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SERVICES AND VISITS IN A CHILDREN'S DENTAL CLINIC

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This is the second paper presenting data on children's dental services provided by a philanthropic organization in a large urban center. The first report (1) was concerned with the description of a time study of routine treatment—the number of dentist minutes per filling, per extraction, and the like—as provided in the various clinics of the organization. The present paper is concerned with the volume of dental services required and received by the children who come to the largest of the clinics.

It is now widely agreed that the best approach to meeting the problems of dental health is through early and continued care of children's teeth (2, 3); yet sufficient data upon which to base general action appear to be lacking. Although there have been numerous surveys of dental conditions among children, few studies have dealt with the statistics of actual treatment under varying methods of furnishing care. It is hoped that this paper will provide material in that direction. Specifically, and as stated, it presents the experience of a privately financed dental clinic: the number of services and visits entailed in providing treatment, and the periodic increment in defects found. Also covered is the continuity in seeking treatment, as measured by the proportion of children who visit the clinic a sufficient number of times to receive all the treatment they need and the proportion who return periodically for reexamination and treatment.

THE CLINICS OF THE PHILADELPHIA MOUTH HYGIENE ASSOCIATION

The information was collected from the case records of the Philadelphia Mouth Hygiene Association, a social agency which operates

¹ From the Division of Public Health Methods.

six dental clinics ² strategically located throughout the city, for children in low economic circumstance. The clinics vary in size from two chairs to six, in accordance with the demand in each area served. They are staffed largely by dentists employed on a full-time salaried basis, and by hygienist-interns who usually perform the prophylaxes and manage the administrative details of the clinics. Experienced hygienists are employed in the two largest clinics to supervise and instruct the hygienist-interns. The children who come to the clinics pay 50 cents per visit for routine treatment, and comparably low fees are charged for prosthetic appliances and orthodontic services.

The first visit of the patient is customarily devoted to a prophylaxis by the hygienist. At this time, the latter makes an oral examination, charting previous fillings and extractions and indicating the necessary treatment to be given. The examination results are subject to change and modification by the dentists when they do the operative work. If the hygienist finds no cavities or teeth to be extracted, her findings must be verified by a dentist. Examinations are made with explorer and mirror.

COMPOSITION OF THE GROUP OF CHILDREN STUDIED

For this statistical study, the subjects chosen were all the children who came for the first time to the Central City Clinic of the association in 1942 or 1943. There were 1,402 new cases in these 2 years, exclusive of emergency patients and patients who proved to be negligible. Of this number, 1,169 were tabulated; the remaining 233 could not be traced or had been transferred to other clinics, either because the family had moved or the clinics were more easily accessible. A sample of these transfers showed that as a group they did not differ in characteristics from the nontransfers.

The distribution of the children by color, sex, and age (at first visit) is shown in table 1. Since these were new patients and since

TABLE 1.—Number of children, by color, sex, and age groups, who first came to Central City Clinic of the Philadelphia Mouth Hygiene Association in 1942-43

Color and sex	Average age (years)	Age in years												
		All ages	5 or less	6	7	8	9	10	11	12	13	14	15	16 and over
All children.....	10.8	1,169	102	68	82	75	109	83	97	96	114	132	126	85
White:														
Boys.....	10.4	356	31	29	29	26	34	32	31	30	27	36	27	24
Girls.....	9.9	444	41	24	26	28	41	35	34	40	44	43	63	25
Other: ¹														
Boys.....	11.3	154	15	4	10	10	10	6	15	12	16	25	18	12
Girls.....	11.2	215	15	11	17	10	24	10	17	14	27	28	18	24

¹ Includes six children of Filipino origin.

² The number has varied. Present plans (Nov. 1, 1946) are to add two new clinics. The association's largest clinic, from which these materials were obtained, has been closed awaiting the completion of new quarters.

referrals come frequently from school nurses, it might have been expected that the group would be weighted with 6- and 7-year-olds—the first and second graders. Instead, there is a fairly even distribution by age, with the mean age at a little less than 11 years. This age distribution is quite similar to that of all American school children (1940 census) and the average age is the same (table 2). In this

TABLE 2.—Percentage distribution of school children in the United States and attending the Central City Clinic of the Philadelphia Mouth Hygiene Association

Age group (years)	All children		White children	
	United States ¹	Dental clinic	United States ¹	Dental clinic
5-6.....	15.6	² 14.5	15.3	² 15.6
7-9.....	22.7	22.7	22.6	23.0
10-13.....	33.1	33.4	33.0	34.1
14-15.....	16.1	22.1	16.3	21.2
16-17.....	12.5	³ 7.3	12.8	³ 6.1
Total.....	100.0	100.0	100.0	100.0
Average age (years).....	10.9	10.8	10.9	10.1

¹ Sixteenth Census of the United States, 1940: Population, Second Series, Characteristics of the Population, United States Summary, table 11. For the 5- to 6-year old group, the total number of children were used, whether attending school or not.

² Includes a small number of children under 5 years.

³ Includes a small number of 18-year-olds.

respect at least, the group can be accepted as representative of the general population, within the ages shown in the table.

Negro children were, on the average, a year older than the white children when they first came to the clinic. What significance there is in the total number of white and Negro children cannot be measured since the extent of coverage by the clinics of the Philadelphia Mouth Hygiene Association was not explored. For the most part, the data shown in the body of the text combine white and Negro children. There is included as an appendix a corresponding set of tables for white children only.

It should be pointed out that the children are not necessarily a representative group from the viewpoint of dental need or treatment required. Attendance at the clinic is voluntary; hence, some factor of selection is present, both in the character of these children and in their caries susceptibility. The findings given here are to be interpreted in that light.

PREVIOUS DENTAL TREATMENT

Dental treatment previously received is marked on the clinical chart and this provides some index of the number of children who had been to a dentist in the past. However, prior care of deciduous teeth was not tabulated in this study since there was no way of telling

whether deciduous teeth which were indicated as missing had been extracted by a dentist or had ever received any other attention.

In the entire group of 1,169 children, 526, or 45 percent, had had some previous dental work on their permanent teeth—13 percent had had permanent teeth filled and extracted, 21 percent fillings only, and 11 percent extractions only. An additional number may have been to dentists who found nothing wrong with their teeth. More girls than boys had been to the dentist, 48 percent as against 42 percent; more white children than Negro children, 50 percent as against 34 percent.

COMPLETIONS

In planning programs of children's dental care, in which attendance is voluntary, a serious problem arises regarding the failure of many children to return for all necessary treatment during a series of treatments, or to come back periodically for check-up and maintenance care. Such defections, when they are extensive, have an appreciable effect upon the volume of services which the program will provide and upon the effectiveness of treatment. They indicate that the program must include a plan of education and of follow-up that will reduce failures to a minimum.

Table 3 describes the status of the 1,169 records under study with

TABLE 3.—*Treatment history of 1,169 children who first came to the clinic of the Philadelphia Mouth Hygiene Association in 1942-43, by color and sex*

Treatment history	Number of children					Percentage of children				
	All	White boys	White girls	Other boys	Other girls	All	White boys	White girls	Other boys	Other girls
Initial treatment complete:										
Treatment up to date.....	139	44	63	16	16	11.9	12.4	14.2	10.4	7.4
Response after second recall but treatment not up to date.....	19	7	8	1	3	1.6	2.0	1.8	.7	1.4
No response after completed second recall.....	25	9	10	3	3	2.1	2.5	2.2	1.9	1.4
Second recall incomplete.....	10	4	2	3	1	.9	1.1	.5	1.9	.5
No response after completed first recall.....	93	40	39	4	10	8.0	11.2	8.8	2.6	4.6
First recall incomplete.....	50	17	17	9	7	4.3	4.8	3.8	5.9	3.3
No response to first recall.....	290	86	119	32	53	24.8	24.1	26.8	20.8	24.7
Total.....	626	207	258	68	93	53.6	58.1	58.1	44.2	43.3
Initial treatment incomplete:										
No further response.....	497	137	177	80	103	42.5	38.5	39.9	51.9	47.9
Child returned at later date.....	46	12	9	6	19	3.9	3.4	2.0	3.9	8.8
Total.....	543	149	186	86	122	46.4	41.9	41.9	55.8	56.7
All histories.....	1,169	356	444	154	215	100.0	100.0	100.0	100.0	100.0

respect to completion of the initial series and of succeeding recalls, the term "recall" being applied to all series following the initial one. The data are arranged in order of currency of treatment, beginning with the children whose dental care was considered to be up to date;

that is, they were, as of November 1, 1945, coming to the clinic or had completed their most recent recall within 6 months of this date. Two main divisions have been made on the basis of whether or not the child completed the initial series of treatments. As the table and figure 1 show, 46 percent of the original group failed to receive all the necessary initial treatments. About a fifth of these paid only a single visit to the clinic.

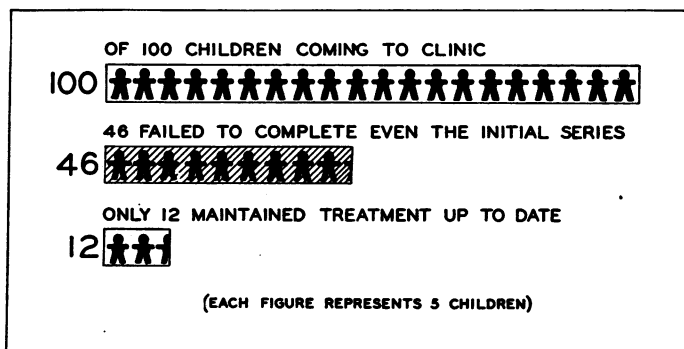


FIGURE 1.—Completion experience of patients. Philadelphia Mouth Hygiene Association.

Twenty-five percent carried their initial series through to completion but failed to return for treatment when recalled 6 months afterward. Another 17 percent had come back when first recalled but dropped out since. Twelve percent of the children were up to date in their dental care (fig. 1).

There are color and age differences with regard to completions, but no differences to speak of in this respect between the sexes. A statistically significant difference occurs between white and Negro children; 58 percent of the former completed the initial series of treatments as compared with 44 percent of the latter. This difference shows no association with the volume of work required as shown by the original examinations of the two groups. The average number of extractions and fillings needed, both deciduous and permanent, was the same for each group.

Examination of the status of the case records according to age of the children reveals two findings that may be important. The first is that a marked difference exists between older and younger children in the proportion with current records. The extent of the difference is shown in the table below. The 15- and 16-year-olds have been eliminated because some of them may have left school since 1942 or 1943 and become ineligible for continued treatment.

Record history	Percentage of children in age group			
	White children		Other children	
	Under 10 years	10-14 years	Under 10 years	10-14 years
Treatment up to date.....	19.4	12.5	18.9	4.7
Initial series incomplete.....	37.5	40.6	51.2	58.8

Among white children, only 12 percent of the children 10 years of age and over were up to date in treatment, in contrast with 19 percent of the children under 10. Among the other children, 5 percent were up to date in the older group as compared with 19 percent in the younger.

The second finding is that the failure by the older group to receive all necessary treatment begins with the initial series of treatments. For, as the lower line of the above table shows, the percentage in the older group that failed to receive all treatment is greater than that in the younger. The differences, however, are not great.

SERVICES RECEIVED ON INITIAL SERIES BY CHILDREN WHO COMPLETED THIS SERIES OF VISITS

The routine services received by the 626 children who completed the initial series of treatments, and the number of visits in which these services were provided are summarized in table 4.

TABLE 4.—*Services and visits on initial series of treatments for 626 children who completed this series. Philadelphia Mouth Hygiene Association*

Service	Children receiving specified service		Number of teeth		Number of visits		
	Number	Percentage	Per child in group	Per child treated	Per child in group	Per child treated	Per tooth treated
Prophylaxis.....	565	90.3			0.9	1.0	
Fillings:							
Deciduous teeth.....	234	37.4	1.1	3.0	1.1	2.9	0.98
Permanent teeth.....	506	80.8	4.2	5.1	4.9	6.1	1.18
Extractions:							
Deciduous teeth.....	217	34.7	.9	2.5	.7	2.0	.79
Permanent teeth.....	230	36.7	.7	1.9	.7	1.9	.98
Polishing.....	452	72.2			.7	1.8	
X-ray.....	65	10.4					
Total services and visits..	626	100.0	6.9		9.1	9.1	

¹ Per child who had one or more teeth filled.

² Includes a small number of visits for zinc oxide and eugenol treatment and treatment with silver nitrate.

Services.—Services are only briefly discussed because the time over which dental decay accrued in these children is not known, nor can the factor of selection previously mentioned be accounted for.

As the table shows, these children, the first time they visited this clinic, had an average of 5.3 teeth requiring fillings, both deciduous and permanent, and 1.6 teeth indicated for extraction. Of the entire group of 626 children, only 26 had no cavities to be filled. Four-fifths of the children had cavities in the permanent teeth, with an average of more than five teeth per child affected. A third required the extraction of a permanent tooth, but among these children 1.9 teeth were extracted per child. A small number of additional extractions which had to be done under gas anesthesia were referred to hospital outpatient departments.

A prophylaxis at the beginning of a series and a polishing at the last visit, when there had been fillings, were fairly routine. There were a few cases in which the only missing item of treatment was the polishing; these cases were still defined as completions. X-rays were taken when the dentist considered them necessary—in 10 percent of the cases who completed the initial series of treatments.

Visits.—The data on visits are considered to be among the most important of these findings. Such data are fundamental in planning dental programs, for they provide a good part of the information needed to determine dental-manpower requirements to meet children's needs.

Charges in this clinic, it was pointed out earlier, are made on a visit basis. In general, an operation such as a filling or an extraction constituted a visit, although the deviations from unity in the last column of table 4 indicate that the dentist found it expedient to vary somewhat the work done per visit. For example, the ratio of 0.79 visit per deciduous tooth extracted shows that two or more deciduous teeth were quite frequently extracted at the same time. Similarly, the ratio of 1.18 visits per filling of a permanent tooth is evidence that it frequently took more than one visit to fill a permanent tooth. One cavity or surface may have been taken care of at a time or the filling completed in two stages.

A prophylactic treatment per series of treatments is accepted practice. One visit ordinarily sufficed, but a few children required more than one visit to get their teeth satisfactorily cleaned; as a result, the number of visits per child for this purpose was 1.02.

To meet the needs indicated for this group took an average of nine visits. Eighteen children of the 626 required but one visit to the clinic for a prophylaxis, 21 required 2 visits, and 25 came 3 times. At the other extreme, there were 16 children for whom 20 or more visits were recorded, including 2 who made 31 visits.

SERVICES RECEIVED BY CHILDREN WHO FAILED TO COMPLETE THE INITIAL SERIES

Data for the children who failed to return for all the services they needed are summarized in table 5. Comparison of this group with

TABLE 5.—Services and visits on initial series of treatments for 543 children who failed to complete this series. Philadelphia Mouth Hygiene Association

Service	Number of children	Percentage of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	508	93.6			1.0	1.1	
Fillings:							
Deciduous indicated.....	182	33.5	1.3	3.8			
Deciduous filled.....	72	13.3	.3	2.1	.3	2.1	.99
Permanent indicated.....	492	90.6	5.7	6.3			
Permanent filled.....	291	53.6	1.6	3.0	1.9	3.5	1.17
Extractions:							
Deciduous indicated.....	195	35.9	1.1	3.1			
Deciduous extracted.....	132	24.3	.6	2.5	.4	1.8	.71
Permanent indicated.....	267	49.2	1.3	2.6			
Permanent extracted.....	192	35.4	.7	1.9	.6	1.8	.97
Total services and visits..	543	100.0	19.4		4.3	4.3	

¹ Indicated for filling or extraction.

² Includes a small number of visits for zinc oxide and eugenol treatment.

those children who completed their treatments (table 4) shows that the former, who were on the average a year older, had considerably more work to be done than the latter. The differences may be seen in the following tabulation and in figure 2.

Indicated treatment per child in group	Initial series	
	Completed	Not completed
	Number of teeth	
Fillings:		
Deciduous teeth.....	1.1	1.3
Permanent teeth.....	4.2	5.7
Extractions:		
Deciduous teeth.....	.9	1.1
Permanent teeth.....	.7	1.3

The total number of visits these services would require, including visits for prophylaxis and polishing, is approximately 12. The average number of visits actually made was 4.3; that is to say, a little over a third of all the operations indicated were completed. In relation to work needed, more extractions were done than fillings (fig. 2), largely because it is the practice in these clinics to attend to the most

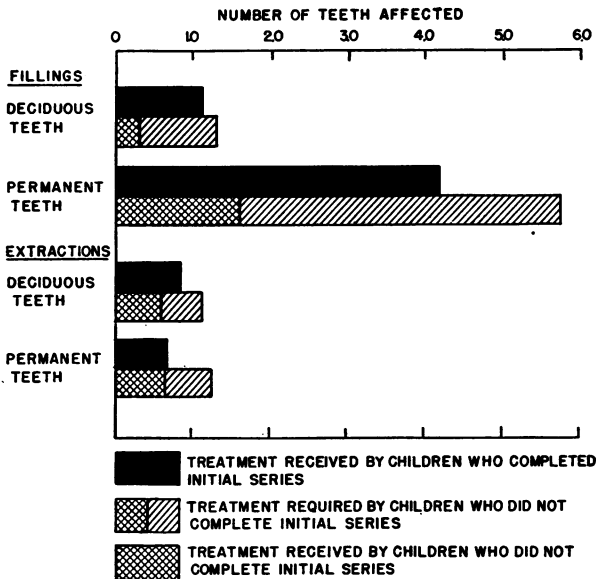


FIGURE 2.—Care required on initial series of treatments: Comparison of children who completed this series with those who did not. Philadelphia Mouth Hygiene Association.

urgent needs first. Often, it is an emergency extraction that introduces parent and child to the clinic.

The number of visits per service for these children, as shown in the last column of table 5, is remarkably similar to that for the group completing the initial series (table 4). As will be shown later (page 126), the ratio of visits to services was also very much the same on the subsequent recalls of these children. Thus, visits per type of service would seem to afford a constant or guide that is applicable in estimating dental-treatment facilities.

SERVICES RECEIVED ON FIRST RECALL

Patients of the clinic are recalled for examination and further treatment 6 months from the completion of the preceding series. Reference to table 3 will show that of the 626 children who completed the initial course of treatment, 336 responded to the recall notice (although not all the children responded promptly). Fifty failed to complete all treatment on first recall, but because of their small number these children have been included in the two tables for this section. The effect of their discontinuance can be gathered from the differences between treatment indicated and received.

Interval between initial series and first recall.—The average interval between completion of initial treatment and return for first recall was 7.2 months. Seventy percent of the group returned in 5 to 7 months, and all but 6 percent returned within a year. The services indicated for the group on first recall and the services received by them are

shown in table 6. The table is based on data for 329 children, since for various reasons the records of 7 children were not completely tabulated.

TABLE 6.—*Services and visits on first recall for 329 children. Philadelphia Mouth Hygiene Association*

Service	Number of children	Percent- age of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	318	96.7			1.0	1.0	
Fillings:							
Deciduous indicated.....	91	27.7	0.6	2.0			
Deciduous filled.....	79	24.0	.5	2.1	.5	2.0	0.98
Permanent indicated.....	245	74.5	2.4	3.3			
Permanent filled.....	222	67.5	1.9	2.8	2.0	3.0	1.09
Extractions:							
Deciduous indicated.....	69	21.0	.4	1.8			
Deciduous extracted.....	59	17.9	.3	1.8	.3	1.4	.81
Permanent indicated.....	26	7.9	.1	1.3			
Permanent extracted.....	26	7.9	.1	1.3	.1	1.3	1.03
Total services and visits..	329	100.0	1 3.5		4.3	4.3	

¹ Indicated for filling or extraction.

² Includes visits for polishing and a small number of visits for zinc oxide and eugenol treatment and treatment with silver nitrate.

Services.—It is worth emphasizing that at the time these children completed the initial series they presumably required no further dental services. The data in table 6, then, represent the need that accrued over a period of 7 months on the average.

A fourth of the children were found to need fillings in one or more deciduous teeth and three-fourths to need fillings in the permanent teeth. One in five required extraction of deciduous teeth, and extraction of permanent teeth was indicated for about one in twelve. As for the number of teeth affected, the deciduous and permanent teeth combined amounted to three teeth per child to be filled and 0.5 tooth to be extracted.

Some appreciation of the significance of these increments is gained by comparing this group of children with those who did not return for the first recall. On the original series, the children who did not return required 7.1 fillings (teeth) and extractions, whereas for those who did return the figure was 6.6. The former required more services on the permanent teeth, but they were a year older on the average. This similarity between the two groups indicates that caries susceptibility was not a factor in the selection of the children who returned for first recall. Thus, the findings as to increment may have some application beyond these children.

The data for the children who responded to this recall are affected by their age distribution, for these are the years when the deciduous

teeth are lost and the permanent teeth acquired. The care needed by each age group, in 3-year intervals, is shown in table 7. The picture is

TABLE 7.—*Fillings and extractions indicated on first recall, by age group. Philadelphia Mouth Hygiene Association*

Age (in years)	Number of children	Per child in age group			
		Deciduous fillings (teeth)	Permanent fillings (teeth)	Deciduous extractions	Permanent extractions
6 or less.....	42	2.0	0.4	0.6	-----
7-9.....	81	1.1	2.0	.8	(1)
10-12.....	85	.2	2.7	.3	0.1
13-15.....	85	-----	3.6	(1)	.2
16 and over.....	36	-----	2.5	-----	.1
All children.....	329	.6	2.4	.4	.1

¹ Less than 0.05.

very much what one would expect. The tendency is to fill the deciduous teeth in the earliest years, when they are needed, and to extract them later on when they are ready for replacement by the permanent teeth. Permanent teeth required an increasing amount of attention until the age of 14 or 15 when, in this group at least, there was some tapering off in the number of teeth with cavities to be filled. The rate of extraction of permanent teeth after the age of 9 was fairly constant.

SERVICES RECEIVED ON SECOND RECALL

Data are presented in table 8 for 173 children ³ who returned for the second recall. The average time between the end of the first recall

TABLE 8.—*Services and visits on second recall for 173 children. Philadelphia Mouth Hygiene Association*

Service	Number of children	Percent- age of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	160	92.5	-----	-----	0.9	1.0	-----
Fillings:							
Deciduous indicated.....	43	24.9	0.5	2.0	-----	-----	-----
Deciduous filled.....	40	23.1	.4	1.9	.4	1.8	0.96
Permanent indicated.....	113	65.3	2.0	3.0	-----	-----	-----
Permanent filled.....	109	63.0	1.7	2.7	1.8	2.8	1.04
Extractions:							
Deciduous indicated.....	27	15.6	.3	1.9	-----	-----	-----
Deciduous extracted.....	24	13.9	.2	1.7	.2	1.4	.83
Permanent indicated.....	9	5.2	.1	1.6	-----	-----	-----
Permanent extracted.....	9	5.2	.1	1.4	.1	1.3	.92
Total services and visits.....	173	100.0	1.9	-----	3.8	3.8	-----

¹ Indicated for filling or extraction.

² Includes visits for polishing and a small number of visits for zinc oxide and eugenol treatment.

³ According to table 2, there should be 195 children in this group, but the second recall records of 22 children were not tabulated; 18 of the children considered up to date in treatment were awaiting second recall and 4 were not coded for other reasons.

and the beginning of the second was 7.6 months, with three-fourths of the children returning in 5 to 8 months.

Although for the group as a whole there is a consistent decrease in required services as compared with the findings on first recall, these differences are so small as to warrant the opinion that uniform increases in dental need are to be expected in groups of children over periods of 6 months or a year. The data on the two recalls were as follows:

Indicated treatment per child in group	Number of teeth	
	First recall	Second recall
Fillings:		
Deciduous teeth.....	0.6	0.5
Permanent teeth.....	2.4	2.0
Extractions:		
Deciduous teeth.....	.4	.3
Permanent teeth.....	.1	.1

In table 9 are given the services per child by age group. The numbers of children involved in the table are small, but comparison with table 7 shows that the findings in both tables are quite similar.

TABLE 9.—*Fillings and extractions indicated on second recall, by age group. Philadelphia Mouth Hygiene Association*

Age (in years)	Number of children	Per child in age group			
		Deciduous fillings (teeth)	Permanent fillings (teeth)	Deciduous extractions	Permanent extractions
6 or less.....	30	1.7	0.4	0.8	0.1
7-9.....	46	.7	1.7	.3	.1
10-12.....	49	.1	3.1	.2	.1
13-15.....	40	-----	2.2	-----	.1
16 and over.....	8	-----	1.6	-----	-----
All children.....	173	.5	2.0	.3	.1

The data for both recalls have been combined in figure 3 to show the approximate age trend in the annual increment of needed fillings and extractions.

Annual increment in required treatment.—An idea of the annual increment can be gained from adding the data in tables 6 and 8. In this group of children, which was fairly evenly distributed by age between 5 and 16 years and consisted largely of white children, the average annual increment was approximately one deciduous tooth and four permanent teeth requiring fillings, 0.7 of a deciduous tooth and 0.2 of a permanent tooth requiring extraction. If two prophylaxes are added, the total of routine services comes to eight.

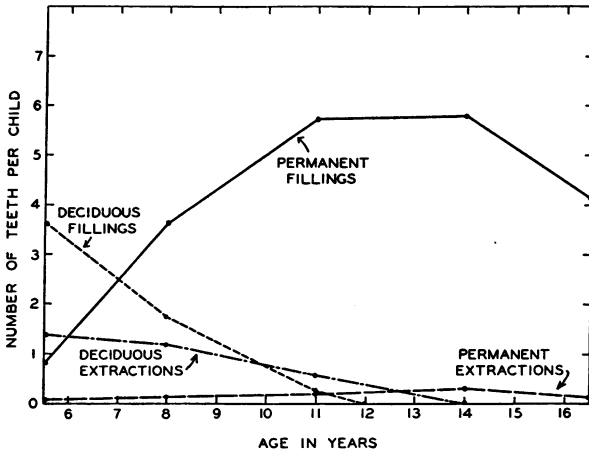


FIGURE 3.—Approximate annual incidence of needed fillings and extractions, by age. Philadelphia Mouth Hygiene Association.

It is important to recognize that this annual increment did not necessarily occur in teeth never previously treated. Many of the fillings, for example, were placed in teeth in which previous cavities had been filled. This raises the question of the additiveness of the data on fillings for the two recalls. Although an overstatement of the number of teeth attacked by caries may result, a measure is obtained of the actual number on which work has to be done.

A more precise estimate of annual increment may be obtained by eliminating the children for whom the interval between completion of the initial series and commencement of the second recall was appreciably more than a year, although the results vary little from those for the entire group. This procedure leaves 122 children for whom the interval was 10 to 15 months, inclusive. For these children, the annual increment in dental need was, on the average, 1.5 deciduous and 3.4 permanent teeth requiring fillings, and 0.6 deciduous and 0.1 permanent tooth requiring extraction. The results are shown graphically in figure 4.

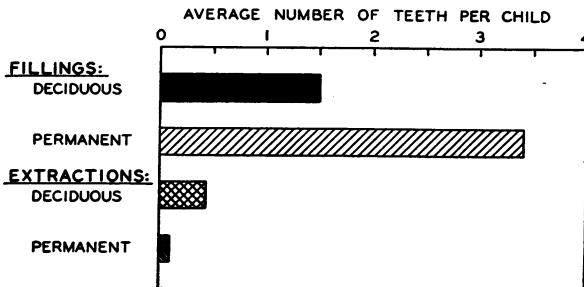


FIGURE 4.—Average annual increment in needed fillings and extractions. Philadelphia Mouth Hygiene Association.

SERVICES PER VISIT

It was remarked earlier that visits per type of service were constant throughout the treatment experience of these children. The following recapitulation brings this out.

Type of service	Children who completed initial series			Initial series incomplete	Weighted average
	Initial series	First recall	Second recall		
	Visits per service				
Prophylaxis.....	1.02	1.01	1.01	1.05	1.03
Filling (complete tooth):					
Deciduous.....	.98	.98	.96	.99	.98
Permanent.....	1.18	1.09	1.04	1.17	1.16
Extraction:					
Deciduous.....	.79	.81	.83	.71	.77
Permanent.....	.98	1.03	.92	.97	.98

Three percent of the children require more than one visit for a prophylaxis. In a very small number of instances, more than one deciduous tooth is filled at a visit and more than one permanent tooth extracted. The multiple extraction of deciduous teeth occurs frequently. Between 15 and 20 percent of all permanent teeth require more than one visit to have all cavities or surfaces completely taken care of. (See fig. 5.)

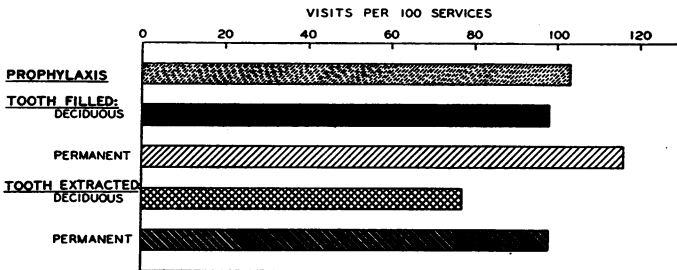


FIGURE 5.—Visits per 100 specified dental services. Philadelphia Mouth Hygiene Association.

These findings stem from a clinic procedure in which the visit is the basis for payment of fees. In general, one service, such as a filling, an extraction, or a prophylaxis, constitutes a visit, but the deviations are quite important. They come largely from the effort to make visits to the clinic of equivalent worth.

This fact is seen from the data on time per service. In the time study (1) conducted in the clinics of the Philadelphia Mouth Hygiene Association, the average number of minutes per operation was found to be as follows:

Prophylaxis.....	15.5
Deciduous filling (complete tooth).....	14.3
Permanent filling (complete tooth).....	17.4
Deciduous extraction.....	9.3
Permanent extraction.....	12.5
Polishing.....	11.8

The briefest operation was the deciduous extraction; but the extraction of two deciduous teeth at a visit was a frequent occurrence. On the other hand, the longest operation, the filling of a permanent tooth, was often spread over two visits.

From the data on visits and time per service, preliminary estimates can be made of the dental manpower—at the chair—required in treating children's teeth, so far as taking care of the increment is concerned. One advantage in employing visits required rather than number of teeth is that allowance can more adequately be made for time between children, interruptions, etc., and for the administration of the clinic service.

SPECIAL SERVICES

As was previously indicated, the clinics of the Philadelphia Mouth Hygiene Association offer such services as orthodontic and prosthodontic treatments, and root-canal therapy. Orthodontic and prosthodontic services are charged for at fees considered to be within the reach of the economic groups served. It was possible to obtain accurately only the number in this group of children who received such services and not the number considered to need them.

In the entire group of 1,169 children, 61 availed themselves of these opportunities for correction and tooth-saving, with 4 children receiving some combination of services. Thirty received orthodontic treatment, 21 were provided with prosthetic devices, and 18 had root-canal therapy. These are relatively small numbers, but the clinic itself does a substantial amount of work in orthodontics and prosthetics for children who can afford to obtain routine treatment from private dentists but are referred to the clinic by the latter for the costlier services.

SUMMARY

1. An analysis has been made of the dental records of 1,169 children who came to the Central City Clinic of the Philadelphia Mouth Hygiene Association for the first time in 1942 or 1943. The association provides dental care at low cost for children whose families cannot afford private treatment.

2. Fifty-four percent of these children completed the initial series of treatments; 46 percent dropped out before all the treatment indicated for them could be provided. Of the Negro children, 44 percent completed the first series of treatments.

Twenty-five percent of the 1,169 children failed to return in 6 months for reexamination. Of the entire group, 12 percent were up to date in treatment. Younger children showed a greater proneness to continue treatment.

3. Children who failed to complete the initial series of treatments had considerably more need than the children who completed this series. The average number of teeth requiring filling or extraction was 6.9 in the latter group and 9.4 in the former.

4. Indicated services per child for the routine treatments on the first recall (which was begun 7 months after completion of the initial series, on the average) were: fillings, 0.6 deciduous tooth and 2.4 permanent teeth; extractions, 0.4 deciduous tooth and 0.1 permanent tooth.

5. Children who responded to the first recall did not apparently differ in caries susceptibility from those who did not respond. On the initial series, both groups had an average of approximately seven teeth in need of filling or extraction.

6. Services indicated on second recall were slightly less than those on the first: 0.5 filling in deciduous teeth and 2.0 in permanent teeth, 0.3 extraction in deciduous teeth and 0.1 in permanent teeth.

7. There were 122 children for whom the interval between completion of the initial series and beginning of the second recall was 10 to 15 months, or approximately 1 year. For these children, the annual increment in dental need was 1.5 deciduous and 3.4 permanent teeth requiring fillings, 0.6 deciduous and 0.1 permanent tooth requiring extraction.

8. The average number of visits per service in this clinic, where charges are made on a visit basis, were:

Prophylaxis.....	1.03	Deciduous tooth extracted.....	0.77
Deciduous tooth filled.....	.98	Permanent tooth extracted.....	.98
Permanent tooth filled.....	1.16		

9. In the entire group of 1,169 children, 30 received orthodontic treatment, 21 were provided with prosthetic devices, and 18 had root-canal therapy.

ACKNOWLEDGMENT

This study was made possible only by the complete cooperation of Lt. Col. William C. Webb, Jr., executive director of the children's dental clinics of the Philadelphia Mouth Hygiene Association, and the members of his staff. Advice and assistance were received from Dr. Antonio Ciocco and Dr. Henry Klein of the Division of Public Health Methods. Responsibility for tabulation and for the preparation of tables and charts was borne by Mrs. Marion Lee Fatt of this Division.

REFERENCES

- (1) Altman, Isidore: Time per service in a children's dental clinic. Pub. Health Rep., 61: 1211-19 (Aug. 16, 1946).
- (2) U. S. Congress. Senate Committee on Education and Labor. Dental research and dental care; hearings before a subcommittee * * * on S. 190 * * * and S. 1099. Washington: U. S. Government Printing Office (1945).
- (3) Council on Dental Health, American Dental Association: A dental care plan for low income groups. Chicago, American Dental Association (1945).

APPENDIX

TABLE 10.—Services and visits on initial series of treatments for 465 white children who completed this series. Philadelphia Mouth Hygiene Association

Service	Children receiving specified service		Number of teeth		Number of visits		
	Number	Percentage	Per child in group	Per child treated	Per child in group	Per child treated	Per tooth treated
Prophylaxis.....	425	91.4			0.9	1.0	
Fillings:							
Deciduous teeth.....	183	39.4	1.2	3.0	1.2	3.0	0.99
Permanent teeth.....	378	81.3	4.2	5.1	4.9	6.1	1.19
Extractions:							
Deciduous teeth.....	169	36.3	.9	2.5	.7	1.9	.79
Permanent teeth.....	157	33.8	.7	2.0	.7	1.9	.97
Polishing.....	343	73.8			.7	1.8	
X-ray.....	57	12.3					
Total services and visits..	465	100.0	7.0		9.2	9.2	

¹ Per child who had one or more teeth filled.

² Includes a small number of visits for zinc oxide and eugenol treatment and treatment with silver nitrate

TABLE 11.—Services and visits on initial series of treatments for 335 white children who failed to complete this series. Philadelphia Mouth Hygiene Association

Kind of operation	Number of children	Percentage of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	311	92.8			1.0	1.0	
Fillings:							
Deciduous indicated.....	120	35.8	1.2	3.4			
Deciduous filled.....	40	11.9	.2	2.0	.2	2.0	1.03
Permanent indicated.....	302	90.1	5.8	6.5			
Permanent filled.....	182	54.3	1.7	3.2	2.1	3.8	1.19
Extractions:							
Deciduous indicated.....	135	40.3	1.3	3.2			
Deciduous extracted.....	93	27.8	.7	2.5	.5	1.8	.71
Permanent indicated.....	162	48.4	1.2	2.6			
Permanent extracted.....	119	35.5	.6	1.8	.6	1.8	.97
Total services and visits..	335	100.0	9.5		4.6	4.6	

¹ Indicated for filling or extraction.

² Includes a small number of visits for zinc oxide and eugenol treatments.

TABLE 12.—*Services and visits on first recall for 254 white children. Philadelphia Mouth Hygiene Association*

Kind of operation	Number of children	Percent- age of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	247	97.2			1.0	1.0	
Fillings:							
Deciduous indicated.....	70	27.6	0.5	2.0			
Deciduous filled.....	59	23.2	.5	1.9	.4	1.9	0.98
Permanent indicated.....	189	74.4	2.4	3.3			
Permanent filled.....	173	68.1	1.9	2.8	2.0	3.0	1.07
Extractions:							
Deciduous indicated.....	50	19.7	.3	1.7			
Deciduous extracted.....	44	17.3	.3	1.7	.2	1.4	.85
Permanent indicated.....	18	7.1	.1	1.3			
Permanent extracted.....	17	6.7	.1	1.4	.1	1.4	1.00
Total services and visits..	254	100.0	1 3.3		2 4.3	2 4.3	

¹ Indicated for filling or extraction.

² Includes visits for polishing and a small number of visits for zinc oxide and eugenol treatment and treatment with silver nitrate.

TABLE 13.—*Services and visits on second recall for 129 white children. Philadelphia Mouth Hygiene Association*

Kind of operation	Number of children	Percent- age of children	Number of teeth		Number of visits		
			Per child in group	Per child needing specified service	Per child in group	Per child needing specified service	Per tooth treated
Prophylaxis.....	119	92.2			0.9	1.0	
Fillings:							
Deciduous indicated.....	32	24.8	0.5	1.9			
Deciduous filled.....	31	24.0	.4	1.8	.4	1.8	0.96
Permanent indicated.....	84	65.1	1.9	2.9			
Permanent filled.....	84	65.1	1.7	2.6	1.8	2.7	1.05
Extractions:							
Deciduous indicated.....	18	14.0	.3	2.1			
Deciduous extracted.....	15	11.6	.2	1.9	.2	1.6	.86
Permanent indicated.....	6	4.7	.1	1.5			
Permanent extracted.....	6	4.7	.1	1.5	.1	1.3	.89
Total services and visits..	129	100.0	1 2.8		2 3.7	2 3.7	

¹ Indicated for filling or extraction.

² Includes visits for polishing.

PUBLIC HEALTH SERVICE PUBLICATIONS

A List of Publications Issued During the Period January–June 1946

There is given herewith a list of publications of the United States Public Health Service issued during the period January–June 1946.

The purpose of this list is to provide a complete and continuing record of Public Health Service publications, for reference use by librarians, scientific workers, and others interested in particular fields of public health work, and not to offer the publications for indiscriminate free distribution.

Single sample copies are available from the Public Inquiries Section, Office of Health Information, United States Public Health Service, Washington 25, D. C.

Quantities may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at prices shown, with a reduction of 25 percent on lots of 100 copies or more of a single publication.

Those publications marked with an asterisk (*) can be obtained only by purchase.

Periodicals

- * Public Health Reports (weekly), January–June, vol. 61, Nos. 1 to 26, pages 1 to 977. 10 cents a number.
- * The Journal of Venereal Disease Information (monthly), January–June, vol. 27, Nos. 1 to 6, pages 1 to 168. 5 cents a number.
- * Journal of the National Cancer Institute (bimonthly), February–June, vol. 6, Nos. 4 to 6, pages 196 to 377. 40 cents a number.
- Public Health Engineering Abstracts (monthly), January–June, vol. XXVI, Nos. 1 to 6, 32 pages each. No sales stock.
- National Negro Health News (quarterly), January–June, vol. 14, Nos. 1 and 2, 24 pages each. No sales stock.

Extracts from Public Health Reports Tuberculosis Control Issues

1. Editorial. (By Herman E. Hilleboe.) Rehabilitation and aftercare in tuberculosis. I. General Problems. By Herman E. Hilleboe and Norvin C. Kiefer. Photofluorographic roll-film viewers. By Ira Lewis. Tuberculosis mortality in major cities: United States, 1942–43. By R. V. Kasius and E. H. Pitney. Characteristics of commercial X-ray intensifying screens: resolving power. Excerpt from "Tuberculosis in Holland during the war." March 1, 1946. 32 pages; 2 plates. No sales stock.
2. Editorial—Teamwork in tuberculosis control. (By Herman E. Hilleboe.) Geographic differences in sensitivity to histoplasmin among student nurses. By Carroll E. Palmer. Tuberculosis mortality in the United States and in each State: 1944. By J. Yerushalmy and I. M. Moriyama. April 5, 1946. 44 pages. No sales stock.
3. Editorial—Tuberculosis record systems. (By Herman E. Hilleboe.) The modalities of bed rest. By William M. Peck. Review of tuberculosis control demonstrations and the program of grants-in-aid. By Francis J.

Weber. Isolation of *Mycobacterium tuberculosis* from gastric contents neutralized after varying periods. By Marian G. Sprick and John W. Towey. Excerpts from "How much control of tuberculosis." A forecast (excerpt from "The Modern Attack on Tuberculosis"). May 3, 1946. 30 pages; 6 plates. No sales stock.

4. Editorial—BCG vaccination against tuberculosis. (By Herman E. Hilleboe.) Experience with BCG vaccine in the control of tuberculosis among North American Indians. By Joseph D. Aronson and Carroll E. Palmer. Indolent early tuberculosis. Excerpt from "Rehabilitating the tuberculous." Excerpt from "Chemotherapy in tuberculosis." Excerpt from "Tuberculosis in Sweden and the fight against it in recent years." New films available on administration of mass radiography programs. Laryngeal swabs for detection of tuberculosis. June 7, 1946. 30 pages. No sales stock.

Reprints From the Public Health Reports

2686. A cycle of morphine addiction. Biological and psychological studies. Part I: Biological investigations. By Edwin G. Williams and Fred W. Oberst. Part II: Psychological investigations. By Ralph R. Brown. January 4 and 11, 1946. 42 pages. 10 cents.
2687. The release of antigen from certain bacteria on treatment with ether. By Charles C. Shepard. January 11, 1946. 6 pages. 5 cents.
2688. An epidemic of a severe pneumonitis in the bayou region of Louisiana. VI. A comparative study of the viruses of lymphogranuloma venereum, psittacosis and Louisiana pneumonitis. By C. L. Larson and B. J. Olson. January 18, 1946. 10 pages. 5 cents.
2689. Tularemia. Attempted transmission by each of two species of fleas: *Xenopsylla cheopis* (Roths.) and *Diamanus montanus* (Baker). By F. M. Prince and M. C. McMahon. January 18, 1946. 8 pages. 10 cents.
2690. Physical impairments of members of low-income farm families—11,490 persons in 2,477 Farm Security Administration borrower families, 1940. VI. Extent of immunization against smallpox, diphtheria, and typhoid fever. By Mary Gover and Jesse B. Yaukey. January 25, 1946. 13 pages. 5 cents.
2691. Composition of some trade name solvents used for cleaning and degreasing and for thinning paints. By Allen D. Brandt, W. J. McConnell, and R. H. Flinn. February 1, 1946. 12 pages. 5 cents.
2692. Influence of pH and temperature on the survival of coliforms and enteric pathogens when exposed to chloramine. By C. T. Butterfield and Elsie Wattie. February 8, 1946. 36 pages. 10 cents.
2693. Diphtheria incidence and trends in relation to artificial immunization with some comparative data for scarlet fever. By Selwyn D. Collins. February 15, 1946. 38 pages. 10 cents.
2694. The increase in tuberculosis proportionate mortality among nonwhite young adults. By J. Yerushalmy. February 22, 1946. 8 pages. 5 cents.
2695. Negro mortality. I. Mortality from all causes in the death registration States. By Mary Gover. February 22, 1946. 8 pages. 5 cents.
2696. The incidence of poliomyelitis and its crippling effects, as recorded in family surveys. By Selwyn D. Collins. March 8, 1946. 28 pages. 10 cents.
2697. Public Health Service drinking water standards, 1946. March 15, 1946. 14 pages. 5 cents.

2698. The excretion of DDT (2, 2-bis-(p-chlorophenyl)-1, 1, 1-trichloroethane) in man, together with clinical observations. By P. A. Neal, T. R. Sweeney, S. S. Spicer, and W. F. von Oettingen. March 22, 1946. 8 pages. 5 cents.
2699. Alterations in the cardiac conduction mechanism in experimental thiamine deficiency. By W. D. King and W. H. Sebrell. March 22, 1946. 7 pages; 2 plates. 5 cents.
2700. Cerebrospinal meningitis. A chronological record of reported cases and deaths. By Mary Gover and Glee Jackson. March 29, 1946. 17 pages. 10 cents.
2701. Some physical properties of DDT and certain derivatives. By Howard L. Andrews, William C. White, Loubov R. Gamow, and Dorothy C. Peterson. March 29, 1946. 8 pages; 1 plate. 15 cents.
2702. A method of conducting the 50 percent hemolysis end point complement-fixation test for parasitic diseases. By John Bozicevich, Helen M. Hoyem, and Vernal M. Walston. April 12, 1946. 6 pages. 5 cents.
2703. Streptomycin in experimental plague. By J. W. Hornibrook. April 12, 1946. 4 pages. 5 cents.
2704. Sequestration of calcium and magnesium in the presence of alkaline detergents. By Edward H. Maun and C. C. Ruchhoft. April 12, 1946. 8 pages. 5 cents.
2705. A statistical study of 500 psychopathic prisoners. By Hulsey Cason and M. J. Pescor. April 19, 1946. 17 pages. 10 cents.
2706. A public health program for rural areas. By Frederick D. Mott. April 26, 1946. 9 pages. 5 cents.
2707. Homologous serum jaundice. Experimental inactivation of etiologic agent in serum by ultraviolet irradiation. By John W. Oliphant and Alexander Hollaender. April 26, 1946. 6 pages; 1 plate. 5 cents.
2708. Comparative assays of rodenticides on wild Norway rats. I. Toxicity. By Sally H. Dieke and Curt P. Richter. May 10, 1946. 7 pages. 5 cents.
2709. Chlorine as a possible ovicide for *Aedes aegypti* eggs. By Stephen P. Hatchett. May 10, 1946. 4 pages. 5 cents.
2710. Shadowed replicas of tooth surfaces. By David B. Scott and Ralph W. G. Wyckoff. May 17, 1946. 10 pages; 6 plates. 5 cents.
2711. The preparation of antigens from yolk sacs infected with rickettsiae. By Norman H. Topping and Charles C. Shepard. May 17, 1946. 8 pages. 5 cents.
2712. The tropical disease education program of the United States Public Health Service. By William S. Boyd, Trawick H. Stubbs and Paul P. Weinstein. May 17, 1946. 6 pages. 5 cents.
2713. Training public health workers. Programs sponsored by State health departments under Title VI of the Federal Social Security Act and the Federal Venereal Disease Control Act (1936-44). By Joseph W. Mountin and Emily K. Hankla. May 24, 1946. 24 pages. 10 cents.
2714. The nature of the soluble antigen from typhus rickettsiae. By Charles C. Shepard and Ralph W. G. Wyckoff. May 31, 1946. 8 pages; 4 plates. 5 cents.
2715. Antibacterial action of penicillin, penicillin X, and streptomycin on *Hemophilus influenzae*. By William L. Hewitt and Margaret Pittman. May 31, 1946. 12 pages. 5 cents.

2716. A method for the preparation of tsutsugamushi (scrub typhus) antigen from infected yolk sacs. By Norman H. Topping and Charles C. Shepard. May 31, 1946. 4 pages. 5 cents.
2717. How does housing affect health? By M. Allen Pond. May 10, 1946. 8 pages. 5 cents.
2718. Electrocardiographic alterations in adult rats as a result of acute thiamine deficiency. By James M. Hundley and W. H. Sebrell. June 14, 1946. 16 pages; 5 plates. 10 cents.
2719. Studies of the acute diarrheal diseases. XVII. The sulfonamides in shigellosis. By Albert V. Hardy. June 14, 1946. 9 pages. 5 cents.
2720. Full-time public health positions in local health departments. By Marion E. Altenderfer. June 14, 1946. 10 pages. 5 cents.
2721. A performance test for rating dishwashing detergents. By Edward H. Mann and C. C. Ruchhoft. June 14, 1946. 12 pages; 2 plates. 10 cents.
2722. A serological study of 37 cases of tsutsugamushi disease (scrub typhus) occurring in Burma and the Philippine Islands. By Ida A. Bengtson. June 14, 1946. 8 pages. 5 cents.
2723. Complement fixation in tsutsugamushi disease (scrub typhus). By Ida A. Bengtson. June 14, 1946. 6 pages. 5 cents.
2724. Incidence of poliomyelitis in the United States in 1945. By C. C. Dauer. June 21, 1946. 8 pages. 5 cents.
2725. *Plasmodium gallinaceum* infection characterized by predominance of erythrocytic forms. By Victor H. Haas, Aimée Wilcox, Frances Park Davis, and Frances Moore Ewing. June 21, 1946. 7 pages. 5 cents.
2726. Prevalence of typhus complement-fixing antibodies in human serums in San Antonio, Texas. By David E. Davis and Morris Pollard. June 21, 1946. 4 pages. 5 cents.
2727. Conclusions concerning psychiatric training and clinics. Meeting of consultants in mental hygiene, United States Public Health Service September 6, 1945. June 28, 1946. 16 pages. 5 cents.
2728. Promizole treatment of leprosy. A preliminary report. By G. H. Faget, R. C. Pogge and F. A. Johansen. June 28, 1946. 4 pages; 1 plate. 5 cents.
2729. Present status of diasone in the treatment of leprosy. Brief clinical note. By G. H. Faget, R. C. Pogge and F. A. Johansen. June 28, 1946. 8 pages; 3 plates. 5 cents.
1137. Questions and answers on smallpox and vaccination. By J. P. Leake. Revised 1946. 28 pages. 10 cents.

Supplements to Public Health Reports

133. The public health nurse and you. Revised 1946. 13 pages, illustrated. 10 cents.
190. The notifiable diseases. Prevalence of certain important communicable diseases, by States, 1944. 1946. 14 pages. 5 cents.

National Institute of Health Bulletins

184. The genus *Ixodes* in North America. By R. A. Cooley and Glen M. Kohls. 1945. 246 pages. 40 cents.
185. The toxicity and potential dangers of methyl bromide with special reference to its use in the chemical industry, in fire extinguishers, and in fumigation. By W. F. von Oettingen. 1946. 41 pages. 15 cents.

186. The effects of aliphatic nitrous and nitric acid esters on the physiological functions with special reference to their chemical constitution. By W. F. von Oettingen. 1946. 76 pages. 15 cents.
187. The genera *Boophilus*, *Rhipicephalus*, and *Haemaphysalis* (*Ixodidae*) of the new world. By R. A. Cooley. 54 pages. 15 cents.

Annual Report

Annual Report of the United States Public Health Service for the fiscal year 1945. 1945. 156 pages. 30 cents.

Unnumbered Publications

- Index to Public Health Reports, vol. 60, part 2, July-December 1945. 1946. 16 pages. 5 cents.
- Index to Journal of the National Cancer Institute, vol. VI, August 1945-June 1946. 1946. 6 pages. 5 cents.
- Set your cap for the U. S. Public Health Service. 1946. 8 page folder, illustrated. No sales stock.
- National Negro Health Week program. This pamphlet is published annually, usually during March, for community leaders in an effort to suggest ways and means by which interested individuals and organizations may be organized for a concerted and effective attack upon the community's disease problems. Thirty-second observance, March 31-April 7. 4 pages. Out of print.
- National Negro Health Week leaflet. Thirty-second observance. 1946. 2 pages. Out of print.
- National Negro Health Week poster. Thirty-second observance. 1946. Out of print.

Reprints from The Journal of Venereal Disease Information

253. The synergistic action of penicillin and mapharsen (oxophenarsine hydrochloride) in the treatment of experimental syphilis. By Harry Eagle, Harold J. Magnuson and Ralph Fleischman. January 1946. 8 pages. 5 cents.
254. San Francisco industrial venereal disease educational and case-finding program. By Richard A. Koch, Lawrence Arnstein, and Arthur C. Painter. January 1946. 12 pages. 5 cents.
255. A plan for revitalizing National venereal disease control. By J. R. Heller, Jr., Lida J. Usilton and Arch B. Clark. February 1946. 6 pages. 5 cents.
256. Untreated syphilis in the male Negro. II. Mortality during 12 years of observation. By J. R. Heller, Jr., and P. T. Bruyere. The effect of treated acquired syphilis on life expectancy. By Dudley C. Smith and Martha C. Bruyere. Mortality trends for syphilis. By Lida J. Usilton. February 1946. 20 pages. 10 cents.
257. Cooperation of health officers and police departments. By Eugene A. Gillis. March 1946. 4 pages. 5 cents.
258. Preliminary report evaluating the worth of obtaining names of suspected contacts during a regular contact interview. By W. D. Hazlehurst, C. P. Stevick, and Harold A. Kahn. March 1946. 4 pages. 5 cents.
259. The revised reports and forms of the Venereal Disease Division. By J. R. Heller, Jr. and L. J. Usilton. April 1946. 8 pages. 5 cents.
260. Blood testing and treatment program in Jefferson County, Alabama. By W. H. Y. Smith and George A. Denison. April 1946. 11 pages. 5 cents.

261. Studies on chancroid. III. Ducrey skin reactions in Negro hospital patients. By Albert Heyman and Paul B. Beeson. April 1946. 4 pages. 5 cents.
262. Cases of syphilis and gonorrhoea reported for the first time in States, territories and possessions for the year 1945. 1 page. 5 cents.
263. The systemic treatment of arsenic poisoning with BAL (2, 3-Di-mercapto-propanol). By Harry Eagle. May 1946. 8 pages. 5 cents.
264. False positive serologic reactions for syphilis in lymphogranuloma venereum. By Albert Heyman and E. L. Webb. May 1946. 6 pages. 5 cents.
265. Studies in syphilis. VI. Fibrosis and round cell infiltration of the parenchymatous organs (Warthin) in relation to serodiagnostic findings. By Paul D. Rosahn. May 1946. 4 pages. 5 cents.
266. National venereal disease control. Report of the committee on venereal disease control to the State and Territorial Health Officers' Association, April 1946. June 1946. 5 pages. 5 cents.

Supplements to The Journal of Venereal Disease Information

4. Directory of clinics for the diagnosis and treatment of venereal diseases. Revised 1946. 52 pages. 15 cents.
20. Postwar venereal disease control. Proceedings, National Conference, St. Louis, Missouri, November 1944. 213 pages. 35 cents.

INCIDENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

December 1-28, 1946

The accompanying table summarizes the incidence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State for each week are published in PUBLIC HEALTH REPORTS under the section "Incidence of Disease." The table gives the number of cases of these diseases for the 4 weeks ended December 28, 1946, the number reported for the corresponding period in 1945, and the median number for the years 1941-45.

DISEASES ABOVE MEDIAN INCIDENCE

Influenza.—The number of reported cases of influenza was about normal for this season of the year. For the 4 weeks ended December 28 there were 11,686 cases reported, which was only slightly above the 1941-45 median. In the West North Central, South Atlantic and Mountain sections the numbers of cases were about normal, but in all other sections of the country the incidence was below the seasonal expectancy. Of the total cases, Texas reported 5,593, South Carolina 1,702, Virginia 1,689 and Arizona 809 cases—more than 80 percent of all cases were reported from those 4 States. The 1945-46 influenza epidemic reached its peak during the week ended December 15, 1945, a total of approximately 149,000 cases being reported for the week,

and for the 4 weeks corresponding to the current 4-week period there were nearly 320,000 cases reported.

Poliomyelitis.—Although the incidence of poliomyelitis dropped more than 50 percent from the preceding 4-week period, the number of cases (668) reported for the current 4 weeks was 1.5 times the 1945 incidence for the corresponding weeks and 2.5 times the 1941–45 median. The number of cases was higher than in 1945 in all sections except the Mountain and Pacific. All sections reported excesses over the preceding 5-year medians. Although the rate of decline of this disease since the recent epidemic has been about normal, there is still a relatively high number of cases being reported. The number of cases (668) was the highest reported for this period in the 18 years for which these data are available. States reporting more than 30 cases for the current 4-week period were California 74, Illinois 61, New York 58, Wisconsin 39, Michigan 38, and Missouri 33.

Whooping cough.—For the 4 weeks ended December 28 there were 8,709 cases of whooping cough reported, as compared with 7,297 for the corresponding weeks in 1945. The 1941–45 median was represented by the 1945 incidence. In the Middle Atlantic, East North Central, South Atlantic, and West South Central sections the incidence was somewhat above the normal seasonal expectancy, but in the other five sections of the country the numbers of cases were below the preceding 5-year median.

DISEASES BELOW MEDIAN INCIDENCE

Diphtheria.—For the 4 weeks ended December 28 there were 1,415 cases of diphtheria reported as compared with 1,819 for the corresponding period in 1945 and a 5-year (1941–45) median of 1,517 cases. From the latter part of 1944 until July 1946 there was a consistent increase in the incidence of this disease, but since that time the number of cases for each 4-week period has been less than for the corresponding period in 1945, as well as lower than the preceding 5-year median for each period. In the southern part of the country where the disease has been most prevalent, there has been a very appreciable decline in the number of cases, but in the New England and Middle Atlantic sections where the disease has also been relatively high, the current incidence was 3.1 and 1.5, respectively, times the preceding 5-year median. Only four of the nine geographic sections reported more cases during this period than in 1945 but all except two sections, the West South Central and Pacific, reported excesses over the preceding 5-year median.

Measles.—The incidence of measles was relatively low, 9,902 cases being reported during the current 4-week period as compared with a 5-year median of approximately 17,000 cases. The New England

and South Atlantic sections each reported a relatively high incidence, but in the other seven sections the numbers of cases were considerably below the median expectancy.

Meningococcus meningitis.—The incidence of meningococcus meningitis (248 cases) was about 50 percent of the 1945 incidence for the corresponding 4 weeks. The 1941–45 median was represented by the 1945 figure (498 cases). The number of cases in each geographic section was lower than the 1941–45 median. For the country as a whole, the current incidence was the lowest since 1941 when there were 143 cases reported for the corresponding 4-week period.

Scarlet fever.—For the current 4-week period there were 8,257 cases of scarlet fever reported, as compared with 10,391 during the corresponding period in 1945 and a preceding 5-year median of 11,821 cases. In each section of the country the number of cases was less than the 1941–45 median, and for the country as a whole the current incidence was the lowest for this period in the 18 years for which data are available in this form.

Smallpox.—Seven cases of smallpox were reported for the current 4-week period, as compared with 23 for the same period in 1945 and a 1941–45 median of 32 cases. In the West North Central section 4 cases were reported as compared with a preceding 5-year median of 10 cases, and in the East North Central there was 1 case reported as against a median of 18 cases. No cases were reported from any other section except the West South Central where 2 cases were reported as compared with a 5-year median of 7 cases.

Typhoid and paratyphoid fever.—The number of cases of these diseases continued at a relatively low level, the 166 cases reported for the 4 weeks ended December 28 being only about 80 percent of the 1945 incidence and 65 percent of the 1941–45 median. In the Mountain section the number of cases (21) was 1.6 times the normal expectancy, but in all other sections of the country the incidence was below the preceding 5-year median.

MORTALITY, ALL CAUSES

For the 4 weeks ended December 28 there were 38,086 deaths from all causes reported to the Bureau of the Census by 93 large cities. The average number of deaths reported for the same weeks in the years 1943–45 was 43,044. For each week of the current 4-week period the number of deaths was less than the preceding 3-year average, the decreases ranging from 2 percent during the first week to 21 percent during the last week of the period. For the 4 weeks ended December 28 the number of deaths was 11.5 percent less than the 1943–45 average.

The birth rate (28.8 per 1,000 population) for the month of November (the latest data available) was the highest since the establishment of the birth registration area in 1915. On the other hand, the general and infant mortality rates for September, October, and November were the lowest in recent years. Infant mortality rates for those months represented about 10-percent reductions over the corresponding months of last year, but the decreases were less for general mortality.

Number of reported cases of nine communicable diseases in the United States during the 4-week period December 1-28, 1946, the number for the corresponding period in 1945, and the median number of cases reported for the corresponding period, 1941-45

Division	Current period	1945	5-year median	Current period	1945	5-year median	Current period	1945	5-year median
	Diphtheria			Influenza ¹			Measles ²		
United States.....	1,415	1,819	1,517	11,686	319,576	11,556	9,902	10,381	17,320
New England.....	104	50	34	30	498	102	2,816	765	1,919
Middle Atlantic.....	196	95	127	60	729	121	3,327	2,930	3,699
East North Central.....	197	282	181	167	7,122	341	965	1,969	1,655
West North Central.....	128	146	110	112	33,904	157	102	435	1,100
South Atlantic.....	257	416	248	3,734	49,663	3,755	1,343	563	563
East South Central.....	206	205	166	353	124,382	662	134	666	603
West South Central.....	153	415	332	6,100	59,697	7,444	213	316	434
Mountain.....	74	147	68	1,065	42,055	1,016	563	685	1,300
Pacific.....	100	63	116	85	1,526	418	439	2,052	2,052
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	248	498	498	668	458	267	8,257	10,391	11,821
New England.....	18	20	39	36	23	16	898	744	1,250
Middle Atlantic.....	47	115	115	81	52	52	1,799	1,902	2,252
East North Central.....	41	99	99	178	100	32	2,566	2,883	3,114
West North Central.....	16	34	34	128	45	19	644	898	1,323
South Atlantic.....	41	56	87	49	43	26	664	1,089	1,129
East South Central.....	24	54	54	32	23	11	333	504	504
West South Central.....	25	43	43	61	34	32	188	713	392
Mountain.....	9	13	25	19	21	15	407	530	640
Pacific.....	27	64	71	104	117	60	758	1,128	1,128
	Smallpox			Typhoid and paratyphoid fever			Whooping cough ²		
United States.....	7	23	32	166	207	251	8,709	7,297	7,297
New England.....	0	0	0	14	11	16	1,044	1,109	1,109
Middle Atlantic.....	0	0	0	21	29	32	2,289	2,024	2,024
East North Central.....	1	4	18	20	30	30	2,348	1,671	1,671
West North Central.....	4	5	10	7	4	8	267	189	396
South Atlantic.....	0	0	1	26	32	39	1,065	825	932
East South Central.....	0	5	4	22	20	31	346	187	391
West South Central.....	2	4	7	23	57	48	770	529	587
Mountain.....	0	4	2	21	12	13	243	225	302
Pacific.....	0	1	0	12	12	21	337	538	566

¹ Mississippi and New York excluded; New York City included.

² Mississippi excluded.

INCIDENCE OF DISEASE

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

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JANUARY 4, 1947

Summary

A total of 96 cases of poliomyelitis was reported for the current week, as compared with 103 last week and a 5-year (1942-46) median of 34. The only States reporting more than 4 cases are California (12), Michigan (18), and Wisconsin (13). Since March 15, 1946, the approximate average date of lowest seasonal incidence, a total of 24,863 cases has been reported, as compared with 13,394 and 19,061, respectively, for the corresponding periods of 1945-46 and 1944-45, and a 5-year median of 12,133.

A slight increase was recorded in the incidence of influenza during the week. A total of 3,665 cases was reported, as compared with 2,660 last week, 48,041 for the corresponding week last year, and a 5-year median of 4,587. Of the current total, 4 States reported 3,044 cases, or approximately 83 percent, as follows (last week's figures in parentheses): Texas 1,431 (1,159), South Carolina 789 (271), Virginia 615 (487), and Arizona 209 (131). For the corresponding week last year these 4 States reported an aggregate of 20,507 cases, or 43 percent of the total. Currently, no other State reported more than 90 cases, and only 4 other States reported more than 50 cases. The total since the low seasonal incidence last year (July 28) is 36,640 cases, as compared with 410,289 for the corresponding period ended January 5, 1946, and 39,662 for the corresponding 5-year median.

Total cases reported for other diseases included in the following tables are as follows (figures for the corresponding week of last year in parentheses): Diphtheria 366 (458), the dysenteries (amebic, bacillary, and unspecified) 832 (588), infectious encephalitis 4 (6), measles 2,995 (2,769), meningococcus meningitis 83 (191), Rocky Mountain spotted fever 1 (0), scarlet fever 2,080 (2,383), smallpox 3 (4), tularemia 51 (20), typhoid and paratyphoid fever 38 (40), endemic typhus fever 37 (67), undulant fever 86 (39), whooping cough 1,746 (1,373).

Deaths recorded for the week in 93 large cities of the United States totaled 10,209, as compared with 11,928 and 9,786, respectively, for the corresponding weeks of 1946 and 1945, and a 3-year (1944-46) median of 11,928.

Telegraphic morbidity reports from State health officers for the week ended Jan. 4, 1947, and comparison with corresponding week of 1946 and 5-year median

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

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1942-46	Week ended—		Median 1942-46	Week ended—		Median 1942-46	Week ended—		Median 1942-46
	Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946	
NEW ENGLAND												
Maine.....	3	0	0	1	2	1	260	12	25	1	0	2
New Hampshire.....	0	1	0	1	3	3	10	3	6	0	0	0
Vermont.....	0	1	0	32	24	24	126	3	7	0	0	0
Massachusetts.....	21	4	5	-----	-----	-----	247	236	236	3	5	8
Rhode Island.....	0	0	0	-----	-----	-----	25	16	7	0	0	0
Connecticut.....	0	3	1	2	558	11	84	21	32	0	2	2
MIDDLE ATLANTIC												
New York.....	25	15	15	18	178	17	112	316	493	4	14	22
New Jersey.....	4	6	3	4	155	27	120	26	134	1	15	15
Pennsylvania.....	11	10	16	4	19	7	778	-----	801	1	7	10
EAST NORTH CENTRAL												
Ohio.....	18	48	12	5	175	26	211	23	40	6	10	10
Indiana.....	21	13	13	23	124	49	18	38	42	0	4	4
Illinois.....	3	17	16	4	49	18	23	327	169	6	9	9
Michigan ²	5	2	3	-----	8	8	126	52	52	4	0	1
Wisconsin.....	4	7	2	33	1,494	62	77	45	273	2	2	2
WEST NORTH CENTRAL												
Minnesota.....	9	4	4	-----	8	1	6	4	6	0	1	1
Iowa.....	0	9	5	-----	59	2	1	16	44	4	5	2
Missouri.....	8	3	3	1	23	10	6	41	27	2	5	7
North Dakota.....	3	2	2	2	25	36	2	1	1	1	0	0
South Dakota.....	0	0	2	-----	-----	-----	7	10	10	1	0	1
Nebraska.....	0	2	4	-----	819	60	1	14	12	1	0	1
Kansas.....	3	10	6	36	3,705	9	4	93	64	1	1	2
SOUTH ATLANTIC												
Delaware.....	0	0	0	-----	-----	-----	-----	2	2	0	2	0
Maryland ²	14	13	10	5	69	11	10	10	13	0	6	6
District of Columbia.....	0	0	0	1	10	6	15	2	5	2	2	2
Virginia.....	3	19	15	615	5,323	659	86	85	85	1	9	9
West Virginia.....	12	3	3	65	2,356	59	22	4	61	6	6	2
North Carolina.....	8	37	24	-----	-----	6	160	53	53	2	8	8
South Carolina.....	18	7	7	789	3,017	688	45	61	61	6	3	4
Georgia.....	18	13	13	12	411	181	89	19	19	0	2	2
Florida.....	6	6	7	7	8	8	1	19	19	0	5	2
EAST SOUTH CENTRAL												
Kentucky.....	21	4	4	3	1,953	2	-----	119	66	2	4	4
Tennessee.....	16	10	10	22	681	89	8	22	39	1	4	6
Alabama.....	8	8	7	69	2,497	413	27	9	9	2	4	4
Mississippi ²	14	14	13	-----	-----	-----	-----	-----	-----	3	1	1
WEST SOUTH CENTRAL												
Arkansas.....	1	13	7	53	1,204	192	13	12	39	1	0	0
Louisiana.....	18	16	9	3	6,314	21	11	6	11	1	2	2
Oklahoma.....	2	8	7	90	2,245	187	10	31	15	1	3	3
Texas.....	27	67	48	1,431	11,510	2,250	25	91	91	8	13	9
MOUNTAIN												
Montana.....	1	1	1	44	350	31	70	2	38	0	0	0
Idaho.....	1	3	1	19	79	2	4	100	24	0	1	1
Wyoming.....	0	3	1	14	6	6	2	3	10	0	0	0
Colorado.....	8	4	6	22	195	62	2	59	87	2	5	2
New Mexico.....	1	3	3	2	1	1	8	-----	3	0	2	1
Arizona.....	7	7	1	209	657	195	64	6	7	0	1	1
Utah ²	0	0	0	28	1,114	32	10	72	48	1	0	1
Nevada.....	0	0	0	-----	-----	-----	-----	15	4	0	0	0
PACIFIC												
Washington.....	10	3	7	-----	-----	1	20	241	31	0	0	2
Oregon.....	3	9	2	25	269	22	29	34	55	0	7	7
California.....	11	30	30	13	436	108	29	414	225	6	21	21
Total.....	366	458	372	3,665	48,041	4,587	2,995	2,769	7,892	83	191	238
Seasonal low week ³	(27th) July 5-11			(30th) July 26-Aug. 1			(35th) Aug. 30-Sept. 5			(37th) Sept. 13-19		
Total since low.....	7,931	12,102	9,444	36,640	410,289	39,662	25,882	28,893	46,195	1,054	1,695	1,695

¹ New York City only.

² Period ended earlier than Saturday.

³ Dates between which the approximate low week ends. The specific date will vary from year to year.

Telegraphic morbidity reports from State health officers for the week ended Jan. 4, 1947, and comparison with corresponding week of 1946 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever ⁴		
	Week ended—		Median 1942-46	Week ended		Median 1942-46	Week ended—		Median 1942-46	Week ended—		Median 1942-46
	Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946		Jan. 4, 1947	Jan. 5, 1946	
NEW ENGLAND												
Maine.....	1	0	0	48	35	16	0	0	0	0	0	0
New Hampshire.....	1	1	0	7	2	6	0	0	0	0	0	0
Vermont.....	1	1	0	12	4	5	0	0	0	0	0	0
Massachusetts.....	0	1	1	144	163	262	0	0	0	3	0	1
Rhode Island.....	0	0	0	10	12	13	0	0	0	0	0	0
Connecticut.....	0	0	0	26	31	49	0	0	0	0	1	1
MIDDLE ATLANTIC												
New York.....	4	6	3	226	263	367	0	0	0	1	4	2
New Jersey.....	1	1	1	94	56	76	0	0	0	0	1	0
Pennsylvania.....	3	0	0	113	146	226	0	0	0	2	3	3
EAST NORTH CENTRAL												
Ohio.....	1	3	1	284	216	290	1	0	0	4	2	3
Indiana.....	4	1	1	103	56	92	1	1	2	2	0	1
Illinois.....	2	0	0	129	139	213	0	0	0	1	3	2
Michigan ²	18	0	0	165	39	66	0	0	0	1	0	0
Wisconsin.....	13	10	0	69	84	145	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	0	0	0	32	22	66	0	0	0	0	0	0
Iowa.....	2	0	0	17	39	39	0	0	0	0	0	0
Missouri.....	2	1	1	35	38	52	0	0	0	0	1	0
North Dakota.....	0	0	0	6	5	16	0	0	0	0	0	0
South Dakota.....	1	0	0	16	11	39	0	0	0	1	0	0
Nebraska.....	1	0	0	10	48	33	0	0	0	0	0	0
Kansas.....	4	0	0	25	80	80	0	0	0	1	0	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	6	6	9	0	0	0	0	0	0
Maryland ²	0	0	0	19	55	55	0	0	0	0	0	1
District of Columbia.....	0	0	0	4	5	15	0	0	0	0	3	0
Virginia.....	2	0	1	25	55	55	0	0	0	0	2	2
West Virginia.....	0	0	0	16	38	49	0	0	0	1	1	0
North Carolina.....	3	0	0	37	51	81	0	1	0	1	0	0
South Carolina.....	0	0	0	26	6	11	0	0	0	1	2	1
Georgia.....	3	1	0	9	12	23	0	0	0	1	0	1
Florida.....	1	0	0	10	6	8	0	0	0	0	0	0
EAST SOUTH CENTRAL												
Kentucky.....	0	0	0	40	40	48	0	0	0	2	0	1
Tennessee.....	0	2	1	15	49	49	0	0	0	1	5	1
Alabama.....	1	1	0	19	22	22	0	0	0	0	0	1
Mississippi ²	1	3	1	4	15	15	1	0	0	1	0	0
WEST SOUTH CENTRAL												
Arkansas.....	1	1	1	3	9	7	0	0	0	0	1	1
Louisiana.....	3	1	0	4	16	10	0	0	0	4	2	2
Oklahoma.....	3	1	1	6	46	25	0	1	0	0	0	1
Texas.....	3	5	4	26	87	83	0	0	1	1	7	5
MOUNTAIN												
Montana.....	0	0	1	5	13	17	0	0	0	0	0	0
Idaho.....	0	0	0	13	7	8	0	0	1	2	0	0
Wyoming.....	0	0	0	5	1	7	0	0	0	0	0	0
Colorado.....	2	0	0	30	29	30	0	0	0	1	0	0
New Mexico.....	0	0	0	6	13	10	0	0	0	0	0	1
Arizona.....	0	1	1	8	13	10	0	0	0	2	1	0
Utah ²	1	1	0	20	32	43	0	0	0	0	0	0
Nevada.....	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	1	4	3	42	45	52	0	0	0	1	1	1
Oregon.....	0	0	0	25	20	20	0	0	0	1	0	0
California.....	12	11	8	86	203	203	0	1	0	2	0	1
Total.....	96	57	34	2 080	2, 383	3, 457	3	4	10	38	40	53
Seasonal low week ⁴	(11th) Mar. 15-21			(32nd) Aug. 9-15			(35th) Aug. 30-Sept. 5			(11th) Mar. 15-21		
Total since low.....	24, 863	13, 394	12, 133	28, 766	40, 954	42, 197	57	80	125	3, 566	4, 291	5, 019

² Period ended earlier than Saturday.

⁴ Including paratyphoid fever reported separately, as follows: Massachusetts 3 (salmonella infection); California 1.

Telegraphic morbidity reports from State health officers for the week ended Jan. 4, 1947, and comparison with corresponding week of 1946 and 5-year median—Con.

Division and State	Whooping cough			Week ended Jan. 4, 1947							
	Week ended—		Median 1942-46	Dysentery			En- ceph- alitis, infec- tious	Rocky Mt. spot- ted fever	Tula- remia	Ty- phus fever, en- demic	Un- du- lant fever
	Jan. 4, 1947	Jan. 5, 1946		Ame- bic	Bacil- lary	Un- spec- ified					
NEW ENGLAND											
Maine.....	14	19	29								2
New Hampshire.....		5	1								3
Vermont.....	4	16	33								4
Massachusetts.....	118	129	129		2						
Rhode Island.....	11	19	19								
Connecticut.....	10	31	73								
MIDDLE ATLANTIC											
New York.....	166	179	179	9	5		1				3
New Jersey.....	94	91	91	1							
Pennsylvania.....	158	94	141								1
EAST NORTH CENTRAL											
Ohio.....	86	71	118						5		
Indiana.....	15	12	18					1	8		2
Illinois.....	70	47	72	3			2		5		1
Michigan ¹	228	18	43	1	4				2		1
Wisconsin.....	134	48	86								31
WEST NORTH CENTRAL											
Minnesota.....	1	8	30	1							
Iowa.....	5	6	11								12
Missouri.....	11	7	13						6		2
North Dakota.....	1		1								
South Dakota.....	1		8								1
Nebraska.....	3	5	2								
Kansas.....	19	17	31						3		1
SOUTH ATLANTIC											
Delaware.....	4										1
Maryland ²	40	20	23				1		1		1
District of Columbia.....	6	10	10						1		
Virginia.....	75	44	46			29			2		
West Virginia.....	10	3	22								
North Carolina.....	13	26	82						5		1
South Carolina.....	62	63	63	2	15				2		1
Georgia.....	8	6	11		2						16
Florida.....	9	1	15								2
EAST SOUTH CENTRAL											
Kentucky.....	46	5	23						3		1
Tennessee.....	9	11	20	2					2		3
Alabama.....	15	4	13								4
Mississippi ²											1
WEST SOUTH CENTRAL											
Arkansas.....	23	3	7						1		1
Louisiana.....	1	2	2	9							3
Oklahoma.....		5	5	2					4		2
Texas.....	139	107	145	6	293	419					5
MOUNTAIN											
Montana.....	1	6	15						1		
Idaho.....	5	7	2								1
Wyoming.....	1		8								
Colorado.....	6	23	23								
New Mexico.....	1	2	3								
Arizona.....	23	10	21			25					
Utah ²	3	12	19								
Nevada.....		1	3								
PACIFIC											
Washington.....	6	69	51	1							
Oregon.....	12	13	13								
California.....	79	98	149		1						8
Total	1,746	1,373	1,845	37	322	473	4	1	51	37	86
Same week, 1946.....				37	450	101	6	0	20	67	39
Median, 1942-46.....			1,845	14	296	47	6	0	38	67	447

¹ Period ended earlier than Saturday.

² 2-year average, 1945-46.

Anthrax: Ohio 1 case.

WEEKLY REPORTS FROM CITIES ¹

City reports for week ended Dec. 28, 1946

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

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polio myelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland.....	1	0	0	0	15	1	2	1	6	0	0	0
New Hampshire:												
Concord.....	0	0	0	0	0	0	0	0	0	0	0	0
Vermont:												
Barre.....	0	0	0	0	0	0	0	0	0	0	0	1
Massachusetts:												
Boston.....	11	0	1	13	0	14	0	16	0	1	31	0
Fall River.....	0	0	0	1	0	1	0	1	0	0	4	0
Springfield.....	1	0	0	0	0	1	0	2	0	0	4	0
Worcester.....	0	0	0	3	0	10	0	4	0	0	13	0
Rhode Island:												
Providence.....	0	0	0	2	0	1	0	5	0	0	6	0
Connecticut:												
Bridgeport.....	0	0	0	0	0	2	0	0	0	0	0	0
Hartford.....	0	0	1	0	0	1	0	2	0	0	0	0
New Haven.....	0	0	0	33	0	3	0	3	0	0	0	0
MIDDLE ATLANTIC												
New York:												
Buffalo.....	2	0	1	0	0	4	0	5	0	0	7	0
New York.....	12	1	5	22	2	75	3	58	0	0	30	0
Rochester.....	0	0	1	1	0	4	2	12	0	0	4	0
Syracuse.....	0	0	0	0	0	4	0	13	0	0	4	0
New Jersey:												
Camden.....	0	0	0	0	0	3	0	0	0	0	0	0
Newark.....	0	0	0	1	0	4	0	8	0	0	10	0
Trenton.....	0	0	0	14	0	3	0	2	0	0	1	0
Pennsylvania:												
Philadelphia.....	6	0	6	4	6	2	8	18	0	0	28	0
Pittsburgh.....	0	0	1	1	208	0	7	11	0	0	2	0
Reading.....	0	0	0	1	0	1	0	0	0	0	5	0
EAST NORTH CENTRAL												
Ohio:												
Cincinnati.....	1	0	0	0	1	1	0	5	0	1	4	0
Cleveland.....	0	0	6	1	129	1	7	21	0	0	5	0
Columbus.....	0	0	0	2	1	1	0	10	0	0	4	0
Indiana:												
Fort Wayne.....	0	0	0	7	0	5	0	1	0	0	10	0
Indianapolis.....	5	0	0	0	1	4	0	10	0	0	0	0
South Bend.....	0	0	0	0	0	0	0	3	0	0	0	0
Terre Haute.....	0	0	0	0	0	2	0	1	0	0	0	0
Illinois:												
Chicago.....	1	0	1	0	9	4	33	1	35	0	45	0
Springfield.....	0	0	0	0	0	2	0	0	0	0	0	0
Michigan:												
Detroit.....	1	1	0	2	0	13	1	30	0	0	32	0
Flint.....	0	0	0	0	0	1	1	6	0	0	0	0
Grand Rapids.....	0	0	0	1	0	2	0	5	0	0	5	0
Wisconsin:												
Kenosha.....	0	0	0	1	0	0	0	0	0	0	0	0
Milwaukee.....	0	0	2	2	0	8	0	23	0	0	49	0
Racine.....	0	0	0	0	0	0	0	0	0	0	8	0
Superior.....	0	0	0	2	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota:												
Duluth.....	0	0	0	1	0	0	0	0	0	0	0	0
Minneapolis.....	3	0	2	3	0	4	0	5	0	0	0	0
St. Paul.....	0	0	0	1	0	6	0	12	0	0	0	0
Missouri:												
Kansas City.....	1	0	1	1	0	5	0	6	0	1	3	0
St. Joseph.....	0	0	0	0	0	0	0	0	0	0	2	0
St. Louis.....	2	0	1	2	1	11	1	8	0	0	5	0

¹ In some instances the figures include nonresident cases.

City reports for week ended Dec. 23, 1946—Continued

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliovirulent cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo.....	0	0	0	0	0	1	1	2	0	0	0	0
Nebraska:												
Omaha.....	0	0	0	0	0	3	0	4	0	0	0	0
Kansas:												
Topeka.....	1	0	0	0	1	2	0	4	0	0	0	1
Wichita.....	0	0	1	0	0	3	0	1	0	0	0	1
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	0	0	0	0	0	1	0	3	0	0	0	6
Maryland:												
Baltimore.....	6	0	2	0	4	0	0	11	0	0	1	24
Cumberland.....	0	0	0	0	0	0	0	0	0	0	0	0
Frederick.....	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington.....	1	0	1	0	29	0	12	0	10	0	0	4
Virginia:												
Lynchburg.....	0	0	0	0	0	0	0	1	0	0	0	1
Richmond.....	0	0	1	0	12	4	0	2	0	0	0	0
Roanoke.....	0	0	0	0	0	0	0	1	0	0	0	0
West Virginia:												
Charleston.....	0	0	0	0	0	0	0	2	0	0	0	0
Wheeling.....	0	0	0	0	0	1	0	0	0	0	0	4
North Carolina:												
Raleigh.....	0	0	0	0	0	1	0	0	0	0	0	2
Wilmington.....	1	0	0	0	0	0	0	0	0	0	0	0
Winston-Salem.....	0	0	0	0	11	0	1	2	0	0	0	0
South Carolina:												
Charleston.....	0	0	17	0	1	0	1	0	0	0	0	0
Georgia:												
Atlanta.....	1	0	1	1	24	0	8	0	1	0	1	4
Brunswick.....	0	0	0	0	0	0	0	0	0	0	0	0
Savannah.....	0	0	2	0	24	0	1	0	0	0	0	0
Florida:												
Tampa.....	0	0	2	0	0	0	1	0	0	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	10	0	0	0	0	7	0	0	0	0	0	0
Nashville.....	0	0	1	0	0	2	0	4	0	0	0	0
Alabama:												
Birmingham.....	1	0	1	0	2	0	1	0	4	0	0	1
Mobile.....	0	0	1	2	0	2	0	0	0	0	1	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	0	0	0	0	0	1	0	0	0	0	0	0
Louisiana:												
New Orleans.....	14	0	5	1	4	4	2	0	2	0	2	4
Shreveport.....	0	0	0	0	0	3	0	0	0	0	0	0
Texas:												
Dallas.....	0	0	0	0	0	3	0	2	0	0	0	2
Galveston.....	0	0	0	0	0	0	0	1	0	0	0	0
Houston.....	0	0	0	0	0	3	0	0	0	0	0	1
San Antonio.....	1	0	0	0	1	0	4	0	1	0	1	0
MOUNTAIN												
Montana:												
Billings.....	0	0	0	0	0	0	2	0	0	0	0	0
Great Falls.....	0	0	0	0	26	0	1	0	1	0	0	0
Helena.....	0	0	0	0	2	0	0	0	0	0	0	0
Missoula.....	0	0	0	0	0	0	0	0	0	0	0	0
Colorado:												
Denver.....	4	0	4	1	2	0	4	0	14	0	0	4
Pueblo.....	0	0	0	0	1	0	2	0	1	0	0	0
Utah:												
Salt Lake City.....	0	0	0	0	1	0	1	0	7	0	0	0

City reports for week ended Dec. 28, 1946—Continued

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0	0	0	1	0	1	0	5	0	1	-----
Spokane.....	0	0	1	0	4	0	1	1	8	0	0	-----
Tacoma.....	0	0	0	0	-----	0	0	0	0	0	0	-----
California:												
Los Angeles.....	2	0	7	0	1	0	5	6	12	0	0	15
Sacramento.....	0	0	0	0	-----	0	1	1	1	0	0	-----
San Francisco.....	2	0	2	0	3	2	4	1	7	0	0	1
Total.....	91	2	69	23	635	21	347	20	461	0	10	393
Corresponding week, 1945	86	-----	1,203	112	1,042	-----	737	-----	576	0	12	372
Average 1941-45.....	77	-----	1,639	156	1,251	-----	732	-----	960	0	10	680

¹ 3-year average, 1943-45.

² 5-year median, 1941-45.

Anthrax.—Cases: Philadelphia 1.

Dysentery, amebic.—Cases: New York, 2; Chicago, 2; Detroit, 1; St. Louis, 1; San Antonio, 1; Denver, 1.

Dysentery, bacillary.—Cases: Providence, 1; Detroit, 1; Los Angeles, 1.

Dysentery, unspecified.—Cases: San Antonio, 9.

Leprosy.—Cases: New York, 1.

Tularemia.—Cases: Indianapolis, 1; Chicago, 1; St. Louis, 1; Baltimore, 1; Washington, D. C., 2; Lynchburg, 1; Los Angeles, 1.

Typhus fever, endemic.—Cases: Atlanta, 1; Nashville, 2; New Orleans, 10; Los Angeles, 1.

Rates (annual basis) per 100,000 population, by geographic groups, for the 89 cities in the preceding table (estimated population, 1943, 34,369,500)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	34.0	0.0	2.6	2.6	175	2.6	91.5	2.6	102	0.0	2.6	154
Middle Atlantic.....	9.3	0.5	5.6	3.2	117	1.9	52.3	2.8	59	0.0	0.0	40
East North Central.....	4.9	0.6	5.5	1.8	93	4.9	48.0	1.8	91	0.0	0.6	99
West North Central.....	13.9	0.0	2.0	8.0	18	4.0	68.6	4.0	84	0.0	2.0	24
South Atlantic.....	14.7	0.0	42.5	8.3	172	0.0	57.2	0.0	54	0.0	3.3	74
East South Central.....	64.9	0.0	5.9	23.6	12	0.0	70.8	0.0	47	0.0	5.9	6
West South Central.....	43.0	0.0	14.3	2.9	14	11.5	45.8	0.0	17	0.0	8.6	20
Mountain.....	33.0	0.0	33.0	8.3	264	0.0	82.6	0.0	190	0.0	0.0	33
Pacific.....	9.5	0.0	15.8	0.0	14	3.2	19.0	12.7	52	0.0	1.6	25
Total.....	14.1	0.3	10.5	3.5	97	3.2	52.8	3.0	70	0.0	1.5	60

DEATHS DURING WEEK ENDED DEC. 28, 1946

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended Dec. 28, 1946	Corresponding week, 1945
Data for 93 large cities of the United States:		
Total deaths.....	9,380	11,399
Average for 3 prior years.....	11,920	-----
Total deaths, first 52 weeks of year.....	470,184	471,729
Deaths under 1 year of age.....	721	602
Average for 3 prior years.....	657	-----
Deaths under 1 year of age, first 52 weeks of year.....	34,936	31,573
Data from industrial insurance companies:		
Policies in force.....	67,278,078	67,190,360
Number of death claims.....	9,065	7,789
Death claims per 1,000 policies in force, annual rate.....	7.0	6.0
Death claims per 1,000 policies, first 52 weeks of year, annual rate.....	9.3	9.9

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended December 14, 1946.—During the week ended December 14, 1946, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox.....		29	1	204	498	48	36	53	135	1,004
Diphtheria.....		5	3	23	7	2				42
Dysentery:										
Amebic.....					4					4
Bacillary.....				1						1
Encephalitis, infectious.....					1					1
German measles.....				22	10			8	8	48
Influenza.....		10		9					2	21
Measles.....		277	48	80	103	37	442	251	153	1,391
Meningitis, meningococcus.....				1		1				2
Mumps.....		1		45	386	42	117	42	200	833
Poliomyelitis.....		1		9	7		1			18
Scarlet fever.....		6	3	98	97	9	4	4	16	237
Tuberculosis (all forms).....		7	14	100	56	23	9	18	39	266
Typhoid and paratyphoid fever.....				8	1				3	12
Undulant fever.....				2						2
Veneral diseases:										
Gonorrhoea.....	3	27	6	164	118	40	32	37	77	504
Syphilis.....	1	6	2	64	83	13	8	14	35	226
Other forms.....				1						3
Whooping cough.....		14	1	37	119	12	11	2	5	201

JAMAICA

Notifiable diseases—4 weeks ended December 14, 1946.—During the 4 weeks ended December 14, 1946, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis.....	1	2	Leprosy.....		2
Chickenpox.....		7	Puerperal sepsis.....		2
Diphtheria.....	2	5	Tuberculosis (pulmonary).....	24	44
Dysentery.....		4	Typhoid fever.....	6	95
Erysipelas.....		1	Typhus fever (murine).....	1	

JAPAN

Notifiable diseases—4 weeks ended November 16, 1946, and for the year to date.—For the 4 weeks ended November 16, 1946, and for the year to date, cases of certain notifiable diseases were reported in Japan as follows:

Disease	4 weeks ended Nov. 16, 1946	Total cases reported for the year to date	Disease	4 weeks ended Nov. 16, 1946	Total cases reported for the year to date
Cholera.....	6	1,204	Paratyphoid fever.....	634	8,334
Diphtheria.....	4,702	43,360	Scarlet fever.....	196	1,869
Dysentery, unspecified.....	6,859	85,866	Smallpox.....	36	17,696
Encephalitis, Japanese "B".....	8	172	Syphilis.....	7,288	62,575
Gonorrhoea.....	12,361	110,476	Typhoid fever.....	2,666	41,266
Malaria.....	1,755	124,848	Typhus fever.....	66	30,819
Meningitis, epidemic.....	79	1,359			

¹ For the period June 2, 1946, to date.

NEW ZEALAND

Notifiable diseases—4 weeks ended November 30, 1946.—During the 4 weeks ended November 30, 1946, certain notifiable diseases were reported in New Zealand as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis.....	12	1	Poliomyelitis.....	1	
Diphtheria.....	80		Puerperal fever.....	9	
Dysentery:			Scarlet fever.....	86	
Amebic.....	2		Tetanus.....	1	
Bacillary.....	5		Trachoma.....	1	
Erysipelas.....	15		Tuberculosis (all forms).....	176	56
Food poisoning.....	4		Typhoid fever.....	4	
Lethargic encephalitis.....	2	1	Undulant fever.....	6	
Malaria.....	2				

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

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

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

Cholera

Afghanistan—Urgun District—China Khwa.—For the week ended November 23, 1946, 30 cases of cholera with 10 deaths were reported in China Khwa, Urgun District, Afghanistan.

Smallpox

China—Hong Kong.—For the week ended December 21, 1946, 96 cases of smallpox were reported in Hong Kong, China.

Yellow Fever

French Equatorial Africa—Ubangi Shari Department—Carnot.—For the week ended December 21, 1946, 1 death from yellow fever (suspected) was reported in Carnot, Ubangi Shari Department, French Equatorial Africa.