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TRAINING PUBLIC HEALTH WORKERS

PROGRAMS SPONSORED BY STATE HEALTH DEPARTMENTS UNDER TITLE VI OF THE FEDERAL SOCIAL SECURITY ACT AND THE FEDERAL VENEREAL DISEASE CONTROL ACT (1936–44)[1]

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In discussions preceding enactment of Title VI of the Federal Social Security Act (*1*), which became effective during fiscal year 1936, acute need of additional personnel trained for public health work was recognized (*2*), (*3*), (*4*), (*5*), (*6*), (*7*). Hence, provisions were made in the Act which permitted States and Territories to use part of their grants for training purposes. When the Federal Venereal Disease Control Act (*8*), (*9*), (*10*) was passed in 1938, expenditure of funds for personnel training was again authorized. These programs have continued over the years with some fluctuation and change in emphasis until, by the end of fiscal year 1944, grant-in-aid funds administered by the United States Public Health Service alone had contributed to the professional development of more than 7,500 people.

Now, with the release of manpower from pursuits associated with prosecution of the war, there will be opportunities to fill accumulated vacancies and to build the staff organizations required to meet demands for expanded public health services. A vast amount of specialized training will be needed to assure properly qualified personnel for all professional and technical positions. It seems appropriate, therefore, at this time to present the experience accumulated to date by the United States Public Health Service in the support of training programs, both as a record of past accomplishment and for whatever suggestive value it may have in guiding future activities of similar purpose.

Under provisions of Title VI of the Social Security Act, funds appropriated by Congress were made available to the States for general public health work. In the early years of this program,

[1] From the States Relations Division, Bureau of State Services.

designated amounts were allotted to States for the specific purpose of developing properly qualified professional or technical personnel (*11*). The percentage of Title VI expenditures devoted to training by the States and Territories amounted to 23.2 in 1936 and gradually declined thereafter. By 1940, this percentage had decreased to 9.1 and by 1944 to 3.3. The proportion of money appropriated under the Federal Venereal Disease Control Act expended for personnel training was highest in 1940, 4.2 percent, and dropped to 1.0 percent in 1944.

States have been permitted to use this money for virtually any items of expense that could be identified as essential to the training program. Among these might be tuition, stipends, general expenses of institutes, honorariums for special lecturers, and travel allowances. Types of programs supported have varied from time to time and among the several States. Observation classes, supervised experience, itinerant counseling, and short institutes, as well as formal instruction in recognized graduate schools have been included. Some States made block grants to schools to assist in the development of courses suited to their needs.

Trainees from each State have been selected by the State health officer. For the most part, they represented actual or prospective employees of State or local health departments, although occasionally persons were admitted from related agencies. A few private practitioners of medicine, dentistry, and nursing took short courses to enable them to participate more fully in special public health programs—notably venereal disease control activities. The State health officer and the trainee together decided upon the kind of education to be pursued and upon the place where it could be obtained most advantageously.

When Title VI of the Social Security Act became effective, there was a great dearth of workers with any specialized training or experience in public health. Scarcely had the more pressing of these personnel deficiencies been overcome when health departments began to lose staff members, especially to the armed services and to war industries. This, combined with the need for additional personnel to meet problems created by the national emergency, made immediate employment of available workers imperative and precluded their absence for extended training. Throughout the entire period, therefore, courses of only a few months' duration have predominated. From now on, as more persons are released from the military services, it is hoped that greater emphasis will be placed on formal instruction extending over a full academic year.

Expenditure figures given in table 1 provide one measure of the extent of the entire training program conducted by State health

departments during the period 1936 to 1944. These data indicate costs of training insofar as they are reflected in fiscal documents submitted to the United States Public Health Service by the several States.[2] It is evident that Title VI funds have carried the largest share of these costs, 70 percent. The next largest portion was paid from miscellaneous sources grouped under "other." Although a complete breakdown of the latter amounts is not available, it can be stated that they consisted chiefly of funds administered by the United States Children's Bureau under provisions of Title V of the Social Security Act. Money provided through the Venereal Disease Control Act accounted for about 8 percent of all expenditures for training during the entire period, while State and local governmental funds represented only 2 percent.

TABLE 1.—*Total expenditures for training*[1] *by State and Territorial health departments, as reported to the United States Public Health Service, distributed according to source of funds for each fiscal year (1936–44)*

Fiscal year	Expenditures from designated source									
	All sources		State and local governments		Title VI—Social Security Act[2]		Venereal Disease Control Act[2]		Other[3]	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
All years	$9,842,718	100.0	$186,197	1.9	$6,907,890	70.2	$805,892	8.2	$1,942,739	19.7
1936[4]	323,749	100.0	4,715	1.5	318,903	98.5	----------	-------	131	(5)
1937	1,209,569	100.0	14,536	1.2	1,160,153	95.9	----------	-------	34,880	2.9
1938	1,420,188	100.0	3,124	.2	1,286,756	90.6	----------	-------	130,308	9.2
1939	1,248,162	100.0	4,958	.4	1,062,193	85.1	70,457	5.6	110,554	8.9
1940	1,163,566	100.0	25,330	2.2	816,209	70.1	165,212	14.2	156,815	13.5
1941	1,433,726	100.0	26,199	1.8	952,720	66.5	160,881	11.2	293,926	20.5
1942	1,315,747	100.0	23,919	1.8	647,670	49.2	157,146	12.0	487,012	37.0
1943	876,072	100.0	20,355	2.3	314,783	35.9	152,945	17.5	387,989	44.3
1944	851,939	100.0	63,061	7.4	348,503	40.9	99,251	11.7	341,124	40.0

[1] Including subsidies for schools and field orientation centers as well as direct assistance to trainees.
[2] Funds administered by the U. S. Public Health Service.
[3] For the most part "other" funds are those administered by the U. S. Children's Bureau under terms of Title V of the Social Security Act. Money donated by foundations is included if handled by the State.
[4] Only 5 months.
[5] Less than 0.1 percent.

Expenditures from Title VI funds, which almost entirely financed the training program in its early years, have decreased both in amount and in the proportion which they represent of the annual totals. Federal venereal disease control funds spent on training have also decreased in amount. Meanwhile, there has been a tendency for the contributions of State and local governments, though remaining relatively very small, to increase. Expenditures from "other" sources, chiefly Federal funds administered under the Children's Bureau,

[2] Expenditures for training as reported include only those made by State health departments from State appropriations and from funds made available to State health departments by Federal or local governments or other agencies. Direct payments by students, special scholarship grants, or expenses borne by schools and other training agencies over and above tuition payments are not included.

have expanded still more. In spite of proportionate changes in the contribution to training from the several sources portrayed in table 1, the total amounts of combined expenditures were at a roughly comparable level from 1937 to 1942, after which there was a large reduction.

Amounts expended for training by the several States and Territories varied widely, as would be expected for areas so divergent in character. Moreover, changes from year to year were relatively much greater for individual States than the national totals would indicate. These differences in training expenditures by fiscal year and by State and Territory are shown in appendix table A (see page 740).

A training program may be described also in terms of the participants, or trainees. Individual records submitted to the United States Public Health Service for persons who had tuition, stipends, or travel expenses paid from funds provided through Title VI or the Federal Venereal Disease Control Act make data available for a general portrayal of educational programs developed over the period. It is believed that the comparisons which will be presented are significant, although the character of the basic data has changed somewhat over the years. Initially, health departments supplied total figures according to broad categories, but were not asked to supply information on individual trainees. The original questionnaire, later revised for use as a trainee application form, was printed in 1938.[3] State health officers were asked at that time to send in completed forms for as many of the persons previously trained as possible as well as for all those then under consideration. Inasmuch as the submission of individual applications for training was not required by regulation until 1941, the data obtained before that time are perhaps somewhat less complete than those for later years.

Altogether, there are records on file for 8,414 separate training periods [4] initiated in the fiscal years 1936 to 1944. Not infrequently, a single person participated in the program on two or more different occasions and is represented by a corresponding number of completed application forms. A check of the schedules indicates that about 10 percent of the individuals trained fall into the above-mentioned category (fig. 1). On the basis of this count, it is estimated that approximately 7,500 different persons are represented by the 8,414 trainee records. The frequency with which individuals received more than one period of training was slightly higher for physicians and nurses than for sanitation personnel and for other types of workers.

[3] The edition of the application blank adopted in July 1941 and used for the remainder of the study period is attached as appendix B. In most essential respects, it reflects the forms used earlier.

[4] In the interests of convenience and simplicity, the terms "training period" and "trainee" will each be used at times in describing counts obtained from the same source. When totals are so qualified, they will refer to counts of application forms; therefore, an individual is enumerated as many times as there are different application forms describing training which he received.

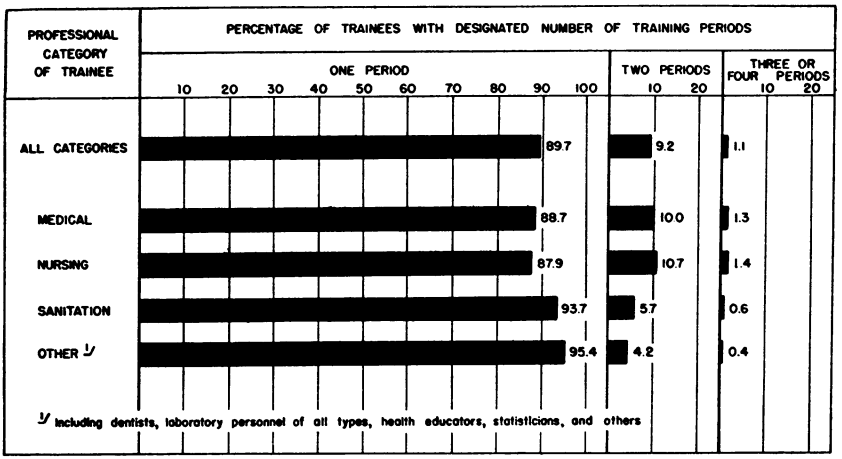

FIGURE 1.—Percentage distribution of trainees in different professional categories by number of training periods (1936–44).

Distribution of Trainees by Professional Category

More than half, or 55 percent, of the 8,414 trainees were nurses (table 2). This professional group was especially prominent during the first 2 years of the program when, according to available data, 85 percent of all trainees were nurses. After 1939, the percentage of nurses ranged around 50, varying from 46 to 54. The relative position of physicians, who made up 18 percent of the trainees for the entire period covered, rose from 4 percent in 1936 to 33 in 1940 and then

TABLE 2.—*Distribution of trainees* [1] *in different fiscal years by professional category (1936–44)*

Fiscal year when training period began	Trainees in designated professional category									
	All categories		Medical		Nursing		Sanitation		Other [2]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All years	8,414	100.0	1,550	18.4	4,626	55.0	1,447	17.2	791	9.4
1936	458	100.0	20	4.4	416	90.8	19	4.1	3	.7
1937	685	100.0	59	8.6	556	81.2	60	8.7	10	1.5
1938	1,501	100.0	288	19.2	863	57.5	254	16.9	96	6.4
1939	750	100.0	196	26.1	368	49.1	117	15.6	69	9.2
1940	857	100.0	282	32.9	402	46.9	115	13.4	58	6.8
1941	1,372	100.0	326	23.8	634	46.2	315	22.9	97	7.1
1942	935	100.0	203	21.7	470	50.3	196	21.0	66	7.0
1943	871	100.0	88	10.1	410	47.1	186	21.3	187	21.5
1944	856	100.0	52	6.1	460	53.7	148	17.3	196	22.9
Unknown [3]	129	100.0	36	27.9	47	36.4	37	28.7	9	7.0

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] Including dentists, laboratory personnel of all types, health educators, statisticians, other professional and technical workers, and 5 of unknown type.

[3] Training periods for which fiscal year of onset is unknown occurred in the years 1936–40 only.

declined each year until 1944, when they represented only 6 percent of the total. The participation of sanitation personnel in the program also began slowly. For the whole period 17 percent of all trainees were in this category; and in 1941, 23 percent. Health workers of other types made up a small fraction of the total until 1943; then the percentage in this group jumped to 22, and in 1944 it was 23.

According to a survey of full-time public health agency personnel made in 1938,[5] the proportion of professional and technical workers then employed in each major category was approximately as follows: Physicians, 12 percent; nurses, 47 percent; sanitation personnel, 27 percent; other professional or technical workers, 14 percent. Comparison of these percentages with trainee-distribution figures (table 2) indicates that, for the years 1938 to 1942 and for the entire period studied, physicians made up a considerably higher proportion of the trainees than they represented on the staffs of health agencies. Short courses in venereal disease control were probably in some measure responsible for the relatively high numbers of medical graduates participating in the program. These courses were approved not only for health department personnel, but occasionally for selected physicians in private practice, medically trained personnel from nonofficial agencies, and others not employed by official health departments, if thereby the work of such individuals could be better integrated with the official public health program.

The proportion of nurses, as we have seen, was very high at the onset of the program but dropped to a lower level in 1939. Since that time it has been only slightly higher than their representation on health department staffs. Sanitation personnel were not included among the trainees in percentages even approximating their reported employment until 1941. Professional public health workers of other types were represented by relatively few trainees in contrast to their numbers in the health departments until 1943 and 1944. In those years, the prominence, both numerically and comparatively of "other" trainees in the program was much greater than ever before, and their estimated proportion in prewar health departments was surpassed. In this group are found dentists, bacteriologists, nutritionists, vital statisticians, health educators, and others. The apparent emphasis on their training in 1943 and 1944 was partly a result of the lowered numbers of other workers, especially physicians available. As public health programs expand, however, the relative importance of personnel in the miscellaneous categories may be expected to increase

[5] Derryberry, Mayhew, and Caswell, George: Qualifications of professional public health personnel. Pub. Health Rep., 55: 2312-2319 (Dec. 13, 1940). Reprint No. 2217. A similar distribution (physicians, 13 percent; nurses, 47 percent; sanitation personnel, 22 percent; and other professional or technical workers, 18 percent) characterized full-time positions reported by the health departments covered in a later study by Perrott, G. St. J., and Dorn, Harold F.: Current needs for health personnel. Pub. Health Rep., 57: 997-1000 (July 3, 1942). Reprint No. 2388.

because of growing tendencies toward specialization and broader participation of the various professional groups.

Age of Trainees

The median age of all trainees, at the midpoint of the fiscal year in which training began, was 31. There was little variation among the professional groups, median ages ranging from 30 to 34. Nurses and sanitation workers were on the average about 4 years younger

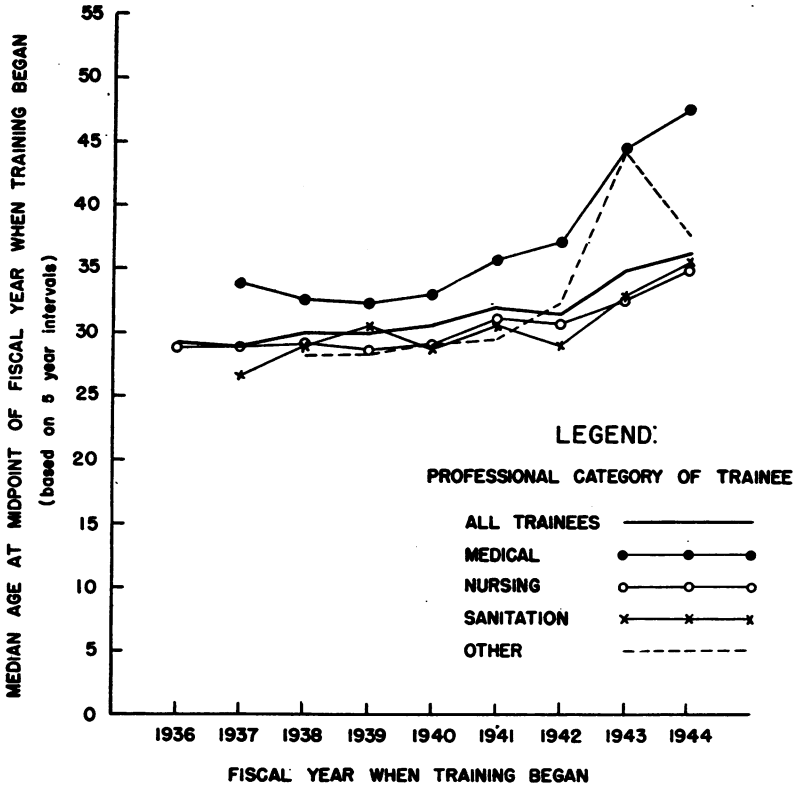

FIGURE 2.—Median age of trainees in different professional categories for each fiscal year (1936–44).

than physicians. The median age of all other trainees over the entire period was 33. This average is strongly influenced by the situation in 1943 and 1944 when the number of workers of miscellaneous types who received training was unusually large and when these trainees were considerably older than had been the case earlier. On the whole, median ages increased slightly from 1936 to 1942 and then rose significantly (fig. 2). In all professional categories, median ages were higher in 1943 and 1944 than ever before.

Type of Training Received

Training consisted of academic study in various phases of public health; field practice affiliated with a school of public health, a health department, or some other agency offering supervised field experience; observation tours; training on the job; and conferences or lectures which, though sometimes lasting only a few days, provided instruction in specific aspects of public health work.

About 80 percent of the trainees engaged in academic study, according to the reports. In almost a third of these instances, supervised field practice, as well, was covered by the same application. About 12 percent of all training periods lasted less than 4 weeks, while another 12 percent continued for 9 months or more (table 3). Including the latter, 58 percent were at least 3 months long. Of the training periods which combined field practice with academic study, 84 percent were at least 3 months in length as compared with 61 percent of those which were entirely academic and 18 percent of those consisting of field practice only. When field practice occurred alone, it was frequently nonaccredited as well as short-termed in type.

TABLE 3.—*Distribution of trainees [1] with academic study, field practice, or both by length of training period (1936–44)*

Type of training	Trainees receiving training for designated period (in months) [1]															
	Total, all periods		Less than 1		1–2		3–4		5–6		7–8		9–10		11 or more	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All trainees [2]	8,276	100.0	954	11.5	2,520	30.4	2,333	28.2	741	9.0	736	8.9	557	6.7	435	5.3
Academic study	4,477	100.0	416	9.3	1,341	30.0	1,475	32.9	370	8.3	465	10.4	287	6.4	123	2.7
Field practice only	1,680	100.0	455	27.1	916	54.5	215	12.8	26	1.6	14	.8	18	1.1	36	2.1
Both academic study and field practice	2,100	100.0	82	3.9	251	12.0	639	30.4	344	16.4	257	12.2	251	12.0	276	13.1
Unknown type	19	100.0	1	5.3	12	63.1	4	21.0	1	5.3	----	----	1	5.3	----	----

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] Not included in this total are 138 individuals with training periods of unknown length.

Most of the early trainees—over 95 percent of those beginning in 1936 or 1937—took academic courses, but the proportion decreased as the years went by until 1943 when 40 percent had field practice only. Training periods initiated in 1937 were generally longer than those started in other years. About 78 percent of them were at least 3 months in length (fig. 3). The greatest decline in duration of training occurred between the fiscal years of 1942 and 1943, when the pressure of the war became acute. Only 37 and 32 percent, respectively, of the training periods which began in 1943 and 1944 lasted for 3 months or more.

Comparison of types of instruction for persons in different professional categories reveals that nurses least often omitted academic study from a training period. Only 12 percent of the nurses, in contrast to 32 percent of the physicians, 32 percent of sanitation personnel, and 22 percent of other types had field training without academic study. In general, training periods were also longer for nurses than for personnel in other categories. The percentage lasting at least 3 months was 67 for nurses, 54 for sanitation workers, 46 for physicians, and 36 for other trainees. The proportion lasting at least 9 months varied little, 11 to 13 percent, among three groups (nurses, physicians,

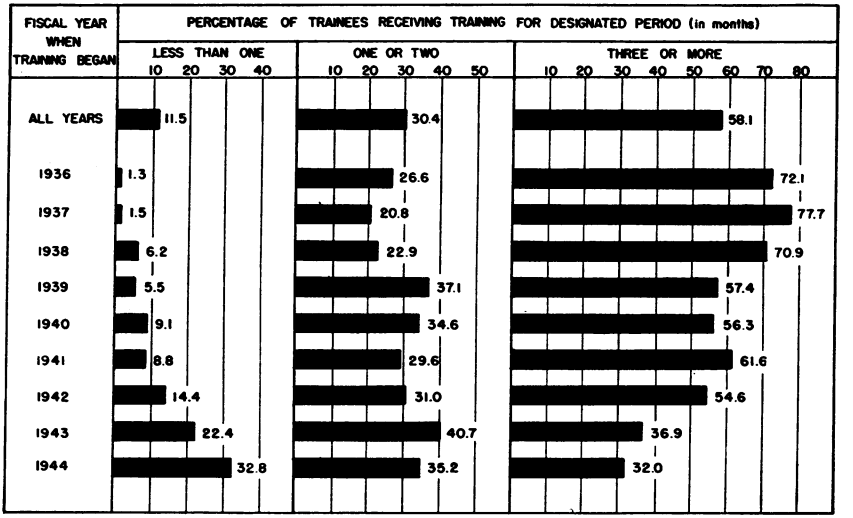

FIGURE 3.—Percentage distribution of trainees in different fiscal years by length of training period (1936-44)

and "other" personnel) but was only 7 percent for sanitation workers. At the opposite end of the scale, 21 percent of medical and 30 percent of "other" workers had training periods of less than 1 month, while only 9 percent of the sanitation workers and about 6 percent of the nurses took courses of such short duration.

Institution Attended

Educational institutions attended by 10 or more trainees during the years 1936 to 1944 are listed, and the total number of trainees during this period [6] distributed according to academic or field training, fiscal year, and broad professional category, in appendix tables B, C, and D. Altogether, the facilities of 80 schools were utilized in the program. Most of these were colleges or universities; the others, schools of special types or laboratories.

[6] Of the 8,414 training periods studied, 57 could not be classified by school or by type of training received. They are omitted, therefore, from appendix tables B, C, and D.

Of the 8,357 training periods which can be classified both by school and by type of instruction, 6,674 involved some academic study which may or may not have been accompanied by a period of field practice, while 1,683 represented field practice without accompanying classwork. Training which was limited to field practice only was seldom under school auspices. Only 172 of these 1,683 training periods represented attendance at centers having school affiliations.

Inspection of the school data reveals great variation in the extent to which individual institutions participated, as measured in numbers trained. Of the 80 colleges, universities, and schools of special types represented in the program, 21 were selected by only a single trainee during the 9-year period studied, while 20 others had fewer than 10 trainees each or an average of not more than 1 per year. These two groups combined provided less than 2 percent of all training periods with school supervision. On the other hand, 17 colleges or universities, each having 100 or more trainees, accounted for 87 percent, and 5 of these, for 47 percent of these training periods. The 5 institutions most frequently selected by participants in the program were, in the order named: The University of Michigan, George Peabody College, and the Universities of Minnesota, Vanderbilt, and Pennsylvania.

As has been shown earlier, there was considerable year-to-year fluctuation in trainee totals. The number of schools which provided academic instruction for 10 or more trainees per year (appendix table C) averaged about 16 and ranged from 10 to 22. Only 4 institutions had as many as 10 trainees every year.

Of the 6,674 trainees with some academic study, 1,049 were physicians, 4,032 nurses, 975 sanitation workers, and 618 professional and technical personnel of other types. Reference to appendix table D reveals that for each class of personnel training was concentrated in a relatively small number of schools.

During the period under discussion, only 23 institutions trained physicians under the program. Six schools, which averaged at least 10 medical trainees per year, accounted for more than 75 percent of the total. Ninety-four percent of all physician trainees with academic study selected schools which offered graduate degrees, diplomas, or certificates in public health [7] during the latter part if not all of the period 1936 to 1944 (*13*).

When nurses were classified according to whether the institution attended was among those with curricula approved by the National

[7] On January 11, 1946, the Committee on Professional Education of the American Public Health Association adopted certain minimum standards for accreditation of institutions giving the degree of Master of Public Health (Diploma of Public Health in Canada) for the academic year 1946-47 (*12*). Nine schools had applied for and received accreditation by January 25, 1946. During the period studied, 1936-44, these institutions were selected by 59 percent of the physician trainees.

Organization for Public Health Nursing (*13*), (*14*), the percentage choosing schools listed at some time during the years 1936 to 1944 stood at 94. In addition, some of the other 6 percent selected institutions which are outstanding in the field of public health but whose curricula are not planned specifically for nurses.

Sanitation workers, as a group, represent a combination of engineers with other workers who may or may not have taken academic courses leading to professional degrees. In the years 1941 to 1944, less than one-fourth of the trainees in this broad category were engineers. In spite of this, however, about two-thirds of all the sanitation personnel trained during the entire period selected schools which were listed for some of these years, 1936 to 1944, as offering graduate degrees in sanitary or public health engineering (*13*). About 38 percent, most of whom are included above, were trained at schools listed by the Engineers' Council for Professional Development (*15*), (*16*) as having applied for and received accreditation for undergraduate curricula in sanitary engineering, public health engineering, or civil engineering with an option in sanitary engineering.

Dentists, bacteriologists, laboratory technicians, vital statisticians, health educators, and all other professional and technical workers outside the medical, nursing, and sanitation fields have been grouped together in an "other" category for this analysis. Of these trainees, 75 percent chose schools which offered graduate degrees in public health [8] (exclusive of engineering and public health nursing) at some time during the period (*13*). Some of the schools selected by the other 25 percent offered public health courses intended for nurses, and others may have been well equipped to give the specific instruction needed by the trainee.

Distribution of Trainees by Geographic Location

The number of persons trained, their distribution by professional category, and even the ratio of trainees to the total population of the State through which the funds were made available has varied considerably among the several States and Territories and, in many of them, from year to year (appendix tables E and F). Division of the number of trainees for the entire period 1936 to 1944 by the 1940 population total for the United States and Territories reveals that, on an average, 6.3 persons were trained for each 100,000 inhabitants. Corresponding ratios for the 48 States ranged from 1.5 in Ohio to 26.6 in North Dakota. Alaska's trainee ratio was highest of all, 27.6, but the totals involved were small.

To simplify comparison among different sections, the continental United States have been grouped into four broad geographic regions

[8] Institutions accredited in January 1946 for giving the degree of Master of Public Health were chosen by 48 percent of these "other" trainees (see footnote 7 and reference 12).

and the Territories into a fifth.[9] Although some of these areas contain States differing widely from each other in the extent of training programs as measured by the relation of trainees to population, the sectional comparisons deserve special notice (table 4). Ratios of trainees to population for the Northeastern (3.9) and Central States (5.0) were considerably below the national average; while for the Western and Southern States, they reached 8.0 and 9.4, respectively. The corresponding ratio for the Territories was 6.4—almost the same as the average for all areas.

TABLE 4.—*Total number and percentage distribution by professional category of trainees [1] from each of four geographic divisions of the continental United States and from the outlying Territories (1936–44)*

Geographic division [2]	Number of trainees		Percentage distribution of trainees by designated professional category			
	Total all categories	Total per 100,000 population [3]	Medical	Nursing	Sanitation	Other
United States and Territories	8,414	6.3	18.4	55.0	17.2	9.4
States:						
Northeastern	1,500	3.9	17.1	61.2	9.9	11.8
Southern	3,639	9.4	23.7	47.0	22.4	6.9
Central	2,018	5.0	12.4	61.4	13.7	12.5
Western	1,104	8.0	15.3	64.3	13.6	6.8
Territories	153	6.4	6.5	33.3	37.3	22.9

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] The geographic divisions with the States contained therein are as follows:

Northeastern: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia.

Southern: Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Central: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Western: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

The Territories include: Alaska, Hawaii, Puerto Rico, and Virgin Islands.

[3] Number trainees for the fiscal years 1936–44 related to population according to the 1940 census.

Distribution by broad professional categories shows emphasis on different classes of trainees within the several geographic divisions. Relative to their population, the Southern States had more trainees in each professional category, but they emphasized medical and sanitation personnel to a comparatively greater extent than was true for the country as a whole. In this region, 23.7 and 22.4 percent of the trainees were physicians and sanitation workers, whereas the corresponding percentages for all States and Territories combined were 18.4 and 17.2, respectively. On the other hand, in the Northeastern and Central States, which trained the smallest number of persons

[9] The geographic regions with the States contained therein are as follows:

Northeastern. Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia.

Southern: Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Central: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Western: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

The Territories include: Alaska, Hawaii, Puerto Rico, and Virgin Islands.

relative to their populations, larger than average proportions were found in the nursing and "other" groups. The West was characterized by the highest percentage of nurses found in any section, 64.3 as compared with 55.0 for all areas combined. Trainees from the Territories, especially Puerto Rico, more frequently than those from the States were in the "sanitation" or "other" categories.

Comparisons among individual States, as might be expected, reveal greater differences in emphasis on one or another of the several professional categories. For example, the representation of physicians among all trainees from a State ranged from 1.6 percent in Montana to 47.1 percent in Alabama. Conversely, the percentage of Montana's trainees who were nurses was 95.2, in contrast to 22.2 for Alabama and 18.3 for Puerto Rico. On the continent, sanitation training was most emphasized in West Virginia where 39.0 percent of all persons included under the program fell into that category. Still higher proportions, 44.4 and 41.9 percent respectively, of Hawaiian and Puerto Rican trainees were sanitation workers. Personnel outside the medical, nursing, and sanitation fields made up 50.9 percent of all those trained in North Dakota. That this proportion was exceptionally high is indicated by the corresponding percentage for all States and Territories, 9.4. One brief course in vital statistics, provided for clerks who were to carry on that activity in various parts of the State, made up the training received by a majority of these "other" workers in North Dakota.

Difference in performance among the States in respect to training programs may have been influenced partially by conditions associated with differences in their income status and urban character. These factors were on the whole inversely related to number of persons trained per 100,000 population. The general tendency of the poorer States to provide instruction for larger number of workers in proportion to total population may be illustrated by dividing the 48 States into 4 groups of 12 each on the basis of trainee ratios and ranking the States in each group by average per capita incomes.[10] If the median income States are then selected from each group, the following results are obtained. The 12 States with the lowest ratios of trainees show a median per capita income of $679 in 1940; the next 12 States, $531; the third group, $416; and the fourth, comprising the States with the highest ratio of trainees, $362.

A similar comparison made with the purpose of discovering the relationship between number of trainees and population density of States reveals an even more striking pattern. For the 12 States having the lowest ratio of trainees, selection of the median indicates an

[10] Average per capita income payments in 1940 to all individuals (excluding payments outside the continental United States), as reported by Charles F. Schwartz, U. S. Department of Commerce, in table 2, "State Income Payments in 1944." Survey of Current Business 25:10-19 (August 1945).

average of 194 persons per square mile; for the next group of States, 50; while for the two groups having higher than average trainee ratios, the median number of persons per square mile falls to 26 and 24, respectively.

Summary

Expenditures for personnel training by the States and Territories in connection with grant-in-aid programs are briefly presented as one measure of the extent of such activities from 1936 to 1944.

A somewhat detailed analysis is made of 8,414 individual records submitted for persons whose training during the same period was aided by Title VI or venereal disease control funds administered by the United States Public Health Service through the State and Territorial health departments. More than half of these people were nurses. Physicians and, to a lesser extent, nurses were included in greater proportions than they represented on the staffs of health agencies. The median age of all trainees was 31.

Among the types of instruction received were: Observation courses, supervised experience, short institutes, and formal classes. About 80 percent of all training periods consisted at least partially of academic instruction; 58 percent lasted for 3 months or longer. Field practice and courses of short duration, however, made up increasing proportions of training during the war years.

Participants in the program attended 80 different educational institutions. Eighty-seven percent, however, were concentrated in 17 colleges and universities. A large majority of trainees in each professional category and almost all of the nurses and physicians selected schools which during at least part of the study period offered programs of graduate study in public health of an apparently appropriate type.

There were wide differences in the extent to which the several States took part in the training program and in their emphasis on various categories of personnel. Generally speaking, the States training the largest number of workers in proportion to their total populations were comparatively poor or thinly settled or both. They were more likely to be in the South or West than in the Northern or Eastern sections of the country.

In the early years of the program and again during the war, plans for developing well-trained staffs were greatly hampered by the acute and immediate need of workers. Short orientation courses received an emphasis not originally anticipated. Now, with comparatively normal employment conditions but ever-increasing demands for health services in prospect, more careful consideration can be given to planning well-rounded training programs.

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Appendix A

TABLE A.—*Total expenditures for training* [1] *by State and Territorial health departments, as reported to the United States Public Health Service, according to fiscal year (1936–44)*

State or Territory	Expenditures in designated fiscal years									
	Total, all years	1936	1937	1938	1939	1940	1941	1942	1943	1944
United States and Territories	$9,842,718	$323,749	$1,209,569	$1,420,188	$1,248,162	$1,163,566	$1,433,726	$1,315,747	$876,072	$851,939
Alabama	330,697	11,246	26,485	47,776	37,729	44,467	46,426	59,618	36,805	20,145
Arizona	62,142	7,322	13,502	8,912	3,341	18,791	8,402	1,621	----------	251
Arkansas	174,735	5,231	28,142	26,144	33,908	27,946	33,936	11,204	5,700	2,524
California	410,396	2,738	54,969	69,818	63,660	41,818	68,194	59,374	23,171	26,654
Colorado	83,519	10,848	18,465	11,287	20,153	8,219	3,892	8,334	311	2,010
Connecticut	64,114	1,223	13,774	14,213	11,218	8,408	12,641	425	----------	2,212
Delaware	19,822	922	2,903	2,563	1,642	2,827	----------	2,786	4,167	2,012
District of Columbia	88,280	512	6,615	14,070	11,496	9,271	8,057	9,123	16,103	13,033
Florida	113,349	11,773	25,110	13,337	9,914	10,352	17,458	15,922	3,039	6,444
Georgia	425,493	9,027	53,995	60,228	55,771	59,296	84,290	50,054	28,928	23,904
Idaho	73,960	4,159	9,174	13,217	11,038	6,290	8,288	7,044	8,164	6,586
Illinois	235,718	9,246	23,167	22,597	37,141	30,919	28,659	23,489	28,135	32,365
Indiana	134,356	1,543	16,103	20,358	22,118	19,230	21,794	16,137	8,308	8,765
Iowa	143,475	4,791	32,823	15,638	16,788	20,810	22,210	22,060	4,899	3,456
Kansas	99,097	4,270	17,326	14,348	18,360	14,342	9,076	10,295	5,069	6,011
Kentucky	151,511	8,638	34,021	25,412	26,486	24,640	20,981	6,091	2,754	2,488
Louisiana	191,786	3,268	13,040	18,163	14,778	22,216	39,219	31,693	22,575	26,834
Maine	39,858	2,576	9,303	13,015	4,756	2,075	----------	3,107	2,592	2,434
Maryland	312,108	4,855	26,004	26,504	24,176	46,363	44,000	48,570	45,860	45,776
Massachusetts	225,294	2,381	37,428	45,065	42,776	34,799	35,649	15,133	10,173	1,890
Michigan	995,329	14,124	48,101	48,994	43,601	95,412	100,801	216,266	208,320	219,710
Minnesota	288,630	12,784	65,328	37,859	33,636	26,475	34,398	32,889	28,051	17,210
Mississippi	265,644	14,511	23,391	22,204	18,381	37,521	45,438	43,505	39,204	21,489
Missouri	198,172	3,878	26,949	26,505	32,877	13,773	44,177	26,441	12,254	11,318
Montana	33,937	3,010	4,340	2,491	6,761	5,095	4,120	3,689	2,212	2,219
Nebraska	63,151	430	9,136	11,647	5,909	7,058	8,796	13,372	4,648	2,155
Nevada	28,435	1,965	6,132	7,393	3,423	4,237	2,871	1,883	431	100
New Hampshire	28,124	2,079	----------	6,805	6,720	4,838	7,188	380	114	----------
New Jersey	81,829	----------	14,878	15,042	13,935	9,411	12,265	5,369	6,826	4,103
New Mexico	86,781	10,858	11,316	24,364	9,825	8,708	10,683	5,704	4,739	584

New York	845,974	14,860	71,026	192,716	108,932	83,768	121,465	102,329	69,113	81,765
North Carolina	631,227	13,988	70,489	68,439	53,131	94,581	91,073	102,529	70,536	66,461
North Dakota	74,044	2,097	7,220	6,414	6,340	10,756	5,277	12,615	11,094	12,231
Ohio	236,819	6,397	32,400	130,383	28,089	8,936	15,041	11,816	1,874	1,883
Oklahoma	183,825	3,267	21,866	33,464	31,465	16,352	25,730	21,754	13,636	16,291
Oregon	100,718	7,270	8,256	16,956	14,274	16,691	26,033	5,295	3,401	2,542
Pennsylvania	345,255	1,668	41,213	24,812	27,247	74,251	90,022	46,944	25,490	13,608
Rhode Island	32,741	7,395	6,522	8,258	3,444	2,054	128	2,817	635	1,488
South Carolina	184,322	22,482	34,276	25,936	29,040	6,967	20,339	18,156	14,519	12,607
South Dakota	66,497	3,274	10,466	9,807	12,938	6,323	9,026	6,183	6,429	2,051
Tennessee	339,943	8,846	38,955	61,737	43,761	40,049	57,937	56,462	22,153	10,043
Texas	369,573	11,502	58,190	43,553	70,099	48,092	48,531	38,355	29,906	21,345
Utah	84,060	7,398	23,032	9,330	5,598	10,392	7,933	13,259	6,263	855
Vermont	14,020	125	1,617	3,279	2,078	1,843	3,655	185	440	798
Virginia	124,236	8,212	21,157	17,320	20,183	21,348	21,962	8,192	1,412	4,450
Washington	90,761	4,756	11,555	21,464	20,838	10,409	10,648	6,712	1,903	2,476
West Virginia	226,536	14,403	42,746	31,199	87,831	14,897	12,200	10,646	6,324	6,290
Wisconsin	100,450	6,659	13,284	10,772	24,584	12,097	10,395	12,167	8,372	2,120
Wyoming	26,022	4,491	4,630	2,464	3,922	1,261	1,531	3,377	2,619	1,727
Alaska	19,770	356	3,735	5,024	6,146	1,452	----------	2,874	----------	183
Hawaii	71,253	4,095	15,014	10,892	5,905	14,673	12,691	4,573	1,860	1,550
Puerto Rico	224,930	----------	----------	----------	----------	767	58,200	76,929	14,541	74,493

[1] All amounts, regardless of source, reported by the State or Territorial health department as expended for training, including subsidies to schools and field orientation centers as well as direct assistance to trainees, are included.

TABLE B.—*Distribution of trainees* [1] *at different schools by type of training (1936–44)*

School from which training was received	Number of trainees who received training of designated type		
	Total, all types	Academic study [2]	Field practice
All trainees	[3] 8,357	6,674	1,683
No school	1,511	----	1,511
California, University of	394	380	14
Catholic University of America	10	10	----
Chicago, University of	21	21	----
Columbia University or DeLamar Institute	305	304	1
Duke University	10	10	----
Duquesne University	34	34	----
George Peabody College for Teachers	703	691	12
Harvard University	219	215	4
Indiana University	47	44	3
Johns Hopkins University	302	288	14
Kentucky, University of	251	250	1
Louisiana State University	37	37	----
Loyola University, Chicago	12	9	3
Massachusetts Institute of Technology	52	52	----
Medical College of Virginia	78	78	----
Michigan State College	13	----	13
Michigan, University of	774	710	64
Minnesota, University of	653	641	12
Murray State Teachers College	10	10	----
New York University	117	116	1
North Carolina, University of	387	385	2
Oregon, University of	175	174	1
Pennsylvania, University of	467	465	2
Pittsburgh, University of	75	75	----
Richmond School of Public Health, Professional Institute, College of William and Mary	138	132	6
St. John's University, Brooklyn	16	16	----
St. Louis University	148	146	2
School of Tropical Medicine, Puerto Rico	80	80	----
Simmons College	89	88	1
Syracuse University	169	169	----
Temple University	12	12	----
Tennessee, University of	17	17	----
Tulane University	14	14	----
Vanderbilt University	590	586	4
Washington, University of	172	169	3
Wayne University	19	19	----
Western Reserve University	89	86	3
Wisconsin, University of	12	11	1
Yale University	34	34	----
Other	101	96	5

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] Including instances when both academic and field training were covered in the same application.

[3] Not included in this total are 57 trainees for whom type of training or the school at which it was received are unknown.

TABLE C.—*Distribution of trainees*[1] *with academic study at different schools by fiscal year (1936–44)*

School from which training was received	Number of trainees receiving training initiated in designated fiscal year										
	Total, all years	1936	1937	1938	1939	1940	1941	1942	1943	1944	Unknown years[2]
All trainees	6,674	439	649	1,306	659	719	1,052	601	531	611	107
California, University of	380	54	9	65	43	19	46	41	32	58	13
Catholic University of America	10	------	------	1	1	2	2	3	1	------	--------
Chicago, University of	21	------	------	2	1	1	5	5	5	2	--------
Columbia University or DeLamar Institute	304	22	22	90	11	28	71	18	17	21	4
Duke University	10	------	------	10	------	------	------	------	------	------	--------
Duquesne University	34	------	15	15	------	------	------	------	------	4	--------
George Peabody College for Teachers	691	116	108	156	77	58	85	32	15	27	17
Harvard University	215	1	16	38	41	33	60	17	3	2	4
Indiana University	44	------	------	2	1	14	1	13	7	6	--------
Johns Hopkins University	288	2	26	65	40	48	56	27	12	5	7
Kentucky, University of	250	30	21	71	69	56	1	------	1	------	1
Louisiana State University	37	------	------	1	15	21	------	------	------	------	--------
Loyola University, Chicago	9	------	------	------	------	------	------	2	3	4	--------
Massachusetts Institute of Technology	52	------	2	10	6	8	13	6	3	------	4
Medical College of Virginia	78	15	14	27	5	4	6	3	3	------	1
Michigan, University of	710	46	120	164	60	56	119	80	35	25	5
Minnesota, University of	641	90	114	76	52	36	74	61	59	77	2
Murray State Teachers College	10	------	------	------	------	------	------	------	------	10	--------
New York University	116	1	2	15	------	7	51	15	10	15	--------
North Carolina, University of	385	------	------	78	16	23	51	55	82	46	34
Oregon, University of	174	19	25	28	25	25	19	20	7	6	--------
Pennsylvania, University of	465	1	24	40	14	80	117	43	55	88	3
Pittsburgh, University of	75	------	------	------	------	------	------	------	------	75	--------
Richmond School of Public Health, Professional Institute, College of William and Mary	132	4	20	27	14	25	19	14	2	1	6
St. John's University, Brooklyn	16	------	------	------	------	------	10	6	------	------	--------
St. Louis University	146	------	------	------	1	------	3	15	78	49	--------
School of Tropical Medicine, Puerto Rico	80	------	------	------	------	------	25	10	29	16	--------
Simmons College	88	1	6	43	2	4	21	4	3	4	--------
Syracuse University	169	------	23	82	------	6	19	3	30	6	--------
Temple University	12	------	------	4	2	------	4	------	------	------	2
Tennessee, University of	17	------	------	------	13	2	2	------	------	------	--------
Tulane University	14	------	------	------	------	1	------	------	------	13	--------
Vanderbilt University	586	15	44	117	122	120	105	46	5	11	1
Washington, University of	169	13	25	37	18	8	24	27	6	9	2
Wayne University	19	------	2	3	1	4	4	5	------	------	--------
Western Reserve University	86	9	8	20	2	7	12	7	10	11	--------
Wisconsin, University of	11	------	------	------	------	------	------	5	6	------	--------
Yale University	34	------	1	6	1	15	4	3	1	3	--------
Other	96	------	2	13	6	8	23	15	11	17	1

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] All training for which the year of onset is unknown occured in the early years of the program.

TABLE D.—*Distribution of trainees* [1] *with academic study at different schools by professional category (1936–44)*

School from which training was received	Number of trainees in designated professional category				
	Total, all categories	Medical	Nursing	Sanitation	Other [2]
All trainees	6,674	1,049	4,032	975	618
California, University of	380	56	197	90	37
Catholic University of America	10		10		
Chicago, University of	21		12	2	7
Columbia University or DeLamar Institute	304	15	281		8
Duke University	10				10
Duquesne University	34		34		
George Peabody College for Teachers	691		691		
Harvard University	215	93	7	83	32
Indiana University	44		44		
Johns Hopkins University	288	209	23	4	52
Kentucky, University of	250	59	158	28	5
Louisiana State University	37	21	14		2
Loyola University, Chicago	9		9		
Massachusetts Institute of Technology	52	1		20	31
Medical College of Virginia	78		78		
Michigan, University of	710	101	389	131	89
Minnesota, University of	641	34	488	76	43
Murray State Teachers College	10				10
New York University	116	21	75	19	1
North Carolina, University of	385	90	118	152	25
Oregon, University of	174		174		
Pennsylvania, University of	465	103	205	66	91
Pittsburgh, University of	75		75		
Richmond School of Public Health, Professional Institute, College of William and Mary	132	1	131		
St. John's University, Brooklyn	16		16		
St. Louis University	146		72		74
School of Tropical Medicine, Puerto Rico	80		15	39	26
Simmons College	88		83		5
Syracuse University	169		169		
Temple University	12	1		3	8
Tennessee, University of	17				17
Tulane University	14	13			1
Vanderbilt University	586	204	130	242	10
Washington, University of	169		168	1	
Wayne University	19		19		
Western Reserve University	86	2	84		
Wisconsin, University of	11		11		
Yale University	34	17	2	5	10
Other	96	8	50	14	24

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] Including dentists, laboratory personnel of all types, health educators, statisticians, other professional and technical workers, and 5 of unknown type.

TABLE E.—*Total number and distribution by professional category of trainees*[1] *from each State and Territory (1936–44)*

State or Territory	Number of trainees in designated professional category					
	Total, all categories	Total, per 100,000 population[2]	Medical	Nursing	Sanitation	Other[3]
All trainees	8,414	6.3	1,550	4,626	1,447	791
Alabama	414	14.6	195	92	109	18
Arizona	43	8.6	4	34	3	2
Arkansas	253	13.0	52	151	44	6
California	343	5.0	79	133	96	35
Colorado	94	8.4	13	70	10	1
Connecticut	70	4.1	8	43	5	14
Delaware	24	9.0	2	11	1	10
District of Columbia	29	4.4	1	18	8	2
Florida	86	4.5	24	38	14	10
Georgia	229	7.3	68	82	59	20
Idaho	70	13.3	5	46	8	11
Illinois	254	3.2	29	170	7	48
Indiana	181	5.3	15	139	20	7
Iowa	147	5.8	19	109	16	3
Kansas	118	6.6	19	75	16	8
Kentucky	433	15.2	86	259	66	22
Louisiana	298	12.6	64	110	112	12
Maine	28	3.3	3	8	8	9
Maryland	89	4.9	10	74	1	4
Massachusetts	112	2.6	17	48	14	33
Michigan	313	6.0	63	124	96	30
Minnesota	233	8.3	23	146	33	31
Mississippi	340	15.6	120	87	104	29
Missouri	183	4.8	30	103	21	29
Montana	62	11.1	1	59	1	1
Nebraska	87	6.6	10	66	9	2
Nevada	28	25.4	2	17	4	5
New Hampshire	31	6.3	3	20	4	4
New Jersey	93	2.2	34	37	16	6
New Mexico	48	9.0	4	40	2	2
New York	547	4.1	90	430	23	4
North Carolina	458	12.8	44	292	79	43
North Dakota	171	26.6	10	62	12	87
Ohio	104	1.5	9	78	15	2
Oklahoma	208	8.9	36	112	21	39
Oregon	175	16.1	22	142	6	5
Pennsylvania	431	4.4	81	207	65	78
Rhode Island	25	3.5	1	12	3	9
South Carolina	107	5.6	4	79	23	1
South Dakota	57	8.9	6	39	10	2
Tennessee	282	9.7	45	156	53	28
Texas	347	5.4	68	188	71	20
Utah	98	17.8	2	84	5	7
Vermont	21	5.8	7	9	1	4
Virginia	48	1.8	14	26	6	2
Washington	114	6.6	26	71	12	5
West Virginia	136	7.2	44	37	53	2
Wisconsin	170	5.4	17	128	22	3
Wyoming	29	11.6	11	14	3	1
Alaska	20	27.6	1	15	2	2
Hawaii	36	8.5	3	16	16	1
Puerto Rico	93	5.0	6	17	39	31
Virgin Islands	4	16.1	---	3	---	1

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] Number trainees for the fiscal years 1936–44 related to the population according to the 1940 Census.

[3] Including dentists, laboratory personnel of all types, health educators, statisticians, other professional and technical workers, and 5 of unknown type.

TABLE F.—*Distribution of trainees* [1] *from each State and Territory by fiscal year (1936–44)*

State or Territory	Number of trainees receiving training initiated in designated fiscal year										
	Total, all years	1936	1937	1938	1939	1940	1941	1942	1943	1944	Unknown year [2]
All trainees	8,414	458	685	1,501	750	857	1,372	935	871	856	129
Alabama	414	12	20	95	45	41	103	66	24	8	
Arizona	43	7	14	8	3	7	3			1	
Arkansas	253	11	15	40	20	43	56	24	26	17	1
California	343		5	34	30	46	70	56	37	54	11
Colorado	94	27	9	18	14	2	8	12	1	2	1
Connecticut	70	3	3	24		11	24	1		4	
Delaware	24			4	2	2		2	7	2	5
District of Columbia	29	3	1	13	4	1	4	2			1
Florida	86	16		13		8	9	21	3	2	14
Georgia	229	8	10	64		28	36	13	5	16	49
Idaho	70	9	3	8	13	4	12	9	7	5	
Illinois	254	1	44	25	5	4	35	35	46	59	
Indiana	181	1	22	28	15	17	36	26	23	12	1
Iowa	147	9	37	15	7	1	27	24	14	13	
Kansas	118	4	12	25	13	11	10	19	13	11	
Kentucky	433	40	17	93	81	80	39	27	19	36	1
Louisiana	298	4	4	13	57	53	18	60	39	49	1
Maine	28		1	8	4	2		4	2	7	
Maryland	89		6	27	5	6	5	10	11	19	
Massachusetts	112	1	2	40	1	18	40	2	5	2	1
Michigan	313	35	27	24	3	23	41	45	46	69	
Minnesota	233	42	48	29	22	15	26	20	16	14	1
Mississippi	340		26	71	44	48	53	41	37	20	
Missouri	183	9	19	33	30	8	41	15	8	16	4
Montana	62	6	2	11	10	7	9	8	3	6	
Nebraska	87		12	19	9	4	23	17	1	2	
Nevada	28	5		6	2	3	3	5	2		2
New Hampshire	31	3	2	5	4	2	8	1		2	4
New Jersey	93	1	2	35	4	6	21	5	14	5	
New Mexico	48	9	1	17	7	4	8	2			
New York	547	14	38	160	1	38	144	49	55	47	1
North Carolina	458	23	37	76	32	55	55	52	106	22	
North Dakota	171	7	13	12		3	7	15	67	47	
Ohio	104	6	13	44	1		20	15	3	2	
Oklahoma	208	6	19	31	29	15	17	18	36	37	
Oregon	175	20	11	22	23	24	23	26	10	15	1
Pennsylvania	431		40	28	10	61	85	27	36	144	
Rhode Island	25			12	1	4	1	6			1
South Carolina	107	14	16	24	4	5	13	8	9	1	13
South Dakota	57	6	7	8	7	4	10	9	6		
Tennessee	282	21	28	33	59	36	63	19	12	11	
Texas	347	12	53	82	50	43	44	23	17	23	
Utah	98	19	12	9	9	14	8	16	9	2	
Vermont	21			8	2	3	5		1	2	
Virginia	48	1	1	11	10	7	12	4			2
Washington	114	4	4	27	17	11	20	18	6	6	1
West Virginia	136	10	2	29	1	5	23	23	23	9	11
Wisconsin	170	24	21	21	26	14	14	20	18	10	2
Wyoming	29	5	3	1	6		2	2	10		
Alaska	20		3	9	5	1		1		1	
Hawaii	36			9	3	9	10	2		3	
Puerto Rico	93						28	10	35	20	
Virgin Islands	4								3	1	

[1] Persons with tuition, stipends, and/or travel expenses incidental to training paid from funds administered by the U. S. Public Health Service through State and Territorial health departments. This enumeration is based upon application forms; therefore, an individual is counted as many times as there are application forms representing training which he received.

[2] All training for which the year of onset is unknown occurred in the early years of the program.

Appendix B

Form 8913
(Formerly D. F. 8913)
(Revised July 1941)

TRAINEE APPLICATION FORM

(Before completing form read instructions on reverse side)

U. S. PUBLIC HEALTH SERVICE, FEDERAL SECURITY AGENCY

I. GENERAL INFORMATION: CHILDREN'S BUREAU, U. S. DEPARTMENT OF LABOR

Name ..... (Surname) (First name) (Initial) State ..... Date ..... (Month) (Day) (Year)

Sex ..... Color ..... Year of birth..... Dependents ☐ (Yes) ☐ (No) Present address ..... (Street) (Post office)

II. EDUCATIONAL HISTORY: High school graduate? ☐ ☐ (Yes) (No) If no, circle years completed: 0 1 2 3 Curriculum major .....

Colleges—Universities—Nurses and Other Training Schools (Give name and location)	Attended Month	Attended Year	Field of Specialization	If Graduated, Degree Received	If Not Graduated, Give Credit Hours
1.	From				
	To				
2.	From				
	To				
3.	From				
	To				
4.	From				
	To				
5.	From				
	To				

III. EXPERIENCE: List in chronological order all positions held within last 10 years, including present position. (See reverse side for additional space.)

Pay-Roll Title of Position	Name of Employing Agency	Dates of Employment Month	Dates of Employment Year	Full Time? (Yes or No)	Number of Persons Supervised, if Any	Salary per Month
1.		From				
		To				$
2.		From				
		To				$
3.		From				
		To				$
4.		From				
		To				$

IV. TRAINING PLANNED: Type of course planned .....

College or university study ..... (Name of school) Period of study: From ..... (Month) (Day) (Year) To ..... (Month) (Day) (Year) Full time ☐ (Yes) ☐ (No)

College accredited field training ..... (Name of training center) Period of training: From ..... (Month) (Day) (Year) To ..... (Month) (Day) (Year) Concurrent with school attendance ☐ (Yes) ☐ (No)

Nonaccredited field practice ..... (Name of agency) From ..... (Month) (Day) (Year) To ..... (Month) (Day) (Year) At ..... (County or city)

I agree, upon completion of this training, to accept at least 2 years employment in the field for which I am being trained.

..... (Signature of applicant)

V. BUDGETARY DATA: Note.—Applicant will not fill the following. This section is to be completed by the State agency.

Source and estimated amount of training funds: Title V, I. ..... V.D., $..... M.C.H., $..... C.C., $.....

Approximate dates of sponsored training: From ..... (Month) (Day) (Year) To ..... (Month) (Day) (Year)

Fiscal Year	Budget No.	Stipend	Tuition	Travel
		Item No.	Item No.	Item No. .....
		Total amt.	Total amt.	Total amt. .....
		Item No.	Item No.	Item No. .....
		Total amt.	Total amt.	Total amt. .....

Applicant is being trained for a State ☐ Local ☐ Reserve ☐ or other position ☐ ..... (Give pay-roll title of position)

Application approved by ..... (Public Health Service) or (Children's Bureau) Applicant recommended by ..... (Executive officer of State agency)

Date approved ..... Date recommended .....

[OVER]

16—37888

INSTRUCTIONS

Note.—This form has been prepared by the United States Public Health Service in cooperation with the United States Children's Bureau and should be completed by every individual applying for training financed wholly or in part by funds administered by either agency.

Use a typewriter to fill this form if practicable; if not, write or print legibly in ink. Follow instructions carefully, filling in all blanks that apply to your individual case.

SECTION I.—General Information. It is important that the identity of the applicant be clearly established by an accurate completion of all blanks in this section. Under "dependents" check "yes" only if one or more relatives are entirely dependent on your income for support.

SECTION II.—Educational History. A complete history of all previous education from high school to the present date is imperative.

In describing your high school education fill in blank designated as "curriculum major" with the appropriate term, such as Academic or Literary, Commercial, Science, Industrial Arts, Home Economics, etc.

In describing post-high school education list all colleges, universities, schools of nursing and other educational institutions in order of attendance.

To describe "Field of Specialization," use appropriate terms such as Sanitary Engineering, History, Maternal and Child Hygiene, Adult Health Education, etc., to designate the academic field of major emphasis.

The number of credit hours should be indicated only when the applicant was not graduated and should be stated in the units used by each individual school and designated as term hours, semester hours, credits, points, etc., as the case may be.

SECTION III.—Experience. This section refers to all types of employment during the last 10 years. List all such positions in chronological order, giving inclusive dates of employment, the last position recorded being the applicant's present position or, if now unemployed, the last position held. If a position entails supervision of one or more persons, indicate the number of persons supervised. Under "salary per month" indicate only compensation derived from regular full-time employment.

SECTION IV.—Training Planned. This section refers to the entire continuous period of training planned. Indicate the type of course planned with the appropriate term such as Orthopedic Nursing, Industrial Hygiene, Public Health Administration, Venereal Disease Control, Maternal and Child Health, etc. Give the beginning and ending dates of each type of training you intend to receive before returning to regular employment.

In outlining proposed training, college accredited field training should not be confused with field practice not accredited by an educational institution.

By signing the statement referring to future employment, the applicant agrees to accept such employment, but the agreement does not necessarily obligate the sponsoring agency.

SECTION V.—Budgetary Data. **(State agency, please note carefully.)**

This section is not to be completed by the applicant. The sponsoring agency should state the beginning and ending dates of the period of training in which stipend, tuition and travel, or any one or combination of these items, are to be paid from Federal funds. In the appropriate spaces, indicate fiscal year and budget number as well as item numbers and total estimated amounts of stipend, tuition and/or travel. State the pay-roll title of the position which it is anticipated the applicant will occupy on completion of training.

After the executive officer of the State agency has signified his recommendation of the applicant, this application should be forwarded for approval of the proposed sponsored training to the District Director of the Public Health Service or to the Regional Medical Consultant of the Children's Bureau not less than 30 days previous to the beginning date of training.

III. EXPERIENCE—Continued.—If necessary, use this space to list additional positions held within last 10 years.

	Pay-Roll Title of Position	Name of Employing Agency	Dates of Employment: Month	Dates of Employment: Year	Full Time? (Yes or No)	Number of Persons Supervised, if Any	Salary per Month
5.			From				
			To				$
6.			From				
			To				$
7.			From				
			To				$
8.			From				
			To				$
9.			From				
			To				$
10.			From				
			To				$

REMARKS: .....

.....

.....

U. S. GOVERNMENT PRINTING OFFICE 16—32008

DEATHS DURING WEEK ENDED APRIL 27, 1946

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Apr. 27, 1946	Corresponding week, 1945
Data for 93 large cities of the United States:		
Total deaths	9,448	9,105
Average for 3 prior years	9,504	
Total deaths, first 17 weeks of year	169,248	162,732
Deaths under 1 year of age	632	571
Average for 3 prior years	619	
Deaths under 1 year of age, first 17 weeks of year	10,342	10,761
Data from industrial insurance companies:		
Policies in force	67,208,187	67,249,729
Number of death claims	12,527	16,240
Death claims per 1,000 policies in force, annual rate	9.7	12.6
Death claims per 1,000 policies, first 17 weeks of year, annual rate	10.9	11.1

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED MAY 4, 1946

Summary

Of the total of 17 cases of smallpox reported for the week, 7 occurred in Washington State (including delayed report of 1 case), 4 in Iowa, and 3 in Indiana. The total to date is 189, the same as for the corresponding period last year. The 5-year (1941–45) median is 395. (See p. 757.)

The incidence of measles declined slightly for the country as a whole, but increases occurred in the New England, Middle Atlantic, East North Central, and East South Central areas. A total of 39,902 cases was reported, as compared with 40,072 last week and a 5-year median of 26,032. An aggregate of 22,079 cases, or 55 percent of the total, occurred in the Middle Atlantic and East North Central areas as compared with 53 percent in the same area last week. The total to date is 419,130, as compared with 54,475 and 454,871, respectively, for the corresponding periods of 1945 and 1944, and a 5-year median of 340,866.

A total of 245 cases of diphtheria was reported, as compared with 313 last week and a 5-year median of 192. The cumulative figure, 6,422, is more than reported for a corresponding period since 1939.

Of the total of 23 cases of poliomyelitis (as compared with 47 last week and a 5-year median of 19), 4 occurred in Florida (last week 14), 3 in California (last week 8). The current total is the same number as reported for the week ended March 16, the lowest incidence for a previous week this year. Since that date 207 cases have been reported, as compared with 219 for the same period last year.

Of the total of 96 cases of meningococcus meningitis (as compared with 126 last week and a 5-year median of 158), New York reported 11, Illinois, Texas, and California 8 each, Pennsylvania 7, and Ohio 6. The cumulative figure is 3,171, as compared with 4,167 for the period last year, which is also the 5-year median.

Deaths recorded for the week in 93 large cities of the United States totaled 8,974, as compared with 9,448 last week, 9,105 and 9,322, respectively, for the corresponding weeks of 1945 and 1944, and a 3-year (1943–45) average of 9,123. The total to date is 178,222, as compared with 171,652 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended May 4, 1946, and comparison with corresponding week of 1945 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1941–45	Week ended—		Median 1941–45	Week ended—		Median 1941–45	Week ended—		Median 1941–45
	May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945	
NEW ENGLAND												
Maine	5	0	0	------	------	------	213	3	142	3	1	1
New Hampshire	0	0	0	------	------	------	60	------	23	1	0	0
Vermont	2	0	0	------	------	------	25	5	145	0	0	0
Massachusetts	4	9	2	------	------	------	2,743	150	975	1	5	7
Rhode Island	4	0	1	------	27	2	28	11	11	1	1	1
Connecticut	2	2	1	------	3	1	476	110	442	2	2	2
MIDDLE ATLANTIC												
New York	15	16	15	[1] 7	[1] 1	[1] 5	4,757	130	1,624	11	15	19
New Jersey	6	5	4	6	3	4	4,743	57	1,252	3	3	4
Pennsylvania	13	5	8	1	1	1	4,320	408	1,678	7	13	13
EAST NORTH CENTRAL												
Ohio	12	6	8	3	6	9	734	77	591	6	8	8
Indiana	14	3	3	4	13	13	610	33	261	1	2	2
Illinois	4	2	10	2	5	11	1,022	220	719	8	15	15
Michigan [2]	5	3	4	------	3	2	1,913	290	1,067	4	2	2
Wisconsin	2	1	0	27	58	38	3,980	83	1,854	1	1	1
WEST NORTH CENTRAL												
Minnesota	11	3	3	------	------	------	52	15	390	3	3	1
Iowa	7	3	2	------	------	------	281	52	249	1	0	0
Missouri	4	2	2	1	1	1	179	12	282	4	2	3
North Dakota	1	6	1	------	33	27	------	2	31	0	1	0
South Dakota	1	2	0	------	------	------	55	15	23	0	1	1
Nebraska	1	3	3	2	------	3	303	44	157	0	0	0
Kansas	10	13	4	------	------	1	514	43	633	0	2	2
SOUTH ATLANTIC												
Delaware	0	0	0	------	------	------	66	11	30	0	0	1
Maryland [2]	9	11	4	4	2	6	716	43	403	1	3	3
District of Columbia	0	0	0	------	------	------	384	6	121	0	2	2
Virginia	10	2	4	106	56	143	608	65	452	1	7	7
West Virginia	7	3	5	3	6	14	45	18	102	0	1	2
North Carolina	4	6	6	------	------	3	491	58	543	1	3	3
South Carolina	2	3	2	150	207	229	271	21	141	1	3	3
Georgia	3	2	2	1	2	17	94	6	164	1	0	1
Florida	3	3	2	------	1	4	209	11	221	1	3	3
EAST SOUTH CENTRAL												
Kentucky	2	1	2	3	------	7	762	30	153	4	2	3
Tennessee	3	2	4	13	10	26	237	65	196	3	4	4
Alabama	0	7	5	21	12	22	212	8	198	0	2	3
Mississippi [2]	1	6	5	------	------	------	------	------	------	0	4	4
WEST SOUTH CENTRAL												
Arkansas	1	2	2	21	11	47	208	24	122	2	4	1
Louisiana	4	6	2	------	4	4	84	28	124	0	6	2
Oklahoma	2	6	5	21	164	43	323	42	148	2	2	2
Texas	23	23	23	439	697	511	1,898	328	1,293	8	9	9
MOUNTAIN												
Montana	0	2	2	------	6	5	54	14	81	0	1	0
Idaho	4	1	0	19	2	------	140	13	57	1	0	0
Wyoming	1	0	0	------	------	------	91	7	67	0	0	0
Colorado	4	9	9	1	5	18	446	39	299	0	1	1
New Mexico	4	4	0	1	1	1	117	16	35	0	2	0
Arizona	1	2	1	32	79	56	266	29	98	0	0	0
Utah [2]	0	0	0	2	------	13	388	267	179	0	1	1
Nevada	0	0	0	------	------	------	7	3	16	0	0	0
PACIFIC												
Washington	8	9	2	------	------	------	463	232	307	5	3	2
Oregon	0	4	3	4	6	16	338	99	191	0	3	3
California	26	14	14	15	7	70	3,976	1,267	1,267	8	15	15
Total	245	212	192	909	1,432	1,432	39,902	4,510	26,032	96	158	158
18 weeks	6,422	5,139	5,037	182,740	59,102	72,364	419,130	54,475	340,866	3,171	4,167	4,167

[1] New York City only.

[2] Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended May 4, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever [3]		
	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45
	May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945		May 4, 1946	May 5, 1945	
NEW ENGLAND												
Maine	0	0	0	18	60	14	0	0	0	1	0	0
New Hampshire	0	0	0	3	29	11	0	0	0	0	0	0
Vermont	1	0	0	6	10	10	0	0	0	0	0	0
Massachusetts	0	1	0	191	309	309	0	0	0	2	0	0
Rhode Island	0	0	0	8	16	16	0	0	0	1	0	0
Connecticut	0	1	0	62	57	76	0	0	0	0	1	1
MIDDLE ATLANTIC												
New York	1	2	1	511	740	553	0	0	0	1	2	4
New Jersey	0	1	0	165	153	153	0	0	0	2	0	0
Pennsylvania	0	0	0	436	508	423	0	0	0	6	3	6
EAST NORTH CENTRAL												
Ohio	0	1	1	305	398	320	1	0	0	4	5	4
Indiana	0	1	0	73	94	94	3	9	4	0	0	0
Illinois	0	0	0	198	279	279	0	0	0	1	8	4
Michigan [2]	0	0	0	176	269	224	0	0	0	1	1	1
Wisconsin	0	0	0	101	193	193	1	0	1	0	0	0
WEST NORTH CENTRAL												
Minnesota	0	1	0	44	72	72	0	0	0	0	0	0
Iowa	1	1	0	61	28	40	4	0	1	0	0	0
Missouri	2	0	0	22	53	91	0	0	0	0	0	0
North Dakota	0	0	0	9	19	17	0	0	0	0	0	0
South Dakota	0	0	0	7	19	19	0	1	1	0	0	0
Nebraska	0	0	0	27	94	29	0	0	0	0	0	0
Kansas	0	0	1	71	74	46	0	0	0	0	1	0
SOUTH ATLANTIC												
Delaware	0	0	0	4	5	17	0	0	0	1	0	0
Maryland [2]	0	0	0	78	144	136	0	0	0	3	1	1
District of Columbia	0	0	0	13	27	22	0	0	0	0	1	1
Virginia	1	1	0	61	93	39	0	0	0	0	1	1
West Virginia	0	0	0	22	48	46	0	0	0	0	1	1
North Carolina	1	1	0	44	57	35	0	0	0	1	2	2
South Carolina	0	0	0	6	6	4	0	0	0	0	2	2
Georgia	1	1	0	9	28	15	0	0	0	5	2	2
Florida	4	8	0	6	3	3	0	0	0	0	2	3
EAST SOUTH CENTRAL												
Kentucky	0	1	0	25	32	65	0	0	0	0	1	1
Tennessee	0	1	0	29	41	41	0	0	0	1	2	2
Alabama	0	2	0	7	13	12	0	0	0	0	1	2
Mississippi [2]	0	0	0	2	12	5	0	0	1	3	1	1
WEST SOUTH CENTRAL												
Arkansas	*0	0	0	20	11	5	0	0	0	2	3	2
Louisiana	1	3	0	7	6	6	0	3	0	0	2	2
Oklahoma	0	0	0	8	24	24	0	0	0	1	0	0
Texas	2	6	3	34	82	57	0	0	2	6	9	6
MOUNTAIN												
Montana	0	0	0	10	17	21	1	0	0	0	1	0
Idaho	0	0	0	8	31	31	0	0	0	1	1	0
Wyoming	0	0	0	12	45	16	0	0	0	0	0	0
Colorado	2	0	0	19	48	48	0	0	0	0	0	0
New Mexico	1	0	0	9	26	6	0	1	0	1	0	0
Arizona	1	0	0	14	67	9	0	0	0	0	0	0
Utah [3]	0	0	0	22	22	22	0	0	0	0	0	0
Nevada	0	0	0	2	0	0	0	0	0	0	0	0
PACIFIC												
Washington	1	0	0	20	95	37	7	0	0	0	0	0
Oregon	0	0	0	43	23	18	0	0	0	5	0	0
California	3	3	3	197	335	174	0	0	0	3	0	4
Total	23	36	19	3,225	4,815	3,859	17	14	17	52	54	67
18 weeks	*673	616	414	63,145	98,760	71,761	[4]189	189	395	897	1,049	1,290

[2] Period ended earlier than Saturday.

[3] Including paratyphoid fever reported separately as follows: Rhode Island 1; New Jersey 1; Ohio 1; Georgia 4; Tennessee 1; California 2.

[4] Correction by delayed reports of 5 cases in Washington State.

*Correction: Week ended Apr. 13, Arkansas, poliomyelitis 1 case (instead of 2).

Telegraphic morbidity reports from State health officers for the week ended May 4, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.

Division and State	Whooping cough			Week ended May 4, 1946							
	Week ended—		Median 1941–45	Dysentery			Encephalitis, infectious	Rocky Mt. spotted fever	Tularemia	Typhus fever, endemic	Undulant fever
	May 4, 1946	May 5, 1945		Amebic	Bacillary	Unspecified					
NEW ENGLAND											
Maine	36	52	32				1				1
New Hampshire	5		3								
Vermont	43	25	12								2
Massachusetts	135	166	166		2						
Rhode Island	13	18	18								
Connecticut	52	29	29								3
MIDDLE ATLANTIC											
New York	135	278	285	4	6		3			1	4
New Jersey	132	104	116	2		1					2
Pennsylvania	102	212	212				1				1
EAST NORTH CENTRAL											
Ohio	98	159	159								2
Indiana	28	21	42								
Illinois	99	41	91	4			1	1			9
Michigan [2]	132	98	139	1	1						2
Wisconsin	85	54	94								8
WEST NORTH CENTRAL											
Minnesota	9	7	20						1		3
Iowa	20	2	48				1				1
Missouri	8	25	22			2					1
North Dakota	1	11	13								
South Dakota			1								2
Nebraska	2	5	8								
Kansas	25	36	44								17
SOUTH ATLANTIC											
Delaware	4	1	1					2			
Maryland [2]	24	73	73			1	2	2			6
District of Columbia	12	3	12								
Virginia	36	55	63			26			3		3
West Virginia	32	20	31								
North Carolina	95	186	186	2				1		1	1
South Carolina	31	68	68		7					1	
Georgia	18	11	14		3					9	10
Florida	16	13	42	1						5	1
EAST SOUTH CENTRAL											
Kentucky	22	27	75			1			1		
Tennessee	33	19	42	1	1		2		3		4
Alabama	25	8	44							7	2
Mississippi [2]									2	1	
WEST SOUTH CENTRAL											
Arkansas	6	14	16						2	1	1
Louisiana	39	10	3						1	5	
Oklahoma	14	17	33								
Texas	196	270	347	6	297	41				14	20
MOUNTAIN											
Montana	4	5	15					1			
Idaho	14	9	4						1		
Wyoming	2	8	3	1							
Colorado	35	34	34					1			1
New Mexico	9	24	7								
Arizona	9	27	27			57	1				1
Utah [2]	36	44	48								
Nevada			3								
PACIFIC											
Washington	48	17	46								1
Oregon	18	27	19								1
California	135	313	313	4	5						2
Total	2,073	2,646	3,977	26	322	129	11	8	14	45	112
Same week, 1945	2,646			48	285	109	6	6	9	53	72
Average, 1943–45	2,951			30	261	86	12	[3] 9	8	[3] 28	
18 weeks: 1946	33,035			669	5,261	1,868	163	29	329	827	1,463
1945	44,726			530	7,748	2,085	120	22	294	874	1,538
Average, 1943–45	49,968		[3] 69,361	510	5,067	1,382	175	[3] 38	255	[3] 722	

[2] Period ended earlier than Saturday.
[3] 5-year median, 1941–45.

Leprosy: California 1 case.

WEEKLY REPORTS FROM CITIES

City reports for week ended Apr. 27, 1946

This table lists the reports from 89 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	------	0	1	0	2	0	6	0	0	7
New Hampshire:												
Concord	0	0	------	0	------	0	0	0	1	0	0	------
Vermont:												
Barre	0	0	------	0	------	0	0	0	0	0	0	------
Massachusetts:												
Boston	2	0	------	1	426	0	10	0	49	0	0	13
Fall River	0	0	------	0	87	0	2	0	4	0	0	1
Springfield	0	0	------	0	55	0	0	1	4	0	1	1
Worcester	0	0	------	0	314	1	5	0	5	0	0	47
Rhode Island:												
Providence	1	0	------	0	9	1	3	0	8	0	0	5
Connecticut:												
Bridgeport	0	0	------	0	2	0	4	0	4	0	0	------
Hartford	0	0	------	0	5	0	0	0	2	0	0	9
New Haven	1	0	------	0	112	0	1	0	2	0	0	------
MIDDLE ATLANTIC												
New York:												
Buffalo	4	0	------	1	155	0	7	0	10	0	0	11
New York	13	1	------	1	1,581	9	62	1	397	0	1	22
Rochester	0	0	------	0	257	0	5	0	14	0	0	------
Syracuse	0	0	------	0	24	0	3	0	15	0	0	2
New Jersey:												
Camden	1	0	1	1	52	0	1	0	4	0	0	3
Newark	0	0	1	0	881	1	5	0	13	0	0	15
Trenton	0	0	------	0	23	0	4	0	1	0	0	3
Pennsylvania:												
Philadelphia	3	0	2	1	599	2	25	0	62	0	1	14
Pittsburgh	2	0	1	1	14	3	6	1	25	0	0	10
Reading	0	0	------	1	55	0	3	0	4	0	0	14
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	2	0	------	1	50	1	7	0	10	0	0	7
Cleveland	1	0	3	0	132	0	8	0	20	0	0	20
Columbus	2	0	------	0	1	0	4	0	7	0	0	2
Indiana:												
Fort Wayne	0	0	------	0	------	0	0	0	5	0	0	------
Indianapolis	6	0	------	0	259	0	6	0	17	0	0	17
South Bend	0	0	------	0	5	0	0	0	2	0	0	------
Terre Haute	0	0	------	0	3	0	2	0	1	0	0	------
Illinois:												
Chicago	0	0	------	1	399	3	31	0	92	0	0	44
Springfield	0	0	------	0	28	0	0	0	1	0	0	------
Michigan:												
Detroit	0	2	------	0	484	0	11	0	30	0	0	30
Flint	0	0	------	0	8	0	5	0	2		0	------
Grand Rapids	0	0	------	0	213	0	0	0	5	0	0	14
Wisconsin:												
Kenosha	0	0	------	0	109	0	0	0	2	0	0	------
Milwaukee	2	0	------	0	1,882	1	2	0	23	0	0	45
Racine	0	0	------	0	36	0	0	0	2	0	0	------
Superior	0	0	------	0	1	0	0	0	1	0	0	------
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	------	0	10	0	1	0	6	0	0	4
Minneapolis	6	0	------	0	21	2	4	0	12	0	1	------
St. Paul	1	1	------	0	3	0	2	0	10	0	0	5
Missouri:												
Kansas City	0	0	1	0	19	0	6	0	7	0	0	------
St. Joseph	0	0	------	0	1	0	0	0	3	0	0	------
St. Louis	2	0	------	1	121	1	4	0	15	0	0	2

City reports for week ended Apr. 27, 1946—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
Nebraska:												
Omaha	1	0	------	0	65	0	1	0	6	0	0	------
Kansas:												
Topeka	0	0	------	0	9	0	0	0	5	0	0	7
Wichita	0	0	------	0	96	0	1	0	3	0	0	1
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	30	0	1	0	1	0	0	1
Maryland:												
Baltimore	20	0	2	2	466	2	10	0	26	0	0	9
Cumberland	0	0	------	0	1	0	0	0	2	0	0	------
Frederick	0	0	------	0	-------	0	1	0	0	0	0	------
District of Columbia:												
Washington	1	0	------	0	427	2	3	0	26	0	1	7
Virginia:												
Lynchburg	0	0	------	0	18	0	1	0	2	0	0	1
Richmond	1	0	25	0	42	0	1	0	5	0	0	6
Roanoke	0	0	------	0	5	0	0	0	2	0	0	------
West Virginia:												
Charleston	0	0	------	0	-------	0	0	0	1	0	0	------
Wheeling	1	0	------	0	4	0	1	0	0	0	0	14
North Carolina:												
Raleigh	0	0	------	0	52	0	0	0	1	0	0	4
Wilmington	0	0	------	0	17	0	1	0	0	0	0	1
Winston-Salem	0	0	------	0	26	0	1	0	2	0	0	1
South Carolina:												
Charleston	0	0	2	0	6	0	1	0	4	0	1	1
Georgia:												
Atlanta	0	0	1	1	14	0	1	0	5	0	0	------
Brunswick	0	0	------	0	3	0	0	0	0	0	0	1
Savannah	0	0	------	0	2	0	0	0	1	0	0	------
Florida:												
Tampa	1	0	------	0	26	0	0	0	0	0	1	------
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	------	4	26	0	12	0	2	0	0	5
Nashville	0	0	------	0	3	0	6	0	1	0	0	------
Alabama:												
Birmingham	0	0	2	0	18	0	1	0	0	0	0	------
Mobile	0	0	3	0	3	0	1	1	0	0	0	2
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	------	1	22	0	2	0	0	0	0	------
Louisiana:												
New Orleans	3	0	1	0	17	0	3	0	2	0	0	------
Shreveport	0	0	------	0	0	0	7	0	0	0	0	------
Texas:												
Dallas	0	0	------	0	68	1	1	0	2	0	0	3
Galveston	0	0	------	0	5	0	0	0	0	0	3	------
Houston	2	0	1	0	4	0	4	0	0	0	1	------
San Antonio	1	0	------	0	14	0	1	0	1	0	0	------
MOUNTAIN												
Montana:												
Billings	0	0	------	0	1	0	2	0	1	0	0	------
Great Falls	0	0	------	0	-------	0	1	0	0	0	0	------
Helena	0	0	------	0	-------	0	0	0	0	0	0	------
Missoula	0	0	------	0	-------	0	3	0	0	0	0	------
Idaho:												
Boise	0	0	------	0	3	0	1	0	0	0	0	------
Colorado:												
Denver	1	0	2	1	793	0	2	0	11	0	1	23
Pueblo	0	0	------	0	22	0	1	0	3	0	0	------
Utah:												
Salt Lake City	0	0	------	0	115	0	3	0	5	0	0	11

City reports for week ended Apr. 27, 1946—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle	2	0	------	0	75	0	2	0	9	2	0	7
Spokane	0	0	------	0	68	0	2	0	0	0	0	3
Tacoma	0	0	------	0	12	0	0	0	1	0	0	2
California:												
Los Angeles	1	0	6	1	485	2	9	1	34	0	2	5
Sacramento	0	0	------	0	329	0	2	0	1	0	0	2
San Francisco	2	0	4	0	178	0	10	0	15	0	1	8
Total	86	4	59	20	12,007	32	341	5	1,083	2	15	492
Corresponding week, 1945	64	------	22	19	1,395	------	331	------	1,540	0	8	724
Average, 1941–45	60	------	84	[1] 26	[2] 6,574	------	[1] 402	------	1,631	0	13	952

[1] 3-year average, 1943–45.
[2] 5-year median, 1941–45.

Anthrax.—Cases: Philadelphia 1.
Dysentery, amebic.—Cases: Boston 2; San Antonio 19; Los Angeles 2.
Dysentery, bacillary.—Cases: New York 2; Chicago 1; Memphis 1; Los Angeles 2.
Leprosy.—Cases: San Francisco 1.
Rocky Mountain spotted fever.—Cases: Missoula 1.
Tularemia.—Cases: Lynchburg 1.
Typhus fever, endemic.—Cases: Atlanta 1; Birmingham 1; Mobile 1; Dallas 1; Galveston 1; Houston 2.

Rates (annual basis) per 100,000 population, by geographic groups, for the 89 cities in the preceding table (estimated population, 1943, 34,366,400)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	10.5	0.0	0.0	2.6	2,643	5.2	70.6	2.6	222	0.0	2.6	217
Middle Atlantic	10.6	0.5	2.8	2.8	1,685	6.9	56.0	0.9	252	0.0	0.9	44
East North Central	7.9	1.2	1.8	1.2	2,195	3.0	46.2	0.0	134	0.0	0.0	109
West North Central	20.1	2.0	2.0	2.0	694	6.0	38.2	0.0	135	0.0	2.0	38
South Atlantic	39.2	0.0	49.0	4.9	1,862	6.5	36.0	0.0	127	0.0	4.9	75
East South Central	0.0	0.0	29.5	23.6	295	0.0	118.0	5.9	18	0.0	0.0	41
West South Central	17.2	0.0	5.7	2.9	373	2.9	51.7	0.0	14	0.0	11.5	9
Mountain	7.9	0.0	15.9	7.9	7,418	0.0	103.3	0.0	159	0.0	7.9	270
Pacific	7.9	0.0	15.8	1.6	1,814	3.2	39.5	1.6	95	3.2	4.7	43
Total	13.1	0.6	9.0	3.0	1,827	4.9	51.9	0.8	165	0.3	2.3	75

PLAGUE INFECTION IN SANTA BARBARA AND VENTURA COUNTIES, CALIF.

Plague infection has been reported proved, on April 22, in 2 pools of fleas from ground squirrels, *C. beecheyi*, shot in Santa Barbara County, Calif.; 1 a pool of 131 fleas from 3 ground squirrels taken 1 mile south of Buellton, and the other a pool of 198 fleas from 5 ground squirrels taken 1 mile south and one-half mile east of Buellton.

Under date of April 29, plague infection was reported proved, on April 26, in tissue from one cottontail rabbit shot one-half mile south and 2 miles east of Santa Paula, Ventura County, Calif.

SMALLPOX IN SAN FRANCISCO, CALIF., AND SEATTLE, WASH.

Week Ended May 4, 1946

No new case reported in San Francisco or in the State. Date of onset of last case was March 27.

Six new cases, with 1 death, were reported in the Seattle area during the week—1 case in King County, 5 cases, 1 death, in Everett (Snohomish County). To May 6, total for the State, 59 cases, 16 deaths—Seattle, 35 cases, 8 deaths; King County, 15 cases, 6 deaths; Everett, 6 cases, 2 deaths; 1 case each in Longview, Waterville, and Orcas Island, the latter being the residence of the patient in the case originally reported from Friday Harbor. Date of onset of last case was May 2, in Everett.

TERRITORIES AND POSSESSIONS

Panama Canal Zone

Notifiable diseases—March 1946.—During the month of March 1946, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	Panama		Colon		Canal Zone		Outside the Zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox	1		1		2		2		6	
Diphtheria	21		1		2		14	1	38	1
Dysentery:										
Amebic	4		2		2		2		10	
Bacillary	2	1			1		2		5	1
Leprosy						1				1
Malaria [1]	6	1	3		21		46	7	76	8
Measles	3				18	1	22		43	1
Meningitis, meningococcus					1				1	
Mumps					2		11		13	
Paratyphoid fever							1		1	
Pneumonia		9		4	37	3		6	[2] 37	22
Relapsing fever	1								1	
Tuberculosis		13		9	4	2		7	[2] 4	31
Typhoid fever			1	1					1	1
Whooping cough		2			3			2	[2] 3	4

[1] 16 recurrent cases.
[2] Reported in the Canal Zone only.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended April 6, 1946.—During the week ended April 6, 1946, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		36		107	232	7	19	22	140	563
Diphtheria		4		23	4	7	4			42
Dysentery, bacillary				1						1
Encephalitis, infectious							1			1
German measles				23	57	4	6	13	16	119
Influenza		10			11	2	1		185	209
Measles		143	9	669	1,321	4	2	105	69	2,322
Meningitis, meningococcus			1		3		2			6
Mumps				37	429	124	20	103	171	884
Scarlet fever		11	2	74	85	12	2	6	15	207
Tuberculosis (all forms)		9	9	109	67	44	17	44	48	347
Typhoid and paratyphoid fever				12	2		2			16
Undulant fever				2	2				1	5
Venereal diseases:										
Gonorrhea		21	14	126	173	47	44	53	82	560
Syphilis		19	6	136	127	17	20	15	24	364
Whooping cough				52	33			8		93

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during recent months. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

Cholera

Ceylon—Eastern Province—Batticaloa District.—For the period April 1–17, 1946, 3 fatal cases of suspected cholera were reported in Batticaloa District, Eastern Province, Ceylon. All precautionary measures have been taken.

China.—Cholera has been reported in China as follows: Hunan Province, March 1–31, 1946, 1 case; Hupeh Province, February 19–28, 1946, 52 deaths; Kwangtung Province, April 1–30, 1946, 21 cases, 3 deaths. For the city of Canton cholera was reported as follows: January 1–31, 20 cases; February 1–28, 53 cases; March 1–31, 229 cases, 95 deaths. For the first week of April 1946, 164 cases with 43 deaths were reported in Canton.

India—Calcutta.—For the week ended April 13, 1946, 149 cases of cholera with 54 deaths were reported in Calcutta, India.

Plague

British East Africa—Kenya.—During the week ended April 13, 1946, 5 cases of plague were reported in Rift Valley, Kenya, British East Africa.

Burma—Rangoon.—For the week ended March 30, 1946, 8 cases of plague with 7 deaths were reported in Rangoon, Burma.

China.—Plague has been reported in China as follows: Chekiang Province, April 9, 1946, 3 cases; Fukien Province, February 1 to March 6, 1946, 298 deaths; Kwangtung Province, April 4, 1946, 1 case among the soldiers.

Egypt—Alexandria.—For the week ended April 27, 1946, 7 cases of plague were reported in Alexandria, Egypt.

Union of South Africa.—For the week ended April 20, 1946, 1 case of plague was reported in the Union of South Africa, no specific location being given.

Smallpox

Burma—Rangoon.—For the week ended March 30, 1946, 64 cases of smallpox with 35 deaths were reported in Burma, Rangoon.

French Guinea.—For the period April 1–10, 1946, 107 cases of smallpox were reported in French Guinea.

Togo (French).—For the period April 1–10, 1946, 80 cases of smallpox were reported in French Togo.

Typhus Fever

Mexico.—For the month of March 1946, 127 cases of typhus fever were reported in Mexico. States reporting the highest incidence are: Federal District, 23 cases; Mexico, 18; Guanajuato, 16; Nayarit, 11.

Morocco (French).—For the period April 11–20, 1946, 204 cases of typhus fever were reported in French Morocco, including cases reported by regions as follows: Agadir and frontier districts, 12; Casablanca, 48; Fez, 43; Marrakech, 35; Meknes, 33; Oujda, 3; Rabat, 30.

Turkey.—For the week ended April 27, 1946, 35 cases of typhus fever were reported in Turkey, including 2 cases in Istanbul, 3 cases in Izmir, 2 cases in Samsun, 4 cases in Sinop, and 4 cases in Zonguldak.

Yellow Fever

Colombia—Caqueta Territory—San Vincente del Caguan—La Danta.—On March 1, 1946, 1 death from yellow fever was reported in La Danta, San Vincente del Caguan, Caqueta Territory, Colombia.

Nigeria—Ibadan.—For the week ended April 20, 1946, 1 case of suspected yellow fever was reported in Ibadan, Nigeria.

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