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JOB ANALYSIS OF A RURAL HEALTH OFFICER[1]

Brunswick-Greensville Health Administration Studies No. 6

Prepared by J. O. DEAN, *Passed Assistant Surgeon, United States Public Health Service*

INTRODUCTION

The broad objectives underlying the studies of county health departments being conducted by this Office [1] are to determine the efficacy of prevailing practices and, where necessary, to develop more effective measures and administrative procedures for the preservation of health than are now employed. A necessary preliminary step is the collection and analysis of data relative to the daily activities of members of health departments. For this purpose, information has been gathered on each staff member in four health departments, but only that relating to the Brunswick-Greensville health officer is presented in this paper. Partial analyses of the work of the sanitation officer and of the nurses have already appeared in previous issues of the Public Health Reports.[2] [3]

A description of the Brunswick-Greensville area and a general outline of the health department program were given in the first article [4] of this series. However, for purposes of immediate orientation, certain items of information are repeated.

DESCRIPTION OF AREA

Brunswick and Greensville are adjoining counties situated in the piedmont section of south central Virginia and border on North Carolina. They comprise an area of 864 square miles and have a population of approximately 34,000. Fifty-eight percent of the population was colored. The area has four incorporated places with populations of 2,144, 1,629, 365, and 328. The largest two of these, Emporia and Lawrenceville, are the county seats of Greensville and Brunswick Counties, respectively.

[1] From the Office of Studies of Public Health Methods, in cooperation with the Division of Domestic Quarantine.

[2] Dean, J. O., and Mountin, J. W.: Job analysis of a rural sanitation officer. Pub. Health Rep., vol. 49, no. 51, Dec. 21, 1934.

[3] McIver, Pearl: Public health nursing in a bicounty health department. Pub. Health Rep., vol. 50, no. 14, Apr. 5, 1935.

[4] Mountin, J. W.: Effectiveness and economy of county health department practice. Pub. Health Rep., vol. 49, no. 42, Oct. 19, 1934.

The area, which is rural and predominantly agricultural in character, is low in wealth. The per capita income [5] was estimated to be about $147 in Brunswick County and $134 in Greensville County. Taxable resources of the two counties amounted to $15,000,000 and yielded about $233,000 in revenue.

Facilities and community organizations for medical care were not as well developed as those which may be found in many areas otherwise comparable. Eighteen physicians and five dentists engaged in active practice resided within the area. There were no hospitals in either county, and most of the patients seeking hospitalization went to Richmond, Va., about 70 miles away. Medical care for the indigent and other forms of public relief were supervised for the most part by a county superintendent of the poor. Some medical service was provided by small volunteer welfare groups. In each county, a luncheon club financed an orthopedic clinic operated by the health department, and a tuberculosis association provided a small amount of medical and material relief for families in which tuberculosis was known to exist.

In a measure the public health problems of the two counties are indicated by the incidence of infectious diseases. The reported number of cases and deaths from a few selected causes for two 5-year periods, 1921–25 and 1926–30, are presented in table 1.

TABLE 1.—*Reported cases and deaths from selected causes in Brunswick and Greensville Counties during years 1921–25 and 1926–30*

Disease	1921–25		1926–30	
	Cases	Deaths	Cases	Deaths
Typhoid fever	151	21	40	16
Diphtheria	215	29	85	13
Smallpox	28	0	5	0
Scarlet fever	76	2	25	0
Diarrhea and dysentery [1]	1,236	104	377	75
Malaria	1,276	7	233	4
Tuberculosis	158	178	111	178

[1] Diarrhea and dysentery not reported until July 1923.

Vital statistics of the period 1921–30 show that the combined mortality rates [6] for white and colored population were as follows: Gross mortality, 11.2; infant mortality, 71.4; tuberculosis, 106.0; typhoid fever, 11.0; diarrhea and enteritis among children under 2 years of age, 41.0; pellagra, 11.6; diphtheria, 12.5; measles, 7.2; and whooping cough, 16.7. Mortality rates for the Negro were consistently higher than for the white fraction of the population. The live birth rate was 30.3 per 1,000 population. About 75 percent of the infants were delivered by midwives.

[5] Sales Management, Apr. 1933.

[6] Total birth and total death rates per 1,000 population; stillbirths, infant mortality, and maternal mortality rates per 1,000 live births; other death rates per 100,000 population.

The bicounty health department of this area was under the direction of a medical health officer who served both counties, but maintained headquarters in Lawrenceville, Brunswick County. A sanitation officer serving both counties lived in the county seat of Greensville County, where a branch office of the health department was located. One nurse was assigned to each county and a clerk was stationed at the main office in Lawrenceville. All personnel were employed full time except the clerk.

METHOD OF STUDY

Prior to the study, few records were kept by the health officer. While these records were considered by him as sufficient for local administrative use, it was readily conceded that for purposes of the study it would be necessary to develop a record system especially designed for analysis. After some experimentation, a record system was developed which called for the following information concerning each person served by the health officer in a professional capacity:

1. Identification of the individual in relation to family head and by age, sex and color, and location of home.
2. Date and place of service, such as home, health department office, school, or other place.
3. Source of information: Who instituted the visit? Was the visit made in response to a request from the patient, school teacher, physician, or neighbor, or was it made solely upon the initiative of the health officer?
4. Purpose and result of the visit: Why was the individual seen and what service was rendered?
5. Amount of time involved.

Much of the health officer's work involved activities other than personal service, such as correspondence, working on records and reports, planning the program, supervising clinics, conferring with officials or staff members, and other activities essentially administrative in character. All work, irrespective of its character, was recorded during a period of 10 months. The same general types of information as described for professional visits were also recorded for administrative and miscellaneous activities.

EXTENT AND DISTRIBUTION OF INDIVIDUAL AND GROUP SERVICES RENDERED BY THE HEALTH OFFICER

NUMBER AND COLOR OF INDIVIDUALS SERVED

During the period of the study, records were obtained showing some type of service to 3,992 individuals, approximately 12 percent of the entire population. These individuals represented 2,496 families, or about 37 percent of all families within the area. A larger percentage of the colored population was served than of the white group. The number and percentage of persons seen in each group are listed in table 2.

TABLE 2.—*Number and percentage of population served by health officer in a period of 10 months according to color*

	Color		Total
	White	Colored	
Population of health district	14,253	19,621	33,874
Number served by health officer	1,431	2,559	[1] 3,992
Percent served by health officer	10.0	13.0	11.8

[1] Includes 2 persons of unknown color.

PLACE OF SERVICE

The principal activity of the health officer from the standpoint of numbers served was diphtheria control. Most of this was Schick testing and was done in the schools. Approximately 90 percent of those the health officer served were seen in the school, about 7 percent in the health department offices, 4 percent in the homes, and 1 percent in other places.

A great majority of the individuals were recorded as receiving but one visit; therefore very few of them were seen except at the place of first contact. Only 55 individuals were seen at two or more places. The number and percentage of persons seen in school, office, home, and other places are given in table 3.

It is of interest to note that while 64 percent of all those served by the health officer were colored, of those seen in either home or office only 33 percent were colored.

TABLE 3.—*Number and percentage of persons served by health officer in school, health department offices, home, and other places*

	Number	Percentage of total number of persons served by health officer
Total number of persons seen [1]	3,992	100.0
Seen in school	3,583	89.8
Seen in health department offices	268	6.7
Seen in home	151	3.8
Seen in other places	46	1.2

[1] 54 persons seen at 2 places; 1 person seen at 3 places.

RESIDENCE OF INDIVIDUALS SERVED

During the study period all the public schools were visited in connection with the diphtheria-prevention activities of the health officer. Since the great majority of individuals seen by the health officer were served in the schools, contacts were made in the several districts of the area, as may be observed by referring to figure 1 and table 4. A definitely larger percentage, however, of the Brunswick County

inhabitants was served than of Greensville County. In Greensville County, which was farther from the headquarters than most of the outlying sections of Brunswick County, only 43 persons made contact with the health officer in the home or office, while in Brunswick County 370 persons were seen. The Greensville County residents were practically all visited because of communicable disease. It should be pointed out that one reason for the small number of Greensville County residents served in the home or office by the health officer was the fact that visits were made in this county on an appointment

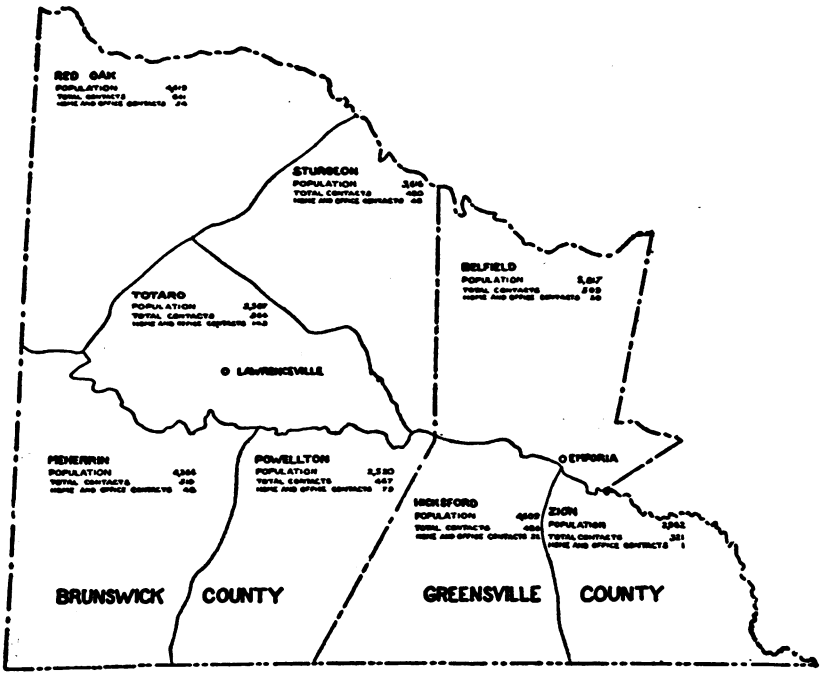

FIGURE 1—Distribution of population and of persons served by the health officer, according to magisterial districts.

basis. The nurse serving Greensville County performed many of the minor duties of a health officer; therefore, visits by the health officer were made to the county chiefly for the purpose of rendering services beyond the resources of the nurse. Table 4 shows the number and percentage of residents served in each magisterial district.

Village or rural residence may have had some influence upon the number served. The residence in relation to village or rural location was unknown for 212 individuals; but excluding these it was found that 8.1 percent of those living in the villages were served, in comparison with 11.8 percent of those in strictly agricultural areas.

TABLE 4.—*Number and percentage of persons from each magisterial district served by the health officer*

Magisterial district	Total population	Total served by health officer		Served by health officer in either home or office	
		Number	Percentage of total population	Number	Percentage of total population
Brunswick County:					
Meherrin district	4,364	519	11.9	48	1.1
Powelltown district	2,520	467	18.5	79	3.1
Red Oak district	4,419	641	14.5	54	1.2
Sturgeon district	3,616	480	13.3	46	1.3
Totaro district	5,567	564	10.1	143	2.6
Total Brunswick County	20,486	2,671	13.0	370	1.8
Greensville County:					
Belfield district	5,817	509	8.8	20	0.3
Hicksford district	4,609	486	10.5	22	0.5
Zion district	2,962	321	10.8	1	0.0
Total Greensville County	13,388	1,316	9.8	43	0.3
Total Brunswick and Greensville Counties	33,874	[1] 3,992	11.8	413	1.2

[1] Total includes 5 individuals of unknown district.

AGE GROUP SERVED

As already pointed out, most of the contacts were made in the schools in connection with diphtheria-prevention activities. While a large part of the publicity attending this work was directed toward reaching children below school age, school children (6–15 years of age) constituted over 81 percent of all contacts. There were no accurate figures available on the population according to age groups at the time of the study. However, on the basis of figures given in the United States census of 1930, population estimates have been made as appear in table 5. The percentage of persons in each age group receiving service from the health officer was as follows: Infants 4.5, preschool 5.8, school 33.9, adult 2.4.

TABLE 5.—*Number and percentage of various age groups served by health officer*

	Infant	Preschool	School	Adult	Total
Total population	806	4,402	9,564	19,102	33,874
Number served by health officer	36	257	3,243	449	[1] 3,992
Percentage served by health officer	4.5	5.8	33.9	2.4	11.8

[1] Total includes 7 individuals of unknown age group.

TYPES OF SERVICE RENDERED AND NUMBER OF CONTACTS MADE WITH EACH INDIVIDUAL

The health officer's services have been classified into four general types:

1. *Immunization.*—Administration of materials for producing immunity against smallpox, diphtheria, typhoid fever, or rabies, or performing Schick test.

2. *Communicable disease control.*—Regulatory measures prescribed by the State health department for cases and contacts of acute communicable disease.

3. *Medical care and relief.*—Investigation of need for medical care or of material relief, and aid to patients in procuring material relief, hospital care, or a physician.

4. *Other services regarding hygiene and sanitation.*

Approximately 90 percent of the 3,992 individuals served by the health officer received some type of immunization service, 5 percent were visited in the interest of communicable disease control, 6 percent were seen for either medical care or material relief, and less than 2 percent were visited for other purposes. There is some duplication of individuals in these percentages, but the amount is small, since only 100 individuals sought more than one type of service. The number of times a person was seen and the number of persons receiving each type of service are given in table 6. Thus it will be seen that of those who were recipients of an immunization service (excluding the reading of Schick tests), approximately 72 percent were seen but one time. Of those seen for communicable disease control and medical or material relief, 65 and 63 percent, respectively, had one visit.

TABLE 6.—*Individuals served by health officer according to number of contacts and type of service rendered*

Type of service	Individuals having specified number of contacts with health officer where at least one contact was for the specified service									
	Number of individuals					Percent of individuals				
	1 contact	2 contacts	3 contacts	4 or more contacts	Total individuals	1 contact	2 contacts	3 contacts	4 or more contacts	Total individuals
Immunization	2,603	715	250	26	3,594	72.4	19.9	7.0	0.7	100
Communicable disease control	121	34	26	6	187	64.7	18.2	13.9	3.2	100
Medical or material relief	160	69	20	5	254	63.0	27.2	7.9	2.0	100
Other	65	0	2	1	68	95.6	0.0	2.9	1.5	100

SOURCE OF FIRST INFORMATION ABOUT INDIVIDUAL SERVED BY HEALTH OFFICER

The source through which the health officer first learned about the individual to be served or from whom he received a request for service was obtained for all persons except those seen in clinics and in group contacts. This type of information was sought principally for home visits and office calls, where the service was rendered individually rather than collectively in groups, and it was therefore obtained for only 499 individuals. The analyses made on source of call are presented in table 7.

The person served or a member of the family was responsible for requesting the first service for approximately 52 percent of this number. For about 14 percent the health officer reported himself as the source of first information. Actually these represented instances in which either the health officer may have forgotten who was the source of call or in which there was no request for service and he instituted the visit upon his own initiative. Physicians and teachers were next in frequency, each serving as the source of call for about 10 percent of the number on whom this information was collected. Visits to other members of the family provided the first information which led to visits for 26 persons, 5 percent of the total number. Neighbors of those served were responsible for 5 percent of the first visits.

TABLE 7.—*Source of information on first visit to 499 persons receiving individual service from the health officer according to type of service and place*

Source of first information	Type of service at first visit								Place of first visit						Total number of persons receiving individual service	
	Immunization		Communicable disease control		Medical or social relief		Other types of service		Home		Office		Other places			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Individual served or member of his family	103	92.8	18	10.1	111	74.5	25	41.0	230	63.5	11	27.5	16	16.5	257	51.5
Visit to another member of family	0	-----	22	12.4	4	2.7	0	-----	25	6.9	1	2.5	0	-----	26	5.2
Health officer	4	3.6	38	21.3	7	4.7	19	31.1	29	8.0	4	10.0	35	36.1	68	13.6
Physician	0	-----	45	25.3	5	3.4	3	4.9	47	13.0	4	10.0	2	2.1	53	10.6
Teacher	4	3.6	45	25.3	1	.7	0	-----	3	.8	9	22.5	38	39.2	50	10.0
Neighbor	0	-----	10	5.6	12	8.1	4	6.6	19	5.2	3	7.5	4	4.1	26	5.2
Other	0	-----	0	-----	9	6.0	10	16.4	9	2.5	8	20.0	2	2.1	19	3.8
Total	111	100.0	178	100.0	149	100.0	61	100.0	362	100.0	40	100.0	97	100.0	499	100.0

Table 7 also shows the relationship between source of information leading to first visit, type of service, and place of visit. While the numbers presented in the table are small, it is of interest to note that the person served or a member of the family was usually the source of call for either immunization service or medical or social relief. Thus among 111 persons obtaining an immunization of one type or another outside of special immunization clinics, 103, or 93 percent, were given upon the solicitation of the patient or the patient's family. Similarly, where the first visit was for medical or social relief, 75 percent were instituted by the patient or his family. However, for communicable disease patients, the informant was more frequently a physician or a school teacher, each reporting an equal number of cases and together accounting for over half of the 178 cases. When the first visit was made to the home, the informant who instituted the contact was the

individual served or a member of the family for 64 percent of the cases and the family physician for 13 percent. For office calls the patient or patient's family and the teacher were most frequently the informants.

NUMBER OF PERSONS SERVED EACH MONTH

Table 8 lists for each month the number of individuals who were recorded as having had service contacts. Except when some type of campaign or group service activity was being carried on, the number of persons visited in the course of a month was small. The health officer was engaged with group service during November, March, and April. Almost 78 percent of all persons recorded with some type of service during the 10 months' period of study were seen for the first time during the 3 months mentioned above. In November, the schools were visited for the purpose of immunizing the first-grade pupils against smallpox and diphtheria. Subsequent visits were made to the schools in March and April for the purpose of Schick-testing children who had been given toxoid earlier in the school term or during a diphtheria immunization campaign of the preceding school year. Diphtheria toxoid was then given to those having a positive Schick reaction.

TABLE 8.—*Number of individuals served by health officer during the study period according to calendar month*

	September	October	November	December	January	February	March	April	May	June	Total number of individuals served in study period
Number of persons served for first time during study period	105	301	817	38	104	78	1,446	845	55	203	3,992
Percent of total number persons served during study period	2.6	7.5	20.5	1.0	2.6	2.0	36.2	21.2	1.4	5.1	100.0
Total number of persons served each month	105	308	923	54	120	83	1,743	1,100	68	243	------

ADMINISTRATIVE ACTIVITIES

Much of the attention of the health officer was occupied by activities which were of an administrative character as distinguished from those involving an element of personal service. The remainder of the paper will be devoted to a consideration of the administrative duties of the health officer.

CONFERENCES

The number of conferences held during the study period was 219. Most of these were for the purpose of planning or discussing some part of the health department program. Thirty-five conferences were

held with physicians; 22 of these were in regard to clinics or the control of communicable disease, and the remainder were for the purpose of arranging medical care. Fourteen of the 18 practicing physicians residing within the county were represented among the administrative contacts. The interests represented by the individuals with whom the health officer conferred and the number of conferences are presented in table 9. All but 1 of the 32 conferences with county superintendents of the poor were in regard to the problem of medical care or relief for indigents. Only two of these conferences were with the Greensville County Superintendent of the Poor; the remainder were held with the Superintendent of the Poor for Brunswick County. At the time of this study, the income of the several local governments was undergoing a reduction, and retrenchment was a subject for frequent consideration by the county authorities; therefore most of the conferences with town officials and county supervisors were for the purpose of discussing the health department's appropriations. Practically all conferences with members of the health department staff, community leaders, teachers, and county school superintendents pertained to health department services.

According to the purpose stated on the record, 43 percent of the conferences were to plan or discuss health department service, 14 percent were in regard to health department appropriations, and 22 percent were held because of medical or material relief problems. The remainder were for miscellaneous purposes. About 45 percent of the conferences took place in the health department office at Lawrenceville; 52 percent were held on the premises or in the offices of those seen; and the remaining 3 percent were held in other places.

TABLE 9.—*Number of conferences held by health officer during study period*

Persons or groups	Number	Persons or groups	Number
Physicians	35	Teachers	9
County superintendents of the poor	32	Community leaders	8
Members of State health department	29	Members of health department staff	10
County boards of supervisors	16	U. S. Public Health Service representatives	14
County superintendents of schools	12	Others	24
Other county officials	17		
Town officials	13	Total	219

TIME ANALYSIS

Counting Saturdays as half days, the health officer was on duty 225 of the 231.5 work days contained in the 10-month period of the study. His records accounted for a total of approximately 1,502 hours on duty, which was an average of practically 6 hours and 40 minutes per day, thus approximating a work day of 7 hours. The time spent on duty was the customary amount for that locality. Nearly 58 percent of the time was spent on duties connected with

the health department offices, 20 percent was consumed by automobile travel, about 8 percent was spent in schools, 4 percent in the homes of patients or other persons, and 10 percent was spent in other places in the field.

TABLE 10.—*Distribution of health officer's time on duty over a period of 10 months*

	Hours	
	Number	Percent
Service to individuals	472.0	31.4
Immunization service	223.4	14.9
Control of communicable disease	143.4	9.5
Arranging for or investigating the need of medical or material relief	76.1	5.1
Miscellaneous services	29.1	1.9
Staff supervision and conferences with members of staff or of State health department	182.5	12.2
Conferences with officials, teachers, doctors, community leaders, and others	124.1	8.3
Supervision of health department clinics	115.4	7.7
Administrative duties other than conferences, clinics, or staff supervision	608.0	40.5
Reports and correspondence	260.5	17.3
Attending meetings	10.5	0.7
Reading and study of journals and scientific publications	30.0	2.0
Other and unclassified	307.0	20.4
Total	1,502.0	100.0

According to table 10, about 31 percent of the health officer's time was taken up by service to individuals. Supervision of personnel and conferences with members of the staff or those of the State health department consumed 12 percent of the time. During the study period the health department sponsored a tonsillectomy clinic and a refraction clinic. Each month orthopedic clinics were held in Lawrenceville and Emporia. The State health department also held tuberculosis clinics in each of the counties. The health officer attended most of these clinics in a supervisory capacity and spent almost 8 percent of his time in this manner. Administrative duties other than conferences or supervision of staff members or clinics consumed the greatest proportion of his time; preparing monthly reports for the State health department and the work of correspondence took up 17 percent of his time; and 20 percent of it may be described as unassigned, in which the health officer was on duty but not engaged in specific activities. Most of the unassigned time was spent in the health department headquarters, thus affording residents of the county an opportunity to call upon him for advice, instruction, or other services.

SUMMARY

The activities of one rural health officer working in a bicounty health department were studied for a period of 10 months. The records reveal that approximately 12 percent of the 34,000 people living within the health district received some type of personal service. Immunization was the type of personal service rendered to 90 percent of these individuals, who, for the most part, were children of

school age. Over three-fourths of the initial service contacts were made in 3 of the 10 months under study. Ninety percent of the persons served by the health officer were seen through group services conducted in the schools.

Control of communicable diseases was the specific health problem to which the health officer gave special attention. About 10 percent of his time was devoted to general control measures, and 15 percent was spent on immunization, including tests for susceptibility to diphtheria.

Professional conferences with individual citizens, staff members, practicing physicians, and community leaders accounted for approximately 35 percent of the health officer's time. The remaining 40 percent was consumed by general and administrative duties which did not involve direct contact with individuals requiring personal service or with situations presenting immediate health problems.

COST OF LOCAL ENFORCEMENT OF THE UNITED STATES PUBLIC HEALTH SERVICE MILK ORDINANCE

By A. W. Fuchs, *Sanitary Engineer*, and L. C. Frank, *Sanitary Engineer, in charge, Office of Milk Investigations, United States Public Health Service*

For a number of years those inquiring as to the cost of community milk control under the Public Health Service program were informed that the cost was usually less than 10 cents per capita per year. This estimate was based on the experience of a limited number of towns, and was consequently considered only approximate. Cities contemplating the adoption of the Public Health Service Milk Ordinance frequently want to know what the cost of enforcement will be. Those operating under the ordinance sometimes question whether they are spending enough or (rarely) too much for adequate milk control.

A questionnaire survey was therefore undertaken in November 1934 to determine the local cost of milk control in all cities having milk-sanitation ratings of 90 percent or more, i. e., in cities which may be classed as satisfactorily enforcing the Public Health Service Milk Ordinance. The survey was so planned as to reveal variations in cost in cities differing in size, per capita milk consumption, percent of supply pasteurized, and similar differences.

Questionnaires were mailed to 101 cities with milk-sanitation ratings of 90 percent or more, including 99 appearing in the published lists (Public Health Reports, July 27, 1934, and Oct. 26, 1934) and 2 others which subsequently qualified before November 26, 1934. Returns were received from 84; and after considerable checking and correspondence, 74 of the returns were considered sufficiently satisfactory as to cost figures for inclusion in this report. The cities included range in population from under 1,000 to over 300,000.

LOCAL MILK CONTROL ORGANIZATION

The organization of milk-control activities varies widely in the 74 cities. In the largest cities, milk control is usually a function of the city health department, but in the smaller ones the county health department commonly conducts this work. Milk sanitation is under the city health department in 21 of the cities, under the county health department in 45, under the city water superintendent acting as part-time dairy inspector and laboratory technician in 5 communities, and under a private veterinarian or physician acting as part-time dairy inspector in 3 cities.

In most of the larger cities there is a separate division of milk control in the health department or milk control is combined in one division with food, sanitation, or other health activity. In a few of the smaller cities a whole-time dairy inspector is employed by the health department, and in a few others the city or county health officer acts as milk inspector; but the most frequent arrangement in small cities (40 cities) is the employment of a whole-time inspector for general sanitation who devotes part of his time to milk control in one or more communities. Thus the county health organization often makes possible general sanitation service as well as milk sanitation in communities too small to employ their own inspector.

Milk analyses are usually made in the city or county health department laboratory. In 19 of the smaller cities, samples are sent to the branch or central laboratory of the State health department. A few cities have their milk examined in the water-works laboratory, the general city laboratory, or in a private laboratory.

Some of the returns indicated that a portion of the health officer's salary and travel expense is chargeable to milk control, but these were not included in the cost figures except in those cases where the health officer actually served as dairy inspector or laboratory technician.

COST OF ENFORCEMENT

Essential figures for each city on the cost of enforcement and related data are shown in the accompanying table.

The mean per capita cost of local enforcement in 74 cities rating 90 percent or more is 8.3 cents per year. The maximum for any city is 19.9 cents and the minimum 1.7 cents. In 47 cities, or nearly two-thirds of the total, the cost was under 10 cents per capita per year, thus confirming earlier estimates. For 35 cities over 10,000 population the mean per capita cost was approximately 7 cents per year, while for 39 cities under 10,000 it was 9.5 cents.

Local cost of enforcement of the United States Public Health Service milk ordinance in 1934 in 74 cities rating 90 percent or more

City	1930 population	Per capita consumption of market milk, pints per day [1]	Percent of supply pasteurized [1]	Number of producers and plants		Local cost of enforcement			
				Per 100,000 population [1]	Per whole-time inspector	Number of full-time or equivalent part-time inspectors per 100,000 population	Total per year	Cents per gallon	Cents per capita per year	Dollars per producer or plant per year
OVER 100,000										
Louisville, Ky	307,745	0.61	97	388	100	3.9	$31,718.45	0.35	10.3	27
Portland, Oreg	301,815	.72	76	330	125	2.7	21,328.00	.22	7.1	21
Dallas, Tex	260,745	[2].96	73	282	167	1.7	11,466.05	.10	4.4	16
Memphis, Tenn	253,143	.53	73	265	120	2.2	15,229.00	.24	6.0	23
San Antonio, Tex	231,542	.54	56	146	62	2.4	11,745.18	.21	5.1	35
Tulsa, Okla	141,258	.70	74	155	73	2.1	12,025.00	.27	8.5	55
El Paso, Tex	102,421	.72	70	135	99	1.4	3,532.00	.11	3.4	26
7 cities	1,598,669	.68	74	269	107	2.5		.21	6.4	29
25,000–100,000										
Winston-Salem, N. C	75,274	.38	46	235	177	1.3	2,775.00	.21	3.7	16
Montgomery, Ala	66,079	.61	22	147	97	1.5	[3]2,082.80	.11	3.1	21
Charleston, S. C	62,265	.36	[3]100	96	25	3.9	6,932.50	.67	11.1	115
Durham, N. C	52,037	.48	76	187	65	2.9	6,085.00	.52	11.7	63
Jackson, Miss	48,282	.47	22	185	89	2.1	[3]1,225.00	.12	2.5	[4]14
Amarillo, Tex	43,132	.63	63	209	85	2.5	2,741.25	.22	6.4	30
Meridian, Miss	31,954	.39	22	176	56	3.1	3,350.00	.58	10.5	60
Texarkana, Tex.-Ark	27,366	.47	20	187	57	3.3	2,904.00	.49	10.6	57
8 cities	406,389	.47	46	177	81	2.4		.37	7.5	47
10,000–25,000										
Gadsden, Ala	24,042	.45	24	75	36	2.1	[3]1,198.50	.24	5.0	67
Abilene, Tex	23,175	.66	70	152	52	2.9	1,737.50	.25	7.5	50
Vicksburg, Miss	22,943	.33	35	175	44	3.9	2,605.58	.75	11.4	65
Rocky Mount, N. C	21,412	.30	20	98	35	2.8	1,500.00	.52	7.0	71
Tuscaloosa, Ala	20,659	.48	75	141	73	1.9	1,060.00	.23	5.1	37
Tyler, Tex	17,113	.77	50	263	60	[3]4.4	2,475.00	.41	14.5	55
Walla Walla, Wash	15,976	.75	56	321	51	[3]6.3	1,590.00	.29	10.0	31
Vancouver, Wash	15,766	.56	24	293	58	[3]5.1	1,538.00	.38	9.8	33
Decatur, Ala	15,593	.22	44	129	50	2.6	[3]888.00	.56	5.7	44
Corsicana, Tex	15,202	.41	0	164	50	[3]3.3	614.50	.22	4.0	25
Greenville, Miss	14,807	.35	13	142	84	1.7	791.75	.34	5.4	38
Big Spring, Tex	13,735	.46	23	139	76	1.8	445.25	.15	3.2	23
Natchez, Miss	13,422	.52	16	157	70	2.2	[3]750.00	.24	5.6	36
Bowling Green, Ky	12,348	.67	25	293	144	2.0	617.00	.16	5.0	17
Florence, Ala	11,729	.28	35	145	34	4.3	[3]736.86	.49	6.3	43
Henderson, Ky	11,668	.37	37	121	[2]233	[4].5	314.60	.16	2.7	22
Huntsville, Ala	11,554	.51	53	165	63	2.6	538.00	.20	4.7	28
Greenwood, Miss	11,123	.32	23	180	40	4.5	[3]990.00	.62	8.9	50
Thomasville, N. C	10,090	.20	30	60	75	[4].8	175.00	.19	[4]1.7	29
McComb, Miss	10,057	.44	0	250	37	6.7	[3]1,541.60	.76	15.3	62
20 cities	312,414	.45	33	169	68	3.1		.36	6.9	41
UNDER 10,000										
Denton, Tex	9,587	.65	58	347	100	3.5	1,200.00	.42	12.5	36
Blackwell, Okla	9,521	.46	46	337	32	10.5	1,870.00	.93	19.6	58
Dyersburg, Tenn	8,733	.35	0	115	40	2.9	[3]367.50	.26	4.2	37
Talladega, Ala	7,596	.29	0	133	125	1.1	157.67	.16	2.1	16
Jacksonville, Tex	6,748	.55	0	119	53	2.2	481.25	.29	7.1	60
Mount Airy, N. C	6,045	.36	0	150	45	3.3	410.00	.41	6.8	45
Brenham, Tex	5,974	.39	0	186	137	[3]1.4	176.20	.17	2.9	16
Brookhaven, Miss	5,288	.42	0	212	55	3.8	[3]415.00	.41	7.8	38
Canton, N. C	5,117	.52	0	118	27	4.3	515.90	.43	10.1	86
Hendersonville, N. C	5,070	.68	35	500	50	10.0	915.00	.58	18.0	37
Hamlet, N. C	4,801	.30	0	63	30	[3]2.1	180.00	.27	3.7	60
Picayune, Miss	4,698	.67	76	[2]587	90	6.5	702.00	.49	14.9	26
Sanford, N. C	4,253	.34	0	95	[4]6	[2]16.7	816.67	1.23	19.2	[2]204
Lumberton, N. C	4,140	.40	0	98	40	2.4	300.00	.40	7.2	75
Sylacauga, Ala	4,115	.92	0	195	100	2.0	157.67	[4].09	3.8	20
Erwin, N. C	4,000	.17	0	75			165.00	.54	4.1	55
Albemarle, N. C	3,493	.65	0	265	129	2.1	425.00	.41	12.2	47

See footnotes at end of table.

Local cost of enforcement of the United States Public Health Service milk ordinance in 1934 in 74 cities rating 90 percent or more—Continued

City	1930 population	Per capita consumption of market milk, pints per day [1]	Percent of supply pasteurized [1]	Number of producers and plants			Local cost of enforcement			
				Per 100,000 population [1]	Per whole-time inspector	Number of full-time or equivalent part-time inspectors per 100,000 population	Total per year	Cents per gallon	Cents per capita per year	Dollars per producer or plant per year
UNDER 10,000—continued										
Morehead City, N. C.	3,483	0.22	0	176			540.00	1.54	15.5	90
Covington, Tenn.	3,397	.33	0	333	220	1.5	[3] 190.00	.37	5.6	17
Tuskegee, Ala.	3,314	.63	52	212	14	15.2	[3] 625.00	.66	18.9	89
Cleveland, Miss.	3,240	.49	41	375	200	1.9	180.00	.25	5.6	15
Russellville, Ala.	3,146	.14	0	97	50	1.9	[3] 254.08	1.22	8.1	85
Indianola, Miss.	3,116	[4] .04	0	[4] 32	20	1.6	98.00	[3] 1.68	3.1	98
Atmore, Ala.	3,035	.40	0	167	100	1.7	[3] 100.00	.18	3.3	20
Rockingham, N. C.	2,906	.66	0	172	33	[5] 5.2	300.00	.34	10.3	60
Canyon, Tex.	2,821	.81	0	286	133	2.1	161.25	.15	5.7	20
Cullman, Ala.	2,786	.68	28	407	85	4.8	[3] 207.50	.24	7.4	19
Auburn, Ala.	2,713	.54	0	259	70	3.7	[3] 300.00	.45	11.1	43
Southern Pines, N. C.	2,524	.76	0	240			145.00	.17	5.7	24
Clayton, N. Mex.	2,518	.66	0	280	70	4.0	500.00	.66	[3] 19.9	71
Waynesville, N. C.	2,414	.66	0	250	55	4.6	256.67	.36	10.6	43
Wetumpka, Ala.	2,357	.50	0	130	15	8.7	[3] 349.00	.65	14.8	116
Elkin, N. C.	2,357	.61	0	174	20	8.7	410.00	.62	17.4	102
Hartselle, Ala.	2,204	.18	0	136	30	4.5	[3] 222.00	1.22	10.1	74
York, Ala.	1,796	.20	0	118	80	1.5	[3] 69.00	.43	3.8	35
Ocean Springs, Miss.	1,663	.37	0	250	100	2.5	79.20	.28	4.8	20
Hollandale, Miss.	1,211	.30	0	333	80	4.2	141.90	.86	11.7	35
Hope Mills, N. C.	971	.18	0	206	67	3.3	85.00	1.06	8.8	43
Apex, N. C.	863	.19	0	232	40	6.3	116.50	1.60	13.5	58
39 cities	154,014	.45	9	216	71	4.5		.58	9.5	54
74 cities	2,471,486	.47	26	237	75	2.7		.46	8.3	47

[1] Figures taken from last rating report received prior to December 1934, but no rating used was more than 2 years old.
[2] Maximum for 74 cities.
[3] All milk laboratory work done by State.
[4] Minimum for 74 cities.
[5] Inspector also does milk laboratory work.

On a gallonage basis, the mean cost of local enforcement for all cities was 0.46 cent per gallon. The maximum for any city was 1.68 cents and the minimum 0.09 cent. In 51 cities, a little over two-thirds of the total, the cost was less than 0.5 cent per gallon. Per-gallon costs decrease materially as the size of city increases. Thus, for cities under 10,000 the mean was 0.58 cent, for those between 10,000 and 100,000 it was 0.36 cent, and for those over 100,000 it was 0.21 cent. These per-gallon costs may be of particular interest to cities contemplating the financing of milk control by means of inspection fees imposed on milk distributors on a gallonage basis.

The mean cost of local enforcement per producer or plant for the 74 cities was $47 per year, and this is probably the fairest cost index. The maximum for any city was $204 and the minimum $14. In 47 cities, or nearly two-thirds of the total, the cost was not over $50 per producer or plant. These costs vary inversely with size of city. Thus, for cities over 100,000 the mean was $29, for those between 10,000 and 100,000 it was $43, and for those under 10,000 it was $54.

Whether milk analyses are made gratis by the State or are made locally affects the mean unit costs of local milk control only slightly. This is probably because such State cooperation is more frequently extended to the smaller cities, in which mean unit costs were found to be higher than in the larger cities. The mean per capita cost in the 19 cities for which laboratory work was done by the State was 7.8 cents per year, and in the 55 cities making their own analyses 8.5 cents. The mean per-gallon costs are 0.49 cent and 0.45 cent, and per producer or plant, $48 and $47 per year, respectively.

Large differences in unit costs are found. These are due not only to the effect of differences in population, per capita consumption, and number of producers and plants per unit of population and per inspector, but also to the frequency of inspection and sampling considered necessary by local milk control authorities for effective control. Thus, while the United States Public Health Service Milk Ordinance specifies grading of all dairies and plants at least every 6 months, and a minimum of 1 inspection and 4 samples during each grading period, some standard ordinance cities inspect and sample more frequently than at these maximum intervals. To do this requires, of course, more personnel and results in higher unit costs.

Unfortunately no information is available from which to judge optimum grading, inspection, and sampling frequencies. It is reasonable to suppose that higher frequencies mean better enforcement, but frequencies higher than the optimum fail to achieve results commensurate with the cost—an example of the "law of diminishing returns." While conditions on some milk sheds may demand more intensive control measures than the average, it would appear that unit costs not exceeded by two-thirds of the cities effectively enforcing their milk ordinances are reasonable guiding criteria. These unit costs are 10 cents per capita per year, 0.5 cent per gallon, and $50 per year per producer or plant.

SUMMARY

The mean cost of milk control in 1934 in 74 cities adequately enforcing the United States Public Health Service Milk Ordinance was 8.3 cents per capita per year, 0.46 cent per gallon of milk, or $47 per producer or plant per year. All unit costs were generally lower in the larger than in the smaller cities. Figures not exceeded by approximately two-thirds of the cities (10 cents per capita per year, 0.5 cent per gallon, and $50 per producer or plant per year) are considered reasonable limits. Unit costs are affected by the per capita consumption, the extent of pasteurization, the number and character of the dairies and plants, and the frequency of inspection and sampling.

DEATHS DURING WEEK ENDED NOV. 23, 1935

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

	Week ended Nov. 23, 1935	Corresponding week, 1934
Data from 86 large cities of the United States:		
Total deaths	8,022	8,128
Deaths per 1,000 population, annual basis	11.2	11.3
Deaths under 1 year of age	519	586
Deaths under 1 year of age per 1,000 estimated live births	48	54
Deaths per 1,000 population, annual basis, first 47 weeks of year	11.3	11.3
Data from industrial insurance companies:		
Policies in force	67,760,086	67,055,908
Number of death claims	13,071	12,961
Death claims per 1,000 policies in force, annual rate	10.1	10.1
Death claims per 1,000 policies, first 47 weeks of year, annual rate	9.5	9.8

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended Nov. 30, 1935, and Dec. 1, 1934

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 30, 1935, and Dec. 1, 1934

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934
New England States:								
Maine	1	2	-------	1	74	12	1	0
New Hampshire	-------	-------	-------	-------	2	17	0	0
Vermont	-------	3	-------	-------	35	7	0	0
Massachusetts	12	7	-------	-------	60	98	1	1
Rhode Island	-------	2	-------	-------	14	1	0	0
Connecticut	4	2	18	1	29	258	2	2
Middle Atlantic States:								
New York	42	47	[1] 14	[1] 42	397	622	6	2
New Jersey	21	23	7	38	12	48	0	1
Pennsylvania	35	34	-------	-------	48	486	2	1
East North Central States:								
Ohio	89	128	70	58	65	244	0	2
Indiana	47	57	35	20	12	219	4	0
Illinois [2]	61	68	16	37	12	598	9	4
Michigan	30	14	2	5	16	94	2	0
Wisconsin	4	8	34	5	57	234	2	0
West North Central States:								
Minnesota	7	4	1	1	49	205	1	0
Iowa	18	17	7	-------	5	406	3	1
Missouri	75	51	95	70	26	71	3	3
North Dakota	-------	3	-------	-------	12	53	0	0
South Dakota	-------	1	-------	1	3	39	0	0
Nebraska	7	12	1	1	9	11	2	0
Kansas	15	11	16	-------	8	175	1	1
South Atlantic States:								
Delaware	1	2	-------	-------	82	1	0	0
Maryland [3]	13	23	3	7	15	38	5	0
District of Columbia	22	6	-------	-------	1	2	8	0
Virginia [4]	49	99	-------	-------	11	123	0	2
West Virginia	49	47	25	31	9	157	0	1
North Carolina [5]	60	50	6	5	9	230	1	2
South Carolina	4	9	162	239	1	2	0	0
Georgia [6]	22	24	19	-------	-------	0	2	0
Florida	10	17	6	-------	-------	1	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 30, 1935, and Dec. 1, 1934—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934
East South Central States:								
Kentucky	36	78	9	46	31	144	1	0
Tennessee [5]	57	42	34	40	2	28	6	1
Alabama [5]	34	36	53	103	6	52	2	1
Mississippi [5]	9	13	----	----	----	----	0	1
West South Central States:								
Arkansas	17	32	51	93	----	4	1	0
Louisiana	34	25	11	5	11	8	0	0
Oklahoma [6]	20	14	99	16	----	1	0	0
Texas [5]	155	83	218	117	5	11	3	1
Mountain States:								
Montana	1	12	6	----	16	18	1	0
Idaho	1	----	1	----	6	4	0	1
Wyoming	3	----	----	----	2	6	0	2
Colorado	11	7	----	----	10	140	1	1
New Mexico	2	5	3	10	1	62	0	0
Arizona	6	4	54	28	1	17	0	0
Utah [3]	2	1	----	2	1	9	0	1
Pacific States:								
Washington	4	3	----	----	125	131	6	0
Oregon	----	1	24	18	230	10	2	1
California	52	45	23	28	127	111	2	1
Total	1,142	1,172	1,123	1,068	1,647	5,208	80	34
First 48 weeks of year	34,173	36,503	112,880	58,460	711,070	697,734	5,155	2,093

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934
New England States:								
Maine	1	0	18	26	0	0	2	2
New Hampshire	1	0	16	8	0	0	0	1
Vermont	0	0	9	13	0	0	2	1
Massachusetts	5	0	167	127	0	0	2	1
Rhode Island	3	0	18	20	0	0	0	0
Connecticut	5	0	32	38	0	0	0	0
Middle Atlantic States:								
New York	17	3	479	371	0	0	9	11
New Jersey	6	0	97	90	0	0	4	8
Pennsylvania	2	2	233	289	0	0	8	13
East North Central States:								
Ohio	0	3	444	662	1	2	8	8
Indiana	0	0	160	176	5	3	4	4
Illinois [3]	6	2	464	538	2	2	8	20
Michigan	1	4	201	168	0	1	3	9
Wisconsin	0	2	427	384	9	31	2	2
West North Central States:								
Minnesota	1	3	266	112	1	6	0	1
Iowa	0	0	107	54	3	1	28	1
Missouri	2	0	141	104	1	2	2	16
North Dakota	0	1	37	49	0	1	1	0
South Dakota	0	0	57	13	6	14	0	0
Nebraska	0	0	133	28	52	4	2	2
Kansas	1	5	96	48	5	5	3	3
South Atlantic States:								
Delaware	1	0	11	5	0	0	1	0
Maryland [3]	6	1	104	86	0	0	13	5
District of Columbia	0	0	13	26	0	0	2	1
Virginia [4]	2	0	47	99	0	0	4	17
West Virginia	1	0	91	152	0	0	4	15
North Carolina [5]	2	0	58	73	0	0	5	7
South Carolina	2	0	7	10	0	0	2	3
Georgia [5]	0	0	28	28	0	0	8	4
Florida	0	0	7	6	0	0	0	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 30, 1935, and Dec. 1, 1934—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934	Week ended Nov. 30, 1935	Week ended Dec. 1, 1934
East South Central States:								
Kentucky	2	1	79	76	0	1	15	15
Tennessee [5]	1	0	61	76	1	1	4	12
Alabama [5]	2	0	18	33	0	0	5	2
Mississippi [3]	3	0	19	32	0	0	7	11
West South Central States:								
Arkansas	4	0	16	29	0	1	2	15
Louisiana	0	1	14	21	0	0	10	10
Oklahoma [6]	0	0	43	16	4	2	14	14
Texas [5]	0	4	76	41	1	5	27	50
Mountain States:								
Montana	1	0	107	8	41	0	0	0
Idaho	1	0	36	3	1	0	3	1
Wyoming	0	0	90	28	4	1	0	0
Colorado	0	1	189	121	6	1	0	13
New Mexico	1	1	19	19	0	0	7	6
Arizona	2	1	25	17	0	0	1	0
Utah [3]	0	0	100	28	0	1	0	0
Pacific States:								
Washington	2	9	93	32	37	33	4	6
Oregon	7	2	69	56	0	1	2	1
California	4	24	246	185	10	5	10	9
Total	95	70	5,259	4,624	190	124	238	321
First 48 weeks of year	10,501	7,091	227,148	193,728	6,685	4,624	16,739	19,993

[1] New York City only.
[3] Report for week ended Nov. 30, 1935, incomplete.
[3] Week ended earlier than Saturday.
[4] Rocky Mountain spotted fever, week ended Nov. 30, 1935, Virginia, 1.
[5] Typhus fever, week ended Nov. 30, 1935, 15 cases, as follows: North Carolina, 1; Georgia, 6; Tennessee, 1; Alabama, 3; Texas, 4.
[6] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October 1935										
Arizona	2	14	115	9	7	------	1	56	0	11
California	14	292	113	32	589	15	103	889	4	84
Mississippi	3	116	1,637	6,401	8	280	2	101	1	9
Montana	3	8	37	--------	89	------	--------	302	255	9
Nevada	--------	--------	11	--------	8	------	1	72	0	1
North Dakota	1	18	--------	--------	16	------	2	118	2	12
Washington	6	9	57	1	302	------	10	187	63	23

October 1935

	Cases
Anthrax:	
California	2
Chicken pox:	
Arizona	31
California	998
Mississippi	158
Montana	115
Nevada	5
North Dakota	75
Washington	286
Conjunctivitis, infectious:	
Arizona	3
Dengue:	
Arizona	1
Mississippi	4
Dysentery:	
Arizona	17
California (amoebic)	19
California (bacillary)	41
Mississippi (amoebic)	93
Mississippi (bacillary)	338
Washington (bacillary)	1
Epidemic encephalitis:	
Arizona	7
California	12
Mississippi	1
Montana	2
Washington	4
Food poisoning:	
California	48
German measles:	
Arizona	4
California	260

October 1935—Continued

	Cases
German measles—Contd.	
Montana	4
Washington	41
Granuloma, coccidioidal:	
California	3
Hookworm disease:	
California	1
Mississippi	294
Impetigo contagiosa:	
Washington	13
Leprosy:	
California	5
Mumps:	
Arizona	125
California	951
Mississippi	179
Montana	388
Nevada	6
North Dakota	287
Washington	198
Ophthalmia neonatorum:	
California	7
Paratyphoid fever:	
California	7
Puerperal septicemia:	
Mississippi	14
Rabies in animals:	
California	50
Mississippi	4
Relapsing fever:	
California	3
Scabies:	
Washington	1

October 1935—Continued

	Cases
Septic sore throat:	
California	7
Montana	14
Washington	3
Tetanus:	
California	6
Trachoma:	
Arizona	51
California	33
Mississippi	9
Washington	11
Trichinosis:	
California	15
Tularaemia:	
California	2
Washington	1
Typhus fever:	
Mississippi	1
Nevada	1
Undulant fever:	
Arizona	3
California	22
Montana	1
Washington	2
Vincent's infection:	
North Dakota	7
Washington	1
Whooping cough:	
Arizona	28
California	543
Mississippi	263
Montana	91
North Dakota	38
Washington	34

WEEKLY REPORTS FROM CITIES

City reports for week ended Nov. 23, 1935

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0		0	0	1	1	0	1	1	7	21
New Hampshire:											
Concord	1		0	0	0	2	0	0	0	0	4
Manchester						1					
Nashua	0			0		1	0		0	0	
Vermont:											
Barre	0		0	0	0	0	0	0	0	0	4
Burlington	0		0	0	0	0	0	0	0	0	7
Rutland	0		0	2	0	0	0	0	0	0	3
Massachusetts:											
Boston	2		2	10	14	46	0	10	0	5	228
Fall River	0		0	1	2	2	0	2	1	1	28
Springfield	0		0	1	0	3	0	0	0	8	27
Worcester	0		0	2	1	18	0	1	0	2	36
Rhode Island:											
Pawtucket											
Providence	0		2	0	2	2	0	4	0	4	62
Connecticut:											
Bridgeport	0	3	0	0	2	3	0	1	0	1	29
Hartford	1	1	0	2	2	3	0	0	4	15	37
New Haven	0		0	0	1	1	0	0	0	26	49
New York:											
Buffalo	2		0	9	14	45	0	5	0	0	140
New York	18	4	4	109	106	86	0	86	9	107	1,407
Rochester	0		0	1	2	7	0	2	1	4	53
Syracuse	0		0	0	4	4	0	0	0	13	38
New Jersey:											
Camden	0		0	0	2	3	0	0	1	1	27
Newark	0	2	0	1	4	26	0	6	0	34	87
Trenton	0		0	0	0	6	0	0	0	1	25
Pennsylvania:											
Philadelphia	9	3	1	22	23	80	0	10	2	82	397
Pittsburgh	5	2	1	9	19	55	0	7	0	32	130
Reading	0		0	2	0	1	0	0	0	0	25
Scranton	0			0		1	0		0	0	

City reports for week ended Nov. 23, 1935—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Ohio:											
Cincinnati	18	----	2	4	12	9	0	9	0	4	142
Cleveland	2	24	4	2	17	25	0	12	1	43	196
Columbus	9	2	2	1	6	14	0	3	2	1	85
Toledo	0	2	2	29	3	4	0	4	0	5	82
Indiana:											
Anderson	1	----	1	0	0	2	0	0	0	2	8
Fort Wayne	9	----	0	0	3	12	0	1	0	0	23
Indianapolis	3	----	0	1	12	11	0	2	0	14	88
Muncie	0	----	0	1	1	0	0	0	0	0	8
South Bend	0	----	0	0	1	1	0	0	0	2	20
Terre Haute	0	----	0	0	0	4	0	2	0	0	21
Illinois:											
Alton	7	----	0	0	2	4	0	0	0	1	7
Chicago	15	5	4	10	31	169	0	46	1	106	660
Elgin	0	----	0	0	0	2	0	0	0	0	7
Moline	0	----	0	0	0	0	0	0	1	0	14
Springfield	0	----	0	0	1	5	0	0	0	3	17
Michigan:											
Detroit	18	2	1	6	20	67	0	15	1	170	248
Flint	0	----	0	4	4	16	0	1	0	8	25
Grand Rapids	0	----	1	4	0	17	0	2	0	7	31
Wisconsin:											
Kenosha	0	----	0	0	1	14	0	0	0	15	4
Milwaukee	0	1	1	3	5	41	0	3	0	103	97
Racine	0	----	0	0	0	15	1	0	0	7	14
Superior	0	----	0	1	0	2	0	0	0	0	11
Minnesota:											
Duluth	0	----	0	0	0	4	0	0	1	22	19
Minneapolis	3	----	1	4	14	90	0	2	2	8	119
St. Paul	0	----	0	1	8	34	0	0	0	1	54
Iowa:											
Cedar Rapids	0	----	0	0	0	0	0	0	0	3	--------
Davenport	0	----	--------	0	-------	2	0	-------	0	0	--------
Des Moines	0	----	--------	0	-------	3	0	-------	0	0	34
Sioux City	1	----	--------	1	-------	10	0	-------	0	0	--------
Waterloo	7	----	--------	0	-------	7	0	-------	0	2	--------
Missouri:											
Kansas City	5	----	0	1	13	12	0	4	0	1	93
St. Joseph	8	----	0	0	0	4	0	1	0	0	24
St. Louis	16	----	1	1	8	36	0	2	0	3	202
North Dakota:											
Fargo	1	----	0	0	0	6	5	0	0	0	7
Grand Forks	0	----	--------	0	-------	0	0	-------	0	0	--------
Minot	0	----	0	0	0	3	0	0	0	0	7
South Dakota:											
Aberdeen	0	----	--------	0	-------	0	0	-------	0	0	--------
Nebraska:											
Omaha	4	----	0	0	4	65	3	0	0	0	43
Kansas:											
Lawrence	0	----	0	1	0	0	0	0	0	0	1
Topeka	-------	----	-------	-------	-------	-------	-------	-------	-------	-------	-------
Wichita	3	----	0	1	2	7	0	0	0	0	22
Delaware:											
Wilmington	1	----	0	0	4	1	0	0	0	1	28
Maryland:											
Baltimore	5	5	0	3	13	29	0	9	3	23	205
Cumberland	0	3	1	0	1	6	0	1	0	0	10
Frederick	0	----	0	1	0	0	0	0	0	0	2
District of Columbia:											
Washington	20	2	2	2	11	10	0	4	0	0	153
Virginia:											
Lynchburg	2	----	0	0	1	0	0	0	0	7	9
Richmond	0	----	0	0	4	5	0	2	0	0	48
Roanoke	3	----	0	0	2	3	0	0	0	0	17
West Virginia:											
Charleston	2	----	0	1	0	3	0	0	0	1	13
Huntington	0	----	--------	0	-------	3	0	-------	0	0	--------
Wheeling	0	----	0	0	2	0	0	2	0	0	23
North Carolina:											
Gastonia	0	----	0	0	0	0	1	0	0	0	3
Raleigh	0	----	0	0	0	1	0	1	0	0	12
Wilmington	1	----	0	0	2	0	0	0	0	1	9
Winston-Salem	1	----	0	0	3	3	0	0	0	8	14
South Carolina:											
Charleston	0	13	0	0	1	1	0	2	1	0	30
Columbia	0	----	0	0	2	0	0	0	0	0	9
Florence	0	----	0	0	0	0	0	0	0	0	9
Greenville	2	----	0	0	1	1	0	0	1	0	8

City reports for week ended Nov. 23, 1935—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Georgia:											
Atlanta	8	5	1	0	6	8	0	3	0	1	77
Brunswick	1	------	0	1	1	0	0	0	0	0	7
Savannah	8	3	0	------	3	6	0	3	0	2	33
Florida:											
Miami	1	------	0	0	2	0	0	2	0	0	29
Tampa	1	------	0	0	2	0	0	1	0	0	24
Kentucky:											
Ashland	3	------	--------	0	------	1	0	------	0	0	--------
Covington	0	------	0	0	1	2	0	3	0	0	13
Lexington	1	------	0	0	3	2	0	2	0	0	18
Louisville	4	------	0	1	4	15	0	3	1	0	78
Tennessee:											
Knoxville	4	6	0	0	1	4	0	0	0	0	21
Memphis	2	------	0	0	7	10	0	4	2	4	84
Nashville	2	------	1	1	6	1	0	2	0	0	68
Alabama:											
Birmingham	2	------	1	0	1	3	0	5	0	0	56
Mobile	0	------	0	0	4	0	0	0	0	0	18
Montgomery	1	------	--------	0	------	0	0	------	0	2	--------
Arkansas:											
Fort Smith	1	------	--------	0	------	2	0	------	0	0	--------
Little Rock	0	------	0	0	1	0	0	0	0	0	1
Louisiana:											
Lake Charles	0	------	0	0	0	0	0	0	0	0	7
New Orleans	8	------	0	3	12	1	0	12	1	1	162
Shreveport	1	------	0	0	2	1	0	3	0	0	21
Oklahoma:											
Oklahoma City	1	12	2	0	6	4	0	0	0	0	49
Texas:											
Dallas	11	------	0	0	4	9	0	2	0	1	53
Fort Worth	17	------	0	1	6	4	0	3	1	1	45
Galveston	1	------	0	0	0	0	0	0	0	0	12
Houston	19	------	0	0	4	1	0	2	0	0	80
San Antonio	7	------	2	0	4	1	0	9	0	0	64
Montana:											
Billings	0	------	0	1	0	9	0	1	0	0	6
Great Falls	0	------	0	1	1	0	0	0	0	0	9
Helena	0	------	0	0	1	1	0	0	0	0	1
Missoula	0	------	0	1	2	34	1	0	0	0	10
Idaho:											
Boise	0	------	0	0	1	4	0	1	0	0	9
Colorado:											
Colorado Springs	0	------	0	0	0	7	0	0	0	7	7
Denver	10	------	1	4	4	16	1	2	1	2	95
Pueblo	0	------	0	0	0	24	0	0	0	0	14
New Mexico:											
Albuquerque	0	------	0	0	3	1	0	1	1	0	11
Utah:											
Salt Lake City	0	------	1	0	6	52	0	1	0	10	37
Nevada:											
Reno	------	------	------	------	------	------	------	------	------	------	------
Washington:											
Seattle	0	------	0	0	9	20	0	6	0	1	80
Spokane	0	------	0	7	4	1	1	1	0	1	34
Tacoma	0	------	0	0	6	1	0	0	0	2	32
Oregon:											
Portland	0	1	0	36	8	18	0	3	0	3	88
Salem	0	1	--------	1	------	1	0	------	0	0	--------
California:											
Los Angeles	13	25	1	31	18	49	0	16	0	21	319
Sacramento	1	------	0	1	2	20	0	2	0	1	31
San Francisco	2	5	3	25	10	17	0	9	0	27	189

City reports for week ended Nov. 23, 1935—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Maine:			
Portland	0	1	0
Massachusetts:			
Boston	0	1	2
Fall River	0	0	1
Worcester	1	1	0
New York:			
Buffalo	1	0	0
New York	5	2	6
Rochester	1	0	0
Syracuse	0	0	2
New Jersey:			
Newark	0	0	1
Pennsylvania:			
Philadelphia	1	1	1
Pittsburgh	2	0	0
Ohio:			
Cincinnati	0	1	0
Columbus	0	0	1
Illinois:			
Chicago	1	1	1
Moline	0	0	1
Springfield	1	1	0
Michigan:			
Detroit	2	0	1
Minnesota:			
Minneapolis	1	1	0
St. Paul	0	0	1
Missouri:			
St. Louis	0	0	1
South Dakota:			
Aberdeen	0	1	0
Nebraska:			
Omaha	1	0	0
Maryland:			
Baltimore	3	2	1
District of Columbia:			
Washington	2	1	1
Georgia:			
Atlanta	1	0	0
Kentucky:			
Louisville	1	0	0
Tennessee:			
Knoxville	1	0	0
Memphis	0	0	1
Nashville	1	1	0
Louisiana:			
New Orleans	4	1	0
Oklahoma:			
Oklahoma City	1	0	0
Texas:			
Dallas	1	1	0
San Antonio	0	0	1
New Mexico:			
Albuquerque	2	0	1
Oregon:			
Portland	0	0	2
California:			
Los Angeles	0	0	5
San Francisco	1	0	1

Epidemic encephalitis.—Cases: Philadelphia, 1; Chicago, 1; San Francisco, 1.
Pellagra.—Cases: Charleston, S. C., 1; Atlanta, 1; Miami, 1; Louisiville, 1; Mobile, 1.
Rabies-in-man.—Florence, S. C., 1 death.
Typhus fever.—Cases: Atlanta, 1; Savannah, 2; Montgomery, 2; Houston, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended November 16, 1935.—During the 2 weeks ended November 16, 1935, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					4					4
Chicken pox		14	14	295	1,011	179	103	38	197	1,851
Diphtheria	2	4	14	51	17	8	2	5		103
Dysentery					2					2
Erysipelas				8	3	1		1	3	16
Influenza		4			30	1			14	49
Lethargic encephalitis					1					1
Measles	4	4	131	338	907	20	177	60	256	1,897
Mumps		37			415	125	1,147	2	101	1,827
Paratyphoid fever					2					2
Pneumonia					11		2		15	28
Poliomyelitis			1	1	7		4	3	1	17
Scarlet fever		17	11	320	491	79	27	39	46	1,030
Smallpox							1			1
Tuberculosis	2	32	21	115	87	17	22	2	27	325
Typhoid fever		2	5	48	5	5	1			66
Undulant fever					5		3			8
Whooping cough		37	40	163	440	33	70	33	23	839

DENMARK

Communicable diseases—July–September 1935.—During the months of July, August, and September 1935 cases of certain communicable diseases were reported in Denmark as follows:

Disease	July	August	September	Disease	July	August	September
Cerebrospinal meningitis	9	4	2	Paratyphoid fever	7	21	16
Chicken pox	13	5	20	Poliomyelitis	15	44	82
Diphtheria and croup	176	178	272	Puerperal fever	10	14	15
Epidemic encephalitis	5	4	2	Scabies	405	569	834
Erysipelas	205	262	335	Scarlet fever	412	606	815
German measles	11	14	18	Syphilis	49	59	70
Gonorrhea	825	1,120	933	Tetanus, neonatorum	7	2	4
Influenza	1,976	2,032	3,021	Tetanus, traumatic	2	1	2
Malaria	4	3	11	Typhoid fever	5	40	9
Measles	5,656	1,678	852	Undulant fever (Bact. abort. Bang)	35	34	48
Mumps	285	216	210	Whooping cough	2,081	2,412	2,471
Paradysentery	66	172	120				

LATVIA

Communicable diseases—July–September 1935.—During the months of July, August, and September 1935, cases of certain communicable diseases were reported in Latvia as follows:

Disease	July	August	September	Disease	July	August	September
Anthrax			1	Paratyphoid fever	22	10	9
Botulism		1		Poliomyelitis	1	2	10
Cerebrospinal meningitis	5	11	6	Puerperal septicemia	3	8	5
Diphtheria	67	48	33	Scarlet fever	165	100	151
Dysentery		1		Tetanus	5	3	2
Epidemic encephalitis		1	1	Trachoma	32	22	33
Erysipelas	31	22	21	Tuberculosis	412	411	259
Influenza	199	133	60	Typhoid fever	62	82	71
Leprosy	2			Typhus fever	1		
Measles	74	51	18	Undulant fever	1		
Mumps	17	7	3	Whooping cough	55	33	23

PUERTO RICO

Vital statistics—1934—Comparative.—Following are vital statistics for Puerto Rico for the years 1934 and 1933:

	1934	1933		1934	1933
Births per 1,000 population	39.8	38.0	Deaths per 100,000 population, from—Continued.		
Deaths, all causes, per 1,000 population	19.2	22.6	Diarrhea and enteritis (2 years and over)	139.4	204.0
Deaths under 1 year of age per 1,000 live births	113		Heart diseases	104.2	116.2
Deaths per 100,000 population, from:			Influenza	58.1	18.0
Cancer	47.1	45.9	Malaria	152.8	200.7
Cerebrospinal meningitis	5.3	4.9	Nephritis (acute and chronic)	130.8	149.6
Diarrhea and enteritis (under 2 years)	223.4	259.0	Tuberculosis	308.3	337.2
			Whooping cough	22.6	9.8

YUGOSLAVIA

Communicable diseases—October 1935.—During the month of October 1935, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	97	5	Poliomyelitis	4	
Cerebrospinal meningitis	8	2	Scarlet fever	884	8
Diphtheria and croup	952	67	Sepsis	13	5
Dysentery	892	75	Tetanus	51	22
Erysipelas	331	10	Typhoid fever	787	67
Measles	238	1	Typhus fever	6	
Paratyphoid fever	41				

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for November 29, 1935, pages 1701-1717. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued December 27, 1935, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Plague

Ceylon—Southern Province—Balapitiya.—On November 22, 1935, 1 death from plague was reported near Balapitiya, Southern Province, Ceylon.

Ecuador—Guayaquil.—During the period August 6 to November 24, 1935, 84 cases of plague with 29 deaths were reported at Guayaquil, Ecuador.

Hawaii Territory—Hawaii Island—Hamakua District—Hamakua Mill.—A rat captured November 29, 1935, at Hamakua Mill, Hamakua District, Island of Hawaii, Hawaii Territory, has been proved positive for plague.

Typhus Fever

Chile—Santiago.—According to a report dated November 7, 1935, there were 203 cases of typhus fever in hospitals in Santiago, Chile. These include 12 cases admitted on November 6, 1935. The disease is said to be increasing to a considerable extent.

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