

Salary Trends for Public Health Workers In Local Health Departments

By PAUL E. FOX, M.A.

MONETARY REMUNERATION ranks well up on the list of job satisfactions. Although most workers tend to give more weight to intangible factors such as work objectives and accomplishments, recognition and the accompanying prestige, and security, the market price of a position still has a significant influence on the ability of an employer to attract and hold competent personnel. Maintenance of full staffs of well-trained and experienced local public health workers requires adjustments of salaries to meet both general economic pressures and specific competitive conditions. The success with which such problems are met in a particular community depends in large measure upon the attitudes of its citizens toward health programs and the strength of the supporting financial structure.

How communities of 50,000 to 250,000 served by full-time local health departments adjusted salaries for their health officers, sanitary engineers, public health nurses, and other professional personnel between May 1948 and April 1952 (1) will be examined here in some detail. Although comparative data for 1948 on all groups are not available for larger local health units, the 1952 salary study did include informa-

tion from departments serving populations of 250,000 and over. Objective measurement of the many factors which influence salaries is beyond the scope of this particular study, but mention will be made here of the interacting forces which seem to be involved in particular situations.

The salaries of each occupational group are affected at different times and in varying amounts by levels of job responsibilities and requirements; numbers of positions available; reservoir of talent to fill positions; competitive status in relation to comparable occupational groups in other governmental programs, in private agencies, in industry and in private professional practice; professional salary standards—national, State or local—which are formulated and promulgated with a view toward improving the relative economic status of a particular occupational group; and special bargaining positions in relation to program demands within a community.

Salary Trends by Occupation

Percentage increases in median salaries for seven key occupational groups of local public health workers averaged 27.2 percent between May 1948 and April 1952. Increases in median salaries for the respective groups varied from 19 percent for health educators to 33 percent for sanitary engineers.

Local Health Officers

The median salary for local health officers increased from \$6,624 to \$8,519, or 28.6 percent.

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Source of Data

This paper is based primarily on salary data reported by local health departments serving populations from 50,000 to 250,000, although some data from State health departments are included. Trend comparisons are based on changes in median salaries for seven occupational groups locally—health officers, sanitary engineers, sanitarians, professional laboratory personnel, supervising public health nurses, staff public health nurses, and health educators; for medical personnel in private practice; and for six occupational groups employed by State health departments—health officers, sanitary engineers, sanitation personnel, professional laboratory personnel, supervisory and consultant public health nurses, and health educators. State data for staff public health nurses were not available. Individual identification of local health officers permitted some special analysis of their salaries which was not possible for the other groups.

This is more than the seven-group average, but less than the rate of increase for either sanitary engineers or supervising public health nurses. In the amount of dollar increase it is by far the largest, exceeding the dollar increase in the median sanitary engineering salary by almost \$600 (fig. 1).

The competitive pressures of financial rewards to be received in private practice, in larger local health units, and in positions with State health departments must have had considerable effect upon the salary increases given to these local health officers. Some idea of the intensity of these competitive pressures can be obtained from a few related statistics. The 28.6 percent increase in median salary received by local health officers amounts to an annual increment of 7.2 percent. From 1947 to 1951 nonsalaried physicians were increasing their net incomes sufficiently to account for an annual increment of 8.9 percent in median net income (2, 3). The median salary for medical personnel employed by State health departments, excluding State health officers, increased at an annual rate of 7.5 percent from August 1948 to August 1952; for State health officers, the annual rate of increase was 10.6 percent (4).

Not only was the rate of median salary increase relatively less, but the size of the median salary for local health officers was substantially lower than the median compensations for other medical groups. For example, the April 1952 median salary of \$8,519 received by local health officers serving areas with populations of 50,000–249,999 was 30 percent lower than the median net income (\$11,191) received by nonsalaried physicians during 1951. State medical personnel also were paid at sufficiently high rates in August 1952 to account for higher median salaries: health officers, \$10,684; medical personnel other than health officers, \$8,967. Similarly, local health officers in health units serving more populous areas were paid at rates which resulted in substantially higher median salaries: units in the 250,000–499,999 population group, \$10,563; units in the 500,000 and over population group, \$12,437.

The direct relationship between size of the health officer's median salary and size of health jurisdiction is confirmed by data reported in the *Municipal Yearbook* (5). These data are for city health officers' salaries and for that reason are only generally comparable with the data from the study of salaries in all full-time local health jurisdictions. Median salaries reported for city health officers on both January 1, 1948, and January 1, 1952, varied directly with size of city (table 1).

Table 1. Population and median salaries reported for health officers in 4 groups of cities

Population	Median salary reported		Salary increase (percent)
	Jan. 1, 1948	Jan. 1, 1952	
50,000–99,999-----	\$5, 996	\$6, 455	7. 7
100,000–249,999-----	6, 780	8, 181	20. 7
250,000–499,999-----	7, 650	10, 000	30. 7
500,000 and over----	10, 000	11, 586	15. 9

The largest percentage increase, 30.7 percent occurred for health officers in cities with a population of 250,000–499,999; the smallest, 7.7 percent, for health officers in cities 50,000–99,999. These represent annual increments of 7.7 percent and 1.9 percent, respectively.

The extent to which these salary differentials have affected the ability of communities to employ and hold health officers can be deduced only in part from the statistics at hand. Medical personnel per local health unit increased very slightly between June 30, 1947, and December 31, 1951 (6, 7). Also, if very limited data from the salary studies are indicative, turnover among health officers in these health departments was not too great from 1948 to 1952. Only 173 health departments reported in both May 1948 and April 1952. Of these, 135 reported occupied health officer positions both times. Two-thirds of the incumbents were reported in the same positions on both dates. A one-third change of personnel in 4 years is 8.3 percent per year, which is a higher turnover rate than might be desirable but not so high as to be labeled excessive.

Whether rates of pay were the major factor in the turnover rate, whether other tangible rewards were largely involved, or whether intangible influences of prestige and accomplishment were predominant, the following facts based on comparisons of median salaries computed from limited data are clear: First, the 90 health officers who were reported occupying the same positions in May 1948 and in April 1952 received relatively higher salaries than any other group; second, salaries for the 45 occupied health officer positions experiencing a change in incumbents increased at a greater rate than salaries of any other group (table 2).

Sanitary Engineers and Sanitarians

The median salary for sanitary engineers increased by 33.0 percent between 1948 and 1952; that for sanitarians, 26.3 percent. The increase

in the engineers' median salary was almost \$1,300 as compared with \$700 for sanitarians. The April 1952 median salaries for sanitary engineers and sanitarians were \$5,233 and \$3,364, respectively (fig. 1).

Many explanations might be given for these changes. Sanitary engineers were in very short supply in 1952. In view of this fact it could be argued that it took a substantial increase in salaries to maintain the 0.4 engineer per local health unit (6, 7).

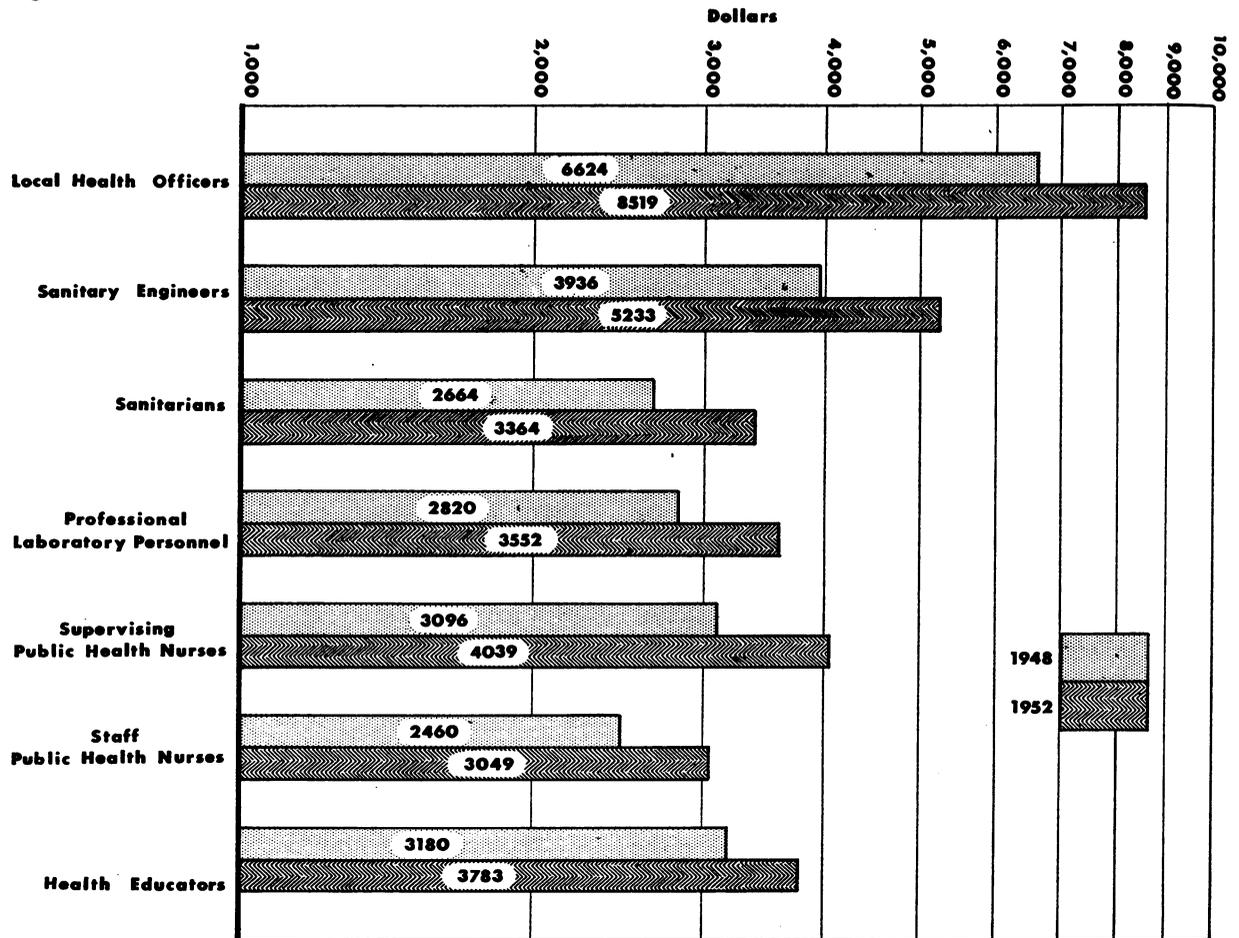
On the other hand, sanitarians reported by local health units increased from 4.0 per unit to 4.7 per unit between June 30, 1947, and December 31, 1951 (6, 7). An inverse correlation between employment and salary trends measured by median salaries for occupational groups seems to exist. In other words, the greater an increase in numbers of employees of a given category, the smaller the percentage increase in median salary. Such a relationship could result from a number of factors. For example, employees are usually taken on at minimum or less than average rates. Except for an occupational group such as engineers, with a ratio per health unit of less than 1, replacements may not be obtainable at existing rates during a period of rising costs of living such as 1948-52. Another characteristic of such a small group is that grade level changes and major revisions of salary scales are more likely to occur here than in larger groups of employees. This would tend to cause a relatively large percentage salary increase.

From the standpoint of diversity of activity, sanitarians constitute the most heterogeneous of the seven groups of local health employees studied. This group is the least profession-

Table 2. Median salaries and percentage increases for health officers in health units reporting, May 1948 and April 1952

Health unit	Number of units reporting	Median salary reported		Salary increase (percent)
		May 1948	April 1952	
All units.....		\$6, 624	\$8, 519	28. 6
Reporting both years.....	173	6, 762	8, 925	32. 0
Same person in position both years.....	90	6, 925	9, 083	31. 2
Different person in position both years.....	45	6, 300	8, 533	35. 4

Figure 1. Median salaries for all reporting health units serving populations of 50,000–249,999.



It has been the practice in the past to consider the midpoint of the median salary interval as the median salary for an occupational group. Medians for the purpose of this trend study have been interpolated by the formula

$$M = Lme + \frac{i}{f} C.$$

alized in the sense of generally accepted prerequisites. Job assignments are widely diversified. Training is most frequently obtained after initial employment. Consequently, recruitment is fluid and the supply of potential eligibles rather large. This is reflected in the wide range of salaries paid, from \$1,620 to \$5,000 in 1948 and from \$1,800 to \$6,305 in 1952 (1). Accessions of employees evidently tend to be in the lower grades and at beginning salaries, thus retarding any increase in the median salary.

Public Health Nurses

There was a \$1,000 difference in median salary in April 1952 (fig. 1) and a 6.5 percent difference in percentage increase from May 1948 in

favor of supervising, as compared with staff, public health nurses. The 30.4 percent increase in median salary for supervising nurses was exceeded only by the rate of increase for sanitary engineers, while the 23.9 percent increase in staff nurse median salary was the second lowest of the 7 occupational groups.

A per-unit increase of 1.2 public health nurses employed by full-time local health departments was reported between June 30, 1947, and December 31, 1951 (6,7). Separate data on supervising and staff nurses are not available for this period. However, certain similarities between the nursing groups and environmental sanitation groups are apparent. Supervising nurses are much fewer in number. The availability of supervisory and consultative posi-

tions with States, hospitals, and industries would also tend to be reflected in relatively larger salary increases for supervising nurses than could be commanded by staff nurses. Furthermore, the staff nurse is handicapped in salary negotiations by the weight of mere numbers. Administrators, councilmen, and county commissioners are moved to weigh requests for increases in salary for this group more cautiously because even small percentage increases may represent a substantial dollar increase in appropriations.

Whatever the basic causes—recruitment of nurses with less public health training, employment of married nurses, continued use of nurses with long service records who had not taken the additional training necessary to qualify for grade promotions, or other reasons—the \$3,049 median 1952 staff nurse salary was only a little more than 75 percent of the supervisory median salary, whereas in May 1948 the staff nurse median was almost 80 percent of the supervisory median.

Although this change does not seem large, a continuing increase in this salary differential could be symptomatic of a serious staffing problem. Whether or not the current campaign to attract women to the nursing profession will benefit local health programs will most certainly depend in some measure on the adequacy of current and potential rates of pay.

Professional Laboratory Workers

Professional laboratory workers probably constitute the most diversified occupational group in terms of range of responsibilities of the seven groups being considered. This is reflected in the difference between the lowest and the highest salaries paid, \$1,440 and \$11,000, respectively, a difference which surpasses the range of sanitarians' salaries (1). This characteristic is different only in degree from that noted previously for sanitarians. Although the April 1952 median salary for professional laboratory workers exceeds that for sanitarians by almost \$200, there is a similarity in amount and percentage of salary increases for the two groups:

Group	Amount	Per- cent
Professional laboratory personnel-----	\$732	26.0
Sanitarians-----	700	26.3

Professional laboratory personnel differ from sanitarians in one respect. They are by no means as numerous in the local health units studied. The number per local unit decreased from 1.3 on June 30, 1947, to 0.9 on December 31, 1951. The moderate increase in median salary therefore probably reflects a relatively larger loss of higher paid personnel. It is the only group for which the lowest salary reported in April 1952 was less than the lowest salary reported in May 1948.

Health Educators

Health educators comprised the smallest occupational group of the seven. Only a little over 15 percent of the reporting health departments employed health educators. Even so, it is likely that this group includes subprofessional personnel who are nevertheless reported as health educators.

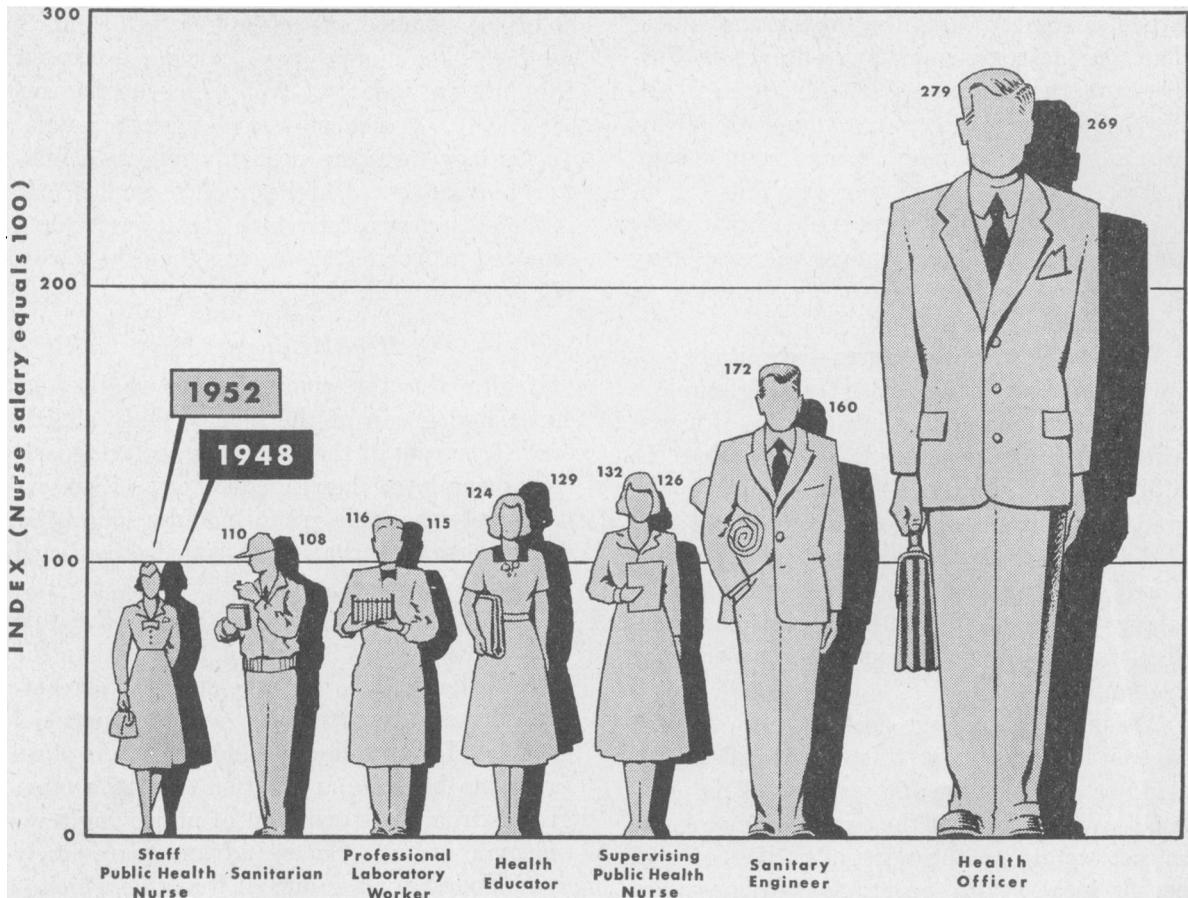
The 1952 median salary for health educators of \$3,783 was only 19 percent greater than the 1948 median. This was the smallest percentage increase reported for any occupational group. However, health educators are in a less favorable bargaining position than the other groups from the standpoint of improving their economic status. Salary advances are likely to be modest for a group such as this which is just becoming established. Furthermore, the opportunities for public health educators are probably more limited to the field of public health than those of any of the other six occupational groups.

Changes in Local Salary Structure

The relationships between salaries paid to various staff members are important in maintaining a balanced staff. If the rate of pay for any single group varies too greatly from what the other groups conceive to be reasonable in relation to the duties and responsibilities involved, problems of recruitment, retention, and staff morale increase.

On the basis of median salaries, staff public health nurses are the lowest paid of the seven occupational groups studied. Using staff nurse salaries as 100 percent, the relative positions of median salaries for the other groups have been calculated (fig. 2). In May 1948

Figure 2. Relation of median salaries among seven occupational groups in full-time local health units serving populations of 50,000–249,999, May 1948 and April 1952.



sanitarians were paid 8 percent more than staff nurses; and professional laboratory workers, 15 percent more. Supervisory nurses and public health educators received 26 percent and 29 percent more than staff nurses, respectively; sanitary engineers, 60 percent more. Health officers were paid 169 percent more than staff public health nurses.

Only one change in the relative positions of the respective median salaries occurred in April 1952 as compared with May 1948. Supervisory nurses replaced public health educators as the third highest paid occupational group.

Except for health educators, median salaries for the other occupational groups gained in relation to the median compensation for staff public health nurses. For professional laboratory personnel and sanitarians it was only 1 or 2 percent, but nevertheless, the general tendency was to widen the salary spread between these

groups and the staff nurse. These relationships and the changes are illustrated in figure 2.

Median salaries for the largest groups of local public health workers—staff nurses and sanitarians—remained closest together. Increases for the numerically strongest groups are always more difficult to obtain. As stated earlier, small advances here often mean substantial increases in appropriations. Financial pressures tend to hold down the size of salary increases given to large groups of personnel. Staff nurses and sanitarians are the only two occupational groups for which the numbers of personnel per unit are likely to be of a significant factor in salary determinations.

Local Versus State Salaries

State-local comparisons of median salaries are limited because local data for 1948 are available only for health units serving populations of

Table 3. Median salaries of personnel in State health departments and in local health departments serving populations of 50,000-249,999, 1948 and 1952

Type of personnel	State ¹			Local		
	Salary		Per- cent in- crease ²	Salary		Per- cent in- crease
	1948	1952		1948	1952	
Health officers.....	\$7, 500	\$10, 684	42. 5	\$6, 624	\$8, 519	28. 6
Sanitary engineers.....	4, 418	5, 333	20. 7	3, 936	5, 233	33. 0
Sanitarians and sanitation personnel.....	2, 830	4, 223	49. 0	2, 664	3, 364	26. 2
Professional laboratory personnel.....	3, 164	3, 825	20. 9	2, 820	3, 552	26. 0
Supervisory and consultant public health nurses.....	3, 401	4, 568	34. 3	3, 096	4, 039	23. 9
Health educators.....	3, 536	4, 278	24. 9	3, 180	3, 783	19. 0

¹ The salaries of State directors, reported separately in the published State studies, have been included here with the salaries of personnel in their respective professional groups. This modifies previously published data for these occupational groups: sanitary engineers, professional laboratory personnel, and supervisory and consultant public health nurses.

² Rates of increase shown for State public health nurses and sanitation personnel were affected by changes in definitions which resulted in the elimination of State personnel assigned to local health work. Generally speaking, the relatively less responsible positions and lower paid personnel were dropped from the State study. Therefore, the 1948-52 increases in median salaries are larger than they otherwise would have been.

50,000 to 249,999. On this restricted basis comparable local and State data are available for four occupational groups: health officers, sanitary engineers, professional laboratory personnel, and health educators. Median salaries for health officers and health educators increased more rapidly between August 1948 and August 1952 in State health departments than did median salaries for these personnel in local health departments between May 1948 and April 1952.

increases given in a more static employment situation to higher grade, experienced personnel.

Ignoring for the moment the noncomparability of data on nursing and sanitation personnel, the 1948 local median salaries were approximately 90 percent of State health department median salaries. This relationship held true in 1952 for three occupational groups: professional laboratory personnel, supervisory and

Quite a different picture is presented when the percentage increases in median salaries for sanitary engineers and professional laboratory personnel, State and local, are compared (table 3). Employment trends undoubtedly had considerable effect upon these changes in median salaries. Local staffs of sanitary engineers per health department were the same in December 1951 as they were on June 30, 1947; professional laboratory personnel decreased slightly (table 4). On the other hand, personnel counts obtained from State plans disclosed a substantial increase in these categories of personnel between January 1, 1948, and January 1, 1952.

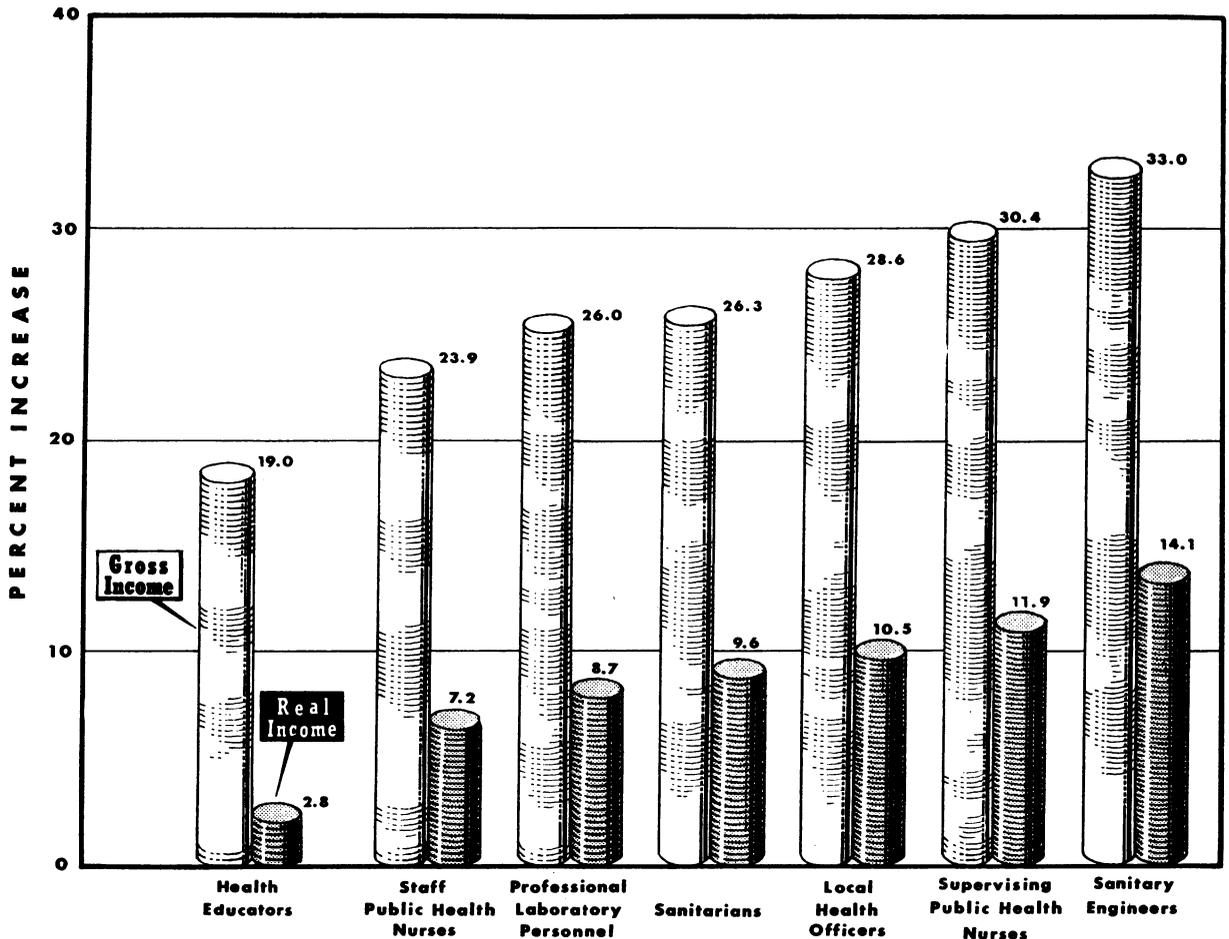
Table 4. Sanitary engineers and professional laboratory personnel in local health departments, June 30, 1947, and Dec. 31, 1951, and in State health departments, Jan. 1, 1948, and Jan. 1, 1952

Type of health department and date	Employees per health department	
	Sanitary engineers	Professional laboratory personnel
Local: ¹		
June 30, 1947.....	0. 4	1. 3
Dec. 31, 1951.....	. 4	. 9
State: ²		
Jan. 1, 1948.....	13. 2	28. 5
Jan. 1, 1952.....	16. 9	34. 6

¹ Full-time local health departments serving populations of 50,000-249,999.

² Public Health Service: Schedule C. Annual combined report and plan, fiscal years 1949 and 1953.

Figure 3. Comparison of percentage increases in median gross and real income, full-time local health units serving populations of 50,000–249,999, May 1948 and April 1952.



Cost of living computations are based upon revised Consumer Price Index Series (U. S. Department of Labor, Bureau of Labor Statistics), using 1947–49 average. Federal taxes were computed by allowing four exemptions for health officers, sanitary engineers, and sanitarians; three exemptions for professional laboratory workers; and two exemptions for supervisory nurses, staff nurses, and health educators; and by using standard deductions. For the first group, taxes were computed on a joint return basis, and for the second and third groups, a single family head basis.

consultant public health nurses, and public health educators. Local median salaries for health officers and sanitation personnel dropped to a fraction below 80 percent of the State median salaries. The local median salary for sanitary engineers increased from 89 percent in 1948 to 98 percent in 1952 of the comparable State median salary.

Three significant trends are noted: First, local-State salary relationships remained substantially stable for professional laboratory workers and health educators; second, median salaries for sanitary engineers were equalized for all practical purposes; and third, increases

granted to State health officers pushed their 1952 median 8 percent farther ahead of the median for local health officers.

1952 Levels

As a rule, 1952 median salaries for the various occupational groups employed by health departments increased in relation to State median salaries as the population served increased, except for professional laboratory personnel and supervisory public health nurses. Larger staffs which include more assistants were probably responsible for the exceptions.

In 5 instances out of 12, local median salaries

exceeded State medians. Health officers in departments serving 500,000 and more people received salaries which were 16 percent higher on the average (median) than the salaries of State health officers. Median salaries for sanitary engineers and health educators employed by departments serving populations of 250,000-499,999 were less than 0.5 percent higher than comparable State median salaries. Health departments serving areas having 500,000 or more people paid these two groups of employees 12 percent and 10.6 percent more on the average (median) than similar State personnel. On the whole, salaries in the largest local health departments are substantially the same as State salaries. Below 500,000, however, local units are in a progressively more difficult position to compete with State organizations for public health personnel.

Cost of Living and Federal Taxes

Rising costs of living and increasing Federal taxes absorbed half or more of the median salary increases received by local public health workers between May 1948 and April 1952 (fig. 3). For example, the median salary for health officers increased by \$1,895, but increases in the cost of living and in Federal taxes absorbed \$1,197, leaving an annual salary increment of \$175 in real income. Almost 85 percent of the increase received by health educators, who had the smallest percentage increase of any group, was theoretically absorbed by higher living costs and higher Federal taxes. Sanitary engineers, on the basis of such hypothetical tax and cost of living burdens, received in real income slightly more than 45 percent of a \$1,297 gross increase in median salary, or an increase of only 14.1 percent in real income for the 4-year period.

Percentage increases in real income based upon median salaries for the seven occupational groups vary from 2.8 percent for health educators to 14.1 percent for sanitary engineers. Changes in median salaries for only three groups—health officers, sanitary engineers, and supervising public health nurses—resulted in calculated increases in real income as large as 10 percent, which constitutes an average annual increase of 2.5 percent.

The relationships explored here only suggest the effects which costs of living and taxes have upon the incomes of salaried persons. These increases in real income may or may not have been sufficient to compensate for the decreases which undoubtedly occurred between 1940 and 1948. Objective data on comparable 1940 salaries of local public health workers are not available. Such data for salaries of State public health workers have been obtained, however, and these would indicate that some groups have more than recovered their economic losses of the 1940's, while other groups have not yet regained their level of income in 1940 (8). A detailed consideration of the subject would require much more data and analysis than could be made during this brief study of salary trends.

Summary

1. Median salaries of local public health workers in seven occupational categories employed by health units serving areas of 50,000 to 250,000 increased 27.2 percent on the average.
2. The highest rates of increase in median salaries were recorded for sanitary engineers, supervising public health nurses, and health officers.
3. Health officers' salaries in those units employing the same individual in May 1948 and April 1952 were generally higher than the salaries paid by other units.
4. Local health units employing different individuals in May 1948 and April 1952 increased their health officers' salaries proportionately more than did those units employing the same individual at these times.
5. On the whole local public health workers in the smaller health jurisdictions fared less well in increased compensation than did State public health personnel.
6. More than half of median salary increases were probably absorbed by increased costs of living, including increases in Federal taxes.

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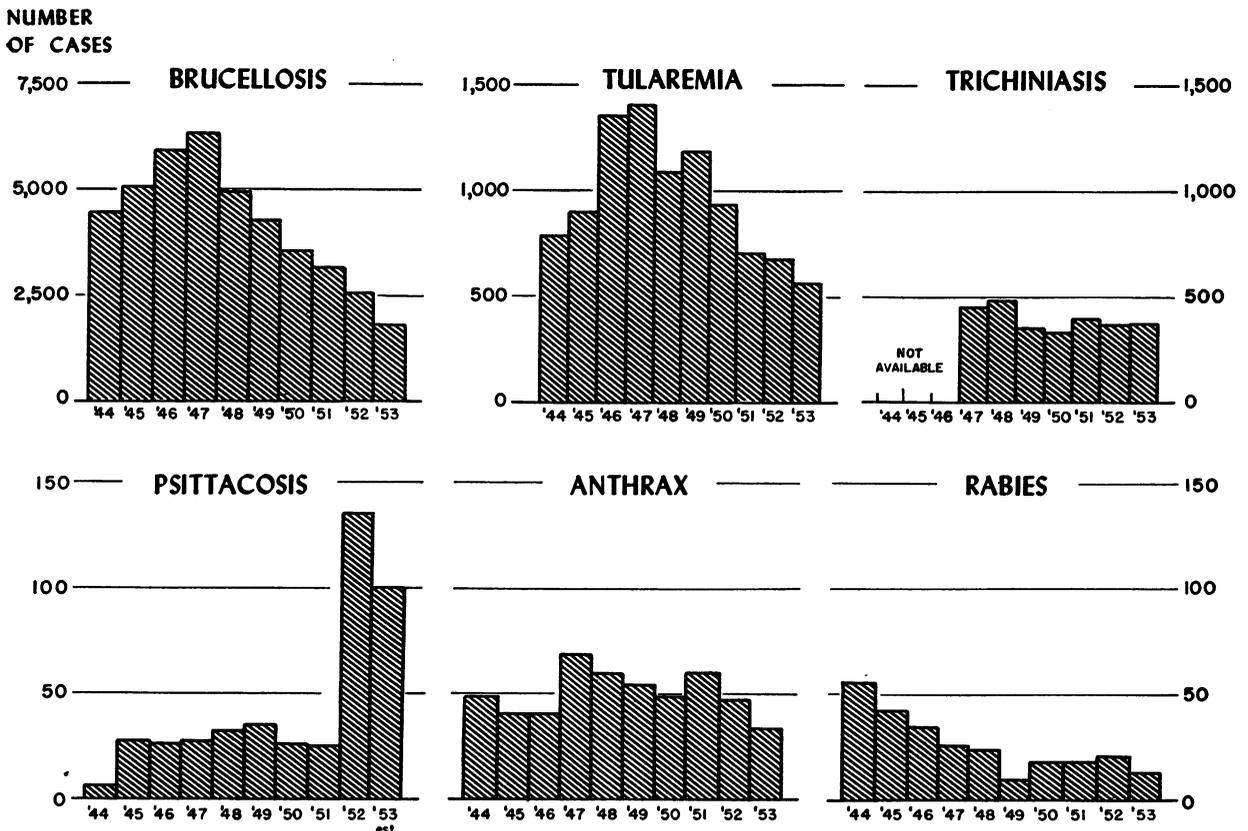
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Trends

Reported cases of six animal diseases transmitted to man, United States, 1944-53



NOTE: Charts are reprinted from the January 15, 1954, issue of *Morbidity and Mortality*, published weekly by the National Office of Vital Statistics, Public Health Service.