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**Staffing of
State and Local
Health Departments
1951**

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Introduction

Health manpower is a national resource of vital importance which is in critically short supply. In normal times, as well as in periods of emergency, adequate health manpower is essential to the maintenance of a satisfactory level of well-being among the people of the Nation. Should disaster from military attack or other causes occur, the immediate mobilization of personnel in the health field would be imperative. With almost no surplus on which to draw, those presently employed in the many organizations utilizing health personnel would be the principal source of supply.

Information concerning the resources in health manpower—the number, age, position, and present employment of professional and technical health workers—was urgently needed in the Office of Defense Mobilization. A Health Resources Advisory Committee was appointed to take stock of the Nation's health manpower, to identify critical shortages, and to advise on the optimum utilization of available personnel. Under the committee's leadership, a continuing survey of health personnel is being made. Several reports on various aspects of the total problem have been published. (See list of publications, appendix A.)

The committee called on the Public Health Service to supply information on manpower in the public health field. A study of the staffing of State and local health departments was undertaken in the spring of 1951 as the first step.

The survey has brought together for the first time in approximately 10 years (1) specific information concerning the staffing of State and local health departments and the vacancies reported in budgeted positions. The data present a far from encouraging picture as to the possibility of maintaining presently operating

health departments at minimum levels. Expansion of services within existing health agencies, an increase in the number of agencies in operation, or the development of new programs and services, all of which require additional professional personnel, face the fundamental problem of personnel shortages.

These observations stem from disclosure that an average of 10 percent of all budgeted positions of State and local health departments were vacant at the time of the survey. For the several categories of health department personnel, vacancy rates ranged from 6 percent for sanitarians to 21 percent for dentists. Fifty-eight percent of all vacancies occurred among the three classes of health department personnel essential for providing minimum basic services, namely, physicians, nurses, and sanitarians. In addition, 10 percent of the professional and technical personnel on the job were reported as having status in some component of the military reserve.

Preliminary reports from the survey data were made to the Health Resources Advisory Committee in October and November of 1951 (2). Highlights of the survey findings, with respect to manpower needs and resources of State and local health departments, were published in August 1952 (3). The present publication covers the final analysis of all data collected. It is designed to furnish source material for reference purposes, of use not only to the committee but also to any groups or individuals interested in the problem of public health manpower. The report features detailed tabular presentation of the information collected, with text limited to the minimum necessary for interpretation.

Method and Extent of Survey

The survey was planned early in 1951. With the help of the committee, a schedule (see appendix A) was developed for collecting the necessary information. Schedules were sent to all State health departments, and through them to local health agencies throughout the Nation. The health departments in Alaska, the District of Columbia, Hawaii, Puerto Rico, and the Virgin Islands were included in the study. Reports as of April 16, 1951, were requested for health department staff members in six selected categories—physicians, nurses, engineers, sanitarians, dentists, and veterinarians—and for budgeted positions and vacancies in a broader list of public health positions. Several city health department reports, submitted at a later date and containing staff information as of the date of submittal, have been included in the final tabulations. However, all data reported were 1951 figures.

The information requested covered two types of data concerning health department personnel. The first was a list of employees in the six classifications basic to health department operations listed above. For these employees, information was requested as to positions occupied in the health department, sex, year of birth, and status in military reserve or liability under the Selective Service Act of 1948, as amended by Public Law No. 770. Second, for 20 categories of professional and technical public health personnel, information was collected on the number of budgeted positions in each health department and the number of such positions

vacant at the time of the survey. Each report also provided information regarding the type of health department, the size of the population served, and the geographic location of the agency.

The survey included reports for all State health departments and 1,470 local health agencies in the continental United States. It also covered four Territorial health departments, the functions of which parallel those of State health departments in the United States, and 37 local jurisdictions in the Territories.

Participating local health agencies in the United States provided services for a population of 119,407,150, and in the Territories for 2,352,562. In the United States, this represented 80 percent of the inhabitants reported in the 1950 census, and in the Territories, 82 percent of the total population.

Of the 1,470 local health departments in the United States which reported personnel of the six selected categories employed at the time of the survey, 1,257 also provided information on budgeted positions and vacancies in 20 categories of public health workers. All 48 State health departments provided information on the six occupational groups, and 44 submitted information concerning their budgeted positions and vacancies. In the Territories, all four central health agencies, and 36 of the 37 health districts which provided information on personnel employed at the time of the survey, also submitted information concerning budgeted positions and vacancies.

Characteristics of Health Departments Reporting

Reporting local health departments in the United States comprised 771 county and city-county units, 228 city departments, 275 local districts (usually, but not always, multicounty units) and 68 State health districts. State districts which provided direct health services

and those exercising only administrative or supervisory functions both participated in the survey. In addition to the above types of organized local health departments, completed schedules were received from 128 areas which have no organized health departments but em-

ploy one or two public health workers, usually nurses and sanitarians. Most of these were rural areas in the Middle West. Their non-organized agencies are classified as "other" throughout this report.

The local health departments participating in the survey served communities ranging in size from less than 35,000 population to over 500,000, with almost two-thirds representing areas of less than 50,000. Sixty-six percent of the county health departments, 50 percent of the city, and 68 percent of the local district health agencies were serving populations under 50,000. However, only 22 percent of the people living in jurisdictions served by local health agencies were residents of communities of less than 50,000 population. Conversely, the 5 percent of local health agencies in communities of a quarter million or more provided

services for 40 percent of the population covered by the survey.

In order to determine whether the distribution, type, and staffing of local health agencies exhibited any regional characteristics, the information for the various States was grouped in four broad geographic areas—the northeastern, southern, central, and western (see appendix A). The distribution of personnel of the selected categories in local health departments in designated geographic regions, according to type of department and community size, is shown in table 1 of appendix B. For the same categories in State health departments, distribution by geographic regions is found in table 2, appendix B. Distribution of local health departments by type, size of community, and population served is reported for each geographic region as well as for the entire country in table 3 of appendix B.

Budgeted and Vacant Positions

In 1,257 local and 44 State health departments in the continental United States which reported budgeted positions and vacancies, there were 31,318 budgeted positions, of which 3,081 were vacant at the time the study was made. In the Territories, 36 health districts and the 4 Territorial health departments reported 1,446 budgeted positions with 129 vacancies.

These 3,200-odd vacant positions should in no way be interpreted as representing total requirements. Vacancies reported in budgeted positions represent only a fraction of the total personnel needs of State and local health departments. They do, however, indicate urgent and immediate needs for personnel to fill positions already established for which funds are available. They also reveal the professional groups in which the most extreme shortages exist. In budgeted positions alone, 1 out of 10 reported was vacant. Obviously the absence of employees in these positions imposes restrictions on health department programs and services.

Budgeted positions and vacancies were re-

ported in 20 categories of public health personnel in the State and local health departments. For only 7 classes of personnel were there more than 1,000 budgeted positions. Four of these appear among the 6 selected categories about which some detailed information was secured. These four—physicians, nurses, sanitarians, and engineers—represent the professional classes that make up the basic framework for health department programs and services. Two categories, physicians and engineers, have vacancy rates considerably higher than the average for all 20 classes—with 19 percent of the budgeted positions for physicians and 15 percent for engineers reported as vacant.

The wide variety of budgeted positions reported gives some indication of the trends in modern health department programs and services. Although only 50 health departments reported budgeted positions for psychiatric social workers—the group with the highest rate of vacancies—the very fact that this category appears in health department plans indicates an awareness among health admini-

Budgeted positions and vacancies and percent of budgeted positions vacant for professional and technical personnel of 20 categories reported by State and local health departments in the United States and Territories

Category ¹	Number of agencies reporting	Positions		Percent of budgeted positions vacant
		Budgeted	Vacant	
All.....	1,341	32,764	3,210	10
Graduate nurse.....	1,209	12,256	1,108	9
Sanitariums.....	1,110	5,580	310	6
Other.....	246	3,075	330	11
Physician.....	1,031	2,382	458	19
Bacteriologist.....	205	1,320	108	8
Engineer.....	254	1,120	164	15
Laboratory technician.....	194	1,101	107	10
Administrative management.....	184	778	44	6
Other technician.....	163	755	70	9
Public health investigator.....	220	623	30	6
Health educator.....	220	463	91	20
Dental hygienist.....	111	403	56	14
Dentist.....	144	370	78	21
Analyst and statistician.....	114	359	52	14
Chemist.....	82	351	25	7
Veterinarian.....	143	325	31	10
Practical nurse.....	50	278	21	8
Other medical social worker.....	88	260	43	16
Nutritionist.....	82	224	35	16
Psychiatric social worker.....	50	182	36	20

¹ Arranged in rank order of budgeted positions.

trators of the place of mental health programs in modern public health services. The inclusion of other professional classes, such as public health investigators, health educators, and nutritionists, also indicates the influence of the newer concept of public health which covers a wide area of environmental and personal health.

Budgeted positions for physicians, nurses, and sanitarians represented almost two-thirds of all those reported, and well over half of the vacant budgeted positions were in these three categories. Although the percentage of vacancies in budgeted positions for nurses was slightly below the average for all classes of personnel combined, the total number of vacancies was more than twice that for any other group. Even so, the number of budgeted positions represents only about one-tenth of the number of nurses estimated to be needed in the United

States to bring nursing services in health departments now in operation up to accepted minimum standards. It should be constantly borne in mind that although vacancies in budgeted positions highlight urgent and immediate needs, these positions are far below requirements for adequately staffed health agencies.

Budgeted positions for nurses represented more than one-third of all positions reported, and 95 percent of all health departments participating in the survey had established positions for nurses in their plans. Less than half as many budgeted positions were reported for sanitarians as for nurses, but 83 percent of the health departments included budgeted positions for sanitarians, while 77 percent reported budgeted positions for physicians. Thus, it would appear that while most health departments can offer the health services which nurses perform, about one in four is without the services of full-time medical personnel. In the Territorial health departments, all agencies reported budgeted positions for physicians and nurses, while three of the four state-level departments and one-third of the local jurisdictions reported budgeted positions for sanitarians.

Positions in Total Staff

Geographic Region

More than half of all health departments reporting budgeted positions and vacancies were in the southern region. The central region had more than one-fifth, and the remaining health departments were divided almost equally between the northeastern and the western regions. Figure 1 shows graphically the distribution in the United States of local health departments which reported budgeted and vacant positions, and the percentage of the total population in each region which was served by local health departments.

Twenty-nine percent of all budgeted positions and 11 percent of all vacancies in local health departments were reported by the northeastern region. In this area, with its largely urban and industrial culture, city health departments were most common, representing more than half of all local health departments.

Almost one-third of the budgeted positions in all local health departments included in the

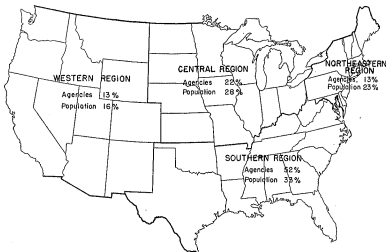


Figure 1.—Percentage distribution of local health departments reporting budgeted and vacant positions and of population residing in reporting health department jurisdictions.

study were reported in the southern region, with an overall vacancy rate of 9 percent. Two-thirds of the southern local health agencies were county health departments, and most of the others were local health districts. No doubt the type of department which has developed in the southern region of the United States reflects to some extent both the dominance of the county as a political unit and the largely agricultural economy of the area.

The central and western regions each reported 20 percent of the budgeted positions in local health departments, with the central region having a vacancy rate of 9 percent and the western, 6 percent. In these areas, county health departments predominated. In the central region 42 percent of the local health departments were of this type; in the western area, 54 percent.

Health Department Organization

Vacancies in budgeted positions ranged from 5 to 16 percent in local health departments of different types. The highest rate of vacancies

in any type of local health department was 16 percent in the State districts, with the small, unorganized health agencies classed as "other" having the lowest rate, 5 percent. County and city health departments, with two-thirds of the total budgeted positions reported, had vacancy rates of 8 and 9 percent, respectively, slightly below the figure for all types of departments. State health departments reported a vacancy rate of 12 percent. Exact figures and percentages are given in table 1 of appendix C. Table 2, appendix C, presents the geographic variations in the distribution of budgeted positions and vacancies reported by health departments of different types.

Community Size

The rate of vacancies did not vary greatly among health departments serving communities of different sizes. The highest rate was reported in the health departments in the smallest communities, but even in the agencies serving the largest populations, those of 500,000 or more, 1 budgeted position in 11 was

reported as vacant. Tables 3 and 4, appendix C, show the influence of community size upon budgeted positions and vacancies in different types of local health departments.

Positions in Designated Categories

State Health Departments

In the United States, 44 of the 48 State health departments provided information on budgeted positions and vacancies. There were 7,852 budgeted positions in the 20 categories of public health personnel, of which 12 percent were vacant at the time of the survey. The highest percentage of vacancies was reported for psychiatric and medical social workers. In these classes, approximately one-third of the positions budgeted were vacant. Physicians, dentists, and dental hygienists also were reported as having high rates of vacancies in State health departments; each of these classes had about one-fourth of the established positions unfilled. Aside from budgeted positions in administrative management, the lowest vacancy rates were for public health investigators, chemists, bacteriologists, and sanitarians, all of which had 5 to 7 percent of the budgeted positions vacant.

With a single exception, the central region, the high vacancy rates for social worker positions, both psychiatric and medical, are found in all geographic regions. In the central region, State health departments reported budgeted positions for five medical social workers and no vacancies. However, in the same region half of the 12 positions for psychiatric social workers were unfilled. Budgeted positions for veterinarians had high vacancy rates in the southern and western regions, but there were no vacancies reported in the budgeted positions for this class in the northeastern and central areas. Table 5 of appendix C shows the numbers of budgeted and vacant positions and vacancy rates for State health department personnel of the United States as a whole and of each of the four geographic areas.

County Health Departments

Budgeted positions and vacancies in 20 categories of health department personnel were reported by 674 county (including city-county) health departments. In these departments, for all categories of personnel, vacancies in bud-

get positions represented 8 percent of the total number. Except for the county health departments in the smallest communities, where the over-all vacancy rate was 14 percent, there was little variation from the total rate.

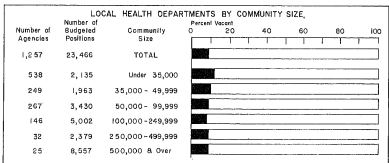
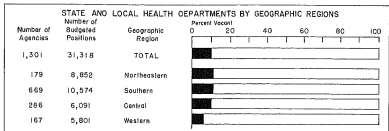
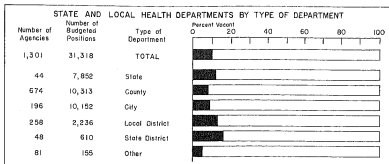
Rates of vacancies in budgeted positions need to be considered in relation to the class of position itself and the extent to which it was reported in county health departments. The vacancy rate for nutritionists was 33 percent, and for sanitarians, 5 percent. It should be noted, however, that only 9 county health departments reported budgeted positions for nutritionists, while 615 had budgeted positions for sanitarians. On the other hand, budgeted positions for chemists were also reported by 9 counties, with no vacancies indicated.

In budgeted positions for physicians, the over-all vacancy rate was 17 percent for all reporting county health departments. By size of community, the range was from 6 percent in health departments serving populations of 500,000 or more, to 35 percent in communities of less than 35,000. Figures 2 through 8 show the vacancy rates for all public health workers and the six selected categories reported by State and local health departments in the United States as a whole, by type of department, by geographic region, and by size of community (from those with less than 35,000 population to those with 500,000 or more).

When vacancies in budgeted positions are considered with respect to the regional location of the agencies, no clear-cut pattern is evident. The vacancy rates in the southern region for four of the six selected categories are somewhat higher than for the country as a whole. The northeastern, central, and western regions reported vacancy rates in budgeted positions for most of the six selected categories about the same as these rates for the country as a whole.

City Health Departments

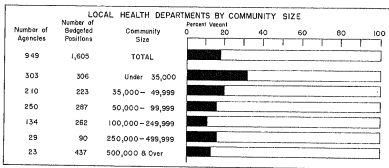
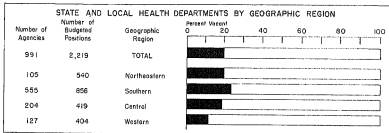
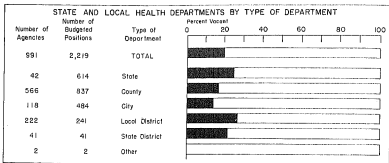
Budgeted positions and vacancies for public health workers were reported by 196 city health departments, with a total of 10,152 budgeted positions, of which 915 were vacant when the study was made. The overall vacancy rates ranged from 2 percent in the 24 city health departments serving communities from 35,000 to 50,000 population, to 10 percent in the 13 agencies in communities with populations of



Vacant Filled



Figure 2.—Percentage of vacancies in budgeted positions for all personnel.



Vacant Filled



Figure 3.—Percentage of vacancies in budgeted positions for physicians.

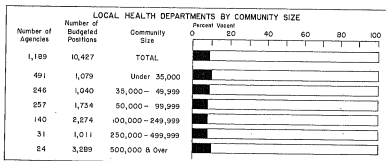
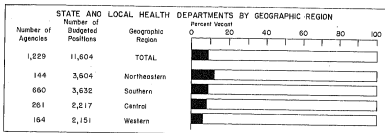
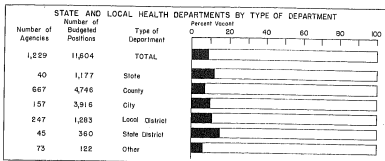
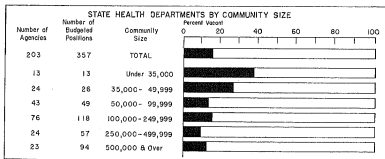
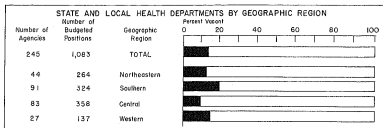
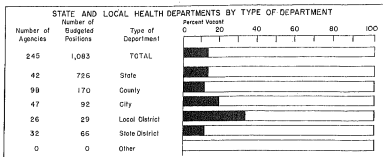


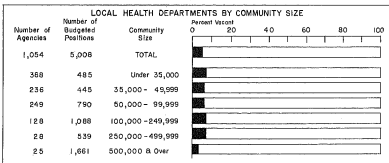
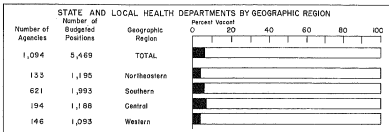
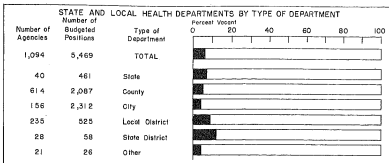
Figure 4.—Percentage of vacancies in budgeted positions for nurses.



Vacant Filled



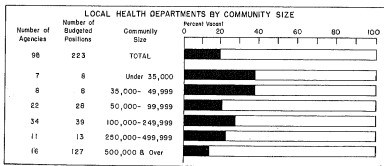
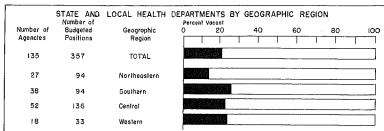
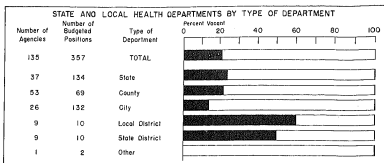
Figure 5.—Percentage of vacancies in budgeted positions for engineers.



Vacant Filled



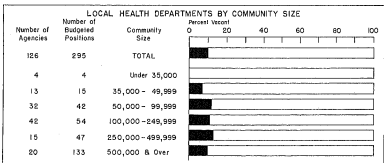
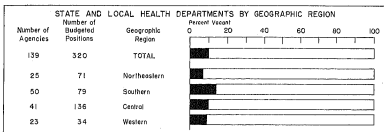
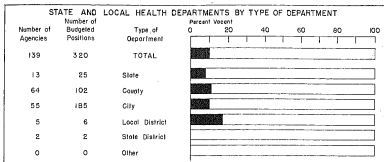
Figure 6.—Percentage of vacancies in budgeted positions for sanitarians.



Vacant Filled



Figure 7.—Percentage of vacancies in budgeted positions for dentists.



Vacant Filled



Figure 8.—Percentage of vacancies in budgeted positions for veterinarians.

500,000 or more. It should be noted, however, that city health departments in communities of 35,000 to 50,000 reported a total of only 179 budgeted positions, while those in the largest communities reported 5,688, distributed among the 20 categories listed.

In city health departments, although the highest rate of vacancies in budgeted positions (23 percent) was for health educators, 20 percent or more of the budgeted positions for nutritionists and engineers were vacant also. For all city health departments, 14 percent of the budgeted positions for physicians were vacant.

Local District Health Departments

Second in number only to county health departments were local districts, 258 of which were included in the survey. These are usually multicounty units, although many represent an aggregation of small towns and villages. Like the county health departments, the greatest number, representing 60 percent of the total, were located in the southern region. All local health districts were in communities with populations under 250,000. Thirteen percent of the budgeted positions in all local districts were vacant at the time of the survey. The rate for the smallest communities (under 35,000 population) was 13 percent, and only slightly higher, or 16 percent, in the local district health departments in communities of 35,000 to 50,000 population. In communities with 100,000 to 250,000 population, the vacancy rate was 8 percent.

Vacancy rates for all categories of personnel reported in the local districts were relatively high except for nurses, sanitarians, and health educators. Twenty-seven percent of the budgeted positions for physicians and 34 percent of those for engineers were vacant.

State District Health Departments

Health agencies in State districts provide two kinds of services—broad administrative and supervisory services over local health agencies in their jurisdictions and direct services comparable to those of county health departments. In this survey no attempt was made to differentiate between the two types of departments. Forty-four percent of the 48

State health districts included in the study were located in the central region and 31 percent in the northeastern area. The western region reported only 2 such health units, and in the southern region there were 10. Few of the agencies were located in communities serving less than 35,000 or more than 500,000 population. The vacancy rate in all budgeted positions reported was 16 percent.

Aside from the basic categories of physicians, nurses, engineers, and sanitarians, only 3 occupational groups were reported by 10 or more State health districts. It seems evident, then, that such direct services as were given were largely of the traditional types.

Other Local Agencies

Eighty-one local health agencies which could not be classified according to the usual types of organized health departments were listed as "other." These were located for the most part in the central and western regions, in rural areas where no organized health agencies were reported. They served communities with populations under 100,000, and the positions budgeted were almost entirely for nurses and sanitarians. Only two health departments in this group reported budgeted positions for physicians, and one reported two positions for dentists. In a total of 155 budgeted positions reported, 8 were vacant.

Territories

In the Territories, only two types of health departments were represented—the Territorial or central agency, corresponding to the State health department in the United States, and State district health departments, the only type of local agency. All personnel reported in Alaska and the Virgin Islands were in the central agency, which provided both administrative and direct health services. In the Hawaiian Islands and Puerto Rico, agencies comparable to State health districts in the United States provided the direct services, with a central agency for administration and supervision.

The number of agencies reporting, budgeted positions, and vacancies for each of the 20 categories of health personnel, are shown in table 6 of appendix C.

Personnel of Selected Categories

State and local health departments in the continental United States and in the Territories provided information concerning position, profession, age, sex, and status in the military reserve or liability under the Selective Service Act of 1948, as amended by Public Law No. 779, for six selected categories of their professional and technical personnel. Included were physicians, dentists, and veterinarians subject to registration under the Selective Service Act. Also included were nurses, engineers, and sanitarians, who, although not covered by the Act, constitute part of the basic health department staff. Information concerning employees in these classes was received from 1,470 local and all 48 State health departments in the United States, from 37 health districts in the Territories, and the 4 Territorial health departments.

At the time of the survey, public health services in the United States and in the Territories were provided by 22,542 health workers of the six categories mentioned. In the total, 63 individuals in the United States, most of whom were reported as lay health officers, were included as "other."

Health Department and Community Size

Local health departments in the continental United States reported 18,614 employees of the six selected categories; in addition, 508 were reported by local health agencies in the Territories. The 48 State health departments listed 3,010 public health workers in these classes; the Territorial health departments, 410. Expressed percentagewise, State health departments reported 14 percent of the total number of public health workers for whom special information was provided. County health departments employed 38 percent and city health agencies, 34 percent; 9 percent were in local and 4 percent in State health districts, with approximately 1 percent in "other" health agencies.

Five hundred and seventeen physicians, 25 percent of the total number reported by official health agencies participating in the survey, were employed in State health departments, whereas

almost two-thirds of the engineers and more than one-third of the dentists were employees of the State organizations. Nurses, sanitarians, and veterinarians, on the other hand, were largely employed in local health departments, with only 10 percent of the nurses, slightly less than 10 percent of the sanitarians, and about 9 percent of the veterinarians reported in State health departments.

The distribution of employees among local health departments in the United States and its geographic regions, by type of department and size of community, is shown in table 1 of appendix B. (For list of States in each region, see appendix A.) The distribution of employees in State health departments and geographic areas is shown in table 2 of appendix B.

Reports of personnel of the selected categories employed by local health departments at the time of the survey were submitted in approximately the same proportions as were reports on budgeted and vacant positions (page 3). As was noted in that discussion, most of the local health departments were in the small communities. The distribution of local health departments according to the type of department and community size for the United States as a whole and its geographic regions is shown in table 3 of appendix B. Actual populations served are also shown.

There was a generally close relation between the percentage of population in health department jurisdictions and the percentage of public health personnel of the six selected groups employed in these jurisdictions.

County Health Departments

The 771 county health departments, representing 52 percent of all local health agencies participating in the survey, provided for 43 percent of the total population receiving local health services and employed 44 percent of the public health personnel in local health departments. Slightly more than one-half of the physicians, nearly half of the nurses, engineers, and sanitarians, and about one-third of the dentists and veterinarians employed in local

health agencies were in county health departments. Sixty-seven percent of the county health departments were serving communities with less than 50,000 population, while 3 percent served populations of a quarter million or more. About 300 physicians, 1,200 nurses, and 600 sanitarians were employed in the more than 500 county health departments providing services for communities with populations under 50,000. In the 24 county health departments serving 250,000 or more persons, there were nearly 200 physicians, 1,500 nurses, and 650 sanitarians.

City Health Departments

City health departments numbering 228 accounted for 15 percent of all local health departments participating in the study. They provided services for one-third of the population residing in local health jurisdictions and employed 40 percent of the public health personnel. They utilized the services of about one-third of all physicians employed in local health departments, slightly more than one-third of the nurses, and nearly half of the sanitarians. Half of the city health departments were located in communities with populations under 50,000 and about one-eighth in communities of a quarter million or more. Less than 9 percent of the physicians and about 6 percent of the nurses and sanitarians employed in city health departments were in the smaller communities. More than two-thirds of the physicians, nurses, engineers, sanitarians, and veterinarians, and more than three-fourths of the dentists in city health departments were in those providing services for populations of 250,000 or more.

Local Health Districts

There were 275 health agencies classed as local health districts, 19 percent of all local health departments in the study. Sixty-eight percent of these agencies were in communities under 50,000 population, and all were serving populations of less than 250,000. They employed 1,905 health workers—186 physicians, 1,203 nurses, and 476 sanitarians. The local health districts employed 10 percent of the public health workers on whom information was made available in the survey and provided services for 11 percent of the population living in any local health department jurisdiction.

State Health Districts

State health districts, both those providing supervisory and administrative services and those giving direct public health services to residents in the area, were included in the survey. There were 68 such agencies—employing 787 public health personnel of the selected classes, representing 4 percent of the total personnel in local health departments, and providing services for 11 percent of the covered population. Half of the State health districts were serving communities in the 100,000 to 250,000 population group. They employed 38 percent of the public health personnel in State health districts and provided services for 40 percent of the population in State health district jurisdictions. About 3 percent of the physicians and 5 percent of the nurses in local health agencies were reported in the State health districts. Although they reported just over 1 percent of the sanitarians, they employed more than one-fourth of all engineers in local health departments.

Other Local Agencies

Practically all the "other" unorganized health agencies were located in areas with the smallest populations, under 35,000. Only 3 physicians were reported in all 128 health units, with most of the staffs being made up of nurses and a small number of sanitarians. Although the "other" health agencies represented 9 percent of the total number of local health departments, they provided services for only 2 percent of the total population residing in health department jurisdictions and employed 2 percent of the public health workers (fig. 9).

In local health departments, especially in the small communities where the number of physicians reported is less than the number of individual agencies, it is obvious that many were operating without full-time medical administrative leadership.

Regional Distribution

The close relation between the percentage of population and percentage of public health personnel noted in connection with the type of department was also evident in the regional distribution of population served by local health

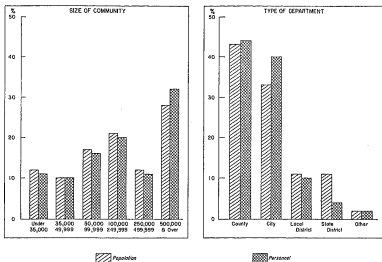


Figure 9.—Percentage distribution of population served and personnel of six selected categories reported by local health departments in the United States, according to size of community and type of department.

agencies and the personnel employed in those agencies. About one-half of all local health departments participating in the survey were in the southern region, one-fourth in the central, and the remainder divided almost evenly between the northeastern and the western regions. The populations served by these agencies showed a somewhat different distribution, with 33 percent in the southern region, 30 percent in the central, 22 percent in the northeastern, and 15 percent in the western. The distribution of public health workers of the six special groups was markedly similar, with 32 percent in the southern region, 25 percent in both the northeastern and central regions, and 18 percent in the western area.

Although more than one-third of all physicians reported in local health departments were employed in the southern region, the average was considerably less than 1 physician for each agency, with a total of 680 reported in the 727 local units. In the central area also, there was an average of less than 1 physician for each health department, although the deficit was not

so great as in the southern region—327 physicians in 309 local health agencies. The northeastern and western regions averaged almost two physicians for each health department.

Military Status

Information provided by State and local health departments concerning six selected categories of professional and technical personnel included status in components of the military reserve of the armed services and the Public Health Service. Three of these categories—physicians, dentists, and veterinarians—were, under specified conditions, required to register under the Selective Service Act of 1948 as amended in 1950 by Public Law No. 779. Under this law, men under 50 years of age were registered unless they held status in the military or Public Health Service reserve.

The first registration was held in October 1950. At that time, those physicians, dentists, and veterinarians were registered who had participated in specialized training programs of

the Army or Navy, or who had been deferred from active service in World War II to pursue their education in one of the special categories had had less than 90 days of active duty after completing their education. In addition, men in the same special categories who had 90 or more days but less than 24 months of active duty were required to register. These two groups made up priorities 1 and 2. Later registrations were held for individuals in these professions who were not registered earlier and who had no active duty in the armed services or Public Health Service after September 16, 1940. These registrants were assigned priority 3. The final group, in priority 4, included all men within the categories and age limits specified who were not liable under earlier registrations. They were ranked according to the number of full months of their active duty.

State and local health departments in the continental United States reported that 942 physicians, 189 dentists, and 152 veterinarians on their staffs were in the age groups affected by the provisions of the amended Selective Service Act. However, of these, 27 percent of the physicians and 32 percent of both the dentists and veterinarians reported status in the military reserve. Priorities were assigned to 476 physicians, 81 dentists, and 48 veterinarians, with 43 physicians, 13 dentists, and 10 veterinarians in priorities 1 and 2, the groups eligible for earliest induction into the armed services (table 1, appendix D).

Status in the military or Public Health Service reserve was reported for all six of the selected categories of personnel, regardless of age and sex. The greatest percentage of any group so enrolled was among the engineers, of whom 38 percent of those employed in health departments reported status in some component of the reserves. Relatively few of the engineers were in the reserve of the Public Health Service. In the event of a recall of reservists to active duty, health agencies would be faced with shortages of engineering personnel far more critical than at present.

Among all personnel on whom information was made available, 10 percent were reported as having status in the military reserve. Among those who held positions as health officers or chiefs of service, 17 percent were reported with status in the military reserve and

another 17 percent among the physicians, dentists, and veterinarians had been assigned priorities under Public Law No. 779. Only about 1 percent of this group, however, were reported in priorities 1 and 2. Among those whose positions were supervisory or consultant, 11 percent were in the military reserve and about 2 percent had been assigned priorities under Public Law No. 779. Table 2 of appendix D presents the numbers of personnel with status in the military reserve or priorities under the Selective Service Act as amended, according to the level of responsibility of the positions held in the State and local health departments. In the event of a general recall to active status of those in the various components of the military reserve and the induction of those eligible under Public Law No. 779, many health departments and specialized health services would lose much of the administrative leadership they reported at the time of the survey. It would not be expected that all those reporting status in the military reserve or liability under Public Law No. 779 would be called to service, for age, physical condition, and essentiality of services would be taken into consideration. However, many health departments were seriously lacking in personnel qualified for leadership at the time of the survey. Additional losses would worsen an already serious situation.

Level of Responsibility

State and local health departments were requested to indicate the position held by each public health employee in the six selected categories. From this information, staffing at various levels of responsibility in the reporting health departments was determined. Ten percent of all professional and technical personnel of the selected categories were reported in administrative positions as health officers or chiefs of service, with another 7 percent serving as supervisors or consultants. More than three-fourths of the personnel reported were staff workers, with 5 percent the only worker in a particular occupation in the health agency. (See table 9 of appendix D for personnel of the six selected categories distributed according to the level of responsibility of the positions in which they were reported.)

Fifty-three persons, not listed in the six categories of professional and technical personnel, but reported as health officers, were classified as "other." They served in small health departments and directed the activities of a limited staff, usually only nursing personnel and occasionally some sanitarians.

Personnel Categories

The requested information on public health personnel in official health departments was limited to those factors believed to have the closest relation to staffing problems. The extent of employment of women qualified in other professions than nursing, the general age levels of professional and technical public health workers, and the responsibilities involved in the positions held, in addition to liability for military service, seemed most significant for the purposes of the survey.

Physicians

Information was made available concerning 2,224 physicians, of whom 2,074 were in the continental United States and 150 in the Territories. State health departments employed 517 of those in the United States, and 61 of the 150 in the Territories were in the central health agencies. Slightly more than 11 percent of all physicians reported were women, serving in relatively the same capacities as male physicians.

Although information on age was sought primarily in relation to possible calls to military service, analyses of the data revealed information of interest in other areas as well. The median age for all physicians was 49 years, with the women physicians in a slightly younger age group than the men. The median age for physicians in the United States was 50 in local health departments and 47 in the State health departments. Although State health departments seemed to be more successful than local agencies in interesting younger physicians in careers in public health, the number employed dropped off sharply after age 50. Nearly two-thirds of the physicians in State health departments were not over 50 at the time of the survey, but only half of those employed in local health departments were in this age group.

Fourteen percent of all physicians whose age was reported were over 65. This group repre-

sented 15 percent of the health department physicians in the United States, but less than 4 percent in the Territories. In local health departments nearly one-fifth of the physicians were over 65, compared with about 7 percent in State health departments. Physicians in the Territories were in general a younger group than those in comparable health departments in the United States. The percentage distribution of physicians in the United States, according to age groups in the various types of departments, is shown in figure 10.

Two-thirds of all physicians were health officers or chiefs of service, 5 percent held supervisory or consultant positions, and 26 percent were reported as staff workers. As has been pointed out previously, many local health departments, particularly those located in the small communities, lacked medical administrative personnel. In the southern region, where the lack of medical personnel in local health departments was perhaps most evident, many instances of sharing the services of medically trained health officers among two or more local health departments were reported.

For the 1,470 local and 48 State health departments participating in the survey in the continental United States, 1,391 physicians were reported as health officers and chiefs of service. Included in this number were the State health officers and medical administrative directors of general and categorical programs in the State health departments, and health officers and chiefs of service of large and complex city health departments. Therefore, perhaps the most serious staffing problems exist with respect to medical administrators to direct the activities and programs of local health agencies, both those in operation and those proposed under plans for expanding and extending local health services.

One-third of the public health workers who were reported as health officers or chiefs of service also were reported as having status in the military reserve or were registered under the provisions of Public Law No. 779. In the event of an emergency requiring the return to active duty of those in the reserve and the induction of those liable for service under the amended Selective Service Act, physicians, as well as others, serving in these supervisory and administrative positions would be called from

their health department activities. Since about half of all physicians employed in health departments were under 50 at the time of the survey, the call for service would undoubtedly deprive the health agencies of most of their younger medical staff—those in positions of responsibility as well as those serving in less critical positions.

Nurses

Health departments provided information concerning 12,656 nurses, of whom 12,044 were in the United States and 612 in the Territories. Only 6 percent of the nurses were reported as having status in the military reserve. It would seem, therefore, that the depletion of nursing staffs in health departments is not particularly due to their being called from reserve to active status in military service. Many nurses, however, are joining the armed forces, and replacements are increasingly difficult to obtain.

The median age, in an occupation for which preparation is completed at a relatively early age, was 41 years, somewhat older than might have been expected. Nurses in State health departments had the oldest median age, 44, in any type of health agency. This contrasts with the median age of physicians in State health departments, who were the youngest age group reported in any type of organized health agency. Figure 11 shows the percentage distribution by age groups of nurses reported by State and local health departments in the United States (table 4, appendix D).

Relatively few of the nurses reported were chiefs of service. Those in administrative positions, together with supervisors or consultants, constituted some 12 percent of the total number. The greater number of nurses employed in the health departments reporting were staff workers. Shortages, therefore, would be reflected in the provision of day-to-day nursing services, rather than in program direction or administration, as in some of the other professions. The nursing profession is one to which its members often return after periods of absence due to marriage, personal responsibilities, and other causes. Nursing skills and abilities may be effectively renewed through brush-up training and reorientation. At pres-

ent, nurses are not entering the profession in numbers sufficient to fill the needs for nursing services, not only in health departments, but also in the armed services, hospitals, private duty, and the many other areas where nurses are needed. Health departments, therefore, would do well to carry on a continuous critical analysis of programs and services to insure the most effective use of the available nursing staff. The use of supplementary personnel where feasible, the recruitment to active service of nurses who have retired from their profession, part-time employment in areas of serious shortages, and the active promotion of nursing careers all may be helpful in the effort to provide nursing services where and when they are most needed.

Engineers

The shortage of engineers was reflected in one of the highest percentages of vacancies in established positions reported by the State and local health departments participating in the study. Of the 1,699 engineers reported, 38 percent held reserve status in some component of the armed services, and among those under 40 years of age, 46 percent reported status in the reserve. Nearly 90 percent of the engineers were under 50 years of age, with a median of 37 years, the youngest of any occupational group reported. With a high rate of vacancies in budgeted positions, and more than one-third of all engineers reporting status in the military reserve, this relatively young group is likely to be further reduced by entrances into the armed services. Hence, the shortage of engineers has serious implications for the maintenance of essential engineering services in public health agencies.

Sixteen percent of the engineers were reported as health officers, chiefs of service, supervisors, or consultants. By far the greatest number were serving as staff workers, with about 11 percent reported as the only engineer in the health agency. Almost two-thirds of the engineers were employed in the State health departments; county health departments were second with 15 percent of the total number.

A look at the age distribution of engineers reveals that one-fourth of all those reported were in the age group of 26 to 30 years. The

number 31 to 35 years of age was about one-third smaller, and the distribution remained almost the same in all age groups up to 46 years, when the number fell off sharply. Only 11 percent of the engineers were over 50 at the time of the survey. It may be inferred that although health departments are fairly successful in recruiting engineers early in their professional careers, they tend to lose them rapidly, so that within a 5-year period employment and separations are about balanced with a considerably lower number of employed engineers. At the age when it might be assumed that engineers have attained their greatest skill in the public health field, there is a sharp drop in the number working in health departments (fig. 12). Attention might profitably be directed to this trend, in the hope that more engineers will remain in public health work after reaching the period of maximum usefulness. A review of salary schedules, working conditions, promotional opportunities, and provisions for retirement might disclose areas in which improvements would produce beneficial results (table 5, appendix D).

Sanitarians

The basic staff for the smallest health department which provides minimum essential services includes, in addition to a physician and one or more nurses, a sanitarian who is concerned with the maintenance of a healthful environment for the members of the community. His duties may extend from the inspection and certification of water supplies to the abatement of minor nuisances affecting the public health. The number of agencies reporting positions for sanitarians, and the number of sanitarians employed at the time of the survey, were second only to agencies reporting positions for nurses and to the number of nurses employed by them. Information was supplied concerning 5,871 sanitarians, of whom less than 10 percent were employed in State health departments. County health departments employed nearly 40 percent of the total number, with city health departments having 41 percent. In the Territories, on the other hand, about two-thirds of the sanitarians reported were in the central agencies, the other third in the State districts.

Few sanitarians held positions above the

level of staff workers. In all, about 5 percent were reported as health officers, chiefs of service, supervisors, or consultants. Status in the military reserve was reported for 10 percent of the sanitarians. However, they too were a relatively young group, and might be expected to enter the armed services or to be called to active duty. Almost half the sanitarians were under 40 at the time of the survey, and nearly three-fourths were under 50. The median age for all sanitarians was 41 years, with the youngest group, whose median age was 37, located in local health districts. The age distribution of sanitarians by percentage, according to the type of health department in which they were reported, appears in figure 13. As may be seen, the age distribution of sanitarians in county and city health departments very much resembles that of the total group (table 6, appendix D).

Dentists

Although public health agencies have been developing programs in dental public health for a number of years, the number of dentists reported on the staffs of State and local health departments would seem to indicate that progress has been slow. There were 316 dentists reported, of whom 305 were in the United States and 11 in the Territories. More than one-third of the dentists in the United States were employed in State health departments, while in the Territories almost two-thirds were located in the central health agencies. City health departments employed about the same number as the State health departments, and county health departments reported some 20 percent.

Of the 316 dentists reported, 193 male dentists were under 50 years of age at the time of the survey, and of these almost 75 percent were reported as having status in the military reserve or registered under the provisions of Public Law No. 770. Twenty-two percent of all dentists in the United States were reported in the military reserve, most of whom were under 50 years of age. In the entire group of dentists, 35 percent were over 50 when the study was made. A recall to active military service for the dentists in the reserve, and the calling up of those holding priorities under the Selective Service Act as amended, would deprive programs of dental

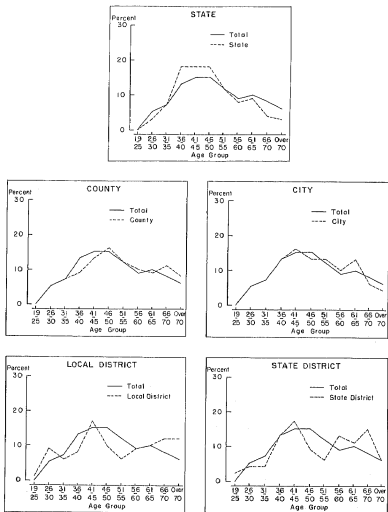


Figure 10.—Percentage distribution, by age, of physicians of known age reported by State and local health departments in the United States, according to type of department served.

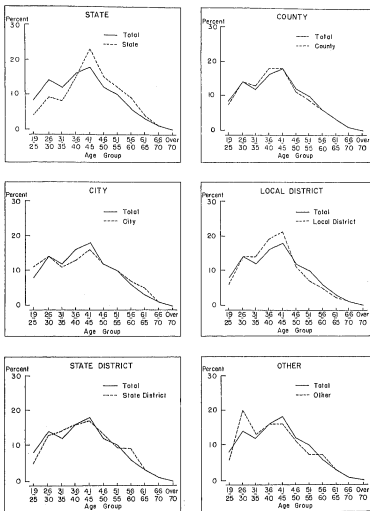


Figure 11.—Percentage distribution, by age, of nurses of known age reported by State and local health departments in the United States, according to type of department served.

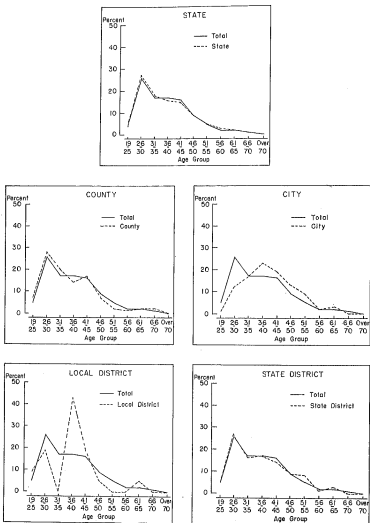


Figure 12.—Percentage distribution, by age, of engineers of known age reported by State and local health departments in the United States, according to type of department served.

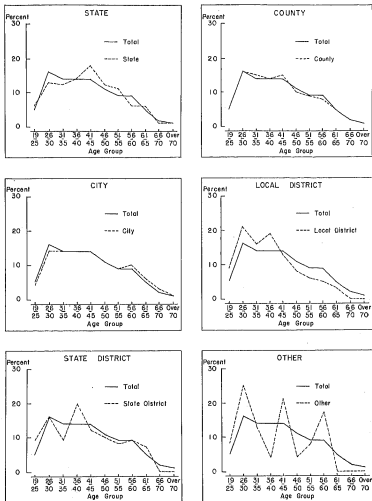


Figure 13.—Percentage distribution, by age, of sanitarians of known age reported by State and local health departments in the United States, according to type of department served.

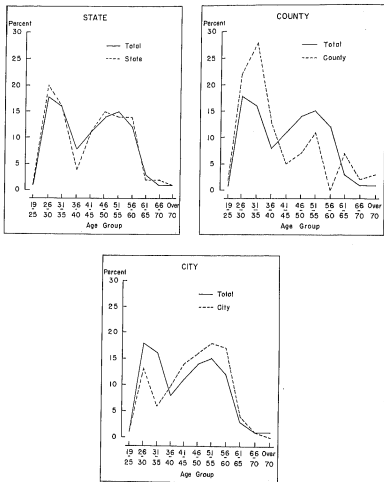


Figure 14.—Percentage distribution, by age, of dentists of known age reported by State and local health departments in the United States according to type of department served.

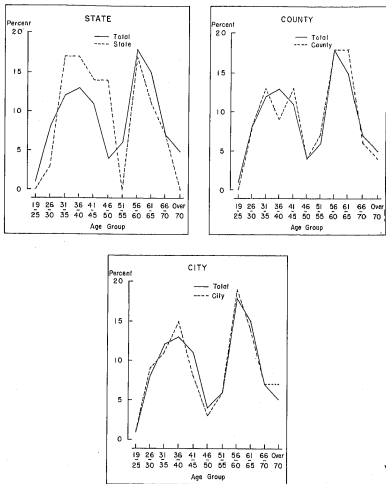


Figure 15.—Percentage distribution, by age, of veterinarians of known age reported by State and local health departments in the United States, according to type of department served.

public health of a large part of their dental personnel, except for those in the older age groups.

The median age for dentists in the continental United States was 45 years, and in the Territories, 50. In county health departments, the median age was considerably lower than for the dentists as a group or in other types of departments employing a considerable number in this category. County health departments reported a total of 62 dentists, with a median age of 35 (table 7, appendix D).

Less than 20 percent of the dentists reported were in positions at the administrative, supervisory, or consultant level. Most dentists were employed as staff workers, and about 1 in 5 was the only member of his profession in the health department.

The fact that participating health departments in the United States and in the Territories listed a total of only 316 dentists indicates that expansion of dental services in the public health field will not be possible until the number of dentists in or entering that field can be substantially increased. The introduction of public health dental programs in communities not now having these services, as well as more nearly adequate staffing of programs already established, will be impossible to achieve with the limited numbers of dentists now interested in the field of dental public health.

Some easing of the shortage might be effected through more general use of auxiliary personnel. Although dental hygienists, in those agencies which reported budgeted positions in that category, were also in short supply, their training is less exacting and time-consuming than the training of dentists. A critical evaluation of the duties and responsibilities involved in carrying on programs of dental public health should identify activities in which well-trained auxiliary personnel might be used. In this way, effective utilization of the qualified dentists available might be assured.

Veterinarians

State and local health departments reported 323 veterinarians. The small number may reflect, at least to some extent, the recognition in recent years of a separate category of public health veterinarians who are concerned chiefly with the diseases of animals transmissible to man rather than with the former duties of inspection and supervision of the production and handling of meat and meat products, poultry, and related items. The concept of veterinary public health is relatively new, and the veterinarians reported may represent in the main those in the new field, with those operating under the older concept of veterinary practices reported as sanitarians.

More than half of the veterinarians were reported by city health departments, with only 10 percent in the State health departments and 30 percent in the county agencies. Most of the veterinarians were employed as staff workers, with about 12 percent reported in administrative, supervisory, or consultant positions. Almost one-third were the only worker in their occupational class in the agencies reporting.

Of the veterinarians under 50 years at the time of the survey, almost two-thirds were in the military reserve or registered under Public Law No. 779. Priorities had been assigned to 48 veterinarians under the act, 10 of whom were in classes 1 and 2. Among all veterinarians reported, 18 percent were in the military reserve, most of them in the Army component.

The median age of all veterinarians reported was 51. In the city and county health departments, where the greater number were employed, the median age was 53, with the small number in the State health departments representing a younger group, with a median age of 45. Of the few veterinarians in the Territories, only 4 in number, 3 were under 30, and 1 was in the 46 to 50 age group (table 8, appendix D).

Discussion and Summary

Budgeted and Vacant Positions

Vacancies in budgeted positions, as reported by State and local health departments participating in the health manpower survey, represent the most immediate and urgent personnel needs for particular types of public health personnel. These vacancies should by no means be considered the only measure of total personnel needs. In most official health agencies, budgeted positions are reviewed periodically in connection with program evaluation and revision. In many cases, it may be assumed that budgeted positions which have been vacant for extensive periods are abolished, and more realistic provisions made in the plan and organization of the health agency.

In the present study, vacancies in budgeted positions are interpreted as representing the immediate needs for personnel, and as restrictions in program operation so long as the vacancies remain unfilled. In the United States, 44 State and 1,257 local health departments reported 31,318 budgeted positions. Over 3,000 of these were vacant at the time of the survey, April 1951. Among the personnel usually considered as the basic team for health department operation, vacancy rates for physicians were 20 percent; for nurses, 9 percent; for engineers and sanitarians, 14 and 6 percent, respectively.

County and city health departments each reported over 10,000 budgeted positions. State health departments were third in rank, with almost 8,000. Overall vacancy rates in these three types of health departments were 8, 9, and 12 percent. Regionally, vacancy rates in the northeastern, southern, and central areas were almost the same as for the country as a whole. In the western region the rate was considerably lower, 6 percent as compared with 10.

The size of community served by local health departments seemed to have little effect on vacancy rates. The highest rate, 12 percent, was found in the health departments in communities with less than 35,000 population. Almost half of the county health departments

were in communities of this size, and they reported a 14-percent vacancy rate in the slightly more than 1,300 budgeted positions. Among the 258 local health districts, none of which served populations over 350,000, the vacancy rate was 13 percent.

Normal turnover in professional positions may account for some of the vacancies reported in budgeted positions at the time of the survey. However, a measure of "normal" turnover is needed, and variations in turnover among the various professional and technical groups required for health department operations should be considered. In local health departments especially, questions of organized plans for advancement, provisions for retirement, and conditions of job security warrant consideration as possibly contributing to longstanding vacancies in established positions. These and perhaps other factors might well be included in a further study of health manpower shortages.

The inauguration of programs of broader scope, the extension of coverage to populations not now being served by organized health departments, and a more nearly adequate service in health departments now in operation are all contingent on the availability of qualified public health personnel. The survey indicates—using vacancies in budgeted positions as criteria—that these goals, for the present at least, must be considered attainable only to a limited degree, if at all.

Personnel

Reports on certain characteristics of physicians, nurses, engineers, sanitarians, dentists, and veterinarians, the six categories of health department personnel selected for special study, were received for 21,024 individuals in the United States. Some 3,000 were employed in State health departments. Of the remainder, approximately 44 percent were in county and 40 percent in city health departments. Nearly one-third were in local health departments serving populations of 500,000 or more.

Ten percent of these public health workers

of all ages and both sexes were reported as having status in some component of the military reserve. Engineers led with 38 percent of their number, dentists were second with 22 percent, and physicians third with 18 percent. However, the median ages of these groups seem to indicate that engineers, with a median age of 37 years, are far more vulnerable to recall to the military services than are dentists and physicians with median ages of 45 and 49, respectively. It might also be noted that almost half the physicians were over 50 at the time of the survey, and hence would be less likely to be called by the armed services.

Of the total number of professional and technical personnel of the selected categories noted above, 10 percent were in positions at the level of health officer or chief of service, 7 percent were supervisors or consultants, and 77 percent were at the staff level. The others were divided among the groups which represented the only worker of a special category in a health department and those whose positions were not specified. In a period of emergency, health personnel performing both administrative and staff duties would be called from their positions in official health agencies. With serious shortages already a matter of concern, such calls might jeopardize the provision of public health services essential to safeguarding the health of the Nation.

The utilization of presently employed per-

sonnel to the maximum of their various skills and abilities should have constant consideration. A study of the efficiency of health department operation may suggest that public health workers in the many small agencies located in small communities could provide adequate services for a greater number of people by coordinating or combining some of the separate local health departments. Critical evaluation of all activities, constant and intensive recruitment, and careful consideration of salary levels, working conditions, and opportunities for advancement and for satisfying work experiences must all be undertaken. Essentially, the problem is one of bringing into the field of public health more workers with qualifications necessary for satisfactory performance on the job, or with potentialities for such qualifications. The promotion of a career service in public health is needed as a long-term approach to meet the staffing needs for nationwide adequate health services.

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Appendix A

FORM 7500-50-101 MARCH 1949		UNITED STATES OF AMERICA EXECUTIVE ORDER BY THE PRESIDENT NATIONAL HEALTH ASSISTANCE BOARD PROFESSIONAL AND TECHNICAL PERSONNEL IN STATE AND LOCAL HEALTH DEPARTMENTS		REPORT FORM NO. 73-1001 GENERAL CATEGORY (GEO. P. 1-12)	
NAME OF STATE		TYPE OF DONORSHIP		Page <u> </u> of <u> </u> pages	
NAME OF HEALTH DEPARTMENT		1. COUNTY		STATE	
ADDRESS		2. CITY		COUNTY	
		3. LOCAL DISTRICT		NAME OF HEALTH OFFICER	
		4. STATE DISTRICT		TOTAL	
		5. STATE HEALTH DIST.			
		6. OTHER			
PREVIOUS POSITION (If moved in 1948 or 1949 to State duplicate (two for officers, three for staff) for this. See CHANGE FOR FILLING ON REVERSE SIDE)		PROFESSIONAL STATUS		MILITARY RESERVE	
NAME AND TITLE		1. PROFESSION		2. YEAR OF SERVICE	
Listed name following licensure after this title. List additional names assume previous description for military service unless otherwise specified. Give new title followed by year on separate entry.		3. SPECIALTY		4. GRADE	
SEX (M/F)		4. GRADE		5. GRADE	
1. 1		1. 1		1. 1	
2. 2		2. 2		2. 2	
3. 3		3. 3		3. 3	
4. 4		4. 4		4. 4	
5. 5		5. 5		5. 5	
6. 6		6. 6		6. 6	
7. 7		7. 7		7. 7	
8. 8		8. 8		8. 8	
9. 9		9. 9		9. 9	
10. 10		10. 10		10. 10	
11. 11		11. 11		11. 11	
12. 12		12. 12		12. 12	
13. 13		13. 13		13. 13	
14. 14		14. 14		14. 14	
15. 15		15. 15		15. 15	
16. 16		16. 16		16. 16	
17. 17		17. 17		17. 17	
18. 18		18. 18		18. 18	
19. 19		19. 19		19. 19	
20. 20		20. 20		20. 20	

*See statute law Public Law 279 relating to order of priority for those categories in reverse side.

FULL-TIME PROFESSIONAL AND TECHNICAL POSITIONS REPORTED						
TYPE OF POSITION	TOTAL POSITIONS	TOTAL POSITIONS			TYPE OF POSITION	
		FILLED	VACANT	FILLED	VACANT	
Physician	1			Other	Physician	11
Graduate nurse	2			Nurse	Graduate nurse	11
Practical nurse	2			Nurse	Practical nurse	11
Dentist	4			Psychiatric	Social worker	11
Sanitarian	5			Other	Medical social worker	11
Sanitary	5			Analyst and	Sanitarian	11
Medical epidemiologist	5			Superintendent		11
Sanitary	5			Public health	Investigator	11
Sanitarian	5			Administrative	Manager	11
Laboratory technician	10			Other		20

Distribution of States in Four Geographic Regions

Northeastern region

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Southern region

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
Oklahoma
South Carolina
Tennessee
Texas
Virginia
West Virginia

Central region

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

Western region

Arizona
California
Colorado
Idaho
Montana
Nevada
New Mexico
Oregon
Utah
Washington
Wyoming

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Appendix B. Distribution of Personnel and of Local Health Agencies

Table 1.—Distribution of professional and technical personnel of six selected categories reported by local health departments, according to type of department and community size, total and by geographic regions

	ALL REGIONS											
	Total						Physicians					
	Total	County	City	Local district	State district	Other	Total	County	City	Local district	State district	Other
Total.....	18,414	8,204	7,428	1,009	587	288	1,057	290	170	188	48	3
<i>Under 25,000.....</i>	2,867	1,187	506	469	22	303	202	163	21	51	5	2
<i>25,000-50,000.....</i>	1,800	601	214	378	26	41	206	121	21	50	7	1
<i>50,000-100,000.....</i>	2,922	1,039	622	624	50	31	274	169	57	56	11	1
<i>100,000-250,000.....</i>	3,821	1,681	1,291	381	200	65	238	144	40	21	10	.....
<i>250,000-500,000.....</i>	1,608	783	551	.....	272	.....	102	58	41	.....	8	.....
<i>500,000 and over.....</i>	1,503	1,742	.....	.....	36	.....	82	117	.....	.....	8	.....
Radiologists												
Total.....	5,258	2,207	2,406	476	77	30	194	62	119	8	6	2
<i>Under 25,000.....</i>	544	336	92	191	4	31	8	1	2	2	3	2
<i>25,000-50,000.....</i>	161	396	75	139	2	2	1	2	1	1	.....	.....
<i>50,000-100,000.....</i>	941	450	202	182	12	4	24	12	19	3	.....	.....
<i>100,000-250,000.....</i>	1,155	574	428	75	17	3	32	21	7	1	3	.....
<i>250,000-500,000.....</i>	529	180	303	.....	18	.....	15	0	3	.....	.....	.....
<i>500,000 and over.....</i>	1,723	420	1,255	.....	14	.....	111	15	09	.....	3	.....
Dentists												
Total.....	19,880	4,829	1,668	1,200	551	353	279	181	61	21	106	.....
<i>Under 25,000.....</i>	1,221	602	134	235	10	175	16	6	3	4	3	.....
<i>25,000-50,000.....</i>	1,624	559	191	319	10	28	30	10	.....	7	3	.....
<i>50,000-100,000.....</i>	1,722	819	337	800	60	26	82	20	8	4	6	.....
<i>100,000-250,000.....</i>	2,277	1,150	687	188	212	11	125	76	17	3	13	.....
<i>250,000-500,000.....</i>	1,363	484	381	.....	282	.....	60	13	21	.....	23	.....
<i>500,000 and over.....</i>	3,380	1,034	2,220	.....	37	.....	295	15	42	.....	18	.....
Nurses												
Total.....	300	88	387	4	2	.....	53	6	31	19	6	.....
<i>Under 25,000.....</i>	6	2	.....	.....	.....	.....	20	.....	19	9	2	.....
<i>25,000-50,000.....</i>	26	39	6	1	.....	.....	19	1	8	2	.....	.....
<i>50,000-100,000.....</i>	49	61	25	.....	.....	.....	2	1	2	.....	.....	.....
<i>100,000-250,000.....</i>	23	27	24	2	.....	.....	6	4	2	.....	.....	.....
<i>250,000-500,000.....</i>	43	19	22	.....	.....	.....	5	.....	.....	.....	.....	.....
<i>500,000 and over.....</i>	129	31	96	.....	.....	.....	.....	.....	.....	.....	.....	.....
Veterinarians												
Total.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Under 25,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>25,000-50,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>50,000-100,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>100,000-250,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>250,000-500,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>500,000 and over.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other												
Total.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Under 25,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>25,000-50,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>50,000-100,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>100,000-250,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>250,000-500,000.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>500,000 and over.....</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
NORTHEASTERN REGION												
Total						Physicians						
Total.....	4,628	1,110	1,225	63	234	119	386	192	208	3	25	.....
<i>Under 25,000.....</i>	328	498	543	50	15	1	20	14	39	2	2	.....
<i>25,000-50,000.....</i>	171	30	114	.....	.....	.....	19	4	16	.....	1	.....
<i>50,000-100,000.....</i>	428	198	367	.....	.....	.....	26	8	20	.....	4	.....
<i>100,000-250,000.....</i>	618	336	617	.....	.....	.....	67	19	36	.....	1	.....
<i>250,000-500,000.....</i>	369	175	108	.....	.....	.....	11	7	5	.....	3	.....
<i>500,000 and over.....</i>	2,164	614	2,305	.....	.....	.....	226	69	160	.....	6	.....
Dentists												
Total.....	1,111	322	612	8	24	1	66	5	30	1	1	.....
<i>Under 25,000.....</i>	61	29	46	8	3	1	4	.....	2	1	3	.....
<i>25,000-50,000.....</i>	41	7	24	.....	.....	.....	.....	.....	2	.....	.....	.....
<i>50,000-100,000.....</i>	135	26	78	.....	.....	.....	9	.....	7	.....	.....	.....
<i>100,000-250,000.....</i>	232	29	113	.....	.....	.....	5	1	4	.....	.....	.....
<i>250,000-500,000.....</i>	25	17	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>500,000 and over.....</i>	657	158	519	.....	.....	.....	48	2	41	.....	.....	.....

(Continued)

Table 1.—Distribution of professional and technical personnel of six selected categories reported by local health departments, according to type of department and community size, total and by geographic region.—Continued

All series	NORTHEASTERN REGION—Continued										
	Nurses					Engineers					
	Total	County	City	Local district	State district	Other	Total	County	City	Local district	State district	Other
Total.....	2,062	793	1,308	58	108	9	84	62	25	1	10
Under 25,000.....	178	71	33	28	4	0	4	2	1	2	2
25,000-50,000.....	36	27	50	28	8	0	0	0	0	0	0
50,000-100,000.....	238	98	117	20	4	0	10	4	4	2	2
100,000-250,000.....	419	27	314	44	44	0	17	1	1	0	0
250,000-500,000.....	178	78	74	26	26	0	2	2	15	0	0
500,000 and over.....	1,745	380	1,239	26	26	0	41	31	15	0	0
	Veterinarians					Other					
Total.....	28	16	37	2	2	0	41	1	20	9	2
Under 25,000.....	2	0	2	0	0	0	26	0	18	0	1
25,000-50,000.....	3	2	0	0	0	0	3	1	8	0	0
50,000-100,000.....	4	2	0	0	0	0	0	0	0	0	0
100,000-250,000.....	3	0	3	0	0	0	1	1	0	0	0
250,000-500,000.....	2	1	1	0	0	0	1	0	0	0	0
500,000 and over.....	40	35	33	2	2	0	0	0	0	0	0
	SOUTHERN REGION										
	Total					Physicians					
Total.....	6,067	3,067	3,081	1,361	542	61	680	387	62	120	12
Under 25,000.....	1,085	776	28	282	0	10	103	110	4	41	0
25,000-50,000.....	1,030	587	39	39	17	1	223	76	2	31	3
50,000-100,000.....	1,431	626	30	421	45	0	142	95	7	25	2
100,000-250,000.....	1,525	607	315	372	80	0	120	72	22	12	4
250,000-500,000.....	552	253	299	0	0	0	34	53	15	0	0
500,000 and over.....	258	179	229	0	0	0	0	3	1	0	0
	Sanitarians					Dentists					
Total.....	1,884	1,337	281	268	25	1	20	20	4	0	0
Under 25,000.....	332	214	8	76	0	1	0	0	0	0	0
25,000-50,000.....	268	161	12	105	0	0	0	0	0	0	0
50,000-100,000.....	456	209	31	111	11	0	3	3	0	0	0
100,000-250,000.....	426	269	149	48	11	0	35	14	2	0	0
250,000-500,000.....	159	84	103	0	0	0	10	4	2	0	0
500,000 and over.....	143	81	83	0	0	0	2	1	1	0	0
	Nurses					Engineers					
Total.....	1,305	3,072	616	703	83	10	101	50	20	11	20
Under 25,000.....	599	412	14	102	0	0	1	1	0	0	0
25,000-50,000.....	326	314	28	244	11	1	0	0	0	0	0
50,000-100,000.....	423	353	48	219	26	0	29	17	1	0	0
100,000-250,000.....	841	547	144	188	56	0	29	28	5	0	0
250,000-500,000.....	323	161	153	0	0	0	0	0	12	0	0
500,000 and over.....	133	385	31	0	0	0	4	3	1	0	0
	Veterinarians					Other					
Total.....	66	27	26	3	0	0	2	2	0	0	0
Under 25,000.....	0	0	1	1	0	0	0	0	0	0	0
25,000-50,000.....	32	10	3	2	0	0	1	1	0	0	0
50,000-100,000.....	29	14	3	2	0	0	1	1	0	0	0
100,000-250,000.....	15	2	11	0	0	0	0	0	0	0	0
250,000-500,000.....	12	4	0	0	0	0	0	0	0	0	0
500,000 and over.....	0	0	0	0	0	0	0	0	0	0	0

Table 1.—Distribution of professional and technical personnel of six selected categories reported by local health departments, according to type of department and community size, total and by geographic region.—Continued

	CENTRAL REGION											
	Total						Physicians					
	Total	County	City	Local district	Penit. district	Other	Total	County	City	Local district	State district	Other
Total.....	4,768	1,291	2,430	252	491	596	327	321	303	25	12	1
Under \$5,000.....	464	298	61	48	.....	347	32	27	8	0	.....	1
\$5,000-\$9,999.....	285	254	58	14	.....	20	21	24	2	0	.....	.....
\$10,000-\$24,999.....	641	254	330	103	.....	16	36	21	22	0	.....	.....
\$25,000-\$49,999.....	784	528	252	34	.....	334	48	25	11	1	.....	.....
\$50,000-\$99,999.....	851	142	410	.....	.....	232	.....	.....	18	.....	.....	.....
\$100,000 and over.....	1,569	47	1,398	.....	.....	28	.....	.....	.....	.....	.....	.....
	Nurses						Dentists					
Total.....	1,292	297	875	48	28	14	88	14	26	6	5	2
Under \$5,000.....	81	46	20	7	.....	9	4	.....	.....	1	.....	.....
\$5,000-\$9,999.....	84	48	16	38	.....	2	4	.....	.....	.....	.....	.....
\$10,000-\$24,999.....	155	62	76	33	.....	.....	.....	.....	.....	.....	.....	.....
\$25,000-\$49,999.....	183	39	87	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	521	36	376	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$100,000 and over.....	609	2	216	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Nurses						Engineers					
Total.....	2,729	783	1,346	168	284	591	354	48	34	11	70	.....
Under \$5,000.....	321	110	51	81	.....	158	7	4	.....	.....	.....	.....
\$5,000-\$9,999.....	591	129	32	62	.....	27	19	.....	.....	.....	.....	.....
\$10,000-\$24,999.....	284	155	120	63	.....	16	12	.....	.....	.....	.....	.....
\$25,000-\$49,999.....	463	195	126	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	634	125	238	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$100,000 and over.....	811	64	756	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Veterinarians						Other					
Total.....	137	20	115	1	1	.....	8	3	1	.....	.....	4
Under \$5,000.....	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$5,000-\$9,999.....	10	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$10,000-\$24,999.....	22	9	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$25,000-\$49,999.....	25	1	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000 and over.....	35	2	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
	WESTERN REGION											
	Total						Physicians					
Total.....	3,478	2,116	708	347	17	50	281	176	76	29	1	2
Under \$5,000.....	206	168	21	22	6	45	18	14	1	.....	.....	.....
\$5,000-\$9,999.....	198	66	16	29	.....	.....	.....	.....	.....	.....	.....	.....
\$10,000-\$24,999.....	472	256	62	133	11	16	49	26	6	15	.....	.....
\$25,000-\$49,999.....	842	337	298	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	394	223	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$100,000 and over.....	1,218	606	349	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Nurses						Dentists					
Total.....	1,018	625	300	72	1	14	17	17	.....	.....	.....	.....
Under \$5,000.....	48	23	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$5,000-\$9,999.....	66	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$10,000-\$24,999.....	116	63	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$25,000-\$49,999.....	225	112	88	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	114	74	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$100,000 and over.....	451	278	132	.....	.....	.....	.....	.....	.....	.....	.....	.....

(Continued)

Table 1.—Distribution of professional and technical personnel of six selected categories reported by local health departments according to type of department and community size, total and by geographic regions—Continued

	WESTERN REGION—Continued											
	Nurses						Engineers					
	Total	County	City	Local district	State district	Other	Total	County	City	Local district	State district	Other
Total.....	1,584	1,322	216	241	15	53	27	14	12	1		
Under 25,000.....	321	278	54	55	4	31	2	1	1			
25,000-49,999.....	728	576	152	171	11	21	1	1				
50,000-99,999.....	202	157	45	57	3	11	2	1	1			
100,000-249,999.....	954	785	169	199	11	20	10	5	3	1		
250,000-499,999.....	141	118	23	28	1	5	6	4	4			
500,000 and over.....	677	527	150	176	1	11	4	2	2			
	Veterinarians						Other					
Total.....	29	20	9				2		1	1		
Under 25,000.....												
25,000-49,999.....	2		2									
50,000-99,999.....	2	2	1									
100,000-249,999.....	3	1	5				1		1			
250,000-499,999.....	2	3										
500,000 and over.....	12	11	1									

Table 2.—Professional and technical personnel in selected categories reported by State health departments in the four geographic regions

	Total	Physicians	Nurses	Engineers	Sanitarians	Dentists	Veterinarians
Total.....	3,693	517	1,158	632	501	111	20
Northeastern.....	886	302	493	172	138	23	12
Midwestern.....	929	305	283	191	217	39	4
Central.....	678	53	311	312	103	27	12
Western.....	414	51	328	91	68	11	2

Table 3.—Distribution of local health agencies reporting, by type of department, size of community, and geographic region in the continental United States, with actual population in health department jurisdiction

Region and type of department	Total		Under 50,000		50,000-99,999		100,000-249,999		250,000-499,999		500,000 and over	
	Agencies	Population	Agencies	Population	Agencies	Population	Agencies	Population	Agencies	Population	Agencies	Population
ALL REGIONS:												
Total.....	1,470	106,407,130	626	11,626,147	294	26,384,950	166	55,291,343	42	14,404,729	25	32,343,094
ALABAMA:												
County.....	771	55,291,343	309	6,053,903	155	16,714,862	79	11,621,265	14	4,611,357	10	9,279,493
City.....	229	34,633,209	31	1,693,022	49	5,514,286	24	6,538,516	13	4,022,814	15	21,032,480
State district.....	468	15,582,678	52	3,879,122	90	5,156,802	53	7,121,562	15	3,770,156	5	5,031,121
Other.....	138	2,698,881	152	1,375,428	1	808,870	1	115,388	15	4,423,307	5	2,426,052
ALASKA:												
Total.....	205	26,022,667	101	2,658,909	39	9,928,271	23	4,958,807	0	1,299,729	8	14,000,458
County.....	115	10,305,129	91	1,024,425	0	622,124	15	600,401	0	641,729	2	3,022,652
City.....	25	3,771,912	25	3,771,912	19	2,811,247	5	2,287,452	2	621,509	1	10,248,227
State district.....	3	1,000,000	1	1,000,000	0	0	0	0	0	0	0	
Other.....	62	1,226,546	66	1,226,546	0	415,645	11	2,018,484	3	625,276	1	917,155
ARIZONA:												
Total.....	127	20,064,281	588	2,486,354	108	7,032,146	66	8,474,070	7	2,805,410	3	4,715,754
County.....	462	24,031,229	294	6,155,144	91	6,714,919	52	6,262,969	2	1,842,875	1	1,911,442
City.....	158	8,408,640	63	1,624,252	60	2,500,288	64	1,415,713	4	1,441,273	1	2,014,223
State district.....	1	100,000	1	100,000	1	100,000	0	0	0	0	0	
Other.....	66	1,527,007	70	1,527,007	1	46,010	0	613,152	0	0	0	
ARIZONA:												
Total.....	249	26,022,667	167	2,658,909	62	2,827,017	57	8,908,958	24	4,206,961	10	24,004,508
County.....	142	15,274,999	25	1,425,207	22	1,234,022	26	1,708,027	6	2,054,208	0	473,053
City.....	11	1,000,000	11	1,000,000	13	2,524,745	19	3,027,028	0	0	0	
State district.....	31	8,408,640	31	8,408,640	25	2,500,288	25	2,500,288	0	0	0	
Other.....	31	2,939,028	78	1,527,007	9	345,468	3	208,119	13	4,147,760	2	1,228,447
ARKANSAS:												
Total.....	339	17,208,244	63	1,171,756	29	1,265,506	38	2,072,289	39	4,412,009	5	4,807,402
County.....	17	3,075,853	29	308,620	17	609,411	24	1,342,724	24	2,047,960	1	2,495,219
City.....	11	1,000,000	11	1,000,000	11	441,024	11	702,081	1	380,159	1	1,057,052
State district.....	2	100,000	2	100,000	1	100,000	1	100,000	1	100,000	0	0
Other.....	27	624,144	21	362,131	1	47,071	1	14,000	13	10,840	3	14,000

Appendix C. Budgeted Positions and Vacancies for 20 Categories of Personnel

Table 1.—Budgeted positions and vacancies and percent of budgeted positions vacant for professional and technical personnel of 20 categories reported by State and local health departments in the continental United States according to type of department.

Category	Total			State			County (including city-county)			City						
	Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions					
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant				
Total	1,391	33,385	3,081	33	44	3,852	904	12	674	30,313	888	8	106	16,352	935	9
Physician.....	391	2,210	462	30	42	634	145	25	163	837	145	17	118	493	88	14
Graduate nurse.....	1,726	11,504	1,962	0	61	8,137	158	12	667	4,706	338	7	187	3,910	381	10
Practical nurse.....	76	583	10	0	5	30	2	10	8	14	1	6	19	100	3	3
Engineer.....	215	1,581	155	14	32	720	80	14	98	178	20	13	47	62	18	20
Sanitarian.....	4,691	5,918	298	5	49	440	31	7	612	5,660	114	5	155	5,319	98	4
Dentist.....	155	567	76	21	37	354	32	24	53	108	18	22	20	132	18	14
Dental hygienist.....	399	308	54	14	28	74	19	28	69	68	11	17	23	248	28	9
Chemist.....	79	247	21	7	48	308	14	4	0	22	0	0	20	37	9	15
Bacteriologist.....	262	1,293	107	6	16	798	53	7	79	164	7	4	50	253	47	9
Laboratory technician.....	287	1,828	99	10	24	314	63	12	70	145	9	6	41	338	25	9
Other technicians.....	149	705	48	18	18	306	48	10	62	60	5	6	41	194	39	12
Health estimator.....	209	411	85	20	29	150	33	17	101	897	17	16	43	399	24	23
Nutritionist.....	78	212	30	16	27	130	13	10	9	12	4	29	17	58	25	22
Epidemiologic social worker.....	44	110	29	28	20	72	20	32	33	18	2	7	36	76	6	11
Other medical social worker.....	18	308	38	18	27	85	27	21	21	35	8	7	4	27	6	16
Analyst and statistician.....	109	313	52	16	40	182	27	14	32	41	5	15	30	112	20	18
Veterinarian.....	133	398	33	19	12	25	9	5	63	103	11	6	11	180	6	4
Public health investigator.....	227	618	43	6	20	370	18	6	124	103	6	4	11	180	19	18
Administrative management.....	170	719	42	1	6	416	31	6	100	261	14	6	28	81	4	9
Other.....	244	3,648	768	9	33	1,370	183	11	117	1,178	72	0	00	1,081	806	9

Category	Local district			State district			Other					
	Agencies	Positions		Agencies	Positions		Agencies	Positions				
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant			
Total	258	2,230	286	35	85	650	68	13	81	135	8	2
Physician.....	212	340	60	27	41	40	9	23	2	22	7	6
Graduate nurse.....	317	1,363	237	1	45	200	83	15	73	122	7	6
Practical nurse.....	1	1	0	0	0	0	0	0	0	0	0	0
Engineer.....	25	29	10	24	20	50	8	12	0	0	0	0
Sanitarian.....	204	335	69	5	28	6	7	12	21	36	3	4
Dentist.....	0	39	6	66	9	10	0	0	1	2	0	0
Dental hygienist.....	0	5	2	33	6	7	1	14	0	0	0	0
Chemist.....	19	16	0	0	0	0	0	0	0	0	0	0
Bacteriologist.....	0	1	2	29	1	1	0	0	1	1	0	0
Laboratory technician.....	0	4	0	0	0	16	10	67	0	0	0	0
Health estimator.....	11	13	1	15	13	13	2	16	1	3	0	0
Nutritionist.....	3	3	0	33	12	13	2	16	1	3	0	0
Epidemiologic social worker.....	2	2	0	0	0	0	0	0	0	0	0	0
Other medical social worker.....	1	1	0	0	0	0	0	0	0	0	0	0
Analyst and statistician.....	1	1	0	0	0	0	0	0	0	0	0	0
Veterinarian.....	1	1	0	0	0	0	0	0	0	0	0	0
Public health investigator.....	33	33	0	37	30	2	1	2	0	0	0	0
Administrative management.....	14	14	4	37	1	2	1	2	0	0	0	0
Other.....	14	33	1	1	1	34	2	34	0	0	0	0

Table 2.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by State and local health departments of designated geographic regions in the continental United States according to type of department.

Category	Total		State				County (including city-county)			City		
	Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions	
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant
NORTHEASTERN REGION												
Total.....	179	4,832	989	30	2,722	230	38	1,676	167	68	4,406	577
Physician.....	165	410	325	30	223	65	34	116	31	43	192	33
Graduate nurse.....	146	3,631	410	30	632	88	37	793	84	72	2,121	263
Engineer.....	5	47					1	1			45	13
Sanitarian.....	44	341	36	30	181	22	9	42	2	19	20	13
Dental hygienist.....	27	91	13	9	25	2	6	7	2	15	21	9
Chemist.....	44	276	23	7	29	6	9	22	1	25	29	16
Bacteriologist.....	24	138	14	10	82	5	3	4		11	32	9
Laboratory technician.....	39	427	53	9	172	8	12	36	7	18	138	41
Other technician.....	43	351	27	9	141	3	11	86	3	25	147	58
Health educator.....	28	187	29	8	73	11	6	22		16	192	38
Public health investigator.....	20	85	36	7	29			13	3	11	33	23
Sanitarians.....	26	70	32	30	32			1	1	2	6	31
Psychiatric social worker.....	7	34	7	4	14	4	2	2		1	8	4
Other medical social worker.....	24	86	25	11	34	9	6	30		0	41	4
Analyst and statistician.....	24	135	21	8	83	14	1	7		1	52	16
Veterinarian.....	25	71	5	3	11			19		15	33	5
Public health inspector.....	14	85	6	3	45	2		7		4	41	4
Administrative management.....	39	183	6	7	42	1	7	29		1	64	24
Other.....	62	1,059	122	8	289	21	7	381	43	34	454	69
SOUTHEASTERN REGION												
Total.....	37	Local district		State district			Other					
		Agencies	Budgeted	Vacant	Agencies	Budgeted	Vacant	Agencies	Budgeted	Vacant		
Physician.....	1	1		13	15			1	2			
Graduate nurse.....	8	34		18	101				9			
Engineer.....	3	4		4	4				1			
Sanitarian.....	5	4		5	13				1			
Dental hygienist.....				4	5							
Chemist.....												
Bacteriologist.....												
Laboratory technician.....												
Other technician.....												
Health educator.....	1	3		1	1							
Psychiatric social worker.....				1	1							
Other medical social worker.....												
Analyst and statistician.....				2	2							
Veterinarian.....				1	1							
Public health investigator.....				1	2							
Administrative management.....	1	1		1	2							
Other.....	18	16		2	16							

(Continued)

Table 2.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by State and local health departments of designated geographic regions in the continental United States according to type of department—Continued

Category	Total			State			County (including city-county)			City		
	Appoints	Positions		Appoints	Positions		Appoints	Positions		Appoints	Positions	
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant
CONTINENTAL REGION												
Total.....	628	13,574	1,133	14	3,295	645	431	1,188	308	25	1,845	81
Physician.....	355	875	285	13	355	57	351	484	80	10	48	4
Graduate nurse.....	668	2,632	100	22	322	48	64	1,942	164	22	402	34
Practical nurse.....	32	80	2	2	27	0	1	0	1	2	16	1
Employer.....	91	230	91	10	239	0	15	0	11	11	24	1
Sanitarian.....	621	1,892	120	10	187	39	486	1,098	102	22	301	12
Health.....	28	91	24	11	62	34	21	25	17	4	5	1
Dental hygienist.....	21	51	18	2	25	0	16	17	4	1	2	1
Chemist.....	19	69	5	12	55	5	2	0	0	4	2	0
Sarcoidologist.....	57	323	20	12	248	28	25	42	1	1	10	0
Laboratory technician.....	71	343	47	14	318	43	27	37	1	1	15	25
Other technician.....	80	280	21	57	163	16	30	31	3	11	59	1
Health educator.....	70	191	32	33	75	47	49	43	7	18	15	1
Nutritionist.....	22	57	8	19	45	0	0	0	0	2	2	0
Psychiatric social worker.....	17	51	10	9	20	0	0	4	1	3	6	2
Other medical social worker.....	15	40	11	7	28	11	5	7	0	3	5	1
Analyst and statistician.....	21	108	6	12	50	5	8	4	0	4	8	1
Veterinarian.....	20	70	11	3	30	0	30	48	7	10	22	2
Public health investigator.....	141	263	21	8	132	0	37	112	5	12	84	7
Administrative management.....	189	443	32	31	300	17	77	244	11	4	11	1
Other.....	100	1,400	148	30	889	117	72	503	6	10	155	15
LOCAL DISTRICT												
Category	Appoints	Positions		Appoints	Positions		Appoints	Positions		Appoints	Positions	
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant
Total.....	178	1,066	221	59	108	20	0	0	0	0	0	0
Physician.....	162	170	54	0	0	3	0	0	0	0	0	0
Graduate nurse.....	176	831	118	10	80	12	0	0	0	0	0	0
Employer.....	1	1	1	0	0	0	0	0	0	0	0	0
Sanitarian.....	18	17	0	7	16	2	0	0	0	0	0	0
Health.....	178	306	30	10	24	4	0	0	0	0	0	0
Dental hygienist.....	1	1	1	0	0	0	0	0	0	0	0	0
Chemist.....	1	1	1	1	1	0	0	0	0	0	0	0
Psychologist.....	4	0	0	0	0	0	0	0	0	0	0	0
Laboratory technician.....	2	0	1	0	0	0	0	0	0	0	0	0
Other technician.....	2	0	0	0	0	0	0	0	0	0	0	0
Health educator.....	7	0	1	0	0	0	0	0	0	0	0	0
Nutritionist.....	3	2	1	0	0	1	0	0	0	0	0	0
Psychiatric social worker.....	3	2	1	0	0	7	0	0	0	0	0	0
Other medical social worker.....	2	2	0	0	0	0	0	0	0	0	0	0
Analyst and statistician.....	0	0	0	0	0	0	0	0	0	0	0	0
Veterinarian.....	0	0	0	0	0	0	0	0	0	0	0	0
Public health investigator.....	0	0	0	0	0	0	0	0	0	0	0	0
Administrative management.....	0	0	0	0	0	0	0	0	0	0	0	0
Other.....	0	0	0	0	0	0	0	0	0	0	0	0

Table 2.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by State and local health departments of designated geographic regions in the continental United States according to type of department—Continued

Category	Total			State			County (including city-county)			City		
	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies
	Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant	
CENTRAL REGION												
Total.....	286	6,499	83	11	1,476	135	115	1,306	353	26	2,035	173
Physician.....	201	313	79	10	80	12	106	122	28	43	181	37
Podiatric nurse.....	20	2,217	183	9	181	12	182	169	72	46	939	38
Practical nurse.....	3	33	2				1	1			15	2
Registered nurse.....	63	258	31	8	231	23	33	52	5	11	30	3
Sanitarian.....	154	1,188	78	8	103	13	91	203	56	41	761	34
Health.....	52	131	31	11	37	13	14	15	7	9	62	8
Dental hygienist.....	26	55	18	7	29	9	10	11	4	6	21	3
Chemist.....	29	88	4	1	63	4	1	1			27	4
Radiologist.....	47	229	14	10	202	12	13	18	2	15	75	1
Laboratory technician.....	44	376	22	9	189	17	13	18	2	20	146	8
Other technicians.....	29	127	16	11	130	25	7	13	1	5	62	2
Health estimator.....	49	120	26	10	67	11	16	16	3	15	27	8
Nutritionist.....	21	62	8	8	36	6	1	1		7	18	1
Psychiatric social worker.....	11	21	3	3	12	8	1	8		2	21	2
Other medical social worker.....	17	27	3	4	2	2	2	2		8	20	2
Analyst and statistician.....	26	41	4	11	32	5	6	3	1	11	37	1
Veterinarian.....	41	123	14	5	7		12	20	4	23	158	30
Public health investigator.....	27	100	5	8	28	3	0	9	1	16	43	
Administrative management.....	22	89	2	8	65	2	2	6		7	37	
Other.....	34	291	20	8	165	11	10	13	2	11	335	18
SOUTH REGION												
Category	Total			Local district			State district			Other		
	Agencies	Budgeted	Vacant	Agencies	Budgeted	Vacant	Agencies	Budgeted	Vacant	Agencies	Budgeted	Vacant
Total.....	33	203	14	51	258	63	51	61	61	91		2
Physician.....	10	11	1	10	41	6	1	1	1	1		
Podiatric nurse.....	35	181	10	13	159	26	43	1	1	78		2
Practical nurse.....												
Registered nurse.....	31	53	4	6	38	3	12			15		2
Sanitarian.....	6	9	5	0	30	8	1			2		
Health.....	2	2	1	1	1	1						
Dental hygienist.....												
Chemist.....												
Radiologist.....												
Laboratory technician.....												
Other technicians.....												
Health estimator.....	1	1										
Nutritionist.....												
Psychiatric social worker.....												
Other medical social worker.....												
Analyst and statistician.....												
Veterinarian.....	1	1										
Public health investigator.....	2	3			8	10	1					
Administrative management.....	4	4										
Other.....	3	7	3	3	4							

(Continued)

Table 2.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by State and local health departments of designated geographic regions in the continental United States according to type of department—Continued

Category	Total			State			County (including city-county)			City		
	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies
	Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant	
women's services												
Total.....	447	1,301	378	9	1,045	108	85	1,085	138	18	1,005	81
Physician.....	227	401	79	0	98	28	73	387	16	14	90	7
Graduate nurse.....	161	2,151	153	0	172	39	84	1,967	08	10	170	32
Practical nurse.....	5	38	6	2	31	0	2	4	1	1	2	1
Dietitian.....	57	132	50	8	108	16	41	16	2	0	13	1
Radiologist.....	144	1,050	45	0	68	0	83	619	58	18	312	12
Dentist.....	18	31	8	4	11	2	12	27	6	1	22	1
Dental hygienist.....	15	21	4	2	2	1	10	15	2	1	1	1
Chemist.....	10	28	7	1	11	7	11	5	1	1	1	1
Microbiologist.....	59	314	16	9	115	4	26	75	31	12	28	3
Laboratory technician.....	29	56	3	4	38	1	18	32	2	0	10	1
Other technical.....	159	50	2	7	32	1	16	42	4	0	44	1
Health educator.....	48	98	10	0	27	5	57	26	4	0	44	2
Nutritionist.....	14	23	4	7	14	1	3	7	2	2	6	1
Psychiatric social worker.....	9	11	3	4	2	2	3	6	1	1	1	1
Other medical social worker.....	16	35	9	6	20	7	8	26	2	2	8	1
Analyst and statistician.....	35	99	11	9	52	0	0	22	3	0	15	2
Veterinarian.....	20	31	5	2	1	1	22	28	0	0	31	2
Public health investigator.....	31	112	8	7	23	4	12	35	3	3	29	1
Administrative management.....	27	114	3	9	49	1	11	54	2	3	10	1
Other.....	47	180	48	7	131	4	25	159	22	10	165	11
Local district												
Total.....	38	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions	
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant
Physician.....	29	51	6	1	1	1	1	1	1	1	1	1
Graduate nurse.....	21	252	16	2	14	1	14	1	1	1	1	1
Practical nurse.....	1	1	1	1	1	1	1	1	1	1	1	1
Dietitian.....	30	28	4	1	1	1	1	1	1	1	1	1
Dentist.....	2	2	1	1	1	1	1	1	1	1	1	1
Dental hygienist.....	2	2	1	1	1	1	1	1	1	1	1	1
Chemist.....	1	1	1	1	1	1	1	1	1	1	1	1
Microbiologist.....	5	10	1	1	1	1	1	1	1	1	1	1
Laboratory technician.....	1	1	1	1	1	1	1	1	1	1	1	1
Other technical.....	1	1	1	1	1	1	1	1	1	1	1	1
Health educator.....	2	2	1	1	1	1	1	1	1	1	1	1
Nutritionist.....	1	1	1	1	1	1	1	1	1	1	1	1
Psychiatric social worker.....	1	1	1	1	1	1	1	1	1	1	1	1
Other medical social worker.....	1	1	1	1	1	1	1	1	1	1	1	1
Veterinarian.....	1	1	1	1	1	1	1	1	1	1	1	1
Public health investigator.....	1	1	1	1	1	1	1	1	1	1	1	1
Administrative management.....	1	1	1	1	1	1	1	1	1	1	1	1
Other.....	1	1	1	1	1	1	1	1	1	1	1	1

Table 3.—Budgeted positions and vacancies and percent of budgeted positions vacant for professional and technical personnel of 20 categories reported by local health departments in the continental United States according to size of community

Category	Total			Under 25,000			25,000-100,000			100,000 and over						
	Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions		Percent			
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant				
Total.....	1,207	21,460	3,113	9	458	2,102	260	12	518	1,660	167	10	267	2,033	255	9
Physicians.....	949	1,005	268	15	303	306	87	23	216	573	44	20	218	287	45	16
Practicing nurses.....	1,169	16,427	893	9	491	1,975	183	19	318	1,658	62	9	252	1,733	146	8
Practical nurses.....	21	125	4	1	2	1	1	1	2	2	2	2	1	4	1	11
Sanitary.....	269	287	26	16	13	15	5	28	21	26	7	27	43	29	7	16
Sanitarian.....	1,055	8,028	203	1	388	466	32	7	538	186	27	6	216	208	54	6
Dental.....	84	229	41	29	7	8	3	28	4	4	3	36	22	26	6	21
Dental hygienist.....	49	228	29	11	9	10	14	15	4	17	17	21	17	21	0	23
Chemist.....	49	90	9	9	2	2	1	1	1	1	1	1	5	5	2	49
Bacteriologist.....	162	581	51	39	16	11	1	9	16	16	15	12	51	76	1	1
Laboratory technician.....	114	283	29	5	14	17	.....	.....	.....	.....	.....	.....	34	86	4	7
Other technicians.....	140	265	50	8	.....	.....	.....	.....	7	8	5	25	16	16	6	13
Health educator.....	162	211	75	25	8	6	2	50	12	62	2	33	95	68	6	49
Nutritionist.....	11	45	20	21	.....	.....	.....	.....	2	3	1	23	5	6	2	49
Psychiatric social worker.....	25	39	7	11	2	2	.....	.....	2	2	.....	.....	5	4	1	25
Other medical social worker.....	38	129	11	8	1	2	.....	.....	1	1	.....	.....	4	1	1	25
Analyst and statistician.....	10	143	25	16	1	1	.....	.....	4	7	.....	.....	30	10	.....	.....
Veterinarian.....	158	254	23	18	4	4	.....	.....	13	55	1	7	32	42	5	12
Public health investigator.....	108	342	22	6	20	20	8	14	46	30	6	28	37	50	1	7
Administrative management.....	143	236	22	8	20	25	9	12	28	43	1	2	38	89	1	7
Other.....	211	2,369	173	8	40	76	4	5	38	51	4	5	40	123	9	7

Category	25,000-100,000			100,000-250,000			250,000 and over					
	Agencies	Positions		Agencies	Positions		Agencies	Positions		Percent		
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant			
Total.....	168	4,802	396	8	32	2,339	204	8	25	3,557	553	3
Physicians.....	205	203	28	11	30	89	14	16	23	427	58	14
Practicing nurses.....	168	2,274	117	8	31	1,911	78	8	21	1,268	102	8
Practical nurses.....	4	55	4	2	5	.....	.....	.....	.....	6	2	4
Sanitary.....	76	1,118	16	10	26	65	6	16	21	94	12	16
Sanitarian.....	128	1,888	74	7	28	209	20	7	55	1,601	69	8
Dental.....	24	56	11	28	31	11	3	23	10	137	18	14
Dental hygienist.....	26	29	8	14	7	8	1	11	14	205	14	7
Chemist.....	13	12	1	8	4	5	1	20	17	14	7	0
Bacteriologist.....	49	345	3	3	14	25	1	4	19	531	48	23
Laboratory technician.....	52	365	5	3	15	31	8	0	13	262	55	20
Other technicians.....	51	70	4	5	14	28	4	10	17	160	17	11
Health educator.....	30	45	15	22	19	21	5	21	26	83	24	29
Nutritionist.....	11	11	7	7	7	9	29	14	29	29	15	27
Psychiatric social worker.....	7	8	2	26	6	0	0	4	4	31	4	13
Other medical social worker.....	12	18	2	11	6	.....	.....	.....	.....	69	7	.....
Analyst and statistician.....	25	30	3	10	8	12	3	25	26	54	10	20
Veterinarian.....	62	14	0	11	15	47	6	13	20	103	12	16
Public health investigator.....	52	42	4	4	17	27	2	7	15	165	5	4
Administrative management.....	25	70	3	4	5	19	2	12	12	88	8	.....
Other.....	62	483	30	6	15	362	48	11	15	1,205	85	7

Table 4.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by designated types of local health departments, according to size of community

Category	Total		Under 25,000				25,000-49,999				50,000 and over			
	Positions		Appreciated	Positions		Appreciated	Positions		Appreciated	Positions		Appreciated	Positions	
	Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant			
COUNTY HEALTH DEPARTMENT (INCLUDES CITY-COUNTY)														
Total.....	674	16,303	888	300	1,317	188	1,824	70	138	1,778	130	1,778	130	
Physician.....	505	837	105	221	221	78	180	188	58	132	148	18	62	
Graduate nurse.....	257	4,708	355	257	914	70	333	684	23	123	800	1	1	
Practical nurse.....	8	16	1	1	2	1	1	1	1	3	3	1	1	
Engineer.....	88	139	29	9	4	10	10	1	20	20	3	3	3	
Sanitarian.....	663	2,087	118	508	381	10	534	236	12	130	483	22	22	
Dentist.....	53	99	15	1	1	1	1	1	1	15	15	1	1	
Dental hygienist.....	42	80	11	4	4	1	7	6	2	8	10	1	1	
Chemist.....	9	12	1	1	1	1	1	1	1	1	1	1	1	
Sanitologist.....	75	104	1	7	8	1	10	33	1	27	37	1	1	
Laboratory technician.....	78	102	8	8	38	1	7	9	1	20	20	2	2	
Other technician.....	43	58	4	1	1	1	1	2	1	8	8	1	1	
Health educator.....	53	107	17	3	1	1	7	7	1	15	15	1	1	
Nutritionist.....	9	12	4	1	1	1	1	1	1	2	2	1	1	
Psychiatric social worker.....	11	28	2	2	2	2	2	2	2	2	2	1	1	
Other medical social worker.....	21	45	3	1	1	1	1	1	1	2	2	1	1	
Analyst and statistician.....	39	41	5	1	1	1	1	1	1	4	4	1	1	
Veterinarian.....	64	102	11	1	1	1	1	1	1	10	10	1	1	
Public health investigator.....	121	162	6	35	33	3	20	30	1	39	41	1	1	
Administrative management.....	160	311	14	47	45	6	13	31	1	13	20	1	1	
Other.....	117	1,128	72	31	38	3	30	38	4	34	31	1	1	
100,000-249,999														
Category	Positions		Appreciated	Positions		Appreciated	Positions		Appreciated	Positions		Appreciated	Positions	
	Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant			
Total.....	72	2,621	133	12	808	70	9	2,708	171	171	171	171	171	
Physician.....	72	1,108	80	12	45	6	9	142	8	8	8	8	8	
Graduate nurse.....	70	1,823	68	2	2	1	1,669	1	1	1	1	1	1	
Practical nurse.....	2	7	1	1	1	1	1	1	1	1	1	1	1	
Engineer.....	30	68	10	8	38	3	9	43	4	4	4	4		
Sanitarian.....	70	543	41	12	168	34	9	431	4	4	4	4		
Dentist.....	21	31	4	4	5	1	1	18	4	4	4	4		
Dental hygienist.....	14	27	6	4	5	2	1	23	2	2	2	2		
Chemist.....	2	2	1	1	1	1	1	1	1	1	1	1		
Sanitologist.....	22	32	3	1	7	13	3	28	2	2	2	2		
Laboratory technician.....	30	45	1	1	1	1	1	31	2	2	2	2		
Other technician.....	36	48	2	1	1	1	1	37	1	1	1	1		
Health educator.....	36	28	6	1	1	1	1	17	3	3	3	3		
Nutritionist.....	1	1	1	1	1	1	1	1	1	1	1	1		
Psychiatric social worker.....	5	9	2	1	1	1	1	2	1	1	1	1		
Other medical social worker.....	6	13	1	1	1	1	1	3	1	1	1	1		
Analyst and statistician.....	14	14	2	1	1	1	1	16	2	2	2	2		
Veterinarian.....	33	30	4	1	1	1	1	33	1	1	1	1		
Public health investigator.....	29	41	3	1	1	1	1	38	1	1	1	1		
Administrative management.....	17	56	3	4	4	1	1	41	1	1	1	1		
Other.....	26	221	4	1	1	1	1	241	1	1	1	1		

Table 4.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by designated types of local health departments, according to size of community—Continued

Category	Total		Under \$5,000		\$5,000-10,000		\$10,000-50,000					
	Positions		Positions		Positions		Positions					
	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant				
CITY HEALTH DEPARTMENT												
Total.....	194	31,563	915	85	235	16	24	176	3	44	406	64
Physician.....	123	486	68	19	19	3	31	13	1	41	57	3
Graduate nurse.....	157	3,919	360	37	165	5	21	86	12	12	353	39
Practical nurse.....	12	184	3	2	2					1	8	
Engineer.....	47	62	34	2	2					30	30	2
Healthcare.....	136	2,312	98	30	82	3	20	25		43	155	11
Dentist.....	35	132	14	2	2	1				5	10	1
Dental hygienist.....	35	245	30	5	5					5	9	3
Chemist.....	21	37	9	1	1					2	2	
Bacteriologist.....	70	370	47	2	2					21	26	
Laboratory technician.....	94	388	58	8	8					17	23	2
Other technician.....	41	185	23							10	11	
Health educator.....	45	195	30	2	2					8	9	1
Nutritionist.....	17	35	10			1						
Psychiatric social worker.....	6	27	4									
Other medical social worker.....	16	31	8	1	1					1	1	1
Analyst and statistician.....	30	112	20	1	1					6	6	
Veterinarian.....	52	482	10	3	3					4	4	
Public health investigator.....	30	530	6	1	1					14	21	
Administrative management.....	28	81	4	4	4					4	12	
Other.....	68	1,081	108	20	28	3	8	8		13	41	8
100,000-200,000												
Category	Positions		Positions		Positions		Positions					
	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant				
Total.....	26	1,611	141		15	1,368	180	12	5,488	282		
Physician.....	30	70	5		9	27	6	11	200	50		
Graduate nurse.....	34	335	50		11	418	21	12	2,168	255		
Practical nurse.....	4	95			1	5		2	13			
Engineer.....	14	21	6		7	22		10	27	8		
Healthcare.....	23	430	22		11	367	15	10	1,218	43		
Dentist.....	7	9	2		3	3		9	188	14		
Dental hygienist.....	31	30	2		2	3		5	162	14		
Chemist.....	3	16	1		2	4		12	60	7		
Bacteriologist.....	20	52			10	17		13	260	46		
Laboratory technician.....	20	68	2		8	11		15	290	22		
Other technician.....	16	28	2		0	25		8	120	17		
Health educator.....	14	18	2		7	11		12	45	17		
Nutritionist.....	4	4			3	2		1	6	15		
Psychiatric social worker.....	1	1			2	5		3	21	4		
Other medical social worker.....	2	5	1		2	2		1	42	2		
Analyst and statistician.....	10	19	1		5	9		11	78	17		
Veterinarian.....	17	22	1		9	27		9	68	12		
Public health investigator.....	13	30			6	12		1	7	4		
Administrative management.....	6	11			5	15		7	37	3		
Other.....	11	201	24		6	318	40	3	458	30		

(Continued)

Table 4.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by designated types of local health departments, according to size of community—Continued

Category	Total		Under 25,000		25,000-50,000		50,000-100,000		100,000 and over			
	Positions		Positions		Positions		Positions		Positions			
	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant		
LOCAL DEPARTMENTS												
Total	258	2,236	356	31	478	55	62	500	111	70	712	62
Physician	229	219	65	40	61	38	76	79	22	70	75	23
Quarantine master	217	1,267	137	86	236	33	63	116	57	70	128	43
Practical nurse	1	1					1	1				
Radiologist	21	59	10	2	2		12	13	5	6	2	
Sanitarian	531	655	45	33	108	9	78	154	35	76	181	18
Death	5	10	6	3	7	2	2	2	1	2	3	2
Dental hygienist	5	6	2				1	1	2	2	2	1
Chemist												
Bacteriologist	12	16	2	1	1		2	4	2	2	4	
Laboratory technician	4	7	2				2	2	2	3	3	
Other technicians	4	9					1	1				
Health educator	11	33	1	2	2		4	1	2	2	2	
Nutritionist	3	3	1				1	1				
Psychiatric social worker	2	2					1	1				
Other medical social worker												
Analyst and statistician	1	1						1				
Veterinarian	5	6	2				1		2	2	2	1
Public health investigator	23	20	6	5	5		9	9	4	14	14	1
Administrative management	14	15	4	6	6	3	5	5	1	1	1	
Other	23	28	1	12	12	1	2	5		7	21	

Category	10,000-25,000		25,000-50,000		50,000 and over	
	Positions		Positions		Positions	
	Budgeted	Vacant	Budgeted	Vacant	Budgeted	Vacant
Total	34	356		26		
Physician	24	29		4		
Quarantine master	24	261		11		
Practical nurse						
Radiologist	7	6		2		
Sanitarian	13	83		7		
Death	2	2		1		
Dental hygienist	2	2				
Chemist						
Bacteriologist	5	7				
Laboratory technician	1	2				
Other technicians						
Health educator	3	4				
Nutritionist	1	1				
Psychiatric social worker	1	1				
Other medical social worker						
Analyst and statistician	1	1				
Veterinarian	2	3				
Public health investigator	6	7				
Administrative management						
Other						

Table 4.—Budgeted positions and vacancies for professional and technical personnel of 25 categories reported by designated types of local health departments, according to size of community—Continued

Category	Total		Under \$3,000				\$3,000-49,999				\$50,000-99,999				
	Appointments	Positions		Appointments	Positions		Appointments	Positions		Appointments	Positions		Appointments	Positions	
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant			
STATE DISTRICT															
Total.....	48	918	98	1	6	3	42	4	0	71	9				
Physicians.....	22	41	0	1	1	2	3	1	0	6	1				
Dentists.....	45	303	53	1	1	4	20	3	8	40	4				
Practical nurses.....	33	45	8	1	1	2	3	2	0	3	1				
Nurses.....	28	24	7	1	1	2	2	0	0	3	1				
Sanitarians.....	0	10	5	1	1	1	2	1	1	1	1				
Dental hygienists.....	6	7	1	1	1	1	2	1	1	1	1				
Chemists.....	1	1	1	1	1	1	1	1	1	1	1				
Bacteriologists.....	1	1	1	1	1	1	1	1	1	1	1				
Laboratory technicians.....	1	1	1	1	1	1	1	1	1	1	1				
Other technicians.....	4	6	1	1	1	1	1	1	1	1	1				
Health educator.....	14	14	3	1	1	1	1	1	1	1	1				
Nutritionist.....	12	12	1	1	1	1	1	1	1	1	1				
Epidemiologic social worker.....	1	2	1	1	1	1	1	1	1	1	1				
Other medical social worker.....	1	1	1	1	1	1	1	1	1	1	1				
Analyst and statistician.....	2	2	1	1	1	1	1	1	1	1	1				
Veterinarian.....	3	3	1	1	1	1	1	1	1	1	1				
Public health investigator.....	3	10	1	1	1	1	1	1	1	1	1				
Administrative management.....	1	2	1	1	1	1	1	1	1	1	1				
Other.....	7	14	2	1	1	1	1	1	1	1	1				
100,000-249,999															
Category	Total		100,000-149,999		150,000-199,999		200,000 and over								
	Appointments	Positions	Appointments	Positions	Appointments	Positions	Appointments	Positions							
Total.....	24	281	51	5	130	31	3	75							
Physicians.....	16	18	4	3	8	2	3	5							
Dentists.....	52	134	20	8	22	20	0	21							
Practical nurses.....	15	23	5	0	10	3	0	11							
Nurses.....	15	23	4	0	14	3	0	10							
Sanitarians.....	4	4	1	4	5	2	1	1							
Dental hygienists.....	2	2	1	1	1	1	1	1							
Chemists.....	1	1	1	1	1	1	1	1							
Bacteriologists.....	1	1	1	1	1	1	1	1							
Laboratory technicians.....	1	1	1	1	1	1	1	1							
Other technicians.....	3	4	1	1	1	1	1	1							
Health educator.....	8	8	7	5	2	1	1	2							
Nutritionist.....	5	6	1	1	1	1	1	2							
Epidemiologic social worker.....	1	1	1	1	1	1	1	1							
Other medical social worker.....	1	1	1	1	1	1	1	1							
Analyst and statistician.....	1	1	1	1	1	1	1	1							
Veterinarian.....	1	1	1	1	1	1	1	1							
Public health investigator.....	3	8	1	4	4	1	1	2							
Administrative management.....	1	1	1	1	1	1	1	1							
Other.....	8	8	3	2	3	3	2	2							

(Continued)

Table 4.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by designated types of local health departments, according to size of community—Continued

Category	Total		Under 10,000				10,000-19,999			20,000-49,999			50,000-99,999								
	Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions		Agencies	Positions							
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant									
HEALTH DEPARTMENTS CLASSIFIED AS "OTHER"																					
Total.....	81	185	8	31	114	2	3	8		1	31	3									
Physician.....	2	2		1	1					1	1										
Graduate nurse.....	73	122	7	65	92	4	3	8		4	26	3									
Practical nurse.....																					
Engineer.....																					
Sanitarian.....	21	26	1	18	20	1	2	2		1	4										
Dentist.....																					
Dental hygienist.....	1	2		1	2																
Chemist.....																					
Bacteriologist.....																					
Laboratory technician.....	1	1		1	1					1	1										
Other technician.....																					
Health educator.....	1																				
Nutritionist.....																					
Psychiatric social worker.....																					
Other medical social worker.....																					
Analyst and statistician.....																					
Veterinarian.....																					
Public health investigator.....																					
Administrative management.....																					
Other.....																					
100,000-249,999														250,000-499,999			500,000 and over				
Category	Agencies	Positions		Agencies	Positions		Agencies	Positions													
		Budgeted	Vacant		Budgeted	Vacant		Budgeted	Vacant												
Total.....																					
Physician.....																					
Graduate nurse.....																					
Practical nurse.....																					
Engineer.....																					
Sanitarian.....																					
Dentist.....																					
Dental hygienist.....																					
Chemist.....																					
Bacteriologist.....																					
Laboratory technician.....																					
Other technician.....																					
Health educator.....																					
Nutritionist.....																					
Psychiatric social worker.....																					
Other medical social worker.....																					
Analyst and statistician.....																					
Veterinarian.....																					
Public health investigator.....																					
Administrative management.....																					
Other.....																					

Table 5.—Budgeted positions and vacancies and percent of budgeted positions vacant for professional and technical personnel of 20 categories reported by State health departments in the continental United States according to geographic region

Category	Total			Northeastern			Southern			Central			Western		
	Budgeted	Vacant	Percent	Budgeted	Vacant	Percent	Budgeted	Vacant	Percent	Budgeted	Vacant	Percent	Budgeted	Vacant	Percent
Total	7,882	660	32	2,122	200	13	3,269	465	11	1,470	356	10	1,015	169	16
Physicians	414	155	35	223	65	29	595	57	9	34	12	35	86	25	29
Practical nurses	1,157	436	32	663	78	10	531	89	15	131	33	8	152	19	13
Nurses	725	98	12	181	29	12	259	41	16	29	21	32	105	34	32
Statisticians	468	51	7	183	7	4	587	10	1	100	33	10	49	7	14
Dentist	154	52	34	23	2	9	65	16	25	10	27	11	7	18	26
Dental hygienist	34	10	29	20	4	14	23	5	22	20	9	60	5	1	58
Chemist	238	11	4	82	5	6	50	5	9	60	4	7	41	6	15
Harbor/ship	715	53	7	172	8	5	216	29	12	262	12	4	113	4	4
Laboratory technician	548	68	12	141	5	4	255	31	12	156	22	11	14	27	19
Other technicians	288	41	14	73	11	15	343	14	4	130	19	10	32	1	3
Health educator	192	33	17	20	2	10	78	17	22	67	11	14	27	1	4
Nutritionist	150	13	8	75	2	3	45	4	9	31	8	14	11	1	9
Psychiatric social worker	72	23	32	11	6	55	20	9	31	12	6	60	7	2	29
Other medical social worker	85	27	32	14	19	130	16	20	24	10	25	25	7	33	33
Analyst and statistician	162	27	14	54	14	26	61	5	8	82	9	8	55	6	11
Veterinarian	35	9	26	11	3	27	4	1	35	7	2	3	1	1	33
Public health investigator	276	54	19	46	2	4	152	8	5	26	2	4	7	4	5
Administrative management	410	51	12	42	1	2	308	17	6	62	2	3	42	3	7
Other	1,230	153	11	268	21	7	829	117	14	335	11	13	116	4	3

Table 6.—Budgeted positions and vacancies for professional and technical personnel of 20 categories reported by State and local health departments in the Territories, according to type of department

Category	Total			State		State District			
	Agencies	Positions		Agencies	Positions		Positions		
		Budgeted	Vacant		Budgeted	Vacant	Budgeted	Vacant	
Total	41	1,445	158	4	785	59	26	681	26
Physicians	41	183	15	4	74	12	26	58	3
Practical nurses	41	652	48	4	272	32	16	240	11
Nurses	30	85	41	2	35	7	26	69	8
Statisticians	8	17	9	4	12	7	5	3	3
Dentist	16	120	7	3	79	8	12	41	7
Dental hygienist	4	18	2	2	9	2	4	4	1
Chemist	2	5	2	2	5	2	2	2	1
Harbor/ship	4	14	2	1	14	2	1	1	1
Laboratory technician	7	34	1	1	23	1	1	1	1
Other technicians	14	102	8	2	70	8	3	6	3
Health educator	16	20	2	2	19	2	12	13	1
Nutritionist	4	12	2	2	12	3	11	10	3
Psychiatric social worker	8	12	2	2	10	4	3	6	1
Other medical social worker	23	32	3	2	19	2	19	28	3
Analyst and statistician	6	16	1	2	16	1	1	2	1
Veterinarian	2	6	1	2	5	1	1	1	1
Public health investigator	5	20	1	4	26	1	1	1	1
Administrative management	2	27	2	2	27	2	2	2	2

Appendix D. Military Status, Level of Responsibility, and Age Distributions for Selected Categories of Personnel

Table 1.—Number of male physicians, dentists, and veterinarians under 50 years of age reported by State and local health departments as having status in military reserves or liability under Public Law 779

State	Total	Physicians	Dentists	Veterinarians
Total	1,377	1,109	168	100
Military reserve.....	256	219	40	0
Public Law 779.....	439	319	84	36
Priority:				
1.....	51	25	14	8
2.....	22	16	4	2
3.....	308	279	59	19
4.....	297	236	41	19
Not liable.....	392	341	25	26
No information.....	149	111	25	13
Confidential United States				
Total	1,389	942	190	157
Military reserve.....	303	253	50	0
Public Law 779.....	605	436	83	45
Priority:				
1.....	41	28	14	8
2.....	20	15	3	2
3.....	293	268	59	18
4.....	306	268	36	19
Not liable.....	177	151	23	23
No information.....	138	83	27	28
Territories				
Total	91	86	4	4
Military reserve.....	33	30	0	3
Public Law 779.....	45	49	2	0
Priority:				
1.....	2	2	0	0
2.....	1	1	0	0
3.....	28	31	1	0
4.....	11	10	0	0
Not liable.....	15	12	2	1
No information.....	11	11	0	0

Table 2.—Professional and technical personnel of six selected categories in positions at various levels of responsibility reported by State and local health departments as having status in military reserves or liability under Public Law 779

State	All 1946-1948	Health officers and (1946 or service	Supervisor and public health	Staff	City worker	Other
Total	21,512	4,261	1,569	17,276	1,128	368
Military reserve.....	2,243	309	172	1,866	187	35
Public Law 779.....	681	371	37	2,909	31	2
Priority:						
1.....	35	30	0	38	2	0
2.....	22	7	2	15	0	0
3.....	318	200	21	63	10	0
4.....	267	161	12	86	18	0
Not liable.....	119	119	30	18	31	0
No information.....	149	57	0	62	7	0
Confidential United States						
Total	21,424	2,302	1,289	16,824	1,128	344
Military reserve.....	2,187	358	183	1,646	182	31
Public Law 779.....	685	359	34	1,188	31	2
Priority:						
1.....	60	21	0	23	2	0
2.....	20	0	2	12	0	0
3.....	263	208	16	72	14	0
4.....	216	136	11	85	19	0
Not liable.....	177	171	31	63	8	0
No information.....	138	63	0	73	7	0
Territories						
Total	918	162	347	659	21	44
Military reserve.....	61	37	6	21	0	2
Public Law 779.....	45	21	2	21	0	0
Priority:						
1.....	2	2	0	5	0	0
2.....	1	0	0	1	0	0
3.....	28	12	2	11	0	0
4.....	11	5	2	4	0	0
Not liable.....	15	9	2	3	0	0
No information.....	11	2	0	9	0	0

Table 3.—Physicians reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	2,274	878	789	233	185	127	3
10-25.....	1	1	1	1	1	2	
26-30.....	122	21	28	30	17	17	
31-35.....	168	43	55	31	12	19	1
36-40.....	271	94	73	61	15	12	
41-45.....	239	99	89	28	31	59	1
46-50.....	314	103	122	62	10	9	
51-55.....	252	66	85	63	12	17	1
56-60.....	276	51	74	31	10	14	
61-65.....	210	43	72	62	11	12	
66-70.....	168	29	83	31	29	16	
Over 70.....	126	13	61	19	22	4	
+50 unknown.....	11		5	6			
Unknown.....	49	7	9	23		3	
Median age.....	40	47	41	36	50	42	43

Continental United States

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	2,074	667	759	231	183	128	3
10-25.....	3	1	1	1	1	1	
26-30.....	101	18	28	26	17	2	
31-35.....	141	37	58	34	12	2	
36-40.....	233	85	73	61	15	6	
41-45.....	238	90	69	30	31	8	
46-50.....	299	91	122	67	10	4	
51-55.....	222	63	85	61	12	3	
56-60.....	190	43	74	31	10	6	
61-65.....	204	43	72	62	10	3	
66-70.....	153	29	83	31	22	7	
Over 70.....	121	14	60	19	22	3	
+50 unknown.....	11		5	6			
Unknown.....	45	4	9	23		1	
Median age.....	39	47	41	36	50	42	43

Territories

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	180	61				58	
10-25.....	2	1				1	
26-30.....	21	0				15	
31-35.....	79	0				12	
36-40.....	104	0				6	
41-45.....	21	0				13	
46-50.....	37	13				5	
51-55.....	29	0				14	
56-60.....	19	8				8	
61-65.....	3					3	
66-70.....	3					3	
Over 70.....	3	1				1	
+50 unknown.....	1	3				2	
Unknown.....	1						
Median age.....	44	45				43	

Table 4.—Nurses reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	12,658	1,208	4,825	4,064	1,229	913	188
10-25.....	668	58	310	445	52	60	15
26-30.....	1,702	340	680	686	139	153	88
31-35.....	1,449	321	641	424	169	120	32
36-40.....	2,067	529	885	624	221	156	38
41-45.....	2,238	299	883	621	212	144	39
46-50.....	1,433	191	643	489	135	96	25
51-55.....	1,155	148	499	406	65	67	28
56-60.....	778	102	355	283	64	51	18
61-65.....	597	42	231	175	28	18	7
66-70.....	316	13	37	64	9	5	3
Over 70.....	12	1	3	6	2		
+50 unknown.....	41		16	37			
Unknown.....	281	77	80	47	39	38	10
Median age.....	46	43	45	41	49	39	39

Continental United States

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	12,661	1,198	4,825	4,064	1,229	913	188
10-25.....	616	48	310	445	52	25	15
26-30.....	1,614	309	680	686	132	79	88
31-35.....	1,352	311	611	424	179	113	39
36-40.....	1,868	317	856	599	221	84	38
41-45.....	2,233	299	883	621	212	144	39
46-50.....	1,397	191	633	489	135	71	25
51-55.....	1,122	151	493	404	65	51	18
56-60.....	732	96	353	283	61	49	18
61-65.....	595	40	230	173	28	16	7
66-70.....	313	13	37	64	9	5	3
Over 70.....	12	1	3	6	2		
+50 unknown.....	41		16	37			
Unknown.....	276	56	50	47	39	4	10
Median age.....	43	44	45	41	49	39	39

Territories

Age	Total	State health department	County	City	Local district	State district	Other
All ages.....	632	280				312	
10-25.....	41	10				31	
26-30.....	98	13				63	
31-35.....	41	27				37	
36-40.....	135	53				72	
41-45.....	91	33				54	
46-50.....	56	22				27	
51-55.....	35	17				9	
56-60.....	11	6				5	
61-65.....	2						
66-70.....	3						
Over 70.....	3						
+50 unknown.....	1	3				2	
Unknown.....	85	30				54	
Median age.....	35	30				38	

Table 5.—Engineers reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local districts	State districts	Other
All ages	1,899	717	162	91	21	309	
19-25	21	31	22	1	2	4	
26-30	226	185	45	11	4	16	
31-35	180	127	32	18	4	16	
36-40	185	115	22	23	9	18	
41-45	176	96	27	17	4	36	
46-50	168	65	11	33	1	16	
51-55	55	29	4	8	1	8	
56-60	25	21	1	2		4	
61-65	23	15	3	8	1	3	
66-70	12	6	4				
Over 70	1	1					
+50 unknown	1						
Unknown	4	4					
Median age	37	36	35	40	38	38	

Continental United States

All ages	4,691	622	161	98	21	166
19-25	49	29	12	1	2	5
26-30	219	181	45	11	4	20
31-35	183	129	32	18	4	17
36-40	181	111	22	21	9	18
41-45	168	98	27	17	4	13
46-50	177	62	11	12	1	20
51-55	58	28	4	8	1	8
56-60	21	20	1	2		1
61-65	25	15	3	3	1	3
66-70	12	8	4			
Over 70	1	1				
+50 unknown	1					
Unknown	6	6				
Median age	37	37	35	40	38	37

Territories

All ages	28	26				3
19-25	2	2				
26-30	8	7				1
31-35	6	7				1
36-40	4	4				1
41-45	2	1				1
46-50	5	3				
51-55	1	1				
56-60	1	1				
61-65	1					
66-70						
Over 70						
+50 unknown						
Unknown	1	1				
Median age	34	34				33

Table 6.—Sanitarians reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local districts	State district	Other
All ages	5,871	677	2,267	2,403	476	168	30
19-25	268	53	188	81	41	7	2
26-30	871	79	353	321	99	14	4
31-35	833	82	326	369	54	18	1
36-40	830	83	320	307	37	22	1
41-45	833	97	320	315	41	16	3
46-50	831	64	292	298	40	12	1
51-55	312	54	205	204	27	8	2
56-60	175	25	154	204	23	8	1
61-65	275	59	104	120	13	11	1
66-70	194	8	81	70	2	2	
Over 70	65	11	26	23	2		
+50 unknown	3		0				
Unknown	145	0	10	128	4	2	0
Median age	41	41	41	43	37	48	40

Continental United States

All ages	8,788	928	2,967	2,905	476	77	30
19-25	275	20	168	84	94	7	2
26-30	836	64	356	321	99	12	4
31-35	762	60	328	339	74	7	1
36-40	807	72	325	307	87	15	1
41-45	757	68	323	315	44	9	3
46-50	583	50	242	256	40	8	1
51-55	340	54	205	216	27	6	2
56-60	475	21	196	224	28	7	4
61-65	274	26	103	129	13	5	1
66-70	197	7	81	70	2		
Over 70	64	11	26	23	2		
+50 unknown	9		0				
Unknown	161	3	10	128	4	1	0
Median age	41	42	41	43	37	48	40

Territories

All ages	113	76				20
19-25	5	5				
26-30	13	11				2
31-35	20	22				8
36-40	20	22				8
41-45	16	8				10
46-50	9	5				4
51-55	2	2				2
56-60	1					1
61-65	1					1
66-70	2	1				2
Over 70						
+50 unknown						
Unknown	4	3				1
Median age	37	35				41

Table 7.—Dentists reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local district	State district	Other
All ages	316	118	62	119	5	10	2
19-25	3	1	1	1			
26-30	51	23	13	11	2	1	1
31-35	47	19	17	7	2	1	1
36-40	21	10	8	11	1		
41-45	20	12	2	48		3	
46-50	43	18	4	39		2	
51-55	46	19	7	30		1	
56-60	26	17		39		2	
61-65	11	3	4	3			
66-70	4	2	1	1			
Over 70	3	1	3				
+50 unknown	2						
Unknown	9		3	7			
Median age	45	45	28	85	32	48	30

Continental United States

All ages	265	111	62	119	5	6	2
19-25	3	1	1	1			
26-30	63	22	13	14	2	1	1
31-35	46	19	17	7	2	1	1
36-40	28	8	8	11			
41-45	21	12	3	16		1	
46-50	31	17	3	18		1	
51-55	41	16	7	20		1	
56-60	19	10		19		1	
61-65	10	2	4	4			
66-70	4	2	1	1			
Over 70	3	1	2				
+50 unknown	2			2			
Unknown	6		3	7			
Median age	45	45	28	85	32	45	30

Territories

All ages	11	7				4	
19-25							
26-30	1	3					
31-35	1	3					
36-40							
41-45	2					2	
46-50	3	2					
51-55	3	1				2	
56-60	1	1					
61-65	1	1					
66-70							
Over 70							
+50 unknown							
Unknown							
Median age	50	51				50	

Table 8.—Veterinarians reported by State and local health departments distributed by age groups according to type of department served

Age	Total	State health department	County	City	Local district	State district	Other
All ages	323	12	95	187	4	1	1
19-25	3	1		2			
26-30	27	2	8	16		1	
31-35	37	2	12	21			
36-40	43	3	9	27			
41-45	24	4	12	15	1	1	
46-50	15	3	4	6			
51-55	19	7	11				
56-60	16	5	17	23		1	
61-65	43	2	17	25			1
66-70	21	2	6	13			
Over 70	10		4	12			
+50 unknown	1						
Unknown	3		2	1			
Median age	51	45	53	52	58	45	

Continental United States

All ages	319	10	95	187	4	2	
19-25	2			2			
26-30	25	1	8	16			
31-35	37	2	12	21			
36-40	41	3	9	27			
41-45	23	4	12	15	1	1	
46-50	14	4	4	6			
51-55	19	7	11			1	
56-60	16	5	17	23		1	
61-65	43	2	17	25			1
66-70	21	2	6	13			
Over 70	16		4	12			
+50 unknown	1						
Unknown	3		2	1			
Median age	52	45	53	52	58	45	

Territories

All ages	4	3				1	
19-25	1	1					
26-30	2	1				1	
31-35	2	1					
36-40							
41-45							
46-50	1	1					
51-55							
56-60							
61-65							
66-70							
Over 70							
+50 unknown							
Unknown							
Median age	38	38				38	

Table 9.—Level of responsibility of position held by professional and technical personnel of selected categories reported by State and local health departments

Position held	Total							Continental United States							Territories							
	All groups	Physician	Graduate nurse	Engineer	Sanitarian	Dentist	Veterinarian	All groups	Physician	Graduate nurse	Engineer	Sanitarian	Dentist	Veterinarian	All groups	Physician	Graduate nurse	Engineer	Sanitarian	Dentist	Veterinarian	Other
All groups.....	23,315	2,721	12,682	1,669	5,871	217	323	21,621	2,091	12,015	1,477	5,724	266	316	58	318	130	612	28	113	11	4
Health officer and chief of service.....	2,191	3,478	371	101	137	43	21	40	2,162	1,831	286	68	137	41	21	68	79	5	4	.....	.....	.....
Supervisor and assistant.....	3,306	119	1,103	78	179	18	26	1,399	336	1,026	33	151	15	20	107	33	78	6	15	.....	.....	.....
Staff.....	12,778	367,953	533	782	4,937	191	193	13,021	120,974	479	797	4,879	197	193	2,495	44	80	19	17	4	.....	.....
Trained worker.....	7,178	12	391	117	521	67	86	11,126	17	338	115	312	92	86	1
Not specified.....	388	29	303	17	161	1	331	28	212	17	88	1	44	28

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