training was provided for graduates of the Indian School of Practical Nursing in Albuquerque, N. Mex., which the Division operates, and for dental aides. In Alaska the Division is experimenting with a program for the development of village medical aides.

OTHER ACTIVITIES

The year saw the strengthening of the Indian health program through new emphasis on professional career development, and through closer liaison with national professional medical and health associations. Most of these have now formed committees on Indian health and consult on a regular basis with Division staff.

The first of three physician residencies was established in preventive medicine at the University of Oklahoma Medical School, and residencies in pediatrics and general practice will begin in fiscal year 1965, at the Indian hospitals in Phoenix, Ariz., and Gallup, N. Mex.

For the first time, epidemiology training oriented to the health of Indians is being provided by the Division for its professional staff, and a pilot training program in hospital-management has been estab-

lished for Division physicians stationed at hospitals too small for a staff hospital manager.

Medical Services for Federal Agencies

The medical services of the U.S. Coast Guard and the Federal Bureau of Prisons are legal responsibilities of the Public Health Service and are operated by Bureau of Medical Services personnel assigned to these agencies. The medical programs of the Bureau of Employees' Compensation of the Department of Labor and the Maritime Administration of the Department of Commerce are conducted by personnel detailed to those agencies.

UNITED STATES COAST GUARD, TREASURY DEPARTMENT

The mission of the Coast Guard medical program is to provide complete medical, dental, and preventive health services to the shore and floating units of the U.S. Coast Guard. Health services are available to the 32,000 active members of the Coast Guard, 10,000 retired members, and more than 50,000 dependents. The full-time professional staff of Public Health Service personnel at Coast Guard facilities in 1964 included 28 medical officers, 51 dental officers, 12 nurses, a scientist, a sanitary engineer, a pharmacist, a therapist, and a dietitian.

In addition, 48 Public Health Service medical officers were detailed on temporary assignments to cutters engaged in Arctic and Antarctic operations and to ocean station duties in the Atlantic and Pacific.

In cooperation with the Division of Indian Health, a health center was established on Annette Island, near Ketchikan, Alaska. The medical officer assigned to the new station divides his time between care of Alaska Natives and members of the Coast Guard and their families.

The aviation medicine program begun in the previous year was continued, under direction of a Public Health Service physician who completed flight surgeon training at the U.S. Naval School of Aviation Medicine in Pensacola, Fla., in June 1963. A second officer completed the 6 months of flight surgeon training in Pensacola in December 1963. Additional quotas were obtained from the Navy for the next fiscal year.

Action was taken to utilize the Army's School of Aviation Medicine at Fort Rucker, Ala., for a 4-week training course for the 2-year volunteer medical officers who are assigned to Coast Guard Air Stations. For career officers of the Public Health Service assigned to the Coast Guard, the 6-months training program will continue to be utilized. Hospital corpsmen are also being trained in aviation medicine, to

provide necessary support to flight surgeons and aviation medical officers.

BUREAU OF PRISONS, DEPARTMENT OF JUSTICE

For the 34th year, the Public Health Service provided medical, psychiatric, psychological, dental, nursing, and related health services for Federal prisoners. Twenty-four hospitals and six infirmaries were operated in the prisons and correctional institutions. Fifteen of the hospitals have been fully accredited by the Joint Commission on Accreditation of Hospitals.

The full-time Public Health Service staff assigned to the program included 62 physicians, 34 dentists, and 187 technicians. The staff was augmented by 350 consultants in various medical specialties. About 765 inmates were assigned to the medical program to receive training and assist in the hospitals.

The Year in Review

The total number of Federal prisoners was more than 22,000. The hospitals provided 405,946 hospital relief days. Medical staffs performed 6,984 surgical operations. Outpatient departments gave 1,170,748 treatments. A total of 29,335 physical examinations were performed. The 2 institutions for women reported 30 births. Deaths in all institutions totaled 65.

As in other recent years, there was a turnover of nearly 50 percent in medical and dental staffs. These changes occurred because many of the medical and dental officers came to duty for only 2 years in order to satisfy military obligations. Since this trend is likely to continue for some time, emphasis was placed on improved methods of orienting new professional officers in the unique requirements of prison medical practice. At the same time, efforts were made to strengthen the work of the medical technical assistants. Twenty-four hour coverage by medical technical assistants was implemented in the hospitals in Leavenworth, Atlanta, McNeil Island, Wash., and Lewisburg, Pa.

The demand for psychiatric diagnostic and treatment services as required under the Youth Corrections Act, the Adult Sentencing Act, the Federal Juvenile Delinquency Act, and other laws, continued unabated. Studies were made to determine possible relationships between the offender's medical and mental condition and his criminal behavior and to provide recommendations for specific treatment measures designed to prevent recurrences of criminal behavior. The medical staffs at several of the institutions participated in Federal Judicial Sentencing Institutes to discuss with judges and lawyers the implementation of these observations and study procedures.

Program Highlights

New Marion Hospital.—The hospital at the new Federal Penitentiary in Marion, Ill., was fully activated. The chief medical officer and his staff completed the fitting out of the hospital with all necessary equipment and supplies and engaged medical specialists in the community to serve as consultants. A medical rehabilitation program was begun with the successful correction of an unguinal hernia for an inmate, who was later released and found a job in his home community.

Medical Center for Federal Prisoners.—The Medical Center for Federal Prisoners, in Springfield, Ill., continued to operate at near-capacity in all departments. Training programs for clinicians, nurses, and technicians were strengthened. Modernization and enlargement of the clinical facilities were planned; the proposed plan will add nearly 140,000 square feet of floor space, largely in the medical and surgical areas.

New Eastern Psychiatric Institute.—Work on the new Eastern Psychiatric Institute for Federal Prisoners in Butner, N.C., was continued. Site preparation and installation of utilities were completed. At the end of the year, final drawings for the new hospital were completed, and it was expected that the general construction contract would be let in the near future.

Clinical Services.—A review of the tuberculosis control program begun the previous year indicated that the prisons are well on the way toward the eradication of open cases of tuberculosis. An increase in the census of tuberculosis patients at the Medical Center was directly attributed to the effectiveness of case-finding. The hospitals on McNeil Island and in Atlanta, Terre Haute, Ind., and Alderson, W. Va., made special efforts to increase the effectiveness of their outpatient services. The hospitals in Lompoc, Calif., Lewisburg, Englewood, Colo., and Ashland, Ky., extended their advisory health services to personnel by providing electrocardiographs, determinations of intraocular tension, and endoscopy examinations when indicated. All institutions participated in communitywide polio immunization programs. Staffs at Lewisburg, Lompoc, Terre Haute, and Leavenworth continued to provide increasing numbers of diagnostic studies on adult offenders referred by the courts before the imposition of final sentence. The institutions in Ashland, El Reno., Okla., Chillicothe, Ohio, Englewood, and Petersburg, Va., continued to provide these services for youthful and juvenile offenders. The staff in La Tuna, Tex., continued to provide advisory and inspection services to the Arizona camps at Tucson, Safford, and Florence. The staff in Milan, Mich., greatly strengthened its relationships with the University of Michigan Medical Center.

Assistance from PHS Hospitals.—The staff at the Public Health Service Hospital in Lexington, Ky., continued to provide excellent periodic psychiatric consultative services to the Alderson institution for women. Various Public Health Service Hospitals including those in Baltimore, San Francisco, and on Staten Island, and the National Institutes of Health Clinical Center in Bethesda, Md., received prisoner patients for care during the year.

Research.—Selected prisoner volunteers participated in research projects including cold virus studies at the National Institutes of Health, malaria studies, studies of cardiorespiratory physiology, and studies of transmission of venereal disease. In Terre Haute, the medical staff began a study of thyroid metabolism, and in Petersburg and El Reno the staff began a study of the effectiveness of the medical team in the classification process.

Training.—Expanded vocational training courses for prisoners in various medical technical specialties were undertaken in Leavenworth, Lewisburg, McNeil Island, El Reno, La Tuna, and Seagoville, Tex. In Atlanta, a first aid training program was undertaken in cooperation with the Red Cross.

Participation in Community Affairs.—Prisoners contributed 12,060 pints of blood to community blood banks. Members of the psychiatric staff at the Medical Center continued to assist in the Greene County Mental Health Clinic. The Chief Medical Officer at Seagoville presided over a well child clinic. Psychiatrists in Ashland and Englewood assisted with community mental health activities.

BUREAU OF EMPLOYEES' COMPENSATION, DEPARTMENT OF LABOR

A Peace Corps volunteer contracted Chagas' disease in South America, and after preliminary diagnosis in Gorgas Hospital, C.Z., was returned to this country as a beneficiary of the Bureau of Employees' Compensation. The employee returned to her home in North Dakota, and the Bureau of Employees' Compensation authorized a local physician to provide complete medical supervision of the case as long as necessary. Arrangements were made for assistance by the Department of Tropical Medicine of Tulane University, New Orleans, where blood samples will be examined periodically. Because of the potentially serious consequences, several years of followup will be required, and this will be provided by BEC. The case exemplifies the extent of medical care which is provided by the Bureau for Federal employees in the interest of early rehabilitation.

Medical officers of the Public Health Service who are assigned to the Bureau of Employees' Compensation are responsible for the medical care program for civilian employees of the Federal Government

who are injured in their jobs or become ill as a result of their work; also for the identification of unusual diseases or injuries which require special study.

A special study of claims based upon exposure to ionizing radiation was continued in 1964, and guidelines for the establishment of factual data in such cases were being developed.

Injuries arising out of exposure to pesticides attracted attention, and a number of studies were initiated. Technical guidance was obtained from experts in the Public Health Service and in schools of medicine. Medical specialists in private practice served as consultants.

Rehabilitation of employees who have suffered mental illnesses because of their employment or because of injuries received in the course of employment was given increased attention. A study was initiated in the New Orleans area by a member of the staff of Louisiana State University school of medicine and the New Orleans Public Health Service Hospital, who has identified certain significant factors in the rehabilitation of patients with various mental and nervous disorders.

MARITIME ADMINISTRATION, DEPARTMENT OF COMMERCE

There were 516 admissions to Patten Hospital from among approximately 700 cadets at the U.S. Merchant Marine Academy, Kings Point, N.Y., during the year. Health care was given by a Public Health Service physician and two dental officers on duty at the Academy. The medical officer in charge of the Public Health Service Hospital on Staten Island provided professional consultation to the Academy's health program.

Consultations and treatments by the medical officer totaled 4,694. Outpatient consultations and treatments for minor illnesses and injuries totaled 4,075. Consultations and treatments by dental officers numbered 3,649. There were 62 admissions to the Staten Island Public Health Service Hospital and 5 emergency admissions to the North Shore Hospital, a community hospital in nearby Manhasset. In addition, cadets received 2,043 physical therapy treatments, 845 X-ray examinations, and 1,645 inoculations. There were 4,288 laboratory studies conducted.

Bureau of State Services

The primary mission of the 12 divisions comprising the Bureau of State Services is to stimulate the rapid and efficient application of health knowledge for the benefit of all the people. In accomplishing this mission the Bureau works closely with State and local health agencies, educational institutions, and professional and voluntary associations, providing incentive and support to their activities by dem-

onstrations, technical assistance, training, research, and a variety of financial assistance programs.

The Bureau has divided its programs into two major groups to deal more efficiently with modern health problems. The community health group, made up of seven divisions, seeks to promote the availability of the best in health care, State by State and community by community. The five divisions of the environmental health group conduct programs designed to protect the population against hazards of the modern environment.

Office of the Bureau Chief (Community Health)

By the close of 1964, a total of 162 community projects had been approved and supported in 36 States, the District of Columbia and Puerto Rico under the Community Health Services and Facilities Act of 1961, designed to support experiments and demonstrations of improved ways of delivering needed health services, with special attention to the needs of the chronically ill and aged. The Office of the Bureau Chief assisted in coordinating this program and other grant programs of the Bureau, and worked with the divisions to initiate new programs in such fields as the communication of health knowledge, the continuing education of the health professions, and the development of manpower resources for health service.

Division of Accident Prevention

Accidents kill over 100,000 persons annually, injure 45 million, and hospitalize 2 million. They are the leading cause of death for ages 1 through 34 and the fourth leading cause of death among the total population.

In its effort to minimize accidental deaths and injuries, the Division of Accident Prevention works closely with State and local health departments and industry and allied groups in conducting research into the human and environmental factors of accident causation, epidemiological investigations, and in establishing injury control activities.

RESEARCH

The Division supports research designed to determine causes of accidents, means of preventing them, and how to minimize injuries resulting from them. In 1964, the Division financed 46 research grants totaling $1,890,000 compared with 37 in 1963 totaling $1,648,000.

As the year ended the Division was preparing to accept delivery of its first two prototype driving simulators designed to uncover new insights into the human behavior aspects of the driving task.

PROGRAMS AND PROJECTS

The Division's successes in special demonstration areas give every indication that injuries among the general population can be significantly reduced on a national basis.

For instance, a cooperative control demonstration project was developed with the Charleston, S.C., Health Department. Since then, hospital admissions for poisoning have dropped more than 20 percent and there has been a steady reduction in the duration of hospitalizations for poisoning in Charleston.

The data collection phase of a 2-year study of emergency care and treatment given to 70,000 injury victims was concluded in San Francisco in cooperation with the San Francisco City and County Department of Health. When the data are tabulated, they will be used in the Division's Emergency Medical Services (EMS) programing.

Plans were announced for the Division to cosponsor with the American Medical Association and the American Association for Motor Vehicle Administrators a National Conference on the Medical Aspects of Driver Safety and Driver Licensing. The Conference, in the planning stage for 3 years, will be held in November of 1964.

Working with local health departments, the Division conducted a nationwide survey of glass injuries and was able to help glass and sliding door manufacturers identify the independent variables associated with glass door injuries. As a result, 145 leading glass and aluminum door manufacturers formed the Architectural Aluminum Manufacturers Association (AAMA) last year; the AAMA adopted industry quality standards; and the FHA adopted standards relating to the use of safety glass in various glass areas in FHA financed houses. The AAMA presented its 1964 Distinguished Service Award to the Public Health Service.

TRAINING

There were 8 short-term (3 days or longer) Accident Prevention Training Courses provided by colleges and universities compared with one last year. Public Health Service training grants available and utilized for training courses amounted to $105,000 compared with $59,000 last year and $25,000 in 1962.

Division of Chronic Diseases

The Division of Chronic Diseases continued to serve as the principal Federal agency in the planning, development and operation of nationwide programs to prevent the occurrence and progression of chronic illness and impairment. Its operations were directed toward assisting States and communities provide the kinds of health services needed

to prevent and control the major killing and crippling diseases, and to meet the challenge of the disability caused by these diseases.

To foster the development and expansion of programs for the chronically ill, disabled, and aged, a total of 71 contracts and grants to voluntary and official health agencies currently are in operation. Programs include community coordination of care, home health services, and outpatient services.

The Division continued its efforts to foster mass presymptomatic casefinding programs through consultative services to 44 State health departments and by serving as a clearing house for information on evaluation studies of new tests suitable for mass testing. During the past year a curriculum in the Epidemiology of the Chronic Diseases was established to teach public health physicians the environmental and genetic origins of the chronic diseases. In addition, national consultative service was provided hospitals interested in establishing Artificial Kidney Centers. A survey questionnaire was developed to determine the extent and use of artificial kidney equipment throughout the United States.

The Division provided the staff nucleus for a Public Health Service Clearinghouse on Smoking and Health. The Division also provided staff and consultative assistance in the formation of a National Interagency Council on Smoking and Health composed of 12 national agencies in the fields of health and education. This Council seeks to develop and implement plans and programs aimed at combatting smoking as a health hazard. The Division also assisted in the initial distribution of more than a quarter of a million copies of the Smoking and Health Report to physicians, professional organizations, medical schools, editors and writers and other interested groups. An additional 10,000 copies were distributed to senior medical students along with a questionnaire to determine smoking habits and changing attitudes among this important group. Other Smoking and Health activities included the cosponsorship of the National Conference on Cigarette Smoking and Youth in New York during the month of June 1964; a continuing analysis of the amount and distribution of smoking in conjunction with and through the auspices of the National Center for Health Statistics; and the award of 10 grants or contracts totaling nearly $260,000 to support demonstrations and studies relating to cigarette smoking and its effects on health.

HEART DISEASE CONTROL PROGRAM

The mission of the Heart Disease Control Program is to help reduce the toll of death and disability from cardiovascular ailments by providing funds, trained manpower, and information. These resources

encourage States and local communities throughout the country to initiate or expand heart service programs and community studies.

The Heart Program has pioneered in stimulating the adaptation of hospital intensive care units to the specialized care of patients with acute myocardial infarction. The initial experience with Coronary Care Units, which features around-the-clock electronic monitoring and intensive nursing care, indicates that substantial reduction in mortality will be achieved.

Testing of nationwide instantaneous recording and transmittal of electrocardiograms has proven the feasibility of automated at-home service. Electrocardiograms are made with a portable electronic device at home by public health nurses, then transmitted by telephone directly to the instrumentation and data processing center in Washington, analyzed by computer, and phoned back to the physician. In this manner, ECG data can be transmitted, analyzed, and returned anywhere in the country within 10 minutes.

Augusta, Ga., is the first city to participate in a series of community demonstration projects to determine the socioeconomic saving from the rehabilitation of patients with chronic pulmonary disease. These demonstration projects provide clinic services, group therapy, outpatient nursing care and followup, and education and training of health personnel, patients and their families.

Physicians treating congestive heart disease patients on a restricted sodium diet will soon know whether the community drinking water is a hidden source of sodium. The first of eight nationwide samplings in a 2-year test of measuring the sodium content in drinking water disclosed that 44 percent of community water supplies contain sufficient sodium content to be considered in diet planning. The survey is being made by the Heart Disease Control Program and the Division of Environmental Engineering and Food Protection in about 2,000 participating communities.

Stroke patients and those with impending stroke symptoms are being helped with new rehabilitation and prevention programs. Thirty-one rehabilitation programs, with an average of 249 patients per program, have been completed or are in operation, and more are to be established. A successful stroke prevention program in Portland, Oreg., has been in operation over 2 years.

CANCER CONTROL BRANCH

The Cancer Control Branch focuses efforts on programing control activities which will reduce the risk of death from five major cancer sites: the uterine cervix, the oral cavity, the breast, the lungs and colon-rectum. Reduction of the risk of death from these sites is possible with the systematic application of known techniques and proce-

dures. Deaths from these sites account for more than 50% of all cancer deaths.

In fiscal year 1964, grants totaling $3,562,131 were awarded to 139 projects. Thirty grants were for cervical control projects, 54 for cytotechnician training, 15 for oral cancer control projects, and 40 for projects in diverse areas, including professional education, registry analysis, mammography training, and smoking studies. In calendar year 1963, projects examined 172,827 women for cancer of the cervix and treated the 777 women who were found to have cancer in situ and the 446 women with invasive cancer. Training was completed for 335 cytotechnologists. Seventeen thousand, seven hundred and seventy-three individuals received clinical examinations for cancer of the oral cavity. A cytology study of 4,167 persons, with carefully controlled followup, provided needed data to evaluate the effectiveness of cytology in oral cancer detection.

Awards were made to 99 physicians for a year of advanced clinical training with major emphasis on management of the neoplastic diseases. Ninety-nine physicians received clinical training this year with awards from fiscal year 1963 funds, the first year of the program.

Eighteen of the 30 cervical cancer control projects are directed specifically at the women at high risk who are primarily from low socioeconomic and educational backgrounds. These projects are developing effective ways to reach these women and, as a result, are finding 9 cancers per 1,000 women examined, as compared with an overall project rate of 6 per 1,000.

Contracts and intramural studies are exploring diverse leads to effective control measures. A flexible proctosigmoidoscope is being developed to provide a better tool for examining the colon and rectum and to encourage early examination for cancer of these sites. A survey of smoking habits and attitudes is underway to provide baseline data to evaluate smoking control efforts and to provide clues for more effective measures.

DIABETES AND ARTHRITIS PROGRAM

The Diabetes and Arthritis Program seeks to reduce the severity of the effects of these two metabolic diseases by finding and applying the best techniques of detection, care, and prevention. Major tools include stimulating contractual or cooperative agreements, project grants, and research grants, developing educational and informational material, detailing personnel, furnishing supplies, and loaning equipment.

This year's emphasis in diabetes has been on education for both the physician and the patient. There has been, at the same time, continued and increasingly successful effort in the area of diabetes screening.

Continued study has been made of the use of programed instruction for patient education and continuing education for physicians. After a field test in Massachusetts, using a program developed by the Branch, two-thirds of the participating physicians indicated that they planned to alter their practice as a result.

The Program's Boston research arm carried out a 3-month, communitywide study on the prevalence of rheumatoid arthritis, gout, and diabetes in Sudbury, Mass. The results of this study are still being evaluated, but the study itself achieved a successful 75-percent participation, having tested 4,500 persons. Results of other studies were presented during the year, such as the Lewisburg Prison Study Report on the "Reproducibility of the Oral Glucose Tolerance Test," which raised questions as to the validity of relying on a single glucose tolerance test.

Final screening returns showed a 56-percent increase in screening over the previous year (527,195 in fiscal year 1963 over 338,546 in fiscal year 1962). The number of positive screenees went up 127 percent from 10,315 to 23,574. At the same time, new data has indicated that there are 4 million American diabetics rather than the previously estimated 3 million.

The first step in helping America's 12 million arthritics must be to coordinate the efforts of all agencies that can assist them. During the past fiscal year, this Program has held and attended several regional and State seminars on such subjects as arthritis programing, diet, and quackery. An invitation has been received for the Program to send representatives to all regional meetings of Arthritis and Rheumatism Foundation chapters throughout the county. The Program's nutrition consultant has worked with the ARF and the American Dietetic Association on a joint publication, Diet and Arthritis, which is designed to fight expensive food fads.

NEUROLOGICAL AND SENSORY DISEASE SERVICE PROGRAM

Early detection and control of neurological and sensory disease problems in communities throughout the United States were notably advanced during fiscal year 1964. Public Health Service efforts to assist health and related agencies across the nation in improving care services for the neurologically and sensory impaired took concrete form in the development of many community services and training activities. This included promotion and support of a wide variety of projects dealing with disorders of speech, hearing, and vision; epilepsy, muscular dystrophy, cerebral palsy, aphasia, and other neurological and sensory impairments. Eighty-two grants, totaling $2,118,280, were made to official State and local health agencies, and to nonprofit health

and medical institutions in 32 States, the District of Columbia, and the Virgin Islands.

The Neurological and Sensory Disease Service Program awarded grants to a number of institutions throughout the country to establish and improve clinical training programs. These grants totaled $811,-142. Sixty-four individual traineeship awards amounting to $275,253 were made to nonphysician health personnel. Of these, 31 were candidates for doctorates and 33 for master's degrees. The 32 training institutions attended by the grantees were located in 19 States. Five senior medical traineeships, totaling $42,000, were awarded to physicians for additional specialized training in the care of patients with neurological and sensory diseases.

An adult hearing survey in Boston, Mass., and a Michigan study of relatives of known glaucoma victims were continued. The hearing survey, which is conducted from a "testmobile" staffed by an audiologist, is to determine the value of mass screening for hearing impairments as compared to hearing examinations made by appointments in doctors' offices. The vision study is directed at obtaining information on the occurrences of chronic simple glaucoma and other eye conditions among relatives of persons known to be blind from this disorder. The number of States conducting glaucoma screening programs during fiscal year 1964 increased from 14 to 34. The total number of persons tested nationally in such programs increased from 45,000 in 1963 to 135,000 in 1964.

To find and diagnose individuals suffering from epilepsy and other convulsive disorders, the North Carolina State Health Department has established a regional referral clinic program throughout the State. Medical School Centers at Duke University in Durham, and at the University of North Carolina in Chapel Hill are cooperating by providing neurological evaluation clinics to complement this program.

GERONTOLOGY BRANCH

The program developed by the Gerontology Branch during the past fiscal year includes the following activities: Development of a curriculum in applied gerontology for all the practicing health professionals, with particular emphasis on the training of the clinical physician; research, including attitudinal studies of the medical and paramedical professions, and attitudinal studies of older persons to uncover reasons for their utilization and nonutilization of existing community health facilities; establishment of health maintenance services for large concentrations of elderly persons incorporating variations in techniques and settings; creation and refinement of a method

to inventory data on health services of the aged currently provided in the States; and establishment of a comprehensive program of information and education for professional persons, community leaders, and the lay public.

Valuable information on on-going research projects in gerontology will be gained through a study supported by the Gerontology Branch. This study includes evaluation of the organizational settings in which the research is conducted, evaluation of the methodology applied, and a measurement of the relative importance of the individual research project.

A meeting was called by the Gerontology Branch to bring together representatives of the schools of public health to discuss gerontological content of their curricula. Representatives of nine schools of public health participated. Significantly, several months after the meeting, one of the schools adopted a new curriculum containing four courses in gerontology.

The lack of resource material in applied gerontology has served as a serious impediment to progress in the training and orientation of all the health disciplines concerned with health of the aged. To fill this gap, the Gerontology Branch is supporting the development of a curriculum on applied gerontology suitable for all the practicing health professionals.

In its service projects the Program has emphasized the development of programs which encourage the use of a variety of services relating to health maintenance. For the most part these services use the adult health conference concept and include screening, referral, and ambulatory care. The health services have been provided to residents of housing projects under varied auspices, such as a local hospital, a Social Welfare Planning Council, and a visiting nurse association. All projects include the participating of the local health department, but they involve the coordination of health and related services from several sources.

MENTAL RETARDATION PROGRAM

Increasing recognition of mental retardation as a growing national problem of considerable proportions led to the establishment of the Mental Retardation Branch in the Division on December 19, 1963. The Mental Retardation Program is a focal point in the Public Health Service for stimulating the development of the comprehensive services needed in States and communities to combat mental retardation.

The initial, primary responsibility of the Mental Retardation Program is the administration of one-time grants to States for mental retardation planning authorized by Public Law 88–156. A total of $2.2 million was appropriated for this purpose. Three-fourths of the

total funds were allocated for basic planning grants of $30,000 to each of the eligible States and jurisdictions. The remaining one-fourth, for supplementary grants for followup planning, is to be made available to the States in 1965 on a competitive basis.

To date, initial mental retardation planning grants have been awarded to 50 jurisdictions (47 States, the District of Columbia, Puerto Rico, and the Virgin Islands).

"Terms and Conditions" for award of the grants were developed, published, and distributed to the States. Several publications and reprints on mental retardation planning and coordination were published and distributed to designated State planning agencies. A document entitled "Mental Retardation Guidelines for State Interagency Planning," was developed with the assistance of an inter-Departmental group of representatives from other programs with activities in the field; and "State Laws and Regulations Affecting the Mentally Retarded: A Check-List," was published for the Office of the Special Assistant to the President for Mental Retardation.

The Program sponsored a national conference for State coordinators of mental retardation planning. Several university authorities on planning served as the staff for the conference. Considerable followup consultation is also being given to the States by staffs at headquarters and in the regional offices. An inter-Departmental committee (Health, Education, and Welfare; Labor; and Interior) has been established to review State grant applications, recommend action, and evaluate progress in planning.

The Program also has responsibility for community services, training, and applied research projects and grants in mental retardation. A total of $548,198 has been awarded for eight community service projects; $210,964 for six projects for the training or demonstration of training of health personnel for work in mental retardation; and $111,872 for six applied research projects.

NURSING HOMES AND RELATED FACILITIES BRANCH

This program, assigned the mission of improving standards of patient care in the Nation's 23,000 nursing homes and related facilities, placed major emphasis during 1964 on stimulation and support of training and education programs for nursing home personnel, since the shortage of qualified professional and ancillary personnel in this area has been a major problem for many years.

Under a Community Health Services grant a Statewide project was undertaken in Oklahoma to employ professional physical therapists to conduct in-service training of nursing home staffs in improved techniques of patient care. Designed to achieve self-supporting status

within 3 years, the Oklahoma plan is expected to raise the level of restorative services in nursing homes and to provide guidelines for many other States now preparing to organize similar programs.

A New England Conference for deans of collegiate schools of nursing was held at Boston College (Massachusetts), with the aid of a contract entered into by the Branch, for the purpose of studying methods for improving the nursing home curriculum content in nursing schools. A followup Conference of the same group held later in the year evaluated the progress achieved in the several schools as a result of the recommendations of the first Conference.

The American Nursing Home Association and the American Association of Homes for the Aged undertook, with support of a Branch contract, pilot nursing home cost studies to test the methodology of a National Nursing Home Cost Study proposed for initiation in 1965 under assignment from the President's Council on Aging. The Branch has also been assigned the task of drafting a Model State Home Code.

Communicable Disease Center

The Communicable Disease Center (CDC), Atlanta, Ga., leads the Public Health Service's offensive against all infectious diseases. CDC supports and supplements State health department control activities by providing technical competence, manpower, and facilities as needed and requested by these agencies.

ASSISTANCE TO STATES

Epidemic Aid

Epidemic aid was extended to 35 states in 71 instances, involving 26 different diseases.

Hepatitis continued as a major problem. Two epidemics related to clams brought the total number of such outbreaks to five documented throughout the world. Gastrointestinal dieases were also active, with an interstate hospital-associated outbreak traced to raw or undercooked eggs contaminated with *Salmonella derby.*

More human cases of botulism—46 with 14 fatalities—were reported in 1963 than in any year since 1939. The unusual epidemiologic aspects of this disease and its high case-fatality rate create greater interest than would ordinarily exist with a disease of such low incidence. One-third of the 12 outbreaks during the calendar year were attributed to commercially processed foods. Three of these outbreaks were due to Type E botulism in canned tuna and smoked whitefish, with 22 cases and 9 deaths. Since Type E antitoxin is not produced

in the United States, CDC has procured from abroad a supply of polyvalent botulinus antitoxin which includes Type E and has made it available to State and territorial health authorities on an emergency basis.

Immunization Program

During 1964, the first year of its operation, the vaccination assistance program awarded grants for 61 immunization projects to 34 States and 27 local health departments, in amounts totaling more than $8.5 million. These grants help health departments conduct and maintain vaccination programs, particularly against poliomyelitis, diphtheria, whooping cough, and tetanus. In addition, CDC provides consultative and training services, and has assigned 30 field personnel to help States and cities with immunization activities. Approximately 70 percent of the total population of the United States resides in communities covered by project grants.

Aedes Aegypti *Eradication Program*

A program to eradicate *Aedes aegypti* (the mosquito carrier of yellow fever and dengue) from the United States was initiated in 1964. This action meets a Government commitment to the Pan American Health Organization to participate with other member nations of the Americas in a hemispherewide eradication program. *Aedes aegypti* is found in nine Southern States, Puerto Rico, and the Virgin Islands.

The eradication program is conducted cooperatively with State and local health agences on a contract basis. In its first year, it became operational in Texas, Florida, Puerto Rico, and the Virgin Islands. Plans for 1965 and 1966 include expansion of eradication activities into Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, and Tennessee, the remaining States in the yellow fever receptive area.

While this country has been free of yellow fever for many years, the disease continues to occur in the Western Hemisphere, chiefly because of a reservoir of the disease virus among monkeys in the jungles of Central and South America. An epidemic of dengue fever in the Caribbean area during the summer and fall of 1963 involved more than 30,000 cases. Several persons ill with the disease entered the continental United States.

Laboratory Services

Fifty-two consultations on program reviews, technical reviews, and facilities planning were rendered to public health laboratories in 25 States and Territories and in Washington, D.C.

The central laboratory for the national and international cholesterol standardization program is located at CDC. Sixty-three laboratories in the United States and 18 laboratories in foreign countries participate in this program. During 1964 they performed approximately 165,000 serum cholesterol analyses. In addition to working with these laboratories, CDC carried out nearly 27,000 serum cholesterol determinations for the National Diet-Heart Study, investigating the effect of the degree of unsaturation of dietary fat on the serum cholestrol level and on the development of symptomatic heart disease in approximately 1,000 middle-aged men in six cities.

Demonstrations

Communicable disease control demonstrations are tailored to delineate a locality's special problems and resources and to work out practical solutions. Established demonstration programs at Lebanon, Pa., Oklahoma City, Okla., Tucson, Ariz., and Huntsville, Ala., have been the inspiration for 10 additional satellite demonstrations in 8 States. A new project established in Colorado Springs, Colo., includes an epidemiological study of streptococcal infections.

Because of the effectiveness of the demonstration program, the Mexican Ministry of Health has requested a binational demonstration on the Mexican-United States Border. Laredo-Nuevo Laredo is the probable site.

The immunization program created new opportunities to develop neighborhood evaluations within the low socioeconomic areas, new public health educational media specifically designed for people in these areas, and to use curbside or mobile immunization units. Motivation of "hard-to-reach" population groups was emphasized.

Training

More than 10,500 public health workers, private physicians, and various professional and service personnel attended CDC training courses and seminars.

New presentations included courses on "Infections Control in Hospitals and Institutions," "Safe Use of Pesticides," and four on training methods and aids. A demonstration of instruction methods employing the CDC-developed "hypothetical community" of Dixon-Tiller County was presented to 42 representatives of schools of medicine and of public health, and assistance was given to 7 universities in adapting this training aid to certain of their courses. Twenty seminars on immunization and 13 on tuberculosis were presented for 26 health departments and for 10 Academies of General Practice.

Five Programed Instruction units were completed: *Amebiasis*, *Insecticide Formulation*, *Jet Injector Operation*, *Food-Borne Disease*

Investigation: Analysis of Field Data, and *Personnel Procedures for GS Positions.*

PHS Audiovisual Facility

Forty-six motion picture productions (16 mm. and 35 mm.) were released during fiscal year 1964. Production of 8 mm. film was started late in the year; nevertheless, 8 prototypes from excerpts of existing 16 mm. films were produced along with 12 films depicting laboratory procedures and techniques.

Installation of a television studio enabled recording of 6 live programs and duplication of an additional 16 on video tape. The facility distributed 20 shipments of video tapes to ETV and network television stations.

Graphics and photographic arts contributed more than 140,000 units of work to the production of slide sets, filmstrips, and other visual presentations. There is a growing need for filmstrips for teaching programs in the developing countries. CDC is working with the Agency for International Development (AID) in the production of prototype filmstrips in venereal disease control, tuberculosis, nutrition, and human reproduction.

Approximately 177 films were added to the Archives, raising the total number of films in the collection to 877. An estimated 2.5 million persons viewed PHS films during the year. Some 54 countries were served under the international exchange program. Six films were translated into foreign languages with 55 release prints made available for use. Additionally, 31 films in English with magnetic striping were furnished to the AID Mission in Vietnam, where appropriate narration will be added.

REPRESENTATIVE DISEASE CONTROL STUDIES

Venereal Diseases

The upward trend of incidence of infectious syphilis which began in 1958 continued with a 3.2 percent rise over fiscal year 1963. The 1964 total of 22,740 reported cases [2] of primary and secondary syphilis was nearly 3½ times the incidence reported in 1957. The disease is simultaneously moving up the socioeconomic ladder and down into lower age groups.

The National Syphilis Eradication Program increased to 560 its field personnel assigned to State and local health departments. Eighty-eight thousand private physicians were visited to acquaint them with the program and to offer them health department diagnostic and epidemologic services. Eleven thousand eight hundred visits were made to private laboratories and 9,026 cases of infectious syphilis

[2] Provisional.

were reported in connection with reactor follow-up activities. Ten thousand six hundred and sixty-two patients with infectious syphilis were interviewed. Source or spread cases were found for 69 percent of the cases interviewed.

Research in the diagnostic, therapeutic, and immunologic aspects of syphilis was continued. New projects were begun in the field of behavioral science research to improve epidemiologic interview techniques.

Pilot projects in VD education were started in several large cities, including New York, Chicago, and Philadelphia. A course of instruction on venereal disease was developed for eighth-grade students.

Tuberculosis

The Task Force on Tuberculosis appointed by the Surgeon General in 1964 completed its report outlining a 10-year course of action which would reduce significantly the burden and misery caused by this disease. The report has been published under the title, "The Future of Tuberculosis Control," as PHS Publication No. 1119.

Thirty-nine project grants to improve and expand medical and treatment services to nonhospitalized tuberculosis patients, contacts, and suspects were in operation during the year.

The professional educational facility at Denver, Colo., conducted two 3-week courses for nurses and physicians and a 1-week workshop for public health nurses on the clinical and public health aspects of tuberculosis. It also presented a 3-day symposium for physicians on the epidemiology of public health problems of the disease.

Interim results of a continuing study carried out with the help of 22 State and city hospitals across the nation indicate that there has been no significant increase in primary drug resistance in adults with active pulmonary tuberculosis during the last decade.

A study of the dynamics of tuberculosis morbidity and mortality was started to document the changing picture of tuberculosis, using parameters that are descriptive and that will serve as guidelines for developing new methods to eradicate the disease.

Arthropod-Borne Encephalitis

Western encephalitis (WE) virus transmitted by the mosquito *Culex tarsalis* was confirmed as the cause of about one-half of the human cases in an outbreak of encephalitis in the Texas Panhandle. The etiology of the remainder of the cases was unknown. Outdoor residual spraying of premises proved highly effective in preventing the transmission of this virus in Texas and California, but limited larviciding was ineffective.

Venezuelan equine encephalitis (VEE) virus, responsible for widespread human epidemics in northern South America, has not been recognized north of Panama in the past. However, a recent serological survey of the Seminole Indians in southern Florida indicated they had at some time experienced infection with VEE. Three isolations of this virus have now been made from the mosquito species *Culex* (*Mellanoconion*) collected in that area in June, July, and October. This evidence of current activity was strengthened further when specific antibody was found in small mammals sampled from one of the infected sites in January 1964. These findings indicate that VEE could be a potential new public health problem in the United States.

Infectious Hepatitis

Evidence continues to accumulate on the association of adenoviruses with confirmed cases of infectious hepatitis. However, the "San Carlos" group, once considered as candidate agents, has proved to be a mixture of various adenoviruses and some ECHO and other enteroviruses. Serological studies have removed this group from the list of prime candidates for the etiology of infectious hepatitis.

Rabies

Each year approximately 32,000 individuals receive rabies vaccine because of exposure to rabid or suspect animals. Hyperimmune serum, which produces almost immediate passive immunity, is used as an adjunct to post-exposure vaccine in severe types of exposure. This serum, being of equine origin, sometimes produces adverse reactions. CDC is cooperating with veterinary associations and the Red Cross to develop an immune globulin of human origin to replace the equine serum. Veterinarians are the best source of this globulin, since many of them have received the Pasteur treatment at some time or other. Their antibody titer can be increased by giving them a booster dose of duck embryo vaccine a few weeks before blood is drawn, processed, and pooled.

Enteric Infections

An interstate hospital-associated outbreak of *Salmonella derby* gastroenteritis required extensive field and laboratory studies. It was traced to the use of raw or undercooked eggs. A National Conference on Salmonellosis was held at CDC, March 11–13, 1964. It was attended by 250 people representing various disciplines in public health and in food industries. A Shigella Surveillance Program, based on voluntary reporting of shigella isolates weekly from the States, was also started.

Smallpox

Smallpox vaccination by jet injection offers significant advantage as a mass immunization tool for use in this country and in the worldwide eradication program. Using several dilutions of commercially available vaccine, CDC personnel vaccinated approximately 50,000 people in a previously unvaccinated population in the Kingdom of Tonga. A 1:50 dilution administered by jet injection was shown to be as good or better than the multiple-pressure method in performing primary vaccinations in all age groups.

Vector Control

Evaluation of DDVP as a residual fumigant in malaria eradication in Haiti indicates that this treatment reduces malaria incidence but does not completely stop transmission of the disease. Biological studies show that reliance on indoor treatment alone, regardless of the insecticides used, cannot eradicate the disease.

Biochemical studies show that folic acid is essential to the development of housefly larvae. This observation has led to the development of some new chemical agents which may prove useful in the control or eradication of disease vectors.

Division of Community Health Services

During 1964 the Division of Community Health Services served as the coordinating point for the Public Health Service for plans relating to the Appalachia Program. The Chief of the Division at that time served as Chairman of the subteam on health of the President's Appalachia Regional Commission.

HEALTH COMMUNICATIONS

In response to the need for intensive effort in the field of health communications activities, the Division formed a Health Communications Branch in 1964. As a first step, three projects dealing with continuation medical education were initiated through contracts with the Empire State Medical, Scientific and Educational Foundation, Inc.; the Pennsylvania Hospital; and the New York Academy of Medicine.

The Empire State project seeks to develop a method of studying the continuation education needs of physicians in upstate New York. The Pennsylvania Hospital contract is designed to determine the feasibility of conducting a comprehensive project of continuation education for physicians, which would consist of a 5-day postgraduate course in obstetrics presented to two different groups, using a different instruction method in each class. The New York Academy of Medicine project involves a study of open circuit television programs as a medium of continuation medical education. A series of seminars on

various medical subjects, supported by non-Federal resources, are being presented on open circuit television over a specific period of time. The contractor will then determine the amount of viewing, and compare physician viewers by type of practice, age, training, and other characteristics.

MIGRANT HEALTH

Under the provisions of the Migrant Health Act, 53 projects totaling nearly $1.2 million were awarded in 26 States to improve the health conditions of agricultural migrant families. These projects have provided a variety of services including medical care through family health service clinics, nursing, health education, sanitation, nutrition, and other services.

In an effort to obtain an independent, impartial evaluation of the migrant health program authorized by the Migrant Health Act of 1962, the Division has entered into a contract with the American Public Health Association. The APHA will determine the extent to which the program has achieved or shows promise of achieving the intent of Congress for improving health services in rural areas, with emphasis on domestic agricultural migratory workers and other rural people afflicted with poverty.

PUBLIC HEALTH ADMINISTRATION

In recognition of the increasing demands upon health services because of population growth and concentration in metropolitan areas, a Metropolitan Health Section was established. This will enable the Division to give attention to problems of metropolitan health as an integral part of the ongoing programs in public health administration.

Currently, a survey in depth of selected school-community health service programs is being conducted through contractual agreement with six schools of public health (University of Michigan; University of California, Berkeley; University of California, Los Angeles; Johns Hopkins University; Yale University; and the University of North Carolina). As designed, the study will place emphasis upon the school-community health organization and structure, and will try to identify the administrative problems of school health programs.

ALCOHOLISM

In 1964, the Division was given responsibility for developing and proposing a program in alcoholism for the Public Health Service. Fifteen experts in the field, representing State alcoholism programs, local community clinics, voluntary agencies, and academic institutions were called together on November 5–6 to discuss current alcoholism problems.

MEDICAL CARE ADMINISTRATION

The medical care administration program works with State and local health departments to assist them to carry out their role in medical care activities. A number of projects are being supported in this area. For example, in 1964 the development of a guide on the organization and administration of medical care was initiated. Another project was developed in cooperation with two hospitals in New York City, to study the impact of the use of emergency services for nonacute care upon existing patterns of ambulatory care. These hospitals, from interviews with a sample of 2,000 patients, will determine why they choose a particular source of care and the reason for this choice.

HEALTH ECONOMICS

The health economics program in 1964 continued to develop the financing and utilization data which are basic to understanding and improving the provision of health services. Numerous publications were completed. They include: *United States Statistics on Medical Economics; Present Status and Recommendations for Additional Data*, Report of the U.S. National Committee on Vital and Health Statistics, which resulted from 2 years of deliberations by a Subcommittee on Health Economics; *Maternity Care Utilization and Financing*, Source Book of United States Data, Selected Years 1950–1962, Health Economics Series No. 4, which includes information about the newborn and maternity care; and about health insurance provisions in these two areas; and *Chart Book of Basic Health Economics Data*, Health Economics Series No. 3, designed for the use of students in understanding major facts, trends, and problems of health and medical care.

TRAINING RESOURCES

The program of public health traineeships is designed to (1) increase the number of professional health personnel with graduate or specialized training in public health and (2) to recruit new professional health personnel into the field of public health. From 1957 through 1963, over 5,000 traineeships have been awarded, 58 percent to trainees who were newly entering the field.

During 1964, over 4,000 traineeships were awarded totaling over $4.1 million.

Formula grants were awarded to the 12 accredited schools of public health to help defray the cost of training federally sponsored students. These grants, totaling $1.9 million in 1964, also enable the schools to maintain a strong and varied public health curriculum.

Project grants were awarded to schools of public health, nursing, and engineering for the purpose of enriching their curricula or other-

wise improving instruction in public health training. In 1964 over $1.8 million was awarded in 81 grants to 53 different schools.

Under the Health Professions Educational Assistance Act of 1963 provision was made for long-term, low-interest loans to students in schools of medicine, dentistry, and osteopathy. This Division has been delegated the responsibility for the administration of this portion of the Act.

SECOND NATIONAL TRAINING CONFERENCE

Eighty conferees attended the Second National Conference on Public Health Training on August 19–22, 1963, to appraise the effectiveness of the public health traineeship program as directed by the Congress under Section 306(e) of the Public Health Service Act, and to consider modifications in the legislation, if any, which would increase its effectiveness. Recommendations of the Conference were considered in developing legislation to extend and expand the public health training program.

RESEARCH GRANTS

In 1964, 18 new research grants were funded, 29 grants were continued from prior years, and 6 supplemental grants were awarded. One way of coping with personnel shortages was demonstrated by the "Navajo-Cornell Field Health Research Project." This project developed educational content and carried out successful training of Navajo subprofessional workers serving as field and clinic auxiliaries. Other projects approved were in support of (1) research on roles and relationships of the various community resources in providing health services; (2) methods of education to improve health practices; (3) problems of health economics; (4) problems of medical care administration; and (5) problems pertaining to the health needs of and the provision of health services for particular groups, for example, agricultural migrants.

Division of Dental Public Health and Resources

The protection and improvement of the Nation's oral health is the assigned mission of the Division of Dental Public Health and Resources. The Division conducts and supports research to discover causes of dental diseases and disorders and means of their prevention and control. It promotes the adoption of new and improved public health measures for the extension of dental services and conducts sociological studies to determine public and professional attitudes toward them; it assists the efforts of State and local health departments and public and private groups to establish dental health programs.

Finally, the Division seeks to augment present manpower resources and dental facilities.

COMBATING DENTAL DISEASES

Fluoridation of the community water supply is a proven method of reducing dental caries. As a result of action by 2,645 communities, drinking water in which the fluoride level is controlled was available to 47 million people by June 30, 1964. To promote interest in and utilization of fluoridation, the Division operates a public information service and, upon request, provides consultation, training, and technical assistance to official health agencies and communities wishing to fluoridate.

Continuing experimentation with other caries control measures included studies of the value of fluoridating school water supplies in rural areas and of applying topical fluoride applications to the teeth of children in a fluoridated community. A 3-year study of the effectiveness of a stannous fluoride dentrifrice in a school health program was concluded.

Periodontal disease is one of the most common of all dental diseases. As a first step toward its prevention, the Division initiated clinical studies to learn more about the nature and process of the disease and to establish conclusively the suspected relationship between it and oral hygiene status.

The Division continued to expand its program to promote the use by dentists of the oral cytological smear as an aid to early discovery and diagnosis of oral cancer. Eight new demonstration projects were added this year, bringing the total to 15.

A survey of the incidence of congenital malformations among babies born in some 30 States in 1963 was initiated with a long-range goal of achieving better understanding of the occurrence of oral clefts. By comparing information on malformed infants with that for a sample of normal infants, the study seeks to identify factors such as birth order, race, and parental age, which may be related to cleft lip and palate.

MAKING DENTAL CARE AVAILABLE

The cost of dental care often deters those who need it most from seeking treatment. Dental insurance plans are an increasingly popular method of financing such services. In June 1964, over 1,352,600 members were enrolled in 368 groups throughout the Nation. The Division encourages the growth of prepayment plans through direct consultative services and the distribution of pamphlets, many based on the analysis of plans already in operation, to interested consumer and professional groups. *Digest of Prepaid Dental Care Plans 1963*,

published this year, is a source of information for program planners and administrators on methods of operation, benefits, and methods of financing a variety of prepayment plans.

The Division's Special Patient Care Program, conducted in cooperation with 12 dental schools, represents a continuing effort to ensure that dental services are available to aged, chronically ill, and handicapped persons. Under the program, dental students receive instruction and experience in the treatment of special patients both within and outside the dental office.

ASSISTING OTHER HEALTH AGENCIES

Actual operation of dental public health programs is the responsibility of State and community health departments. To aid these agencies in strengthening their programs, the Division published *Census of Dental Programs in Local Health Departments*, the second in a series of studies of the organization, staffing, and activities of different types of dental health programs.

MEETING MANPOWER NEEDS

As administrator of the dental portion of the Health Professions Educational Assistance Act, the Division assisted dental schools with the planning of teaching facilities. Eight construction applications had been approved by June 1964.

Increased dentist productivity is also required. The dentist who works with a chairside assistant works with greater speed and efficiency and, as a result, can increase his normal patient load. In 1964, the great majority of dental schools continued to give students training and experience in working with chairside assistants in a program supported by Division grants. The Division aided schools organizing dental assistant training programs with the planning of the program and the teaching facility. An experimental program was continued, conducted in cooperation with six educational institutions at varying levels, to learn more about the content and length of training required.

The role of the auxiliary is the subject of study at the Clinical Development Center, opened this year in Louisville, Ky. Clinical experiments will be conducted to determine what additional nonprofessional duties dentists might delegate to assistants, the amount of training required for the assistants to perform added duties effectively, and the effect upon productivity of varying arrangements of equipment.

A Division study of participation in an oral cytology demonstration project will provide greater insight into the ways in which knowledge of new techniques is communicated among dentists. The development of a series of programed courses in dentistry, initiated this year, will provide a means of testing the value of this new instructional method

in continuing education programs, urgently needed to help dentists keep up to date. Similar research in the potential application of self-instruction techniques for undergraduate dental education was continued, with the publication of *Introduction to Dental Public Health*, a programed text for dental and dental hygiene students.

Division of Hospital and Medical Facilities

The introduction of four new programs and the laying of necessary groundwork for administering anticipated revisions in Hill-Burton legislation highlighted the activities of the Division of Hospital and Medical Facilities during fiscal 1964.

NEW PROGRAMS

The new programs stem from assignments in administering certain portions of the Health Professions Educational Assistance Act (P.L. 88–129) and the Mental Retardation Facilities and Community Mental Health Centers Construction Act (Public Law 88–164). The programs for which the Division is responsible authorize grants for constructing (1) educational facilities for the health professions (e.g., schools of medicine, dentistry, collegiate nursing, and public health); (2) public and other nonprofit facilities for the mentally retarded; (3) university-affiliated facilities for the mentally retarded; and (4) comprehensive mental health centers. The Division shares responsibility with the National Institute of Mental Health in administering the latter program.

Two advisory bodies to the Surgeon General in the administration of these two legislative measures met with officials of the Department, Public Health Service, and the Division to set up the administrative framework for carrying out the two programs. The National Advisory Council on Education for Health Professions which was established following passage of Public Law 88–129 is composed of outstanding leaders representing the health professions as well as the public at large. The Federal Hospital Council, which has advised the Surgeon General on the administration of the Hill-Burton Program since its inception, was assigned added responsibilities under terms of Public Law 88–164, and added representatives from the fields of mental retardation and mental health.

NONDISCRIMINATION

Ways in which certain discriminatory practices could be eliminated from Hill-Burton projects was a subject given marked attention during the year. With the establishment by the Courts of the unconstitutionality of the "separate-but-equal" clause in the original act, the Division

immediately took steps to implement this decision. Assurances were required of all project sponsors that patients would be admitted, staff privileges would be granted, and room accommodations assigned to patients without discrimination.

APPROPRIATIONS AND CONSTRUCTION PROGRAM

For the second consecutive year, appropriations for construction under the Hill-Burton Program reached $220 million. Some 564 projects involving a total of 23,328 beds were approved during the year. With these 1964 additions, Hill-Burton's box score reflecting aid since the Program's inception shows a total of 7,372 projects providing some 313,762 beds. Projects approved during 1964 include 14,315 general hospital beds, 7,945 long-term care beds (including nursing homes), 1,068 beds for mental patients, 32 rehabilitation facilities, 88 diagnostic and treatment centers, and 48 public health centers.

ACCELERATED PUBLIC WORKS PROGRAM

The Hill-Burton Program continued to play a role in the allocation of funds to hospitals and related facilities under the Accelerated Public Works Program which expired on June 30, 1964. The Division processed and secured approval for 154 projects to be constructed at a total cost of approximately $182,035,340, involving $68,017,587 in APW funds.

RESEARCH AND DEMONSTRATION ACTIVITIES

A marked increase was noted in the number of research applications received in the computer field—a trend which has important implications for the hospital of the future. Some of the other areas given particular attention during the year included hospital outpatient services, personnel needs, central sterile supply in hospitals, bacterial contamination in various areas of surgical suites, toxic gases in building fires, procedures for measuring hospital obsolescence, and fire and explosion hazards of static sparks in oxygen tents and oxygen atmosphere.

The extramural research budget for fiscal 1964 was approximately $3.5 million. During that period some 37 applications were approved.

Demonstration grants continued to serve as an impetus to areawide planning activities throughout the Nation. During fiscal 1964, some 15 projects received grants. This brings to 39 the number of projects to be funded since the outset of the program in 1962. Grant funds in this area during the past 3 years total more than $3 million.

Another highlight of the Division's areawide planning activities was its role in the first nationwide institute on coordinated health facility planning held in Chicago in December 1963. The week-long training

program was sponsored by the Graduate School of Hospital Administration of the University of Chicago as one of the Division's intramural research projects. It was designed primarily for members of areawide health facility planning agencies. Division staff served as faculty, resource personnel, and recorders.

COMMITTEE ACTIVITIES

Three committees, assigned to study special areas in which the Division has a primary interest, completed their studies during the year. The findings of these groups, which were co-sponsored by the Public Health Service and nongovernmental professional organizations, now appear in documents prepared by Division staff. These publications are entitled "Areawide Planning of Facilities for Tuberculosis Services," "Medical Education Facilities: Planning Considerations and Architectural Guide," and "Nursing Education Facilities: Programing Considerations and Architectural Guide."

Division of Nursing

Through studies, research, training, consultation, and grants, the Division of Nursing provides help and guidance to all groups concerned with strengthening and upgrading the practice of nursing.

By making possible the first nationwide count of all nurses and by studying mobility, turnover, and utilization of nursing personnel, the Division helped to define the true condition of the nursing profession on a national scale. Once this was accomplished, and private and public bodies interested in nursing were in full possession of all of the facts, it was possible to plan a broad-based program of corrective action.

LEGISLATION

Introduction of the Nurse Training Act of 1964 simultaneously in both Houses of Congress was a major step toward the goal of nursing improvement. This legislation proposal was based upon the 1963 recommendations of the Surgeon General's Consultant Group on Nursing, and is designed to increase the supply of well-prepared professional nurses. It provides financial assistance to schools of nursing for construction of educational facilities and for expansion and improvements of the teaching program, and to nursing students for traineeship grants and loans.

PROFESSIONAL NURSE TRAINEESHIPS

The Professional Nurse Traineeship Program, authorized through June 1964, has administered over $44 million in appropriations for the advanced training of more than 24,000 professional nurses in the

8 years of the program. The system of surveillance in the use of funds granted to schools made it possible to redistribute unobligated funds in individual schools for use elsewhere. All of the funds appropriated in 1964 plus the transfer of unobligated funds from the previous year were not sufficient to meet all of the requests from eligible candidates for traineeship assistance.

NURSING RESEARCH

At the Nursing Research Field Center, in San Francisco, study and experimentation has continued to add to the store of new nursing knowledge. One study which has important implications for the improvement of nursing care to patients is the investigation of what the patient knows about his condition and what he needs to be taught. Other areas include the growing role of automation and mechanization in modern nursing, and the role of the nurse in community hospitals without full-time medical personnel.

The transfer of the administration of nursing research grants from the National Institutes of Health to the Division has improved the communication of new knowledge to the practicing nurses who apply it, and brought new problems needing nursing research solution to the attention of those most concerned with solving them. However, fiscal year 1964, the year after the transfer of these funds to the Division, was the first in the 8-year life of the program without increase in nursing research project funds. Rising costs of the individual continuing projects and increased indirect costs, coupled with the same level of funding over the past 2 years, has resulted in a decline in the number of new projects which could be funded.

A small number of developmental and general research support grants were made to schools with advanced nursing programs, to provide funds on a continuing basis for their research and research training programs in nursing. Though still new and few in number, they are meeting the need to develop faculty and are giving the program the broad academic base it needs.

During 1964, an encouraging increase occurred in the number of competent applicants for fellowships in nursing research, which the Division administers to provide specialized training at the pre- and post-doctoral levels. There were, in fact, 60 approved applications awaiting funding at the end of fiscal year 1964.

HOSPITAL NURSING

A pilot conference on the Nursing Consultant and Hospital Nursing Service was held in 1964, at which the participants joined with the Division of Nursing in preparing a research design for a depth study on

nursing consultation in hospitals. The Division will inaugurate the study in 1964–65.

The first assignment of a full-time hospital nursing consultant to a regional office was made in 1964. Results of that experience, as well as the scope of institutional requests for consultation and assistance, point to the need for similar expansion of Division activity in other regions.

NEW PROGRAM TRENDS

In this year, there was a growing emphasis on communication of nursing health knowledge, with the aim of facilitating the application of results of research and studies. In addition to providing research projects directors with increased assistance on technical problems of communication, there has been an added use of teams of consultants to help hospitals and health agencies in the use of improved methods which have been developed and tested by the Division.

Office of the Bureau Chief (Environmental Health)

PESTICIDES ACTIVITY

As a result of the President's Science Advisory Committee's (PSAC) report on "The Use of Pesticides," and the growing national concern about possible health hazards from economic poisons, the Secretary of Health, Education, and Welfare signed an agreement with the Secretaries of Agriculture and Interior for the interdepartmental coordination of pesticide activities. Under this agreement, the Pesticide Program of the Bureau, representing the Service, will review the applications for registrations of new pesticides and will furnish to the Department of Agriculture information it has concerning pending actions on registrations.

The Federal Committee on Pest Control, of which the Service is a member, achieved general agreement by the end of the year on the formation of a Federal Monitoring Program, a notable feature of which will be the Pesticide Intelligence System, to which all Federal agencies working in this field will contribute data, and which the Public Health Service will operate.

The Service contracted with the Southwest Research Institute of San Antonio, Tex., to prepare a "Manual of Methods for the Analysis of Pesticide Residues," which will be approved by an expert committee and will provide a uniform manual for all agencies cooperating in the Federal Monitoring Program and the Pesticide Intelligence System.

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Planning for the Community Studies, which are scheduled to be a major activity of the Pesticide Program during the coming year, began and reached the final stages during the year. These studies, scheduled for about 12 areas of the Nation, will undertake to make an assessment of the total exposure of the population to all sources of pesticides, including household and drycleaning uses, community spraying, and agricultural uses. The base data from these studies will furnish, for the first time, solid information on how much exposure to pesticides people are getting. Negotiations were carried on with a number of States to ascertain their willingness and ability to undertake these studies. One area was given funds to initiate its study on a small scale before the year was out.

The PSAC report expressed concern over the need to educate the public further about the pesticide problem. The Service took part in the distribution of many thousands of copies of the PSAC report to public health officials and other scientists all over the Nation; the publication and widespread distribution of a leaflet describing the public health aspects of the pesticide problem; and an accelerated schedule of speeches on the pesticide problem by program officials to large meetings of top professional scientific organizations.

Environmental Health Sciences

New and complex problems are being generated by our Nation's population growth, the development of new technologies, and the accelerated momentum of industrialization and urbanization. The environment is being polluted and contaminated by a myriad of toxic substances and harmful environmental stressors are being created. Present methods for assessing the total effect of environmental insults upon man are not sufficiently developed to keep abreast of the rapidly changing nature of the environment. The Environmental Health Sciences extramural research and training program was initiated in 1964, to support multidisciplinary studies concerning the relationship of man's health to his total environment. The emphasis was on interrelated environmental health problems involving mainly toxic chemicals and harmful biophysical agents.

In 1964, 23 research grants totaling $1,608,000 were awarded, while over 200 environmental health researchers were being trained, the majority at the doctorate level, at a cost of $1,519,000.

Division of Air Pollution

Air pollution is now a nationwide problem. It affects the health and welfare of Americans in every part of the country. It helps to bring on or aggravates such serious respiratory diseases as asthma,

chronic bronchitis, emphysema, and lung cancer. Its damages to property, including growing crops and livestock, are estimated at more than $10 billion a year.

CLEAN AIR ACT

To help meet this challenge, the Congress passed new legislation designed to strengthen the Federal program carried on by the Division. On December 17, 1963, President Johnson signed the Clean Air Act (Public Law 88–206). To prepare for implementation of the Act, this Division began during fiscal year 1964 an extensive reorganization of its program.

PROGRAM GRANTS

For the first time, the Federal Government will be able to provide direct financial assistance, in the form of grants-in-aid, to municipal and State governments to help them establish or improve air pollution control programs. Though funds for this activity were not appropriated during fiscal 1964, the Division prepared regulations governing eligibility for such grants and developed procedures for review of applications. A series of regional meetings was held to familiarize municipal and State officials with the provisions of the Clean Air Act under which the grants will be made available.

ABATEMENT

Another important new provision of the Clean Air Act authorizes Federal initiative to insure abatment of interstate air pollution problems. The fact that some 38 million Americans live in areas where contaminated air flows across State lines indicates how extensive such problems can be. The Secretary is also empowered to undertake abatement action to resolve air pollution problems within a single State, but only at the request of designated State officials.

RESEARCH

In its facilities at the Robert A. Taft Sanitary Engineering Center and through grants and contracts, the Division has conducted and supported extensive research in both the engineering and physical sciences and the medical and biological aspects of air pollution.

Engineering research has been focused on a wide range of technical problems related to control of pollutant emissions. During fiscal 1964, action was taken to give greater impetus to the search for solutions to the motor vehicle pollution problem, for example. In accordance with a directive in the Clean Air Act, the Secretary of Health, Education, and Welfare formed a technical committee of representatives of the Department, motor vehicle manufacturers, developers of exhaust control devices, and fuel producers. The com-

mittee will evaluate progress in the development of control techniques and recommend any additional research which it considers necessary.

A second major problem under investigation is that of sulfurous air pollution from the combustion of sulfur-bearing fuels, chiefly coal and residual fuel oil. Considerable progress has been made in Federal as well as industry-supported efforts to develop methods of reducing sulfurous emissions, and efforts will be stepped up.

In the Division's medical and biological research programs, additional information was obtained about various aspects of the relationship between human exposure to polluted air and the occurrence of various respiratory diseases. In particular, new insight was gained into the role of air pollution in triggering periodic rises in the incidence of asthma attacks among urban residents.

One of the chief purposes of research on the health effects of air pollution is to assemble data on which clean air objectives can be based. The development of such objectives is a specific responsibility of the Federal Government under the Clean Air Act. An organizational unit to carry on this activity was set up during fiscal 1964. It will have charge of establishing air quality criteria which the Secretary of Health, Education, and Welfare is authorized to issue for the guidance of air pollution control agencies in setting ambient air quality standards and emission limitations.

TRAINING

Training activities were made a part of the Federal Air pollution program in recognition of a need for specialized training of personnel both to staff control programs and to conduct research in air pollution. The Division has been helping to meet this need through the presentation of courses at the Taft Center and in the field and by awarding grants to support advanced training programs at universities.

TECHNICAL ASSISTANCE

The Division's technical assistance activities are designed to help municipal and State governments define their air pollution problems and develop effective control programs. During the year, the Division provided technical assistance, in the form of manpower, equipment, and consultation, for studies of interstate problems in Chicago and St. Louis.

A growing awareness of the need to modify air pollution control programs was reflected in requests for assistance in modernizing existing municipal and State regulations, many of which were drafted primarily for abatement of smoke and soot rather than the more complex types of air pollution which are now predominant.

FEDERAL PERMIT SYSTEM

In 1959, the Congress directed all Federal agencies to observe recognized practices to control air pollution arising from Federal installations. This directive was carried a step further in the Clean Air Act, which assigned to the Department of Health, Education, and Welfare a specific responsibility for monitoring all Federal activities which contribute to air pollution.

Division of Environmental Engineering and Food Protection

The Division's activities include safeguarding the sanitary quality of drinking water, milk, and other foods; controlling environmental dangers which arise because of urbanization; and protecting the public health against environmental health risks encountered in outdoor recreational areas and aboard common carrier vehicles in interstate travel.

MILK AND FOOD

Technical and consultative services were given to all States and to many segments of the food industry on programs for the prevention of foodborne disease. One hundred and forty-seven seminars and training courses on food protection were sponsored or participated in by PHS milk and food personnel, and were attended by more than 7,000 Federal, State, and local health officials, and industry personnel.

The Cooperative State-PHS Program for the Certification of Interstate Milk Shippers continued its growth for the 13th consecutive year. The July 1964 list of milk shippers, complying with PHS recommended standards, includes 1,052 shippers in 46 States and the District of Columbia. During fiscal year 1964, 424 check-ratings in 34 States were made to validate the sanitation compliance ratings submitted by the respective States. In addition, 45 State milk sanitation rating officers in 21 States were certified. Currently, there are 139 certified State milk sanitation rating officers, representing every State except one.

Through fiscal year 1964, 10 States and 32 local health jurisdictions adopted the PHS-recommended "Food Service Sanitation Ordinance and Code," published in May 1962, affecting a population of more than 20 million persons.

Milk and food radiation surveillance networks are operated in cooperation with State and local official agencies, industry and organizations, to provide continuing nationwide surveillance of radiation exposure from milk and other foods. The total diet collection stations were increased in fiscal year 1964 from 21 to 43. A stand-by milk

surveillance network, in the vicinity of the U.S. Atomic Test Site, was developed in 12 Western States to assure complete coverage in the event of a test accident.

The pilot plant and virology laboratory were completed at the Robert A. Taft Sanitary Engineering Center. The validity of laboratory results can now be more completely evaluated through the use of full-scale equipment, and the implication of viruses as the causative agent in foodborne illnesses can be investigated. Studies on the highly fatal foodborne disease organism, *Clostridum botulinum*, particularly Type E, were intensified and contracts for studies on this problem were negotiated with several health agencies and industry. Cooperative work with the Food Research Institute, University of Chicago, and the Division of Microbiology, Food and Drug Administration, resulted in the development of a quantitative test for staphylococcal enterotoxin B in food and substantial progress toward a similar test for enterotoxin A.

SPECIAL ENGINEERING SERVICES

Efforts were devoted to solid waste engineering activities, to meeting problems of septic tank disposal systems, to environmental health practices in recreation areas, and to procedures to provide safe drinking water in emergencies. A continuing activity was supplying information on problems of general sanitation through exhibits, conferences, and publications.

SHELLFISH SANITATION

Two new shellfish sanitation research centers were dedicated and occupied during fiscal year 1964, one at Dauphin Island, Ala., the other on the Narragansett Campus of the University of Rhode Island.

Field studies included a comprehensive sanitary and resource survey of Raritan Bay, assistance to four States in design and operation of pilot shellfish depuration facilities, investigations of the occurrence of pesticides in marine areas, and assistance in investigating clam-associated infectious hepatitis outbreaks.

Twenty-two lists of State-certified shellfish shippers were prepared and distributed, with an average of 1,252 shippers being listed each month. Five hundred and fifty-seven check ratings of shellfish plants were conducted. A Shellfish Sanitation Newsletter was inaugurated and now reaches over 300 technical workers in the field each quarter.

The Fifth National Shellfish Sanitation Workshop, meeting November 1964, will consider studies and recommendations on bacteriological standards for market oysters and clams and for shellfish growing waters.

Preliminary discussions were held with Mexican, French, and Korean authorities and the Department of State on agreements similar to the United States-Japanese and the United States-Canadian Shellfish Sanitation Agreements which were fulfilled during the fiscal year.

METROPOLITAN PLANNING AND DEVELOPMENT

During fiscal year 1964, the Metropolitan Planning and Development Branch conducted 1-week "Urban Planning for Environmental Health" training courses in seven communities and shorter orientation conferences at Rutgers University, Drexel Institute, University of Michigan, and University of Georgia. Lectures, seminars, consultations, and technical assistance were provided to health and planning agencies in various parts of the United States.

INTERSTATE CARRIER BRANCH

In recognition of the excellent sanitary conditions maintained on all conveyances during the year, 17 railroad and 58 vessel operating companies were awarded Special Citations and Letters of Commendation. Twenty-two new vessels constructed in U.S. shipyards and built in accordance with Public Health Service sanitation standards were issued certificates. Assistance was given to three foreign-flag vessel operating companies in the construction of four new passenger vessels, so as to meet PHS requirements for construction.

RESEARCH GRANTS

The Research Grants Program permits enlistment of research capabilities at universities, health agencies, and other nonprofit research organizations for study of problems in environmental engineering and food protection. Grants awarded in fiscal year 1964 permitted initiation of 67 new projects. Total research supported by the Division is 252 projects, at 85 institutions located in 35 States and 4 foreign countries.

Current projects include 77 in food microbiology, 137 in chemical, toxicological and technological aspects of foods, and 38 in environmental engineering. Program emphasis during the year was on study of problems relating to botulism, mycotoxins, biocides in the food chain, solid wastes disposal and collection technology, and interrelationships of environmental, health, and socioeconomic factors in housing, the residential environment, and the total urban complex.

Division of Occupational Health

The Division, this year observing its 50th anniversary of effort to prevent or control occupational diseases and to stimulate the provision of preventive health services to American workers, was faced with the

fact that in this era of rapid technological advances, the worker is exposed to a multitude of new, and potentially toxic, substances as well as to unfamiliar physiological and psychological stresses in the work environment.

There was also growing indication that occupation may directly contribute to the incidence of some chronic or deteriorating diseases previously believed to be entirely unconnected with work exposure. Through its research, in both the laboratory and the work environment, the Division sought the cause and control of job-connected health hazards. Through consultative services, training courses, and information activities, it made available to industry the benefits of its research and experience and guided the development of preventive services at the workplace adequate to maintain and protect the worker's health.

A long-range study of uranium miners, begun in 1950, gave evidence of showing definitive results, demonstrating a direct relationship between high radiation exposure and lung cancer. Cell changes noted in sputum were studied as possible early precursors of malignancy.

The report of a 3-year study of silicosis in metal mining, released during the year, indicated that, although prevalence of silicosis has been greatly reduced in the last 30 years, inadequate control measures still endanger the health of workers in some mines; a significant number of cases of silicosis were found among men who began work in the mines after 1935. The report recommends followup studies of the problem at regular intervals and combined medical and engineering surveillance to prevent the disease.

A study of chronic chest diseases among bituminous coal miners in the Appalachian area, which began in 1963 in cooperation with the Bureau of Mines, is expected to resolve some of the medical and legal controversy which surrounds this health problem. The death rate among American coal miners is about twice that of the general working male population—overwhelming evidence that the coal mining environment has a deleterious effect on the health of miners. A comprehensive epidemiological approach is being employed in the current study to help isolate and define the socioeconomic factors, as well as the direct occupational factors, bearing on the problem. The research included examination of 3,000 miners, carefully chosen to represent a cross section.

A long-term study of asbestos workers began during the year in a number of New England plants. The purpose is to develop safe standards to protect workers from asbestosis and to determine possible causative relationships between asbestos exposure and other diseases,

notably lung cancer. In addition to workers in asbestos plants, hundreds of thousands of craftsmen, particularly in the building trades, work with asbestos and may be exposed to health damage.

Studies of the physiological and psychological effects of industrial noise are yielding significant results. Evaluation of thermal stress in hot industries is probing the effects of heat on health and productivity through new instruments and techniques developed for the purpose.

Toxicological studies constituted a continuing, major part of the Division's research and are producing important new information relating to the mechanisms of toxic action. Studies show that altered enzyme patterns and departures in normal metabolism can signal early progressive injury from toxic substances. Biochemical profiles are being developed to permit early recognition of such effects. At the same time, body protective mechanisms such as the pituitary-thyroid-adrenal axis are under study especially with relation to lung irritative changes. Evidence is growing that hypersusceptibility of certain individuals to industrial chemicals may be predicted, making possible the screening of workers who should not be exposed.

New substances and chemicals currently under study for toxic effect in experimental animals include the isocyanates (foamed plastics), various oil mists now widely used in industry, certain intermetallic compounds, and domestic beryllium ores.

Occupational dermatoses continue to be a major problem in industry and a subject of research by the Division. In addition to basic exploration in the field and evaluation of diagnostic tests, studies examined various classes of solvents and metals.

Of special interest was an unusual outbreak of arsenical skin disease among the residents of a gold mining and smelting community, which was found to be due to concentrations of arsenic trioxide discharged from the effluent stack. Installations of adequate engineering controls removed the contamination and resulted in clinical improvement of the dermatoses.

Seventy-two research grants in occupational health were supported during the year in the amount of $2.2 million.

Seventeen training courses were given during the year for 452 persons, the subject matter ranging from basic occupational health practices to advanced and highly technical research techniques. A half-hour motion picture film and two filmstrips were produced during the year as training tools and made available for loan through State health departments. Six technical or semitechnical publications released during the year helped to meet the need for basic and advanced information.

During the year, emphasis was given to development of health services for employees of State and local governments, health hazards of health workers, and health services for small plants. Guidelines are being developed for the provision of small plant health services by public health nurses, and improved training of nurses for occupational health is being stressed.

Federal agencies, State health departments, and industrial organizations rely upon the Division of Occupational Health for technical assistance and the solution of special problems; during 1964, such service was provided in over 100 instances. To broaden its service during the coming year, the Division initiated a new regional representation plan, assigning top technical personnel to Public Health Service regions on a part-time basis.

Under new legislation authorizing grants financed by Public Law 480 funds, two research projects were started in Yugoslavia, and others are planned in India, Poland, and Israel.

Division of Radiological Health

An important part of the mission of the Division of Radiological Health is monitoring and assessing environmental radioactivity resulting from nuclear weapons testing. However, the sense of urgency concerning this work was somewhat abated by the signing of the limited test ban treaty in October 1963.

Although the Division continues to monitor and study the effects of fallout in the atmosphere, a larger effort can now be made in the assessment or control of other sources of radioactivity, including nuclear reactors used for power and production and medical and industrial X-ray. At present, the greatest source is X-ray, estimated to contribute one-half of all radiation exposure to the population at large.

SURVEILLANCE AND MEASUREMENT

The recognition of X-ray as a major radiation exposure source has brought steadily increased effort in the assessment of the problem. The Division is now undertaking the second of a series of national X-ray studies designed to provide additional information about the X-ray experience of the U.S. population. These studies will provide radiographic, fluoroscopic and therapeutic exposure estimates for a representative sample of the U.S. population.

Monitoring activities were also increased around reactors and missile test sites during the year, following the signing of an agreement with the Atlantic and Pacific Missile Ranges to conduct a radiological and toxicological health program in the off-site areas of these ranges.

Other off-site monitoring includes surveillance at ports-of-call of the nuclear ship NS *Savannah*. The Division also makes available a team for health physics support in the operations of the nuclear ship.

Under an agreement with the Air Force, PHS emergency monitoring teams were trained to provide assistance following accidents involving nuclear weapons or materials. For example, when a B–52 crashed in western Maryland in May 1964, a PHS team was quickly dispatched to the scene.

The Division continued to monitor and measure radioactivity from past nuclear tests and from underground tests. The Institutional Diet Sampling Program, expanded until now every State is represented, will attempt to secure an estimate of the total dietary intake of radionuclides by children and teenagers from 5 to 18 years old.

A rather unusual surveillance project is the Caribou-Reindeer Sampling Program in Alaska. Quarterly collection of samples are being made from four herds. These animals eat lichens and sedges which have a particular ability to absorb airborne materials such as strontium 90 and cesium 137.

STATE ASSISTANCE

The Division is helping the States develop radiological health programs through consultation, program planning, assignment of personnel to the State programs, loan of equipment, training of personnel, and by providing funds through matching grants.

To assist the States in developing their own radiological health programs, the Division started a system of formula grants in 1963. These grants, now being used by all the States and two territories, are used to hire or train personnel, purchase equipment, and in several States to help finance State assumption of the AEC's licensing and inspection authority.

The States are rapidly assuming licensing and inspection authority over radiation sources. By the end of June 1964, a total of 41 States, the District of Columbia, and Puerto Rico had adopted statutes or regulations pertaining to radiation control.

The Division is providing assistance in problem areas to the States. For example, the medical X-ray protection program works toward the elimination of unnecessary radiation exposure from the healing arts.

The DRH also is providing guidance to State health authorities and reactor personnel in nuclear waste management, as, for example, on problems related to the operation of the pressurized water reactor at Shippingport, Pa., and the Consolidated Edison Reactor at Indian Point, N.Y. At their request, consultation is provided to the States concerned on the potential hazards of environmental contamination.

Other assistance to the States include:

1. Intensified efforts to assist the States in evaluating various proposed protective measures against environmental radioactivity.

2. A cooperative study of the present status of measures being taken to protect medical and industrial users and the general public from undue exposure to radium and help in developing better methods for radium control by State and local health authorities.

RESEARCH

Development of preventive health measures continued to receive special attention by the Division. One of the most promising of these measures is an ion-exchange system capable of removing radiostrontium from 100,000 pounds of milk in 8 hours. The system is under development by the PHS and the Department of Agriculture. Tests run on large quantities of both skim and whole milk indicate that the palatability of the treated milk has been maintained. Analyses of the nutritional qualities of the milk are being conducted.

Along with the increased effort for evaluating the radiation exposure from diagnostic X-ray, additional studies examined the long-term effects of X-ray exposures. Some of these studies include:

1. A study on the 30,000 members of four professional societies, designed to learn the causes and rates of death of physicians who have been exposed in their work to varying amounts of ionizing radiation.

2. A study of the diseases and deaths among a group of children exposed to X-ray before birth, comparing 912 children whose mothers received diagnostic X-rays in the pelvic area early in pregnancy with 1,800 children whose mothers did not receive such X-ray diagnosis.

3. An extensive research program at Johns Hopkins University to obtain comprehensive information on dosages received during various kinds of diagnostic X-ray procedures.

In one long-term study, radiation effects at higher levels will be studied at the Collaborative Radiological Health Animal Research Laboratory at Colorado State University. A large lab building is being constructed and about 100 dogs have been acquired as breeding stock, the nucleus of an eventual colony of about 2,000.

The Division is also conducting extensive studies on the effects of environmental radiation from nuclear fallout. For example, a study of thyroid cancer, bone cancer, leukemia, and congenital malformations in Utah and Nevada will serve as a pilot project to determine the feasibility of a national program to analyze morbidity and mortality data on thyroid cancer and leukemia in relation to radiation exposure.

The Division's growing extramural research program covers a wide variety of radiation studies. The Division is now funding 107 grants totaling $2,209,000 in 29 States and several foreign countries.

TRAINING

Training adequate numbers of radiation health specialists and technicians is a major goal of the Division. Progress toward this goal is being made through grants to colleges and universities to improve, expand, or establish radiation health specialist curricula and to train radiation technicians. About 40 universities are now participating in the program, using grant funds to secure equipment, add to teaching staff, and to provide fellowships. The number of students enrolled in radiation health specialist programs is now about 200 a year.

Radiation technician training at the 2-year college level was tested at a junior college and a grant was awarded for such a program in fiscal year 1963. Additional funds for support of radiation technician training in fiscal year 1964 enabled the Division to award grants for such training at seven universities, junior colleges, and trade schools.

The short-course program covers three broad areas of radiological health: medical aspects, environmental surveillance, and health physics and instrumentation. The continuing growth of the short-term training program is reflected in the numbers of enrolled students—from 961 in fiscal year 1960 to 1,863 in fiscal year 1963.

From fiscal year 1960 through 1964, approximately 100 professional men and women of the PHS received graduate training in radiological health, many for more than 1 year, at various colleges and universities as a part of an extramural graduate-level training program.

The Division's well-developed laboratory system was expanded. At the Southwestern Radiological Health Laboratory, Las Vegas, Nev., additional facilities will provide 82,980 square feet of office and laboratory space in four buildings through a 10-year lease agreement with the southern branch of the University of Nevada.

Division of Water Supply and Pollution Control

This year was marked by significant developments in enforcement activities, construction of waste treatment facilities, expansion of water pollution control research work, and development of comprehensive programs for the control of water pollution. Public attention was focused on water pollution following the discovery that the pesticide endrin has caused the large fish kills in Louisiana in the fall and winter of 1963–64.

MISSISSIPPI FISH KILLS

On November 18, 1963, the State of Louisiana requested technical assistance in identifying the cause of massive fish kills in the Mississippi and Atchafalaya Rivers that had been plaguing the State since 1960. A team of Public Health Service scientists and investigators visited the site of the kills, noting symptoms and taking samples of dying fish. With the assistance of a complete research team in the Sanitary Engineering Center in Cincinnati, scientists definitely established that there was enough endrin in the blood of the dying fish to have killed them.

On May 5 and 6, 1964, an enforcement conference on abatement of pollution of the interstate waters of the lower Mississippi was held in New Orleans, La., with representatives from the States of Louisiana, Mississippi, Arkansas, and Tennessee, and the U.S. Department of Health, Education, and Welfare examining the evidence. The conferees concluded that endrin pollution was endangering the health and welfare of people in the States other than those in which the pollution originated and called for an immediate cleanup of all known sources and studies to determine other sources of the pesticide. By the close of the year, preliminary investigations had been carried out, especially in the Memphis area where one of the endrin manufacturing plants is located.

CONSTRUCTION OF WASTE TREATMENT FACILITIES

With funds available from both the Water Pollution Control Act and the Accelerated Public Works Act, construction of municipal waste treatment facilities reached record levels during the first half of the year. With funds no longer available from the Accelerated Public Works program construction declined during the latter half of the year.

During the year, municipalities approved the expenditure of $424.6 million to build new and urgently needed additions to their sewage treatment works. Federal funds of $149.2 million were allocated to these works—$84.6 million from the Accelerated Public Works Act and the remainder from the regular water pollution control funds.

By early January, annual expenditures for construction of waste treatment facilities had, for the first time, exceeded the targets necessary to catch up with the backlog of needed works, improvements, and replacements. If the rate of construction had been maintained, the backlog could have been dealt with in 5 years. With the lower rate of construction during the second half of the year, the country will drop further behind by the end of this year.

Almost 1,400 projects are now under construction and applications are being processed at a rate nearly double that of 3 years ago. Even

with this general increase in activity, there are still 1,533 communities in this country with a population of 12 million dumping their untreated wastes into their streams. In addition, 1,462 communities with a population of 18.6 million are putting inadequately treated wastes into the waterways while 2,677 communities with 5.2 million people still need sewer lines and treatment plants. The total cost for these new or improved facilities will be $1.8 billion.

Since the first grants were made to communities in 1956, 5,617 projects have been approved which will eventually improve the quality of 52,000 miles of waterways in areas serving 48 million people.

ENFORCEMENT

The 10 enforcement actions begun this year to control pollution in 10 river basins or sections of them made this the most active year in history for Federal enforcement of water pollution control. Nine of these actions were on interstate streams and one, the South Platte River, was started at the needed request of the Governor of Colorado since it concerned only intrastate pollution. These actions involved 18 States, 285 municipalities, and 397 industrial establishments.

Followup enforcement conferences were called on the Colorado and North Platte Rivers to review the progress that had been made. Projects to get information upon which to base future abatement activities were underway on the Colorado River, Raritan Bay, Puget Sound, and the Detroit River. Additional projects were started on the South Platte, the Monongahela, the Merrimack, and the Upper Mississippi Rivers.

The 10 actions begun this year brought to 30 the number of enforcement actions started since 1956. Federal water pollution enforcement has involved 36 States, the District of Columbia, and 5 interstate compacts. Federal action has started the abatement of pollution in over 7,000 miles of waterways and will result in expenditures of more than $1 billion in public works and additional expenditures by private industry to correct the pollution situation.

COMPREHENSIVE RIVER BASIN PROGRAMS

Comprehensive water pollution control programs are now underway in seven of our Nation's large river basins. These programs are designed to gather information about the uses that are and will be made of our water resources so that long-range programs can be recommended for cooperative Federal, State, and municipal action to protect the water resources in the river basins from pollution.

This year saw the completion of the first stage of the comprehensive study in the Arkansas and Red River Basins. In these basins, which

have a population of 7.3 million, 27,000 tons of salt are carried by the rivers each day, making water unfit for a variety of normal uses. The first step toward eliminating these salt discharges was completed with the location of the 15 major sources contributing to the salinity of the rivers. One of these, Estelline Springs in Northern Texas, contributed a load of 375 tons of salt each day. The Springs have been sealed by the U.S. Army Corps of Engineers, acting on the recommendation of the Public Health Service.

The Southeastern River Basins Project, with headquarters in Atlanta, has started investigations which will lead to the development of comprehensive programs to protect the Southeastern River Basins from the pollution threatened by increased population and industrial expansion.

In addition to these comprehensive projects, work continues on the Chesapeake Bay-Susquehanna River Basins, the Columbia River Basin, the Delaware Estuary, the Great Lakes and Illinois River Basins, and the Ohio River Basin.

RESEARCH

Research on water pollution problems has resulted in significant advances at the Sanitary Engineering Center in Cincinnati, Ohio; the effort and funds devoted to encouraging research potential of institutions and individual scientists has been increased; and work has moved forward in the planning and construction for seven regional and two national water quality laboratories.

The $7.3 million appropriated for research, training, and demonstration grants is an increase of more than 40 percent over 1962 and almost 100 percent since 1961. The work done under these grants will help develop the 4,000 engineers and the 10,000 new allied scientists who will be needed in this field by 1970.

Scientists at the Sanitary Engineering Center are developing and applying new methods for removing organic matter from wastes. A virus has been discovered which will attack and destroy algae which cause undesirable lake conditions. New analytical methods and techniques have laid the groundwork for future careful investigations of chemically caused pollution.

OTHER WATER POLLUTION CONTROL PROGRAMS

By the end of the year, 175 special reports had been prepared for the Federal reservoir construction agencies assessing the need for storage and estimating the benefits to be derived. Annual benefits from these projects are estimated at $33 million for municipal-industrial water supplies and $18.5 million for streamflow regulation.

The $5 million granted to States for their water pollution control programs has encouraged the States to spend an additional $10.5 million of their own funds.

The national water pollution surveillance system added 4 stations, bringing to 130 the total number of stations which maintain a continuous surveillance over our Nation's waterways. Development of refined methods of procuring water samples has enabled researchers of the system to develop much more sensitive and positive means for identifying exotic chemical pollutants in the water samples collected.

Arctic Health Research Center

The Arctic Health Research Center in Anchorage, Alaska, which studies special health problems in cold climates, had one of its busiest years. Staff members were active in the First International Conference on Medicine and Public Health in the Arctic and Antarctic held in Geneva during the fall, and this meeting led not only to a visit from the top Norwegian physiologist to Anchorage, but also laid the groundwork for an exchange visit between Russian and United States scientists in the field to take place during the coming year. In March, the Center staff was thrown into many emergency duties during the earthquake, and during the recovery period saw many instances of the use of knowledge they have gained through the years; for example, housing designs prepared and tested by the AHRC in the villages were used in the reconstruction of several communities damaged during the catastrophe.

Robert A. Taft Sanitary Engineering Center

The activities of the Environmental Sciences and Engineering Training program expanded sharply in terms of the size of the curriculum and number of trainees and in the scope and quality of instruction. The Training Program offers short-course training in radiological health, air pollution, water supply and pollution control, food protection, metropolitan planning, and occupational health.

In meeting the steadily rising demands for specialized instruction in these areas, the Training Program offered increasingly more instructions outside of its regular courses given at the Center. During the summer the Program presented courses at the University of Washington, Oregon State University, the Davis and Berkeley campuses of the University of California as well as at the Southwestern Radiological Health Laboratory at Las Vegas and the Hawaii Department of Health in Honolulu. Another Training Institute was given at City

College of the City University of New York. Students successfully completing these courses were given graduate credit by the university.

Courses at the Center were enhanced with the use of closed-circuit television which provides each trainee with a "front row" view of laboratory demonstrations otherwise impossible to present to large groups. The ability of the staff to provide training was further broadened by the participation of more than 700 guest faculty members, from universities, the military services, industry and other branches of government.

Programed instruction techniques have been added to the Program's educational methods. Two course units have been "translated" into this format. Future use of programed instruction will probably include precourse training to bring trainees to the same level prior to their entering a course as well as correspondence type training whereby the student will be able to study the latest developments in his field at his own pace and without having to enter a formal training course.

During the year 4,177 trainees participated in 157 course presentations given by the Training Program compared to 3,831 trainees who attended 134 course presentations in the previous year.

The National Institutes of Health

In this past year, health research programs at the National Institutes of Health were reappraised in terms of policy, magnitude, impact, and accomplishments. Arising out of this "new look" has come a restatement of the conviction that the national biomedical research base must continue to expand if our health needs are to be met. It was anticipated that future research would emphasize these areas: (1) behavioral science, (2) normal mental processes, (3) learning and cognition, (4) reproduction and genetics, (5) viral diseases, (6) environmental hazards, (7) epidemiology, and (8) mathematical and physical science applications in biology and medicine.

NIH research has clearly gone beyond the point where filling gaps in health research needs was the paramount endeavor. The pressing concern now is for purposeful guidance of health research, to the end that new knowledge contributes directly to program objectives. This does not mean prejudging the course of research, but rather that program activities should influence the character and emphasis of research activity.

Behind NIH research programs are implicit a number of well-established concepts: a diversified group of projects to meet the varied and changing needs of the biomedical community; the need to support the fundamental sciences; support for training and for facilities

construction to meet anticipated growth. NIH programs cannot be separated from the concerns of the total scientific community and from the broad economic and public policy considerations that affect the Nation.

The two Institutes established during the previous reporting period—NICHD and NIGMS—have made strides in defining and planning their programs. The National Institute of Child Health and Human Development—as a completely new Institute—has had to plan means of fulfilling a new concept: study of human development over the full lifespan. This Institute has completed plans for new mental retardation centers authorized for construction under its enabling legislation. The National Institute of General Medical Sciences—formerly a Division—has had to redefine and reorganize its programs. The Institute has been planning a major new effort in pharmacology and toxicology research.

Expansion of plant continued during this period. The initial phase of construction was begun on an Animal Center at Poolesville, Md., that will contribute farm animal and dog quarantine facilities. Plans were completed for construction of a pathogen-free animal colony. Dedication in September of the Clinical Center's Surgery Wing placed in full operation a facility that is a prototype of surgical suites of the future.

The goal in training continued to be the doubling of medical research manpower during the decade, 1960–70. NIH training programs seek to provide the biomedical community with a steady supply of competently trained young scientists.

Investment in training research manpower continued to comprise about one-quarter of NIH's total program effort: approximately 19 cents out of every NIH program dollar went for training grants to institutions; an additional 5 cents went for fellowships or similar training awards to individuals. Nearly 9,000 individuals at the predoctorate level, and about 5,500 at the postdoctorate, received some form of training under these programs in calendar 1963. Studies of stipends—with a view towards their standardization—and of the relationship between training grants and fellowships were designed to effect uniform and improved policies and procedures.

Great gains were anticipated from the new medical scientist training program, for which the National Institute of General Medical Sciences made its first awards this year. This program seeks to train well-rounded medical scientists whose training combines the traditional medical sciences with thorough indoctrination in mathematics, physical and biomedical sciences. Two other Institutes—NIAMD and

NICHD—have established parallel training programs, but oriented more closely to their specific needs.

At the close of this period, the NIH Career Development Award Program—which provides qualified career-minded scientists with full salary support at grantee institutions—was supporting 930 investigators at an approximate annual cost of $21 million.

More than ever, the grants program manifested a concern for (1) a comprehensive range of research endeavors promising contributions to biomedical knowledge that meet the scientific community's needs, and (2) properly defining and focusing the various responsibilities of a Federal agency that provides support to research institutions and individual scientists, so that the obligations of public stewardship and the demands of scientific creativity are in proper balance.

Efforts to strengthen grants administration in the past year have had in mind this concern and have resulted in these concrete steps:

1. Issuance of the second edition of the manual of codified research grant award conditions.
2. Codification of conditions covering all PHS training grants.
3. Designation of the Division of Research Grants as the single grants manager for all of PHS.
4. Delineation of functions and strengthened staffing of the new Grants Policy Office in the Office of the Surgeon General.
5. Plan to transfer to grantees certain routine administrative decisions on grants, provided the grantee institutions set up PHS-approved review mechanisms.
6. A plan to standardize stipends.

It appeared that, for the foreseeable future, since NIH international research commitments would be limited by the U.S. balance of payments situation, the trend of international programs would be downward, particularly in economically advanced countries, such as West Germany, where the gold-drain problems are most acute. It should be emphasized that the downward trend reflected purely economic considerations, not a minimizing of the importance of contributions by foreign scientists, or of the disease insights gained from studying varied ethnic, climatic, dietary, behavioral, or ecological factors available overseas.

Potent research advances continued in cell or molecular biology. This new knowledge is providing insights into the chemical mechanisms of genetics, the mechanisms of viral entrance into and action within the cell, particularly the antigenic and disease-producing effects. Behind the advances in much of the newer biology lie developments in complex engineering and instrumentation that permit more refined measurements and more sensitive discriminations in biologi-

cal systems. These new engineering and physical skills are also yielding benefits when applied directly to diagnosis and therapy, as well as investigation, of disease.

A closer view of NIH performance during the year is provided in the individual Institute and Division reports that follow.

National Institute of Allergy and Infectious Diseases

New advances were made in understanding of microbial infections and of allergy-immunology, including the immunologic barriers to successful organ and tissue transplantation.

THE INTRAMURAL PROGRAM

During the period, the Institute focused more closely on selected projects and on a clearer definition of objectives, particularly the development of respiratory virus vaccines, the clarification of effects of newly discovered respiratory agents on the human host, and the ascertaining of the causes of the hemorrhagic fever epidemic in Bolivia and ways of bringing it under control. New undertakings in microbiology and immunology included studies of chronic viral infections, drug resistance in malaria, and the role, in human disease, of the *Mycoplasma* group of microorganisms. Inquiries were also made into the structural relationships and DNA homologies of the nucleotide sequences of mammalian cells and viruses.

New impetus was given to intramural research at geographic locations where disease problems can best be studied. At the Middle American Research Unit, Canal Zone, work was intensified on important arborvirus infections, particularly Bolivian hemorrhagic fever; at the Pacific Research Section, Honolulu, Hawaii, studies of eosinophilic meningitis progressed; and at the Far East Research Project, Kuala Lumpur, Malaya, research continued on the ecology of human and simian malaria.

NIAID played an increasing role in training future medical research workers through the clinical and research associate programs and in enabling foreign scientists and guest workers to learn, in its laboratories, new techniques and concepts in allergic and infectious disease.

THE COLLABORATIVE PROGRAM

The control of viral respiratory disease continued as a major objective. Through NIAID's Vaccine Development Program, contracts were awarded to biological manufacturers for specific vaccines produced under the supervision of the Institute. Evaluation of field trials will be accomplished by other contracts to competent scientific

units in medical schools, research centers, or hospitals. It is intended that knowledge of the etiology and epidemiology of specific viral infections will be translated directly and rapidly into practical measures useful to the medical and public health profession. Intramural scientists also participate as panel members and project officers in the Reference Reagents Program directed at the production of standardized reagents (antigens and antisera) to enable research laboratories to make reliable identification of viruses of human importance.

THE EXTRAMURAL PROGRAM

Extramural investigators made noteworthy advances in virology, allergy and immunology, bacterial diseases and vaccines, and tropical medicine and parasitology. A significant advance in the treatment of a major infectious disease in man occurred with the demonstration that the drug N-methylisatin beta-thiosemicar-bazone provides effective protection against smallpox. Other virology research resulted in the reporting of (1) the first case of mixed meningitis due to ECHO virus type 9 plus *Hemophilus influenzae* type B, and (2) the first infant fatalities associated with Coxsackie A-16 and Coxsackie B-1 virus infections. In a coordinated activity for the collection, fractionation, and laboratory testing of ragweed pollen allergen, a purified highly potent fraction (Antigen E of T. P. King) was obtained. A long-awaited development was the transmission of human leprosy to hamsters, an accomplishment that may make possible accelerated research on the causative agent without human experimentation. Other major achievements in extramural research included trials of a cholera vaccine and a brucellosis vaccine, the latter having been tentatively accepted as a WHO standard vaccine. Gains were made in knowledge of the principal parasitic diseases of man: malaria, schistosomiasis, filariasis, hookworm, and amebic dysentery.

National Institute of Arthritis and Metabolic Diseases

Institute research into the cause of rheumatoid arthritis centers about the role of the rheumatoid factor, an antibody found in the blood of many patients, and the possibility that this disease may be the result of an autoimmune reaction. This concept, although certainly not yet proven, continues to gain support as more evidence is gathered. Meanwhile, investigations of other likely causes of the disease are continuing.

Another area of inquiry concerns the possible influence of environment on the occurrence of the disease. The second phase of a study by Institute scientists of two American Indian tribes living under extremely contrasting climatic conditions has indicated that the occur-

rence of rheumatoid arthritis is not tied to hereditary factors, but may well be influenced by environmental factors other than climate.

In still another area of research, Institute-supported studies of the immune mechanism of the Aleutian mink have raised the possibility that certain rheumatic diseases may be induced by infections with viruses. New knowledge concerning Aleutian Mink Disease, which simulates some of the rheumatic diseases of man and is believed to be of viral etiology, has led to speculation that similar causative mechanisms may be involved in certain of the human rheumatic diseases.

Clinical studies in rheumatoid arthritis are devoted to developing new methods of physical therapy and rehabilitation and to evaluating new anti-inflammatory and analgesic drugs. A large dose of corticosteroid drugs administered every 48 hours has been found to result in less serious side effects than heretofore associated with their conventional mode of administration in multiple, small divided, daily dosages, with no loss of therapeutic efficacy.

Gold salts have been an effective therapeutic agent in rheumatoid arthritis for 35 years, but how or why they worked has been a mystery. Scientists supported by the Institute have now demonstrated that these agents inhibit the action of certain enzymes responsible for inflammatory reactions, as well as production of certain antibodies. In this connection, other Institute-supported investigators have shown that penicillamine, a heavy, metal-binding compound, when used in conjunction with gold salts, sequesters deposits of these agents in body tissues and enhances urinary excretion of the metal from the body, thereby circumventing the toxicity of excessive gold deposition. Two antimalarial drugs, chloroquin and hydroxycloroqin, were also found to be effective in the treatment of rheumatoid arthritis.

Gout is caused by a defect in body chemistry which leads to an accumulation of uric acid in the blood and tissues. A new drug compound, hydroxypyrazolopyramidine (HPP), has been found to be effective in inhibiting uric acid synthesis in gouty patients, thus markedly reducing elevated levels of uric acid in the blood and urine. This represents the first successful attack upon the origin of uric acid production in gouty patients.

Intensive study is devoted to the metabolic diseases, of which diabetes, since it affects millions of people, is probably the best known. Perhaps the most significant finding this year in the field of diabetes was the synthesis by Institute-supported investigators of a biologically active, artificial insulin molecule. This preparation will be invaluable in studying the little-known mechanism of insulin action in this disease and could lead to eventual production of synthetic

insulin for therapeutic use. Because the structure of insulin is complex, this achievement required a highly sophisticated chemical process and was a triumph of fundamental laboratory research.

Methods and means to detect and treat diabetes continue to be improved. Prolonged administration of the oral antidiabetic drug tolbutamide has been found to result in either a return to normal or improved carbohydrate tolerance in young, nonobese asymptomatic patients with mild diabetes. Beneficial effects persisted in some patients as long as four years. Such antidiabetic drugs as tolbutamide may prove to be useful as prophylactic or retarding agents against diabetes in patients who are predisposed to this illness.

A serious complication of diabetes, diabetic retinopathy, is a leading cause of blindness in this country. Postoperative results in 12 of 13 such patients who underwent a unique, highly intricate operation on their pituitary glands showed unequivocal, beneficial changes in vision, including clearing of glassy haze and ending of hemorrhagic activity. The previously unknown cause of a lesser known metabolic disease, a severe type of jaundice in infants, was traced to a unique steroid substance in the blood of the mothers, enabling prevention, in the future, of possible mental retardation in many children.

Surgical techniques are another interest of the Institute. One outstanding finding this past year culminated ten years of painstaking research which led to development of a tracheal prosthesis made of Teflon. Continued permanent success with implantation of such a device in experimental animals has brought its developers to the point where they are ready to apply their findings to man.

Significant gains have also been made in the fields of gastroenterology, which encompasses all the diseases of the digestive tract. An effective new treatment for pancreatitis, a disease often acutely fatal, resulted in relief of the intractable pain, and of the attacks, without side effects within 20 minutes. The new therapeutic procedure, which was tested by scientists supported by the Institute, employs an enzyme inhibitor isolated from the parotid glands of cattle. An unusual, dramatic method of managing the problem of malabsorption following massive intestinal resection has been developed whereby a short, reversed segment of small intestine is interposed in the continuity of the intestinal tract. Following successful animal experiments, the feasibility of the method was demonstrated by Institute-supported investigators in an 84-year-old patient with continued good results. Another development in the area of gastroenterology included a method of determining ammonia levels in peritoneal fluid that may be of distinct value in the differential diagnosis of acute abdominal conditions.

National Cancer Institute

INTRAMURAL RESEARCH

The intramural research program of the National Cancer Institute has twin goals: the maintenance of excellence in fundamental laboratory and clinical research and, at the same time, the rapid extension of new knowledge to the patient and the community.

Considerable progress toward both goals has been made during the past year, particularly as related to acute leukemia of childhood. NCI scientists, in cooperation with other members of the Acute Leukemia Task Force, have shown in clinical studies that a combination of antileukemia drugs provides more effective treatment than the same drugs used singly in sequence.

Prolongation of life for leukemia patients has meant increased opportunity for the occurrence of hemorrhage and infection—common complications of the disease. It has long been known that multiple transfusions of whole blood rich in platelets will control hemorrhage in leukemic patients. Now NCI scientists have found that, through use of a new technique, enough platelets to help a leukemic child can be obtained from one donor—often his parent. The use of fresh, platelet-rich plasma has been found to provide effective control of hemorrhage in 85 percent of leukemia patients at the Cancer Institute. By the rapid extension of this research through the Red Cross, platelets are being made available in a number of medical centers.

Other elements of the blood, white cells known as granulocytes, are needed to combat infections resistant to antibiotics. Research this year has shown that white cells capable of dividing can be obtained from the peripheral blood of donors and successfully transplanted in leukemic patients. This has prompted the design and development of a pilot model of a continuous flow centrifuge especially for this purpose.

The most active area of research on the causes of leukemia is that exploring the role of viruses. In one study, viruslike particles resembling the known animal leukemia viruses were seen with the electron microscope in the blood of 7 out of 51 leukemia patients and in none of the 86 normal individuals whose blood was examined.

Other work based on an animal-leukemia model system has led to the development of a procedure whereby the fluorescent antibody staining technique can be used to identify a mouse leukemia virus in the tissues of mice and rats. This application of methods based on immunofluorescence to the leukemia viruses opens up a new approach to the problem of associating candidate viruses with the human disease.

Another important area of virus-cancer research is that concerned with the inability of most viruses in the natural state to cross species lines. In studying this phenomenon, one Institute scientist very recently demonstrated the presence of a yet unidentified "factor" in rapidly growing normal and malignant tissues which enables a chicken virus to produce tumors in mammals from which infective virus can be recovered.

EXTRAMURAL RESEARCH

It has been estimated that approximately 50 percent of laboratory and clinical observations on cancer published in the leading professional journals are reported by grantees of the National Cancer Institute. Only a sampling of those appearing last year can be mentioned here:

Further studies of Rous Associated Virus (RAV), the "helper" virus for Rous Sarcoma Virus (RSV) discovered last year, have revealed that chick cell cultures treated with RAV are resistant to subsequent infection by RSV but are fully sensitive to infection by other viruses. This finding indicates that the resistance to RSV produced by RAV is due to the nature of the infectious virus particle itself rather than to the production of any general inhibiting substance such as interferon.

New viruses belonging to two distinct groups have been isolated from rats and from human tumors transplanted in conditioned rats. Similar viruses have been reported in cancer patients and in normal human fetuses. First studies directed toward characterizing these new viruses indicate that they might be members of the papilloma-polyoma-vaccinia (papova) group. Their role in the causation of cancer, if any, is not yet known.

New evidence that a virus might cause human breast cancer was presented with the finding of viruslike particles in milk obtained from breast cancer patients. Some of these as seen with the help of the electron microscope, were structurally identical to many particles extracted from actual breast cancer tissue. No such particles were observed when milk from cancer-free individuals was studied. Further investigations are needed to determine whether the particles are actually viruses causally related to breast cancer.

Patients with inoperable carcinoma of the lung who have been given high doses of radiation have been found to have a 40 percent higher 1-year survival figure than untreated patients. The average survival of treated patients in one study was 21 months, as compared to 10 weeks to 6 months in untreated patients.

National Institute of Child Health and Human Development

The National Institute of Child Health and Human Development was established by the Surgeon General of the Public Health Service on January 30, 1965. The Institute's major aims—summarized in Public Law 87–838—include the responsibility for conducting and supporting research and training in: (a) maternal health, child health, and human development, as well as the special health problems and requirements of mothers and children, and (b) the basic sciences related to human growth and developmental processes, including prenatal development. Added to these responsibilities are studies concerned with development of adolescents, young or middle-aged adults, and older individuals.

NICHD consists of three branches under the Office of the Director—Program Planning and Analysis Branch, Technical Communications Branch, and Extramural Management Branch. When originally set up, this organization was recognized as a transitional one that would require revision as Institute programs developed, and in April 1964, the NICHD Director submitted a proposed revision.

Both the proposed and the existing organizations focus on program areas rather than on administrative mechanisms. It is felt that NICHD programs can accomplish their missions better by integrating intramural and extramural approaches to a particular problem. An Associate Director for Scientific Programs would direct the eight programs under this plan.

The Institute also made progress in the following areas:

(1) Some 930 grants and awards from other NIH units were transferred to appropriate NICHD programs during the year.

(2) A National Advisory Child Health and Human Development Council was appointed and held its first meeting in November 1963, recommending a number of new grants be approved and the transfer of over 800 others.

(3) In March, the Council recommended approval of the first two grants to aid in the construction of mental retardation research centers, provided for in Public Law 88–164.

(4) A 5-Year Plan was drafted outlining proposed NICHD progress and development over the 1965–69 period.

(5) Though NICHD had no ongoing intramural research during this period, plans for future intramural studies were formulated; the first direct NICHD research unit became operational in St. Petersburg, Fla., during July 1964.

(6) Four outstanding men were obtained to head Institute programs. Active recruiting continues for persons to head other NICHD programs.

National Institute of Dental Research

In the 16-year history of the National Institute of Dental Research, a considerable body of knowledge has been developed on the cause and prevention of dental decay, the most prevalent of all diseases. Institute scientists have shown that tooth decay in hamsters and in rats is a transmissible disease. This knowledge is today being carried forward into study of the bacterial factors in human dental disease to find possible control methods for rampant caries, the most virulent form of this disease in children.

Research has brought new understanding of the mechanism of action of fluorides, as electron miscroscopy and X-ray diffraction have revealed that fluorides render the crystals of bones and teeth more stable and less soluble in acids. The studies of fluoridation of water supplies, with which the Institute has had a long association, have resulted in steadily increasing use of this important public health measure.

Periodontal disease, the major adult dental disease, is a worldwide problem, producing the loss of all teeth in a high proportion of the population over 45 years of age. Studies of the causes of periodontal disease have developed significant knowledge of the mineralization of bacteria to form calculus, the role of diet, and the correlation of the disease with states of poor oral hygiene. Most significant is the discovery this year by Institute scientists that a condition very like human periodontal disease is in hamsters a transmissible and infectious process. The identification of a filamentous strain of oral bacteria which produces the infection in animals provides us with a lead to the conditions which cause it in humans.

In clinical investigations, a transitional form of bacteria resembling the pleuropneumonialike organisms has been isolated from the oral tissues and the blood stream of patients suffering from stubborn canker sores. An understanding of the virus and/or bacteria responsible for these and other oral ulcerations will, it is believed, lead to markedly improved methods of therapy.

This year has brought new hope to the cleft palate patient. Institute scientists have studied the mechanism of speech, swallowing and respiration, in efforts to provide more effective guides to proper planning and timing of corrective surgery. Under grants from the Dental Institute, two new multidisciplinary centers for the study of cleft palate have been established, bringing the number of such centers to six.

Approximately four-fifths of the Dental Institute's funds are allocated to research institutions for scientific investigations and for the training of future researchers. The Institute now supports more than 400 research projects in 129 universities and hospitals, including all 50 schools of dentistry. It also supports extensive programs of research training especially in the sciences basic to dentistry in order to assure a supply of research manpower for the future. Studies under grants have extended into fields basic to dentistry, as engineering schools, graduate schools, and research hospitals have turned their attention to dental research.

National Institute of General Medical Sciences

The broad goal of the National Institute of General Medical Sciences is the support of research and research training in the basic biomedical and health-related sciences. This program strongly emphasizes fundamental investigations which undergird the programs of the categorical Institutes.

The nearly 2,000 research grants of the Institute range diversely within such disciplines as biochemistry, pharmacology, genetics, physiology, anatomy, and microbiology.

Research progress by NIGMS grantees can be highlighted by mention of some outstanding results. One investigator, who had previously reported isolation from the thymus gland of two growth substances (retine and promine), has now demonstrated that retine, the growth retarder, will inhibit growth of mouse tumors. He is able to extract retine from the urine of children and young adults, thus providing a ready source of material for further studies.

The synthesis of Dewar benzene, close relative of benzene, nature's most common organic building block, was reported by an NIGMS grantee. The culmination of three years' work, this achievement has innumerable research potentials. The unique structural and energy capabilities of the new compound should make possible creation of totally new compounds such as medicines and plastics.

Research on the exchange of hereditary material in bacteria, of interest to geneticists seeking information on evolutionary processes at all levels, has produced 23 different hybrids of the common bacterium *Escherichia coli*. A number of crosses of bacterial species indicate that traits are inherited and transmitted to progeny much as in higher life forms.

The multidisciplinary Research Training Grant program of NIGMS, the second largest training program at NIH, covers such broad areas as anatomical sciences, behavioral studies, biomedical engineering, biochemical and biophysical sciences, epidemiology and bi-

ometry, genetics, pathology, and pharmacology. In response to national concern over the development of new drugs and the biological effects of chemicals such as pesticides, increased programing emphasis has been placed on toxicology and clinical pharmacology as an aspect of ongoing training for pharmacological research.

Through Research Fellowships and Research Career Awards the NIGMS provides support at a variety of levels. Its Predoctoral Fellowships finance carefully selected and intellectually outstanding graduate students for research and academic careers in the basic biomedical and certain behavioral sciences. Postdoctoral Fellowships are awarded to degree-holding scientists for advanced training in the basic biomedical sciences and in special areas not supported by the categorical Institutes. Special emphasis has been given to such shortage areas as biomathematics, biomedical engineering, molecular biology, experimental pathology, and surgery. Research Career awardees—biomedical investigators beyond the postdoctoral level—are supported for 5-year periods.

The Institute administers two contracts on research into computer application to hospital activity. One of these, in development 2 years, was recently demonstrated to show the uses in a large general hospital of a computer-based communication system made up of a central time-shared digital computer connected through private-wire teletype lines to teletypewriters. Its adaptation to a complex of smaller hospitals in a contiguous geographical area was also explained. These contracts are administered by the Program Analysis Branch in addition to assembling and presenting data about the NIGMS program.

National Heart Institute

The past year—the 15th since the establishment of the National Heart Institute—continued to bring research advances both in fundamental knowledge and in therapeutic measures of benefit to victims of heart and blood vessel diseases.

Research in atherosclerosis and lipid metabolism produced findings that the different manner in which saturated and unsaturated fats are handled by the liver may be an important factor in their effects on serum cholesterol levels; that two distinct lipase-activating mechanisms may play important roles in the mobilization of free fatty acids in response to fasting, exercise, or stress; and that a genetically determined deficiency of high density lipoproteins may cause abnormalities in cholesterol or triglyceride metabolism.

Notable findings were also made in the field of hypertension. The blood-pressure-lowering effects of reserpine, guanethidine, alpha-methyl DOPA, and other drugs have been attributed primarily to

their ability to relieve constriction of arterioles and to reduce heart work by curbing the activity of the sympathetic nervous system. In Heart Institute studies, however, it was found that while the drugs do reduce arteriolar resistance and heart rate, they also cause reduction in tone of the veins. This may be important, since reduced venous tone increases the capacity of the venous bed and reduces the amount of blood returning to the heart. Since the heart cannot pump more blood than it receives, heart output is reduced and consequently arterial blood pressure is reduced.

NHI scientists reported that patients receiving monoamine oxidase (MAO) inhibitors for treatment of hypertension or mental depression should be cautioned to avoid certain cheeses and Chianti because of their high tyramine content. MAO inhibitors block the enzyme mainly responsible for inactivating tyramine, thus causing a more sustained release of norepinephrine from its storage sites by the tyramine, and resulting in a potentially dangerous increase in blood pressure.

In primary pulmonary hypertension, blood-vessel constriction in the lungs creates resistance to bloodflow, backing up of blood and increased pressure in the right heart chambers, and usually results in death from congestive heart failure in 2 to 10 years. NHI investigators observed that, in Eisenmenger's Syndrome, which is characterized by pulmonary hypertension plus an abnormal opening in the wall between the left and right sides of the heart, the defect in the wall appeared to protect against heart failure since during periods of stress or exercise blood could be diverted through the hole and thus relieve pressure in the right ventricle. Carrying out controlled experiments in animals, they demonstrated conclusively that the deliberate creation of such a defect will protect against heart failure in pulmonary hypertension, suggesting that the operation be applied in treatment of patients with the disease.

Under development during the year was a suction-operated heart-lung apparatus about the size of a quart can. Although not yet perfected, the apparatus may be the prototype of inexpensive, mass-produced disposable heart-lung machines for open-heart surgery. Another advantage: the very small quantity of blood required to prime the apparatus would simplify blood procurement problems, reduce the risk of hepatitis or transfusion reaction, and reduce the cost of open-heart operations.

GRANT-SUPPORTED RESEARCH

New uses for hyperbaric oxygenation were reported. Investigators at Children's Hospital Medical Center and Harvard Medical School in Boston achieved dramatic increases in the oxygen content of arterial

blood of infants with cyanotic congenital heart disease by administering, in a compression chamber, 100 percent oxygen at pressures of 3 to 3.6 atmospheres. This enabled a number of these critically ill infants to better withstand palliative heart surgery, which was performed within the 29- by 8-foot pressure chamber. In experimental studies at the University of Maryland, it was found that treatment with pure oxygen at three atmospheres pressure substantially increased survival rates in animals subjected to severe hemorrhagic shock. Seventy-four percent of those treated with hyperbaric oxygenation survived as compared with only 17 percent of the control group.

A number of new drugs were studied during the year. One of these, ethacrynic acid (MK–595, Merck Sharp & Dohme), was found by Columbia University scientists to be a diuretic that was well tolerated, acted rapidly, and usually more powerfully than previously known agents in relieving edema. It was found to be particularly effective against refractory states of fluid retention where other measures had failed. Another compound, ethyl p-chlorophenoxyisobutyrate (CPIB ester, Ayerst), was reported by investigators of Montefiore Hospital and the Sloan-Kettering Institute for Cancer Research, N.Y., to reduce substantially serum levels of cholesterol, phospholipids, and triglycerides during limited clinical trials. The drug was well tolerated and there was no evidence of toxicity during the period of study.

A computer model of human blood that will report changes in concentration of 56 different constituents of plasma, erythrocytes, and alveolar gas was developed by a team of cooperating scientists from the University of California Medical Center and the Rand Corp. Following programed instructions describing the basic chemical and thermodynamic reactions of the blood, the computer can print out within 2 minutes a complete blood study that would take weeks to do manually. The reliability of the computer model was tested on various problems in blind competition with a team of physicians and chemists in a surgical laboratory. Over 1,000 of their analyses were compared with computer predictions and in no case was the computer found in error.

Results of a study conducted at the Washington, D.C., Hospital Center indicated that continuous oral anticoagulant therapy for heart attack patients increases long-term survival, reduces the incidence of recurrent attacks, and reduces disability. Of 204 patients who received an anticoagulant plus ascorbic acid, 113 were still alive after 15 years. Of the 200 control patients who received only ascorbic acid

as a placebo, 36 were still alive. The heart attack recurrence rate of the anticoagulant-treated group was about one-half that of the control group.

National Institute of Mental Health

COMMUNITY SERVICES

The National Institute of Mental Health during fiscal year 1964 began to implement the Community Mental Health Centers Construction Act of October 1963. This law authorized matching funds of $150 million over a 3-year period for construction of facilities offering comprehensive services in the community for mental health care. Construction is scheduled to begin early in fiscal year 1965.

This activity is related to the planning grants program initiated last year, in which each of 53 States and territories received grants to prepare a comprehensive, long-range plan for care of mental illness and improvement of the mental health of its residents. The aim of the State plans is to integrate preventive, therapeutic and rehabilitative services in a community setting for prompt treatment of disturbed persons.

TRAINING

The first phase of the Inservice Training Program was completed in fiscal year 1964. In seven regional conferences, governors, legislators, university officials, and mental health authorities determined the nature, extent and needs of current training practices. Staff field visits and an extensive survey of professional personnel provided information on employment and training patterns.

Additional resources were developed, including production of films, training of statisticians to handle mental health data, education of teachers in mental health problems, and training of houseparents for institutions for the mentally retarded. An appropriation of $3,304,000 in fiscal year 1964 for the second phase will establish the inservice training program. Current emphasis is on subprofessional personnel, including psychiatric aides, volunteers, attendants and others involved in direct care of patients.

The NIMH Training Grants Program continued to support clinical and research training in the four core professions of psychology, psychiatry, social work, and psychiatric nursing. The program was expanded to include grants for relevant training in the biological and social sciences, in public health schools, and for lawyers, physicians, clergymen and educators. Special projects to support workshops, conferences, institutes and surveys were incorporated.

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HOSPITAL IMPROVEMENT

A new Hospital Improvement Projects Program, with an appropriation of $6 million, aids State hospitals in developing improved methods of diagnosis, care, treatment and rehabilitation of mentally ill patients. These demonstration projects stimulate new planning, operations research, and program evaluation. They further encourage explorations of new patterns of care. With more patients able to receive outpatient services, attention of the hospital staff can be more closely directed to chronically ill cases.

RESEARCH

Research into the causes, prevention and treatment of mental illness is the major endeavor of the NIMH. Causes of mental disorders are completely rooted within the nervous system, in interrelationships with other organ systems, and in interpersonal relationships and environmental factors. Hence research is conducted in widely diverse disciplines, from biology and biochemistry to sociology and anthropology. In addition, investigations to determine patterns of normal behavior and development are being continued; these studies encompass brain biochemistry and metabolism as well as the behavioral sciences.

Basic research seeks to define the means by which biological processes and psychological and social experiences determine the individual's adaptation level. Studies of the functioning of the brain and nervous system and of the physical, biological and psychological aspects of normal and abnormal behavior and development are carried out. Behavioral scientists attempt to define the life experiences which form and deform personality, and study family and environmental influences on child development. Other clinical and field research efforts are concerned with the application of developments to treatment procedures.

Scientists at NIMH's 11 laboratories and field stations and Institute grantees over the Nation cover a wide area of research, including drug addiction, alcoholism, old age, suicide, crime and delinquency and childhood disturbances, as well as retardation, schizophrenia, and depression.

About one in three research grants support work in schizophrenia. The current emphasis is biochemical. Scientists have identified an abnormal protein in the blood of schizophrenics. There is also evidence that associates some cases of schizophrenia with an abnormality in biological transmethylation.

At the Clinical Neuropharmacology Research Center at St. Elizabeth's Hospital, significant correlations have been determined between the mental state and metabolism of catecholamines. An intensive

comparative study of 197 drugs used to relieve schizophrenic symptoms is underway at the Psychopharmacology Service Center. There is also increasing interest in the side effects of psychotomimetic drugs.

INSURANCE TASK FORCE

The recently created Insurance Task Force of NIMH is working to improve coverage of mental illness treatment. Most insurance plans do not provide coverage for outpatient psychiatric services, and coverage for inpatient care is often limited. Among its recommendations, NIMH has suggested a number of improvements in plans operating under the Federal Employees Health Benefits Act.

National Institute of Neurological Diseases and Blindness

Institute-sponsored research programs are contributing scientific knowledge leading to the prevention, cure, and treatment of many chronic, disabling disorders of the brain, eye, ear, and special senses. Significant accomplishments in this period included the establishment of a research center for Parkinson's disease and a joint center for the study of latent virus diseases of the nervous system; intensified and broadened studies of amyotrophic lateral sclerosis (ALS), multiple sclerosis (MS), and disorders of hearing and speech; evaluation of drug therapies for various disorders; and the training of professional manpower.

PARKINSON'S DISEASE

The new study center for Parkinsonism—established at Columbia University—will enable biomedical scientists representing different disciplines to combine their knowledge and techniques to intensify research, refine diagnosis, and improve treatment of this disease of the nervous system which affects more than half a million Americans. Such research will assist in treating and managing this disease and allied disorders characterized by involuntary movements. The center includes a special information-exchange system whereby physicians throughout the nation may learn of promising developments in treatment or research.

INFECTIOUS DISEASES OF THE NERVOUS SYSTEM

Recent studies suggest a possible causal connection between the latent viruses and certain neurological disorders. A strengthened program to study this lead, initiated earlier with the Patuxent Wildlife Research Center, will permit intensive investigation of those degenerative nerve disorders in animals that are similar to human diseases.

Discovery of the animal causation factor may be a valuable clue to discovery of the cause in humans.

AMYOTROPHIC LATERAL SCLEROSIS (ALS)

The Institute study of amyotrophic lateral sclerosis on Guam, where this disease is 100 times more prevalent than in the United States, has been expanded because of new evidence pointing to environmental causes rather than genetic ones. At Institute laboratories in Bethesda certain other diseases have been found in association with ALS. The incidence of these concurrent symptoms may signify common or related viral or other causal factors.

MULTIPLE SCLEROSIS (MS)

Another Institute program has confirmed the suspected unique geographical distribution of multiple sclerosis. Studies indicate that a cold climate bears a distinct relationship to the occurrence of this disorder. Research in the laboratory is concentrated on determining the nature of the auto-immune process whereby the body destroys its own essential tissue—in MS, myelin—and on the various methods of blocking this reaction.

HEARING AND SPEECH DISORDERS

Many of the causes of hearing and speech impairments that affect millions of school age children and adults remain unknown. The Institute this past year expanded its activities directed toward early precise diagnosis of auditory and communicative difficulties and toward obtaining data, on a statewide basis, on deafness and hearing disability. Institute funds were awarded for a series of conferences concerned with establishing standard nomenclature and classification of communication disorders, with the important aim of developing programs for special forms of therapy.

Jointly, the Institute and nongovernmental groups undertook support of a national "Temporal Bone Program," in which persons who suffer from hearing loss may will their temporal bones to special centers for microscopic examination of the inner ear after death. Important clues to causative agents, difficult to ascertain during life, may stem from these pathological examinations.

EVALUATION OF DRUG THERAPY

Testing the effectiveness of drugs used in controlling certain neurosensory disorders, a matter of great research importance, received increasing attention. Special attention has been given to drugs for treating epilepsy: investigations include drugs capable of controlling some of the less responsive types of epilepsy. Evaluation of drugs

for treating multiple sclerosis and certain neurological disorders of infancy and childhood is also a research aim.

This year, a clinical study supported in six hospitals to test the effectiveness of ACTH on myasthenia gravis patients offered no evidence that ACTH produced improvement in the 43 patients studied. The Institute's cooperative study of cerebral aneurysms, a condition frequently leading to fatal strokes, has provided critical data on the value of four different forms of therapy for this serious problem. In the Collaborative Perinatal Project, a nationwide study of 50,000 mothers to determine causes of neurosensory deficits in their offspring, a program was developed to determine the effects on the human fetus of drugs taken by the mother.

Because clinical therapy is regarded as a major activity, the Institute this year established a panel of experts to advise on the evaluation of such therapy.

TRAINING OF ESSENTIAL PROFESSIONAL MANPOWER

Because of the drastic shortage of professional personnel in the neurological and sensory fields, the Institute has given top priority to the development of new training programs, the expansion of existing programs, and the recruitment of personnel to prepare for careers in these fields.

The Institute has emphasized the preparation of physicians and scientists for careers in academic medicine as well as the training of research scientists. Besides providing the training environments for clinical research and teaching, special attention has been given to training activities in neurochemistry, sensory physiology, epidemiology, and neuropathology.

Clinical Center

Utilization of the Clinical Center's new surgical wing throughout fiscal year 1964 enabled surgeons of the National Heart Institute and the National Institute of Neurological Diseases and Blindness to provide the most advanced surgical care for research patients. In addition, they collected valuable precise medical data never before attainable. About 1,500 surgical procedures have been performed since the new facilities were activated in June 1963. As information from such procedures is accumulated through the present monitoring system, computers will be used to develop still more refined techniques for predicting life-threatening crises and thus guiding therapy.

Widespread sources of patient referrals have been pursued and the flow of patient referrals from practicing physicians continues to meet the needs of the various Institutes. The participation of increasing

numbers of healthy normal volunteer patients is particularly gratifying since these individuals are the mose precious resources of the investigators at the National Institutes of Health who are engaged in research on the major causes of death and disability in our country.

Since the Clinical Center opened 11 years ago, almost 35,000 inpatients have been studied, and about 4,000 of these were admitted during this fiscal year. As the clinical research program matures, the number of followup patient visits increases and this figure has now reached 213,181.

Division of Biologics Standards

The accelerated pace of research in the area of infectious diseases has resulted in a significant increase in the complexity and diversity of biological products. Currently, there are 297 such products licensed under the provisions of the Public Health Service Act for commercial use in this country and abroad. These products, which include the vaccines, antitoxins, therapeutic serums, and human blood and its derivatives, are developed for the most part from pathogenic microorganisms. Their preparation requires careful control in order to minimize safety hazards which might occur in the course of processing, and to ensure final products of satisfactory potency.

Responsibility for the administration of these control measures resides with the Division of Biologics Standards. Effective administration requires the design and development, within a research context, of adequate and practical standards for the production and testing of biologics, careful surveillance of production methods, and the continuous improvement of testing procedures. Thus the control program of the Division is necessarily supported by an active and flexible research program in order to keep pace with the development of new and improved immunizing agents, to prepare physical references for these products, and to devise testing procedures for them once they are ready for commercial production.

The research programs of the Division's six laboratories—Bacterial Products, Biophysics and Biochemistry, Blood and Blood Products, Control Activities, Viral Immunology, Virology and Rickettsiology—include a diversity of projects, many of immediate practical urgency, and all having direct relation to the prime responsibility of the Division.

Measles studies in West Africa show that combinations of live measles, smallpox, and yellow fever vaccine can be successfully inoculated into susceptible infants, and that live measles vaccine is fully effective for infants over 8 or 9 months old.

Studies of the antigenic shift of the A2 influenza viruses away from the "Asian" strain made it possible to incorporate a satisfactory contemporary strain of influenza A2 virus into the polyvalent vaccine in time for commercial use in the United States during the 1963–64 season.

Division of Research Grants

The Division of Research Grants coordinates the development of policies and procedures in Public Health Service grant administration and provides principal scientific and technical review of grant and award applications.

The workload of processing and reviewing applications for extramural support has increased with the expansion of DRG's responsibilities to include extramural programs of the Community Health and Environmental Health Divisions of the Bureau of State Services. In fiscal year 1963, 24,994 grants and awards were made amounting to $650,759,657, compared with 23,747 totaling $571 million in fiscal year 1962.

To review and insure competency in new and expanding areas of research, the Division created 6 new study sections bringing the total of these non-Federal review panels to 52, and 1 new fellowship review panel for a total of 13.

To further meet the need for a more systematic approach to the management of grant programs, the Grants Manual, first published in 1963, was revised to provide a current codification of PHS policies and regulations. Preceded by orientation seminars for PHS grants administration staff, regional meetings of grantee institutions were arranged to brief personnel on new grants administration procedures and supplement the information in the revised Manual. These meetings facilitated an exchange of views with local administrators, faculty members, public information officers and others concerned.

The DRG Newsletter was initiated as an administrative publication to be brought out periodically to augment the general effort toward strengthening communications between PHS research grant administrators and grantees by providing information on changing grant and award procedures, extramural program developments, and staff changes.

Three new posts of Associate Chief were created and filled in a major reorganization to meet the need for expanding activities in scientific evaluation, technical communications, analyses of extramural programs, statistical interpretations of grant support, and staff training and orientation.

A third annual Research Grants Index listing nearly 16,000 active PHS grants by subject matter was distributed to Federal administrative personnel, PHS grantees and other scientists in this and other countries.

Eleven candidates entered the 1963–64 class of the Grants Associates Program to embark upon the 12-month training period designed to develop qualified professional staff for the various grants programs throughout PHS in alleviating the problem of recruiting and efficiently utilizing competent scientist administrators. Ten candidates who formed the first 1962–63 class completed training and accepted permanent assignments within NIH.

Division of Research Facilities and Resources

Largest of the Division's programs is health research construction. In fiscal year 1964, 125 grants provided matching funds totaling $53,900,498. The program responsibility was broadened considerably by new legislation authorizing construction of mental retardation research centers and of health professions teaching facilities, most of which will include research construction.

As models of excellence in clinical research, the general clinical research centers continued steady growth with 11 new centers authorized, bringing the total to 78. At the end of June, 63 centers with 744 beds were in operation in 30 States, the District of Columbia and Puerto Rico.

The second of the projected seven regional primate research centers was opened. Ground was broken for two other centers, two were nearing completion, and the seventh was in the final planning stage. Scientists at all the centers, in temporary or permanent quarters, were well underway with primate research programs.

The 19 new centers supported by the special research resources program included 10 computer centers, 2 scientific and technical information centers, and 1 center for the production of various microorganisms for use in research projects. The program supported a total of 45 special research resources, including the LINC computer experimental and evaluation program by 6 selected laboratories.

Funds from the Division's general research support program supplemented research grant and training programs at 260 institutions and were used, among other ways, to pay salaries of more than 2,000 scientific personnel, to provide research training, and to support hundreds of promising new research projects.

Division of Research Services

The Division provides a wide variety of scientific, engineering, and technical services essential to the needs of the NIH research program. Although the conduct of research is not a primary objective of DRS, it is essential that studies and investigations be carried out in the course of achieving program goals.

Division engineers have helped produce an outstanding surgical facility in the new Surgical Wing of the Clinical Center, especially in regard to the operating room ventilation system and the instrumentation system for monitoring surgery. Veterinarians and scientists in the Division have developed new animal production techniques and more effective disease control, which have led to increased productivity and higher quality in small laboratory animals. A DRS pilot program for rearing germfree animals has developed into a small production facility supplying several laboratories with germfree animals on a regular basis.

In other DRS programs, engineering liaison was provided in the design and construction of new NIH facilities, with more than 15 projects in the design phase. Also, a second high-speed digital computer was made fully operational, doubling the capacity of the central computing facility.

Table 1.—*Statement of appropriations, authorizations, and obligations, fiscal year 1964*

[In thousands]

Appropriation	Funds available for obligation					Amounts obligated
	Appropriations and authorizations	Net transfers between appropriations	Repayments for services	Prior year unobligated balances	Total funds available	
Total	$1,721,822	0	$17,433	$260,740	$2,144,607	$1,808,045
Appropriation, PHS	1,720,960	0	17,433	260,412	1,998,805	1,665,644
Buildings and facilities	16,311			47,536	63,847	15,673
Accident prevention	4,163	+18			4,181	4,089
Chronic diseases and health of the aged	53,439	+211	96		53,746	50,868
Chronic diseases and health of the aged	2,200				2,200	1,140
Communicable disease activities	18,200	−4	2,265		20,461	20,253
Communicable disease activities (1964–65)	10,205				10,205	1,564
Communicable disease activities (1963–64)				8,456	8,456	8,148
Community health practice and research	29,608	+33	29		29,670	29,560
Control of tuberculosis	6,828	+22			6,850	6,791
Control of venereal diseases	9,588	+11			9,599	9,559
Dental services and resources	6,194	+52			6,246	6,227
Nursing services and resources	11,217	+32			11,249	11,210
Hospital construction activities	6,269	+17			6,286	6,272
Hospital construction activities (1964)	5,000				5,000	
Hospital construction activities (1964–65)	220,000				220,000	61,358
Hospital construction activities (1963–64)				154,666	154,666	151,993
Environmental health sciences	4,220	+15	62		4,297	4,275
Air pollution	12,942	+45	49		13,036	13,013
Milk, food, interstate and community sanitation	9,006	+64	232		9,302	9,257
Occupational health	4,990	+42	26		5,058	5,049
Radiological health	19,145	+232	1,334		20,711	20,507
Water supply and water pollution control	28,953	+89	634		29,676	29,350
Grants for waste treatment works construction (1964–65)	90,000				90,000	66,407
Grants for waste treatment works construction (1963–64)				19,300	19,300	19,021
Hospital and medical care	49,962	+1,331	8,243		59,536	59,530
Foreign quarantine activities	6,456	+98	464		7,018	7,004
Indian health activities	58,956	+737	678		60,371	60,083
Construction of Indian health	6,100			7,640	13,740	9,569
General research and services, NIH	163,869	−9,663	99		154,305	149,555
Biologics standards	4,787				4,787	4,283
Child health and human development		+34,000			34,000	30,461
National Cancer Institute	144,340	−1,161	204		143,383	131,684
National Cancer Institute				264	264	121
Mental health activities	183,241	−6,929	125		176,437	171,251
National Heart Institute	132,404	−8,075	4		124,333	117,496
National Heart Institute				743	743	59
National Institute of Dental Research	19,689	−523			19,166	18,977
Arthritis and metabolic disease activities	113,679	−5,980	122		107,821	105,240
Allergy and infectious disease activities	68,723	−1,666	123		67,240	66,474
Neurology and blindness activities	87,675	−3,232	1		84,444	82,085
Grants for construction of health research facilities	56,000			3	56,003	49,990
Scientific activities overseas (special foreign currency program)	4,000			7,670	11,670	5,565
National health statistics	5,949		398		6,347	6,172
National Library of Medicine	4,074		10		4,084	4,056
Retired pay of commissioned officers	[1] 6,487				6,487	6,487
Salaries and expenses, Office of the Surgeon General	6,091	+124	873		7,088	7,021
Emergency health activities	27,500		22	2,351	29,873	17,207

See footnote at end of table.

Table 1.—*Statement of appropriations, authorizations, and obligations, fiscal year 1964*—Continued

[In thousands]

Appropriation	Funds available for obligation					Amounts obligated
	Appropriations and authorizations	Net transfers between appropriations	Repayments for services	Prior year unobligated balances	Total funds available	
George Washington University hospital construction	$2,500				$2,500	$2,500
Construction of mental health, neurology research facility				$11,679	11,679	182
Bureau of State Services management fund			(5,425)		(5,425)	(5,385)
National Institutes of Health management fund			(41,972)		(41,972)	(41,308)
Consolidated working fund, HEW, grants for research			(401)	(129)	(530)	(412)
General research support grants, NIH			(35,000)		(35,000)	(35,000)
Consolidated working fund, HEW			318	104	422	39
Consolidated working fund, HEW			1,022		1,022	969
Appropriations, special project funds made available by other agencies					144,612	141,552
Public Works acceleration, Executive (transfer to HEW, PHS) (1964)					7,250	7,243
Public Works acceleration, Executive (transfer to HEW, PHS) (1963–64)					130,628	128,414
Salaries and expenses, Bureau of Prisons (transfer to HEW, PHS)					2,772	2,768
American Sections, International Commissions, State (transfer to HEW, PHS)					95	89
Farm Labor supply revolving fund, Bureau of Employment Security (transfer to HEW, PHS)					230	208
Inter-American social and economic cooperation program, Executive (transfer to HEW)					226	118
Assistance to refugees in the United States, Office of the Commissioner, SSA					1,103	1,028
Administrative expenses, economic assistance, Executive (transfer to HEW)					40	38
Development grants economic assistance, Executive (transfer to HEW)					1,421	1,058
Development grants economic assistance, Executive (transfer to HEW)					148	105
Supporting assistance, economic assistance, Executive (transfer to HEW)					527	368
Alliance for progress development grants economic, Executive (transfer to HEW)					89	69
Alliance for progress develpoment grants economic, Executive (transfer to HEW)					68	34
Military assistance, Executive (transfer to HEW)					15	12
Gift funds donated for general and specific purposes	861.8			328.1	1,189.9	849.1
Construction, Indian health facilities	595.2			124.4	719.6	621.8
Public Health service unconditional gift fund	67.8			71.1	138.9	5.5
Public Health service conditional gift fund	33.2			27.5	60.7	11.9
Patients' benefit fund, Public Health service hospitals	42.5			18.6	61.1	41.4
Special Statistical work, vital statistics	123.1			86.5	209.6	168.5

[1] Does not include $30,000 to be deappropriated.

Table 2.—*PHS total paid employment by bureau and division, as of June 30, 1964*

	Grand total	Full-time					Part-time and intermittent			
		Total	United States			Territories and possessions	Foreign countries	Total	Advisers and consultants	Others
			Total	Washington metropolitan area	Outside					
Public Health Service—All Bureaus	36,006	34,594	34,137	15,192	18,945	203	254	1,412	289	1,123
Office of the Surgeon General	1,490	1,392	1,309	1,109	200	1	82	17	10	
Immediate Office of the Surgeon General	80	80	80	76	4					
Division of Finance	122	122	122	122						
Division of Administrative Services	135	135	135	86	49					
Division of Public Health Methods	45	43	43	41	2			2	1	1
Office of International Health	63	63	60	58	2		3			
Division of Health Mobilization	180	178	177	98	79	1		2	2	
Office of Personnel	178	175	175	175				3		3
Office of Information	46	44	44	44				2	2	
Division of Internal Audit	15	15	15	14	1					
National Center for Health Statistics	383	375	375	373	2			8	5	3
Regional Offices	42	42	42		42					
Details to AID	42	42	12	6	6		30			
Details to Peace Corps	68	68	19	7	12		49			
Other details	10	10	10	9	1					
Bureau of Medical Services	14,494	13,786	13,656	1,478	12,178	34	96	708	2	706
Office of the Chief	53	52	49	48	1		3	1		1
Divison of Foreign Quarantine	693	643	552	42	510	16	75	50	2	48
Division of Hospitals	7,811	7,431	7,396	1,235	6,161	18	17	380		380
Freedmen's Hospital	994	955	955	955				39		39
Divison of Indian Health	5,538	5,265	5,265	123	5,142			273		273
Details to Bureau of Prisons	291	289	289	20	269			2		2
Details to Bureau of Employees Compensation	6	5	5	2	3			1		1
Details to U.S. Coast Guard	94	93	93	8	85			1		1
Details to other agencies	8	8	7		7		1			
Bureau of State Services—Community Health	4,802	4,625	4,582	1,302	3,280	43		177	102	75
Office of the Chief	184	175	174	165	9	1		9	9	
Division of Accident Prevention	151	149	149	98	51			2		2

Division of Chronic Diseases	834	794	790	456	334	4	----	40	29	11
Communicable Disease Center	2,758	2,725	2,687	81	2,606	38	----	33	13	20
Division of Community Health Services	258	239	239	157	82	----	----	19	19	----
Division of Dental Public Health and Resources	254	207	207	124	83	----	----	47	8	39
Division of Hospital and Medical Facilities	232	225	225	146	79	----	----	7	7	----
Division of Nursing	127	107	107	73	34	----	----	20	17	3
Details to other agencies	4	4	4	2	2	----	----	----	----	----
Bureau of State Services—Environmental Health	3,838	3,762	3,751	1,036	2,715	3	8	76	20	5
Office of the Chief	533	521	520	160	360	1	----	12	2	10
Division of Air Pollution	408	400	400	77	323	----	----	8	3	5
Division of Environmental Engineering and Food Protection	366	362	362	103	259	----	----	4	----	4
Division of Occupational Health	217	211	211	53	158	----	----	6	4	2
Division of Radiological Health	931	910	900	395	505	2	8	21	----	21
Division of Water Supply and Pollution Control	1,375	1,350	1,350	246	1,104	----	----	25	11	14
Details to other agencies	8	8	8	2	6	----	----	----	----	----
National Institutes of Health	11,204	10,775	10,585	10,013	572	122	68	429	153	276
Office of the Director	1,473	1,434	1,413	1,411	2	2	19	39	20	19
National Cancer Institute	1,246	1,223	1,199	1,159	40	----	24	23	15	8
National Heart Institute	733	705	698	563	135	2	5	28	10	18
National Institute of Allergy and Infectious Diseases	682	674	625	446	179	43	6	8	5	3
National Institute of Arthritis and Metabolic Diseases	603	565	557	556	1	----	8	38	24	14
National Institute of Dental Research	260	252	252	248	4	----	----	8	3	5
National Institute of Mental Health	1,215	1,097	1,091	887	204	1	5	118	37	81
National Institute of Neurological Diseases and Blindness	745	708	634	630	4	74	----	37	3	34
National Institute of General Medical Sciences	142	137	137	137	----	----	----	5	2	3
National Institute of Child Health and Human Development	112	98	98	98	----	----	----	14	10	4
Clinical Center	1,736	1,680	1,680	1,678	2	----	----	56	----	56
Division of Biologics Standards	264	256	256	256	----	----	----	8	5	3
Division of Research Grants	551	533	533	533	----	----	----	18	----	18
Division of Research Services	1,295	1,284	1,284	1,283	1	----	----	11	1	10
Division of Research Facilities and Resources	135	117	117	117	----	----	----	18	18	----
Details to Peace Corps	2	2	2	2	----	----	----	----	----	----
Details to other agencies	10	10	9	9	----	----	1	----	----	----
National Library of Medicine	259	254	254	254	----	----	----	5	2	3

Table 3.—*PHS total paid employment by bureau, commissioned officers, and civil service, as of June 30, 1964*

	Grand total	Commissioned officer					Civil Service				
		Total	United States			Territories, possessions, and foreign countries	Total	United States			Territories, possessions, and foreign countries
			Total	Washington metropolitan area	Outside			Total	Washington metropolitan area	Outside	
Public Health Service—Total	36,006	4,934	4,761	1,544	3,217	173	31,072	30,760	14,055	16,705	312
Office of the Surgeon General	1,409	211	129	91	38	82	1,198	1,197	1,027	170	1
Bureau of Medical Services	14,494	1,863	1,825	91	1,734	38	12,631	12,514	1,430	11,084	117
Bureau of State Services:											
Community Health	4,802	701	690	167	523	11	4,101	4,068	1,173	2,895	33
Environmental Health	3,838	985	974	222	752	11	2,853	2,853	834	2,019	----
National Institutes of Health	11,204	1,172	1,141	971	170	31	10,032	9,871	9,336	535	161
National Library of Medicine	259	2	2	2	----	----	257	257	255	2	----

Table 4.—*Research grants and awards, fiscal year 1964*

Program	Research projects		Research facilities		Training projects		Fellowships and traineeships		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Total	15,242	$497,893,536	125	$54,012,992	3,893	$165,907,872	4,834	$44,468,939	24,094	$762,283,339
Allergy and infectious diseases	1,471	35,119,696			168	7,936,725	275	2,990,757	1,914	46,047,178
Arthritis and metabolic diseases	2,804	68,590,012			312	12,863,571	332	3,951,397	3,448	85,404,980
Cancer	1,650	55,734,798			243	8,307,614	244	2,768,167	2,137	66,810,579
Child health and human development	808	21,647,368			73	3,475,779	158	1,917,119	1,039	27,040,266
Dental research	385	8,114,505			99	4,366,659	139	1,359,001	623	13,840,165
General medical sciences	1,951	50,819,350			683	35,173,043	1,662	13,211,112	4,296	99,203,505
Heart	2,326	76,623,233			361	13,326,145	464	5,352,598	3,151	95,301,976
Mental health	1,751	58,881,554			1,690	68,970,181	981	7,501,295	4,422	135,353,030
Neurological diseases and blindness	1,639	48,512,077			264	11,488,155	396	4,218,807	2,299	64,219,039
Division of research facilities and resources	378	73,652,474	125	54,012,992					503	127,665,466
Office of international research	79	198,469					183	1,198,686	262	1,397,155

Table 5.—*Payments to States or localities within States for public health services, fiscal year 1964* [1]

[In thousands]

State	Tuberculosis control	General health	Mental health	Cancer control	Heart disease control	Water pollution control	Chronic Diseases and health of the aged	Radiological health
Total	$2,896	[2] $13,981	[3] $6,717	$3,368	[4] $6,108	[5] $4,510	[6] $11,610	$1,806
Alabama	72	356	123	77	127	85	212	28
Alaska	15	41	67	0	0	12	0	9
Arizona	39	138	64	31	6	40	87	15
Arkansas	44	227	70	47	60	63	113	21
California	207	946	481	254	410	292	936	172
Colorado	25	153	67	36	98	47	123	25
Connecticut	27	134	75	39	95	42	131	23
Delaware	14	26	67	26	51	47	60	15
District of Columbia	27	40	67	27	70	15	67	8
Florida	70	423	177	100	197	127	433	59
Georgia	65	399	146	87	155	114	160	46
Hawaii	17	54	67	27	64	40	57	17
Idaho	13	85	67	25	74	27	67	9
Illinois	145	576	294	118	179	139	561	47
Indiana	52	320	137	62	89	118	177	35
Iowa	26	212	82	54	73	56	201	24
Kansas	23	174	67	42	46	57	153	19
Kentucky	67	307	110	49	158	92	313	35
Louisiana	61	315	117	72	87	96	35	34
Maine	17	88	66	19	21	39	88	15
Maryland	63	202	98	53	126	90	185	31
Massachusetts	70	308	142	94	171	137	369	56
Michigan	108	504	247	127	246	184	474	76
Minnesota	34	260	102	60	138	85	249	29
Mississippi	45	308	92	64	149	83	299	31
Missouri	64	311	135	85	142	64	373	41
Montana	15	79	67	18	45	26	48	9
Nebraska	17	127	63	34	22	23	31	9
Nevada	11	43	43	9	13	16	31	5
New Hampshire	12	48	62	27	18	36	23	9
New Jersey	82	344	185	72	183	150	341	54
New Mexico	26	112	67	26	63	33	67	17
New York	262	893	509	268	397	320	1,050	187

North Carolina	63	470	170	83	128	137	255	56
North Dakota	13	85	66	27	64	27	53	17
Ohio	119	627	311	157	194	213	481	84
Oklahoma	37	216	82	54	129	61	219	16
Oregon	27	153	55	26	44	48	76	21
Pennsylvania	180	759	354	213	340	249	851	125
Rhode Island	17	59	66	27	54	55	66	10
South Carolina	44	279	92	58	133	85	195	24
South Dakota	15	89	67	2	11	27	21	12
Tennessee	75	349	131	80	176	108	127	12
Texas	136	798	330	183	348	208	351	72
Utah	14	99	64	5	43	31	34	15
Vermont	12	49	67	27	25	27	67	1
Virginia	74	349	140	77	152	107	307	12
Washington	27	211	91	42	115	69	192	38
West Virginia	35	167	67	40	112	60	163	1
Wisconsin	45	296	127	61	52	107	321	42
Wyoming	9	47	55	7	20	19	47	9
Guam	10	5	23	0	12	0	14	0
Puerto Rico	101	314	91	60	163	77	189	28
Virgin Islands	8	7	45	10	20	0	67	1

[1] Additional amounts as follows were paid during fiscal year 1964:
- $5,867,000 for Venereal Disease Special Projects, including $2,711,000 for personal services and supplies in lieu of cash.
- $1,525,000 for Tuberculosis Control Projects, including $36,000 for personal services in lieu of cash.
- $3,263,000 for Vaccination Assistance Projects, including $166,000 for personal services and travel in lieu of cash.
- $4,652,000 for the Public Health Service Traineeship Program. Of this amount, $604,000 was for Special Purpose Training Grants and $461,000 was for Short Term Training Grants.
- $7,107,000 for the Professional Nurse Traineeship Program.
- $1,790,000 for Project Grants for Training in Radiological Health.
- $1,809,000 for Project Grants for Graduate Training in Public Health.
- $1,464,000 to Schools of Public Health for the Provision of Public Health Training.
- $4,169,000 for Community Cancer Demonstration and Training Projects, including $24,000 for personal services in lieu of cash. Also includes $837,000 for Senior Clinical traineeship direct award program.
- $5,067,000 for Community Health Demonstration Projects, including $46,000 for personal services in lieu of cash.
- $482,000 for Water Pollution Demonstration Projects.
- $1,171,000 for the Cuban Refugee Health Program. Of this amount $254,000 was paid to Veterans Hospital, Coral Gables, Fla., to furnish drugs and supplies to Refugee Center.
- $1,181,000 for Migrant Health Project Grants.
- $2,236,000 for Neurology and Sensory Disease Service Project Grants, including $239,000 for direct award traineeships.
- $53,000 for Mental Retardation Planning projects.
- $651,000 for Dental Student Training projects.

[2] Includes $38,000 withheld to cover assignment of Commissioned Officers in lieu of cash.

[3] In addition to this amount $3,380,000 was paid for Mental Health Planning.

[4] Includes $14,000 withheld to cover assignment of Commissioned Officers in lieu of cash.

[5] Excludes $257,000 paid to Water Pollution Interstate Agencies as follows:
- $65,000 to Interstate Sanitation Commission.
- $25,000 to Interstate Commission on the Potomac River Basin.
- $105,000 to Ohio River Valley Water Sanitation Commission.
- $12,000 to New England Water Pollution Control Commission.
- $46,000 to Delaware River Basin Commission.
- $4,000 to Klamath River Compact Commission.

[6] Includes $17,000 withheld to cover assignment of Commissioned Officers in lieu of cash.

Office of Education

From Advice to Action

As the Nation began to look to education as one of the principal means of assuring the long-term growth and safety of our democratic society, a responsibility far more challenging than it had ever known in its nearly 100 years of life was placed upon the Office of Education. From a more or less consultative and advisory role, the Office was asked by the Congress to turn to programs aimed at actively advancing and strengthening the Nation's educational system.

The first great step in this direction came with passage in 1958 of the National Defense Education Act. Carrying an appropriation of $115,300,000 for the Office of Education, this seemed at the time to be a giant stride. In the sense that it represented a tangible recognition of the Federal interest in education, it was indeed that. In terms of financial commitment, however, it has been dwarfed as the Congress placed greater and greater responsibilities upon the Office of Education. These responsibilities are consonant with an increasing recognition of the part that the Federal Government must play, as a partner of States, communities, and higher educational institutions, in providing more and the best of educational opportunity to all Americans to the extent that they can benefit from it.

This recognition reached new heights with approval by the 88th Congress of a new array of education legislation, together with renewal on expanded terms of legislation enacted in the preceding 5 years.

Under new legislation, the Office of Education is given the task of administering programs which will help to expand the facilities of higher education, to broaden adult education, to raise the qualifications of teachers, to strengthen vocational and technical schools, to improve

public library services, to extend school guidance and counseling, and to promote research into sound methods of improving education generally.

To carry out these new programs, and to continue older ones, predicates an appropriation of about $1.5 billion for the 1965 fiscal year, double the amount appropriated for the fiscal year ended June 30, 1964. Nearly all of this, like fiscal year 1964 appropriations, is for grants-in-aid and loans to States, localities, institutions, and individuals, and for contracts made with them. This report is an accounting of how these grant, loan, and contract funds were spent on programs of (1) educational assistance, (2) educational research and development, and (3) international education in fiscal 1964.

Educational Assistance

Educational assistance—defined broadly as assistance to schools and colleges for instructional programs and buildings rather than for, say, research—is administered within the Office of Education by the Bureau of Educational Assistance Programs. Assistance programs are carried out under seven general categories:

1. Those programs falling under titles II, III, IV, V, and VI of the National Defense Education Act (NDEA).[1]
2. Vocational and Technical Education.
3. Compensation to "federally impacted areas."
4. Payments to Land-Grant colleges and universities.
5. Training under the Area Redevelopment Act and the Manpower Development and Training Act.
6. Grants for educational television facilities.
7. Aid to Cuban refugees.

National Defense Education Act

Titles II and IV, part B of title V, and title VI of NDEA are concerned with higher education activities. All these titles, due to expire June 30, 1964, were extended for another year under Public Law 88–210, signed by the President on December 18, 1963. As a matter of convenience, they are considered together here, with discussion of titles III and V–A following.

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[1] Title I enacts and authorizes the entire NDEA program. Titles VII and X bearing on research and statistics, are administered by the Bureau of Educational Research and Development of the Office of Education. (See page 256.) Title VIII, dealing with vocational education, was made a permanent law by the 88th Congress (No. 2 above). Title IX, providing grants for science education, is administered not by the Office of Education but by the National Science Foundation.

TITLE II—STUDENT LOANS

Since the beginning of the program in 1959, approximately 600,000 college and university students have borrowed about $453 million from NDEA loan funds. Federal allocations have totaled $400 million and institutional contributions another $44.5 million, bringing the aggregate National Defense Student Loan fund to $444.5 million over the 6 years. That the total amount actually borrowed is in excess of that sum is explained by the fact that repayments on loans are deposited in the various institutional funds and become available for relending.

In fiscal year 1964, Federal capital contributions totaling $108.4 million were made to National Defense Student Loan Funds established at 1,574 colleges and universities, and this amount was augmented by another $12 million contributed by the institutions in accordance with statutory requirements. During the same year, approximately 247,000 needy students borrowed about $119.5 million. The average loan was $484.

By the end of fiscal year 1964, about 63,000 former borrowers had applied for partial loan cancellations in the amount of $8.1 million under a provision forgiving 10 percent of a loan for each year (up to 5 years) that a borrower teaches in public elementary or secondary schools. As of the same date, collections by institutions amounted to $20.6 million.

Amendments to NDEA contained in Public Law 88–210 effected the following major changes in the Student Loan Program: (1) Increased the authorization for Federal contribution to $125 million for fiscal year 1964 and $135 million for fiscal year 1965; (2) increased the ceiling on the Federal contribution to any one institution from $250,000 to $800,000 per year; (3) extended teacher forgiveness provisions to teachers serving in elementary and secondary overseas schools of the U.S. Armed Forces and in schools conducted by the Federal Government within the States; and (4) extended deferment on loan interest and repayments to students continuing their education in colleges or universities outside the United States.

TITLE IV—GRADUATE FELLOWSHIPS

The purpose of this program is to increase the number of well-qualified college and university teachers by awarding fellowships (the majority for 3 years) to graduate students working toward their doctoral degrees in preparation for academic careers. In addition, financial assistance is given to those institutions where title IV fellows are enrolled to enable the schools to expand and strengthen their graduate programs. In approving programs for NDEA support, the Office of Education is also concerned with encouraging more widespread geographic distribution of graduate level training facilities.

Award of 1,500 new fellowships in 1964 brought to 8,500 the number given over the first 6 years of the program, at a total cost of approximately $101 million.

The 1,500 new appointees are enrolled at 156 institutions in 695 programs and represent the following distribution among academic areas: Social sciences, 384; humanities, 355; biological sciences, 208; physical sciences, 258; engineering, 160; and education, 135.

In addition, under authority contained in Public Law 88–210, 29 fellowships vacated prior to completion have been reawarded in 1964 for the periods remaining on the original awards. Previously, uncompleted fellowships lapsed.

All told, more than 4,100 title IV fellows will be studying in 1964–65, in 1,052 programs at 168 graduate schools, with total support estimated at $21.2 million.

TITLE V–B—COUNSELING AND GUIDANCE TRAINING INSTITUTES

Under this program, the Office of Education contracts with colleges and universities to conduct short-term and regular-session institutes for improving the qualifications of personnel engaged, or preparing to engage, in the counseling and guidance of students in the Nation's schools.

In December 1963 the program was broadened to extend eligibility for training to include counselors or prospective counselors of 7th- and 8th-grade students as well as of those in grades 9 through 12.

The 64 institutes approved in 1964 at a cost of $7.25 million provided for about 1,920 enrollees—1,170 at short-term institutes designed for the professional upgrading of personnel who have already completed an appreciable part of a counselor education program. Of the 25 regular session institutes, 21 were designed for teachers with little previous training in counseling to complete a full year of preparation in the field; the remaining 4 provided training beyond the first graduate year.

During the first 6 years of NDEA, enrollments at 480 Counseling and Guidance Training Institutes totaled about 15,700, at a cost of nearly $37 million.

TITLE VI—LANGUAGE DEVELOPMENT

This title aims to strengthen instruction in modern foreign languages at all levels of education through four allied activities—language and area centers, modern foreign language fellowships, language research, and language institutes.

Language and Area Centers

The purpose of these Centers is to stimulate the study of critically needed languages and of subjects related to the areas where these

languages are spoken, which are necessary for full understanding of a culture. At present 55 centers, located at 34 colleges and universities, are receiving NDEA assistance.

Federal funds support instruction in nearly 70 of the more than 90 languages offered at the Centers. (Some centers offer work in other languages without Federal support.) Instruction in Arabic, Chinese, Hindi-Urdu, Japanese, Portuguese, Russian, and Spanish receive the largest proportion of Federal aid.

In 1964, allocations from the Office of Education to the Centers amounted to $2.58 million, making a total of $11 million obligated over the 6 years of NDEA. Federal funds are used primarily for instruction and must be matched by contributions from the participating colleges and universities.

Modern Foreign Language Fellowships

Fellowships are awarded to students preparing for college teaching, government service, or for employment in a professional or technical activity (nonprofit and nonsectarian) which contributes significantly to the conduct of the Nation's economic, cultural, educational, scientific, social, or political relations and in which proficiency in the language studied under the fellowship is highly desirable.

In 1964, 1,074 modern foreign language fellowships were awarded, mostly to graduate students, at a cost of approximately $3.6 million. Undergraduates accounted for 196 of the grants made for intensive summer study of certain critical languages. Postdoctoral fellowships for a full year of language study were awarded for the first time in 1964 to 13 liberal arts college teachers to assist them in administering or teaching undergraduate programs of non-Western studies.

Over the 6 years of NDEA's operation, more than 2,600 students have received NDEA title VI fellowships to study over 60 languages, at a cost of more than $16 million. In addition, Fulbright-Hays awards for study and research abroad were offered for the first time in 1964 to advanced graduate students and NDEA Language and Area Center faculty members. (See page 264 in section on International Education.)

Language Research and Studies

Under this program the Office of Education awards contracts to institutions, organizations, and individuals to conduct surveys and investigations of language needs and resources, to develop and evaluate new methods of language instruction, and to prepare specialized foreign language teaching materials, such as basic courses, grammars, readers, and dictionaries.

Projects approved in 1964 include: A survey by Yale University of intensive programs in the uncommon languages, summer 1964; a trial program to test the effectiveness of a self-instructional course in Spanish among high school students by the Inglewood Unified School District, Inglewood, Calif.; and preparation of a reference grammar for Hindi and Urdu, the most important languages of India and Pakistan, by the University of Chicago.

Forty-seven language research and studies contracts were awarded in the fiscal year 1964, costing $1,819,986.

Over the 6 years of the program, 295 such contracts have been awarded for 271 projects involving about 125 languages at a cost of over $14 million.

Modern Foreign Language Institutes

These institutes are designed to improve the quality of foreign language instruction in the Nation's elementary and secondary schools by providing teachers with advanced training, particularly in the use of new teaching methods and instructional materials.

Institutes are conducted by colleges and universities under contract with the U.S. Office of Education and are held both during the summer and academic year.

In December 1963 the NDEA institute provision was broadened to authorize institutes for teachers of English as a second language. Two such institutes were held during the summer of 1964, enrolling 108 elementary and secondary school teachers engaged in teaching English to children for whom it is not the native tongue.

In 1964 funds totaling $7.25 million were obligated for the support of 85 institutes enrolling approximately 4,368 teachers. Over the 6-year span of the program, some 17,400 elementary and secondary school language teachers have attended 386 NDEA-supported institutes held both in the United States and in foreign countries, at a cost of about $33 million.

(This concludes discussion of those parts of the NDEA pertaining to higher education which are administered by the Bureau of Educational Assistance Programs of the Office of Education. Following are reports on the two other parts which are administered by that Bureau.)

TITLE III—INSTRUCTION IN SCIENCE, MATHEMATICS, AND MODERN FOREIGN LANGUAGES

To strengthen elementary and secondary school instruction in science, mathematics, and modern foreign languages, the NDEA authorizes the use of Federal funds under this title for two purposes: (1) To purchase equipment and materials and to do minor remodeling of space

where they will be used, and (2) to expand or improve State supervisory or related services to public schools in these areas, and to administer the State plan for improvement in instruction. For these programs, the Congress appropriated $47.75 million, in the fiscal year 1964, and all States and Territories except American Samoa, Arizona, the Canal Zone, and Wyoming participated.

Under the first part of this program, grants may be made to public schools and loans to nonpublic schools. The Federal grants to public schools must be matched 50–50 by States or localities. In fiscal 1964 for such grants, $42.63 million was allotted to the States, and $18.44 million was paid to them. In addition, an amount of $34.9 million was obligated from the 1963 appropriation which was available in fiscal year 1964, of which $33.4 million was paid to the States. The States reported a total expenditure of $130.96 million, including $62.49 million in Federal, $1.25 million in State, and $67.27 million in local funds. These figures include estimates for 7 States.

State educational agencies approved 70,126 projects submitted by local districts and estimated to cost $131.3 million in Federal, State, and local funds. Projects in science represented 73 percent of the cost, those in mathematics, 10.8 percent, and those in modern foreign languages, 16.2 percent. These data include estimates for 5 States. The number and cost of projects to buy equipment greatly exceeded those to remodel space.

Under amendments to title III in December 1963 the U.S. Commissioner of Education was authorized to reallocate to other States the allotment not required by any particular State, and the provision that a State's allotment would be available in the fiscal year following that for which it was made was rescinded. Published materials other than textbooks, test-grading equipment, and specialized equipment for audiovisual libraries were included in equipment on which funds may be spent. Thirty States reported that among them they would not need approximately $15 million of their 1964 shares of funds for equipment. Under his new authority, the Commissioner reallotted $10 million of this money to 18 other States which had asked increased grants.

For loans to nonpublic elementary and secondary schools, $750,000 was available for allotment to the States. Forty loans totaling $520,780, were approved. Three in California totaled $16,950; two in Colorado, $16,400; one in the District of Columbia, $17,000; two in Florida, $5,020; four in Illinois, $36,760; one in Indiana, $5,100; one in Kansas, $9,000; two in Massachusetts, $75,000; two in Michigan, $50,250; three in Minnesota, $18,350; one in New Jersey, $4,000; eleven in New York, $119,250; one in Oklahoma, $1,100; one in Pennsyl-

vania, $36,350; one in South Carolina, $8,400; one in Texas, $46,900; one in Virginia, $3,500, and two in Puerto Rico, $51,450.

Repayments since the program began have aggregated $1,065,602 of $3,649,579 lent. In fiscal year 1964, six loans in the total amount of $42,655 were repaid in full, bringing to 20 in number and $176,179 in amount the loans repaid in full.

Federal funds for State supervision and administration are in the form of grants to States which must be matched 50–50 by the States. In fiscal 1964 the States were allotted $3.37 million, of which $3.0 million was paid to the States. Expenditure of $6.43 million was reported by the States, $3.11 million in Federal and $3.32 million in State funds. Figures include estimates for 7 States.

The States employed the full-time equivalent of 222 special supervisors of science, mathematics, and modern foreign languages. There were only 33 such specialists before the National Defense Education Act was passed. Now there is the full-time equivalent of 97 in science, 69 in mathematics, and 56 in foreign languages.

Twenty-three States said they would not need a total of $654,191 for supervision and administration, and under his new authority the Commissioner reallotted $269,761 for this purpose to 18 States.

TITLE V–A—GUIDANCE, COUNSELING, AND TESTING

Grants to State educational agencies to assist them to establish and maintain programs of testing and guidance and counseling are authorized under this part of NDEA. Public Law 88–210 increased this authorization for fiscal year 1964 and the succeeding one to $17.5 million from the $15 million previously authorized. Special arrangements also may be made to give tests to nonpublic secondary school students.

The new law also increased from $20,000 to $50,000 the minimum allotment to any State, authorized the U.S. Commissioner of Education to reallocate to other States amounts allotted to but not used by any State, and extended the programs of testing and guidance and counseling downward to include seventh-grade students.

In fiscal year 1964 allotments to the States were $15 million, payments to them were $14 million, and expenditures reported by them were $169.5 million, including $14.9 million in Federal, $8.1 million in State, and $146.5 million in local funds. Expenditures include estimates for 1 State. Although only 50–50 matching is required, State and local resources overmatched the Federal contribution by a ratio of 10 to 1.

Under the title V–A program, 22 million aptitude and achievement tests were given to public school students. In addition, 156,000 tests

were administered under contract with the U.S. Office of Education to more than 136,000 students in 779 nonpublic secondary schools in 37 States, the District of Columbia, and Guam at a Federal half-share cost of $47,652. The States gave an additional 600,000 tests to students in nonpublic secondary schools.

The full-time equivalent number of public secondary school counselors increased to about 29,000, about 142 percent over the estimated 12,000 before enactment of the NDEA. Since 1958–59 the ratio of full-time counselors to secondary students in public schools has much improved. In 1958–59 there was 1 to every 960 students. There is now 1 to every 528. Schools with guidance and counseling programs meeting State standards enrolled 11,000,000 out of the 15,000,000 students reported by the States in secondary grades during 1963–64. Members of professional guidance staffs in State educational agencies have increased 242 percent while the NDEA has been in effect—from 100 to 342.

Forty-nine States, the District of Columbia, and three territories took part in the title V–A program. American Samoa, Canal Zone, and Wyoming did not participate.

Vocational and Technical Education

The aim of vocational and technical education is to provide manpower with the skills and education needed to support the growing and changing American economy. This goal was not changed during fiscal year 1964, but the scope of Federal-State cooperative programs of occupational training was broadened by the Vocational Education Act of 1963.

The new act is built upon several previous statutes, basically the Smith-Hughes Act of 1917 and the George-Barden Act of 1946. Title VIII of the NDEA, which established the area vocational education program, actually was an amendment to the George-Barden Act but, as part of the NDEA, was on a 4-year renewable basis. The new law made the area program permanent as part of the George-Barden Act, and title VIII passed out of existence as such. The area program is centered principally on the training of highly skilled technicians—laboratory assistants, certain specialized draftsmen, and other workers who require somewhat more training, and at a higher level, than does the skilled laborer. Most of this training is given at a level above high school.

The new act declares that the purpose of the program is to maintain, extend, and improve vocational-technical education to assure that persons of all ages in all communities have access to vocational training or retraining of high quality. The training must be suited to their

needs, interests, and abilities and be realistic in view of actual or anticipated opportunities for gainful employment.

The act increased the authorized amount of Federal matching grants to States. Among other things it also authorized: Experimentation with residential vocational schools; work-study programs for those who need part-time earnings to stay in school; teacher training and development of curriculums and other instructional materials; research and experimental and pilot projects to solve educational problems, especially those of the socioeconomically handicapped; and area vocational school construction.

No funds were appropriated for new activities in fiscal 1964, but Federal-State vocational and technical education programs continued to operate under the Smith-Hughes and George-Barden Acts and other statutes. Under these laws, Federal funds are allotted to the States and territories for vocational education in Agriculture, Distributive Occupations, Home Economics, Trades and Industry, Practical Nursing, and Fisheries Occupations, and for the Area Vocational Education program. Vocational education programs provide training for youth and adults in regular day schools and through extension courses.

Meanwhile, preparations were made by the Division of Vocational and Technical Education to put the new act into effect as soon as funds were voted.

AGRICULTURAL EDUCATION

Agricultural employment opportunities today extend beyond on-farm occupations. They include the field called "agri-business," which covers services to farmers and the processing, manufacturing, and distribution and marketing of agricultural products, machinery, and chemicals. Trained workers for agri-business are needed in addition to highly skilled farmers and agricultural technicians to utilize scientific and technological developments in agriculture.

A decrease in the number of farms in recent years has resulted in fewer young men and women with farming backgrounds, and increasing numbers of rural nonfarm and urban youth are being enrolled in vocational agriculture courses and are being placed for occupational experience on farms and in other agricultural establishments.

Since 1960, enrollments of youth in high school vocational agricultural classes have increased 25,865 to reach a high of 488,624 in 1963. Approximately 75,000 of these students completed three or more years of vocational agriculture training. This number falls short, however, of meeting the estimated 125,000 farming replacements needed an-

nually and the demand for workers in agri-business and professional occupations in agriculture.

Enrollments in young farmer and adult farmer classes have risen by only 6,929 since 1960. This means that these courses at present reach less than 7 percent of eligible farmers.

HOME ECONOMICS EDUCATION

Home economics instructional programs serve two major purposes: (1) Preparation for homemaking and (2) preparation for gainful employment in occupations involving knowledge and skills in home economics subjects. Such programs are provided for in-school and out-of-school youth and adults.

During 1963–64, emphasis in secondary school homemaking programs was on making home economics instruction more widely available to students of varying academic abilities and with diverse vocational and career interests. Instructional programs have been redesigned to give greater attention to the study of home management and related consumer problems, child development, family relations, health and nutrition, and housing.

A major focus of the Home Economics Branch was on a long-range curriculum project to identify basic concepts in home economics appropriate for secondary schools. Two-week curriculum workshops held in cooperation with four institutions of higher education included high school home economics teachers, home economics teacher educators, supervisors, specialists from colleges representing home economics subject matter fields, and specialists in related and supporting disciplines. Estimated enrollment in home economics continued to be approximately 2.5 million youth, of which well over 1 million were enrolled in vocational day school programs.

During 1963–64 home economics education instruction was provided to help women prepare for the dual role of homemaker and wage earner. There was a continuation of cooperative efforts among welfare, health, housing, and educational agencies designed to meet homemaking education needs of different groups and adults. These special types of instructional classes were attended by approximately 675,000 adult women and men.

Examples of occupations for which curriculum guides have been prepared are: Child Day-Care Center Worker, Visiting Homemaker, Companion to an Elderly Person, Homemaker's Assistant. Post high school programs are being designed to prepare persons for supervisory and managerial positions such as Food Service Supervisor, School Lunch Manager, Child Day-Care Center Assistant, Management Aide, in Low Rent Housing Project, and others which require more highly

specialized training than is offered in the secondary school program but at less than a college degree level.

TRADE AND INDUSTRIAL EDUCATION

Enrollment in trade and industrial education programs, based on a sampling of States, is estimated at slightly over 1 million youth and adults, with considerable gains noted over the past year in preparatory programs for the unemployed and workers in obsolescent occupations threatened with loss of employment.

As some occupations become obsolete, new ones develop. It is estimated that several thousand new jobs will be cataloged in the latest edition of the U.S. Department of Labor's *Dictionary of Occupational Titles*. To fill resulting employment needs as rapidly as possible and provide up-to-date instruction, a number of States are stressing part-time cooperative programs in which students spend half of their time in school and the other half learning new trades through supervised on-the-job training.

Rapid technological advances in industry have caused changes in still other occupations. This was reflected in growth in evening extension programs, with increased numbers of workers availing themselves of opportunities to update their knowledge and skills to meet continuing employment requirements. Programs for in-school youth continued to expand, with a growing emphasis noted in pilot programs in semi-skilled or single-skilled occupations for students lacking requirements for regular skilled trades.

In order that State and local personnel in the fields of supervision and teacher-education might be better prepared to implement the new Vocational Education Act of 1963, a national clinic was held with representatives from 50 States and the Territories. Methods were discussed for meeting problems of rapid program expansion.

Serious shortages were reported by several States of trained personnel to fill leadership positions required at State and local levels to implement program expansion. To meet this need, a national leadership clinic was devoted to the many areas involved in program administration.

DISTRIBUTIVE EDUCATION

Increased employment opportunities in the service industries, as reported by the U.S. Department of Labor, accounted for greater emphasis on training programs in merchandising and marketing.

Cooperation with other Federal agencies has served to implement export trade programs with the U.S. Department of Commerce, seafood merchandising with the U.S. Department of Interior, and instruc-

tional materials in management training with the Small Business Administration.

Major State activities have included the following:

1. A Governor's Conference on Education for Distribution in Indiana.

2. Experimental programs for American Indians, school dropouts, rehabilitation clients, and continuation school enrollees.

3. Programs focusing on job opportunities which require the cooperative efforts of distributive educators, and vocational educators from the fields of agriculture, industry, and home economics.

4. Student marketing studies implemented by major marketing organizations.

5. Post-high school programs in 25 States as contrasted with 6 in 1959.

6. The establishment of teacher education programs in nine additional institutions.

OFFICE EDUCATION

The office education program supports training for a field engaging more than 10 million persons, some 15 percent of the employed. The program covers such fields as automation, data processing, operational systems, and the coordinating and communicating of information.

The office education program provides consultative services to States, encourages the development of office training, and supports special vocational programs established by Congress. These special programs are under the Area Redevelopment Act and the Manpower Development and Training Act. In both of these, office occupations has been one of the most popular areas of training. Curriculum guides were prepared in cooperation with the manpower development and training program for stenographic-secretarial, clerical and record-keeping, and peripheral data processing occupations.

The 1963 Vocational Education Act included authorization for training in office occupations also. The potential of this program is indicated by the fact that, of all June 1963 high school graduates who got jobs, 37 percent entered the world of work through the office.

TECHNICAL EDUCATION

In making permanent title III of the George-Barden Act, the Congress recognized the continuing need for highly skilled technicians and the accomplishments of these federally assisted technical education programs. It authorized $15 million annually for such programs.

To achieve one of the objectives of title III, a number of States have made provisions to implement vocational-technical education on an area basis to serve better the needs of entire States. Fifty-two new area vocational-technical schools began operation in September 1963, and 132 new schools were under construction or in the planning stages in fiscal 1964. State educational structures are being revised to accommodate the need for 2-year post-secondary technical education programs.

Under title III Federal funds stimulated the purchase of equipment required for laboratories to instruct technicians in such occupational fields as electronic data processing, electronics, instrumentation, chemistry, and metallurgy. Area programs are now well established as an important part of vocational education in 49 States, the District of Columbia, and Puerto Rico. In fiscal year 1964 over 66,000 students were enrolled in post-secondary programs and over 13,000 in secondary programs.

Graduates of technical education programs numbered 11,612 in fiscal year 1964. Of those graduates available for placement, 75 percent were placed in the field for which they were trained, 23 percent in a field related to their training, and only 2 percent were unemployed immediately after graduation. The average annual starting salary for post-secondary graduates was approximately $4,860, and for high school graduates $3,804.

Studies are being made by the States and communities to review current operations and to determine the potential for extending technical education; to analyze the extent, character, and capacity of technical education in the States; and to review current training articulation and to recommend appropriate structural modification.

With the advent of automation, increased efficiency, and economic change, certain employment opportunities are disappearing from the labor market. Technical courses to upgrade and update employed adults are being conducted in all of the States, the District of Columbia, and Puerto Rico. In fiscal year 1964, over 116,000 such persons were enrolled in technical education extension courses.

The changing pattern of manpower needs has begun to focus attention on new programs in engineering and related occupational fields. Agricultural and life science, medical and biological, and forestry, pulp and paper technologies are among the emerging fields. Electronic data processing for science, engineering, and business is one of the newest and one of the fastest growing areas. The acute shortage of teachers in this area resulted in a cooperative effort by six institutions, State boards for vocational education, and the U.S. Office of Education to provide training in a minimum length of time.

To assist in the development and improvement of instruction in technical education programs, the Technical Education Branch is preparing or planning suggested curriculum guides in chemical, metallurgical, instrumentation, and civil technologies and in scientific data processing. A previously published curriculum guide in electronic technology is being updated. The importance of adequate library facilities for students in technical education programs is being stressed by the preparation of a library guide for technical and related programs.

Federally Impacted Areas

Federally impacted areas are localities which have been heavily affected by the fact that large Federal installations, military or civilian, have increased the load of school children while at the same time, in many cases, removing large areas of land from local tax rolls.

In recognition of the burden imposed on these localities, the Congress in 1950 passed two public laws, one (Public Law 815) providing Federal money to assist in construction of local schools, and the other (Public Law 874) providing funds to assist local schools with operating expenses.

PUBLIC LAW 815

From fiscal year 1951 through fiscal 1964, the Congress appropriated $1,175,345,000 for school construction. State and local sources added about $715 million, making a total of approximately $1.9 billion to house more than 1.7 million children.

During fiscal year 1964, Federal funds were reserved in the amount of $11,129,559 for 67 school districts to construct 80 projects. To these funds the school districts were to add approximately $6.8 million, the total to be used to construct 645 classrooms and related facilities for 18,000 children. In addition, the Federal Government authorized construction for projects located on Federal property which will provide 177 classrooms to house an estimated 5,180 children.

PUBLIC LAW 874

In the 1964 fiscal year 4,076 school districts were found eligible for $284 million in Federal funds, about 5.3 percent of the total current operating expenses of schools eligible for Federal assistance under the act. These funds were paid to support schooling of 1.9 million federally connected children. The eligible school districts receiving this assistance had an estimated attendance of 12,555,430 pupils, about ⅓ of all public elementary and secondary school children in the Nation. In addition, a little over $17 million was allocated to other Federal

agencies to provide school services for 42,406 children residing on Federal property. Some $2,029,124,000 has been appropriated for this program since its enactment in 1950.

SUITABLE FREE PUBLIC EDUCATION

Under section 10 of Public Law 815 and section 6 of Public Law 874, if no local educational agency is able to provide "suitable free public education" for children residing on Federal property, the Commissioner of Education is required to make such arrangements as may be necessary to provide education for these children. In March 1962 the Secretary of Health, Education, and Welfare announced a ruling that local public education which is segregated by race is not "suitable free public education" and that arrangements would be made in appropriate situations to provide "suitable" education by September 1963 for children residing on Federal property.

During the fiscal year 1963 the Department and the Office of Education took steps to carry out the ruling by (1) seeking voluntary compliance of local educational agencies in the assignment of children residing on Federal property to their schools, without regard to race; or (2) arranging for the Federal construction and operation of schools on Federal property in case such compliance could not be secured and it appeared to be both necessary and feasible to make such arrangements looking to September 1963.

During the fiscal year 1964, under the "suitability ruling," construction was completed on eight projects for elementary children on military bases in four States where local educational agencies could not give assurance that on-base children would receive suitable free public education. These projects were at Fort McClellan, Fort Rucker, and Maxwell Air Force Base in Alabama; Fort Stewart and Warner Robins Air Force Base in Georgia; England Air Force Base in Louisiana; and Fort Jackson and Myrtle Beach Air Force Base in South Carolina. These schools were operated by base commanders. The total cost for construction of the eight school facilities was $4,003,600, and the operating cost in fiscal 1964 was $1,593,299. There was a total of 4,412 children in average daily attendance at these eight on-base schools.

Land-Grant Colleges

Through the Division of College and University Assistance, payments aggregating $14,500,000 were made in fiscal year 1964 to the 50 States and Puerto Rico for distribution among the 68 land-grant colleges and universities. This total amount is composed of a permanent appropriation of $2,550,000 authorized by the Second Morrill Act, as amended, and the following annual appropriations authorized by

the Bankhead-Jones Act of 1935, as amended: $7,650,000 for payments in equal shares to the several States and Puerto Rico, and $4,300,000 for allotments on the basis of population.

Area Redevelopment and Manpower Development and Training Acts

While the focus of each of these acts is sharply different, the training offered under them is quite similar.

The Area Redevelopment Act of 1961 (Public Law 87–27) is aimed at assisting whole geographical areas designated by the Secretary of Commerce as areas of persistent or chronic unemployment. If such areas have an overall economic development plan, they are eligible to receive funds for the training of unemployed or underemployed persons in occupations holding employment opportunities for these persons. The Secretary of Labor designates such occupations, and the Secretary of Health, Education, and Welfare is responsible for providing training programs, which is done through the Office of Education.

The Manpower Development and Training Act of 1962 (Public Law 87–415), as amended by Public Law 88–214 in December 1963, is aimed at assisting unemployed or underemployed individuals, wherever located, and to upgrade the skills of those who face technological unemployment. Training must be in occupations in which there is reasonable expectation of employment. The Department of Labor identifies the employment possibilities and selects the trainees, and the Department of Health, Education, and Welfare is responsible for arranging with State agencies for training programs.

AREA REDEVELOPMENT ACT TRAINING

Occupational training projects were approved for operation in 37 States and Puerto Rico during fiscal year 1964 under provisions of section 16 of the Area Redevelopment Act. A total of 304 projects was approved for the training of 11,603 unemployed and underemployed persons, at a cost of $3,121,445 exclusive of training allowances.

The chart below furnishes a comparative study of ARA training during the 3 fiscal years of its operation:

Fiscal year	No. of States [1]	No. of projects	No. of trainees	HEW costs
1962	36	154	9,200	$2,881,000
1963	42	316	13,754	3,280,000
1964	38	304	11,603	3,121,445

[1] Including territories.

Thirty-seven percent of all the projects were in the five States of Michigan (29), North Carolina (26), Oklahoma (23), West Virginia (18), and Ohio (17). Approximately 60 percent of all projects and trainees were in 10 States. These projects required the expenditure of $1,948,117 or 62 percent of the total approved costs for fiscal year 1964. Eight States had only one project each.

The health occupations made the most extensive use of ARA training of all the employment groups and in the greatest number of States. Sixty-three projects were approved in this area for the training of 1,916 persons in 21 States. These represented almost 21 percent of the total projects and 16.5 percent of the 11,603 trainees. Fifty of these projects were for the training of Nurse Aides and five for Psychiatric Aides.

The following tabulation shows the major fields of employment for which ARA training was approved:

Field of employment	*Number of projects*	*Different kinds of courses*	*Number of States*
Health occupations	63	5	21
Agriculture	39	14	11
Building construction, maintenance, etc	33	16	9
Office occupations	28	6	11
Manufacturing, miscellaneous industries	27	16	8
Apparel industry	26	4	13
Welding	24	4	13
Automotive service, maintenance, and operation	23	9	15
Food service	19	2	10
Machine tool operation	17	5	9
Home service	5	4	4

Some 15 miscellaneous projects were approved in 17 States for training 794 persons in 15 different occupations including: Floral designer, vocational adviser, State timber improvement specialist, stevedore, band instrument repairman, women's garment salesperson, and glassblower.

ARA provided training for Indians on 14 reservations in Arizona, Minnesota, Montana, New Mexico, North Dakota, South Dakota, and Wyoming. Twenty-two projects and supplements were approved to train 660 persons in such occupations as arts and crafts, beadwork, building trades, ranching, feather decorating, nurse aids, and sheepshearing.

MANPOWER DEVELOPMENT AND TRAINING ACT

During fiscal year 1964, a total of 114,659 individuals were referred to institutional training projects in 49 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

More than 60,000 were enrolled in training classes in more than 400 different occupations. The 1,938 approved training projects were funded at a total cost of $79,261,697 for the institutional training.

Manpower training programs have experienced a high completion rate. Some 6 out of 10 of all trainees who started courses have completed them. Placement rates are averaging approximately 70 percent of trainees completing training programs.

To meet the needs of the large numbers of unemployed youth and adults with deficiencies in reading, writing, and arithmetic and other socioeconomic problems, additional time has had to be allotted to the usual occupational training courses.

The first steps toward meeting these problems were taken in 1963, in a few institutional experimental and demonstration projects in which literacy training and guidance and counseling were included. Programs were expanded in fiscal year 1964 to provide large-scale multiple training projects where more basic education, counseling, and guidance for all youth and adults could be provided.

Experimental and demonstration projects sponsored by the Division of Vocational and Technical Education of the Office of Education to provide for the problems of youth and adults from disadvantaged groups were established in St. Louis, Philadelphia, Chicago, Tuskegee, Ala.; El Mirage, Ariz.; Hunters Point, Calif.; Hartford, Conn.; Wilmington, Del.; Washington, D.C.; Miami, Fla.; Carbondale, Ill.; and many other cities. These projects ranged from providing guidance, counseling and skill exploration to disadvantaged youth in large urban centers to programs for rural youth. Other projects were for older workers who were displaced from mining and other occupations.

Statewide residential programs were established at Niles, Ohio, and Camp Atterbury, Ind.

In order to assist the States in improving the instructional programs in the new and emerging occupational areas, 37 curriculum guides were developed or begun in cooperation with State staffs; institutions of higher education; and business, labor, and industrial representatives. Subjects ranged from *Hotel and Motel Housekeeping Aide* to *Forestry Aide* and *Machine Operator.*

Educational Television Facilities

Public Law 87–447 provides for matching grants to assist in the construction and expansion of noncommercial educational television broadcast stations. The act authorizes a total of $32 million for these purposes over a 5-year period, terminating June 30, 1967. Federal

grants may be made for up to 50 percent of the reasonable and necessary cost of an eligible ETV project, plus an additional amount of up to 25 percent of the cost of eligible transmission apparatus owned by the applicant on the date the application is accepted for filing.

Authority to recommend action with respect to grants is delegated to the Commissioner; processing and evaluation of applications is delegated to the Educational Television Facilities Program in the Bureau of Educational Assistance Programs.

The appropriation for the fiscal year 1964 was $6.5 million. With $1.5 million appropriated in the last few months of fiscal 1963, the total appropriation by the end of fiscal 1964 was $8 million, of which $7.7 million was available for ETV grants.

During fiscal 1964 a total of 69 applications, representing 34 States, was accepted for filing, requesting a total of $13,463,355 in Federal matching funds. (Among these were 19 States from which two or more applications had been accepted.)

A total of 33 grants was recommended for approval by the Commissioner, involving an obligation of Federal funds amounting to $5,423,381. Among these were 18 grants for proposals to activate new ETV stations in 13 States. Estimated population to be served by these new stations is 26 million persons. Grants ranged in amount from $59,222 to $468,790; the average activation grant was $185,348.

A total of 15 recommendations were for proposals to expand facilities of existing ETV stations in 12 States. Population served by expansion projects is estimated at 19,560,000 persons. Grants in this category ranged from $14,351 to $323,077. The average was $150,175.

ETV funds which are appropriated but which are not obligated by the end of the fiscal year continue to remain available for grants.

Cuban Refugee Assistance

Since 1961 the Commissioner of Education has administered three programs in support of education for Cuban refugees: (1) For elementary and secondary pupils, and adults needing vocational training, (2) for college and university students, and (3) for professional persons.

ELEMENTARY-SECONDARY AND VOCATIONAL STUDENTS

These activities are carried out by the Dade County (Florida) Board of Public Instruction. The Office of Education pays 60 percent of the cost of educating children from kindergarten through 12th grade, and $0.48 per hour for class instruction and $0.60 per hour for shop instruction for adults.

Approximately $5.7 million was provided as the Federal share of the cost of educating about 17,000 children during fiscal year 1964, and $50,000 was paid toward the cost of textbooks and instructional materials.

During the year $1,167,635 was provided towards the cost of giving about 25,000 adults more than 2 million hours of instruction in English and in vocational subjects and special training programs which give the greatest promise of preparing Cuban refugees for jobs on a resettlement basis.

The Government also pays part of the salaries of Cuban refugees who are employed by Dade County as aides to interpret instructions, policies, and requirements of the public schools to the Cuban refugee students and their parents or guardians, and to help the students make the best adjustment possible. In fiscal 1964 this came to approximately $382,000 for 280 such aides.

COLLEGE AND UNIVERSITY STUDENTS

Aid to Cuban refugees who wish to enter U.S. colleges and universities is through loans. The terms of these loans were brought into general conformity in fiscal 1964 with those governing loans to U.S. students under the NDEA. (See page 237.)

More than 2,000 Cuban students received Federal loans totaling $1,717,288 during fiscal year 1964, and 3,186 have borrowed over $4 million since the beginning of the program. A total of 370 colleges and universities enrolling Cuban students have participated.

Institutes for Cuban Refugee Professional Personnel.—Purpose of this program is to assist exiled Cuban doctors, lawyers, teachers, and other professional persons to improve their qualifications and to provide them with instruction in English. Support is also given to research projects for studies in Cuban economics.

Direct grants are made to universities to cover the costs of this program. Fiscal year 1964 funds amounting to approximately $755,000 were allocated to seven institutions of higher education for support of a medical training program, Cuban economic research, and eight teacher training programs. Five of the teacher training programs were designed specifically to prepare enrollees to meet standards required for holding positions as instructors of Spanish in U.S. high schools.

Arrangements were made in fiscal 1964 to make available to Cuban professional persons enrolled in the institutes the same type of loan which is offered to college and university students.

Educational Research and Development

Financial support of programs administered by the Bureau of Educational Research and Development of the Office of Education are in five areas:

1. Cooperative research.
2. Education of handicapped children and youth.
3. Library services and construction.
4. NDEA title VII (new educational media) and section 1009 of title X (state educational statistical services).[2]

Cooperative Research

The purposes of this program are to develop new knowledge about major problems in education, to devise new applications of existing knowledge in solving such problems, and ultimately to improve the educational program at all levels in the Nation's schools.

To carry out these purposes, the Commissioner of Education is authorized to "enter into contracts or jointly financed cooperative arrangements with universities and colleges and State educational agencies for the conduct of research, surveys, and demonstrations in the field of education."

Funds for the support of research are distributed through contracts to colleges, universities, and State educational agencies on the basis of proposals which they submit. The cooperating institution or State educational agency contributes to the total cost of the project.

Proposals for research projects are submitted under one of six programs: (1) Basic research, (2) curriculum improvement, (3) demonstrations, (4) small contracts, (5) research and development centers, and (6) developmental activities. Specialists from outside the Office of Education evaluate the proposals, after which a Research Advisory Council reviews the evaluation in terms of overall cooperative research policy and the need for research information in particular areas. The Commissioner of Education then approves those projects which he believes should be supported, taking into account the recommendations of the Council.

In its 8-year history, the program has received over 4,000 requests for support of research and development projects. Of these requests, more than 900 have been approved. One hundred and sixty-four colleges and universities and 25 State education agencies have participated in cooperative research projects. These projects have been

[2] See pp. 236–243 for information on other titles of NDEA. Other sections of title X contain miscellaneous administrative provisions.

conducted in every State, the District of Columbia, the Commonwealth of Puerto Rico, and the Territory of Guam.

	1964
General research support	$6,516,562
Areas of special emphasis:	
Language, arts, and humanities	1,740,883
Social sciences	1,054,209
Human resources	857,127
Teacher preparation	330,186
Subtotal	3,982,405
Research and development centers	998,769
Total obligations	11,497,736

Two important new programs were started in 1964. One, the Small Contracts program, provides support for small-scale research or development with a minimum of delay for proposal review. Projects in this program may not exceed $7,500. Another program, which supports Research and Development Centers, is designed to concentrate resources on a particular problem area in education over an extended period of time. These centers require the services of a permanent core of professional staff members supplemented by the efforts of practicing educators for 5 to 10 years. Two such centers were established in 1964 and three more are planned for 1965. One center will apply the results of scientific research to educational processes, develop improvements in methods of instruction in light of this research, and make these improvements available to interested schools. The other center currently in operation is designed to uncover much of what is now unknown about the relations between schools, the public, and educational decisions, and also to find practical approaches for dealing with many of the difficulties facing educational administrators.

Basic research projects have produced significant findings in such areas as English, social sciences, talent development, and teacher education. Results are being applied under the curriculum improvement and demonstration programs. The English program continues to produce many important new developments; there are now over 75 cooperative studies in literature, language, composition, and reading skills, covering preschool to college years. There has also been an increasing interest in projects in social science.

Handicapped Children and Youth

Handicapped children include those who are mentally retarded, deaf, hard of hearing, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or otherwise impaired in health, who by reason thereof require special education. Major emphasis in programs of the Division of Handicapped Children and Youth is placed

on intramural studies and extramural research and demonstration projects and the preparation of professional personnel in the education of handicapped children and youth.

Grants to aid in the preparation of professional personnel for the education of handicapped children are made to public or nonprofit institutions of higher learning and to State educational agencies. Grants for research and demonstration projects in areas related to the education of handicapped children are made to institutions of higher learning, State educational agencies, local education agencies, and other nonprofit private or public educational or research agencies and organizations.

Funds distributed for the preparation of professional personnel during the 1964 fiscal year totaled $12,992,758. The total of funds awarded for extramural research and demonstration projects was $999,739.

The 50 State education agencies and 154 colleges and universities were authorized to make a total of 4,909 awards to teachers and students during fiscal year 1964. The total included 2,126 students to receive senior year traineeships or graduate fellowships for the full 1964–65 school year, 1,851 teachers of handicapped children to receive summer session traineeships, and 933 teachers of handicapped children to receive traineeships for short-term institutes on new developments in special education. Grants to stimulate the development of new training programs were made to 42 institutions of higher learning.

A total of 34 research and demonstration projects was approved. Eleven of these were in the field of the mentally retarded. Four related to emotionally disturbed children, one to children who are crippled or have other special health problems, five to visually handicapped children, three to children with speech and hearing handicaps, six to deaf children, and four to children with several types of handicaps.

In another type of program, the Division produces, acquires, and distributes films with printed captions superimposed so that the spoken material can be read by deaf viewers. With this modification, these films serve educational and recreational needs of groups of deaf individuals, adults as well as children. The program also engages in research and training in the use of film media as they apply to the deaf.

Film captions are produced by individuals or agencies working by contract with the Office of Education. Prints are deposited in forty locations throughout the United States and are available on application by an approved group or agency. Some 17,500 filmed items were available during the 1964 fiscal year.

During the 1964 fiscal year $1.5 million was available for the captioned films program. Seventy-five prints each of 59 educational titles

and 12 prints each of 44 general interest titles were acquired for distribution during fiscal year 1964. There are now 95 educational titles and 190 general interest titles, totaling 9,330 motion pictures. Other items contained in the library include filmstrips, TV kinescopes, slides, transparencies, and other related materials.

Expenditures were as follows:

Educational and training films	$378,581
General interest films	406,000
Research and training	345,936
Production	160,027
Distribution	34,864
Administration	116,000
Total	1,441,408

Captioned films were used by 968 civic and social groups, schools and classes for the deaf, and religious deaf groups as compared with 771 groups in the 1963 fiscal year. A total of 401,406 deaf individuals viewed one or more of the films.

Library Services and Construction

Public Law 88–269, the Library Services and Construction Act of 1964, signed by President Johnson February 11, 1964, renamed and amended the Library Services Act of 1956. The purpose of this act is to promote improvement and development by the States and territories of public library services and facilities in areas without such services or with inadequate services.

The earlier legislation dealt only with rural areas and was confined to improvement of library services. The new law extends the Library Services Act to urban areas and adds a new provision of Federal assistance to the States for the construction of public library buildings.

The Congress provided no funds to implement the new provisions during the 1964 fiscal year, so only rural areas were benefited during that year.

Federal funds of $7,500,000 were allotted to the 50 States and 4 outlying areas, of which $7,455,000 were matched and claimed by all eligible jurisdictions. Matching funds of States and outlying areas totaled more than three times the amount required to receive the Federal grants.

The act provides that each State receive a minimum allotment of Federal funds and that an additional amount be alloted in proportion to its population and be matched by the State in proportion to its per capita income, with 66 percent as the maximum Federal share and 33 percent as the minimum Federal share.

Budgets submitted by the States and outlying areas indicated that the total of Federal, State, and local funds used in the program would be expended as follows: $14,418,132 for salaries; $9,011,734 for books and library materials; $829,138 for equipment; and $5,307,708 for all other operating expenses.

As a result of the act, State libraries have improved their abilities to carry their responsibilities of statewide leadership and service; local library systems of service have increased in number; more cooperative programs between local libraries have been established; new professional librarians have been trained in addition to many librarians participating in in-service training programs; and, finally, additional States have conducted statewide surveys of libraries which have resulted in new library programs.

New library legislation in the States, responsive to the stimulation of the Federal program, has been impressive in amount and substance. A new graduate school for the training of professional librarians has been approved in Maryland. Local library tax maximums set by State law have been raised in Idaho and North Carolina. Connecticut, Florida, Kansas, and Rhode Island have new State laws reorganizing, coordinating, and strengthening State library functions and services. New Mexico and North Carolina have appropriated funds for new State library buildings. Maryland and Rhode Island have been the first States to appropriate funds for State grants for local library construction. California has a new State aid program for public library services, and Delaware tripled its financial support for local service.

New Educational Media

This program is carried out under provisions of title VII of the NDEA. Part A provides for research and experimentation, both basic and applied, in the educational uses of such communications media as television, radio, motion pictures, printed and published materials, and related media. Part B provides for the dissemination of information concerning these media. Funds are distributed through grants and contracts. (See table 1.)

In fiscal year 1964, the total appropriation for title VII was $5 million, of which approximately $2 million was obligated for part A and $3 million for part B.

A statutory advisory committee meets twice a year to review and approve part A proposals and to review and make recommendations concerning part B dissemination activities.

RESEARCH AND EXPERIMENTATION

In fiscal year 1964, 34 grants and 2 contracts were awarded, plus 32 continuations and amendments. Most of these were concerned with television, programed instruction, and simulated educational experiences. Among the latter, studies are in progress on the effectiveness of teaching principles of engineering design through a digital computer, on the educational application of management "game" theory in business administration, and in teacher education through simulated conditions.

Recommendations by the Advisory Committee to support institutional research projects up to a maximum of $10,000 has resulted in the awarding of several grants to institutions for determining the most effective use of new media within the context of the institutions' own curriculums and objectives. These include classroom observation of preservice teachers through television, videotape, and motion pictures, as well as the use of various media in teaching courses.

DISSEMINATION OF INFORMATION

Thirty-four contract agreements were negotiated for dissemination projects, with 38 amendments and continuations. Emphasis has been on the following programs:

1. Training for Media Use—Contracts for development of experimental curriculums to train teachers, researchers and media specialists.

2. Exhibits and Reports—Publication of interpretive analyses of research.

3. National Media Service Projects—Support of an Educational Research Information Center at Western Reserve University, National and Regional Instructional Television Materials Libraries, and publication of the *Educational Media Index;* support of studies on automated cataloging, computerized teaching, and systems for storage, retrieval, and dissemination of information.

4. Advisory and Assistance Activities—Studies of the need for and implementation of better utilization of new media.

5. Demonstration Activities—Workshops, seminars, films on uses of media.

6. Development of Educational Materials—Experimental curriculums for field testing; a feasibility study to investigate the establishment of a learning laboratory for hard-of-hearing children.

State Statistical Services

Section 1009 of title X of the National Defense Education Act is concerned with the improvement and expansion of statistical services of State education agencies. The act provides for annual grants not

to exceed $50,000 per State, with Federal participation amounting to one-half the cost of approved activities.

As of the end of the 1964 fiscal year, 53 State plans had been approved. Forty-nine States participated during fiscal year 1964 to the extent of approximately $1,807,000 in Federal funds. Nineteen States used the maximum amount of $50,000, with some of these States reporting overmatching of Federal funds. (See table 2.)

Under this program State education agencies are working with local school districts and the U.S. Office of Education in improving the comparability, accuracy, and timeliness of educational information. Emphasis is placed on uniformity of definitions as set forth in cooperatively developed national handbooks of standard terminology.

Major activities under this program include an increase in statistical personnel in the States, revision of data-collection procedures, installation and operation of data-processing equipment (including computers), and improved methods of disseminating educational data. A number of State agencies have made considerable progress toward a system whereby local school districts report data to them in machine usable form. During fiscal year 1964 a majority of the States cooperated with the U.S. Office of Education in a developmental project on reporting teacher data on an individual basis in machine-usable form (punchcards or computer tape) direct to the U.S. Office of Education.

International Education

Financial grant activity of the Bureau of International Education was expanded in fiscal 1964, when section 102(b)(6) of the Mutual Educational and Cultural Exchange Act of 1961 (Public Law 87–256) went into operation.

This act, better known as the Fulbright-Hays Act, consolidated and enlarged various provisions of several separate acts authorizing international education and cultural programs.

Section 102(b)(6), the only part of the act delegated to the Office of Education, provides for "promoting modern foreign language training and area studies in United States schools, colleges, and universities by supporting visits and study in foreign countries by teachers and prospective teachers in such schools, colleges, and universities for the purpose of improving their skill in languages and their knowledge of the culture of the people of those countries, and by financing visits by teachers from those countries to the United States for the

purpose of participating in foreign language training and area studies in United States schools, colleges, and universities."

While the entire act is fundamentally concerned with international understanding, this section is specifically oriented toward improvement of modern foreign language instruction and area study in American schools, colleges, and universities.

Two other kinds of grant programs are administered by the Office of Education.

Under Public Law 83–480, the Agricultural Trade Development and Assistance Act of 1954, the Bureau utilizes foreign currencies available in various countries to finance research in those countries which is of value to American education.

On behalf of the Department of State and of that Department's Agency for International Development, and with funds transferred to it by them, it operates three programs dealing with teacher training and exchange.

Fulbright-Hays Act

The amount appropriated for operations under section 102(b)(6) of this act was $1.5 million. With this money, five distinct types of grants were made:

SUMMER SEMINARS ABROAD

Fifty-five elementary school teachers of French and Spanish participated in two summer seminars, including 6 weeks of study at the Universities of Strasbourg (French teachers) and Costa Rica (Spanish teachers), and 2 weeks of educational travel to places of cultural and historic interest in France and Central America.

Eighty-four grants for four summer seminars devoted to Japan, Mexico, the Middle East, and West Africa were made to secondary school teachers and college instructors and assistant professors whose fields of instruction include world and regional history, geography, economics, and comparative government. The host institutions for these groups included the International Christian University in Tokyo, Japan; the Instituto Politecnico Nacional in Mexico City; the American University of Beirut in Beirut, Lebanon; and the University of Nigeria at Nsukka, Nigeria.

Approximately $214,000 was allocated for these summer seminar grants.

STUDY AND RESEARCH

Twenty-five elementary and secondary school teachers of social studies and modern foreign languages were awarded grants for advanced study and research for 10 months in France, Mexico, Spain,

East Africa, and Switzerland, with approximately $200,000 allocated for this purpose.

NDEA-RELATED RESEARCH

Arrangements were made for 49 university faculty members associated with NDEA-related Language and Area Centers to study and do research abroad. Approximate allocation: $402,000.

NDEA-RELATED GRADUATE WORK

Arrangements also were made for 85 graduate students who had been awarded NDEA Title VI Fellowships, and who are prospective college-level teachers of non-Western language and area studies, to conduct research and study abroad, at an allocated cost of approximately $519,000.

FOREIGN SPECIALISTS

In a different approach to the philosophy of the act, that expenditures should be aimed at the improvement of American education, 15 language and curriculum specialists were recruited in Colombia, France, Uruguay, India, Mexico, Spain, Chile, Argentina, and Costa Rica to assist in improving and strengthening language and area studies programs. Assignments were made to the State departments of education of Colorado, Georgia, Michigan, New York, North Carolina, Pennsylvania, New Hampshire, and Oregon and to county and city school systems in Hamilton County (Ohio), Detroit, Akron, Syracuse, and Baltimore. The amount allocated for this activity was $165,000.

Foreign Currency Programs

Currency was available in six countries as a result of agricultural trade development and assistance transactions, and the following projects were financed with an appropriation of $500,000:

1. Projects on scanning, translation, and annotation of educational publications and documents were continued in Burma, Poland, Yugoslavia, and Indonesia.

2. Foreign currencies were used to finance travel for three education specialists who are currently preparing comparative education studies on Indian and Israeli education. These three manuscripts are planned for publication in fiscal year 1965.

3. In India, nine contracts were negotiated in September 1963 with the National Council of Educational Research and Training, New Delhi, for individual projects ranging from a "Survey of Achievement in Mathematics at Three Levels of School Education" to "Evaluative Criteria for Inspection and Supervision of Secondary Schools."

4. In Israel, six projects were established with the Hebrew University of Jerusalem, the Henrietta Szold Foundation for Child and

Youth Welfare, and the Israel Institute of Applied Social Research. Projects ranged from a study of "The Identity and Cultural Values of High School Pupils in Israel" to "The Identification of Intelligent and Creative Students from Culturally Deprived Homes."

Transferred Fund Services

During the 1964 fiscal year the Department of State provided the Office of Education with $1,312,000 to administer educational grants on its behalf, and its constituent Agency for International Development (AID) provided $3,227,000 for the same purpose. Programs conducted by the Bureau of International Education for these two agencies were:

1. International Teacher Development Program (State).
2. Teacher Exchange Program (State).
3. Technical Assistance Training Program (AID).

As an additional service to the Department of State, the Office provided statistical tabulations on grantees sponsored by the Bureau of International Educational and Cultural Affairs of the Department of State. These tabulations covered such information as country of origin in the case of foreign grantees and State in the case of U.S. citizens, destination, fields of specialization, age groupings, and military status. They showed that 5,000 foreign nationals from approximately 86 countries had the opportunity to live and work with Americans in all of the States and territories and that some 2,000 Americans studied in 60 foreign countries in 150 specialized fields.

In addition to this statistical information, the Office prepared records giving the name, address, category, specialty, occupation, and institution of placement of every foreign grantee entering this country under the international educational exchange program.

TEACHER DEVELOPMENT PROGRAM

In 1963–64, the International Teacher Development Program brought 707 teachers and school administrators to the United States for training and for visits to schools. Representatives from 76 countries and dependencies took part in the program, and 13 colleges and universities cooperated with the Office of Education in arranging special seminars.

Thirteen groups of teachers, teacher trainers, and school administrators were interested in the following fields: four groups in the teaching of English as a second language; two each in elementary education, American civilization studies, secondary education, administration and supervision, and one in science education.

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Three workshops in elementary, secondary, and vocational education were held at the University of Puerto Rico for 115 educators from South and Central America.

In addition, 279 teachers and school administrators participated in 11 short-term special projects in rural education, social science, teacher training, and elementary and secondary education arranged at 7 college and university centers.

TEACHER EXCHANGE PROGRAM

In 1964, the staff of the Teacher Exchange Program provided professional services for approximately 675 elementary and secondary school teachers, as follows:

One hundred and thirty-two U.S. teachers exchanged teaching positions with the same number from abroad—a total of 264.

One hundred and ten U.S. teachers were assigned abroad on a one-way basis.

Sixty-nine foreign teachers were placed in the United States on a one-way assignment.

Two hundred and thirty-two American teachers participated in 10 overseas summer seminars. These were held for teachers of Spanish in Colombia and Spain; teachers of German in Germany; teachers of the classics and teachers of the Italian language in Italy; and teachers of history in Brazil, France, Greece, India, and Iran. The seminar in Iran was held for the first time in 1964.

Interchanges of teaching positions were arranged with the following 13 countries: Australia, Austria, Belgium, Luxembourg, Canada, Chile, Germany, Italy, the Netherlands, New Zealand, Sweden, the United Kingdom, and Uruguay.

One-way assignments (for either American or foreign teachers) were arranged with the following 35 countries: Afghanistan, Austria, Belgium, Bolivia, Burundi, Denmark, El Salvador, Finland, France, Germany, Greece, Iceland, India, Indonesia, Iran, Italy, Ivory Coast, Japan, Jordan, Korea, Laos, Liberia, Libya, Morocco, Nicaragua, Norway, Pakistan, Paraguay, Peru, Spain, Sweden, Turkey, United Kingdom dependencies (considered as one country), Uruguay, and Vietnam.

TECHNICAL ASSISTANCE TRAINING PROGRAM

During 1963–64, the Office of Education supervised programs for 790 participants from 53 countries, including participants from ministries of education or similar offices who came on short visits. There were also many long-term academic placements, and degrees were awarded to 117 participants, of whom 26 came from the Near East, 52 from Africa, 26 from the Far East, 12 from Latin America, and one from Europe.

Countries with the largest number of representatives were Vietnam (103), Tunisia (62), Thailand (59), Sudan (51), and Turkey (45). Training was arranged for educators in approximately 150 training centers located in almost every State, the District of Columbia, and Puerto Rico. It is estimated that in 1964–65 the Office will arrange programs for 900 educators.

Aside from supervising programs in the United States for foreign grantees, the Office assists in recruiting American educational specialists for both AID and UNESCO (United Nations Educational, Scientific and Cultural Organization), which between them require a continuing overseas staff of approximately 1,000 such advisers.

The Office also provides professional consultative and support services to the AID professionals already stationed in foreign missions. This involves either consultation or correspondence with officials of colleges and universities, professional education associations, book publishers, school equipment manufacturers and distributors, State and local school systems, and various Federal departments and agencies. Periodically, packets of current educational materials are forwarded to the various overseas missions for their information and use.

Civil Defense Adult Education

The Civil Defense Adult Education program is administered by the Office of Education under a contractual agreement with the Office of Civil Defense of the Department of Defense. The Office of Education contracts with State departments of education desiring to conduct programs of education for adults, in the basic principles of civil defense. The program is completely funded by the Office of Civil Defense.

Forty-three States, the District of Columbia, and Puerto Rico conducted CDAE programs during the fiscal year. Individuals who completed courses numbered 194,801. Accomplishments of the program were as follows:

Number of adults who completed courses	187,626
Number of teachers trained as instructors	7,175
Number of local classes completed	6,613

Higher Education Facilities

Public Law 88–204, the Higher Education Facilities Act of 1963, authorizes Federal grants and loans to assist eligible public and other nonprofit institutions of higher education in financing construction,

rehabilitation, or improvement of certain academic and related facilities. Assistance is to be principally for the construction of classrooms and laboratories which will result in a substantial expansion of needed student enrollment capacity. Assistance is authorized, also, to improve or establish graduate schools and cooperative graduate centers to increase the Nation's supply of critically needed professional personnel. Certain academic structures are excluded from receiving financial assistance under the act. They are: (1) any facility intended primarily for events for which admission is to be charged to the general public; (2) any gymnasium or other facility designed for athletic or recreational activities (other than for an academic course in physical education); (3) any facility to be used for sectarian instruction, as a place for religious worship, or primarily in connection with a program of a school or department of divinity; or (4) any structure to be used by a school of medicine, dentistry, osteopathy, pharmacy, optometry, podiatry, nursing, or public health; such buildings are provided for under the Health Professions Educational Assistance Act of 1963 (Public Law 88–129).

The authorization for fiscal year 1964 to carry out these programs was:

1. Two hundred and thirty million dollars for grants for construction of undergraduate academic facilities.

(a) Fifty million six hundred thousand dollars allotted for use in providing academic facilities for public community colleges and public technical institutes, and

(b) One hundred seventy-nine million four hundred thousand dollars to institutions of higher education other than public community colleges and public technical institutes.

2. Twenty-five million dollars for construction grants to assist institutions of higher education to improve existing graduate schools and cooperative graduate centers, and to assist in establishing such schools and centers of excellence.

3. One hundred twenty million dollars for loans for construction of both graduate and undergraduate academic facilities. Institutions or agencies eligible to receive grants described in items 1 and 2 above are also eligible to receive loans. No less than one-fourth of the development cost of these projects must be paid out of non-Federal funds.

Funds to initiate this program were not made available in fiscal year 1964.

Table 1.—*Funds obligated to States for media research and dissemination, fiscal year 1964*

	Title VII-A grants	Title VII-A contracts	Title VII-B contracts	Printing	Total
Total	$1,608,721	$297,829	$3,063,218	$28,318	$4,998,086
Alabama					
Alaska					
Arizona	45,147				45,147
Arkansas					
California	229,468		508,392		737,860
Colorado		41,400	25,882		67,282
Connecticut					
Delaware			9,058		9,058
District of Columbia	12,236		481,810	28,318	522,364
Florida					
Georgia	70,380		59,351		129,731
Hawaii	9,936				9,936
Idaho					
Illinois	29,741	120,702	77,663		228,106
Indiana	101,036				101,036
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland	65,026		3,800		68,826
Massachusetts			230,594		230,594
Michigan	68,573		333,284		401,857
Minnesota	41,653				41,653
Mississippi					
Missouri		64,164	74,802		138,966
Montana					
Nebraska			269,426		269,426
Nevada					
New Hampshire					
New Jersey	9,750		27,310		37,060
New Mexico			60,158		60,158
New York	260,945		296,043		556,988
North Carolina					
North Dakota					
Ohio	132,163		232,295		364,458
Oklahoma			32,438		32,438
Oregon	70,851		12,490		83,341
Pennsylvania	383,611		261,277		644,888
Rhode Island					
South Carolina					
South Dakota	9,840				9,840
Tennessee					
Texas			43,308		43,308
Utah		71,563	23,837		95,400
Vermont					
Virginia					
Washington					
West Virginia					
Wisconsin	68,365				68,365
Wyoming					

Table 2.—*State participation for improvement of State statistical services, fiscal year 1964*

State[1]	*Federal funds requested and paid*
Total	$1,806,723
Alabama	6,240
Alaska	39,000
Arizona	50,000
Arkansas	15,400
California	47,521
Colorado	50,000
Connecticut	17,148
Delaware	42,500
District of Columbia	------
Florida	50,000
Georgia	50,000
Hawaii	50,000
Idaho	12,100
Illinois	50,000
Indiana	25,000
Iowa	50,000
Kansas	30,134
Kentucky	50,000
Louisiana	------
Maine	50,000
Maryland	39,472
Massachusetts	50,000
Michigan	35,000
Minnesota	31,493
Mississippi	30,000
Missouri	15,862
Montana	$50,000
Nebraska	24,125
Nevada	------
New Hampshire	9,631
New Jersey	41,752
New Mexico	35,981
New York	50,000
North Carolina	42,184
North Dakota	10,600
Ohio	50,000
Oklahoma	50,000
Oregon	42,500
Pennsylvania	50,000
Rhode Island	50,000
South Carolina	47,543
South Dakota	16,807
Tennessee	47,500
Texas	50,000
Utah	14,414
Vermont	6,164
Virginia	------
Washington	50,000
West Virginia	50,000
Wisconsin	49,088
Wyoming	------
Guam	19,402
Puerto Rico	42,080
Virgin Islands	20,082

[1] The following States did not participate financially: District of Columbia, Louisiana, Nevada, Virginia, Wyoming, and the Canal Zone.

Food and Drug Administration

FDA's Expanding Role in Consumer Protection

A Growing Population, an expanding economy, new technology, and scientific breakthroughs have created new challenges and responsibilities for the Food and Drug Administration.

The mission of the Food and Drug Administration is to protect consumers by insuring the safety and integrity of food, drugs, therapeutic devices, and cosmetics. FDA's authority in these broad areas of human concern is vested in laws, which are implemented through regulations. The agency also relies on public education and information to encourage voluntary compliance with the law to achieve a high level of consumer protection.

The problems of protecting the public have increased with the population growth. Today the American population is in excess of 192 million. The Bureau of Census predicts that our population will number between 216 and 244 million by 1975.

Two important trends in the distribution and character of the population during the past 30 years have had a major impact on FDA's responsibilities and programs. These are: (1) The major shift from farms to urban centers, which brought a phenomenal increase in the preservation, packing, and distribution of foods, and (2) the dramatic increase in number of citizens 65 years and older, who depend a great deal more on drugs and special dietary preparations. They are often victims of charlatans and quacks.

Expansion of the economy is illustrated by growth of the Gross National Product from $90 billion in 1938 to an estimated $625 billion in 1964. Personal expenditures for food, drugs, and cosmetics have increased accordingly (see charts 1, 2, and 3). There are more than

24,000 supermarkets today supplying an affluent population with a larger number and greater variety of products than ever before.

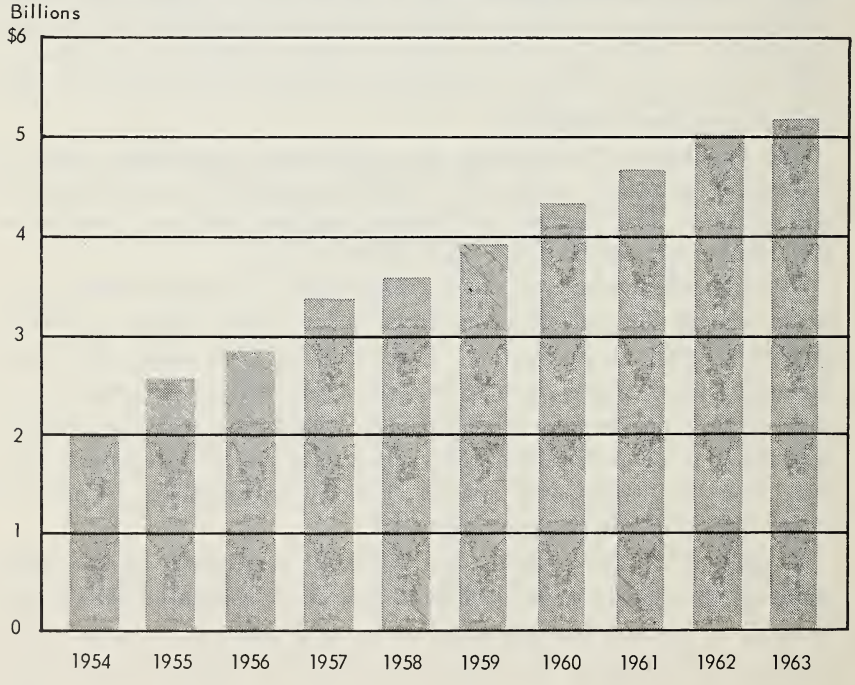
New technology and scientific breakthroughs have created significant new problems, particularly in the field of drugs. These responsibilities and workloads fall essentially into four broad areas:

1. Premarketing control of clinical investigations of new drugs and proof of their safety and effectiveness;
2. General control of the purity, potency, labeling, and promotion of drugs. This is accomplished through inspections, sample collections and examinations, education, and consultation.
3. Attempts to curb illegal sales of prescription drugs; and
4. Work directed against quackery.

It is estimated that 90 percent of the drugs used on prescription today were not on the market 15 years ago. In addition, the growth of the drug industry is indicated by the extremely sharp increase in consumer spending for prescriptions. This has grown from $150 million in 1940 to approximately $2.2 billion today.

On an average working day, FDA receives about 8 proposals for clinical tests to determine the safety and effectiveness of new human

CHART 1.—RETAIL SALES OF DRUGS IN THE UNITED STATES, CALENDAR YEARS 1954–63



and veterinary drugs, as well as 20 proposals to change previously granted approvals of drugs now on the market. More than 2,000 human and veterinary New Drug Applications were received during fiscal year 1964.

Once drugs are marketed, the Food and Drug Administration conducts inspections and sample examinations to determine their purity and potency, the adequacy of their labeling, and the propriety of promotional methods employed for them.

FDA has an obligation to inspect almost 14,000 drug establishments (exclusive of the producers of medicated feeds of which there are over 12,000) once every 2 years. Inspections are followed by collection and examination of samples to confirm the observations made in the factory.

For drugs there are also two additional requirements:

1. That drug labeling give full disclosure of the adverse effects and contraindications as well as of the claimed benefits; and
2. That the advertising of a prescription drug give a brief summary relating to side effects, contraindications, and effectiveness as required by regulations.

Under the provisions of the Durham-Humphrey Amendment, FDA is attempting to control distribution of dangerous and potent drugs which should be sold only on prescription. This is a growing responsibility largely because of the increasing misuse of drugs, such as amphetamines and barbiturates. On an average, 90 percent of all illegal drug sale cases referred by FDA to the Justice Department involve these drugs. Traffic accidents, juvenile delinquency, and other social problems have frequently been linked to illegal use of these products.

A relatively conservative estimate indicates that about $500 million is spent every year by American consumers on worthless or extravagantly misrepresented drugs and therapeutic devices. In many cases these fake products are sold to people suffering from chronic illnesses who are easy victims of unscrupulous pitchmen, but who could obtain greater relief from bona fide drugs and medical care. In many other cases, people who are suffering from illnesses that could be cured are worsening their condition by depending on these fake remedies.

The safety and nutritional values of foods is another area of concern to consumers. About 88,500 interstate establishments produce, process, package, distribute, and store foods. Each is subject to FDA inspection and in 1964 the agency inspected 35,288 of them. One major trend in the food field has been the growing use of chemical food additives. There are today an estimated 2,200 chemicals used by 73,000 food establishments that operate under FDA's jurisdiction.

These food additives are used as preservatives, emulsifiers, and for a host of other purposes. They are used in the production of our

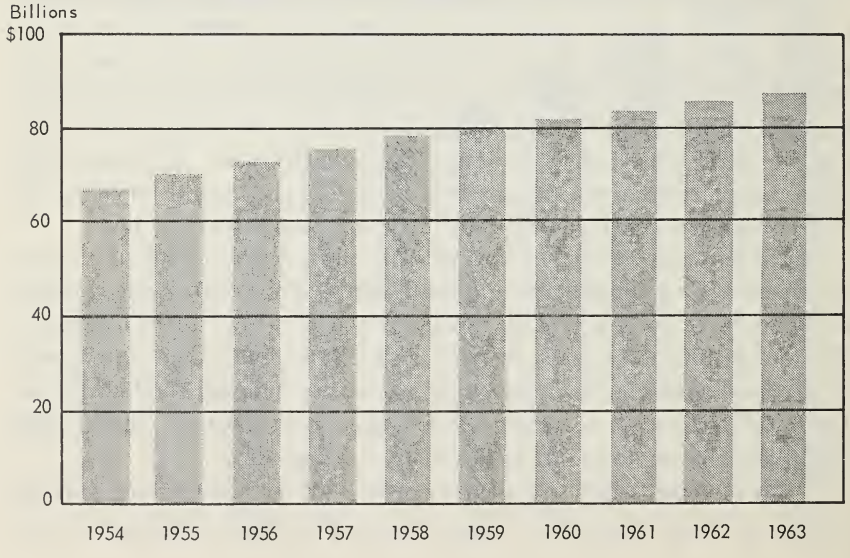
modern convenience foods. Under the 1958 Food Additives Amendment to the Food, Drug, and Cosmetic Act, FDA has the job of establishing safe conditions for use including safety levels, where necessary, for each food additive.

Annually, some 450 million pounds of pesticides are used by over 5 million agricultural employees on crops grown in the United States, and each year there are approximately 2.5 million interstate shipments of raw agricultural products that have probably been treated at some time or other with an agricultural chemical. FDA sampled and analyzed over 25,000 shipments—or 1 percent—for the last 2 fiscal years.

There are an estimated 500 chemicals used today in approximately 55,000 formulas registered with the U.S. Department of Agriculture. Of these, approximately 375 chemicals and 40,000 formulations are specifically for use on food crops. However, since almost any chemical applied for nonfood purposes may accidentally contaminate foods, most of these chemicals and formulations are of concern to FDA.

FDA also has the immense task of protecting consumers against filthy, insanitary, and harmful foods, and from the unscrupulous fringe, that is to be found in all walks of life, who try to short-change the American public by deceptive packaging, misleading labeling, and the like. During fiscal year 1964 over 19 million pounds of foods were seized in the course of 395 actions because of filth and insanita-

CHART 2.—RETAIL SALES OF FOOD IN THE UNITED STATES, CALENDAR YEARS 1954–63



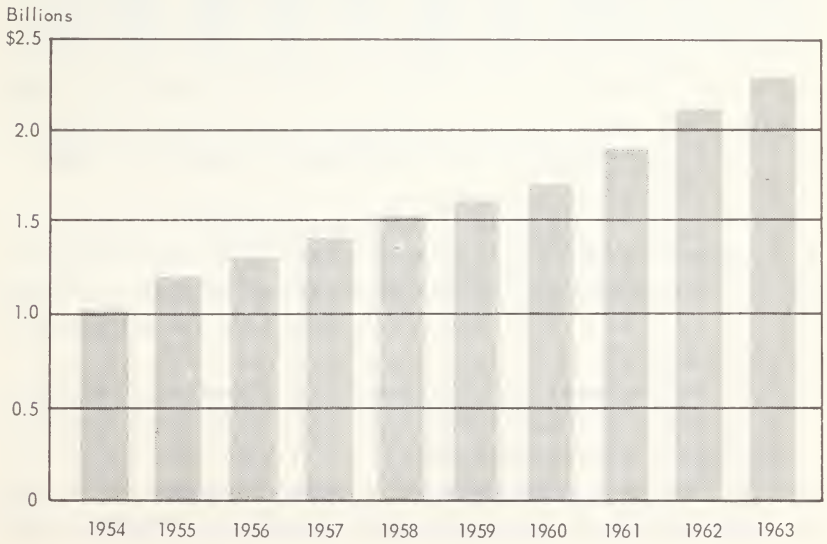
tion, and over 3 million pounds in 65 actions because of direct health factors. In addition, over half a million pounds were seized in 62 actions because of economic cheats.

This year approximately 360,000 shipments of foods, drugs, and cosmetics worth $6 billion will reach U.S. ports from abroad. FDA will sample approximately 4 percent of these shipments.

There has been a significant trend during the past 30 years in the administration of the national pure food and drug laws toward fuller utilization of preventive measures. The 1906 law was punitive in the main, whereas the 1938 law adopted in its provisions the concept of preventive enforcement and promotion of voluntary compliance for which administrators of the old act had been striving. It made color certification mandatory for coal tar colors used in foods, drugs and cosmetics. It authorized the establishment of standards for food thus recognizing the value of the earlier advisory definitions. It authorized (in a way that had to be improved later) the establishment of tolerances for toxic materials required in food production. And particularly, it required premarketing clearance of new drugs for safety.

This basic philosophy has been reflected in various amendments to the 1938 law. FDA's entire rulemaking process, which today is very extensive, is designed to acquaint the manufacturer with steps he can follow to comply with the law. With this evolution of law has come

CHART 3.—RETAIL SALES OF COSMETICS IN THE UNITED STATES, CALENDAR YEARS 1954–63



an evolution of administration. FDA seeks increasingly the assistance of the scientific community in resolving questions presented by new science and technology.

Administrative Progress

The enforcement appropriation for fiscal year 1965 is $39,200,000. This compares with $35,805,000 for fiscal year 1964, representing a net increase of $3,395,000. It provides for 215 new positions, bringing the authorized enforcement staff to 4,039. This does not include employees assigned to certification services and pesticide petitions. These positions are financed on a self-supporting fee basis.

Fifty positions will help handle workloads in FDA's drug program that have been created or increased by the Kefauver-Harris Drug Amendments of 1962 and new regulations of that year concerning investigational drugs. This includes (1) work on projects concerned with drug records and reports; (2) evaluation of investigational drugs and drug efficacy; (3) improvement of management of medical activities in FDA; (4) research and developing methods for scientific projects concerned with drugs; and (5) planning drug programs, registering drug firms, and other regulatory activities at headquarters to implement the Kefauver-Harris Amendments.

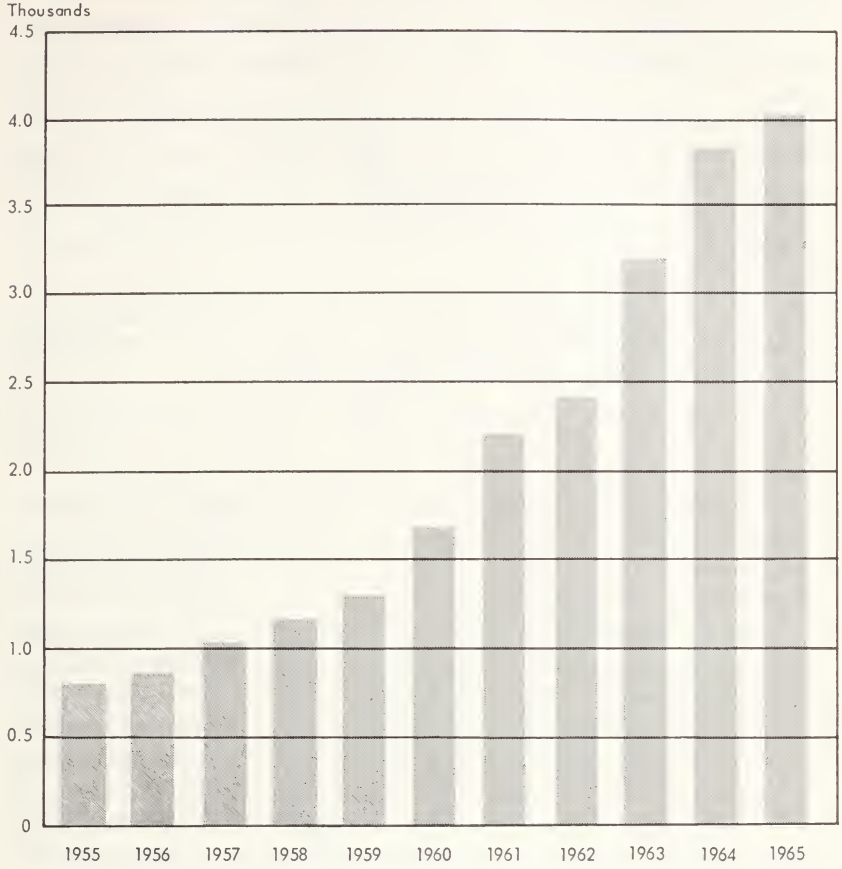
A total of 63 positions will help improve scientific communications and data processing within FDA and provide for exchange and availability of research and other technical data outside the agency. To carry out this improvement these projects will include (1) reporting adverse drug reactions; (2) developing medical liaison; (3) providing new drug information to physicians; (4) reviewing medical literature; (5) developing scientific data systems; (6) using the automated data system more effectively and efficiently in FDA's field districts. Additionally, plans are under way to implement the recommendations of the science communications study undertaken in fiscal year 1964 by Arthur D. Little, Inc.

The study had as its general goal (a) to determine the feasibility of an integrated, agencywide scientific information retrieval system, and (b) to complete a preliminary design for an information storage and retrieval system. As a result of the study, the following conclusions were reached:

1. An integrated agencywide system for handling scientific information is feasible for the FDA. An integrated but decentralized system was recommended.

2. The recommended system is composed of a centrally located Central Retrieval Index subsystem, realized on a computer, which

CHART 4.—BUDGETED POSITIONS FOR FOOD AND DRUG ENFORCEMENT OPERATIONS (EXCLUDING FEE-SUPPORTED CERTIFICATION SERVICES), FISCAL YEARS 1955–65



interconnects four other subsystems whose manual and mechanized files are located at different sites in the agency.

3. It is technically feasible to design and implement a major portion of the system before Fiscal Year 1969.

On the basis of this study, FDA is moving rapidly to develop a detailed design of such a system and to create a science information unit to administer and implement it.

To improve FDA's food programs for protecting consumers' health a total of 53 positions will be assigned (1) to work on research problems involving adulteration, sanitation, and food poisoning; (2) to train field bacteriologists; (3) to evaluate food manufacturing practices; (4) to continue research on food additives; and (5) to maintain the bacteriological surveillance program in the field to help avoid

food-poisoning problems such as those recently connected with tuna and smoked fish contaminated by botulism organisms.

A longstanding effort toward more efficient use of professional manpower will be aided by the addition of 18 positions to achieve a better balance between professional staff and supporting personnel. For example, increasing the number of inspector aides will relieve professional inspectors from the simpler tasks connected with their duties and provide more efficient staffing of FDA resident inspector posts.

A total of 17 positions will permit FDA to improve its programs for consumer and industry education, information, and voluntary compliance with the law.

The remaining 14 positions will be used to strengthen FDA's administrative supporting services in recruitment and classification, training, fiscal operations, and records management.

A new headquarters building for FDA across the street from the HEW Building is now partly occupied. At Beltsville, Md., a new special pharmacological animal laboratory is now in operation.

Construction is being planned for additional headquarters laboratories at Beltsville. The building to house these facilities will supplement laboratory facilities that will be available for headquarters scientific staff when the headquarters buiding is fully occupied in 1965. By that time, its laboratory facilities will be insufficient for FDA needs.

In the past year, three new district office and laboratory buildings have been dedicated. These are in Boston, Buffalo, and Minneapolis. New quarters in Baltimore were dedicated after the end of the fiscal year and the New York building was nearly ready for occupancy. This is part of the program to provide up-to-date facilities in each of the 18 districts of the FDA field operating force. The renovation of FDA district facilities is continuing. With the completion of two districts in 1965, FDA will have 13 of its 18 districts housed in new and modern facilities.

Extensive changes in the organization and operations of the Food and Drug Administration have been undertaken in the last 2 years.

Organizational changes were made within the Bureau of Medicine in 1962 to help meet its increased responsibilities. Following this, and consistent with the principles recommended by the Second Citizens Advisory Committee, a major reorganization of the entire Food and Drug Administration was begun on November 1, 1963. This has been the most significant organizational reorientation of FDA in the last half century and is now nearly complete.

The plan was designed for progressive strengthening over the next 10 years of consumer protection in regard to foods, drugs, medical devices, cosmetics, and household chemical products.

An important feature of the reorganization is the appointment of a National Advisory Council to the Food and Drug Administration. The Council will comprise representative citizens who will advise the Administration on national needs and the effectiveness of program policies.

A new Associate Commissioner, who will be a scientist, will give leadership from the Office of the Commissioner to the programs and functions having to do with medicine, science, and research.

Two new Bureaus with scientific activities have been established: A Bureau of Scientific Research which supports FDA's long-range consumer protection program and a Bureau of Scientific Standards and Evaluation, which handles safety clearance of pesticides, food additives, and colors; tests and certifies insulin, antibiotics, and colors; and develops scientific data used in setting standards and tolerances. These Bureaus replace the former Bureau of Biological and Physical Sciences.

Enforcement activities have been consolidated into the Bureau of Regulatory Compliance, replacing in part the Bureau of Field Administration and the Bureau of Enforcement which formerly shared enforcement responsibilities. Part of the staff of the former Bureau of Program Planning and Appraisal was also assigned to this Bureau.

Educational functions of FDA were emphasized in the creation of a new Bureau of Education and Voluntary Compliance. It contains two units, the Division of Consumer Education and the Division of Industry Advice. The staff and functions of this new Bureau formerly operated as parts of the Bureau of Program Planning and Appraisal, the Bureau of Enforcement, the Division of Public Information, and the Office of the Commissoiner.

Press and public information services are now handled by the new Office of Public Information.

FDA has been fortunate in recruiting physicians and scientists to complement the talents available within the organization. During fiscal years 1963 and 1964, 66 physicians and 654 other scientists were recruited. A number of positions are being filled by scientists who are equipped by training and experience to exercise strong leadership soon after joining the Administration. Several key posts are still to be filled.

To improve the capabilities of the present staff many training programs have been conducted on the job and during the employees' own time. Some examples are:

The first university training course on drug manufacture for Federal Drug Inspectors was held during the summer of 1964 at the University of Rhode Island. The University's School of Pharmacy

has a modern pilot plant with the latest drug manufacturing equipment.

About 250 chemists are participating in a graduate-level, home-study course in drug analysis. The course, designed and written by an FDA senior scientist, includes laboratory exercises and seminars at the end of each lesson. It takes about 30 hours of an employee's own time to complete one of the lessons.

In January 1964, the FDA Institute for Advanced Analytical Chemistry was opened at Georgetown University in Washington, D.C. Fifty-seven FDA chemists, including 41 from the field, attended the first two 12-week courses on advanced instrumental analysis.

Selected groups of FDA inspectors have been taking a 2-week course in self-defense tactics and investigation techniques sponsored by the Los Angeles County Sheriff and held at the Sheriff's Academy. FDA inspectors are not authorized to carry firearms even though they are engaged in undercover investigations of criminals, such as dangerous drug peddlers, who are often armed.

As a result of these and many other training programs FDA employees received 152,000 hours of training or about 38 hours per employee during fiscal year 1964. This is exclusive of normal on-the-job training.

The Department of Health, Education, and Welfare believes that the Nation's consumers of foods, drugs, and cosmetics can best be served by a combination of strong Federal, State, and local enforcement of uniform laws and regulations. FDA has long had an active Federal-State relations program, which has been strengthened by an increased staff in recent years.

It was reported last year that FDA had obtained authorization for an independent, Government-financed study of State and local laws, programs, and facilities. This study was proposed and supported by the Association of Food and Drug Officials of the United States. The study, due to be completed in January 1965, is expected to result in additional Federal-State cooperation in uniform enforcement of food and drug laws.

Food, Drug, and Cosmetic Act

ON THE FOOD FRONT

Radioactivity in Foods

The number of domestic and import food samples collected from major growing areas and monitored for radioactivity in 1964 was half that of 1963. Analysis showed a small but steady increase in the radioactive contamination level (probably resulting from the 1961 Soviet and the United States testing of surface and atmospheric nuclear

weapons). The level is still well within guidelines established by the Federal Radiation Council as acceptable for lifetime consumption under normal peacetime conditions.

After developing a selective system based on knowledge of which plants concentrate radiation, FDA decreased sampling quotas for strontium 90 by 80 percent and cesium 137 by 90 percent. Import samples are now limited to tea and sampling reduced by 25 percent.

The Total Diet Program to measure radiation in the diet of a typical 18-year-old boy continues in Washington, D.C. and nine district areas. Radioactive contamination trends were similar to those found in unprocessed foods noted above.

Leafy vegetables and forage crops were examined for 2 months in the fall of 1963 for gamma and gamma-emitting isotopes (iodine 131 and cesium 137) by 10 districts equipped with semiportable scintillation spectrometers. Results indicated less than twice normal background radiation and the program is temporarily discontinued.

Early in the year, FDA sanctioned the use of gamma rays from cobalt 60 radiation to sterilize insect eggs in wheat and wheat products. No radioactivity remains in the irradiated wheat and extensive tests on animals and human volunteers show no lessening in the nutritional value of the grain.

Natural Disasters

A major earthquake on March 27 and the huge tidal wave that followed laid waste to Anchorage, Alaska, and severely damaged many cities and islands as far away as Hawaii and the California coast. About 30 percent of the Alaska fish, shrimp, and crabmeat canneries were located in the affected area and were heavily damaged or completely destroyed.

Actual examination of 365 tons of food, followed by salvage or destruction of damaged and contaminated foods and drugs, was supervised by local and State health officials with assistance from Seattle District inspectors.

Two weeks afterwards, a ship arrived in Seattle with 185 tons of frozen crabmeat, 8 tons of frozen shrimp, 37 tons of canned crab, and almost 14 tons of canned shrimp. All had been watersoaked in a Kodiak warehouse during the quake. The lots were sorted under State and Federal supervision and some were reprocessed, others destroyed.

During the annual Ohio River basin floods, a 2-day, 7-inch rain caused a small creek which courses through Louisville, Ky., to overflow its banks. Flooding and backed-up sewers resulted in heavy food losses, including a $200,000 candy and sugar inventory by a candy manufacturer, and $250,000 in damaged canned hams, frozen turkeys, and other foods by a cold storage plant. A cake-mix firm hauled 375

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tons of flour, sugar, spices, and other items to a dump, and a distillery destroyed 46,000 cases of bourbon whiskey worth $2 million.

In Montana, excessive rains and melting snows caused extensive flood damage to roads, dams, rangelands, and homes, but relatively slight damage to food and drug stocks. Seattle District inspectors assisted local health department personnel in salvage operations.

Six major fires required inspectors in five field districts to supervise the destruction of drugs valued at almost $400,000 plus 24,000 surgical sutures, and almost 2,000 tons of damaged foods plus an $114,000 inventory of peanuts which had to be plowed back into the soil by Louisiana farmers.

In addition, a train wreck in November damaged a carload each of flour, bulk corn, wheat, and evaporated milk, requiring destruction supervised by State and FDA inspectors.

Chemicals in Food

Food Additives.—FDA inspectors routinely check on the kinds and levels of additives used in foods as a part of each food plant inspection. Relatively few violations occur, however, considering the enormous amount of additives being used in the United States as preservatives, sweeteners, emulsifiers, etc. A check is also made to determine whether color additives being used comply with the Color Additive Amendments of 1960.

During fiscal 1964, 23 food products were seized because of food additive violations. Most of these were vitamin products; one was an amino-acid product seized for containing folic acid in excess of the 0.1 milligram permitted in products not labeled for prescription sale only. Folic acid has been known to mask the symptoms of pernicious anemia when used in excessive quantities.

One vitamin product, seized at Salt Lake City, Utah, contained an unsafe food additive, menadione.

Six of the seizures made under food additives provisions are discussed under the Pesticides section of this chapter.

Five hundred thousand pounds of jams, jellies, and fruit sirups were withheld from interstate shipment by a California firm because they contained the defoaming agent, dimethylpolysiloxane, before its use was permitted for certain products.

In Hawaii, 1,000 gallons of raw milk were dumped into a sewer by State authorities after an assay indicated the presence of an antibiotic drug.

Pesticides.—FDA's objective is to sample and examine a minimum of 25,000 lots of raw agricultural commodities for pesticide residues, or about 1 percent of the estimated 2½ million shipments of food en-

tered annually into interstate commerce. This goal has been exceeded for the past 2 fiscal years.

Samples are collected from farms, packinghouses, trucks, railroad cars, and ultimate consignees. They involve lots collected on a surveillance basis, with no prior knowledge of whether the pesticides were used properly, and lots which were definitely listed for sampling because FDA suspected excess residues prior to shipment.

During the fiscal year, 34 seizure actions were accomplished against foods and feeds containing illegal pesticides—28 of raw agricultural commodities and 6 of processed articles.

Largest in volume was 662 tons of bulk wheat and barley containing seed grain treated with a mercurial fungicide.

Leafy vegetables seized included cabbage, cauliflower, parsley, and broccoli, all because of excessive or unpermitted residues of toxaphene or endrin. Carrots and potatoes were seized because of excessive aldrin and dieldrin, or endrin which has no residue tolerance for these crops.

In Texas difficulties were encountered with endrin on carrots and other vegetables about to be harvested. A program, developed with State officials, called for sampling all fields in the affected area to prevent either interstate or intrastate shipment of commodities with illegal residues. State officials and the industry association held a meeting with the growers at which it was agreed that where FDA reported illegal residues on the vegetables from a particular field, that field would not be harvested until after the pesticide weathered, or if delay would be impossible, then the crop would be plowed under. This action, which was most effective, represented a major operation in consumer protection through voluntary compliance.

This incident led to a long-range improvement. Prior to the summer of 1963 there were no commercial laboratories in Texas equipped with gas chromatographic apparatus suitable for examining raw agricultural commodities and soils for pesticide residues at the levels of current interest. Through the efforts of State officials and the industry association, there are now five laboratories offering this service to industry for a fee. Research is being conducted by State scientists on the problem of take-up of pesticides from soils where other crops had received previous pesticide applications, which was found in some of the high residue cases investigated.

The most significant change in the enforcement picture resulted from improvements in pesticide detection and measurement. FDA is now able to show the presence of pesticides at levels considerably below those previously detectable for enforcement purposes. These methods

are used to insure that milk conforms to the FDA requirement that it contain no pesticide residues.

A comprehensive program covering about 4,000 samples of milk and 2,400 samples of manufactured dairy products uncovered a number of specific problem areas. To determine the sources of residues found in milk, about 800 samples of hay and silage were analyzed.

Alfalfa hay was found contaminated with DDT, toxaphene, or heptachlor, and 174 tons were seized in possession of dairy farmers to prevent its use as dairy cattle feed.

In the spring of 1964 heptachlor epoxide was discovered in milk in the Washington-Baltimore area and city and State officials revoked marketing permits of a number of farmers pending correction of the situation. Feeding of alfalfa chaff to milk cows in a Western State resulted in dieldrin in cheese in a localized area. The chaff was a byproduct of the production of alfalfa seed which requires heavy use of pesticides. Following seizures of the cheese, the State banned for an indefinite period the use of certain pesticides in the county in which the cheese plant is located.

Other processed foods seized under the food-additive provisions because of unpermitted pesticide residues were frozen broccoli with endrin and flour with lindane and methoxychlor.

The President's Science Advisory Committee recommended an expansion of FDA's Total-Diet Study to detect actual levels of pesticide residues as they appear in foods after normal preparation for consumption. The 1963 study, reported in July 1963, showed that pesticide residues detected were well within the amounts expected from compliance with safe limits (tolerances) established for individual crops.

In the spring of 1964, FDA inaugurated a new Total-Diet Study concentrated in Boston, Kansas City, and Los Angeles to cover foods marketed in these three different areas of the country. FDA inspectors obtained market basket samples of various fruits, vegetables, and other commodities recommended as a moderate-income diet for 18-year-old boys, the heaviest eaters in the country. The foods were then prepared by trained dietitians and cooks, and turned over to FDA laboratories for examination in 12 commodity groups. The results will be announced when the analyses are completed.

In the chlorinated organic area, FDA scientists use a multiple-detection procedure able to demonstrate the presence of 25 pesticide compounds.

Each food group is also examined for organic phosphate pesticides using paper chromatographic and polarographic methods.

FDA scientists can also detect six herbicides and certain carbamates, bromides, and arsenic residues in the tested foods.

The three FDA district offices will each run six of these market basket tests per year, and two additional districts will participate in 1965.

Other Harmful Contaminants

Food Poisoning.—Two outbreaks of botulism poisoning resulting from the consumption of smoked whitefish and chubs were investigated by FDA during the year. The outbreaks occurred in Kalamazoo, Mich., and in the Nashville-Knoxville, Tenn., area.

The Michigan outbreak involved two persons and resulted in two deaths. Smoked bulk-packed whitefish was the implicated food. A portion of the suspect product recovered from the home of the persons who died was found to be positive for *Clostridium botulinum*, Type E. The processor of the fish was not determined, but it was believed that the fish was purchased from a small roadside stand in Michigan.

The outbreak in the Tennessee area involved 24 persons in all and resulted in 7 deaths. Smoked packaged chubs were the source of the botulinus toxin. In this instance, the product was distributed by a chain store. The processor was identified and an intensive nationwide recall, involving 13 FDA districts, was initiated to remove possibly dangerous products from the market. FDA was aided by State and local authorities in the recall. Excellent cooperation was also received from TV, radio, and the press.

As a result of these outbreaks, FDA appointed a committee (Advisory Committee on Botulism Hazard), to recommend emergency measures to cope with the botulism hazard from smoked fish. The Committee drafted recommended processing and handling procedures for the smoked-fish industry. The procedures received concurrence of the National Fisheries Institute and were voluntarily adopted by the smoked-fish industry. The recommendations were to be followed until processes could be developed to control the botulism hazard.

Research contracts have been negotiated with the University of Wisconsin to investigate the possible occurrence and distribution of the type E botulism organism in the Great Lakes area and with Oregon State University to conduct a similar investigation of west coast areas. These studies have demonstrated the organism to be present in fish and in the environment of some areas tested. Washington laboratories of FDA are conducting research to determine methods for isolation and possible control of the organism. FDA field laboratories, during the past year, have examined about 1,200 samples of domestic and imported fish found on the market and will continue this program into the coming year.

In addition to the outbreaks of botulism involving smoked fish, FDA investigated 38 outbreaks of food poisoning involving 1,164 persons. One outbreak of four cases and one death occurred in Canada and shipments of liver paste to the United States were quickly recalled. FDA examination of samples from these lots failed to reveal the presence of *C. botulinum* but decomposition by other micro-organisms was observed in a number of the cans.

Botulism from home-canned foods was responsible for 7 outbreaks involving 22 persons and resulting in 8 deaths.

Salmonella contamination resulted in 5 outbreaks affecting 568 persons. Three outbreaks involved products (meringue pie, cream filled donuts, and turkey rolls) or ingredients moving interstate. These were removed from the market by seizure or recall. One outbreak occurred from mishandling of the food and one was of unknown cause.

Two outbreaks affecting 35 and 250 persons, respectively, were caused by *Bacillus cereus* and *Clostridium perfringens* resulting from insanitary handling of dried whipped potatoes and canned pork and juice. Examination of parent lots revealed no evidence of contamination in them.

Salmonella program.—Concern over the worldwide increase in salmonella food poisoning from egg products prompted a regulatory program in September aimed at dried and frozen eggs and foods containing eggs. The first action under the new program resulted from an outbreak of food poisoning among students at a Washington college. State and local authorities along with FDA inspectors traced the cause to frozen eggs used in meringue pies prepared by a Spokane bakery. The eggs were the product of a Spokane commercial creamery company which had never been licensed by the State to produce frozen eggs. FDA inspectors located and sampled interstate shipments from the creamery seizing three lots in Montana. More than 14,000 30-pound tins of frozen eggs from the firm were embargoed by the State. During the following 10 months samples were collected from 142 frozen and dried egg producers and food manufacturers using these products. Four seizures of contaminated frozen or dried eggs and two seizures of commercial foods prepared from contaminated eggs were made because of contamination with salmonella organisms.

To Keep Food Clean

Sanitation in food plants requires constant surveillance and a large part of enforcement time. Inspectors report increasing awareness by management of the need to keep foods clean and wholesome. Compliance through cooperation is becoming more and more significant.

The food industry continues at an ever-increasing rate to make changes in operations and facilities that contribute to sanitary opera-

tions. Some examples of voluntary corrections are: Large sums of money are being spent for modern equipment and improved facilities. Some firms have abandoned old quarters and constructed entire new plants. In 1964, there were 355 plant improvements costing more than $22,086,900 reported to FDA inspectors. This compares with 283 plant improvements costing slightly more than $11 million during the previous year.

An increasing number of food manufacturers are instituting vigorous sanitation programs. The food industry voluntarily destroyed 30,710 tons of food, or diverted it to nonfood use, in 1,380 actions after FDA inspectors pointed out that it was unfit for human consumption. During the previous year, the food industry voluntarily destroyed 2,272 tons of food, or diverted it to nonfood use, in 1,077 actions.

About the middle of March, FDA inspectors began encountering substantial decomposition in Japanese swordfish steaks. This is the principal form in which Japanese swordfish is marketed in the United States. By the end of April, 50 to 75 percent of the shipments were being detained at the port of entry. This amounted to more than 300,000 pounds in some series of shipments. Representatives of the importers and the Japanese shippers visited the districts where these shipments were stopped and agreed with FDA analysts that the detentions were justified. The Japanese visitors said that corrective action was necessary in Japan to prevent future shipments of unfit swordfish. Since then relatively few detentions have been required.

In enforcement actions, the volume of unfit food seized—9,842 tons in 395 actions—included 3,750 tons of safflower seed which became insect infested and contaminated by birds while in storage. The seed was reconditioned under a consent decree. Another 16,230 tons of the seed was referred to State authorities and placed under embargo when its interstate origin could not be established and 130 tons of reject material was destroyed. The firm has since constructed storage bins and other facilities at a cost of $3,800,000.

Coffee and cocoa beans also have been found insect infested while in storage. Seizures of rodent- and insect-contaminated bulk wheat and other grains totaled 3,394½ tons.

The sale of frozen eggs made from incubator rejects is so lucrative that it may never be entirely eradicated. Federal prosecutions seem to have driven the operations out of FDA jurisdiction. Warehouse stocks, when encountered, are usually of intrastate origin and are referred to State agencies for disposition and regulatory action.

Criminal prosecutions terminated, based on unfit foods, totaled 58, bringing fines ranging from $40 to $7,000. The longest jail term was 3 months.

Table 1.—*Actions on foods during fiscal year 1964*

Projects	Seizures accomplished	Criminal prosecutions instituted	Injunction petitions
Totals	512	52	8
Code:			
01 Beverages and beverage materials	9	2	1
02 Bakery, ready to eat cereal, macaroni prod	16	7	1
Cereals, grain prod., and feeds:			
03 Human use	103	10	6
14 Animal use	4		
05 Chocolates, sugars, and related prod	9	1	
Dairy products:			
06 Butter and churning cream	5	1	
07 Cheese and other dairy prod	6		
09 Eggs and egg prod	34	1	
12 Flavors, spices, and condiments	4		
13 Fruits and fruit prod	27		
15 Meat, Meat prod. and poultry	11	1	
16 Nuts, and nut prod	45	1	
17 Oils, fats, and oleomargarine	4		
10 Seafood	37	3	
18 Vegetables and veget. prod	68	3	
19 Miscellaneous foods (mixed lots)	1	1	
20 Warehouse foods	82	19	
31 Foods for special dietary uses [1]	47	1	
81 Misc. chemicals		1	
22 Pesticides (included in codes 03, 14, and 18)	(33)		

[1] Includes vitamin products intended as food supplements.

The $7,000 fine was assessed against an Oklahoma warehouse for storage of foods under insanitary conditions.

A macaroni firm was fined $500 and its officers consented to an injunction. Inspections had indicated serious sanitary violations and the use of reground scrap macaroni.

One large bakery and three of its executives were fined a total of $4,000 for insanitary storage of raw materials, insanitary operations, and interstate shipment of unfit products.

A New England firm was fined $5,000 for interstate shipment of fishsticks prepared under insanitary conditions, contaminated by cockroach filth, and misbranding by substitution of codfish for haddock.

The operator of a salvage firm was fined $2,000 and sentenced to a 3-month jail term for selling evaporated milk and other foods in badly dented, rusted, and swollen cans.

Eight injunction procedures have been instituted to prevent shipment of unfit material and to encourage improvement of facilities. Among the firms involved were the macaroni firm previously noted, a packer of canned vegetables which were contaminated with curculio larvae, a brewery, a rice packer, and four grain warehouses or elevators.

Pocketbook Protection

FDA continues to encounter some, but not as many, violations involving short weight, inconspicuous or "hidden" labeling, lack of mandatory labeling, and failure to comply with official standards.

Total seizures to protect consumers from economic violations were 62 in 1964, compared with 136 in 1963. However, although there were less than one-half as many seizure actions, seizures in total number of pounds were 546,662 in 1964, compared with 519,823 in 1963.

During the year, 15 products were seized on short-weight charges. These included vitamins, nuts, candy, honey, flour, sorghum sirup, bakery products, fruit drinks, seasonings, oil, and crabmeat.

The need for surveillance of the fishing industry has not diminished, particularly in New England where 500 million pounds of food fish are landed annually. The $5,000 fine levied for the shipment of cod labeled as haddock and contaminated by cockroach filth was mentioned in the previous section. In another case, a wholesale fish dealer was fined $3,000 for substituting inexpensive pollock on purchase orders for cod, flounder, and perch.

In view of a record of prior prosecution, a canner of fruits and vegetables was fined $3,250 for short weight, use of moldy and rotten fruit, deficient amounts of sugar in the sirup, and misbranding with a false and misleading vignette.

Court actions were also taken against foods that were below official standards. Among the products seized were two lots of canned tomatoes that had excess peel; one lot of canned green beans containing excessive blemishes; and 83,328 pounds of butter low in milk fat. In another action FDA charged that 500 cases of canned cherries had pits and blemishes in excess of those allowed in the standard of quality.

The Food, Drug, and Cosmetic Act requires certain information that will assist the consumer in intelligent purchasing to appear prominently on the label. In a number of instances, labels of creamed cottage cheese failed to declare the presence of added stabilizing ingredients (gums) which are now permitted as optional ingredients in the standards.

One sampled lot that never reached the market was a case of an "ice tea mix with lemon"; the product was misrepresented to the consumer as containing real lemon, when, in fact, it contained an imitation lemon-juice powder.

Short-weight and slack-filled canned nuts led to seizure of two lots of canned nut meats on charges that the label and its vignette were misleading since there were no pecans present in the mixture, as represented, and the nuts were predominantly peanuts.

FOODS FOR SPECIAL DIETARY USE

Food quackery continues despite the efforts of regulatory agencies and the educational programs of responsible industry, government, and health professions.

An estimate made a few years ago that "health-food" rackets cost 10 million Americans over $500 million a year is still believed conservative. The natural desire for good health is exploited by false claims for special food products, and leads to the most widespread and expensive form of medical quackery today.

Vitamin-and-mineral food supplements are useful when required for medical reasons. These products, in ordinary doses, are not harmful. But when unknowing or unscrupulous promoters distort facts and claim benefits against diseases or symptoms which have no relation to dietary deficiency, the results can be, and often are, tragic. People who have serious medical problems may be misled by these false claims to rely on products that are worthless.

The consumer hears the words vitamins, minerals, protein, or polyunsaturates so often that he feels more secure when such words appear on labels of food he buys. Even if his health is good, he is urged to improve it with a food "supplement."

The seriousness of this sort of food quackery was recognized in 1964 when a Federal court ordered a halt to a multimillion-dollar, nationwide business. The Vitasafe Corporation and five related firms were selling vitamins and other food supplements that had false health claims in the labeling. Examples of claims that produced complaints against these and other firms are that their labels or advertising suggest that (1) the nutritional needs for men and women differ; (2) the preparations are enhanced by the presence of such ingredients as vitamin K, desiccated liver, or various minerals; or (3) the products are effective for treating or preventing conditions often found among older people.

The court's decision in the Vitasafe case is a landmark in the history of efforts against nutritional misrepresentation. The patent-medicine quackery typical of a half century ago has virtually disappeared. No longer are there numerous fake remedies for tuberculosis, diabetes, and other serious diseases and conditions. The exaggerated claims for vitamins and so-called "health" foods will also become rare if enough time and effort are devoted to debunking them.

In New York City a Federal grand jury returned a 49-count indictment against the promoters of safflower-oil capsules and an accompanying book, "Calories Don't Count," by Herman Taller, M.D. The defendants were charged on 45 counts of mail fraud, 1 of conspiracy, and 3 violations of the Federal Food, Drug, and Cosmetic Act. The indictment was based on the sale of safflower-oil capsules mentioned in Dr. Taller's book. The capsules are worthless in obesity control. After the indictment, over 5 million safflower-oil capsules were recalled and destroyed by the manufacturer.

Tablets and collateral literature valued at about $9,500 were seized in another food-supplement quackery action. Promotional material represented the tablets as effective for treating and preventing run-down and weak conditions, lack of energy, tiredness, poor eyesight, and other complaints.

"Energy" wafers worth $105,000 were seized because of false claims for weight control and prevention of heart disease, hardening of the arteries, high blood pressure, and other conditions.

Four lots of vitamin-and-mineral products valued at $37,270 were seized because of false claims for prevention of kidney stones, liver disease, gallbladder disturbances, skin disorders, and insanity.

A 50-page booklet "FDA's Campaign Against Nutritional Quackery" was distributed at the Second National AMA–FDA Congress on Medical Quackery held in October 1963, in Washington, D.C. This booklet described the numerous products FDA has seized since the first Congress in November 1961, because of false and misleading nutritional claims.

The Second Conference on Medical Quackery brought together again all major American groups concerned with efforts to safeguard the public against worthless treatments represented as cures, mechanical gadgets, food fads, and other useless treatments of disease conditions; to learn why the public is vulnerable to quackery; and to determine what is needed in education to help the individual consumer protect herself and her family against health charlatans.

DRUGS AND DEVICES

Recalls.—One hundred and ten defective, misbranded, or potentially injurious drugs were recalled from commerce during the year.

Sprinklings of penicillin tablets were found in 13 hospital-sized bottles of aspirin tablets during January. The penicillin tablets were inadvertently mixed with the aspirin through a packaging error which presented a serious threat to the penicillin-sensitive 5 percent of the U.S. population. Both the manufacturer and FDA warned hospitals and druggists to be on the lookout for hospital-sized bottles containing either 1,000 or 5,000 tablets. Newspaper stories carried the serial numbers of the bottles.

The New Drugs section discusses the withdrawing of the approval of the Orabilex (bunamiodyl sodium) New Drug Application because it had been found that the drug is not safe. After serious reactions and fatalities the firm took the product off the market.

Parnate (tranylcypromine), a potent prescription drug for the treatment of mental depression, was recalled by the manufacturer at FDA's recommendation after a significant number of adverse reactions were reported in patients using the drug.

It was found responsible for reactions ranging from high blood pressure and headaches to strokes and a few deaths. A supplemental New Drug Application was approved in June 1964 after the manufacturer, in cooperation with FDA, had revised the labeling and issued a drug warning letter to all physicians pointing out the new and revised contraindications. After consultation with many experts by 15 FDA physicians, it was concluded that careful use of the drug would minimize and substantially avoid hazards and that the drug is useful in the treatment of severe depression. This is an illness in which suicide is possible and in which electric shock treatments cannot always be used.

Two other drugs, Eutonyl (pargyline hydrochloride) and Di-Triokon (sodium diatrizoate and sodium diprotrizoate), were also recalled when serious side-effect reactions were reported.

Other recall actions during 1964 were accomplished against 22 drugs for label mixups caused by poor packaging controls; 19 drugs where the active ingredient was found to be deficient in potency; 7 drugs where potency was found substantially in excess of label declaration or individual tablets showed extreme variation; and 9 drugs because of decomposition of the active ingredient.

In other actions, eight drugs were recalled because of cross contamination during manufacture; five because of substitution of the active ingredient; five because they were prescription drugs bearing nonprescription labels; six because they did not have current effective New Drug Applications; five because their Investigational New Drug Exemption had terminated; four because they failed to disintegrate as labeled; and three because they were adulterated with foreign tablets.

Sterility, pyrogens, pharmaceutical inelegance, and other causes resulted in the recall of 12 additional drugs.

Illegal Sales of Prescription Drugs

On January 8, 1964, a tractor flatbed truck crossed to the wrong side of the West Virginia Turnpike and collided with an oncoming mobile post office killing the drivers of both vehicles as well as three sorters in the mobile post office. Investigating officers found amphetamine tablets in the luggage of the tractor flatbed and analysis revealed the presence of amphetamine in the stomach contents of the tractor driver.

FDA is responsible for protecting the innocent from harm resulting from misuse of dangerous drugs like amphetamines and barbiturates. Undercover operations are designed to apprehend those selling dangerous drugs illegally.

The goal is to identify and eliminate the points from which the

drugs are diverted from legitimate into illegal channels of distribution. But the traffic in illegal drugs is enormous. Convictions for violating the illegal drug provisions of the Federal Food, Drug, and Cosmetic Act over the 12-year period ending June 30, 1964, involved over 2,100 firms and individuals. This is an average of more than three convictions per week since 1952.

An otherwise law-abiding citizen may go berserk under the influence of an overdose of amphetamines and become a menace to himself and society. He may participate in mass violence while misusing the drugs. It is not uncommon for hoodlums who are planning a robbery or other criminal act to take amphetamines to bolster their courage. In Houston, an ex-convict shot and killed a schoolteacher, assaulted a 14-year-old farm girl, and committed two robberies while under the influence of amphetamine.

The FDA program against illegal distribution of these drugs is conducted primarily by inspectors working out of 18 district offices throughout the country. Undercover investigating of illicit drug traffic, however, has in recent years become increasingly hazardous. FDA inspectors who engage in this work often put their lives in jeopardy because hardened criminals are taking over these rackets.

One of the most unusual cases during the past year was in the Newport-Covington, Ky., area. Over the past 5 years, the FDA district office had received many complaints that amphetamines, barbiturates, and "knock-out drops" were being sold in both areas. According to information received, teenagers and criminals had easy access to purchasing these drugs. Many sales were made through local bars. All evidence pointed to one man who had subdistributors peddling on street corners and in bars. His peddlers worked only in assigned "territories" and would be discharged for selling in another man's "territory." This is typical of the system used by illegal narcotics distributors. At the time of arrest, the distributor was delivering 25,000 amphetamines and 5,000 barbiturates to an FDA agent. This distributor and nine of his peddlers received jail sentences.

Another case involved the sale of drugs to teenagers by a Newark, N.J., hoodlum. He was the prime supplier to the youngsters. After lengthy investigation by FDA inspectors he and some of his subdistributors were tried and convicted. This distributor, when called to trial, was already serving a local prison sentence for stabbing a customer in a fight over the price of drugs. The customer's death added 5 years to the sentence of 1 year for illegal drug peddling.

In a Missouri motel, three FDA inspectors purchased 40,000 "bennies" (amphetamine) which led to the arrest of the seller, a pre-

viously convicted peddler. Previous buys from the same individual were in lots of 4,000 and 20,000 tablets. The peddler's wife had a loaded revolver and 47 "bennie" tablets in her purse.

An Atlanta, Ga., wholesale drug dealer boasted that he had been selling 25,000 bennies a week prior to his arrest and conviction.

In Nashville, Tenn., 5,366,000 "bennies" were seized following a police stakeout at a private residence. Three persons were arrested in connection with the raid.

And in Indiana, a doctor was fined $1,820 for attempting to sell undercover FDA inspectors 16,000 amphetamine tablets. Seizure was made of 273,000 amphetamine pills in his possession.

In June, maximum sentences of 17 years apiece in jail were imposed by the Federal district court at San Francisco on two defendants convicted for traffic in the dangerous hallucinogenic drug LSD–25. The men were convicted and received sentences of 10 and 7 years, respectively, for violating both the smuggling and food and drug laws. They sold or attempted to sell approximately $165,000 worth of LSD–25 to FDA inspectors posing as interested buyers. LSD–25 is considered one of the most powerful chemical agents known and is capable of causing serious mental changes with extremely small doses. It may cause nervous breakdowns and suicidal states.

Of the 151 drug prosecution cases initiated during Fiscal Year 1964, 137 were brought against 232 firms and individuals charged with illegal sale of prescription drugs. Seventy-one cases involved truck-stop and drive-in peddlers, and others not licensed to dispense prescription drugs. Sixty-four cases were brought against drugstores, their pharmacists, or both, for dispensing drugs without prescriptions or refilling prescriptions without authorization. Two involved wholesale distributors; the remaining two prosecutions were brought against physicians who were selling amphetamines, barbiturates, and other prescription drugs without a physician-patient relationship. From the quantity sold it was obvious the physicians did not expect the purchasers to use them for medical purposes.

Of 137 criminal cases terminated during the year on charges of illegal sales, 57 involved unlicensed outlets, 73 involved drugstores or pharmacists, and 7 were physicians or "clinic" operators. Thirty-one jail sentences were given peddlers, self-styled doctors, and other unlicensed operators ranging from 1 hour to 3 years; 21 others received jail sentences that were suspended on condition that they discontinue illegal sales. Five pharmacists and 2 physicians received suspended jail sentences, and fines were imposed in 54 drugstore or pharmacist cases.

Misbranded and Adulterated Drugs

The continued training program for drug inspectors, further allocation of time for work in the drug project, and increased operations under the new Kefauver-Harris Drug Amendments have brought to light additional violations of new and unusual character.

A Long Island City, N.Y., firm was fined $2,000 on five counts of interstate shipments of adulterated drugs and foods. The company was charged with shipping drug products and food supplements prepared under insanitary conditions which resulted in contamination with a synthetic hormone, diethylstilbestrol, which has many of the biological and medical properties of female hormones. All the products were subsequently removed from the market.

Another New York City firm was permanently enjoined from shipping various drugs because of subpotency, excessive potency, failure to meet USP standards for tablet weight variations, and filthy manufacturing conditions. FDA inspections brought to light inadequacies in manufacturing methods, facilities, and controls.

A Greenville, S.C., firm and its president were each fined $500 because some of the firm's drugs varied in composition from the amounts of ingredients declared on the labels.

A preliminary injunction restraining all distribution of Mucorhicin, a widely used alleged cancer cure sold by mail, was granted by a U.S. district court in February. Developed by a former tire salesman and selling for $6.75 to $10 per half ounce, Mucorhicin is made of wheat, salt, yeast, and water. It was claimed that 15 drops of the product taken by mouth three times a day mixed in any liquid would dissolve tumors.

In granting the preliminary injunction, the court denied the defense contentions that Mucorhicin was sold as a food dietary supplement and that there was no evidence that Mucorhicin caused injury to anyone. The drug was delivered into interstate commerce by a "cancer clinic" in Pittsburgh, Pa. Inadequate manufacturing controls, as revealed by FDA's investigation, were also involved.

In December 1963, 27 vials (1,000 mg. ea.) of the worthless cancer drug Laetrile were seized on charges that the article was a new drug shipped in interstate commerce but not cleared by FDA as safe and effective. The McNaughton Foundation of Montreal, Canada, is manufacturer of the drug which was originally compounded from apricot kernels by Ernst T. Krebs, Jr., and the John Beard Memorial Foundation of San Francisco, Calif. Krebs and the Foundation had been fined $3,755, placed on probation for 3 years, and prohibited from shipping any new drugs, including Laetrile, without obtaining prior FDA approval. In a Canadian case in which an FDA official testified

as an expert witness, the McNaughton Foundation was subsequently prohibited from distributing the drug.

Cooperation between an FDA inspector and the Maricopa, Calif., county authorities resulted in the arrest of a man who sold a $330 cancer-cure-treatment course consisting of mineral tablets. He obtained leads to his victims from his wife who was a home-products-party demonstrator.

The manufacturer of MER/29 was fined $80,000 by a Federal Judge in the District of Columbia. MER/29 was marketed between April 1960 and April 1962 to lower high cholesterol levels in the body. The indictment was brought under title 18 of the U.S. Criminal Code, section 1001, which makes it a criminal offense to deliberately and willfully submit to the Government any report which is false and fraudulent in a material respect or willfully and intentionally to conceal any material facts.

The Government charged that the manufacturer made false statements in its New Drug Application about MER/29's toxic effects on rats, monkeys, and dogs, and concealed information about serious adverse reactions in humans including cataracts, infertility, and impotency after MER/29 had been marketed.

Multiple seizure actions were begun in January against a nationally advertised product for appetite control and weight reduction. Regimen Tablets, distributed by the Drug Research Corp., of New York City, were labeled and advertised as effective for appetite control and weight reduction without drastic diet changes. The recommended daily dosage of Regimen contained 75 mg. of phenylpropanolamine, an amount found to have no significant pharmacological value as a weight-reducing agent. FDA discovered that many persons who gave testimonials for magazine-and-television promotion of Regimen were actually reducing on starvation diets or on drugs prescribed by physicians. FDA also found that some of the purported clinical tests conducted by promoters of Regimen were either not carried out at all or had been falsified. The manufacturer has been permanently enjoined from further interstate shipments with claims for weight control. In addition, the firm, its president and chief chemist, and the promoters have been indicted for the fraudulent national advertising of the product.

The U.S. Court of Appeals for the Third Circuit upheld an earlier district court ruling condemning Unitrol, also a phenylpropanolamine treatment for appetite control and obesity. The court found that the phenylpropanolamine content of Unitrol was of no significant pharmacological value as a weight-reducing agent. The firm had similar drug products for treating obesity under a number of private brand

names including Lee, Leen Plan, Offat, and Sleek. A seizure was made of each and before the trial defense attorneys agreed that the decision made in the Unitrol case would be binding in all of the others.

A number of "sustained-action" or "time-disintegration" cold capsules, manufactured by a few firms under more than 100 private brand names, were seized on charges of false claims just after the close of the fiscal year. FDA said the seized nonprescription "time capsules" contained insufficient active ingredients to provide up to 12 hours of continuous relief from the common symptoms of colds and hay fever as claimed. Should a capsule contain an effective dose for a 12-hour period, a New Drug Application would be required to assure safety and efficacy.

Among the seizures of drugs being marketed without FDA-approved New Drug Applications were drugs for ulcer treatment, a hallucinogenic drug, and a 720-tablet lot of hydrochlorothiazide EK–25 tablets.

Probably the last of the cases involving General Pharmacal Company's counterfeit drugs, which have netted 14 cases won with $12,000 in fines and one 6-month jail sentence, was concluded in New York when a drug firm salesman received a 2-year jail sentence (which was suspended for 3 years) and a $2,000 fine for selling counterfeit tranquilizers.

Other imitation and counterfeit cases involved a multiple seizure of an imitation of a well known brand of amphetamine, and a Federal injunction against the Bronx Drug Company and its president to cease repacking various physicians' samples and applying reproductions of a legitimate drug firm's labels to the containers.

Among the examples of misbranded drugs with misleading claims removed from the market were an ulcer treatment which was ineffective; a hair preparation which was falsely claimed to strengthen hair and restore normal hair growth; a group of products, essentially sodium chloride, sodium carbonate and sodium sulphate, claimed as effective treatments of everything from rheumatism and psoriasis to female troubles and ulcers of the eye; and a lot of 170,200 nitroglycerin-containing tablets which did not release its active ingredients according to the label claims.

An elderly herbalist, self-styled half Apache and half Irish, claimed to be able to treat a number of serious (and some imaginary) ailments, diagnosed with the aid of a pen flashlight, with herbs, barks, and other medicants. A court injunction forced him to discontinue practicing his "art."

A number of preparations purporting to be "wrinkle removing" products were seized on charges that they were new drugs for which ap-

plications had not been approved and were misbranded by false and misleading claims. The cases are being contested by the manufacturers who claim that they are not new drugs requiring approved applications.

A suit against the Secretary of the Department of Health, Education, and Welfare and five other Department officers including the Commissioner of Food and Drugs was dismissed by a district court which ruled that the Government's investigations of a worthless cancer remedy, Krebiozen, were reasonable and could be continued. The district court on February 20, 1964, ruled: "The inspectors had a right to make the inspection, had reasonable grounds to inquire into the matters covered by the inspection, made reasonable requests for inspection and samples, and that the legally authorized inspections were denied."

(On November 17, 1964, a Federal grand jury in Chicago indicted the Krebiozen Foundation and Dr. Steven Durovic, 59; his brother Marko Durovic, 64, an attorney; Dr. Andrew C. Ivy, 71; and Dr. William F. P. Phillips, 52, all of Chicago, on 49 counts of conspiracy, mail fraud, mislabeling, and making false statements to the Government. Among the claims made by the defendants were that the cost of producing one gram of Krebiozen was $17,000—when in fact it is a common chemical worth about thirty cents per gram—and that a Krebiozen user was healthy when in fact he had died of cancer 8 years earlier.)

Medicated Feeds and Veterinary Drugs

Potent drugs are increasingly included in nutritionally balanced animal feeds to stimulate growth and to prevent, control, or treat disease. During the last fiscal year, there were 3,544 new drug applications and their supplements approved for medicated feeds and dosage forms and 984 approvals granted for marketing feeds containing certifiable antibiotics. These applications are received from some of the 12,000 feed mills in this country that produce more than 50 million tons of animal feeds annually. Some of the preparations used are antibiotics, drugs, hormones, and arsenicals.

Public health and the Nation's economy alike benefit from their use. Animals that develop rapidly in good health reduce livestock loss for the farmer and food costs for the consumer. However, the marketing of these products must be undertaken within the limits of safety. Each application is carefully reviewed to see that the manufacturer of the drug uses adequate care in preparation, testing, and mixing of the product and that the feed mill has suitable facilities to blend uniformly the small quantities of the drug with the large quantity of the feed.

Often only a few spoonfuls of a drug to a ton of feed will produce the desired effect.

Some feed dealers still do not have the experience or equipment for proper mixing of feeds and drugs. Medicated feeds must be fed exactly as prescribed on the label to avoid animal injury and to avoid toxic residues in human food that might endanger public health.

FDA educational programs to reach the livestock and poultry associations this year included publication of two pamphlets addressed to poultrymen, poultry and egg producers, livestock men, farmers, and feedlot operators in an attempt to keep drug residues out of poultry, meat, and dairy products. Many talks were given by industry, FDA, and local feed officials to make those who manufacture and use medicated feeds more aware of their responsibilities.

Sometimes persuasion and education are not enough and legal action must be taken against feeds that could be damaging to animals and eventually consumers. For example, of 18 seizures made of medicated feeds, 7 contained feed additives whose use had not been sanctioned. Such feeds must be safe for the animals and for people who consume their meat, poultry, milk, and eggs. Another seizure was made because a broiler feed contained an uncertified antibiotic.

Three stock premixes were seized for false and misleading claims and one shipper was permanently enjoined from distributing poultry and stock feeds represented for the prevention of diseases. Farmers were being victimized because the products consisted primarily of mixed feeds containing small amounts of sulfur, sodium bicarbonate, capsicum, and blood root as a substitute for feeds containing antibiotics and other effective medication. They were being sold at the ridiculous price of $50 for a 25-pound drum.

Seven feeds were seized because they were below the composition claimed in the labeling. A $2,000 fine was levied against a firm charged with deficiency of active ingredients.

Eight veterinary drug seizures were made for false claims, unlabeled substitution of ingredients, or marketing without an approved New Drug Application.

A Minnesota man, whose business address was a car or a panel truck, was convicted of selling jars of a mastitis remedy to small country stores and feed mills. The label on the product claimed various sulfa drugs to be the active ingredients. The man and his assistant, without training, equipment, controls, batch samples for analysis, clinical testing or a proper place to work, merely combined with mineral supplements, stacks of outdated sulfa preparations which had lost their potency.

New Drugs

NDA approvals.—One hundred and sixty-five original New Drug Applications for drugs for human use were received during the fiscal

year in addition to 2,700 supplements and other submissions pertaining to approved applications. Within the same period, 83 original applications and 533 supplements were approved. During the fiscal year, 1,887 original New Drug Applications and 2,283 supplements were received for drugs for veterinary use; 1,799 original applications and 1,855 supplements were approved.

Significant new drugs approved for marketing during the year included an antidote for poisoning by parathion and other pesticides (pralidoxime chloride); an antifibrinolytic agent (aminocaproic acid); an oral antidiabetic (acetohexamide); a systemic trichomonicide (metronidazole); an intravenous diuretic (mannitol); a drug for acute childhood leukemia (vincristine sulfate); an agent for an alternate method for electro-shock therapy (flurothyl); a mucolytic agent (acetylcysteine); an antineoplastic drug (melphalan); a product for various psychiatric states and emotional disorders (diazepam); and two oral contraceptives.

Among the new drugs approved for animals were: Thenium clysolate, an anthelmintic for dogs; thiabendazole, an oral anthelmintic for cattle; estradiol palmitate, an injectable paste for chickens to produce more uniform fat distribution and improve finish; acepromazine, a tranquilizer for dogs, cats, and horses; pentapiperide methylsulfate, an antispasmodic for dogs and cats; and furaltadone, an antimicrobal agent for intramammary infusion in the treatment of bovine mastitis.

NDA nonapprovals.—Many of the New Drug Applications which were not approved were regarded as incomplete and inadequate to establish the safety and effectiveness of the drugs for the proposed uses.

Withdrawals of approved NDA's.—The approval of three New Drug Applications was withdrawn. They were:

(a) two dosage forms of Somativite (thiamine mononitrate, vitamin B_{12}, and reserpine), a liquid formulation and a tablet, recommended for the promotion of appetite and weight gain. Approval was withdrawn on the basis that new information evaluated together with the evidence available when the new drug applications were approved showed that the methods used in, or the facilities and controls used for, the manufacture, processing, and packing of the drugs were inadequate to assure and preserve their identity, strength, quality, and purity.

(b) Orabilex (bunamiodyl sodium) an iodine diagnostic radiopaque medium for gall-bladder-visualization studies. Approval was withdrawn on the grounds that tests by new, improved methods disclosed that the drug was not safe for use under the conditions of use upon which the application was approved.

New Drug Status Opinions.—FDA replied to 1,328 inquiries concerning the new drug status of 1,799 articles. The inquiries related to products already on the market and many proposed for marketing. Corrective action was recommended in a number of cases where findings indicated that a product regarded as a new drug was being distributed without a New Drug Application or without an investigational exemption.

Investigational New Drugs.—A total of 860 Notices of Claimed Investigational Exemption for a New Drug were submitted to FDA during the fiscal year. In addition, there were numerous amendments and progress reports to the approximately 1,900 notices received within the past 2 years.

Almost 200 clinical studies were discontinued by the sponsors. FDA terminated clinical investigations on eight drugs for which the data in the investigational drug notice did not support a conclusion that it was safe to proceed with the proposed clinical tests.

New-Drug Surveillance.—The experience with a new drug after it is placed on the market, its labeling, promotional material, and advertising are subject to evaluation by FDA. Following such an evaluation corrective action is recommended where appropriate either through contacting the distributor or through formal regulatory procedures.

During the fiscal year about 1,700 reports of adverse reactions were received. These reports were reviewed to determine whether the reactions warranted revising the labeling for the drugs involved, issuing a drug-warning letter to physicians, or removing the drugs from the market.

FDA has been engaged in securing labeling revisions for drugs in 20 different categories. As a result, 172 firms have revised the labeling of 358 drugs.

Discussions with pharmaceutical firms resulted in the issuance of seven warning letters to medical practitioners in the United States advising them of newly reported serious effects associated with the use of the following products: Chlorpropamide (propyl sulfonylurea), Maalox suspension (magnesium aluminum hydroxide), phytonadione, Parnate (tranylcypromine), Orabilex (bunamiodyl sodium), Imferon (iron-dextram injection), and pargyline hydrochloride.

FDA representatives concerned with drug advertising and promotional literature, have held consultations with drug manufacturers resulting in corrections in the promotion of four drugs having national and international distribution.

FDA maintains effective liaison with the World Health Organization. It has also been responsible for transmitting information on drugs and reactions to various foreign countries.

Devices

That modern device quackery trades on old ideas was abundantly demonstrated at the Second National Quackery Congress referred to earlier under "Foods for Special Dietary Use" held by the American Medical Association and FDA in October 1963. FDA's comprehensive exhibit of the evolution of American device quackery traced "healers' " worthless devices from Dr. Elisha Perkins' Tractors in 1795, Dr. Albert Abrams' radionics in 1915, up to electronic quack devices currently being seized. Another section of the exhibit featured "do-it-yourself" gadgets from the Oxydonor device of the 1880's to today's home treatment counterparts. This exhibit received wide coverage in magazines, newspapers, and on television and radio networks.

Of the 98 device seizures in fiscal 1964, 50 were based on articles charged to be misbranded with false and misleading claims or to bear inadequate directions for the uses for which they were promoted. Fifty-four different devices were involved, some seizures covering more than one type of product.

The 1963 report discussed the roundup of 1,168 Micro-Dynameter and Neurolinometer diagnostic and treatment devices in the hands of practitioners and stated that a few might still be in use. Twenty-three were seized in six actions in 1964. The removal of these worthless machines from the offices of practitioners will protect patients from being led to believe they have diseases they do not have, or gaining false confidence in "cures" for diseases they actually have.

A number of prescription devices requiring medical supervision were seized in possession of persons not licensed to operate them, among them Burdick's UF–400 Ultrasonic Therapy device, the Lindquist Chronasonic Ultrasound, Ultrasonic Generator, and Med-O-Solex, which was promoted for the treatment of muscle spasms. The ultrasonic devices were used in the treatment of arthritis, swollen prostate glands, and migraine headaches.

Other devices were seized from practitioners and treatment clinics or centers; these were charged worthless for their intended use. The devices included Cardiolectameter, Corsray (an electrical shocking instrument), Electronic Magnetic Model G, Gordon Detoxifier, Magnetron, Master Violet Ray, Mathison Electro Psychometer, Med-O-Sonic, Micro-Tabulometer, Pathoclast, Pathosene, Riles-Coe Therapeutic Filter Lamp devices, and Acu-Finders consisting of silver and gold needles claimed to have been discovered as disease cures by the Chinese 5,000 years ago and possibly forerunners of Dr. Perkins'

Tractors. Patients were misled by the complicated appearance of many of these machines into thinking they were scientifically designed to diagnose, treat, or cure disease. Most of them were too expensive (up to $2,500) for individuals to purchase for home use and looked too complicated for untrained persons to operate. The victims were persuaded to pay practitioners for expensive treatments on glowing promises of their effectiveness for serious diseases.

Among the cheaper "do-it-yourself" treatments and cures seized were "health lamps" capable of burning the skin, jouncing contour chairs, vacuum cleaners, sacroiliac belts, foot exerciser sandals, electric sleep machines, electric wrinkle removers, several types of bath contraptions (including the nationally advertised Sauna Bath imported from Finland), oxygen inhalers, ozone generators, negative-ion generators for respiratory conditions and allergies, humidifiers, and a number of articles for weight reduction and firming the skin. The devices were promoted through fairs, home shows, retail outlets, and in mail order catalogs.

An injunction decree was issued by consent in September 1963 prohibiting misbranding of Jacuzzi Whirlpool Bath, a portable unit used to swirl water in a tub or pool, with claims that it was an adequate treatment for arthritis, bursitis and muscular and nervous disorders, varicose veins, hemorrhoids, and other painful ailments.

Joseph Ruffino, promoter of the Abunda Products, Inc., "bust developer," had been permanently enjoined in May 1963 from misbranding this worthless device with false and misleading claims. He was sentenced to 30 days in jail in August 1963, and given a 1-year suspended jail sentence on condition that he remain on probation for 5 years. In addition he was fined $500. Presentence investigation disclosed that he and his associates had mulcted unwary citizens of more than $100,000. Both Federal and California authorities have seized and destroyed large quantities of unsold Abunda products.

FDA assisted the Post Office Department in the prosecution of Roy M. Welles, D.C., of Indianapolis. This terminated with a 10-year prison sentence for mail fraud of cancer patients. His major device was the Detoxacolon which had been seized and condemned in four actions under the Food, Drug, and Cosmetic Act 15 years earlier. Subsequently he had inhumanly operated the Fremont Christian Clinic in Los Angeles where in 4 years he had treated some 700 cancer victims at prices sometimes exceeding $1,000 in advance. There was a 13-percent incidence of death after treatment. Over the years he had sold approximately $\frac{1}{2}$ million worth of Detoxacolons to chiropractors at $2,500 each and had received $2 million in treatment fees from victim

patients. Dr. Welles claimed, contrary to proven medical facts, that all ailments including cancer, arthritis, asthma, colitis, epilepsy, and high and low blood pressure, were caused by toxins in the colon and could be eliminated through irrigation with water and oxygen. The machine was dangerous for such use.

Forty-eight seizures were based on substandard products. Forty-three involved defective rubber prophylactics. The largest in volume comprised 1½ million units with defects ranging between 2 and 4 percent, whereas expert testimony has established that it is readily possible to produce such articles with a defect incidence of one-half percent or less. The court ordered the goods returned to Puerto Rico whence they were shipped, and that they not be sold until they are retested and brought into a condition satisfactory to FDA. No provisions for enforcement of the order or collection of costs were included.

The other five seizures involved cotton swabs and plastic syringes that were not sterile, two brands of clinical thermometers that did not register accurately, and inaccurately labeled drainage bottles for use in surgery where reliable measurement of body fluids is essential.

The U.S. Court of Appeals for the Third Circuit upheld a district court decision debunking health claims for small household "air purifiers." The lower court had ruled that such a device failed to eliminate the symptoms of any of the diseases or conditions mentioned in its promotion. This is the first seizure of a device of this type to be contested and appealed.

Two Endocardiograph devices, 132 different drug and vitamin products, and a quantity of promotional literature shipped by Royal Lee, his associates, and the Vitamin Products Co., Milwaukee, Wis., were seized in a Baltimore vitamin store. The proprietor was using the device to diagnose numerous serious diseases and conditions for which he would prescribe and sell the drugs and vitamins.

COSMETICS AND COLORS

Six cosmetic seizures were made, five of two nail strengtheners and one of cinnamon hot toothpicks. All the products contained a poisonous or deleterious substance.

The nail strengtheners contained formaldehyde, a product injurious to the user when used according to directions on the label.

The toothpicks contained an added poisonous substance, oil of cinnamon or cinnamaldehyde.

No seizure actions were taken this year against products which contained non-permitted or uncertified colors.

CERTIFICATION SERVICES

Color Additives.—All color additives used in foods, drugs, and cosmetics (except hair dyes) must be listed for such use pursuant to the Color Additive Amendments of 1960. Synthetic organic colors used must be from batches certified by FDA as safe for such use unless exempted by regulation. In 1964, 6,218 batches representing 4,482 tons were certified, and 42 batches representing 20 tons were rejected.

Insulin.—Three hundred-nineteen batches of insulin were tested and certified and 58 materials were approved for use in making insulin-containing drugs. One batch of insulin did not meet the required standards.

Antibiotics.—The Drug Amendments of 1962 provided that after May 1, 1963, all antibiotics for human use be certified by FDA. Penicillin, streptomycin, chlortetracycline, bacitracin, and chloramphenicol require certification for animal use.

During Fiscal Year 1964, samples representing 22,700 batches of antibiotics were submitted by the industry for testing. Of these samples, 191 were found unsatisfactory by the Food and Drug Administration, the manufacturer, or both, because of failure to meet one or more of the following standards: Potency and purity (144), sterility (19), moisture (12), disintegration time (3), pyrogens (3), pH (acidity) (2), G content (2), crystallinity (1), heavy metals content (1), residual streptomycin (1), uniformity (1), identity (1), extinction coefficient (1). Included in the above are 58 batches of antibiotic sensitivity discs which were rejected because of potency, uniformity, or both. In addition, requests for certification of 3 batches were withdrawn by manufacturers because of failure to meet additional requirements established by the manufacturers.

Samples of 657 batches of antibiotic preparations were submitted by other Government agencies (Armed Services, Civil Defense, Veterans Administration, etc.) and tested to determine their suitability for use and whether their expiration dates could be extended. The 625 official and investigational samples of drugs, medicated feeds, and food for human use examined for antibiotic content are not included in the certification totals.

Hazardous Substances Labeling Act

The Federal Hazardous Substances Labeling Act requires the informative labeling of a vast number of household aids and materials that may cause significant illness, injury, and even death when misused. Both educational measures and regulatory action are being employed to bring about compliance with this new law, which became fully effective on February 1, 1963.

Of 467 seizure actions completed in fiscal year 1964 under the provisions of this act, approximately 440 were brought against X–33 Water Repellent, an extremely flammable, highly explosive masonry paint sold for waterproofing walls and floors. Three deaths and more than 30 injuries were reported traceable to this product.

As originally formulated, the flash point (point of ignition) of X–33 was minus 40° F. making it comparable to gasoline. In July 1963 following reports of injuries from accidental explosions and fires, the X–33 formula was changed to employ a petroleum distillate with a flash point of above 70° F. Although no injuries were reported from use of the newly formulated product, the manufacturer failed to change the labeling of X–33 to reflect the difference in formulation. A substantial percentage of about 2,000 shipments of the old product were still being held or distributed by garages, service stations, grocery stores, drug stores, auto supply houses, and feed and grain outlets not ordinarily dealing in paint products. Some have been embargoed by State and local officials. Most dealers are now holding stocks of X–33 for destruction by fire marshals or other qualified local safety officials.

Some 15 seizures were made of other household articles which failed to bear adequate warning labels. These included dry cleaning fluids, spot removers, turpentines, paint thinners, a paint remover, liquid sander, liquid preservative, wallpaper cleaner, soldering and thinning flux, radiator conditioner, cesspool cleaner, solid fuel pellet, pocket-lighter fuel, charcoal-lighter fuel, gas-lighter fuel, brushing reducer, and mineral spirits.

A well-known canned-heat product was blamed for the deaths of 31 skid-row derelicts during the Christmas season in Philadelphia. Several other deaths were reported in Maine. This product, with less than 4 percent methyl alcohol by weight, was originally intended for direct sale to household consumers as well as hotels and restaurants. In September 1963, however, formulation of the commercial product intended for hotels and restaurants was changed by increasing the methanol content to 54 percent.

The Federal Hazardous Substances Labeling Act requires warning label statements only for products intended or suitable for household use. The commercial canned-heat product in this case, although not intended for household use, did reach retail outlets. The manufacturer is not released from responsibility for adequate labeling merely by stating "For Institutional Use Only" or some other disclaimer when he permits the product to enter consumer channels.

Canned heat containing less than 4 percent methyl alcohol is commonly used as an alcoholic beverage in skid-row areas. The low

methyl alcohol content apparently is not acutely toxic, but those who drank the commercial product did not realize that the methanol content had been increased more than tenfold. After Federal seizures, the new-formula containers were recalled by the manufacturer for possible relabeling and renaming.

Twenty detentions and seven seizures were made of a Japanese import toy bird containing highly volatile ether and ether vapor capable of causing an explosion if the delicate glass body of the bird should be broken near a pilot light or flame. Importers of the Japanese "Peace Bird" have been able to devise warning statements to prevent careless use.

During the year, FDA received and reviewed approximately 57,000 reports of accidental and intentional poisonings and deaths attributed to cosmetics, drugs, household substances, and pesticides.

Enforcement of Other Acts

A total of 128,314,055 pounds of tea was examined under the Tea Importation Act. The imports for this fiscal year fell off about 3 million pounds from last year's high of 131,733,679 pounds. Generally, the sources of supply were the same. However, two new countries entered tea into this country for the first time—West Cameroon and Turkey. Rejections for failure to measure up to the standards set by the U.S. Board of Tea Experts totaled 197,937 pounds. Six rejections were appealed to the U.S. Board of Tea Appeals, but the decision of the FDA examiner was upheld in all cases.

No actions were taken under the Filled Milk Act. Permits were renewed for one Canadian firm and one in New Zealand to continue milk shipments under the Import Milk Act.

Emergency Preparedness

Under the reorganization, an Office of Emergency Preparedness was established in the Office of the Commissioner to strengthen emergency preparedness planning and other emergency readiness measures.

Eleven emergency preparedness training courses were presented to FDA field district personnel—four to FDA headquarters personnel, five to State food and drug officials, and two to food industry officials. The courses were attended by 1,004 people.

These courses cover the nature of chemical, biological, and radiological weapons; their effects on foods and drugs; monitoring and testing techniques; and methods of decontamination or destruction of products contaminated by these potential warfare agents.

New Court Interpretations

The Supreme Court reversed a district court's dismissal of an information against a warehouseman charged with holding food under insanitary conditions whereby it may have become contaminated with filth. Direct appeal to the Supreme Court followed the district court's decision that the wording of the involved section of the act was too vague to support prosecution and therefore unconstitutional.

The Supreme Court found that the act unambiguously defined as a criminal offense the "doing of any act" with respect to a food which results in its adulteration while being held for sale after shipment in interstate commerce. The warehouseman's contention that the act did not apply to him since he was merely a holder of the foodstuffs was rejected by the Court. It said the hazard the public was to be safeguarded against was the insanitary storage of food, and in this respect the ownership status of the person storing the food was immaterial. The Court reiterated its prior decision that in the area of food and drug regulation intent to violate the law is not a prerequisite to the imposition of criminal sanctions.

The Court of Appeals for the Fifth Circuit reversed an April 1961 orange juice conspiracy conviction with the finding that the original indictment did not sufficiently inform the defendants of the nature of the charges so that they could adequately prepare a defense. The court did not reach the question of the sufficiency of the evidence to support the conviction. The defendants have been reindicted.

In a prosecution involving illegal refills of prescriptions by a pharmacy this same court ruled that it is immaterial if prescriptions obtained by the Food and Drug Administration for refill investigations are not issued by the doctor for actual treatment of a patient. The court based its findings on the premise that if the defendant's argument on this point were accepted, the Government would be unable to make refill investigations unless it had unhealthy agents in need of a prescribed drug.

The 1961 Annual Report discussed a case involving the reach of Federal law to oils that were blended and misbranded following receipt in interstate commerce. In a similar case involving drugs, the Court of Appeals for the Sixth Circuit also ruled in favor of the Government on this point. The court affirmed the judgment of the lower court, which in a seizure action had condemned as misbranded, tablets that had themselves not moved in interstate commerce but had been fabricated from ingredients received under jurisdiction of the Federal law. The court of appeals pointed out that the finished drug labeling emphasized each ingredient; that the ingredients were, in a sense,

all packaged together as tablets; and that combining the ingredients in tablet form did not produce something new and different. After the end of the fiscal year the Supreme Court refused to review the case.

The Court of Appeals for the Third Circuit, in a seizure action involving misbranded "Royal Jelly" capsules, upheld the seizure by finding that it is not necessary for the Government to prove that the accompanying written, printed, and graphic matter constituting labeling had actually been used in the promotion or distribution of the drug. After trial and verdict the Government sought injunction by amending the libel to include a prayer for injunction, which the lower court granted. However, the judgment of the lower court in granting the Government's prayer was reversed by the court of appeals on the basis that it, coming at such late stage of the proceedings, constituted a new and different prayer for relief from that made in the libel originally filed.

The 1962 Annual Report discusses several seizure cases involving physicians' samples of drugs, the labels of which bore legends such as "Professional Sample," "Physician Sample," and "Physician Sample Not To Be Sold." The Government appealed the district court's decision that such samples in the original containers were not misbranded even though they were no longer to be used as physician samples but were to be sold to the public on prescription. While another district court had in the meantime decided a similar case in favor of the Government, the Court of Appeals for the Third Circuit upheld the earlier lower court decisions that such labeling while on the original container does not constitute misbranding. The court, however, sustained the district court's judgments restraining the appellees from repacking and relabeling for distribution the professional samples.

In a seizure involving stocks of vitamin capsules and misbranded accompanying labeling, a district court provided a serious setback to nutritional faddists. The court in a 24-page opinion held that the products consisting of approximately 906 packages promoted by approximately 3,730,000 pieces of labeling were misbranded as articles of food and drug in that claims were exaggerated and adequate directions for use were not provided. The decision is important since it summarizes the scientific facts on which much of the Government's campaign against nutritional quackery is based. The decision also recognizes the admissability of expert opinion on consumer interpretation of voluminous complex labeling by an expert even though the expert had not conducted a consumer survey.

The court found that health claims made in the labeling were symptoms and conditions conclusively shown to be caused and associated

with a number of serious pathological diseases and unlikely to be caused or associated with vitamin or mineral deficiencies in the United States. The decision also holds that the much abused term "lipotropic factor" is, in fact, a representation for certain particular drug usages, for which the label fails to bear adequate directions for safe and effective use. The decision is being appealed by the claimant.

A district court granted the Government's motion for summary judgment in a seizure action against a worthless device. The claimant, a chiropractor, contended that although he had received all of the literature that had been disseminated with the device and which the Court of Appeals for the Sixth Circuit had found to be false and misleading, he had not relied upon any of this literature but rather had ignored it and formed his own conclusions as to the purposes for which the device was to be used. The Government moved for a summary judgment urging that the device was misbranded when shipped and was therefore subject to seizure and condemnation wherever and whenever it was found since a misbranding cannot be cured by subsequent removal of the misbranding literature. The court held that under the statute "misbranding, and therefore liability to condemnation, is determined by the state of fact existing at the time of the introduction of the device into interstate commerce, or while in interstate commerce. Condemnation, therefore, cannot be made to depend upon the happenstance of the knowledge, training, or degree of gullibility of the person into whose hands the misbranded article falls and upon whether that person, in fact, relied upon the false claims." This decision is an important addition to the case law supporting the doctrine of pursuit of a misbranded article, no matter what steps are taken to cure the misbranding and no matter into whose hands it may fall.

Following the issuance of a preliminary injunction against an alleged cancer remedy, a district court in denying the defendant's petition and motion for reconsideration or modification of the decree, ruled that the article regardless of its labeling as a dietary aid, was in fact a new drug within the meaning of the statute as then enacted and not entitled to the exemption in the "Grandfather Clause" of the drug amendments of 1962. The court held that (1) neither the medical doctor with the firm nor all the drugless healers who testified as to the excellence of the product in the treatment of cancer can be accepted as experts qualified by scientific training and experience to evaluate the safety of a cancer drug; and (2) in reviewing the legislative history of the 1962 amendments, it was obvious that Congress had intended to give such powers to the Department of Health, Education, and Welfare as would include supervision over new compounds

for treating life-threatening disease or which offer new theories of treatment, as was offered by the drug in question.

In a suit against a regulation promulgated by the Government, a district court invalidated the requirement that the established (or generic) name of a prescription drug be placed in conjunction with the trade name of the drug on labeling and advertising "every time" that the trade name is used. The court held that the legislative history did not support the administrative interpretation of the 1962 drug amendments. The Government plans to appeal the decision.

Changes in the Law and Regulations

On February 4, 1964, the President sent an American consumer message to the House of Representatives recommending legislation to:

Extend and clarify inspection authority—comparable to that which now governs prescription drugs—over foods, over-the-counter drugs, cosmetics, and therapeutic, diagnostic, and prosthetic devices;

Require that cosmetics be tested and proved safe before they are marketed;

Require therapeutic, diagnostic, and prosthetic devices to be manufactured under conditions that will assure their reliability, and require proof of safety and effectiveness before they are marketed; and

Require that labels include warnings against avoidable accidental injury from drugs and cosmetics, and pressurized containers.

Bills incorporating these proposals were introduced in both Houses in the 88th Congress but no hearings were held.

The Senate passed a bill to tighten controls over psychotoxic drugs after the close of the fiscal year (Aug. 15, 1964). While the bill specifically mentioned only barbiturate drugs and amphetamine, it provided that the Secretary may designate by regulation other psychotoxic drugs that have a potential for abuse when used without medical supervision. This bill was introduced in the House on August 17 and referred to the Committee on Interstate and Foreign Commerce.

The House passed, also in August 1964, an amendment that would remove the ban on non-nutritive articles in confectionery and retain only the prohibition on an alcohol content in excess of half of one percent. This bill was introduced in the Senate on August 13 and referred to the Committee on Labor and Public Welfare.

Both of these bills died when the 88th Congress adjourned on October 3.

REGULATIONS

Drugs.—New drugs cleared under the Federal Food, Drug, and Cosmetic Act prior to the Kefauver-Harris Drug Amendments of 1962 were cleared on the basis of safety alone. The amended law requires that before a new drug may be approved substantial evidence that the drug is safe and effective for the purposes claimed in the labeling be submitted. One provision of these amendments granted to all drugs which were the subject of an effective new drug application prior to October 10, 1962, was a 2-year period within which evidence could be obtained to substantiate that the drug is effective for the purposes claimed in its labeling. After this period, if the evidence is not available, the approval of the New Drug Application may be withdrawn.

To implement this provision, regulations were published to require an industrywide review of the safety and effectiveness of these drugs and the submission of information that will permit a determination by the Food and Drug Administration of whether there is substantial evidence that a drug is effective for the purposes for which it is promoted. These regulations require the submission of such information as follows: Whether the drug is promoted or labeled for claims which were not permitted in the official labeling; if not the same, supporting data for such claims are to be submitted; whether any side effects, contraindications or untoward reactions which may have been caused by the drug are not adequately disclosed in the labeling and promotional material; what the firm plans to do to remedy such situation; and whether there have been any mixups in composition or labeling or other significant problem arising with the drug.

The new law also requires that records of clinical and other experience with a new drug be maintained. Regulations extended the requirement that records be kept of experiences with approved drugs to those cleared prior to the amendments and that reports be made to the Food and Drug Administration at specified intervals. Where evidence becomes available that the drugs are not safe or effective when used as labeled, or where reports are deliberately and repeatedly not submitted, approval of New Drug Applications may be withdrawn.

Authority over prescription drug advertisements was granted the Food and Drug Administration under the Kefauver-Harris Amendments. Significant parts of the regulations covering these advertisements went into effect in Fiscal Year 1964. The regulations are directed toward informative advertising that will give the reader factual information as to the usefulness of the drug and at the same time information on the side effects, contraindications, or precautions. A brief summary containing information on side effects, contraindica-

tions, and effectiveness is required in every advertisement that gives information on uses or dosages of a drug. It is also required that the information on side effects and contraindications be presented in fair balance to the information on effectiveness and be placed reasonably close and with the same relative degree of prominence as the information on the benefits of the drug. There are extraordinary circumstances under which prior approval of an advertisement is required. These conditions are defined.

In order to prevent any abuse of a provision which allows the shipment of a new drug for experimental use in animals or for laboratory study, the regulations were amended to make it clear this provision does not extend to *in vitro* diagnostic agents intended for use in the regular course of diagnosis of disease (for example, antibacterial sensitivity disks impregnated with drugs for use in determining the susceptibility of an organism to such a drug).

The new drug regulations were amended to make it clear that up-to-date records and reports on experiences with a drug are to be submitted when any changes are proposed in the production or labeling of a new drug.

Because of the toxicity of gelsemium, a policy statement was published that would require all gelsemium-containing preparations to be restricted to prescription sale.

A notice was published that the Food and Drug Administration considers preparations containing thorium dioxide or any source of thorium as unsafe for administration to man under any form of labeling and requiring the labeling of such products to bear a statement: "Warning—not for administration to man. Not for administration to food-producing animals."

A revision in the investigational drug regulations was published which provides a new procedure by which a foreign firm or investigator may import from the United States a new drug for investigational use on the request of its government.

The regulations were amended to provide that when a New Drug Application, or a supplement to a New Drug Application to make substantive labeling changes is approved, the approval labeling will be placed on file and be available for review. Notices of such approvals will be published in the Federal Register.

The final order was published permitting a shampoo containing biphenamine hydrochloride, recommended for the temporary relief of itching and scaling due to dandruff, to be sold without a prescription.

The regulations permitting certain dextromethorphan hydrobromide preparations to be sold without prescription were changed to

provide for an increase in the maximum quantity of drug per dosage unit. No change in the recommended dosage was allowed.

The antibiotics regulations were amended 473 times and 124 new monographs added. In addition, 6 notices of proposed rulemaking, including 35 proposed amendments and 5 announcements, were published in the Federal Register.

Food Additives.—Forty-seven regulations were published on new additives and 157 orders were published amending existing regulations during 1964. As of June 30, 1964, 1,542 food additives have been subject to regulations and 575 have been declared generally recognized as safe for certain uses. Prior sanctions have been listed in the regulations on 115 items.

At the close of Fiscal Year 1964, authority expired for extending the effective date of the Food Additives Amendment and of Public Law 86–139 which classifies defoliants, nematocides, and plant regulators as pesticide chemicals. A number of food additives and pesticide chemicals subject to extension of the effective date are faced with discontinuance of use until regulations are published on the petitions under review or in preparation.

During 1964 considerable progress was made in clarifying the status of certain important classes of food additives. Examples of these are artificial and natural flavors, petroleum, ion exchange resins, food-container components, medicated feeds, and drugs for food-producing animals.

Color Additives.—The closing dates of provisional listings of a number of color additives were extended when manufacturers showed that time was needed to complete investigations to establish safety.

Regulations were published, and made final, permanently listing caramel, β-apo-8′-carotenal, annatto extracts, β-carotene, and partially defatted cooked cottonseed flour as safe color additives for food use. Annatto and β-carotene were listed as safe color additives for drug use. Tagetes meal was permanently listed for use in chicken feeds.

A number of individual cosmetic firms and one of the industry trade associations filed a complaint in Federal court seeking to declare invalid certain sections of the Interpretative and Procedural Color Additive Regulations. The Government filed a motion to dismiss the complaint. A decision is pending.

FDA has continued its study of the toxicity of the FD&C Colors now being certified. Various studies by industry groups were underway for a number of the colors formerly listed under the coal-tar provision of the law, and for some inorganic pigment and vegetable colors.

Pesticides.—The act provides that a food is adulterated if it contains any pesticide residue which is not (1) generally recognized as safe, (2) exempted from the requirements of a tolerance, or (3) within the limits of a tolerance established under the act. The establishment of safe tolerances is based on the evaluation of scientific data presented in pesticide petitions by the proponents of pesticide uses. This evaluation is made by FDA scientists using sound criteria and judgment to reach a conclusion that the pesticide residues involved will be safe. Science is not static. As new information is acquired and new methods and test procedures are developed, modifications become necessary in the test protocols required in support of proposals for tolerances.

During the year a significant addition to the safety tests occurred to require data on the effect of pesticide chemicals on reproduction, in addition to the other necessary toxicity data. This additional requirement delayed the submission of a number of pesticide petitions pending completion of such tests. Hence, during the fiscal year only 15 new tolerances or exemptions were established involving 5 pesticide chemicals. There were also eight changes in tolerance levels involving two pesticides, and eight temporary tolerances were issued involving six pesticides. The temporary tolerances were established to permit the marketing of crops experimentally treated with the pesticide chemicals in accordance with the permits granted by the Department of Agriculture. One chemical, benzaldehyde, used in the production of honey, was added to the list of pesticides generally recognized as safe. Eleven pesticide petitions were withdrawn and two were denied filing because of inadequacies.

During the 10 years ending June 30, 1964, a total of 2,612 tolerances or exemptions and 9 declarations of general safety have been established involving 132 different pesticide chemicals.

The scientific staff has continued to review and reevaluate, in the light of new information, the scientific data on which was based the tolerances and exemptions which have been established. During the year, this review enabled the classification of existing tolerances into four categories:

1. Those on which no further investigation or revision consideration were necessary at this time.

2. Those on which tolerances were not supported by all types of evidence currently required but in which deficiencies are such that no immediate revisions appear necessary.

3. Tolerances based upon data that raise some questions on which our scientists desire outside help. The pesticide chemicals

aldrin and dieldrin are in this category and a committee of scientists formed by the National Academy of Sciences has this matter under active study.

4. Tolerances that our scientists have concluded are not supported by adequate scientific evidence. One pesticide chemical, chlordane, fell in this category. Accordingly, notice was published in the Federal Register proposing to revise existing tolerances to zero. An advisory committee was requested by the manufacturer of chlordane to review this proposal.

The troublesome concepts of "zero tolerances" and "no residue" are under study by a committee appointed by the National Academy of Sciences, National Research Council, at the joint request of the Secretaries of Health, Education, and Welfare, and the Department of Agriculture.

Representatives of the Food and Drug Administration have participated actively in the work of the Federal Pest Control Review Board (now Federal Committee on Pest Control) and its Subcommittee on Monitoring.

As a result of conferences among the Departments, a Memorandum of Agreement was developed to insure close coordination and cooperation between the various units of the Department of Health, Education, and Welfare; Agriculture; and Interior in matters involving the regulation and investigation of pesticides.

Research to develop and improve methods of analysis for pesticide chemicals is discussed under Scientific Investigations. Considerable progress was made in development of specifications for analytical reference standards. Specifications were completed and sample standards prepared for five important pesticide chemicals.

Food standards.—During the year the final-order ruling on the record of the hearing on standards for orange juice and related orange-juice products was published and the effective date for the standards was set for July 1, 1964. Nine judicial appeals were filed in four separate court circuits. All were consolidated in the Fifth Circuit Court of Appeals. As a result of these appeals the effective dates for some of the provisions in the standards were postponed.

Two public hearings on food standards were held. The first was a hearing on whether guar gum should be permitted as an optional ingredient in cold-pack cheese food. Members of the industry producing cold-pack cheese food were adversaries at this hearing. The other hearing was on standards for frozen, lightly breaded shrimp. An unusual provision in these standards is the designation by the general term "safe and suitable ingredients" for the batter and breading constituents that are permitted without designating them in the

standards by specific names. Safety is based on conformity with food additive requirements and suitability on the performance of a useful function in the food. However, artificial colorings, artificial flavorings, artificial sweeteners, and preservatives, save for certain specific exceptions, are deemed unsuitable.

The standard for grated American cheese food had been stayed for a hearing. FDA conferred with the parties who had filed the objections and then proposed minor amendments. These proposed amendments were published, no adverse comments were received, and the standard as amended became effective without the necessity of a hearing.

During the year, the bread standards were amended to permit adding up to 2 percent of active wheat gluten in loaves, and to permit limited addition of calcium bromate and carrageenin. The cheese standards were amended to permit the use in additional cheeses of sorbic acid and sorbates for retarding mold, to permit using sodium aluminum phosphate as an emulsifying salt, and to permit a small amount of food-grade calcium sulfate in the creaming mixture for creamed cottage cheese. Amendments as to permitted optional ingredients were made in the standards for mayonnaise, french dressing, salad dressing, margarine, ice cream, dried egg products, enriched corn grits, fruit spreads, canned pears, and canned tuna.

Hazardous Substances.—This act authorizes the Secretary to establish additional labeling requirements when he finds that the basic provisions of the act are not adequate for the protection of the public health and safety. Under this authority an amendment was added to the regulations which requires substances containing 5 percent or more of benzol, or 10 percent or more of toluol or xylol to bear special labeling concerning their vapor hazard and oral toxicity.

A proposal to amend the definition and testing methods for eye irritants was also published and comments were solicited from interested persons. The comments received in response to this regulation have been considered and a final order is under preparation.

The act also provides for exemption from labeling requirements when such requirements are not necessary for the protection of the public health and safety. The following exemptions were granted.

Foil wrapped single use spot remover pads containing small amounts of methyl alcohol in the solvent were exempted from bearing a flammability warning statement, as well as from bearing the skull and crossbones symbol and other special labeling required for methyl alcohol. Cigarette lighters which contain lighter fluid at the time of sale were exempted from bearing the special labeling specified for petroleum distillates. Such lighters were also exempted from bearing a flamma-

bility warning because their intended use is well known. Exemptions were granted for dry granular fertilizers and for small capsules containing a paste of powdered solder and liquid flux. Under certain specified conditions the containers of fertilizer need not bear a toxicity warning statement. Individual tubes of solder need not be labeled provided they contain half a milliliter or less and are part of a kit, if the outer carton and directions of which do bear the appropriate warnings.

Chemistry sets and other science education kits need not bear warnings on the outer carton or in the instructions provided both bear the statement "Warning—This set contains chemicals that may be harmful if misused. Read cautions on the individual containers carefully. Not to be used by children except under adult supervision." The individual bottles of chemicals must be fully labeled but some of the cautionary information otherwise required to appear on the front panel may be placed on the rear portion of the bottle label, due to the small size of the container.

Scientific Investigations

As new types of processed foods, drugs, cosmetics, colors, and pesticides are developed and appear on the market, they present new problems of consumer protection. The simple assays and methods of identification that served in the past are no longer adequate. FDA scientists must now employ the most advanced techniques and must use the most complex instruments to detect minute traces of materials and to investigate the composition and the properties of the commodities they regulate.

The recent reorganization of the Food and Drug Administration, with its emphasis on improvement in scientific stature and quality, resulted in the division of the former Bureau of Biological and Physical Sciences into two new organizational units: the Bureau of Scientific Research (BSR) and the Bureau of Scientific Standards and Evaluation (BSSE). As the names imply, both bureaus will engage in scientific investigations. The research activities of BSSE, are directed toward immediate problems relating to enforcement and regulation. Those of BSR will be devoted to more basic scientific studies. These two bureaus in many instances will combine their efforts in cooperative projects of common concern.

As part of this increased emphasis on scientific research, the Bureau of Regulatory Compliance and the Bureau of Medicine have increased their research activities also. The research activities in the 18 district laboratories of the Bureau of Regulatory Compliance are directed toward improved methods of analysis for regulatory problems.

Among many problems associated with food additives, small amounts of substances called polynuclear hydrocarbons may enter food accidentally, for example, by being dissolved out of the material in which the food is packaged. Some of these substances are known to be capable of causing tumors, if large enough quantities enter the body. Because they are present in food in minute amounts and because they are all extremely complex substances with similar properties, they are difficult to identify and assay accurately.

The spectrophotofluorometer and the spectrophosphorimeter are two complicated and delicate instruments that can be used to identify and measure the polynuclear hydrocarbons. Adaptations of these instruments have been devised by BSR scientists to give better, more accurate results more quickly so that foods can be checked rapidly to determine whether dangerous polynuclear hydrocarbons are present.

The mass spectrometer, another complex instrument, is being tested for its ability to identify polynuclear hydrocarbons and other food additives.

Petroleum waxes, used to coat paper boxes and food wrappers, may also be present in foods as additives. A method for determining these waxes in food has been developed and tested, and will be published soon.

The absorption of infrared radiation at characteristic wavelengths is a specific technique widely used to identify and analyze organic compounds. Formerly this technique could be applied only to transparent material—a solution of the compound in a suitable solvent or a suspension of crystals of the compound—through which the beam of infrared light could pass. It has now been found that infrared spectra of opaque substances such as coatings on food packaging materials can be obtained by newly developed reflectance techniques. Reflectance infrared spectra of the surfaces of 23 copolymers used in packagings have been recorded by BSSE scientists, and studies with this technique are continuing. Other food additives for which various types of analytical methods are being devised are styrene from polystyrene, mineral oil from rosins used in paper and paperboard, mineral oil in certain rubber products, and extracts from vinyl plastics.

Most flavors and fragrances are composed of not one or two but many separate and sometimes closely related compounds. BSSE scientists have used gas chromatography to characterize 10 flavors commonly used in foods, and plan to apply this procedure to commercial products. In BSR the oral toxicities of several flavors are being tested in dogs and rats.

Investigations relating to several important drug cases were completed during the past year. As a result of studies on Krebiozen, BSR

scientists were able to identify the "drug" and several of its by-products that are present in the oil solution used as the dosage form. The scientists showed that the "drug" was in reality a common chemical compound with no known anti-tumor properties.

The complex and sensitive technique of nuclear magnetic resonance (NMR) is being developed in BSR for analysis of drugs. The NMR spectra of various drugs are being compiled and will be correlated with infrared and ultraviolet absorption spectra. The library of infrared, ultraviolet, and visible absorption spectra of 175 drug standards, published last year, has been supplemented by publication of infrared spectra of 335 additional drugs and solvents, which have also been incorporated in the FDA data-retrieval system.

Many drugs that were formerly administered singly are now being prepared in mixtures, and assay methods must be devised and modified to apply to these mixtures. Improved chemical methods have been worked out for mixtures of ketosteroids, antihistamines, and barbiturates.

The USP assay for thyroid has proved inadequate for showing that some drugs are therapeutically ineffective. Chemical, physical, and biological methods are being studied so that an adequate test can be developed for these products.

Other problems being studied in BSR are the effects of drugs on ovulation and reproduction; the ability of reserpine, cortisone, and other steroids, coupled with stress, to induce ulcers in test animals; the action of the psychotropic drugs (those that affect the personality) in the laboratory; and the metabolism of arsenical drugs in test animals.

Satisfactory microbiological assay procedures were developed by BSSE for the antibiotics leucomycin, lincomycin, cephalothin, and ampicillin. Assay methods have also been devised for various antibiotics in pharmaceutical dosage forms such as polymyxin and oxytetracycline ointment.

The carbamates are a class of pesticides that have proved difficult to study because they are much alike in chemical structure and properties. Mass spectrometry, nuclear magnetic resonance, and various chemical techniques are being studied as possible assay methods, and the metabolism of the carbamates is being investigated. BSSE scientists, using rat hydrolytic enzymes to study the toxic effects of some carbamates, found that brain cholinesterase is a better indicator than liver esterase.

The organophosphate pesticides are also difficult to analyze. The usual type of gas chromatography has not been successfully used to distinguish the organophosphates from other types of pesticides. They can now be determined by means of a new detector system for the

gas chromatograph that has been devised by scientists in the Division of Food Chemistry of BSR. It is called a "sodium therminonic detector" because its action depends on the presence of a coating of sodium salts placed on a detector electrode at a high temperature. When fully perfected it will be a significant advance in this type of analysis. Another instrument, the polarograph, has also been successful in identifying some of the organophosphate pesticides in mixtures.

Besides developing and improving assay methods for pesticides, it is important to know the metabolism of the pesticide, that is, whether it is converted to other, perhaps more toxic, forms as the pesticide is incorporated in crops, finished foods, and the bodies of humans and animals. To investigate this problem, measurements were made by BSR scientists of the amount of DDT, for example, taken up by the kidney, the liver, and the fat of rats, and of the conversion of DDT to DDD. Tests were made to learn whether pesticide residues present in feed given to cows are later present in cow's milk. The metabolism of aldrin and dieldrin was studied by feeding these pesticides to rats and measuring the amounts present in the rat excreta, liver, kidney, and fat.

The effect of chlordane on reproduction was investigated in three generations of rats. There is no effect on the capacity to reproduce or on the size of the litter. However, enough chlordane is transmitted through the milk of the mother to cause death among the offspring.

Some drugs have been reported to potentiate, or increase, the toxicity of certain pesticides. Acute poisoning by pesticides such as parathion and carbaryl causes a rise in blood sugar, and the measurement of this rise was used by BSSE to evaluate the potentiation effects of several drugs. Neither chlorpromazine, reserpine, nor morphine potentiated carbaryl toxicity, although reserpine did enhance the lethality of carbaryl.

Many substances in everyday use are unexpectedly dangerous if they are not used properly. Certain petroleum distillates, used in cleaning fluids, have been found to be toxic when inhaled by rats. The rats showed symptoms of lung congestion, pleuritis, pneumonia, and pericarditis. Detergents applied to the eyes of rabbits caused conjunctivitis, iritis, and corneal opacity. The lungs of rats showed symptoms of congestion when exposed to other detergents.

Several years ago it was found that a mold growing on peanuts and some types of grain produces toxic substances, called aflatoxins, that are a hazard to health. Cooperative projects have been set up in several divisions of BSR and BSSE to study the nature and action of these substances and to find methods to identify them in contaminated foods.

The molds have been grown and the aflatoxins extracted for study; the toxicity of the aflatoxins is being tested in the embryo of chicks, which are highly sensitive to these toxic materials; and several types of assay methods have been compared. In addition, FDA scientists have devised chemical tests that enable them to identify aflatoxins positively. The effects of feeding aflatoxins to laboratory test animals for long periods of time are being examined pathologically.

As a result of recent outbreaks of botulinus poisoning caused by eating smoked fish, a sensitive method has been developed in BSR to recover the highly toxic "Type E" strain of botulinus organism from contaminated materials. It has also been found that brine concentrations of 4.5 to 5.5 percent almost completely inhibit the formation of toxin in smoked fish. BSSE is investigating methods to measure the degree of smoking, which is equivalent to the penetration of heat into the food. Several years ago FDA found that extracts of proteins from fish formed characteristic horizontal "bands" across a layer of starch gel during electrophoresis, and that these bands could be used to identify the species of fish from which the proteins were derived. It is known that heat "fixes" the proteins so that they do not form distinct bands in electrophoresis, and it was therefore reasoned that the degree of smoking should correlate with the pattern of the protein bands. FDA studies showed that raw and lightly smoked fish displayed no difference in the bands; moderate smoking caused loss of two or three of the minor bands; and all minor bands disappeared with heavy smoking. Two major bands that remained in heavily smoked fish compared closely with bands obtained with canned tuna and other heat-processed fish.

It has long been known that minute traces of certain metals in the diet are important to growth and health. In studies by BSR, it was observed that if the diet of quail is deficient in zinc, the proteins in the diet are not metabilized properly. Very low levels of the metals chromium and vanadium may also be essential to the diet of animals.

Data on the composition of fruits, obtained some years ago, are being redetermined. Authentic packs of cherries and strawberries have been prepared and analyzed by BSSE for sugars, soluble solids, ash, phosphorus, potassium, protein, and other characteristics. These values will be used as guidelines for examining fruit products to detect adulteration or failure to meet standards.

The Bureau of Medicine employs teams of experts to study data that manufacturers must submit on drugs and antibiotics; toxicity of the drug; its effectiveness; the contraindications and combinations; and the manufacturing process, equipment, and control used in production.

Bureau of Medicine veterinarians and chemists maintain a "farm" for basic research on animal health and pathology at Beltsville, Md., and check devices and claims made by manufacturers. During Fiscal Year 1964, these studies varied from investigations of the potassium requirements of sheep to an evaluation of a contact lens for chickens, promoted with the claim that it prevented cannibalism and pecking within the flock. The test chickens quickly scratched out the contact lens, and when notified of this the manufacturer removed the product from the market. A treatment for pinkeye in animals and commercial tonics for chickens were also tested. Neither type of preparation was effective; the pinkeye treatment was irritating to the eye of the animal, and the tonics, when tested and compared with a control and nux vomica, showed no significant difference in performance of the treated groups.

FDA veterinarians also test products intended for human use; pigs (whose skin has many characteristics comparable to human skin) and monkeys were used to test a cosmetic for which unusual claims had been made to see if an effect was produced on the skin of the animal. No significant histological changes were observed in the animals during the treatment period. A device intended for use on humans, using high frequency radio waves to help heal wounds, was tested on animals. The results from this study of the product did not confirm the claims of the promoter.

FDA maintains constant vigilance to assure that the milk supply is free from harmful quantities of residues of drugs, antibiotics, and pesticides. In one continuing project, five chlorinated pesticides were fed at varying levels and the milk was tested for residues. In another, four antibiotics were administered to cows by intramammary infusion. When three were found to leave residues beyond the normal withholding time, the products were not permitted to be marketed.

FDA veterinary researchers are working on new techniques to detect and check useful anthelmintics for large farm animals. Gerbils (small rodents) were infected with ruminant strongyles, the anthelmintics ruelene, phenothiazine, and thiabendazole were used to treat the animals.

The number of institutions in the Hospital Reporting Program for adverse effects of drugs increased from 197 to 594 at the end of this fiscal year. Of these, those reporting under contract increased from 22 to 79. The remainder are Federal and represent a very substantial segment of all Government medical facilities.

During the year FDA has developed close liaison with the American Medical Association and there is a full exchange of information in the collection and dissemination of information on adverse drug effects.

The adverse reaction data collected from hospitals was supplemented with reports from the division's Medical Reference Library. During the year 2,500 abstracts were published in the MRL *Journal of Literature Abstracts* and 900 copies were distributed to FDA staff, participating hospitals, and other interested individuals and groups in the drug community.

While the primary role of the district scientists is still the examination and analysis of regulatory samples collected during or following inspections of establishments, a secondary role of very great importance has recently developed. The district laboratories are now vitally concerned with the development of new analytical procedures needed for enforcing recent Federal legislation on pesticides, food additives, hazardous substances, color additives, and new drugs.

Of approximately 700 scientists now performing laboratory work in the 18 district laboratories, 35 percent (245) now have special assignments to develop and test methods for food composition and food additives, pesticides, drugs, hazardous substances, and cosmetics, in addition to their enforcement work.

To avoid duplication of work, and to achieve a unified program, the research efforts of the individual laboratories are coordinated through the Division of Field Operations of the Bureau of Regulatory Compliance. Each district, through its research coordinator, is regularly informed of the research activities of every other district, and of the Bureau of Scientific Research, Bureau of Scientific Standards and Evaluation, and Bureau of Medicine. A standard report form adopted by the bureaus and the district laboratories has greatly aided exchange of information about research activities. Both the scientific competence and the sophistication of the district scientists are being markedly enhanced by intensive specialized training in current instrumentation, drug analysis and inspection, nutrition, and hazardous substances.

Enforcement Statistics

Major work loads are summarized in the tabulation below:

	Inspections made	*Samples collected*
Total	57, 629	109, 258
Foods	33, 058	45, 686
Drugs	15, 293	35, 265
Cosmetics	696	511
Pesticides	5, 952	25, 207
Hazardous substances	2, 209	2, 235
All other	420	354

There was a change in the reporting system for food additives and color additives in Fiscal Year 1964. Prior to that time, inspections in these categories were reported for all users, as well as manufacturers of food additives and color additives but in 1964, only the manufacturers of products falling in these two categories were reported. However, coverage of users was continued—and, in fact, increased. Examinations by FDA field chemists increased 12.4 percent in Fiscal Year 1964.

In the 215 criminal actions terminated (or terminated for some defendants) in the Federal courts during 1964, fines assessed totaled $144,155. Thirty-five individuals were required to serve jail sentences ranging from 1 hour to 7 years, and averaging 13 months. Twenty-one were within the 6 to 12-month range. The highest fine of the year was $7,000 imposed on a firm for insanitary storage of food. Records of actions terminated in the courts were published in 1,290 notices of judgment.

Table 2.—*Number of samples on which criminal prosecutions and seizures were based and number of court actions instituted during fiscal year 1964*

Item	Total		Criminal prosecutions instituted		Seizures accomplished		Injunctions requested
	Violative samples	Actions	Violative samples	Actions	Violative samples	Actions	
Total	3,274	1,515	1,306	205	1,968	1,288	22
Foods	1,021	575	245	52	776	512	8
Drugs and devices (cosmetics counted in drugs)	1,622	476	1,061	153	561	309	14
Hazard, household substances	631	467	----	----	631	467	----

NOTE.—The number of samples on which the actions are based always exceeds the number of actions; in seizures a variety of articles may be contained in a single shipment, while in criminal actions each sample usually represents a single shipment which forms one count of action.

Table 3.—*Import samples collected, examinations made, and lots detained during fiscal year 1964*

	Samples collected	Examinations made	Lots detained
Total	18,634	28,450	7,497
Foods	14,121	25,915	2,966
Drugs and devices	4,088	2,115	4,280
Cosmetics, colors, miscellaneous	425	420	251

Vocational Rehabilitation Administration

In 1964 the public program of vocational rehabilitation for disabled men and women reached a record level of achievement in its 44-year history. Easily the most rapid period of its growth was concentrated in the past 10 years.

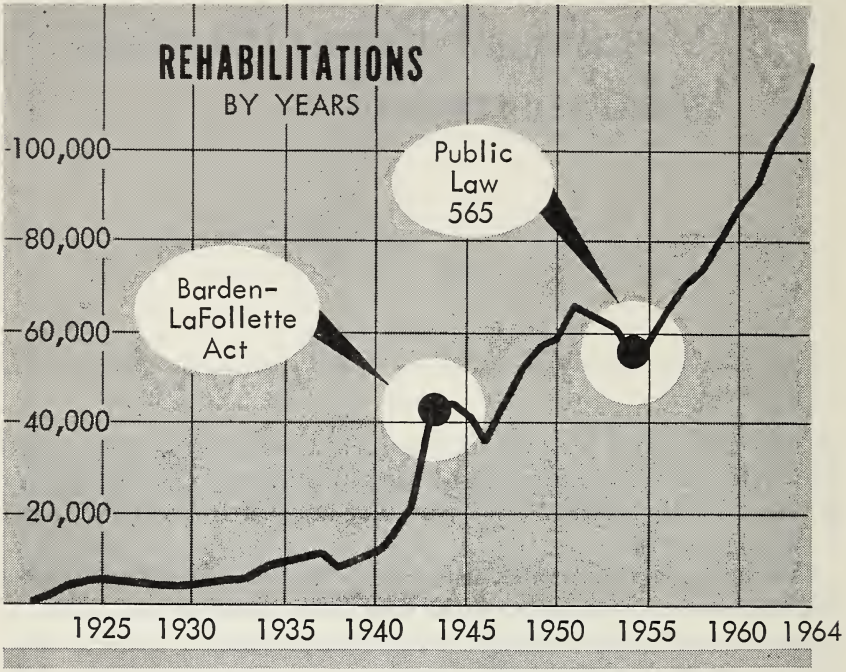
During the fiscal year that ended June 30, 1964,[1] a total of 119,708 disabled persons was prepared for productive activity and placed in successful employment through the services provided to them by their State vocational rehabilitation agencies. It was a new high mark, 9 percent more than the previous year—and more than double the total of 1954—and it marked the ninth consecutive year in which a substantial gain was made.

The nationwide vocational rehabilitation program began in 1920. Its basic concepts remain, though there were important amendments to the original law in 1943 and in 1954 that greatly expanded its scope and its usefulness. The program is a partnership between the Federal Government and the governments of the States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands, in which vocational rehabilitation agencies in those jurisdictions prepare mentally and physically disabled people for jobs and homemaking. The Federal Government, through the Vocational Rehabilitation Administration, provides national leadership and grants-in-aid to the States. The Vocational Rehabilitation Administration also administers a rehabilitation research program and a program to train professional rehabilitation personnel.

The past 10 years have been particularly fruitful in many areas that were opened through the legislation enacted in 1954. The States had

[1] Throughout this report, reference to any year indicates fiscal year unless otherwise indicated.

CHART 1.—REHABILITATIONS BY YEARS



new incentives to broaden the base of their rehabilitation activities, and the State-Federal partnership was so strengthened and revitalized that the annual totals of rehabilitations climbed swiftly, as shown in chart I. The 1964 total of almost 120,000 was a long step toward a goal of 200,000 annually.

For an understanding of the public program's past decade of achievement and expansion, it will be necessary to go back to August 1954 for a review of the amendments then enacted, known collectively as Public Law 565.

Under these amendments, new responsibilities were placed upon the State rehabilitation agencies and the Vocational Rehabilitation Administration.

—To effect new fiscal relationships within the State-Federal partnership to give the public program a sounder base for broad action.

—To provide support for research and demonstration projects to find new ways to rehabilitate disabled persons for jobs.

—To establish and provide support for the training of professionals with skills in vocational rehabilitation to meet serious shortages in this kind of personnel.

—To evolve approaches to new concepts of the public program and its usefulness.

In the following 10 years, the results were:

The number of people rehabilitated annually increased from about 55,000 in 1954 to nearly 120,000 in 1964. Combined Federal and State spending on services rose from $35,411,124 to $133,259,534 in that period.

The number of research and demonstration projects grew from 18 in 1955 to 795 in 1964, with Federal funds increasing from $298,900 in the first appropriation to $15,179,000 in 1964.

Training activities were expanded from the total of 77 teaching programs and 201 student traineeships that were given support in 1955 to 447 teaching programs, and 3,259 traineeships and research fellowships in 1964. The initial appropriation for training activities in 1954 was $900,000. In 1964 the sum of $16,528,000 was expended in the training program.

The Benefits

What this expanded activity meant to the rehabilitated persons themselves in the enhancement of personal dignity through the ability to work is incalculable. But the program also has values readily measured in dollars.

Over 70 percent of the almost 120,000 disabled persons rehabilitated into jobs in 1964 were unemployed when they began to receive services. Most of the others had comparatively low earnings.

Moreover, about 16,000 of those persons rehabilitated in 1964 were receiving public assistance at the beginning of or during their rehabilitation, and about 5,200 resided in tax supported institutions. Public assistance payments to the 16,000 persons were at an estimated $18 million annually. Conversion of most of these persons from tax consumers to economic independence through the public program cost about $16 million in a one-time outlay, thus saving many millions of dollars in Federal and State public assistance funds.

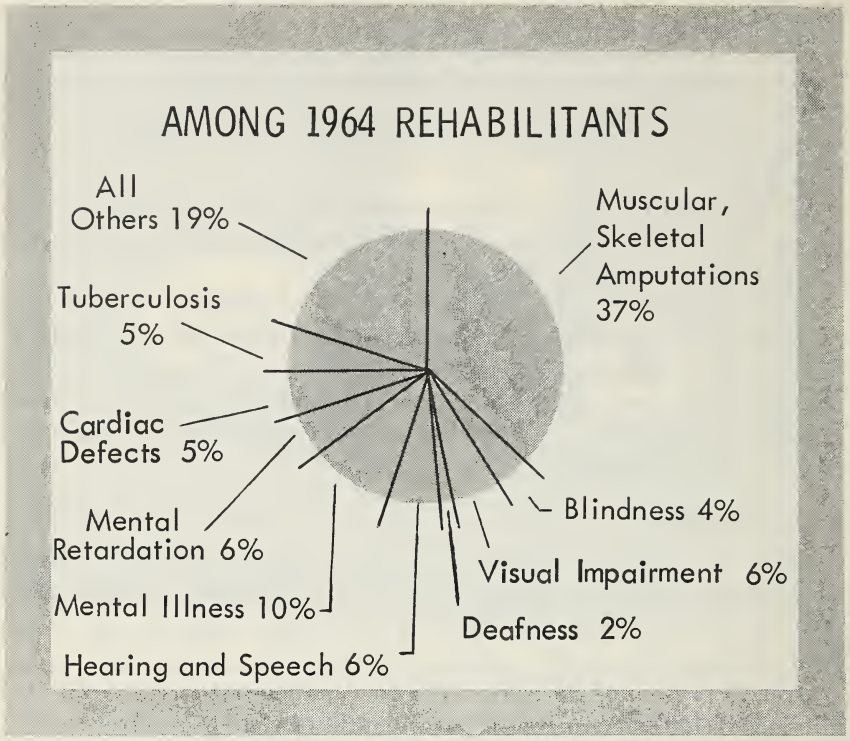
There is still another way of looking at the economic worth of rehabilitation for the disabled. Those who entered employment through the public program in 1964 will pay, during the remainder of their working lives, an average of five dollars in Federal income taxes for every Federal dollar expended for their rehabilitation.

New Concepts Arise

During the last 10 years there arose new concepts of vocational rehabilitation and its usefulness for the individual and for the Nation, and resources for the program were increased enormously. State

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CHART 2.—PRINCIPAL CAUSES OF DISABILITY AMONG 1964 REHABILITANTS



agency staffs grew from about 2,700 in 1954 to more than 7,000 in 1964, with greater selectivity and higher standards for the participating professions. Special emphasis was placed on rehabilitation of those with more severe forms of disability. Amendments to the Hill-Burton hospital construction legislation that were adopted in 1954 provided aid to scores of communities and organizations for construction of comprehensive rehabilitation centers, special centers for specific disabilities, clinics in connection with hospitals, and workshops of several kinds for various purposes; scores of community and statewide facilities were built with the aid of funds available for States' basic programs. New patterns of service were developed, not only for the rehabilitation of those already disabled, but for the broader purpose of early detection and diagnosis of disabling conditions among those preparing for the world of work.

Prevention of dependency through vocational rehabilitation measures—a target in the attack on poverty—has become a principal aim of the program. The movement toward that goal has become one of its strongest trends. It extends through accentuation of youth pro-

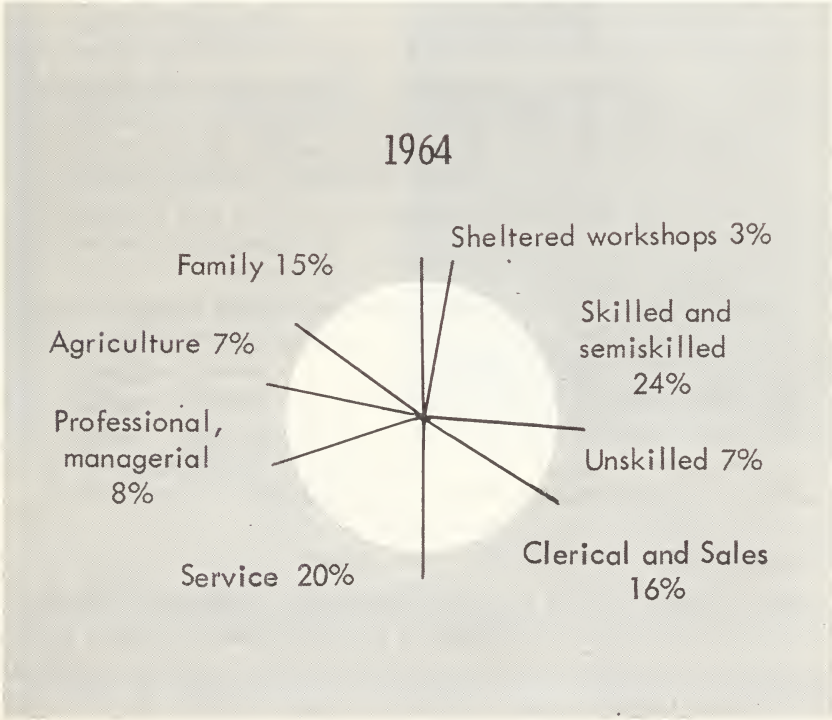
grams, through the great volume of services for those disabled persons in their prime working years, and through the mounting total of older persons in our population beset by chronic illness and infirmities.

Effect of Disability Within the Family

There was growing recognition of the total effect of disability on family units—on the added burden of handicapped children, on mothers unable to give proper care to their children, on fathers unable to provide for their families because of a vocational handicap. Measures were put into effect with cooperation of national, State and local welfare organizations to hold these family units together while appropriate rehabilitation measures were taken.

School systems in States and communities collaborated with their rehabilitation agencies to identify and evaluate handicapped students and provide special courses to stimulate their interest in furthering their education, thus combating dropouts and possible delinquency. In many places simultaneous academic education and vocational train-

CHART 3.—MAJOR OCCUPATIONS OF PERSONS REHABILITATED IN 1964



ing and experience were provided for mentally retarded students, and occupational training centers in more than 30 States were preparing large numbers of retarded youths for jobs consistent with their abilities.

Special classes and extraordinary steps were taken by rehabilitation agencies to participate in early aid to youths handicapped by visual, aural, or speech problems. For those with such disabilities as epilepsy, cardiac disorders, emotional disturbances, cerebral palsy, polio, and orthopedic handicaps, measures were put into effect that will lessen the load on rehabilitation programs of the future as well as make for a harvest of individual benefits for those whose handicaps have been identified in their early years.

The growing proportion of older persons in our population prompted the need and development of services designed to prepare them for full or partial employment, or lessened dependence on family or public funds. Research and demonstration projects have shown that many older persons—some beyond 65—can be rehabilitated into employment compatible with their condition. Other projects have demonstrated that many persons who had been confined to bed in public or private institutions could be rehabilitated into self-care and considerable independence, thus reducing the enormous number of hospital and similar facilities held for these purposes.

A measure of the success of these programs within age groups can be demonstrated with a few figures. Among those disabled persons of 20 years or less the volume of rehabilitations grew from about 9,800 in 1954 to some 27,500 in 1964; and 875 disabled persons of 65 years or more were rehabilitated in 1954, compared to about 1,900 in 1964. This left, in 1964, around 90,000 disabled persons who were rehabilitated during their prime working years—more than 58,000 between the ages of 20 and 45, and some 32,000 between 45 and 65.

Among those groups were many persons disabled from birth, or by accident or disease; some were disadvantaged by lack of educational or economic opportunities, in addition to a vocational handicap; others had natural aptitudes or abilities, and needed counseling and guidance as the top requisites for overcoming their handicap for employment; still others were socially adrift, handicapped by both disability and lack of motivation for employment.

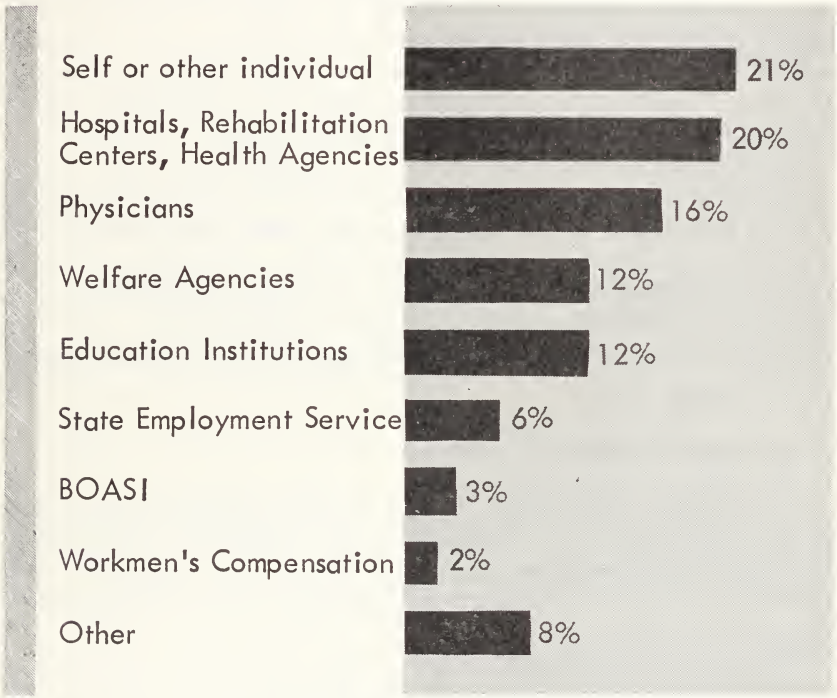
Rehabilitation vs. Public Assistance

Most of these disabled people were among the segment of our population for whom there is mounting national concern because of the persistence of poverty and economic deprivation in a time of general prosperity. Congress gave expression to this concern in 1962 with

the passage of amendments to public welfare legislation, which reflected, among other things, a growing sentiment for rehabilitation rather than relief for those disabled persons receiving public assistance payments.

State rehabilitation agencies by 1964 had mounted a strong attack within this phase of the public program. The first step was training of their staff in methods compatible with joint aims and procedures developed with welfare agencies, and the strengthening of interagency relationships. The second step was assignment of special counselors to serve mentally or physically disabled public assistance clients.

CHART 4.—SOURCES OF REFERRALS AMONG 1964 REHABILITANTS



Among several States making a strong attack in this direction were Tennessee, which assigned work counselors for such duties in its four largest cities; Pennsylvania, which placed a score of counselors in this work; Montana, mounting a pilot effort in 11 counties; and Minnesota, preparing to enter this phase of rehabilitation by the end of calendar 1964.

One of the most practical activities in this area is the cooperative efforts developed and maintained between State rehabilitation agen-

cies and State and local welfare departments to mobilize the total of their own resources with those of community groups and agencies, so that disabled public assistance recipients in need of rehabilitation services may be identified.

There were many complexities in this effort. Many of these persons were found to have long-neglected multiple disabilities as well as economic and dependency problems of considerable proportions, and pilot research and demonstration projects were conducted in Florida and Georgia to find a pattern for attacking the problem of the disabled public assistance client.

By the end of 1964, demonstration projects of this kind sponsored by State agencies had been initiated in 23 communities—10 in 1963 and 13 in 1964—enabling scores of persons to build new lives for themselves. California took a slightly different approach: with the aid of a VRA demonstration grant, it has been concentrating on early identification of disability among applicants for public assistance, and referring them promptly to its rehabilitation program.

Another approach was used in St. Louis, beginning in 1963. There the Missouri agency undertook to discover disabled persons living in a large public housing development and to offer them rehabilitation services designed to place them in employment. By the end of 1964 more than 50 residents in this housing had been rehabilitated into successful employment. The principles of this project have been adopted in similar developments in Miami, Fla.; New Haven, Conn.; and Pittsburg, Calif.

Screening Military Rejectees

A significant development in 1964 affecting young persons was a greatly expanded effort to rehabilitate men rejected for military service because of physical or mental disabilities. The assumption was that many of these young men could be prepared for civilian employment.

There were two approaches used in this effort: First, the development of working arrangements between the Federal and State agencies involved; second, experimental projects that would determine the size of the problem and the proper procedures.

At least six State rehabilitation agencies have made arrangements with the Selective Service System through which physically or mentally disqualified registrants could be brought to the attention of their State rehabilitation agencies. Several other States have shown interest in this direction, and, on a national scale, the Vocational Rehabilitation Administration, the Public Health Service and Selective

Service are working jointly toward establishment of cooperative projects throughout the country.

The rehabilitation agencies in Arkansas, Georgia, South Carolina, and West Virgina, with support of VRA demonstration grants, have initiated such experimental projects. All but the first project involved the screening of rejected registrants at Armed Forces Examining Stations. In Arkansas, the procedure was somewhat different, in that assigned personnel work with local Selective Service boards to identify disabled registrants and assess their potential for rehabilitation. Plans were a foot in several other State agencies at the end of the year for similar activities in 1965.

Expansion and Use of Facilities

Rehabilitation facilities are an indispensable part of the expanding public program, for they provide an unequaled means for evaluating, treating, and serving the severely disabled.

There are many types: Large centers for training or treating persons with practically all forms of severe disability; speech and hearing centers; optical aid clinics; centers for the blind; halfway houses for patients discharged from a mental hospital who are adjusting to community life; and workshops for various purposes.

State rehabilitation agencies have authority to establish facilities, with the funds they have available for basic rehabilitation services. Since 1954 they have spent about $17 million to establish more than 300 State-operated or private facilities.

Forty-six States have used funds in this way. In addition to the variations in physical size and in broad or specialized purposes, some are medically oriented while others lean to the vocational side. Whatever the scope or capacity of these facilities, they greatly increase resources for aiding the disabled. Some States have reported that the increase in facilities has had a most profound influence on the character of their rehabilitation programs.

The use of facilities by State agencies has increased 10 times in the past decade. In 1955 the agencies paid for services at rehabilitation centers for some 2,400 persons. In 1964 the total was more than 30,000 and over the country about 18 percent of State agency expenditures for services was made to facilities and workshops.

Since 1954 the Hill-Burton law has permitted Federal financial help for construction of rehabilitation facilities as well as for building new hospitals. Funds for the rehabilitation facilities are jointly approved by the Vocational Rehabilitation Administration and the Public Health Service.

In all, 304 rehabilitation projects have been approved under Hill-Burton provisions—32 of them in 1964. Total cost of the 304 projects was $189,500,000; the Federal share was more than $64 million, or about 30 percent.

A reflection of the increased interest in rehabilitation of the mentally disabled is that 10 of the 32 construction projects of 1964 are for the mentally retarded or mentally ill, and 3 of the 10 are for halfway houses for ex-patients from mental hospitals—a rapidly growing phase of rehabilitation for these people.

As the program progressed to the point where a better perspective could be taken on the capabilities of disabled persons, a diversity of ways has been devised to cope with individual disabilities. The rehabilitation workshop is one of the ways.

There are, essentially, two kinds of workshops. In one, the principal goal is to move disabled workers into private employment. The other is the long term shop, where work may be adapted to individual abilities and capacities and where a disabled person—unable to compete in private industry—may earn all or part of his livelihood. This is called a sheltered workshop.

There is rising demand for more workshops, and the VRA, the State agencies, and private rehabilitation groups are attacking many problems that have arisen in expanding this phase of the program.

Research is providing some of the solutions to these problems. Projects have been initiated to find answers as to whether a multicommunity workshop is feasible; to find methods of obtaining contract work; methods of applying marketing principles to workshop products; to study the feasibility of establishing statewide systems of workshops; and a number of similar matters that will help the workshop to come into its proper place in the program.

An estimated 800 workshops of various kinds are in existence over the country, and a considerable proportion of them are members of the National Association of Sheltered Workshops, which, with the National Rehabilitation Association, has completed a study of workshops on a national scale, supported by a VRA research grant. A report containing standards for workshops and answers to some of the complexities that are inherent in workshop operations was being prepared at the end of 1964.

Funds for the Program

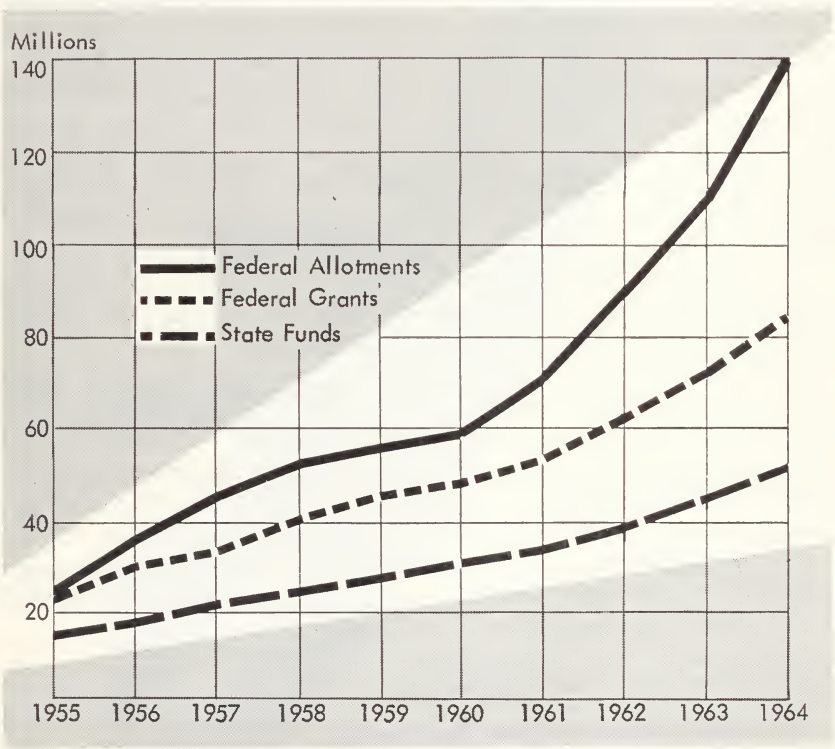
The amount of money that each State has available for its basic program of services for the disabled depends on these factors: (1) The need for rehabilitation services as measured by population, (2) the wealth of the State as measured by per capita income, (3) the amount

of funds put up by the State, and (4) the amount of Federal funds that the State funds will obtain according to a statutory formula.

This mechanism began with Public Law 565 in 1954. Each annual appropriation of Federal funds for rehabilitation provides for an allotment base sufficient to meet the anticipated financial needs of the State agencies for their basic programs during a fiscal period. Under this fiscal design the States obtain their individual Federal allotments in full or in part, according to the amounts of their own funds that are provided.

The Federal allotment base for 1964 was set at $140 million, and the total of Federal grants to States for their basic programs was approximately $85 million. In general, for every $3 provided by the Vocational Rehabilitation Administration, a State was matching with $2.

CHART 5.—FUNDS FOR STATE REHABILITATION PROGRAMS



Seven States obtained their full Federal allotments for 1964 by putting up the full amounts required to fulfill formula demand. The States were Arkansas, Delaware, Georgia, Kentucky, Nevada, Rhode

Island, West Virginia, as well as the District of Columbia. In fact, all of these jurisdictions, with the exception of Georgia and West Virginia, put up more than was required to obtain their regular allotments, and received additional Federal money to match the excess funds. The total of matching funds put up by the States in 1964 was $52.7 million.

Extension and Improvement Grants

One of the most useful tools for broadening the resources of the public program is the Extension and Improvement grant. State agencies may apply to the VRA for such grants to aid them in improving physical plants, for purchase of equipment therein, adding staff for expanding programs, and similar purposes. Federal participation is limited to 75 percent of the cost.

In 1964 the use of these grants reached a new high. Federal funds were granted for 128 projects, compared to 89 in the previous year. The Massachusetts agency has made wide use of these grants to step up referrals of mentally ill persons. Other States have similarly improved services to the mentally ill. The Delaware agency, which also uses grants in this way, has reported that in 1964 such improvements had raised the percentage of rehabilitations of the mentally disabled to 24 percent of its total. California used such funds to assign more counselors to six of its largest mental hospitals and reported that referrals of the mentally ill have increased greatly.

Some agencies have used such grants for assignment of especially trained counselors to activities for the mentally retarded, and to support workshops and other facilities in this work.

More than 400 E&I projects have been sponsored by State agencies since 1955. About one-third were for improvements to rehabilitation facilities, and another third provided means for assignment of counselors and other specialized staff to serve in particular the mentally ill and emotionally disturbed, as well as the mentally retarded, cerebral palsied, deaf and hard of hearing, and blind persons.

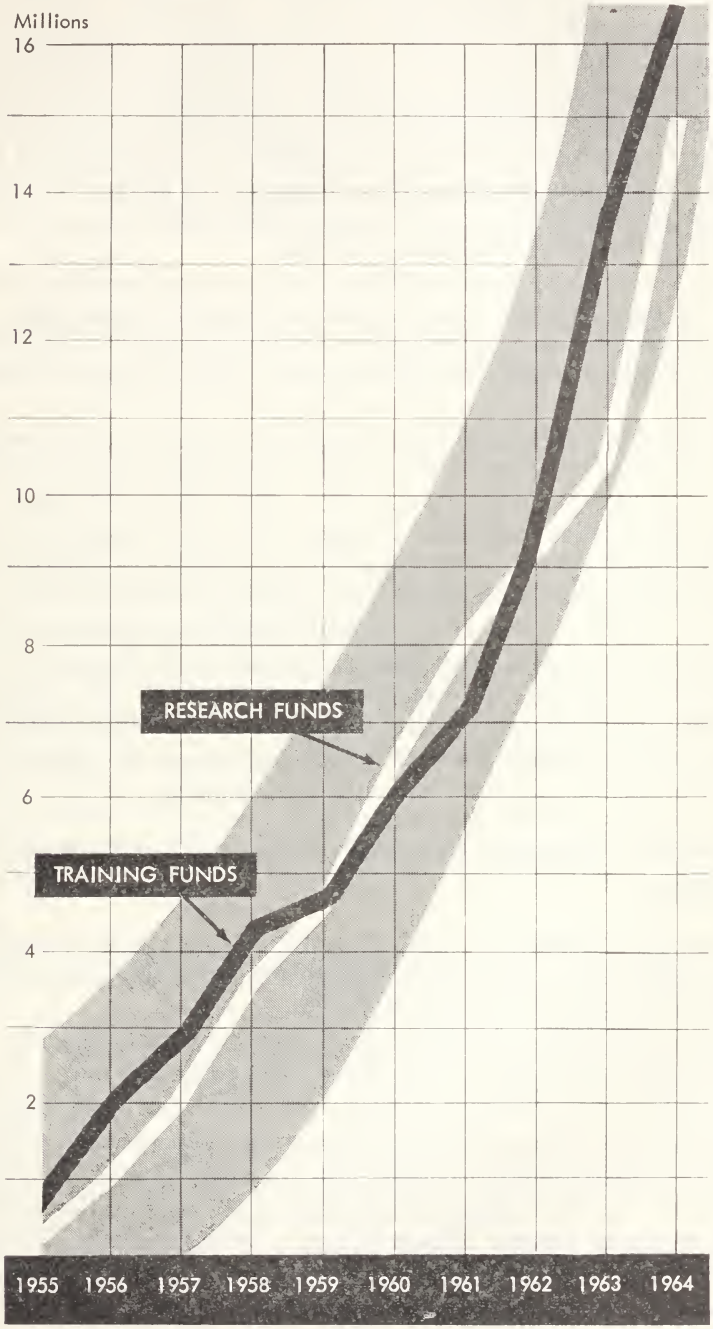
The total of State funds for extension and improvement projects was more than $640,000 in 1964, and the Federal grants that matched them amounted to more than $1.9 million.

New Directions for Research

The basic service program for disabled persons owes much of its change in scope and direction to new concepts in rehabilitation that have evolved in 10 years of research.

Those who plan the direction and operation of the public program now must be aware of great changes in the labor market, the kinds

CHART 6.—FEDERAL FUNDS EXPENDED FOR RESEARCH AND TRAINING IN VOCATIONAL REHABILITATION



of jobs and the kinds of employees that are needed to fill them; the effect of the burgeoning population; shorter work hours; the increased demand for skills; the rising place of the scientist, clinician, and the technician; the decline of "common labor" as a means of livelihood, and the fewer number of persons required in agriculture. There is deep meaning here for the rehabilitation program, for these factors influence greatly the course of vocational training and the placement of those persons restored to employability. Many of the answers are found through the wealth of imagination and effort that has been shown in rehabilitation research and demonstration.

At the end of 1964 a total of 795 research or demonstration projects had been completed or were in operation. Federal funds made available for research and demonstration in 1964 amounted to about $6.5 million for new projects and $8.6 million for continuation of other projects.

In the years since this activity became a part of the public program more than 1,600 projects have been submitted by State agencies and by private nonprofit groups to the VRA. The almost 800 that were approved as worthy of Federal support because of their promise of adding knowledge about rehabilitation, or proving the validity of an idea or technique, were screened and evaluated by VRA in two ways. A study section reviews applications for their technical aspects and desirability in a particular field, and makes recommendations to a National Advisory Council on Vocational Rehabilitation, composed of persons knowledgeable in rehabilitation and its allied fields, and headed by the Commissioner, which has final approval authority and can make grants in amounts deemed to be appropriate.

Research Prepares Disabled Persons for Modern Employment

Many services have been developed—principally through research—that enable those with specific disabilities to be fitted into modern employment according to their capacities.

Research into the rehabilitation of those with cardiovascular disorders has shown ways of measuring work tolerance, and a cardiac work classification system is bringing more satisfactory placements.

Methods have been devised for measuring the potential abilities of severely disabled cerebral palsied adults, and for intensive workshop programs to prepare them for industry, or for meeting the problems encountered by palsied college students. Seven work classification and evaluation centers have been established in as many States to prepare palsied persons for employment and place them in jobs.

Epilepsy has come under more intensive study, to develop methods of community organization for enhancing employment opportunities, for evaluating all the employability factors of this handicap, and for combating employer prejudices against hiring persons with epilepsy.

Among more than 40 research and demonstration projects in orthopedic disorders are measurement methods for energy expenditures of these disabled persons in various kinds of work, for demonstrating the ability of amputees to operate trucks and other equipment, and for the development of assistive devices that will aid these persons with limb malfunctions.

Expanding the Fight Against Mental Retardation

Rehabilitation research has been a big factor in the fight against mental retardation and the results are becoming evident.

The number of mentally retarded rehabilitated into employment in 1964 was 20 percent greater than in the previous year—about 7,500 against 6,000.

As a further reflection of the great activity in this field, the amount of Federal funds for services to the mentally retarded as part of the basic grants to States in 1964 was about $5.5 million, or more than 55 percent greater than the 1955 total.

Training grant funds for mentally retarded programs also took an enormous jump in 1964, the total of some $800,000 being about 5.5 times that of 1963; and grants in support of research and demonstration projects in this field increased from about $1.5 million in 1963 to $2.25 million in 1964.

These figures add up to a total of some $8,550,000 expended by the Federal Government during 1964 for mentally retarded people served in the public program, an 80 percent increase over the $4,775,000 of 1963.

The pace of research activity on mental retardation is made clear by the number of research and demonstration projects on this disability. Thirty new grants of this kind were approved in 1964. Combined with 35 other grants already in operation, the total of 65 projects represents a highly intensive effort to move forward the rehabilitation of these people.

Much of the research and demonstration activity is centered on combined academic education, vocational training, and actual work experience for retarded youths of high school age.

Such programs have two effects. They prepare well-motivated, retarded youths for a vocational future; among others they combat some of the mounting problems of school dropouts and the probability

of delinquency among handicapped youths by counseling and providing good motivation.

Within recent years such projects have been carried on or are current in Florida, Texas, and Georgia; in Milwaukee, Minneapolis, Detroit, and Champaign, Ill.; and Montgomery County, Md. These kinds of projects are designed to bridge the gap between the close of a retarded youth's schooling—usually in the last year of high school and entrance into the field of work.

These activities were broadened in 1964 by a variation which combines academic education with alternate workshop experience. Fifteen such projects have been initiated in 10 States. Among them are seven in West Virginia and Kentucky, as part of the effort to help areas where economic and cultural deprivation has come to national attention.

Many extension and improvement grants made to States have provision for better services for the mentally retarded and other disabled persons. Of the 123 E&I grants made to States in 1964, 17 had the specific purpose of serving the retarded. They carried a total of $185,000. Among the uses to which these grants were put, New Jersey had fostered a broad expansion of workshops, six of them exclusively for the retarded and seven for retarded and other disabled persons. New Mexico has made outstanding use of these projects to coordinate education and vocational services for the retarded.

One of the earliest kinds of selected demonstration projects for the mentally retarded was establishment of occupational training centers by State agencies or private groups where retarded young people of various backgrounds can be evaluated and vocationally trained. The centers have shown a steady growth, and many of them have outgrown the need for Federal support. In 1964 there were 43 occupational centers in more than 30 States. Hundreds of retarded youths were prepared for vocational success in these centers.

Jobs for the Mentally Ill

Vocational rehabilitation of the mentally ill through the public program is principally in three directions: Work with hospital patients before discharge to evaluate their abilities and prospects for employment; helping them to adjust to noninstitutional life and into work situations; and helping mentally ill persons outside hospitals with services that help them remain in the community.

In 1964 more than 11,000 persons who had been mentally ill were rehabilitated into employment in the public program.

Many of them owe their rehabilitation to the great volume of rehabilitation research. The upsurge of interest in mental health in

the past 5 years brought a total of 84 projects in this field—for halfway houses, work therapy, and screening of hospital patients for rehabilitation potential; outpatient counseling and hospital aftercare; and evaluation, training, and placement for emotionally disturbed persons.

More than 100 VRA research or demonstration projects have dealt with mental illness, costing more than $10 million. Close to half the projects are in the area of special counseling to deal with problems of the hospital patient. The rest are concerned with a multiplicity of matters outside the hospital.

The largest obstacle to adequate expansion of services to the mentally ill is lack of specially trained personnel. One acute shortage is among psychiatrists. In order to improve this situation the VRA has supported a series of regional workshops through training grants. The results have been outstanding. Many more hospitals have accepted the rehabilitation program, many have utilized expansion and improvement grants to expand their facilities and staff, and in a number of selected hospitals affiliated with medical schools, there are new academic and clinical courses on psychiatric rehabilitation.

New Work for Blind Persons

More than 5,000 blind persons were rehabilitated into employment in 1964 through the public program, only a small increase over the previous year, but a considerable accomplishment in view of the tremendous problems that have developed in the placement of blind persons in jobs.

Placement of blind persons in routine, repetitive machine operations—once the mainstay of the program—is being largely obviated by automation. Counselors today must be prepared to help blind persons into highly skilled and complex work, now widely available in many industries, but only for those who are well trained, adjusted to their disability, and flexible enough for adaptation.

Again, the answers to these problems are being found in research. One illustration of the methods being developed to help blind persons keep pace with the effects of automation is the VRA-grant support given to research at the University of Cincinnati to find ways for blind persons to participate in electronic computer operations, and to a private organization in Pittsburgh for development of techniques in applying such knowledge to actual operations.

The language program instituted at Georgetown University a few years ago to teach blind students Russian and German has been an enormous success, and a similar project is being established at Occi-

dental College in California to teach blind students to become linguists in Chinese and Arabic.

One of the important sources of employment for blind persons is vending stands, operated in public and private locations under the general supervision of State rehabilitation agencies and the provisions of the Randolph-Sheppard Vending Stand Act of 1936.

The size of the vending operation has grown consistently. In 1964 there were 2,442 stands on Federal, public, and private property. They did a gross business of $54 million and returned an average profit of $4,452 to 2,641 operators.

Another successful program, for people with low vision, is the optical aids clinics in 20 States. These provide services to scores of persons whose low visual acuity has handicapped them for employment, by fitting magnification devices as a means of increasing their perception.

Hearing

During the year efforts within the public program and several voluntary organizations to widen job opportunities for deaf persons were aided by the appearance of electronic and telephonic devices that will improve communication, reduce isolation, and increase opportunities for jobs.

One such device, when combined with the telephone, will enable deaf persons to write messages to each other at any distance. The second is a combination of the telephone and television, so that deaf persons can see each other and communicate by signs or lipreading.

The VRA has given support to these developments by granting funds for projects that will develop ways to adapt these devices to the needs of the deaf, of whom there are about 250,000 over the nation.

To these may be added some 8 million persons who are handicapped by partial hearing or speech difficulties. Some have disorders of the ears, others have defects or loss of the vocal organs, still others have disorders of the central nervous system which impair normal communication.

The affected individual faces formidable barriers in his social life and in achieving vocational success. Some barriers can be struck down by medicine and surgery, by various therapies, by hearing aids. Whatever the individual difficulty may be, the VRA is becoming more and more concerned and able to help in the medical and surgical aspects, with the training of special teachers, with research, and with extension and improvement grants to expand facilities for speech and hearing activities. Such facilities are in operation in Wisconsin,

Georgia, Florida, Tennessee, Alabama, Mississippi, and Indiana, among others, and are increasingly able to offer diagnosis, training, and placement services for many more deaf people.

Narcotic Addiction

Drug addiction has been a growing problem in the United States for many years, yet from the standpoint of the rehabilitation program there is a great lack of medical and social research upon which to develop guidelines for rehabilitating addicts. They are eligible to apply for the services of State rehabilitation agencies, but the number of referrals has been small and few such persons have been rehabilitated.

There are manifest difficulties in this phase of rehabilitation. A new approach is being demonstrated through a grant made to the Vocational Guidance Service of Houston, Tex., for partial support of a halfway house that is providing intensive aftercare services to narcotic addicts released from the Public Health Service Hospital at Fort Worth. This project will offer a combined hospital and post-hospital treatment program of medical, psychiatric, counseling, vocational training and placement services, and is the beginning of a new emphasis on rehabilitation of the narcotic addict.

Alcoholism and Rehabilitation

Alcoholism now ranks as the fourth greatest health problem in the United States, following heart disease, cancer, and mental illness. As a disabling condition it affects some 5 million men and women, of whom about 2 million are employed people. The psychiatric, medical, and social problems involved in rehabilitating alcoholics are tremendous and offer such substantial difficulties that less than a thousand such persons were rehabilitated in 1964.

There are still a great many unknown factors in alcoholism. There is urgent need for research as to the basic causes of excessive drinking in order to assist in the development of appropriate rehabilitation techniques, particularly in the area of improving motivation for return to productive life in the community. There is a similarly great need for intensive training of professional personnel, including those in State rehabilitation agences.

The Colorado Vocational Rehabilitation Department is maintaining two halfway houses for alcoholics in Denver, one for men and one for women. An encouraging number of the residents of these halfway houses have been able to return to the community and avoid their former habit during the 2-year period that the program has been in

existence. Each year a number of counselors from State rehabilitation agencies attend training sessions on rehabilitating alcoholics at the Rutgers University Summer School on Alcoholics, and other sessions are held in Colorado, Utah, and Louisiana, under their rehabilitation agencies.

In a project at the University of California at Los Angeles, supported by a VRA research grant, the careers of 600 persons who have apparently quit drinking are under examination to determine the personality factors differentiating them from persons who continue to use alcohol. Another project at the same university has under study the personality patterns of ex-prisoners with a history of alcoholism who have a subsequently clean record of law observance, so that their behavior patterns may be contrasted with those of current prisoners. The third year of a 5-year project at the Salvation Army's Men's Social Service of San Francisco has just been completed. The effort there is to demonstrate the effectiveness of an in-residence vocationally oriented program in the rehabilitation of alcoholics.

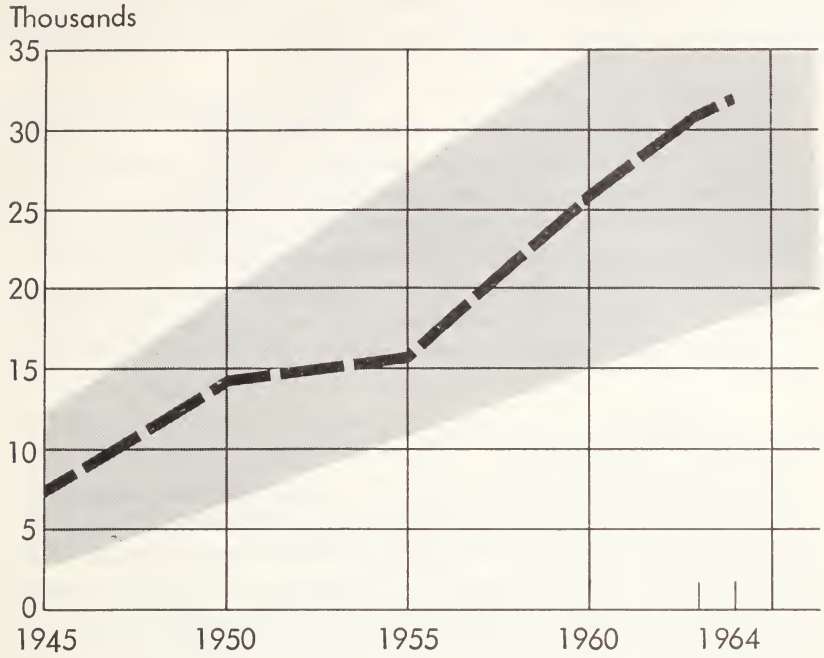
A grant to Temple University's Diagnostic and Relocation Center is attempting to determine the feasibility of various rehabilitation programs for the treatment of homeless alcoholic men on "skid row." The Chicago Educational Television Service has been given a planning grant for the development of a series of television films on alcoholism and how to deal with the problem. Another planning grant has been awarded to the North American Association on Alcoholism Programs for a national workshop to develop guidelines designed to bring about a close working relationship between State rehabilitation agency personnel and professional workers in the field of alcoholism.

Social Security Disability Applicants

The vocational rehabilitation agencies of all but five States are responsible for evaluating the disability and rehabilitation potential of those persons who apply for benefits under the disability provisions of the Social Security Act. This phase of State agency work began in 1955 and, in the relatively few intervening years, has brought increasingly heavy workloads, but excellent results.

In 1964, State agencies evaluated about 462,000 of those cases to identify those applicants who seemed to have some prospect for returning to work through rehabilitation services. As a result, around 50,000 were considered to have rehabilitation potential in some degree and were accepted into the referral loads of State agencies. A total of 9,600 social security disability applicants were rehabilitated in 1964—about 8 percent of all rehabilitants for the year.

CHART 7.—DISABLED PERSONS OF AGE 45 OR MORE REHABILITATED 1945–64



There was established in Atlanta, Ga., an experimental project involving the State rehabilitation agency, the local Social Security office and the Employment Service. This project utilizes available community resources in assisting disability applicants to employment through the provision of vocational rehabilitation and placement services. The concurrent efforts of all three agencies are applied in the evaluation of disability applicants and in the restoration of these individuals to gainful activity.

The District of Columbia rehabilitation agency is conducting a unique demonstration project which provides for the selection of disability applicants who appear to have employment potential and stabilized impairments. Provision of intensive counseling and placement services may return these persons to employment quickly without the need for restorative services or long-term training. Interim reports indicate unusually successful results may be accomplished through this project.

Preliminary findings of three major research projects suggest that there is a potential among social security disability applicants that has not yet been fully realized by the State vocational rehabilitation agencies. Information from these projects (supported by research

grants to Tulane University, the Ohio Rehabilitation Center, and the Sister Kenny Institute) is expected to encourage State vocational rehabilitation agencies to undertake restoration of more applicants for disability benefits to productive employment.

Eleven additional projects that were nearing completion at the close of 1964 are expected to provide valuable data on new techniques for reaching severely disabled applicants for disability benefits. These demonstrations studied the extent to which severely disabled social security beneficiaries, not normally considered as rehabilitation candidates, actually could be restored to employment through the provision of intensive rehabilitation center care supplementing other necessary rehabilitative services. State agencies sponsored nine of the projects and also cooperated with the rehabilitation centers which sponsored the two others.

Growing Relationships With Labor

Organized labor and the people in the rehabilitation program continued to forge new relationships during 1964. This effort began a few years ago and has since served to make labor more aware of the economic, humanitarian, and sociological benefits to be gained through better understanding of rehabilitation principles and methods. In turn, rehabilitation professionals are acquiring a fuller understanding of organized labor's problems.

The relationships have been enlarged through labor-rehabilitation institutes and seminars across the country, supported by VRA training grants. Twelve of these workshops were conducted in 1964 and more are planned for 1965.

Future institutes will place increasing emphasis on the rehabilitation aspects involved in administration of Workmens' Compensation programs. A National Institute on Rehabilitation and Workmens' Compensation in late 1962 brought together leading authorities in these fields with reference to law, insurance, labor management and government, and has had great influence on those interested in this phase of rehabilitation.

A highly significant research and demonstration grant to the Sidney Hillman Health Center in New York City has been concluded. It was concerned with the incidence of disability among union members and their families, and establishment of a mechanism within a labor health facility for referral of disabled people to appropriate rehabilitation resources, particularly those with mental illness.

A new and enlarged demonstration program of psychiatric services to members and their families was recently initiated with joint support

of VRA and the Public Health Service. Another important VRA-backed research project was being conducted by the AFL–CIO Central Labor Council to find ways to rehabilitate nonunion members and their families.

Manpower Development

Enactment of the Manpower Development and Training Act brought new obligations to the rehabilitation program, so that handicapped people can benefit from its provisions.

Cooperative arrangements have been made between the Vocational Rehabilitation Administration and the Department of Labor, whereby projects proposed under the legislation may be reviewed from the rehabilitation viewpoint. The legislation is administered by the Department of Labor and the Department of Health, Education, and Welfare. Similar relationships are also being developed with the State rehabilitation agencies, toward more complete understanding among all the participants in this activity as they affect disabled people.

The New York Division of Vocational Rehabilitation already is providing intensive vocational evaluation for disabled persons being served through these projects. Also in that State, the Human Resources Foundation, of Albertson, has undertaken a project for development of new techniques in the training of mentally retarded and other severely disabled persons in commercial and industrial skills, a valuable contribution to the rehabilitation program from this new legislation.

Rehabilitation Research Overseas

The Vocational Rehabilitation Administration has participated in international rehabilitation research since 1961, in a program involving the United States and nine other countries. The basic legislation for these activities is Public Law 480 (the Agricultural Trade Development and Assistance Act) which allows the use of currencies accumulated in foreign countries from their purchases of U.S. farm commodities for various purposes within those countries, including rehabilitation research.

The countries participating are Brazil, Burma, India, Israel, Pakistan, Poland, the Syrian Arab Republic, the United Arab Republic (Egypt), and Yugoslavia. Fifty-seven projects have been approved for operation in those countries.

Outstanding among these projects are India's experimentation into methods of counteracting the effects of leprosy by surgical restoration

and by integration of patients into employment and community life; its demonstration of ways to rehabilitate blind persons into agriculture; and its research into restoration of severely burned persons to employability.

Israel has many projects. Outstanding among them is one for development of methods for training blind persons in the use of textile machinery.

Brazil has developed training methods for prosthetists and orthotists in fitting these devices, and methods of manufacture of prefabricated parts for them, to reduce their costs. Other projects are related to heart disorders, cerebral palsy, severe burns, and mental retardation.

INTERCHANGE OF EXPERTS

Under provisions of the International Health Research Act of 1961, the VRA has made 60 awards for the interchange of experts in rehabilitation between the United States and the countries participating in international research. The disciplines involved include prosthetics and orthotics, psychology, counseling, plastic surgery, neurosurgery, and physical medicine, among others. This program is administered in VRA through its Division of International Activities.

The first exchange visit was made by a group of U.S. specialists in plastic surgery who went to Vellore, India, to study the work among leprosy patients being performed under direction of Dr. Paul Brand. In 2-month rotation, experts from such schools as Harvard, Yale, Johns Hopkins, and the Universities of Pittsburgh, Kansas, Ohio (State), North Carolina, and Pennsylvania, visited the Vellore hospital and brought back to the United States a wealth of information, not only on the treatment of leprosy itself, but on corollary methods of skin grafting and cosmetic restoration, useful in the medical and surgical aspects of rehabilitation in the United States. The interchange program also has brought many foreign experts to the United States to study its rehabilitation programs, particularly its organization and methods, as well as its research in relation to similar projects in their own countries.

VISITORS FROM FOREIGN COUNTRIES

The Division of International Activities also plans training programs of study and observation of the U.S. rehabilitation program for persons from other countries. They are sent by their own governments and are supported by study grants from the Agency for International Development, the Department of State, or the United Nations and its specialized agencies.

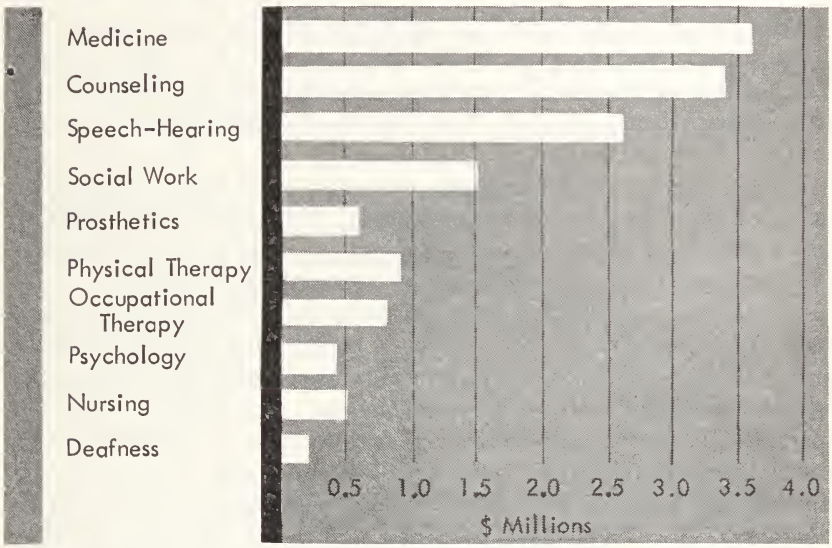
Many of the trainees who come here are planning, directing, or operating rehabilitation programs in their own countries, conducting research, or otherwise helping to meet problems of the disabled.

This activity has been carried on in VRA since 1947, and through 1964 some 1,500 persons from 80 countries have taken part in it.

Training New Workers for Rehabilitation

Rehabilitation must encompass not only the vocational needs of the disabled person but the physical, emotional, and social needs as well It follows that services to disabled persons must be given by qualified professionals. In response to a serious shortage of these individuals—rehabilitation counselors, rehabilitation physicians, rehabilitation nurses, therapists, and a number of others, the Vocational Rehabilitation Administration has supported since 1954 a rehabilitation training program, largely in colleges and universities.

CHART 8.—1964 TRAINING FUNDS IN AREAS OF PERSONNEL SHORTAGES



The training grants program was started in the fall of 1954 with an appropriation of $900,000. In the following year, grants were made for 77 teaching programs, 201 traineeships and 16 short-term continuing education courses. Each year has seen an increase and in 1964, with a $16,930,000 appropriation, 447 teaching programs received support and grants were made for 3,529 traineeships and 15 research fellowships. In addition, support was provided for 147 short-term continuing education courses which reached over 6,000 individuals.

KINDS OF TRAINING GRANTS

Long-Term Grants.—Grants to educational institutions and rehabilitation agencies for support of basic or advanced professional training. They are of three kinds: (1) Teaching grants, to defray part of the cost of instruction, (2) traineeship grants, to provide tuition and stipends and other costs for students enrolled in the training program, as selected by the educational institution; and (3) a combination of both.

Short-Term Grants.—Training of shorter duration than a semester. They include institutes, workshops, seminars and other training courses.

In-Service Grants.—Grants to State vocational rehabilitation agencies for staff development programs.

Research Fellowships.—Awarded for research in rehabilitation for the purpose of producing new knowledge or to assist professional personnel to prepare for careers in rehabilitation research.

Training grants have enabled schools to employ field teachers and clinic supervisors and thus expand their admissions. They have enabled curricula changes for incorporation of more rehabilitation content, more information about the nature and effects of disability, and the techniques and services that are utilized.

From a quantitative standpoint, manpower has been augmented in fields where there were serious shortages. More trained clinicians are working in rehabilitation settings than ever before, and a number of graduates are now on the faculties of participating schools.

The fields in which support is currently concentrated are medicine, with special emphasis upon residency training in physical medicine and rehabilitation; counseling; nursing; speech pathology and audiology; occupational therapy; physical therapy; psychology; recreation; sociology, dentistry, prosthetics and orthotics; and social work. Encouragement is also given to the development of curricula designed to provide specialized skills and knowledge required by workers for the blind, the deaf, the mentally retarded, and the emotionally disturbed. Training programs that are interdisciplinary in nature, and pilot projects with collaborative practice also are being encouraged.

Rehabilitation Medicine

Rehabilitation is a concern of many medical specialists, but it is the primary responsibility of specialists in physical medicine and rehabilitation. There is an acute shortage of physicians qualified as specialists in this comparatively new field, and the training grant program has given emphasis to increasing this number as well as helping

to insure that all physicans will be knowledgeable about rehabilitation concepts and techniques.

Teaching grants to schools of medicine are made to stimulate the inclusion of rehabilitation content in the instruction of all undergraduate students. In 1964, they reached 70 of the 91 approved schools of medicine and osteopathy. This was a noticeable increase from 1956, the first year in which teaching grants were awarded, when only six schools received grants.

Grants for undergraduate traineeships include provision for medical students to have intensive work experience of 2 or 3 months duration in research or clinical service in rehabilitation. In the first year of this program in 1960, 76 students were awarded such traineeships. In 1964, it is estimated that 272 students will have this experience.

Since 1955, when only 4 physicians were receiving VRA traineeships for residency study in physical medicine and rehabilitation, the number has grown to 139 in training on June 30, 1964. Just as the rehabilitation process is considered to be the responsibility of many professional fields, so are the medical aspects recognized as involved in several specialties. In addition to the 139 persons specializing in physical medicine and rehabilitation on a full-time basis in 1964 there were 36 physicians enrolled in other residency training programs who were pursuing training in physical medicine and rehabilitation on a part-time basis.

Another great need is for educators equipped to give leadership in instruction in physical medicine and rehabilitation. To meet this need for broadly trained academicians, an academic careers program has been established. Grants for this purpose offer opportunities to promising physicians for advance study in rehabilitation topics that will enhance their qualifications for academic posts. Four were in training at the end of the year.

Rehabilitation Counseling

The field of rehabilitation counseling is primarily concerned with helping a disabled individual to achieve his most productive role. Specific emphasis is placed on the client's occupational adjustment. Rehabilitation counselors are employed in State vocational rehabilitation agencies, rehabilitation centers, hospital rehabilitation programs, the public employment service, sheltered workshops and in a variety of rehabilitation programs in public welfare or public health agencies. They work in a close team relationship with physicians, social workers, and other professional personnel serving disabled persons. In many agencies, the counselor carries responsibility for employer edu-

cation and community publicity programs designed to attain a greater acceptance of handicapped persons as qualified job applicants. In State vocational rehabilitation agencies, the counselors are responsible for evaluating the vocational potential of disabled individuals, arranging for medical care, training, and other needed rehabilitation services, and placement in a suitable job.

Estimates of the number of graduates of rehabilitation counselor training programs needed annually for replacements or to fill new positions in expanding programs have increased from 600 to a minimum of 800, and 1,200 is considered a more comfortable margin. University training programs in rehabilitation counseling are currently graduating many less than these requirements. Because of the urgent need, especially in the State vocational rehabilitation agencies, a large proportion of the training grant funds, second only to medicine, is used for the support of counselor training. In fiscal year 1964, such teaching grants were made to 38 educational institutions, and 775 traineeships were awarded. Of this number, about 360 were graduated and ready for employment, since the curriculum is generally 2 years in length.

Psychology

The psychologist working in the field of rehabilitation helps the disabled client to deal with those practical psychological problems that prevent him from functioning at his highest ability. Psychologists trained to work with the severely disabled are in extremely short supply.

Support exists for the training of psychologists in several specialized areas, with concentrated emphasis on applicability to work with the disabled.

In 1964, 12 universities received grants to strengthen the teaching of rehabilitation psychology and 52 students were awarded stipends for doctoral studies in this field. Since 1957, about 55 students have completed graduate training, chiefly at the doctoral level.

Psychiatric Internships

In 1964, VRA continued its psychiatric intern training program—started in 1963—for counselors employed in State vocational rehabilitation agencies. The aim is to provide additional training in psychiatric rehabilitation to experienced counselors so that they might more effectively serve individuals recovering from mental illness. Three university departments of psychiatry associated with comprehensive hospitals have established training units. Since its inception, 38

trainees from 22 State agencies have completed the psychiatric internship program. About 38 additional trainees are expected to complete the program in 1965.

Speech Pathology and Audiology

Training grants in speech pathology and audiology are increasing the number of speech and hearing clinicians qualified to diagnose and treat adults with communicative disorders. Teaching grants are made to assist university training centers to expand their programs and modify their curricula to provide more extensive training for work with adults since the majority of the previous programs had been oriented toward preparation of students to work in the public school system. Traineeship grants are made to training centers so that students interested in speech and hearing therapy with adults can secure graduate training, and so that experienced clinicians can have advanced training for teaching or research positions. To provide therapy for the 8 to 9 million individuals with impaired speech or hearing, it is estimated that about 20,000 clinicians are needed, which is almost twice the number currently employed. In order to reach and retain this number 1,500 students should complete graduate study each year. Since about 800 students completed graduate study in 1963, just over half the numerical need is being met.

In 1964, teaching grants were made to 59 graduate programs with a total of 491 traineeships, a significant increase since the first grants were made in 1958. The number of clinicians providing services to adults in various rehabilitation settings has greatly increased, especially during the past 2 years. It is anticipated that manpower shortages will continue to decrease as more of the trainees complete their studies and begin employment providing direct services to handicapped individuals. Since 1958, approximately 1,300 trainees have completed their studies and 90 to 95 percent of them are engaged in full-time clinical, research, or teaching activities. In addition to the training programs continued throughout the year, there were 9 short-term training courses conducted for 278 trainees.

Workers for the Deaf

Relatively few professional workers in rehabilitation are equipped with enough knowledge about problems of the deaf. Special skills, such as the ability of communicating manually, are most important in providing the necessary services to these individuals. In 1961, VRA inaugurated a specialized training program designed to prepare a small number of persons working with the deaf for positions of leadership.

Twenty trainees have completed this course of study which includes content drawn from several disciplines, and is composed of both classroom instruction and actual field experience in several settings. During 1963 and 1964 additional programs were developed. These programs provide orientation of professional workers to the problems of the deaf.

Social Work

Grants to schools of social work enable them to incorporate rehabilitation content in their curricula and provide opportunities for selected students to prepare for future employment as social workers on rehabilitation teams, to participate in research in rehabilitation, or to give leadership in community planning for new services.

Social workers in nearly all settings deal with disability and must be able to relate it to the individual, his family and the community. Most teaching grants are now being made for establishment or expansion of field instruction units in nontraditional settings including State vocational rehabilitation agencies and institutions for the mentally retarded. This is an innovation that is meeting with considerable success in several State agencies.

It is estimated that of the 15,000 social workers needed annually at least 1,500 are needed in health and rehabilitation fields. In 1964, teaching grants were made to 42 of the 58 accredited schools of social work, and 45 schools were awarded traineeship grants for a total of 279 trainees. The 45 schools receiving teaching or traineeship grants had a full-time enrollment of about 5,600 as of November 1, 1963.

Nursing

Grants to schools of nursing have as their objectives the infusion of rehabilitation content into all relevant aspects of graduate nursing curricula and the specialized preparation of selected nurses for teaching rehabilitation to graduate and undergraduate nurses. In 1964, grants were made to 10 graduate schools of nursing, and traineeships were awarded for 62 nurses.

Occupational Therapy

Grants for the training of occupational therapists assist schools in their efforts to make the curriculum an effective and dynamic professional education program; to foster the establishment of new schools in medical centers where such a training program is needed to round out the training of medical and related professional groups; and to increase the number of occupational therapists qualified for teaching, research or other leadership positions.

Each year there are about 500 graduates in occupational therapy. Some 6,800 registered occupational therapists are available in the United States; the estimated need is about 12,000, with approximately 4,000 new personnel required annually.

Since 1955 about 1,600 students of occupational therapy have received financial assistance. The number of traineeships has increases from 52 in 1955 to 385 in 1964. In 1964, 18 of the 33 approved schools of occupational therapy received teaching grants.

Physical Therapy

The shortage of physical therapists is a matter of grave concern to the development of the total rehabilitation program, for physical therapy is an essential element in the treatment of nearly all kinds of disability. The training grants in physical therapy are directed toward improving and expanding the training programs in approved schools; accelerating the growth of newly established schools in geographical areas needing them; providing opportunities for advanced study by graduate physical therapists; and fostering experiments in new methods of training.

About 9,000 physical therapists are currently available in the United States. Between 1961 and 1963 the average number of students who were graduated annually by 36 schools was 560. In 1964 it is estimated by 42 schools that approximately 1,000 students will be graduated.

Since 1958 traineeships have been awarded to 85 experienced physical therapists for graduate study in physical therapy or related sciences, such as anatomy and physiology. Those who have completed their graduate training are now working in teaching, research or administrative positions in the field.

During 1964 traineeship grants were made to 41 of the 42 approved schools of physical therapy, and slightly over 400 undergraduate or certificate students received VRA assistance, which now represents the largest scholarship program for this field.

Prosthetics and Orthotics

Since 1953, over 9,000 rehabilitation personnel including prosthetists, orthotists, physicians, physical and occupational therapists, and rehabilitation counselors have received specialized training in the fields of prosthetics and orthotics (artificial limbs and braces) in VRA-supported courses at the University of California at Los Angeles, Northwestern University, and New York University. The VRA-sponsored traineeships have brought teams of medical personnel to these classes where the clinic team approach to rehabilitation, practiced

today in all of the major hospitals and specialized rehabilitation centers, had its initial impetus and development through student participation in amputee clinic practice sessions.

Trained personnel in prosthetics and orthotics are urgently needed to staff clinic teams and rehabilitation centers throughout the country. There is also a great need to provide training to residents in orthopedic surgery and physical medicine during their residency training.

Training Workers for the Blind

The recently established university courses for mobility instruction of blind persons were continued in 1964, as was the special training program to teach rehabilitation counselors the basic principles and specialized techniques of placing blind persons in competitive employment. The courses for mobility instructors enrolled 28 trainees during 1964.

The newly established training of home teachers for the blind enrolled its first class of eight students, and some were scheduled to receive their degree early in 1965. The demand for the services of these qualified teachers is increasing and applications for admission to the course indicate a growing interest on the part of potential employers as well as on the part of potential students in this new program.

In the area of short term courses for services to the blind conducted among State agency personnel in 1964, there was a series on placement of the blind in competitive occupations; on vending stand supervision and operation; on home teaching of the blind; for home teachers and their volunteer assistants; employment of blind persons as telephone switchboard operators; courses in industrial arts for the blind; placement of blind in Federal employment; and in-service training of home teachers of the blind.

Recreation for the Ill and Disabled

Seven schools were awarded grants in 1964 to train recreation specialists and 28 students were enrolled in these programs. The program was initiated in 1963 and the first traineeships were awarded for the academic year 1963–64.

Home Economics

Objectives of the home economics training program are to provide financial assistance for study at the master's and doctoral levels; to refine requirements and criteria for selecting home economists for traineeships in rehabilitation; and to develop graduate programs.

Since the first grant for graduate traineeships was awarded in 1963, a total of 15 has been given at the master's and doctoral levels, with 10 of these in 1964.

Short-Term Training Courses

In 1964 stress was placed upon short-term training of State vocational rehabilitation agency personnel in the following areas: advanced counseling techniques, particularly in the area of motivation; supervision of rehabilitation counselors; job placement techniques; and improvement of the services to the blind, deaf, mentally retarded and those recovering from mental illness. Training for personnel who deal with the mentally ill or emotionally disturbed has included courses on rehabilitation and after-care services for patients returning to the community after a stay in a mental hospital; rehabilitation counseling of the alcoholic, and psychological services for the mentally retarded. Training courses in the field of communicative disorders, which were held primarily for speech pathologists, have included post-laryngectomy speech, aural rehabilitation of adults and emotional problems affecting speech development in cleft palate cases.

New Training Centers in Mental Retardation

In 1964 training centers in mental retardation were established at State universities in North Carolina, Texas, and Wisconsin, and at Columbia. These centers will conduct a series of short-term courses on a year-round basis and develop new teaching materials for this specialized area. They feature a multiplicity of academic, clinical, research, vocational and other resources, and were being staffed with full-time faculty of competence in various aspects of rehabilitation of mental retardates.

In addition to these centers, grants for support of field instructional units in mental retardation have been made to 16 universities which have basic training programs in social work, rehabilitation counseling, and speech pathology and audiology. These units have a total of 90 trainees. It is anticipated that additional programs will be developed during fiscal 1965. The settings for such units are in residential training schools, public and private schools, sheltered workshops, hospitals, clinics, rehabilitation centers, VRA research and demonstration projects, State vocational rehabilitation agencies, and other programs serving the mentally retarded.

Research and Training Centers

Three years ago the Vocational Rehabilitation Administration instituted a series of grants to universities having medical schools and other facilities where rehabilitation research and training can be conducted under the favorable conditions that are offered in such settings. Unique contributions to modern rehabilitation are coming out of these efforts, for they provide strategically located institutional situations in which people can be trained in virtually every phase of rehabilitation, and where rehabilitation research of a high order can be developed.

The first research and training centers of this kind were at New York University and the University of Minnesota, followed soon by the University of Washington and Baylor University. Western Reserve University and Emory University were also getting started in this direction in 1964.

The size and importance of the medical schools participating in the program provide a wide spectrum of disabled patients for clinical investigation, and their education facilities offer almost unparalleled opportunities for the training of undergraduate and graduate students in subjects within or allied with rehabilitation of the disabled. Among the disciplines that have been strengthened in the research and training center program are physical therapy, occupational therapy, prosthetics and orthotics, nursing, speech and hearing, psychology, rehabilitation counseling, rehabilitation administration, and special education for handicapped youths. Graduate and post-professional training are also offered in most of these subjects.

Activities at the centers often vary. At New York University there is strong emphasis on medical research in the range of disabilities encountered in the public rehabilitation program. An increase of interest in these activities in 1964 almost doubled the volume of research efforts of the preceding year, and greatly widened its scope.

At the University of Minnesota—where the program is conducted jointly with the Sister Kenny Institute—more than 35 clinical investigations and research studies were in progress in 1964, and about 40 publications have been issued, bearing on a wide range of medical and paramedical findings as they pertain to rehabilitation.

The University of Washington has made available a new research laboratory for three major projects, and its Department of Mechanical Engineering is using the rehabilitation program as a testing ground for students entering the new field of Medical Engineering. A typical example is an undergraduate study of friction and lubrication of the knee joints in rabbits, which can have considerable implication for studies of the human anatomy. A wide variety of medical and scien-

tific investigations brings to a total of 18 the projects carried on in 1964.

Twelve new research projects were begun at Baylor University in 1964 under this program, and 15 others were continued from 1963. These, too, covered a wide range of investigation applicable to the rehabilitation program. A great many of the projects concerned care of patients in the rehabilitation process, including evaluation of cardiac patients, pulmonary cases, and quadriplegics.

As an example of the operation of these programs, Baylor's College of Medicine reported for the first 8 months of 1964 that a total of 167 patients, each spending an average of 35 days as subjects of rehabilitation studies, had not only served rehabilitation research but had also received rehabilitation services that benefited them enormously.

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Table 1.—*Number of referrals and cases, by agency, fiscal year 1964*

Agency[1]	Referrals				Cases				
	During fiscal year			Remaining at end of year[3]	During fiscal year				Remaining at end of year[6]
						Closed from active load			
	Total	Accepted for services	Not accepted for services[2]		Total active load (receiving services)	Rehabilitated	*After* rehabilitation plan initiated[4]	*Before* rehabilitation plan initiated[5]	
United States, total	513,371	179,132	171,735	162,504	399,852	119,708	15,131	20,062	244,951
Alabama	9,157	4,864	1,563	2,730	10,884	3,537	351	588	6,408
Alaska	527	208	115	204	422	96	22	27	277
Arizona:									
General	2,350	880	639	831	1,603	480	71	25	1,027
Blind	119	57	19	43	192	24	13	6	149
Arkansas	9,038	3,937	2,541	2,560	7,004	3,000	245	134	3,625
California	40,024	9,025	25,035	5,964	20,171	3,044	1,246	3,503	12,378
Colorado	4,958	2,103	1,291	1,564	4,632	1,323	313	159	2,837
Connecticut:									
General	2,747	1,348	477	922	3,928	971	222	177	2,558
Blind	182	85	51	46	226	54	16	4	152
Delaware:									
General	1,435	729	454	252	1,402	562	20	70	750
Blind	56	47	5	4	74	21	6	3	44
District of Columbia	4,548	1,739	1,836	973	3,468	1,201	230	188	1,849
Florida:									
General	25,409	8,153	10,512	6,744	16,105	5,172	1,066	1,032	8,835
Blind	3,476	409	1,629	1,438	1,231	238	65	33	895
Georgia	26,806	8,452	5,884	12,470	15,830	6,803	434	483	8,110
Guam	115	35	34	46	76	18	0	2	56
Hawaii:									
General	1,979	595	798	586	1,460	325	175	47	913
Blind[7]	86	42	23	21	103	12	8	5	78
Idaho:									
General	2,105	471	878	756	1,129	404	27	14	684
Blind	28	16	11	1	52	15	2	2	33
Illinois	13,727	6,695	3,864	3,168	14,632	3,750	564	1,249	9,069
Indiana:									
General	4,009	2,123	922	964	5,024	1,533	82	128	3,281
Blind	165	49	49	67	168	21	11	10	126
Iowa:									
General	6,272	1,920	1,717	2,635	4,636	1,444	227	162	2,803
Blind	215	79	48	88	252	59	14	11	168
Kansas:									
General	2,736	988	749	999	2,642	757	150	238	1,497
Blind	357	87	76	194	279	80	18	10	171
Kentucky	12,927	4,974	4,585	3,368	7,259	2,975	124	178	3,982
Louisiana:									
General	4,939	3,245	808	886	8,792	2,128	250	328	6,086
Blind	706	259	100	347	823	130	15	12	666
Maine:									
General	2,036	549	623	864	1,204	367	49	90	698
Blind	274	108	64	102	238	57	6	17	158
Maryland	7,205	2,918	2,304	1,983	6,670	1,974	374	408	3,914
Massachusetts:									
General	12,672	3,299	5,132	4,241	7,100	2,212	246	397	4,245
Blind	312	173	32	107	469	85	21	7	356
Michigan:									
General	10,060	4,104	1,965	3,991	10,523	3,181	383	219	6,740
Blind	376	208	80	88	538	97	45	44	352
Minnesota:									
General	7,603	2,176	3,233	2,194	6,075	1,538	346	285	3,906
Blind	1,166	269	490	407	709	157	31	42	479
Mississippi:									
General	3,920	2,006	764	1,150	4,179	1,535	116	144	2,384
Blind	1,139	410	486	243	987	325	33	25	604
Missouri:									
General	8,880	2,840	3,566	2,474	6,079	2,566	242	179	3,092
Blind	855	252	325	278	524	165	23	11	325
Montana:									
General	2,040	815	637	588	2,219	530	29	81	1,579
Blind	235	22	179	34	77	26	3	2	46
Nebraska:									
General	1,986	823	425	738	2,658	639	75	165	1,779
Blind	439	133	162	144	267	73	19	2	173

See footnotes at end of table.

Table 1.—*Number of referrals and cases, by agency, fiscal year 1964*—Con.

Agency [1]	Referrals				Cases				
	During fiscal year			Remaining at end of year [3]	During fiscal year				Remaining at end of year [6]
	Total	Accepted for services	Not accepted for services [2]		Total active load (receiving services)	Closed from active load			
						Rehabilitated	*After* rehabilitation plan initiated [4]	*Before* rehabilitation plan initiated [5]	
Nevada:									
General	959	194	581	184	387	113	51	25	198
Blind	36	19	10	7	48	14	3	2	29
New Hampshire:									
General	641	344	167	130	878	215	136	32	495
Blind	109	37	23	49	101	19	1	8	73
New Jersey:									
General	11,420	4,542	3,199	3,679	8,720	2,890	247	370	5,213
Blind	905	216	296	393	593	170	19	30	374
New Mexico:									
General	1,889	587	780	522	1,001	319	57	39	586
Blind	231	64	58	109	142	41	5	4	92
New York:									
General	31,752	11,359	10,525	9,868	26,658	7,641	1,113	1,675	16,229
Blind	1,689	805	263	621	1,752	462	35	67	1,188
North Carolina:									
General	13,346	7,643	3,910	1,793	16,816	6,214	338	287	9,977
Blind	1,475	617	572	286	1,506	523	17	77	889
North Dakota	2,064	467	504	1,093	1,457	374	27	57	999
Ohio:									
General	7,882	3,676	1,975	2,231	8,731	2,642	354	672	5,063
Blind	741	336	169	236	1,159	193	56	97	813
Oklahoma	9,914	3,543	2,942	3,429	10,284	2,258	268	512	7,246
Oregon:									
General	6,624	1,624	2,934	2,066	3,274	721	143	270	2,140
Blind	263	51	111	101	160	34	10	3	113
Pennsylvania:									
General	47,304	16,799	13,982	16,523	36,325	11,103	1,907	1,441	21,874
Blind	4,235	921	1,446	1,868	1,708	478	46	101	1,083
Puerto Rico	12,775	2,712	1,860	8,203	7,031	1,530	87	215	5,199
Rhode Island:									
General	5,502	2,310	1,155	2,037	4,753	1,501	285	21	2,946
Blind	138	98	12	28	280	65	12	29	174
South Carolina:									
General	15,996	5,108	6,040	4,848	11,083	3,263	223	331	7,266
Blind	364	168	114	82	435	118	6	18	293
South Dakota:									
General	1,448	403	330	715	1,077	294	31	7	745
Blind	517	49	167	301	148	32	7	1	108
Tennessee:									
General	10,472	3,791	3,089	3,592	8,357	2,861	261	229	5,00
Blind	1,120	341	327	452	782	309	14	29	430
Texas:									
General	17,089	6,012	5,998	5,079	13,156	4,268	366	315	8,207
Blind	1,256	429	458	369	906	320	23	30	53
Utah	1,930	998	522	410	2,668	704	151	21	1,792
Vermont:									
General	1,614	336	310	968	910	186	50	29	645
Blind	39	15	14	10	40	10	4	1	25
Virginia:									
General	18,084	5,449	7,683	4,952	10,838	4,175	232	557	5,874
Blind	930	199	267	464	380	163	11	5	201
Virgin Islands	150	44	5	101	93	40	0	0	53
Washington:									
General	6,461	1,504	2,322	2,635	4,017	1,045	178	221	2,573
Blind	343	119	102	122	301	54	14	16	217
West Virginia	19,258	6,129	5,248	7,881	15,326	3,875	134	1,136	10,181
Wisconsin:									
General	10,894	4,037	3,954	2,903	9,870	2,627	160	117	6,966
Blind	161	104	25	32	263	57	13	19	174
Wyoming	955	214	106	635	423	83	8	0	332

[1] In States with 2 agencies, the State division of vocational rehabilitation is designated as "general" and the agency under the State commission or other agency for the blind is designated as "blind."

[2] Services declined, services not needed, individual not eligible, individual needing services other than vocational rehabilitation, referred to other agencies, migratory shifting of the individual, etc.

[3] Eligibility for rehabilitation not yet determined.

[4] Closed after rehabilitation plan was initiated; received rehabilitation service but never reached the point of employment because of personal factors, illness, aggravated disability, etc.

[5] Closed prior to initiation of rehabilitation plan because of indifference of individual, increase in degree of disability, loss of contact, etc.

[6] In process of rehabilitation on June 30, 1964. [7] Estimated.

Table 2.—*Vocational rehabilitation grants, 1964, State divisions of vocational rehabilitation*

State or territory	Support grants	Extension and improvement grants	Total
Total	$77,219,830	$1,766,272	$78,986,102
Alabama	3,708,707	49,872	3,758,579
Alaska	168,166		168,166
Arizona	609,134	13,336	622,470
Arkansas	2,882,220	27,990	2,910,210
California	3,884,810	260,551	4,145,361
Colorado	1,279,611	29,279	1,308,890
Connecticut	356,525	31,898	388,423
Delaware	145,986	15,000	160,986
District of Columbia	462,113	7,238	469,351
Florida	2,310,791	49,148	2,359,939
Georgia	5,068,388	62,950	5,131,338
Guam	73,649		73,649
Hawaii	389,794		389,794
Idaho	270,327		270,327
Illinois	2,785,738	155,520	2,941,258
Indiana	713,838		713,838
Iowa	920,838	14,752	935,590
Kansas	601,078	26,154	627,232
Kentucky	1,339,645	47,320	1,386,965
Louisiana	1,868,900		1,868,900
Maine	288,777		288,777
Maryland	1,035,794	15,669	1,051,463
Massachusetts	1,391,099	48,057	1,439,156
Michigan	1,544,212	111,648	1,655,860
Minnesota	1,389,193	24,124	1,413,317
Mississippi	1,157,498		1,157,498
Missouri	1,105,946	53,382	1,159,328
Montana	371,854	15,000	386,854
Nebraska	358,007	15,190	373,197
Nevada	107,466	1,500	108,966
New Hampshire	102,856		102,856
New Jersey	1,427,297	81,945	1,509,242
New Mexico	318,488	15,661	334,149
New York	5,200,000	204,267	5,404,267
North Carolina	3,510,369		3,510,369
North Dakota	398,323	15,000	413,323
Ohio	1,386,313	16,096	1,402,409
Oklahoma	1,900,579	37,586	1,938,165
Oregon	862,094		862,094
Pennsylvania	6,791,927	99,662	6,891,589
Puerto Rico	1,367,428		1,367,428
Rhode Island	584,836	10,500	595,336
South Carolina	2,327,990		2,327,990
South Dakota	407,690	12,000	419,690
Tennessee	1,807,094		1,807,094
Texas	2,667,824	60,000	2,727,824
Utah	446,935	15,000	461,935
Vermont	239,418	3,417	242,835
Virginia	1,855,405		1,855,405
Virgin Islands	46,193		46,193
Washington	997,585	33,558	1,031,143
West Virginia	2,102,198	27,223	2,129,421
Wisconsin	1,709,578	43,779	1,753,357
Wyoming	171,306	15,000	186,306

Table 3.—*Vocational rehabilitation grants, 1964, State commissions or agencies for the blind*

State or territory	Support grants	Extension and improvement grants	Total
Total	$7,636,541	$156,176	$7,792,717
Arizona	105,374		105,374
Connecticut	85,000	7,975	92,975
Delaware	34,342		34,342
Florida	602,000		602,000
Hawaii	71,487		71,487
Idaho	25,527		25,527
Indiana	58,612	6,774	65,386
Iowa	197,657		197,657
Kansas	179,586		179,586
Louisiana	224,573		224,573
Maine	106,880	2,925	109,805
Massachusetts	210,463		210,463
Michigan	126,584		126,584
Minnesota	226,785		226,785
Mississippi	460,266	8,374	468,640
Missouri	247,116		247,116
Montana	54,468		54,468
Nebraska	96,950	7,595	104,545
Nevada	37,169		37,169
New Hampshire	41,405		41,405
New Jersey	288,481	9,900	298,381
New Mexico	73,278		73,278
New York	687,340	28,163	715,503
North Carolina	690,900		690,900
Ohio	403,107	11,254	414,361
Oregon	104,405		104,405
Pennsylvania	605,063	60,928	665,991
Rhode Island	87,548	3,750	91,298
South Carolina	88,798		88,798
South Dakota	85,116	3,000	88,116
Tennessee	513,846		513,846
Texas	319,878		319,878
Vermont	43,966		43,966
Virginia	181,159		181,159
Washington	178,300	5,538	183,838
Wisconsin	93,112		93,112

Saint Elizabeths Hospital

Saint Elizabeths Hospital, the largest federally operated hospital for the mentally ill, fulfills its statutory mission by means of three major programs:

1. Treatment—This involves the therapeutic, rehabilitative, and protective programs for an average in 1964 of 7,641 patients including residents of the District of Columbia, beneficiaries of the Veterans Administration, beneficiaries of the Public Health Service, mentally ill persons charged with or convicted of crimes in U.S. courts including the courts of the District of Columbia, and certain American citizens and nationals found mentally ill in foreign countries, the Canal Zone, and the Virgin Islands.

2. Training and Education—This program provides multidisciplinary clinical training for professional and other personnel engaged or interested in mental health activities.

3. Research—The hospital plans, develops, and carries out coordinated research programs and projects for the purpose of obtaining a better understanding of the causes of mental disorders, and of the factors bearing upon their development, treatment, and possible prevention. A close working relationship is maintained with the National Institute of Mental Health.

In making an annual assessment of the programs of a large institution for the treatment of the mentally ill, it is appropriate to include a statement of the principles governing its operation.

It is mankind's current fundamental concepts as they relate to man in general and to the mentally ill in particular that determine how the mentally ill are treated, and what kinds of programs are developed for them. Fundamental concepts, of course, change through time.

Since man is the originator, perpetuator, and executioner of ideas, it is not surprising that he has many ideas about himself. One of the most fundamental is that man is important—important as a person and as a species. From this flows the notion that he, as a person, is entitled to certain rights and respect within the bounds prescribed by the society of which he is a part. In a democratic society, it follows, on philosophical grounds, that this social form can survive only so long as certain personal human rights and dignity are recognized and honored. An erosion of personal rights is often an erosion of democracy itself. Our current concepts are that mentally ill persons are treatable because their difficulty is based on naturalistic causes of a medical, psychological, and social nature capable of being, if not yet, fully understood. These basic concepts lead to certain corollaries.

(a) The diagnosis and treatment of mentally ill persons are medical problems, but there are social, psychological, and often legal issues involved.

(b) Every mentally ill person must have easy and prompt access to programs and services appropriate to his particular needs.

(c) It should be presumed that a mentally ill person wants treatment in an appropriate community program, including a mental hospital, unless he actively objects.

(d) Those persons dealing with the mentally ill, including friends and relatives, the professional and nonprofessional personnel who provide service to them in and out of hospitals, and attorneys and courts involved in any judicial proceeding, are to be presumed honestly concerned with the best interest of the patient.

(e) The human dignity and rights of mentally ill persons must be protected and are as important as the need to protect society. These individual rights include protection, not only against wrongful deprivation of liberty, but also against invasion of privacy, and exposure to traumatic situations inimical to the treatment of the mentally ill.

(f) The patient is the most important person involved in any mental health program. Without the patient or potential future patient there would be no programs for the treatment of the mentally ill nor the promotion of mental health. Not a few persons who believe themselves to be genuinely concerned with the improvement of services for the mentally ill tend to forget the patient. It is not uncommon to see people in different organizations contesting between themselves about who shall provide certain services to the mentally ill. Perhaps this is due in part to

the current dedication to specialization with its attendant problems of professional identity. Many organizational and procedural problems might be easier of solution than they now appear to be if those concerned with their solution were really dedicated to the concept that the patient is the reason for their professional or organizational being.

Certain administrative and clinical principles should be honored in the organization of a mental hospital and other facets of a comprehensive mental health program.

1. *There should be continuity of service for each patient.* One of the most important tools in conducting therapy with many psychiatric patients is the development of a meaningful human relation between therapist and patient. It is self-evident that the maintenance of such a relation is made difficult if there is a continual change of therapists during the treatment. Further, many patients have particular difficulty in establishing human therapeutic relations because of their illnesses. To call upon them to shift this relation from one therapist or group of therapists to another several times during the course of treatment complicates rather than facilitates the treatment process. There are rarely valid reasons to transfer a patient from one therapist or group of therapists to another within the hospital setting.

2. *Responsibility must be clearly defined.* As long as one group of therapists has the opportunity readily to shift patients to other therapists, responsibility for treatment has not been clearly defined. This is important clinically, since therapists will often deal differently with a patient whom they can transfer to someone else than they would if they knew they would have to cope with that particular patient's behavior.

3. *Authority must be given commensurate with the responsibility assigned.* This administrative principle is very often violated in mental health programs. While there is certainly a place for overall medical policy and "higher authority," it is possible that if there is a general error in this situation today, it is to give too little, rather than enough or too much authority to persons immediately responsible for treatment of a particular patient.

4. *Patients and employees tend to respond to the environment and expectations of the place in which they live and work.* Many large public hospitals, and private ones for that matter, distribute their patients on a behavioral classification basis. The trouble with this system is that if a patient is placed in a "disturbed ward" either officially or unofficially designated as such; where the modal behavior of the patients on that ward is disturbed;

where disturbed behavior is expected by the employees; it is not surprising that the patient just introduced to that environment may behave in a disturbed fashion. If a patient is not disturbed while living in a "disturbed ward," he is a deviant in that culture. If, on the other hand, he is placed in a ward where disturbed behavior is not the modal behavior, where it is not expected by the employees and they will thus try to take steps to minimize or prevent such behavior, and where it is poorly tolerated by the other patients; most patients will behave in a much less disturbed fashion. The same can be said for "untidy," "regressed," and other types of wards. It is this type of behavioral classification and organization that also leads to the discontinuity of service for a particular patient as he changes from one behavioral classification to another.

Perhaps much of this type of behavioral classification was adopted by our larger hospitals as a convenience for employees who were present in woefully insufficient numbers, but in some instances it also seems to call out rather loudly some underlying assumptions about lack of treatability.

5. *Manpower should be utilized at its highest level of competence.* Utilizing manpower at less than its full capability is not only wasteful in dollars but is damaging to the dignity and integrity of the individual concerned. Using physicians as clerks, or nurses as janitors results in poor treatment, poor clerical work, poor sanitation and an unhappy staff.

6. *Progressive personnel should be employed.* This refers to the importance of recruiting persons, both professional and nonprofessional, who are devoted to "seeking a way to get a job done" in contrast to those who characteristically point out why "it cannot be done."

7. *Commonly accepted operating assumption should be queried.* It is important that assumptions are not accepted as facts simply because they have been used for some time. Certain organizational forms and procedures tend to perpetuate themselves simply because they are time-honored, even though new knowledge has been acquired or new and better operating assumptions could be or have been made that call for their review.

Saint Elizabeths Hospital hopes by its service to the mentally ill to demonstrate that it believes in the importance of man; that it has respect for the rights and dignity of the mentally ill; that it believes the mentally ill are treatable; and that it intends to support and administer its programs based on these ideas.

Program Developments

In order to improve the continuity of treatment of patients by the same professional staff members, admission services were opened in three additional services during the report year. Seven of the 12 Psychiatric Services now provide such programs. Further, with few exceptions, patients who require readmission are now admitted directly to the Service from which they were released, where they are already acquainted with the personnel, rather than to be admitted, as in the past, to one of the "admitting services." These changes, made during the latter part of the report year, have substantially reduced the number of instances in which it has been necessary to transfer a patient from one treatment team to another. "Continuity of treatment" is thus fostered.

Still another significant change to improve continuity of treatment took place in the operation of John Howard Pavilion, a maximum security building utilized primarily for the treatment of patients admitted as a result of criminal proceedings. John Howard Annex was opened in one ward of East Side Service in February 1964. The Annex provides limited medium security facilities where selected patients from John Howard Service may be treated by the staff of that Service when maximum security is no longer medically indicated. The Hospital has long needed medium and minimum security facilities as an integral part of the John Howard Service.

The Annex represents only an interim measure until such time as the John Howard Service as it now exists can be expanded into a complex which would provide maximum, intermediate, and minimum security facilities necessary for the treatment of patients admitted as a result of criminal proceedings during the entire period of their hospitalization. It is recognized that the acquisition of new facilities will require several years, hence the importance and significance of the temporary measures represented by the creation of the John Howard Annex.

The new Physical Medicine and Rehabilitation Building constructed at a cost of approximately $4,389,000 was put in operation during the year. Four wards were opened in August 1963, and the remainder later in the year. The new building provides badly needed physical medicine and rehabilitation resources but in addition has dining facilities for approximately 400 patients from adjacent buildings, as well as for those patients living in the Physical Medicine and Rehabilitation Building. Up to this time the first group was fed in a distant overcrowded cafeteria, access to which was rather difficult.

Subsequent to the opening of the Physical Medicine and Rehabilitation Building, space was allocated in that building, and equipment

procured for the establishment of a Speech Pathology and Audiology Unit. The most modern audiological evaluation and treatment equipment has been procured and installed, and although selected primarily for patient service, it is also of great value for training and research purposes. This unit provides patient service through the evaluation and treatment of patients with communication problems, training services through which students may acquire practical, supervised experience in evaluating and treating such patients, and the means for conducting significant research projects. A valuable byproduct resulting from the establishment of this unit is the elimination of the need for transporting patients to facilities located away from the hospital for specialized treatment as in the past.

The hospital's new program in the Youth Center progressed very well in the development of structured activities for mentally ill children. There are now in the hospital about 60 patients under 18 years of age who merit special consideration because of the possibility of lifelong maladjustment unless there is some modification in their present course. These young patients do not yet have fixed patterns of behavior, neither have they completed their schooling nor made their vocational choices. Their relationship patterns and personality are still in a state of flux; their sense of values and attitudes are still fluid. Therefore, they need a special program somewhat different from that provided for adult patients. Specifically, they require educational and group activity programs carried out by persons trained to work with emotionally maladjusted children and adolescents. It would be desirable to have a 24-hour-a-day structured program in a residential setting. Since the facilities and staff are lacking for such a program, the hospital must, for the present, content itself with special activities in the Youth Center for these young patients. A hospital improvement grant received from the National Institute of Mental Health will assist in the endeavor.

The interest of the community in hospital activities is evidenced by the continued increase in the number of hours of service furnished to patients, without compensation, by volunteers. The following tabulation reflects a gratifying though somewhat declining rate of increase during the past year:

Year	*Hours of service by volunteers*
1964	52, 290
1963	49, 933
1962	40, 058
1961	24, 185

The value of volunteer services is not to be measured only in terms of hours. Many, if not most, services furnished by volunteers are of a nature which, for a variety of reasons, the hospital is unable to supply.

In recent years as well as in 1964, there has been a marked improvement in the hospital's sanitation. Insect and rodent control has become quite sophisticated. Effective cleaning materials are being manufactured at considerable savings. Dietary and ward living area inspections have paid off in improved cleanliness and are resulting in active cooperation from personnel and patients alike.

Official visitors from many foreign countries and most of the states came to the hospital during the year. These visits pointed up again the potential that exists at the hospital to lead the way in treatment, training and research by serving as a demonstration center.

Population Trends

The average resident population continued to decline as did admissions and discharges from the hospital rolls.

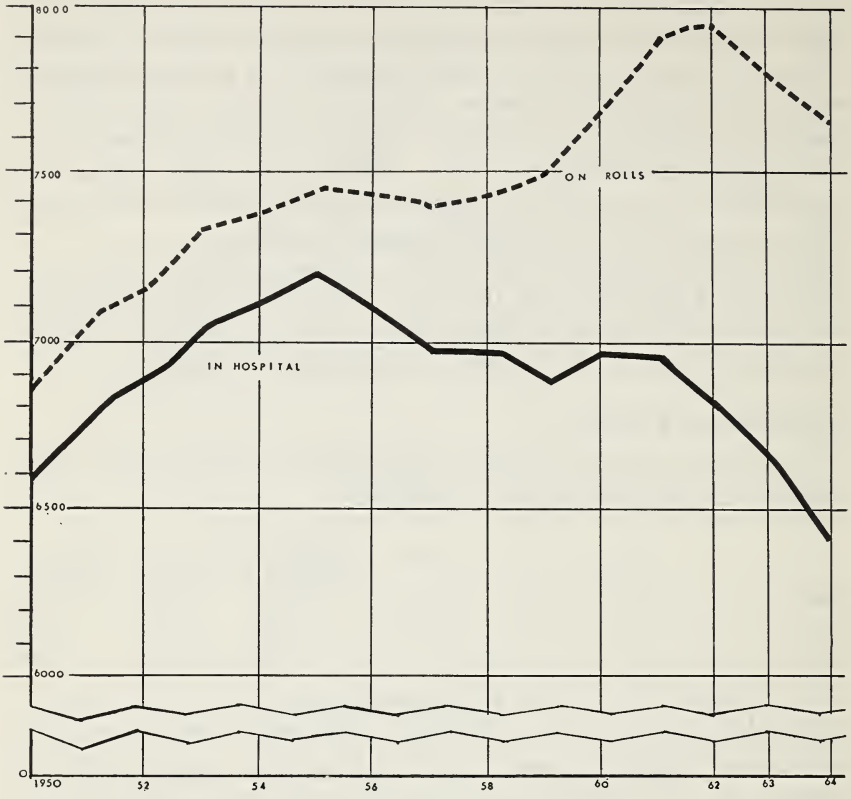
Year	*Average in hospital population*	*Admissions*	*Discharges from rolls*
1964	6, 412	1, 692	1, 469
1963	6, 668	1, 930	1, 559
1962	6, 838	2, 024	1, 648

The number of patients on visit and leave has risen steadily in recent years, increasing from 245 in 1955 to 1,229 in 1964. The median age for resident patients in 1964 was 57 years and the convalescent leave patients, 46 years. Patients on the rolls were about evenly divided between males and females, but there were substantially more discharges of male than female patients and also more male admissions than female. Of the 1,692 admissions during 1964, 1,006 were civilly committed from the District of Columbia. Patients admitted as the result of criminal proceedings totaled 391, or about 23 percent of all admissions. (See charts 1 and 2, and tables 1–6).

Professional Training and Education

During the past year each professional training program has undergone intensive review with regard to the following: Specific mission, curriculum, and administrative organization; recruitment methods and problems; supply, equipment, and facility needs; consultation and staffing needs; accreditation standards; and techniques for evaluating programs of trainees. The review has produced a number of benefits, a major one being an increasing integration of program activities with the resultant strengthening of programs and simultaneously, the elim-

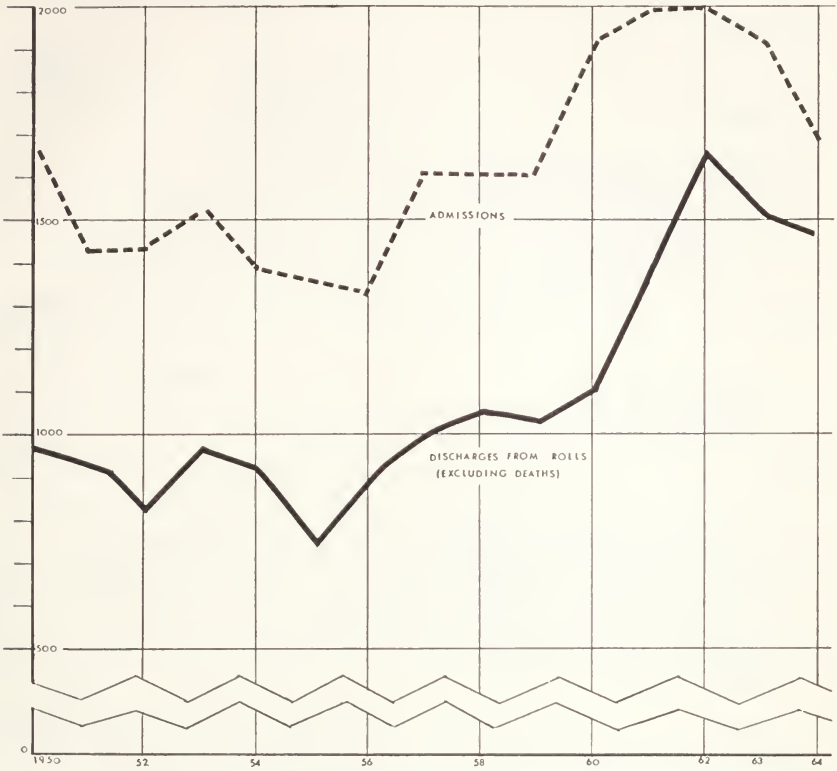
CHART 1.—AVERAGE NUMBER OF PATIENTS, FISCAL YEARS 1950–64



ination of duplicated effort. Particular attention was devoted to the development of a core curriculum for several professional disciplines, the orientation program for new trainees, methods for centralized assignment, the sharing of training resources, and the development of more efficient methods for processing applications from prospective trainees.

A significant development during the year was the authorization, by the Civil Service Commission, of higher stipends for trainees. Although only about 20 percent of the total increase authorized will be paid in fiscal year 1965 because of fund limitations, it is hoped that sufficient funds will be available in 1966 to make stipend payments at the full authorized amount. The increase in stipends should greatly improve the competitive recruitment position of the Hospital, especially with respect to the quality of applicants. This was demonstrated to a limited extent by the fact that even the anticipation of the

CHART 2.—ADMISSIONS AND DISCHARGES, FISCAL YEARS 1950–64



increase has improved recruitment of rotating interns and psychiatric residents.

Another significant development in the psychiatric residency program was the designation at the end of the year, of training officers in five clinical areas. This action was taken to correct a major weakness in the psychiatric residency program caused by the unevenness of clinical supervision of residents in the various hospital units. There is every reason to expect that when this program is in operation in fiscal year 1965, the quality and quantity of the day-to-day clinical work of psychiatric residents will be greatly improved.

A cooperative arrangement was inaugurated during the year with the George Washington University as a result of which the senior psychiatric residents will be provided an opportunity to gain essential supervised experience with patients of a type seldom encountered in the normal inpatient setting of St. Elizabeths Hospital. The results of this arrangement have been extremely satisfactory.

PROFESSIONAL TRAINEES, FISCAL YEAR 1964

The tabulation below shows the number of trainees in the various disciplines:

	Number enrolled during year
Physicians	45
Psychiatric residents	29
Affiliate psychiatric residents [1]	3
Surgical residents [1]	3
Radiology residents [1]	2
Rotating medical interns	7
Nurses	588
Undergraduate [1]	467
Graduate students	69
Undergraduate collegiate	52
Other	93
Psychology interns and residents	9
Psychodrama interns and residents	7
Chaplain interns and residents	22
Social work students (field work placement)	25
Occupational therapy interns	21
Recreational therapy interns	4
Dental interns	5
Total	726

[1] On affiliation from other hospitals.

Research

Research activities at the hospital are divided into three main areas: basic sciences, clinical, and behavioral studies. The basic science studies are largely at the laboratory level and are entirely supported by the National Institute of Mental Health (NIMH). The behavioral studies are devoted to understanding behavioral phenomena in both normal and mentally ill persons. These activities are supported by the hospital. The clinical studies are devoted to a better understanding of the causes of mental illness and improved treatment of the mentally ill. These studies are jointly financed by the NIMH and the hospital. The total research activities at the hospital constitute a mutual undertaking with the National Institute of Mental Health and are a single integrated program.

BEHAVIORAL STUDIES

No new research program areas were established during the year but the following were continued: Experimental Psychiatry, Com-

munications Behavior, Personality Assessment, Operant Conditioning and Psychophysics, and Investigation of Criminal Behavior, all of which operated satisfactorily and productively during the year. The latter program is particularly interesting and, as now constituted, centers on three basic themes: (1) How patterns of criminal behavior evolve in the individual and how these interact with social forces in the family and community; (2) the nature of the treatment process for patients exhibiting criminal behavior, and the apparent need, in long-term individual treatment, to deal with basic personality issues that underlie but are broader than the criminal pattern itself; and (3) biological investigations dealing with possibly differentiating characteristics in patients with certain types of criminal behavior patterns.

CLINICAL STUDIES

Until a little over 3 years ago the William A. White Building was a chronic service for over 300 patients. There were neither facilities nor services for a research program in clinical and social psychiatry. A concept and theory for clinical research had to be evolved on which the development of comprehensive research facilities could be based. A very substantial amount of time was therefore devoted to the development and implementation of a comprehensive concept. Training of professional personnel on all levels was required before a functionally integrated system of facilities and services could be made to work.

The Comprehensive Psychiatric Center located in the William A. White Building serves these purposes. It provides first, a medium for a great variety of clinical and psychosocial studies. The material for the study of families with multiple incidence of mental illness now consists of 133 index cases with a total of 223 mentally ill blood relatives. This study, as most other projects, has been severely hampered by lack of staff to devote full time to the compilation of data from case reviews and to the interviewing of patients and relatives. Eventually this study should prove to be a major attraction for a collaborative endeavor of clinical and social scientists.

Secondly, the Comprehensive Psychiatric Center itself serves as the object of research since it constitutes a proving ground for the effectiveness of therapeutic and preventive measures basic to the philosophy of comprehensive community mental health centers. This project represents a pioneering endeavor in the utilization of a new concept and approach in mental health. An investigation of the multidimensional program of this comprehensive center covering a period of over 3 years is now in progress.

In terms of facilities, the Center now contains: (1) an Inpatient service comprising five admission wards, (2) a Day Hospital with a

capacity for 20 patients, (3) the Clinic serving an average of 150 patients per month and (4) the Home Service.

Within the treatment center the Day Hospital serves two purposes: Preventing hospitalization of ambulatory patients and accelerating recovery of hospitalized patients. To achieve these goals, the Day Hospital offers intensive and sharply focused treatment. Economy of time is considered important. The period of treatment has been limited to from 6 to 8 weeks. This period has been found adequate to confirm or disprove the therapeutic prognosis formulated at the time of admission. The existence of the Day Hospital has been enormously valuable in reorienting staff as well as the community to the possibilities of ambulatory treatment. Initially, substantial skepticism prevailed since many persons considered it lacking in feasibility to treat acutely psychotic patients in the Day Hospital, returning them to their homes at night.

The Clinic has become the site of intensive outpatient therapeutic activity. For some time now the number of Clinic patients has been substantially greater than the number of hospitalized patients. It has been the policy from the beginning to refer every departing patient to the Clinic either for active treatment or for periodic evaluations conducted by the Clinic's followup research unit. Nearly two-thirds of the active patients receive drugs as compensatory or preventive treatment. The majority of drug-treated patients receive brief psychotherapy as well. Individual and group pyschotherapy is available for both patients and family members. Clinic patients live and work in the community.

The Home Service is staffed by psychiatrists, nurses, and social workers who visit alone or in pairs as is deemed necessary to cope with specific situations. In the beginning, home visits tended to be made in response to a crisis. More recently the emphasis has been on treatment in the patient's natural habitat. Visits to patients' homes have been eye openers to many staff members who had only the vaguest ideas about the reality of many social situations. The Home Service has become an important educational device in contributing to a community oriented mental health profession.

Special Studies

The Advisory Group on the Future of Saint Elizabeths Hospital created by the Secretary of Health, Education, and Welfare in 1963, completed its study and submitted a report of findings and recommendations to the Secretary. At the close of the year the report was being reviewed by the Office of the Secretary. In October 1963 an *Ad Hoc* subcommittee of the House Committee on Education and

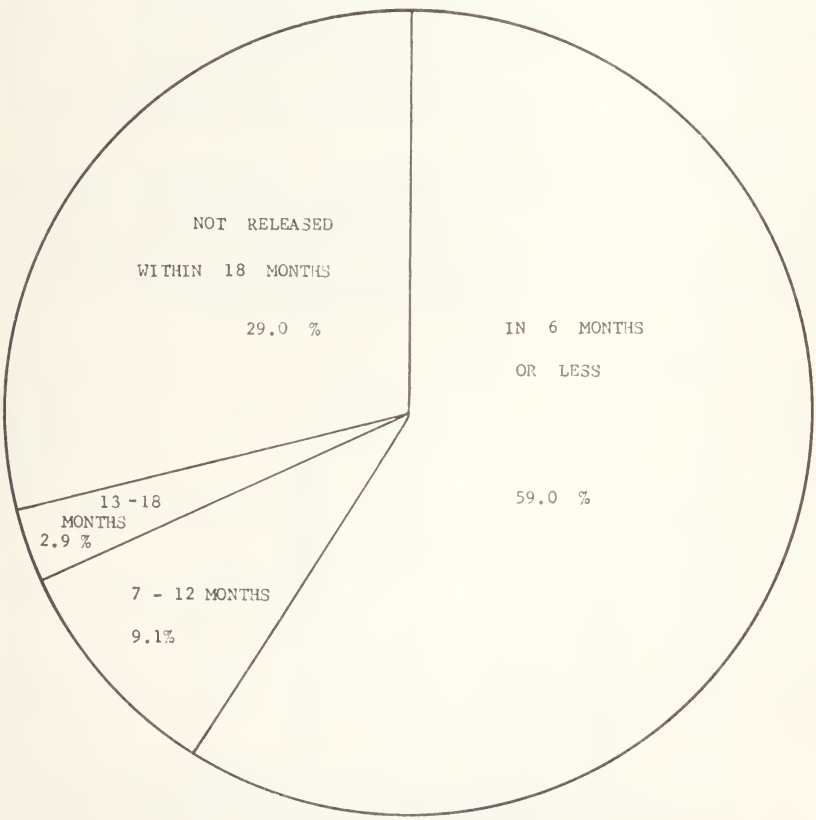
Labor was created to investigate "the administration and operation of Saint Elizabeths Hospital." A number of hearings were held at which Hospital officials and others testified. The report of the subcommittee issued in December 1963 included the following statements:

a. "It is the opinion of the Committee that * * * (the) proposal for a 'Subcampus' for the housing of all prisoner patients is sound."

b. "The Subcommittee agrees that the need for a new residential treatment center for the treatment of children and adolescents is urgent."

c. "The Subcommittee concurs in the view that substantial legislative revision is required to facilitate the operation of the Hospital."

CHART 3.—TIME UNTIL RELEASE, ALL CIVIL ADMISSIONS, FISCAL YEAR 1962



Median Stay - 3.6 Months

A study of the fiscal year 1962 civil admissions revealed that 59 percent were released from the hospital within 6 months, 68 percent within 12 months, and 71 percent within 18 months. The median stay for this group was 3.6 months. (See chart 3.) Numerically, the largest single diagnostic category was the schizophrenic group (652) and of these 76 percent were released within 6 months, 85 percent within 12 months, and 89 percent within 18 months. However, 371 patients admitted with a diagnosis of chronic brain syndrome due to cerebral arteriosclerosis or senile brain disease, only 20 percent were able to be released within 6 months, 24 percent within 12 months, and 27 percent within 18 months.

Staffing and Financing

An operating budget of $27,909,000 was approved by the Congress for the hospital for fiscal year 1964 and included 50 additional positions to strengthen the research and training programs. No additional positions were approved for the seriously understaffed patient treatment program. Employment at the end of the year, exclusive of trainees and temporary employees, was 3,750 compared with 3,716 the previous year. The increase in employment was in the training and research activities.

Staffing shortages continue, notably in areas directly concerned with patient treatment and rehabilitation. This remains true even though, because of a reduced patient population, the employee-patient ratio improved slightly during the year as shown in the following tabulation:

Year	*Employee-patient ratio*	*Year*	*Employee-patient ratio*
1959	39–100	1962	50–100
1960	42–100	1963	55–100
1961	45–100	1964	60–100

The need for at least a 100–100 ratio has been demonstrated by a detailed staffing survey made by the hospital.

A continuing problem in providing nursing service is maintaining the number of graduate nurses at a level sufficiently high to meet minimum needs. A total of 55 were appointed in 1964, but there were 51 separations. Of those appointed, 12 were former student-nurse affiliates at the hospital, thus demonstrating the value of that training program as a recruitment source.

A significant development in employee training during the year was the enrollment of 10 graduate nurses in local colleges and universities as full-time students for 2 semesters, receiving full salary and payment of tuition. These nurses were selected from a total of 35 who

applied. It is hoped that this program as it continues will develop nurses who are eligible for supervisory positions, an area in which there is a most marked shortage.

Buildings and Facilities

Despite the fact that funds were available, the construction contract for the 450-bed Rehabilitation Center was not awarded during the fiscal year. It is hoped that the difficulties which prevented the award of the construction contract will be overcome so that this very badly needed facility can be made available not only to provide rehabilitation services but also to replace extremely unsatisfactory and obsolete patient buildings which were erected between 1856 and 1898.

Funds were provided during the fiscal year for the rewiring and extension of electrical facilities ($354,000), alteration of X-ray facilities ($80,000), establishment of central sterile supply facilities ($50,000), replacement of certain steam service lines ($42,000), insect screens in patient buildings ($50,000), replacement of certain sewers ($54,000), modernization of dishwashing facilities ($50,000) and addition to the powerplant ($25,000).

The new Physical Medicine and Rehabilitation Building was placed in full operation during the year. Negotiations were underway at the end of the year for the demolition of the obsolete patient building replaced by that new structure.

Table 1.—*Patients, admissions, and discharges, fiscal years 1935–64*

Fiscal year	Average number of patients		Admissions [1]	Discharges [1]	Discharges as percent of admissions	Deaths [1]
	On rolls	In hospital				
1935–39	5,624	5,374	987	474	48	296
1940–44	6,849	6,477	1,885	1,295	69	387
1945–49	6,832	6,446	1,815	1,477	81	431
1950–54	7,175	6,896	1,481	920	62	440
1955–59	7,458	7,039	1,501	951	63	524
1950	6,897	6,587	1,648	960	58	495
1951	7,053	6,783	1,412	928	66	424
1952	7,172	6,915	1,438	814	57	431
1953	7,361	7,079	1,524	977	64	436
1954	7,392	7,117	1,385	921	66	416
1955	7,461	7,216	1,349	748	55	502
1956	7,438	7,120	1,327	884	67	600
1957	7,413	6,994	1,615	1,014	63	507
1958	7,466	6,965	1,605	1,076	67	532
1959	7,512	6,900	1,607	1,034	64	479
1960	7,691	6,983	1,894	1,101	58	504
1961	7,933	6,976	1,981	1,395	70	440
1962	7,940	6,838	[2] 2,024	1,648	81	484
1963	7,787	6,668	[2] 1,930	1,559	81	513
1964	7,641	6,412	[2] 1,692	1,469	87	444

[1] For the 5-year periods, 1935–59, admissions, discharges, and deaths are averages per year.
[2] Differs slightly from comparable numbers for earlier years in that the earlier figures include "paper" discharges and readmissions made in order to change legal categories.

Table 2.—*Patients on the rolls, by status and by sex, time since admission, ethnic group, and age, June 30, 1964*

Sex, time since admission, ethnic group, and age	Patients on rolls, total	Resident patients [1]			On vacation	On convalescent leave	On unauthorized leave
		Total	In hospital	On temporary visit			
Total	7,521	6,352	6,316	36	67	1,013	89
Males	3,761	3,283	3,270	13	38	373	67
Females	3,760	3,069	3,046	23	29	640	22
Time since admission							
Less than 6 months	613	504	500	4	4	97	8
6–11 months	402	280	278	2	6	108	8
1 year	710	476	474	2	10	210	14
2 years	515	381	379	2	5	111	18
3–4 years	830	654	645	9	10	149	17
5–9 years	1,031	852	846	6	10	156	13
10–19 years	1,420	1,257	1,250	7	17	139	7
20 years and over	2,000	1,948	1,944	4	5	43	4
Median time since admission (years)	8.3	10.2	10.3	4.8	4.7	2.8	2.8
Ethnic group							
White	3,881	3,394	3,378	16	38	414	35
Nonwhite	3,640	2,958	2,938	20	29	599	54
Age (years)							
Less than 15	9	8	8	0	0	1	0
15–17	34	28	27	1	0	5	1
18–24	252	194	193	1	2	49	7
25–34	781	584	578	6	7	168	22
35–44	1,169	877	862	15	19	246	27
45–54	1,451	1,156	1,152	4	14	263	18
55–64	1,550	1,376	1,372	4	10	153	11
65–74	1,173	1,073	1,071	2	11	88	1
75–84	852	814	811	3	4	32	2
85 and over	250	242	242	0	0	8	0
Median age	55	57	57	42	49	46	40

[1] Resident patient status should not be confused with the D.C. resident legal category. The former is defined as patients in the hospital plus those on temporary visit.

Table 3.—*Movement of patients on the rolls, by sex, time since admission, ethnic group, and age, fiscal year 1964*

Sex, time since admission, ethnic group, and age	Patients on rolls, June 30, 1963	Admissions	Discharges	Deaths	Patients on rolls, June 30, 1964	Change during year
Total	7,742	1,692	1,469	444	7,521	−221
Males	3,937	944	910	210	3,761	−176
Females	3,805	748	559	234	3,760	−45
Time from admission to June 30, 1964 [1]						
Less than 6 months	733	849	216	19	613	−120
6–11 months	465	843	380	61	402	−63
1 year	698	----------	418	65	710	+12
2 years	545	----------	157	33	515	−30
3–4 years	804	----------	121	61	830	+26
5–9 years	1,007	----------	83	66	1,031	+24
10–19 years	1,511	----------	63	52	1,420	−91
20 years and over	1,979	----------	31	87	2,000	+21
Ethnic Group						
White	4,035	791	692	253	3,881	−154
Nonwhite	3,707	901	777	191	3,640	−67
Age (years)						
Less than 15	8	6	4	0	9	+1
15–17	33	22	9	0	34	+1
18–24	272	195	169	4	252	−20
25–34	827	369	377	5	781	−46
35–44	1,264	348	390	12	1,169	−95
45–54	1,490	251	260	26	1,451	−39
55–64	1,562	177	167	61	1,550	−12
65–74	1,182	152	68	106	1,173	−9
75–84	839	130	21	133	852	+13
85 and over	265	42	4	97	250	−15
Median Age	55	42	40	76	55	----------

[1] Data for patients on rolls June 30, 1963, represent time from admission to June 30, 1963.

NOTE.—Ordinarily the number of patients on the rolls at the beginning of the year plus admissions minus discharges and deaths equal the number of patients at the end of the year. However, this is not true for characteristics which change during the year, such as age or time since admission.

Table 4.—*Patients on the rolls by status and legal category, June 30, 1964*

Legal category	Patients on rolls, total	Resident patients [1]			On vacation	On convalescent leave	On unauthorized leave
		Total	In hospital	On temporary visit			
Total	7,521	6,352	6,316	36	67	1,013	89
Reimbursable	6,735	5,629	5,595	34	63	963	80
D.C. resident	5,158	4,391	4,362	29	46	686	35
D.C. voluntary	337	191	191	0	7	138	1
D.C. prisoners, total	737	626	623	3	4	65	42
For examination	49	49	49	0	0	0	0
Mentally incompetent	215	202	200	2	2	8	3
Not guilty, insanity	350	271	270	1	2	45	32
Under sentence	73	72	72	0	0	0	1
Sex psychopath	50	32	32	0	0	12	6
Veterans Administration	407	341	339	2	5	60	1
U.S. Nationals from abroad	54	50	50	0	0	3	1
U.S. Soldiers Home	33	22	22	0	0	11	0
Indians (PHS)	7	7	7	0	0	0	0
Other	2	1	1	0	1	0	0
Nonreimbursable	786	723	721	2	4	50	9
D.C. nonresident	311	267	266	1	2	33	9
Military and Coast Guard	249	246	245	1	0	3	0
Virgin Islands	120	118	118	0	0	2	0
Federal reservation	33	24	24	0	2	7	0
Public Health Service	13	13	13	0	0	0	0
Canal Zone	14	14	14	0	0	0	0
Emergency voluntary	10	8	8	0	0	2	0
U.S. prisoners	26	25	25	0	0	1	0
Military prisoners [2]	0	0	0	0	0	0	0
Other	10	8	8	0	0	2	0
Total prisoners	763	651	648	3	4	66	42

[1] Resident patient status should not be confused with D.C. resident legal category. The former is defined as patients in the hospital plus those on temporary visit.

[2] During fiscal year 1964, the 20 military prisoners were civilly committed as D.C. nonresidents. The military prisoner legal category is now obsolete.

Table 5.—*Movement of patients on the rolls by legal category, fiscal year 1964*

Legal category	Patients on rolls, June 30, 1963	Additions		Removals			Patients on rolls, June 30, 1964	Change during year
		Admissions	From other legal category	Discharges	Deaths	To other legal category		
Total	7,742	1,692	583	1,469	444	583	7,521	−221
Reimbursable	6,905	1,474	258	1,044	410	448	6,735	−170
D.C. resident	5,239	1,006	59	461	347	338	5,158	−81
D.C. voluntary	334	108	106	184	17	10	337	+3
D.C. prisoners total	787	336	35	316	10	95	737	−50
For examination	67	163	0	167	2	12	49	−18
Mentally incompetent	243	94	15	61	5	71	215	−28
Not guilty, insanity	333	40	14	31	2	4	350	+17
Under sentence	88	38	5	49	1	8	73	−15
Sex psychopath	56	1	1	8	0	0	50	−6
Veterans Administration	436	7	58	63	27	4	407	−29
U.S. Nationals from abroad	52	6	0	3	1	0	54	+2
U.S. Soldiers Home	39	11	0	12	5	0	33	−6
Indians (PHS)	15	0	0	5	3	0	7	−8
Other	3	0	0	0	0	1	2	−1
Nonreimbursable	837	218	325	425	34	135	786	−51
D.C. nonresident	312	0	308	279	19	11	311	−1
Military and Coast Guard	259	0	1	3	7	1	249	−10
Virgin Islands	128	0	0	3	5	0	120	−8
Federal reservation	36	40	0	40	2	1	33	−3
Public Health Service	14	1	0	1	1	0	13	−1
Canal Zone	14	0	0	0	0	0	14	0
Emergency voluntary	4	121	4	33	0	86	10	+6
U.S. prisoners	41	55	10	65	0	15	26	−15
Military prisoners [1]	20	0	0	0	0	20	0	−20
Other	9	1	2	1	0	1	10	+1
Total prisoners	848	391	45	381	10	130	763	−85

[1] During fiscal year 1964, the 20 military prisoners were civilly committed as D.C. nonresidents. The military prisoner legal category is now obsolete.

Table 6.—*Discharges by status from which discharged and by condition, environment, and employment, fiscal year 1964*

Condition or type, environment, and employment	Total	From resident patient status [1]			From vacation	From convalescent leave	From unauthorized leave
		Total	Direct from hospital	From temporary visit			
Total	1,469	844	812	32	18	520	87
Condition or type							
Medical discharges	780	216	193	23	14	493	57
Condition on discharge:							
Recovered	36	11	11	0	1	24	0
Socially recovered	493	107	91	16	6	359	21
Improved	228	84	77	7	6	106	32
Unimproved	23	14	14	0	1	4	4
Administrative discharges	689	628	619	9	4	27	30
Type of discharge:							
Against medical advice	62	44	43	1	1	1	16
To legal or police authorities	308	305	304	1	1	0	2
To home State or country	121	112	111	1	1	5	3
To VA hospital	38	35	35	0	0	1	2
Expiration of limited stay, court order, for admission to private hospital, etc	160	132	126	6	1	20	
Environment							
Lives alone	157	60	58	2	2	94	1
With spouse	204	78	72	6	3	115	8
With relatives (not spouse)	347	152	142	10	7	179	9
With others	77	35	30	5	2	40	0
In foster-care home	47	0	0	0	0	47	0
In D.C. Village	7	0	0	0	0	7	0
In other home for aged, nursing or convalescent home	13	2	2	0	0	11	0
In inpatient psychiatric institution	152	143	142	1	1	3	5
In penal institution	318	312	311	1	1	2	3
In other institution	16	11	10	1	1	4	0
Unknown environment	131	51	45	6	1	18	61
Employment							
Full time	193	53	49	4	1	134	5
Part time or intermittent	31	5	5	0	0	25	1
Not employed	985	688	670	18	10	266	21
Unknown employment	260	98	88	10	7	95	60

[1] Resident patient status should not be confused with D.C. resident legal category. The former is defined as patients in the hospital plus those on temporary visit.

Surplus Property Utilization[1]

The ever-growing need for facilities and properties to meet the requirements of health and educational activities always seems to exceed funds available to acquire such properties and facilities. Through participation in the surplus property utilization program, thousands of health and educational institutions save millions of dollars annually, which would otherwise be spent from current appropriated funds, both Federal and local, to acquire real and personal properties essential to the conduct of their health and educational activities because they were able to acquire, by donation and conveyance, Federal surplus personal and real properties.

Personal properties, ranging from pencils to computers, nails to demountable buildings, knives and forks to complete hospital operating rooms, are available through this program. During fiscal year 1964, surplus property which cost over $418 million was donated to over 200,000 eligible health and educational institutions through the State agencies for surplus property established in each State. A good portion of this was equipment, such as machine tools, hand tools, earth-moving equipment, heavy construction machinery, and automotive equipment, which went to schools to carry out manpower training and vocational programs under federally sponsored contracts. Many colleges engaged in medical training and research activities under contracts with the Public Health Service and National Institutes of Health have utilized various types of surplus properties in connection with this work. Each year greater uses are being found in the teaching fields for surplus electronic-type equipment resulting from the abandonment of missile and other research and scientific

[1] This activity is administered by the Office of Field Administration, Office of the Secretary.

projects of our Government. On the open market, this type of equipment would bring little cash return to the Government in comparison to its cost and its value when effectively utilized through donation for health or educational purposes by eligible institutions.

This program played a significant part in carrying out the President's crash program of assistance to the economically distressed Appalachian area. During a 3-month period, over half a million dollars worth of property (Federal acquisition cost) was channeled into this distressed area.

Federal surplus real properties which had an acquisition cost to the Government of over $35 million were conveyed to health and educational institutions during fiscal year 1964. All real property conveyances contain restrictions requiring their health and educational program use for a period of 20 years, in most instances. These properties conveyed at fair market value. In 1964, this approximated $20 million, against which is applied a public benefit allowance and discount, ranging from 40 to 100 percent. This discount is earned by the institution over the period of restriction by its use for health or educational purposes or the unearned discount is collected in cash.

During 1964, a total of 234 conveyances was made, 20 for educational programs and 33 for health programs. There were 7,688 acres involved and 897 buildings. As in the personal property program, many of these properties were used to carry out programs financed, in whole or in part, through Federal contracts and other types of Federal assistance. In a number of instances, the acquisition of surplus real properties has enabled a community to go ahead with the actual construction of essential facilities for which they would have not had sufficient funds if it were not for the acquisition of the surplus Federal real properties. Several junior colleges and area vocational education schools have been established through the use of these Federal surplus facilities during the year. Schools and training centers for the mentally retarded and physically handicapped have been set up in Federal surplus facilities. To illustrate the diversification of the uses of real properties during 1964, a listing is given below:

30 College campus sites and facilities
23 College and high school agricultural, teaching, experimental, and vocational training
92 Elementary and secondary educational programs
7 Contract administrative and service facilities for schools and school systems
28 Housing for school or hospital staffs
10 Hospital or clinic programs

14 Treatment, rehabilitation, and training centers for mentally retarded and physically handicapped
3 Diagnostic, evaluation, and rehabilitation centers for juvenile delinquents
14 Public libraries
10 Water and sewer production, distribution, collection, treatment, and service facilities
2 Landfill refuse disposal programs
1 State health department animal farm—cancer research

American Printing House for the Blind

As the official schoolbook printery for the blind in the United States, one of the principal functions of the American Printing House for the Blind, in Louisville, Ky., is the provision of special educational books and supplies for the blind schoolchildren throughout the country through the Federal act "To Promote the Education of the Blind." This act, originally passed in 1879, authorizes an annual appropriation to the Printing House for this purpose. Allocations of books and materials are made on a per capita basis. Only those pupils may be registered whose vision comes within the accepted definition of blindness as follows: "Central visual acuity of 20/200 or less in the better eye with correcting glasses, or a peripheral field so contracted that the widest diameter of such field subtends an angular distance no greater than 20 degrees."

The Printing House maintains large catalogs of Braille books, Talking Books, recorded tapes, Braille music publications, large-type texts, and tangible apparatus. A rich collection of educational material is thereby provided for the kindergarten through the high school grades. A total of 7,892 blind pupils was enrolled through public educational institutions for the blind and 9,438 through State departments of education—a total of 17,330 blind pupils being served by the Printing House—for the fiscal year ending June 30, 1964.

During the 1964 fiscal year, Braille books, educational periodicals, and music made up approximately 45.2 percent of the materials required by the schools; Braille slates, Braillewriters, maps, and other mechanical devices about 18.5 percent; Talking Books about 2.7 percent; recorded educational tapes about 0.3 percent; and large-type books about 31 percent. Approximately 2.3 percent was used for miscellaneous items.

Gallaudet College

Gallaudet College, a private corporation, established in 1857, is the only institution of higher learning in the world devoted exclusively to the education of the deaf. It is accredited by the Middle States Association of Colleges and Secondary Schools. Public Law 420, 83d Congress, approved June 18, 1954, clearly defines its status as a college, its relationship with the Federal Government, and its responsibility to provide education and training to deaf persons and otherwise to further the education of the deaf.

The college's principal activity is a 4-year undergraduate course of studies leading to the B.A. and B.S. degrees. In addition, Gallaudet offers a 1-year college preparatory course. Deaf children of nursery ages receive training in the Hearing and Speech Center. Elementary and secondary education for deaf children of the District of Columbia and adjacent States is provided by the Kendall School, a laboratory school serving the college's Department of Education. This department, established in 1891, trains graduate students, both deaf and hearing, for positions as teachers in schools for the deaf. The fifth-year teacher training program is accredited by the National Council for Accreditation of Teacher Education. The 1962-63 enrollment for the college was 602; for the Kendall School, 108; and for the nursery school, 35.

The editorial offices of "dsh Abstracts," the "American Annals of the Deaf," and the Central Office of the Convention of the American Instructors of the Deaf are housed on the Gallaudet campus.

Howard University

Howard University, located in the District of Columbia, was chartered by an Act of Congress, dated March 2, 1867. The university consists of 10 schools and colleges, offering programs of higher education on the undergraduate, graduate, and professional levels. Undergraduate students are registered in the college of liberal arts; graduate students seeking the master's and doctor of philosophy degrees are registered in the graduate school; professional students are registered in the colleges of medicine, dentistry, pharmacy, fine arts (including the school of music and the departments of art and drama), and the schools of engineering and architecture, social work, law, and religion. (The school of religion receives no support from Federal funds.)

The educational program of the university is conducted in keeping with the democratic purposes of land-grant colleges and State universities, with the low tuition fees and living costs which characterize these institutions and with an educational program resting upon and permeated by the content and spirit of a general or liberal education. The university admits students of both sexes, from every race, creed, and national origin, but it accepts and undertakes to discharge a special responsibility for the admission and training of Negro students.

ENROLLMENT OF STUDENTS

During the school year 1963–64, the university served a total of 10,565 students as follows: 7,643 during the regular academic year and 2,922 in the summer session of 1963. The total net enrollment, excluding all duplicates, was 8,715 distributed in the 10 schools and colleges as follows: liberal arts, 4,928; graduate school, 916; engineering and architecture, 775; fine arts, 537; social work, 177; medicine, 385; dentistry, 632; pharmacy, 165; law, 137; and religion, 63. The

enrollment of Negro professional students at Howard continues to be greater than in all the public-supported universities in all the Southern States.

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

The enrollment of foreign students continues to be significant. During the second semester of the 1963–64 school year, there were 1,476 foreign students constituting 16 percent of the enrollment. The percentage of foreign student enrollment to the total student enrollment at Howard was the highest anywhere in the United States. These 1,476 foreign students came from 48 foreign countries, including Canada, Mexico, and Panama; 3 countries in South America; 12 possessions in the West Indies; 11 countries in Africa; 17 countries in Asia and the Pacific Islands; and 7 countries in Europe. In addition, there were students from Puerto Rico and the Virgin Islands.

During the course of the school year, there were 7,216 degree-seeking students from the United States. These students were distributed as follows: New England States, 197; Mideastern States, 3,281; Great Lakes States, 479; Plains States, 77; Southeastern States, 2,788; Southwestern States, 268; Rocky Mountain States, 32; Far Western States, 83; Alaska, 1; and Hawaii, 8.

VETERANS

The total enrollment of veterans and dependents of deceased veterans was 84. Twelve of these students were graduated. The period during which servicemen could enter the service and be eligible for educational benefits from the Veterans' Administration ended January 25, 1954. Of this total enrollment of veterans, 45 are Korean veterans, 6 disabled veterans, and 33 are dependents of deceased veterans.

ARMY AND AIR FORCE ROTC

Army ROTC.—There were 477 students enrolled in Army ROTC during the 1963–64 school year. Of this number, 231 were in the first year course, 163 in the second year, 42 in the third year, and 26 in the fourth year. Two were holdovers from 1961–62, and 13 were holdovers from 1962–63. There were 20 students commissioned as reserve officers in the Army during the year.

Air Force ROTC.—A total of 652 students was enrolled in Air Force ROTC. Of this number, 286 were in the first year course, 233 second year, 85 in the third year, and 52 in the fourth year. During the year, 24 students were commissioned as reserve officers in the Air Force.

THE FACULTY

There were 903 teachers serving the university during the school year. Of this number, there were 490 full-time teachers and 413 part-

time teachers. The full-time equivalent of the teaching staff was 598.35. Of this full-time equivalent, 532.43 were teaching in the rank of instructor or above.

The university continues, as always, to seek for its faculty the most able persons who are selected on the basis of their competence and character, without regard to race, sex, color, creed, or national origin. It is to be noted, however, that the Howard University faculty has always included the largest group of Negro teachers and scholars at the university level found anywhere in the United States. Many of the most outstanding Negroes in public life have served at Howard University sometime during the course of their careers. Among such persons were the founder and operator of the first blood plasma bank, a Governor of an American possession, an under secretary of the United Nations, and two judges of the United States Court of Appeals.

The faculty continues to remain active in making a valuable contribution to education and the advancement of knowledge through significant research and scholarly publications. Funds allocated in the university's budget for support of research in the social sciences and humanities have been especially helpful in the encouragement of research in those areas.

GRADUATES

During the 1963–64 school year, there were 884 graduates from the 10 schools and colleges. These graduates came from 36 States, the District of Columbia, Puerto Rico, the Virgin Islands, 20 foreign countries, and 6 island possessions of the British, French, and Dutch West Indies.

The 884 graduates were distributed among the 10 schools and colleges as follows: Liberal arts, 407; engineering and architecture, 99; fine arts, 45; the graduate school, 77; social work, 53; medicine, 90; dentistry, 45; dental hygiene, 13; pharmacy, 12; law, 30; and religion, 13. In addition, honorary degrees were conferred upon three persons.

From the date of its establishment in 1867, Howard has graduated 23,322 persons. The great majority of these graduates have been Negroes. Throughout its 97-year history, Howard has been a pioneer in providing Negroes with educational opportunities which were either not available or offered in only limited amount elsewhere. Among institutions in which Negro students are in a majority, the university still stands as the only one affording a complex system of undergraduate, graduate, and professional training.

The largest number of graduates has entered the field of teaching, especially in the Southern States. In the field of medicine, there have been 3,470 graduates; 2,015 graduates have gone into dentistry and dental hygiene; 1,785 have entered the field of law; 440 have entered

the ministry; 1,196 have gone into the fields of engineering and architecture; and 699 graduates have gone into social work. Numerous graduates of the university have engaged in Government service not only in the United States but also in many countries abroad.

VARIED ACTIVITIES OF THE FACULTY AND STAFF

Many members of the faculty and staff were engaged in a variety of useful activities both in the United States and abroad. A professor of architecture participated in an architectural study tour and a tour of the archeological zones in Mexico. An assistant professor of architecture traveled to seven European countries to study new European towns. The head of the department of home economics served as consultant to the Congo Polytechnic Institute. The head of the Department of Romance Languages served as U.S. specialist in linguistics in eight African countries. An assistant professor of psychology served as field assessment officer with the Peace Corps in Puerto Rico. An associate professor of psychology participated in research on brain function and behavior at laboratories in the Soviet Union under the United States-U.S.S.R. exchange agreement. The librarian of the School of Religion is compiling a reference book entitled, "Who's Who in the Negro Clergy." The acting head of the Department of Art received a fellowship for 3 weeks' study at The Hague. The supervisor of the Negro collection served as program specialist and acquisitions librarian at the national library in Lagos. The president of the university served as an adviser of the United States Delegation to the 48th Session of the International Labor Organization, Geneva, Switzerland.

SIGNIFICANT PROGRAM DEVELOPMENTS

The new curriculum in the College of Medicine was extended through its second year. Additional improvements in teaching included the use of the team approach in clinical teaching in medicine and surgery, the continuation of the guest lectureship program, supported by a new grant, and the establishment of a Testing Office to provide professional assistance in the utilization of newer and more efficient testing and other evaluation procedures.

The university received a grant from the Ford Foundation and in cooperation with the Department of State established a 4-year program designed to prepare Negroes and members of other minority groups for careers in foreign affairs. Forty students from 32 colleges began internships in the foreign affairs scholars program in June.

The university continues to operate teaching and research programs having the objective of assisting local neighborhood areas in solving certain of their economic, social, and cultural problems. The Youth

Center concentrates on the problems of the young. The continuing education and community development project functions as a facilitator or catalytic agent in the development of community resources and in channeling the services of the larger community to one of the most depressed areas in the District of Columbia. The University Neighborhood Council is a voluntary association of organizations and individuals who represent the people who live, work, or have interest in a 3-square-mile area around Howard University.

THE BUILDING PROGRAM

During the 1963–64 school year, the new Physical Education building for men was completed. Construction is well advanced on the new classroom building for the social sciences and humanities. Plans and specifications are in process for a school of social work building and for two proposed new dormitories—one for women students and one for men.

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