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FREE PLASMA FOR NORTH DAKOTANS

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Another great step in the expansion of medical service to the people of North Dakota is being taken in the fulfillment of present plans for the establishment of a blood plasma bank by the State health department.

Free blood plasma for everyone in North Dakota is now available through a recently established State-directed and -financed program under the administration of the Division of Laboratories, State Department of Health. In March 1944, the North Dakota State Legislature appropriated funds to set up and finance a free plasma service by the State health department in cooperation with the University of North Dakota. The program embraces the procurement of blood from volunteer donors, its processing to the dried state, and the distribution of the final product.

PURPOSE OF STATE-WIDE PLASMA PROGRAM

The purpose of the blood plasma program is to help save civilian lives in North Dakota. The value of blood plasma has been adequately demonstrated during the past few years and there is no doubt that its use is a definite milestone in the advancement of medical science. Plasma has a definite place in the practice of medicine and has been used with success in the treatment of shock from trauma, hemorrhage, operations, obstetrical complications, burns, hypoproteinemic conditions, infections, and in other medical conditions, as well as in the prevention and treatment of measles, scarlet fever, mumps, pneumonias, and other infections which do not respond to specific treatment.

The critical shortage of physicians, nurses, public health workers, and hospital facilities in North Dakota, created somewhat by the present emergency, will most probably extend for some time after

the war. One method of partially counteracting this serious condition is to make available to every physician and hospital in the State a supply of blood plasma for use in cases of shock, hemorrhage, accidents, and severe burns, and for the treatment of infectious diseases for which specific therapy is not available or is ineffective. The fact that the financial status of the patient is of no consequence means that plasma will be used freely rather than only when patients are already on the threshold of death.

The problem of maintaining an adequate plasma service is usually of small concern in large urban areas where hospitals with ample funds and well-organized technical staffs are located. However, in North Dakota, where hospitals are small, budgets are scant, and help is scarce, the problems of maintaining adequate plasma reserves are serious. It is no longer possible to excuse the absence of this life-saving substance upon the basis of financial or technical inability to produce it. North Dakota's program has taken care of that situation.

North Dakota is primarily a rural State, covering some seventy thousand square miles. Hospitals and physicians are inadequate for complete coverage of the entire State and transportation facilities are decidedly limited. Since these are the chief problems for consideration, the program calls for the distribution of plasma in the dried form. As will be noted later, because of the type of final package distributed, plasma is available for use in farm accidents where transportation of the patient to a hospital is not practicable.

ORGANIZATION OF PROGRAM

The plasma program is administered by the Director of Laboratories, State health department. The director schedules and manages the donor clinics and controls the distribution of the final product. A trained bacteriologist is in direct charge of the plasma laboratory and is responsible for processing, testing, and packaging, and for maintaining equipment used by the mobile unit in conducting donor clinics.

Under this program, physicians in the localities where clinics are held volunteer to collect blood from the donors. Thus far this system has proved to be very satisfactory. It not only tends to cut down the expense of the program, but we find that the donors would rather have their local physicians do the bleeding than have outsiders.

In the larger cities clinics are held in easily accessible public buildings, while in the small communities local hospitals are used. When public buildings are used for clinics, volunteer help is obtained from nurses' aides, hospital staff nurses, and trained nurses who have become housewives. When hospitals are used it has been found that the question of trained help is not such a problem. Also, it has been our experience that when hospitals are utilized the clinics are conducted

in a more efficient manner because of the better arrangement of beds and other equipment. We feel that in the small communities it is best to use hospitals, as the advantages far outweigh any objections which might be raised.

COLLECTION OF BLOOD

Blood is procured only from volunteer donors and processed into dried plasma at the public health laboratory, located at the University of North Dakota in Grand Forks. Volunteer donors report to a regular donor clinic set up by cooperation between the State health department and the local community. At the beginning of the program, the stimulus for these clinics originated with the Division of Laboratories. However, interest in participation in the plasma program now originates in local medical groups, civic organizations, and hospitals.

The registration of donors is handled through medical groups, civic and commercial organizations, and hospitals. A date for holding the clinics is generally suggested by the director of the program. The clinic then becomes a local function. Methods of publicity are usually left to the discretion of the local community.

On the appointed date, the health department sends out a mobile unit which carries all the supplies necessary for the collection of blood. Generally 2 technicians accompany the unit to assist the local people in conducting the clinic. In most instances 50 donors are registered, as this has been determined to be the most practicable number for one morning's clinic. Clinics are usually held from 8:30 a. m. to 12:00 noon and on some occasions it has been found necessary to conduct evening clinics beginning at 6:00 p. m. Our experience has shown that evening clinics are the least desirable because many prospective donors fail to obey instructions which prohibit eating within 4 hours prior to reporting at the clinic. This means that we obtain a large number of chylous specimens which have to be discarded.

Prior to each donation, a physical examination is given to the donors, and a Wassermann test is run on each sample of blood before it is used in the final product. A canteen service, providing fruit juice before bleeding and coffee and cookies after the blood has been drawn, is handled by some local organization. After each patient has donated blood he receives a card certifying that he or she has rendered a public service to the State of North Dakota.

TRANSPORTATION AND PROCESSING

At the conclusion of each donor clinic all blood is transported to the public health laboratory in Grand Forks for processing. The blood samples are placed in ice chests and are either carried to the

laboratory by automobile or are moved by train when connections are satisfactory. Each ice chest holds 18 samples of blood and has a removable tray holding approximately 30 pounds of ice. We have found that blood transported approximately 300 miles within a period of 18 hours has kept satisfactorily in these chests. As soon as the blood is received in Grand Forks it is placed in a refrigerator where it is allowed to remain without being disturbed for 18 to 24 hours.

Processing of blood plasma to the dried state is done by a method which conforms to the requirements of the National Institute of Health. The blood is centrifuged and the plasma pooled, dispensed, and brought to the frozen state within 72 hours after it is collected. A minimum of 10 samples is placed in each pool, after which a 1:50,000 dilution of phenyl mercuric borate is added as a preservative. Sterility cultures are made on each pool at the time it is dispensed into 250-cc. amounts. It is then shell frozen prior to dehydration and stored in a low-temperature cabinet until it is dehydrated. Plasma is desiccated to the dried state in a dehydrator designed by Dr. Max Strumia and his associates of the Bryn Mawr Hospital, Bryn Mawr, Pa. This apparatus can shell freeze 12 bottles per hour and can dehydrate 24 bottles in 20 to 22 hours. Sterility and toxicity tests are run by animal inoculation on random samples from each batch of plasma.

DISTRIBUTION OF FINAL PRODUCT

Each package sent out into the State contains one bottle of dried pooled normal human plasma, one bottle of 0.1-percent citric acid solution for restoration of the plasma, a complete intravenous administration set, and directions for its use. This complete unit makes it possible for a physician to administer plasma in an emergency, eliminating the necessity of moving patients to a hospital. As pointed out before, this is important in North Dakota because of the lack of adequate hospital coverage in the State.

The first objective of the program is to make supplies of plasma available in every part of the State. Thus far, plasma has been distributed to 34 hospitals, 27 private physicians, and 4 drug stores, making a total of 65 depots scattered throughout the entire State. As the program progresses we hope to have plasma available in every county for immediate use, even where there is neither a physician nor a hospital in the county.

The amount of plasma located in each station will depend somewhat on the normal supplies needed in the routine practice of the local physician, plus a sufficient number of units for emergencies. When supplies have reached a predetermined level each unit will be replaced as soon as the report of its use is received in the plasma laboratory.

The first blood-donor clinics were held in the latter part of July

1944, and the first dried plasma was sent out from the public health laboratory on August 27. Over 900 units of plasma have been desiccated to date and approximately 450 have been distributed. Several hundred units of plasma are stored in the frozen state and are currently being processed.

Dried plasma, although it has a high cost per unit in comparison to liquid or frozen plasma, is the product of choice in North Dakota because of its ease of transportation, the extent of its usefulness, and the lack of suitable storage space for the other types of plasma mentioned. It would be inaccurate to estimate the exact cost per unit of plasma at this time because of the fact that a whole new processing laboratory was set up, complete in every detail of equipment and supplies. Because of the fact that all supplies such as donor bottles, final bottles, intravenous sets, etc., used in the system can be used again, the cost per unit will be reduced materially as the number of units processed increases.

Subject to the above limitations, the following estimates have been prepared. The first thousand units will cost approximately \$20 per unit. The second thousand units, which will be prepared within a 2-month period, will cost approximately \$5 per unit. Thereafter it is estimated that the cost per unit will be considerably less than \$5, depending, of course, on the number of units prepared. After the program has been in operation for 1 year, the cost per unit of plasma will have some significance. Certainly the cost of the program will be much less than if the plasma were bought on the open market and, because of its availability for immediate use, many more lives will be saved.

The above costs include a complete intravenous administration set for each package. These sets are returned to the public health laboratory after use for cleaning, reesterilization, and redistribution.

The success of the North Dakota program naturally depends upon 2 factors. First, the availability of plasma when it is needed and, second, the extent to which physicians will use the plasma. The first factor has been taken care of thus far by a general coverage of the State with supplies of plasma. Establishment of the second point will take time, inasmuch as some localities had supplies of plasma on hand which must be used before they can enter into the State program. However, up to the present time we have received reports on the use of 98 units of plasma. The amount of plasma and the type of case in which it has been used will be reported in a later paper. The indications thus far are that under this program plasma will be well utilized by physicians.

The medical profession has accepted the State health department program with great enthusiasm, as it realizes that it is a step forward

in the advancement of medical aid in a rural State such as North Dakota. Local communities have been cooperating whole-heartedly in the program because they are aware of what it means to have a supply of plasma locally available for immediate use. Reports received from physicians located in places where plasma has been used under this program have indicated that it has already helped to save many lives in North Dakota.

WARTIME NURSING CARE IN REPRESENTATIVE GENERAL HOSPITALS ¹

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INTRODUCTION

It is the purpose of this paper to present measures of the amount of nursing service being provided in civilian general hospitals during wartime. Recent developments have focused attention on the urgent need of the armed forces for nurses. Discussion of this need has raised questions concerning the utilization of nursing personnel in civilian hospitals. It is believed that the data here presented may be helpful to persons concerned with distributing nursing manpower equitably between civilian and military hospitals. In considering this problem careful attention should be given to the complex variation among hospitals in the amount and type of nursing service available to patients.

Information comparable to the present data is not available on nursing service before the war. A study was made in 1938 by the Department of Studies, National League of Nursing Education (1) of 14 hospitals "known to be conducting nursing service and nursing education programs representative of the best current practice." In 1943, a study made of these same hospitals (2), revealed the changes brought about by wartime conditions. Neither study can be regarded as giving a representative picture of nursing service in the country as a whole; since the 14 hospitals were selected for the high quality of their service. However, the findings of these studies may be used as points of reference for comparison with the data of the present study.

This paper attempts to give a picture of nursing service prevailing in the United States in wartime rather than a picture of "best current practice." The data presented show what wartime conditions are in general hospitals and also give some quantitative indication as to what the post-war problems may be.

¹ From the Division of Public Health Methods.

MATERIAL AND METHOD

A questionnaire asking for information regarding the professional personnel, both medical and nursing, of hospitals was sent, in the summer of 1943, by the Procurement and Assignment Service of the War Manpower Commission to the 6,345 hospitals registered by the American Medical Association. Over 1,600 of the 4,200 general and related special² hospitals returned sufficient information on nursing staffs to permit analysis. These returns have been analysed in a series of articles in the *American Journal of Nursing* (3-7). The articles described the findings in governmental and nongovernmental hospitals, in hospitals with and without schools of nursing, and in hospitals of different sizes. As is shown in columns 1 and 2 of table 1, the group of hospitals studied included too large a proportion of hospitals with schools of nursing, of large hospitals, and of hospitals in the northeast section of the country to be representative. Therefore, no attempt was made to present an over-all picture of nursing care.

Since the purpose of this paper is to present an over-all picture of nursing service, it was necessary to use a more representative sample than was furnished by the questionnaires returned. Therefore, it was decided to select out of the material a representative sample of 500 hospitals or approximately 12 percent of all the registered general and related special hospitals in the country. The sample was obtained in such a way that it contains the same proportion of hospitals as is contained in the total group of hospitals with respect to the following criteria:

1. Geographic area—northeast, south, central, and west.
2. Control of hospital—governmental and nongovernmental.
3. School of nursing or no school of nursing.
4. Average daily patient census—under 25, 25-49, 50-99, 100-199, 200-299, 300 and over.

There are 96 possible combinations of these 4 criteria. A count was made of the number of registered general and related special hospitals in the country in each of the 96 categories. Twelve percent of the number in each category is the number required for a representative sample of 500 hospitals. The returned questionnaires were sorted into the same 96 categories and the required number of questionnaires picked at random from each group. It is recognized that in accepting these 500 hospitals as representative we have assumed that there is no bias in the returns. That is, we have assumed that the hospitals, in each category, which returned questionnaires are representative of all the hospitals in that category.

² Includes eye, ear, nose, and throat, pediatric, maternity, and industrial hospitals. Excludes chronic hospitals (those with an average length of stay of 3 weeks or more).

TABLE 1.—*Comparison of the percent distributions of general and related special hospitals in the United States: total registered, hospitals returning questionnaires, and hospitals in a representative sample*

	Total registered hospitals	Hospitals returning questionnaires	Hospitals in representative sample
Control of hospital			
Total.....	100	100	100
Governmental ¹	12	14	12
Nongovernmental.....	88	86	88
Schools of nursing			
Total.....	100	100	100
Without schools.....	70	51	70
With schools.....	30	49	30
Geographic area²			
Total.....	100	100	100
Northeast.....	23	31	23
South.....	30	23	30
Central.....	33	34	33
West.....	14	12	14
Average daily patient census (including newborn infants)			
Total.....	100	100	100
Under 25.....	38	23	38
25-49.....	21	17	21
50-99.....	18	21	18
100-199.....	14	22	14
200-299.....	5	10	5
300 and over.....	4	7	4

¹ Except Army, Navy, Veterans Administration, Indian Affairs, and U. S. Public Health Service Marine Hospitals.

² Geographic areas include: Northeast: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

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

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

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

RESULTS

TYPE OF NURSING STAFF

There were three groups of nursing workers giving bedside nursing care: graduate registered nurses, student nurses, and paid auxiliary nursing workers. Ninety-six percent of the hospitals reported graduate registered nurses giving bedside nursing care (including operating and delivery-room service). This figure is in sharp contrast to a recently published statement (8) that in 1927 nearly three-fourths of the hospitals reported that they had no graduate staff nurses.

Even under wartime conditions, it appears that the system of general staff nursing by graduate registered nurses is nearly universal.

Four types of nursing staffs were found in the hospitals with graduate registered nurses giving bedside nursing care. Bedside care by graduate registered nurses only was reported in 12 percent of the hospitals; by graduate registered nurses and paid auxiliary nursing workers in 56 percent; by graduate registered nurses and student nurses in 12 percent; and by graduate registered nurses, student nurses, and paid auxiliary nursing workers in 16 percent. The remaining 4 percent of the hospitals had no graduate nurses giving bedside care.

Seventy-four percent of the hospitals reported that paid auxiliary nursing workers were assisting in bedside nursing care. A more detailed account of the hospitals employing paid auxiliary nursing workers will be found in a previous report (5). In 1938, the 14 hospitals of the Cost Analysis study (1) employed no paid auxiliary nursing workers. The 1943 study of the same hospitals does not report how many of the hospitals employed paid auxiliary workers but shows, for the various services, only the percent of the total hours of bedside care given by nonprofessional workers.

The 4 percent of the hospitals which had no bedside nursing care by graduate registered nurses reported that this care was given by student nurses only, by paid auxiliary nursing workers only, or by both of these groups.

AMOUNT OF BEDSIDE NURSING CARE

A convenient method of comparing the amount of bedside nursing care available to patients in different hospitals is to express this care as the hours of care per patient per day. This ratio can be used to measure the amount of bedside care given by each type of nursing worker. If the ratios for the different types of workers are added, a measure of the total amount of care available is obtained. This average amount of care per patient per day for all hospitals was 3.4 hours. Of this total, 1.1 hours were by graduate registered nurses, 0.6 hour by paid auxiliary nursing workers, and 1.7 hours by student nurses. Figure 1 shows this graphically and also shows the corresponding data for hospitals with and without schools of nursing. In calculating these figures it is assumed that an hour of bedside care by a student nurse is equal to an hour of care by a graduate nurse. The authors of the Cost Analysis study found that, on the average, student nurses were 76 percent as effective as graduate nurses. Using this percent, the 1.7 hours of care by student nurses would be reduced to 1.3 hours and the total hours of bedside care would become 3.0 hours per patient per day. In the hospitals with schools of nursing, the hours of care by student nurses would drop from 2.6 hours to 2.0 hours and the total hours of care from 3.7 to 3.1 hours per patient per

day. As is shown in figure 1, the total hours of bedside care per patient per day in the hospitals without schools was 2.8 hours. Therefore, the difference between the total amount of care available to patients in the hospitals with and without schools is greatly reduced by using this percent effective figure for the student nurses. There are no data from which we can estimate the relative effectiveness of the paid auxiliary nursing workers. This effectiveness might be expected to vary greatly from hospital to hospital, depending upon the proportion

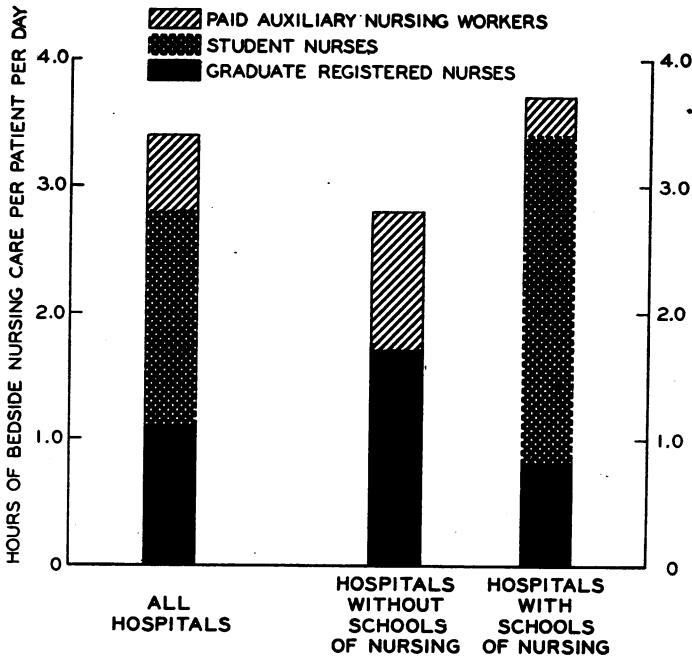


FIGURE 1.—Hours of bedside nursing care per patient per day in all hospitals and in hospitals with and without schools of nursing.

of the total bedside nursing care provided by the paid auxiliary workers.

The variation with size of hospital in the amount of bedside nursing care is shown in table 1 of a previous report (?). In both the hospitals with and without schools of nursing, the total hours of bedside nursing care per patient per day decreased as the size of hospital increased.

The Cost Analysis study does not present an over-all figure for bedside nursing care, but gives the median hours of care on various services for ward, semiprivate, and private patients. These medians vary from 3.2 hours on medical and surgical service for ward and semiprivate patients to 5.4 hours on the same services for private patients. In 1943 the medians were 3.2 hours on medical and 2.8 hours on surgical service for ward and semiprivate patients and 4.5

hours for private patients. These figures are not quite comparable to the average of 3.4 hours found in the hospitals in our sample because the Cost Analysis figures do not include operating-room service, while our figures do.

The total amount of bedside nursing care shown in figure 1 is an average for all the hospitals in each group. Actually there was considerable variation from hospital to hospital in the hours of bedside nursing care per patient per day. For example, in the hospitals without schools, the average was 2.8 hours of care, but the range of variation was from less than a half hour to more than 5 hours. Figure 2 shows, for all hospitals and for hospitals with and without schools

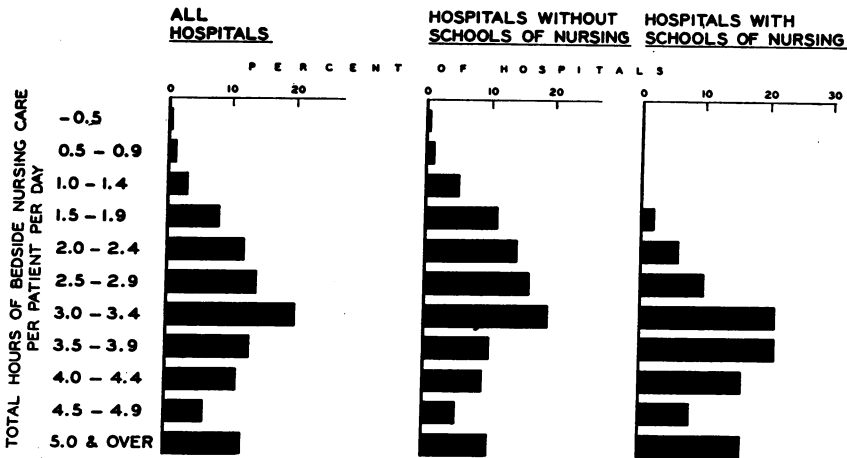


FIGURE 2.—Percent distribution of all hospitals and of hospitals with and without schools of nursing, by the total hours of bedside nursing care per patient per day.

of nursing, the percent of hospitals with various amounts of bedside nursing care.

NUMBER OF EQUIVALENT FULL-TIME NURSING WORKERS

Many of the hospitals employed part-time workers in addition to their full-time personnel. In order to make comparisons of the number of nursing workers employed by different hospitals, the number of part-time workers was expressed as an equivalent number of full-time workers. In this study, the student nurses have all been considered full-time workers since their average hours of service (exclusive of classes) were over 45 hours a week. For each of the other types of bedside nursing workers, the ratios of the weekly hours for part-time workers to the weekly hours for full-time workers in the individual hospitals were averaged. These average ratios were applied to the total number of part-time workers of each type to obtain the number of full-time equivalents. The total number of equivalent

full-time workers was obtained by adding these full-time equivalents to the actual full-time workers.

The number of equivalent full-time workers of each type may be related to the patient census as a ratio. Table 2 shows such ratios for all hospitals and for hospitals with and without schools of nursing, expressed as the number of equivalent full-time nursing workers of each type per 100 patients. The ratios for the individual types of nursing workers have been added to obtain the total number of bedside nursing workers per 100 patients.

TABLE 2.—Number of equivalent full-time nursing workers giving bedside care per 100 patients in all hospitals and in hospitals with and without schools of nursing

Type of hospital	Equivalent full-time nursing workers giving bedside care per 100 patients			
	Total	Graduate registered nurses	Student nurses	Paid auxiliary workers
All hospitals.....	51	16	26	9
Hospitals without schools of nursing.....	40	24	—	16
Hospitals with schools of nursing.....	56	11	40	5

The average for all hospitals was approximately 50 equivalent full-time nursing workers giving bedside care per 100 patients. As was true of the amount of bedside care, the average does not give the whole picture. There was 1 hospital with only 7 equivalent full-time bedside nursing workers per 100 patients and another with almost 80 workers per 100 patients. There were more than twice as many graduate staff nurses and 3 times as many paid auxiliary workers per 100 patients in the hospitals without schools as in the hospitals with schools.

The ratios of graduate staff nurses per 100 patients, shown in table 2, may be compared with the wartime standards recommended in a directive (9) sent to the State and Local Committees for Nurses by the Directing Board of the Procurement and Assignment Service in January 1944. For hospitals without schools, a minimum of 21.9 and a maximum of 36.5 graduate staff nurses per 100 patients were recommended. The corresponding figures for hospitals with schools were 7.3 and 14.6 nurses per 100 patients. The averages in table 2 are within these recommended ranges. However, for the hospitals without schools, the average of 24 graduate staff nurses per 100 patients is quite close to the recommended minimum of 21.9. Over one-third of the hospitals in this group had fewer graduate staff nurses than this minimum.

In addition to the persons giving bedside nursing care, the hospitals reported the number of graduate registered nurses in administrative and supervisory positions. This category includes directors,

assistant directors, supervisors, head nurses, and assistant head nurses who give a major part of their time to administrative work. The hospitals with schools also reported the number of teachers. The number of part-time workers in these positions was expressed as equivalent full-time workers by the same method as was used for the workers giving bedside care. In order to obtain a picture of the total nursing staffs of the hospitals, the numbers of equivalent full-time administrators, supervisors, and teachers were expressed as ratios to the patient census and are shown in table 3. The average for all hospitals was 60 equivalent full-time nursing workers for every 100 patients.

TABLE 3.—*Number of equivalent full-time nursing workers per 100 patients in all hospitals and in hospitals with and without schools of nursing*

Type of hospital	Number of equivalent full-time nursing workers per 100 patients			
	Total	Administrators, supervisors	Teachers	Workers giving bedside care
All hospitals.....	60	8	1	51
Hospitals without schools of nursing.....	47	7	—	40
Hospitals with schools of nursing.....	66	8	2	56

The role of the graduate registered nurse varied greatly from hospital to hospital. In some institutions graduate nurses were used only in administrative and teaching positions and for supervising student nurses and auxiliary nursing workers. In others, the greater part of the actual bedside nursing care was given by graduate nurses. As was mentioned above, in 12 percent of the hospitals bedside care was provided entirely by graduate nurses. Differences of this sort undoubtedly exist between civilian and military hospitals and among different types of military hospitals. Since no military hospitals are included in the present study, we have no information on the extent of these differences. However, it should be emphasized that great care is required in making comparisons between the data presented here and figures on nursing personnel in military hospitals. Allowance must be made for differences both in the types of illness treated and in the types and organization of nursing personnel used respectively in civilian and military hospitals.

PART-TIME NURSING WORKERS

One indication of the success which hospitals have had in persuading the older, the retired, and the married nurses to return to institutional nursing during the war emergency is the proportion of part-time workers on hospital staffs. In order to study what part of the total hospital staff the part-time nursing workers constitute, we have

expressed the number of part-time workers, of each type, as a percent of the total workers of the same type (table 4). On the average, 7 out of every 100 nursing workers (exclusive of student nurses) were part-time employees. While the part-time workers constitute a small and possibly rather transient part of the hospital staffs, their contribution to wartime nursing care is by no means negligible. In 1938, according to the Cost Analysis study, no part-time nursing workers were employed in the hospitals in the study. By 1943, all except one of these hospitals reported the use of part-time workers.

TABLE 4.—*Part-time nursing workers as a percent of total workers of the same type in all hospitals and in hospitals with and without schools of nursing*

Type of hospital	Percent part-time workers				
	All (exclusive of student nurses)	Administrators, supervisors	Teachers	Graduate staff nurses	Paid auxiliary workers
All hospitals.....	7	2	11	10	5
Hospitals without schools of nursing.....	9	4	12	12	7
Hospitals with schools of nursing.....	6	1	11	9	3

DISCUSSION

It is not the purpose of this paper to discuss in detail the significance of the findings presented or to say how much nursing care patients should receive. However, it may be pointed out that while the average of 3.4 hours of bedside care per patient per day is slightly higher than the lowest of the prewar cost analysis medians (3.2) many hospitals have been able during the war to provide far less nursing service than existed before the war in the hospitals "representative of the best current practice." It appears that some of the hospitals without schools are having particular difficulty in maintaining adequate bedside care since the average for this group of hospitals was only 2.8 hours of care and over 15 percent of the hospitals had less than 2 hours of care. It is perhaps significant that this group of hospitals has made greater use of paid auxiliary and part-time workers than the hospitals with schools. Unfortunately, there are no prewar data to use as a basis for comparison but the present study shows that well over one-third of the bedside care in the hospitals without schools was given by paid auxiliary workers. In the hospitals with schools, the large proportion of the total bedside care which is now provided by student nurses may be an important consideration in the formulation of post-war policies in the institutional nursing field.

SUMMARY

From over 1,600 questionnaires returned in a survey of registered hospitals made by the Procurement and Assignment Service in 1943, a representative sample of 500 hospitals was selected. An over-all picture of nursing service in wartime has been obtained from analysis of these questionnaires.

1. There was great variation from hospital to hospital in the hours of bedside nursing care per patient per day, from less than half an hour to over 5 hours.

2. The average for all hospitals was 3.4 hours of bedside nursing care per patient per day.

3. Ninety-six percent of the hospitals employed graduate registered nurses to give bedside nursing care.

4. Seventy-four percent of the hospitals employed paid auxiliary nursing workers to assist with bedside nursing care.

5. The ratio of total nursing staff to patients was three equivalent full-time nursing workers for every five patients.

6. Part-time nursing workers constituted 7 percent of the total nursing staffs (exclusive of student nurses) of the hospitals.

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PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

December 3-30, 1944

The accompanying table summarizes the prevalence 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 the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4 weeks ended December 30, 1944, the number reported for the corresponding period in 1943, and the median number for the years 1939-43.

DISEASES ABOVE MEDIAN PREVALENCE

Diphtheria.—For the 4 weeks ended December 30 there were 1,517 cases of diphtheria reported as compared with 1,101 for the corresponding period in 1943 and a 1939-43 median of 1,369 cases. The greatest excesses over the 5-year medians were reported from the West North Central and Pacific sections, with minor excesses in the New England and South Central sections. In the Middle Atlantic, East North Central, and Mountain sections the incidence was below the normal seasonal expectancy. The number of cases for the current period was higher than for the same weeks in each of the two preceding years, but it was about 20 percent below the 1941 figure for this period. This is the second time during the current year that the incidence for any 4-week period has been higher than the preceding 5-year median. For the entire year there were 14,097 cases reported, which is about a 10-percent increase over the incidence in 1943; it was, however, below the 1939-43 yearly median (approximately 15,700 cases).

Meningococcus meningitis.—The number of cases of meningococcus meningitis rose from 670 during the preceding 4-week period to 761 for the 4 weeks ended December 30. An increase of this disease is normally expected at this season of the year but the rate of increase was slightly lower than in preceding years. Compared with recent years the number of cases for the current period was only about 55 percent of the number reported for the corresponding period in 1943, but it was more than 5 times the preceding 5-year median. In each section except the West South Central the number of cases was below the 1943 figure; all sections, however, reported excesses over the 5-year medians. The current incidence may be compared with an average of approximately 300 cases for this period in the 10 years 1929-38, or less than one-half of the current figure.

Poliomyelitis.—The seasonal decline of poliomyelitis continued during the 4 weeks ended December 30. Compared with preceding years the number of cases (382) was about 50 percent above the

normal seasonal expectancy (251 cases). The incidence remained relatively high in the Middle Atlantic and North Central regions, with a somewhat significant excess over the median in the Pacific region. Of the total number of cases New York reported 140, California 35, Ohio and Washington 20 each, and Nebraska 15 cases. While this disease has been on a relatively high level for the past 2 years, the decrease since the August peak compared favorably with the normal decrease that is expected at this time of the year.

Scarlet fever.—The incidence of this disease was also above the normal seasonal expectancy. For the current 4-week period there were 14,739 cases reported, as compared with 12,305 for the corresponding period in 1943 and a 1939–43 median of 11,821 cases. In the West North Central section the incidence was about normal and in the East South Central section the number of cases was below the 5-year median, but all other regions reported excesses over the medians. The largest excess was reported from the Pacific region, the number of cases (1,689) being 2.6 times the normal incidence.

DISEASES BELOW MEDIAN PREVALENCE

Influenza.—The influenza incidence remained below the normal seasonal expectancy. For the 4 weeks ended December 30 the number of reported cases totaled 11,556 as compared with approximately 318,000 cases during the corresponding period in 1943, and a 1939–43 median of 23,874 cases. The 1943–44 epidemic of this disease was in progress at this time, having begun in November 1943. At the present time there is no indication of an epidemic in any part of the country. About 88 percent of the total cases in the current period occurred in 6 States, viz, Texas (6,684), South Carolina (1,378), Virginia (955), Arizona (433), Oklahoma (426), and Arkansas (313).

Measles.—The number of cases of measles (3,092) reported for the 4 weeks ended December 30 was only about 10 percent of the number reported for the corresponding period in 1943, and about 15 percent of the 1939–43 median figure. The incidence was comparatively low in all sections of the country. During the early part of the year measles was unusually prevalent in all sections of the country, but since the middle of the year the number of cases has dropped to the lowest level in the 16 years for which these data are available. For the entire year of 1944 there were approximately 602,000 cases reported, which was only slightly below the number reported in 1943 (approximately 603,000 cases).

Smallpox.—For the current 4-week period there were 28 cases of smallpox reported as compared with 32 in the corresponding period in 1943 and a 5-year median of 220 cases. The current incidence is the lowest on record for this period.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period December 5-30, 1944, the number for the corresponding period in 1943, and the median number of cases reported for the corresponding period, 1939-43

Division	Current period	1943	5-year median	Current period	1943	5-year median	Current period	1943	5-year median
	Diphtheria			Influenza ¹			Measles ²		
United States.....	1,517	1,101	1,369	11,556	318,158	23,874	3,092	29,658	18,868
New England.....	33	54	28	102	2,413	21	330	2,081	1,919
Middle Atlantic.....	111	127	157	32	2,112	115	349	5,849	5,849
East North Central.....	181	128	205	135	27,918	341	295	11,217	1,655
West North Central.....	214	110	94	84	35,771	542	253	3,380	1,409
South Atlantic.....	206	178	321	2,588	72,358	3,981	216	3,805	922
East South Central.....	166	108	146	389	75,473	2,318	131	704	613
West South Central.....	332	223	304	7,444	54,000	6,124	253	458	458
Mountain.....	51	47	68	632	28,053	5,978	111	1,300	1,300
Pacific.....	223	126	115	180	20,080	728	1,164	864	2,433
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	761	1,392	143	382	267	251	14,739	12,305	11,821
New England.....	39	116	19	12	16	10	1,601	1,217	1,217
Middle Atlantic.....	195	401	40	153	33	33	2,641	2,252	2,387
East North Central.....	159	324	16	50	30	30	3,704	2,913	3,351
West North Central.....	46	121	13	41	17	19	1,376	1,543	1,352
South Atlantic.....	87	141	25	29	11	24	1,550	1,129	1,148
East South Central.....	55	63	18	11	10	12	677	481	730
West South Central.....	69	55	15	15	32	21	664	392	388
Mountain.....	25	34	8	11	31	15	837	863	551
Pacific.....	86	137	11	60	87	39	1,689	1,515	650
	Smallpox			Typhoid and paratyphoid fever			Whooping cough ³		
United States.....	28	32	220	217	324	414	7,000	7,235	12,019
New England.....	0	0	0	17	16	16	1,068	470	1,326
Middle Atlantic.....	0	0	0	36	32	63	1,820	1,320	3,295
East North Central.....	10	6	48	23	30	45	1,218	1,523	3,076
West North Central.....	9	10	107	8	7	22	306	396	541
South Atlantic.....	1	3	3	49	39	87	932	1,545	1,126
East South Central.....	2	3	3	14	104	32	148	548	401
West South Central.....	4	7	16	36	43	67	691	587	587
Mountain.....	2	3	9	13	14	21	251	302	393
Pacific.....	0	0	11	21	39	34	566	544	892

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

² Mississippi excluded.

Typhoid and paratyphoid fever.—The number of cases (217) of this disease was about 50 percent below the 1939-43 median incidence for this period. In the New England section the number of cases was about normal, but in all other sections the numbers were considerably below the normal seasonal expectancy. The number of cases for the year (5,392) is the lowest for any year on record.

Whooping cough.—For the current 4-week period there were 7,000 cases of whooping cough reported. The number was only slightly below the 1943 figure for the corresponding period but it was less than 60 percent of the 1939-43 median. The West South Central section reported a few more cases than might normally be expected, but in all other sections the incidence was relatively low.

MORTALITY, ALL CAUSES •

For the 4 weeks ended December 30 there were 35,986 deaths from all causes reported to the Bureau of the Census by 93 large cities. The 1939-43 average for the corresponding weeks was approximately 41,000 deaths. During this period in 1943 an epidemic of influenza was in progress and the 3-year average was influenced by the excess deaths from that disease. Compared with the corresponding weeks in the 2 preceding years, the number of deaths for the current period was about 90 percent of the 1942 figure, and it was only slightly above the deaths reported for this period in 1941.

DEATHS DURING WEEK ENDED DECEMBER 30, 1944

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

	Week ended Dec. 30, 1944	Correspond- ing week, 1943
Data from 93 large cities of the United States:		
Total deaths.....	9,934	14,427
Average for 3 prior years.....	11,287
Total deaths, first 52 weeks of year.....	468,769	487,931
Deaths under 1 year of age.....	608	753
Average for 3 prior years.....	670
Deaths under 1 year of age, first 52 weeks of year.....	32,113	34,402
Data from industrial insurance companies:		
Policies in force.....	66,887,835	66,110,955
Number of death claims.....	10,567	14,594
Death claims per 1,000 policies in force, annual rate.....	8.3	11.5
Death claims per 1,000 policies, first 52 weeks of year, annual rate.....	10.0	9.7

PREVALENCE OF DISEASE

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

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JANUARY 6, 1945

Summary

In accordance with the seasonal pattern, the incidence of meningococcus meningitis again increased. Of the current total of 238 reported cases, as compared with 198 last week, 45 for the corresponding 5-year (1940-44) median, and 580 for the corresponding week last year, 110 occurred in the 5 States reporting more than 10 cases each, as follows (last week's figures in parentheses): New York 22 (29), New Jersey 19 (12), Ohio 11 (7), Illinois 25 (16), Missouri 11 (6), California 22 (14).

The total of 52 cases of poliomyelitis reported, as compared with 75 last week, is more than for the corresponding week of any year since 1928. Of the current total, 9 cases were reported in New York, 5 in Ohio, and 4 each in Indiana, Virginia, and California.

A total of 4,587 cases of influenza was reported, as compared with 3,466 last week, a 5-year median of 9,630, and 126,610 for the corresponding week last year. Of the current total, nearly 82 percent occurred in 4 States, viz, Virginia, South Carolina, Alabama, and Texas, with an aggregate of 3,749 reported cases. The same States reported a combined total of 2,888 cases last week.

The current total of reported scarlet fever cases, 3,922, as compared with 3,749 last week and a 5-year median of 3,457, is more than for the corresponding week of any of the past 5 years. About 42 percent of the current total was reported in the Middle Atlantic and East North Central areas.

A total of 9,786 deaths was recorded for the week in 93 large cities of the United States, as compared with 9,934 last week, a 3-year average of 11,394, and 13,476 for the corresponding week last year.

Telegraphic morbidity reports from State health officers for the week ended January 6, 1945, and comparison with corresponding week of 1944 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 1940-44	Week ended—		Median 1940-44	Week ended—		Median 1940-44	Week ended—		Median 1940-44
	Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944	
NEW ENGLAND												
Maine.....	0	0	0	1	73	10	6	184	91	2	10	2
New Hampshire.....	0	0	0	1	3	3	1	6	11	1	1	0
Vermont.....	0	0	0	1	100	24	18	1	24	1	0	0
Massachusetts.....	7	13	5	0	424	61	61	424	384	8	24	4
Rhode Island.....	0	0	0	55	77	1	5	104	38	0	6	0
Connecticut.....	4	0	0	2	307	10	14	32	110	5	9	1
MIDDLE ATLANTIC												
New York.....	9	6	15	(1)---	170	17	57	779	670	22	75	7
New Jersey.....	1	3	7	5	126	20	12	529	346	19	31	3
Pennsylvania.....	16	13	16	3	29	---	47	801	1,121	10	48	5
EAST NORTH CENTRAL												
Ohio.....	11	11	12	7	5,365	26	12	2,059	95	11	50	4
Indiana.....	7	27	13	4	194	49	5	156	42	4	25	1
Illinois.....	4	10	25	4	211	18	34	280	169	25	35	4
Michigan ^{1,2}	3	0	3	---	27	6	6	500	83	1	11	1
Wisconsin.....	0	2	1	28	3,162	62	33	742	303	5	4	1
WEST NORTH CENTRAL												
Minnesota.....	13	4	2	---	---	1	4	298	199	3	5	0
Iowa.....	5	3	5	---	3,860	2	21	44	50	2	3	1
Missouri.....	9	3	3	3	132	10	2	67	27	11	18	1
North Dakota.....	10	8	2	8	421	49	1	263	10	2	5	0
South Dakota.....	1	4	3	---	9	---	9	102	2	1	0	0
Nebraska.....	10	4	3	11	171	13	11	12	12	1	7	0
Kansas.....	10	4	4	2	1,156	238	16	46	112	1	6	2
SOUTH ATLANTIC												
Delaware.....	0	0	1	---	---	---	2	19	6	0	0	0
Maryland ¹	1	5	5	6	2,354	16	5	93	13	5	11	2
District of Columbia.....	0	0	0	1	1,138	6	5	29	5	1	5	0
Virginia.....	2	5	15	398	8,335	659	8	208	146	4	20	1
West Virginia.....	3	2	8	59	10,536	38	61	175	61	2	5	0
North Carolina ¹	13	13	24	---	419	17	8	341	69	8	8	2
South Carolina.....	7	5	7	688	6,702	1,581	11	95	33	4	8	1
Georgia.....	9	4	13	62	3,054	788	2	153	27	2	14	1
Florida.....	12	0	7	2	97	32	3	32	11	2	6	1
EAST SOUTH CENTRAL												
Kentucky.....	2	3	5	2	22,785	13	5	66	66	4	16	1
Tennessee.....	10	4	4	17	2,276	143	39	134	39	6	29	2
Alabama.....	13	5	7	413	3,884	974	6	281	25	9	4	1
Mississippi ¹	13	4	5	---	---	---	---	---	---	5	3	1
WEST SOUTH CENTRAL												
Arkansas.....	6	7	12	123	5,462	336	8	71	39	4	0	0
Louisiana.....	8	9	9	21	4,106	15	12	4	4	1	2	1
Oklahoma.....	7	4	5	171	3,310	257	15	7	6	2	6	1
Texas.....	66	37	37	2,250	24,454	1,520	90	274	69	9	10	2
MOUNTAIN												
Montana.....	1	4	1	31	1,665	81	2	246	38	0	4	0
Idaho.....	2	0	0	2	17	2	2	24	24	1	1	0
Wyoming.....	0	1	0	---	804	54	0	19	10	0	0	0
Colorado.....	4	6	6	25	847	163	8	127	92	2	1	0
New Mexico.....	13	3	1	132	9	9	2	3	10	1	0	0
Arizona.....	3	1	1	---	589	195	3	20	29	0	2	2
Utah ¹	0	0	0	1	2,030	320	14	6	48	0	2	1
Nevada.....	0	0	0	---	1,206	---	4	0	0	1	0	0
PACIFIC												
Washington.....	10	11	1	1	453	2	25	23	31	2	6	2
Oregon.....	2	6	2	22	1,325	281	54	55	66	6	8	0
California.....	34	14	17	26	3,258	163	210	225	147	22	36	3
Total.....	361	268	372	4,587	126,610	9,630	979	10,159	7,892	238	590	45

¹ New York City only.

² Period ended earlier than Saturday.

³ The following delayed reports should be added to the State figures and to the respective totals for 1944: Michigan, week ended December 30—Diphtheria 13, influenza 1, measles 6, meningitis 9, poliomyelitis, 1, typhoid fever 1, scarlet fever 148, whooping cough 26, undulant fever 2, bacillary dysentery 2. North Carolina, week ended December 2—Poliomyelitis 2.

Telegraphic morbidity reports from State health officers for the week ended January 6, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Polio-myelitis			Scarlet fever			Smallpox			Typhoid and para-typhoid fever ⁴		
	Week ended—		Med-ian 1940-44	Week ended—		Med-ian 1940-44	Week ended—		Med-ian 1940-44	Week ended—		Med-ian 1940-44
	Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944		Jan. 6, 1945	Jan. 8, 1944	
NEW ENGLAND												
Maine.....	3	0	0	35	14	11	0	0	0	0	0	0
New Hampshire.....	0	0	0	19	3	3	0	0	0	0	0	0
Vermont.....	0	0	0	5	9	8	0	0	0	0	0	0
Massachusetts.....	0	0	1	261	262	262	0	0	0	0	1	1
Rhode Island.....	0	0	0	19	10	10	0	0	0	0	0	0
Connecticut.....	1	0	0	49	91	72	0	0	0	1	0	0
MIDDLE ATLANTIC												
New York.....	9	3	2	408	329	329	0	0	0	1	2	3
New Jersey.....	1	0	0	120	71	120	0	0	0	1	0	0
Pennsylvania.....	0	1	1	250	197	258	0	0	0	3	1	9
EAST NORTH CENTRAL												
Ohio.....	5	0	1	317	250	290	0	0	1	1	4	3
Indiana.....	4	1	1	115	113	103	0	0	2	0	1	1
Illinois.....	0	4	0	269	213	219	1	0	0	2	1	3
Michigan ²	0	0	0	35	66	100	0	0	0	0	0	0
Wisconsin.....	0	0	1	145	176	145	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	0	0	0	53	90	69	0	0	1	0	0	0
Iowa.....	0	0	1	55	69	53	0	0	0	0	1	1
Missouri.....	2	0	0	82	52	52	0	0	0	0	0	1
North Dakota.....	0	0	0	11	26	21	0	1	0	0	0	0
South Dakota.....	0	0	1	39	53	38	0	0	1	0	1	0
Nebraska.....	0	0	0	15	33	33	1	0	0	0	0	0
Kansas.....	0	0	0	125	0	80	0	2	0	2	1	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	9	3	12	0	0	0	0	0	0
Maryland ²	0	0	0	105	40	43	0	0	0	1	1	2
District of Columbia.....	0	0	0	42	34	11	0	0	0	1	0	0
Virginia.....	4	1	1	97	43	46	0	0	0	0	2	2
West Virginia.....	1	0	0	69	40	49	0	0	0	0	0	1
North Carolina.....	0	1	0	94	81	78	0	0	0	1	0	0
South Carolina.....	0	0	1	11	17	13	0	0	0	1	1	1
Georgia.....	1	0	0	32	14	23	0	0	0	0	1	3
Florida.....	1	0	0	13	8	8	0	0	0	0	1	1
EAST SOUTH CENTRAL												
Kentucky.....	1	0	1	38	48	48	1	1	0	0	18	1
Tennessee.....	0	0	0	59	145	48	0	0	0	1	1	1
Alabama.....	0	0	0	29	12	27	1	0	0	1	2	2
Mississippi ²	3	0	0	21	11	11	0	0	0	0	4	0
WEST SOUTH CENTRAL												
Arkansas.....	0	0	0	11	6	7	0	0	0	1	0	1
Louisiana.....	1	0	0	13	6	9	0	0	0	0	2	2
Oklahoma.....	1	2	0	55	25	18	1	0	0	0	1	1
Texas.....	2	5	2	131	83	52	0	2	1	4	7	5
MOUNTAIN												
Montana.....	1	2	0	9	57	26	0	0	0	0	0	0
Idaho.....	0	1	0	63	22	8	2	1	0	0	1	1
Wyoming.....	0	0	0	8	7	7	0	0	0	0	0	0
Colorado.....	1	0	0	113	30	30	0	1	1	2	0	1
New Mexico.....	2	0	0	17	6	6	0	0	0	4	0	2
Arizona.....	1	0	0	22	10	5	0	0	0	0	0	0
Utah ²	0	1	0	43	162	21	0	0	0	0	0	0
Nevada.....	0	1	0	0	4	0	0	0	0	3	2	0
PACIFIC												
Washington.....	3	3	1	75	145	39	0	0	0	0	1	1
Oregon.....	0	0	0	39	75	14	0	0	0	0	0	0
California.....	4	8	8	277	203	111	0	0	0	1	0	2
Total.....	52	34	34	3,922	3,464	3,457	11	8	37	32	58	76

² Period ended earlier than Saturday.

⁴ Including paratyphoid fever reported separately, as follows: New York, 1; New Jersey, 1; New Mexico, 2.

Telegraphic morbidity reports from State health officers for the week ended January 6, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Whooping cough			Week ended January 6, 1945								
	Week ended—		Med-ian 1940-44	An-thrax	Dysentery			En-ceph-alitis, infectious	Lep-rosy	Rocky Mt. spotted fever	Tula-remia	Ty-phus fever
	Jan. 6, 1945	Jan. 8, 1944			Ame-bic	Bacil-lary	Un-specified					
NEW ENGLAND												
Maine.....	37	8	41	0	0	0	0	0	0	0	0	0
New Hampshire.....	1	0	4	0	0	0	0	0	0	0	0	0
Vermont.....	50	17	33	0	0	0	0	0	0	0	0	0
Massachusetts.....	74	75	247	0	0	3	0	0	0	0	0	0
Rhode Island.....	6	4	21	0	0	0	0	0	0	0	0	0
Connecticut.....	73	7	71	0	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York.....	167	151	389	0	0	16	0	1	0	0	0	0
New Jersey.....	85	55	103	0	0	0	0	0	0	0	1	0
Pennsylvania.....	141	69	283	0	0	0	0	0	0	0	1	0
EAST NORTH CENTRAL												
Ohio.....	118	77	144	0	0	0	0	0	0	0	3	2
Indiana.....	13	18	26	0	0	0	0	0	0	0	4	0
Illinois.....	72	47	145	0	1	1	0	2	0	0	12	0
Michigan ²	17	43	97	0	0	2	0	0	0	0	0	0
Wisconsin.....	73	86	103	0	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	30	28	34	0	1	0	0	0	0	0	0	0
Iowa.....	2	21	11	0	0	0	0	0	0	0	0	0
Missouri.....	13	7	17	0	0	0	0	0	0	0	1	0
North Dakota.....	1	1	6	0	0	0	0	0	0	0	0	0
South Dakota.....	8	0	1	0	0	0	0	0	0	0	0	0
Nebraska.....	2	11	10	0	0	0	0	0	0	0	0	0
Kansas.....	31	22	46	0	0	0	0	0	0	0	0	0
SOUTH ATLANTIC												
Delaware.....	8	0	8	0	0	0	0	0	0	0	0	0
Maryland ²	72	23	46	0	0	0	0	0	0	0	4	0
District of Columbia.....	3	5	13	0	0	0	0	0	0	0	0	0
Virginia.....	45	111	61	0	0	0	77	0	0	0	2	0
West Virginia.....	18	28	28	0	0	0	0	0	0	0	0	0
North Carolina.....	71	82	115	0	0	0	0	0	0	0	1	3
South Carolina.....	78	86	36	0	1	5	0	0	0	0	0	3
Georgia.....	6	11	18	0	1	1	0	0	0	0	0	21
Florida.....	4	24	15	0	0	1	0	0	0	0	0	5
EAST SOUTH CENTRAL												
Kentucky.....	13	20	22	0	0	0	0	0	0	0	4	0
Tennessee.....	12	45	20	0	0	0	1	1	0	0	3	4
Alabama.....	17	5	13	0	0	0	0	1	0	0	0	13
Mississippi ²				0	0	0	0	0	0	0	0	4
WEST SOUTH CENTRAL												
Arkansas.....	22	7	7	0	0	6	0	0	0	0	1	0
Louisiana.....	2	1	2	0	0	0	0	0	0	0	1	8
Oklahoma.....	5	5	5	0	0	4	0	0	0	0	0	0
Texas.....	200	145	145	1	5	907	187	0	0	0	0	21
MOUNTAIN												
Montana.....	15	7	13	0	0	0	0	0	0	0	0	0
Idaho.....	0	2	3	0	0	0	0	2	0	0	0	0
Wyoming.....	8	8	8	0	0	0	0	0	0	0	0	0
Colorado.....	34	17	23	0	0	0	0	0	0	0	0	0
New Mexico.....	0	3	9	0	0	0	0	0	0	0	1	0
Arizona.....	5	22	21	0	0	0	49	0	0	0	0	0
Utah ²	8	19	32	0	0	0	0	0	0	0	0	0
Nevada.....	0	3	3	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	21	51	43	0	0	0	0	0	0	0	0	0
Oregon.....	15	13	13	0	0	0	0	0	0	0	0	0
California.....	149	47	154	0	0	8	0	0	1	0	0	1
Total.....	1, 845	1, 538	3, 449	1	9	954	314	5	1	0	39	85
Same week, 1944.....	1, 538			1	14	296	47	7	0	0	19	59
Average, 1942-44.....	² 3, 449			1	17	160	38	6	1	0	32	³ 59

² Period ended earlier than Saturday.

³ 5-year median, 1940-44.

WEEKLY REPORTS FROM CITIES

City reports for week ended December 30, 1944

This table lists the reports from 88 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Epidemic typhus, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	0	0	0	0	1	0	8	0	0	0
New Hampshire:												
Concord	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston	1	0	0	0	42	1	11	0	73	0	0	23
Fall River	0	0	0	0	0	0	3	0	3	0	0	2
Springfield	0	0	0	0	1	0	0	0	7	0	0	3
Worcester	0	0	0	0	1	0	10	0	10	0	0	3
Rhode Island:												
Providence	0	0	1	0	0	0	1	0	6	0	0	7
Connecticut:												
Bridgeport	0	0	0	0	0	0	0	0	2	0	0	2
Hartford	0	0	0	0	16	1	1	0	4	0	0	1
New Haven	0	0	0	0	0	0	2	0	2	0	0	14
MIDDLE ATLANTIC												
New York:												
Buffalo	2	0	0	0	0	0	8	1	3	0	0	2
New York	10	0	3	4	10	23	81	19	195	0	1	68
Rochester	0	0	0	0	17	0	1	1	3	0	0	6
Syracuse	0	0	0	0	0	0	6	0	7	0	0	4
New Jersey:												
Camden	1	0	2	2	0	0	0	0	1	0	0	0
Newark	0	0	2	0	3	1	5	0	12	0	0	2
Trenton	0	0	0	0	0	1	3	0	3	0	0	0
Pennsylvania:												
Philadelphia	0	0	1	0	4	3	30	0	67	0	1	31
Pittsburgh	0	1	2	2	0	4	15	0	18	0	0	9
Reading	0	0	0	0	3	0	6	0	1	0	0	0
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	0	0	1	0	1	2	7	1	20	0	0	7
Cleveland	0	0	2	1	1	4	13	1	38	0	1	18
Columbus	0	1	0	0	3	1	1	0	6	0	0	0
Indiana:												
Fort Wayne	0	0	0	0	0	0	1	0	2	0	0	0
Indianapolis	8	0	0	4	2	0	9	0	17	0	0	5
South Bend	0	0	0	0	0	0	0	0	3	0	0	0
Terre Haute	0	0	0	0	0	0	1	0	1	0	0	0
Illinois:												
Chicago	0	0	2	3	10	4	26	0	97	0	0	26
Michigan:												
Detroit	1	0	2	0	2	9	15	0	57	0	0	5
Flint	0	0	0	0	0	0	5	0	8	0	0	1
Grand Rapids	0	0	0	0	0	0	1	0	12	0	0	1
Wisconsin:												
Kenosha	0	0	0	0	0	0	0	0	1	0	0	21
Milwaukee	0	0	1	1	1	4	10	0	15	0	0	4
Racine	0	0	0	0	1	0	0	0	2	0	0	2
Superior	0	0	0	0	0	0	0	0	2	0	0	0
WEST NORTH CENTRAL												
Minnesota:												
Duluth	1	0	0	0	0	2	1	0	0	0	1	0
Minneapolis	1	0	1	0	1	3	0	7	0	0	0	4
St. Paul	0	0	0	0	1	0	2	0	8	0	0	10
Missouri:												
Kansas City	2	0	0	0	2	1	10	0	13	0	0	0
St. Joseph	0	0	0	0	0	0	0	0	7	0	0	0
St. Louis	0	0	3	0	3	2	12	0	17	0	0	9

City reports for week ended December 30, 1944—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polymyolitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo.....	0	1	0	0	0	0	2	0	0	0	0	0
Nebraska:												
Omaha.....	8	0	0	4	0	3	0	7	0	0	0	0
Kansas:												
Topeka.....	0	0	0	3	0	2	0	6	0	0	0	0
Wichita.....	0	0	0	0	0	2	0	6	0	0	0	1
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	0	0	0	0	0	1	0	0	0	0	0	0
Maryland:												
Baltimore.....	8	0	1	0	2	2	12	0	64	0	1	49
Cumberland.....	0	0	0	0	0	0	1	0	1	0	0	0
Frederick.....	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington.....	0	0	1	3	3	12	0	60	0	0	0	2
Virginia:												
Lynchburg.....	0	0	0	1	0	1	0	0	0	0	0	0
Richmond.....	0	0	1	1	0	0	4	0	4	0	0	0
Roanoke.....	1	0	0	0	0	1	0	2	0	0	0	0
West Virginia:												
Charleston.....	0	0	0	0	0	0	0	1	0	0	0	0
Wheeling.....	0	0	0	42	0	2	0	0	0	0	0	5
North Carolina:												
Raleigh.....	0	0	0	0	0	0	0	0	0	0	0	2
Wilmington.....	0	0	0	0	0	2	0	3	0	0	0	3
Winston-Salem.....	0	0	0	0	1	1	0	5	0	0	0	1
South Carolina:												
Charleston.....	0	0	45	3	0	0	2	0	1	0	0	0
Georgia:												
Atlanta.....	0	0	9	2	0	0	6	0	1	0	0	0
Brunswick.....	0	0	0	0	0	0	3	0	1	0	0	0
Savannah.....	0	0	2	0	0	0	4	0	1	0	0	0
Florida:												
Tampa.....	0	0	1	0	0	0	3	0	0	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	0	0	7	0	64	7	8	0	21	0	0	9
Nashville.....	0	0	0	0	1	0	6	0	9	0	0	0
Alabama:												
Birmingham.....	0	0	0	0	0	0	7	0	1	0	0	0
Mobile.....	0	0	1	2	0	2	1	0	1	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	2	0	0	0	0	0	1	0	0	0	0	0
Louisiana:												
New Orleans.....	5	0	5	5	7	5	13	1	9	0	0	0
Shreveport.....	2	0	0	0	0	0	4	0	0	0	0	0
Texas:												
Dallas.....	0	0	1	1	2	0	4	0	2	0	0	5
Galveston.....	0	0	0	0	0	0	0	0	1	0	0	0
Houston.....	1	0	0	0	0	0	6	0	6	0	0	0
San Antonio.....	1	0	2	2	0	1	8	0	4	0	0	0
MOUNTAIN												
Montana:												
Billings.....	0	0	0	0	0	0	0	0	0	0	0	0
Great Falls.....	0	0	0	0	0	0	1	0	0	0	0	0
Helena.....	0	0	0	0	0	0	1	0	2	0	0	0
Missoula.....	0	0	0	0	0	0	3	0	2	0	0	0
Idaho:												
Boise.....	0	0	0	0	0	0	1	0	0	0	0	0
Colorado:												
Denver.....	0	0	1	0	2	0	9	0	19	0	0	3
Pueblo.....	0	0	0	0	0	0	1	0	9	0	0	0
Utah:												
Salt Lake City.....	0	0	0	0	5	0	2	0	15	0	0	0

City reports for week ended December 30, 1944—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0	1	3	0	10	0	3	0	0	0	3
Spokane.....	0	0	0	1	0	2	0	7	0	0	0	0
Tacoma.....	0	0	0	0	0	1	0	0	0	0	0	0
California:												
Los Angeles.....	2	0	3	2	0	8	2	35	0	0	0	16
Sacramento.....	0	0	2	0	0	2	0	4	0	0	0	0
San Francisco.....	0	0	1	3	1	13	0	14	0	0	0	12
Total.....	57	3	101	39	300	88	476	28	1,087	0	5	401
Corresponding week, 1943.....	56	7,845	441	1,831	1,436	854	0	7	277			
Average, 1939-43.....	80	2,839	140	1,729	1,697	962	3	13	851			

1 3-year average, 1941-43.
 2 5-year median, 1939-43.

Dysentery, amebic.—Cases: Chicago, 1; Detroit, 1.
Dysentery, bacillary.—Cases: Providence, 1; Buffalo, 1; New York, 2; Rochester, 1; Detroit, 1; Tampa, 1; Los Angeles, 3; San Francisco, 8.
Dysentery, unspecified.—Cases: Richmond, 1; San Antonio, 10.
Tularemia.—Cases: New York, 1; Nashville, 1.
Typhus fever, endemic.—Cases: Atlanta, 2; Savannah, 3; Birmingham, 1; Mobile, 1; New Orleans, 1; Shreveport, 1; Dallas, 1; Galveston, 1; Houston, 2; San Antonio, 1.

Rates (annual basis) per 100,000 population, by geographic groups, for the 88 cities in the preceding table (estimated population, 1943, 34,313,400)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	2.6	0.0	2.6	0.0	158	5.3	76.1	0.0	302	0.0	0.0	144
Middle Atlantic.....	6.0	0.5	4.6	3.7	17	14.8	71.7	9.7	143	0.0	0.9	56
East North Central.....	5.5	0.6	4.9	5.5	13	14.7	54.6	1.2	172	0.0	0.6	55
West North Central.....	23.9	2.0	6.0	2.0	26	11.9	69.6	4.0	145	0.0	2.0	48
South Atlantic.....	14.7	0.0	96.4	11.4	78	9.8	89.9	0.0	235	0.0	1.6	101
East South Central.....	0.0	0.0	47.2	11.8	384	53.1	129.8	0.0	189	0.0	0.0	53
West South Central.....	31.6	0.0	23.0	23.0	26	17.2	103.3	2.9	63	0.0	0.0	14
Mountain.....	0.0	0.0	7.9	0.0	56	0.0	143.0	0.0	373	0.0	0.0	24
Pacific.....	3.2	0.0	4.7	6.3	63	4.7	58.5	3.2	100	0.0	0.0	49
Total.....	8.7	0.5	15.4	5.9	46	13.4	72.5	4.3	166	0.0	0.8	61

PLAGUE INFECTION IN TACOMA, WASH.

Plague infection has been reported proved in 3 pools of fleas from rats, *R. norvegicus*, and 1 pool of fleas from mice, *Microtus townsendi*, collected on December 23, 1944, at the waterfront, Tacoma, Wash., as follows: 51 fleas from 4 rats, 81 fleas from 12 rats, 18 fleas from 8 rats, and 4 fleas from 4 mice.

TERRITORIES AND POSSESSIONS**Hawaii Territory**

Plague—In rodents and ectoparasites.—Plague infection in rodents and their ectoparasites has been reported in Honokaa, Hamakua District, Island of Hawaii, T. H., as follows: A pool of 75 fleas found in District 15A proved positive for plague on December 7, 1944; a rat found in Kukaiau area was proved positive for plague on December 12, 1944; a pool of rats collected in District 12B was proved positive for plague on December 17, 1944.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended December 16, 1944.—During the week ended December 16, 1944, 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.....		28		119	468	72	44	57	98	886
Diphtheria.....		5	1	40	4	6	6			62
Dysentery, bacillary.....									1	1
German measles.....		1		9	10		7	2	16	45
Influenza.....		6			90	2			6	104
Measles.....		1		171	103	30	44	10	69	428
Meningitis, meningococcus.....					1	1	1			3
Mumps.....		1		204	105	7	7	55	43	422
Pollomyelitis.....					13		2		1	16
Scarlet fever.....		10	3	85	121	19	6	34	33	311
Tuberculosis (all forms).....		6	4	75	40	34	3	10	14	186
Typhoid and paratyphoid fever.....						1				1
Undulant fever.....							3			3
Veneral diseases:										
Gonorrhoea.....	1	37	3	64	132	32	17	45	48	379
Syphilis.....		15	2	114	60	13	11	11	18	244
Whooping cough.....		35		282	61	7	3	20	58	466

¹ Includes 2 cases delayed reports.

CUBA

Provinces—Notifiable diseases—4 weeks ended December 2, 1944.—During the 4 weeks ended December 2, 1944, cases of certain notifiable diseases were reported in the Provinces of Cuba, as follows:

Disease	Pinar del Río	Habana ¹	Matanzas	Santa Clara	Carnagüey	Oriente	Total
Cancer.....			5	7	2	16	30
Chickenpox.....				3			3
Diphtheria.....	1	25	6	2	1	1	36
Hookworm disease.....		12					12
Leprosy.....		1				6	7
Malaria.....	7	8		7	19	432	473
Measles.....	1	2		2		1	6
Rabies.....				1			1
Tuberculosis.....	8	72	10	32	5	37	164
Typhoid fever.....	18	57	10	48	6	29	168
Whooping cough.....		20		1		2	23
Yaws.....						2	2

¹ Includes the city of Habana.

JAMAICA

Notifiable diseases—4 weeks ended December 16, 1944.—During the 4 weeks ended December 16, 1944, 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.....		3	Leprosy.....		2
Chickenpox.....	4	15	Tuberculosis (pulmonary).....	26	67
Diphtheria.....	10	1	Typhoid fever.....	12	96
Dysentery (unspecified).....	37	75	Typhus fever.....	2	
Erysipelas.....	2				

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place	January-October 1944	November 1944	December 1944—week ended—				
			2	9	16	23	30
ASIA							
Ceylon..... C	2						
India..... C	¹ 195,312	10,843					
Calcutta..... C	3,370	109	20				
Chittagong..... C	63						
Madras..... C	37						
Negapatam..... C	17						
Vizagapatam..... C	269						

¹ Corrected figures.

PLAGUE

[C indicates cases; D, deaths; P, present]

AFRICA						
Algeria..... C	45	14				
Bechuanaland..... C						¹ 392
Belgian Congo..... C	19	4			1	
Plague-infected rats..... P						
British East Africa:						
Kenya..... C	12		2			
Uganda..... C	6	2				
Egypt..... C	649	5				
Fort Said..... C	74	2				
Suez..... C	159	3				
French West Africa: Dakar..... C	514	25				
Madagascar..... C	99	20				
Morocco (French)..... C	172	10				² 10
Rhodesia, northern..... C	1					
Senegal..... C	49	13				
Sudan (French)..... D	1					
Tunisia..... C	45	8		3		
Union of South Africa..... C	43	5		2		
ASIA						
China:						
Chekiang Province..... C	P					
Foochow..... C	P					
Kiangsi Province..... C	104					
India..... C	³ 9,014	1,456				
Indochina..... C	57					
Palestine..... C	69	13				
Plague-infected rats..... C	192	30				
EUROPE						
Portugal: Azores..... C	28	1				
SOUTH AMERICA						
Bolivia:						
Chuquisaca Department..... C	5					
Santa Cruz Department..... C	5					
Tarija Department..... C	12					
Brazil..... C	94					
Ecuador:						
Chimborazo Province..... C	4					
Loja Province..... C	10	1				

¹ From the beginning of the outbreak in October 1944.

² For the period Dec. 1-20, 1944.

³ Corrected figures.

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place	January-October 1944	November 1944	December 1944—week ended—				
			2	9	16	23	30
SOUTH AMERICA—continued							
Peru:							
Ancash Department.....	C	60					
Lambayeque Department.....	C	1					
Libertad Department.....	C	6	1				
Lima Department.....	C	22	5				
Piura Department.....	C	2					
OCEANIA							
Hawaii Territory:							
Hamakua District.....	D	45					
Plague-infected rats ¹		55	1		1		

¹ Includes 1 death from pneumonic plague.

² Plague infection was also proved in a pool of 53 fleas on Mar. 7, 1944, in another pool of 75 fleas on Dec. 7, 1944, in a pool of rats on Dec. 17, 1944, and in tissue from a pool of 8 mice on Aug. 20, 1944.

³ Includes 12 plague-infected mice.

SMALLPOX

[C indicates cases; P, present]

AFRICA		January-October 1944	November 1944	2	9	16	23	30
Algeria.....	C							
Angola.....	C	118						
Basutoland.....	C	201						
Belgian Congo.....	C	2,720	601					
British East Africa:								
Kenya.....	C	3,103	92	12				
Mombasa.....	C	144						
Tanganyika.....	C	2,637						
Uganda.....	C	4,049	247	54				
Cameroon (French).....	C	387	28					
Dahomey.....	C	88						
Egypt.....	C	10,936	24					
French Equatorial Africa.....	C	1,446						
French Guinea.....	C	1,022	59		120			
French West Africa.....	C	165	56		1			
Gambia.....	C	13		2				
Gold Coast.....	C	10	6					
Ivory Coast.....	C	455	23		2			
Mauritania.....	C	2						
Morocco (French).....	C	684	61		30			
Mozambique.....	C	3						
Nigeria.....	C	3,952	131					
Niger Territory.....	C	583	20		2			
Rhodesia, northern.....	C		136					
Senegal.....	C	191	2					
Sierra Leone.....	C	416						
Sudan (Anglo-Egyptian).....	C	2						
Sudan (French).....	C	2,016	24					
Togo (British).....	C	45	90					
Togo (French).....	C				5			
Tunisia.....	C	8						
Union of South Africa: Natal.....	C	1,800	54	5				
ASIA								
Arabia.....	C	26						
Ceylon.....	C	19	17					
China: Kunming (Yunnan Fu).....	C	53	1					
India.....	C	238,937	2,775					
Indochina.....	C	1,557						
Iran.....	C	791						
Iraq.....	C	54						
Palestine.....	C	165						
Syria and Lebanon.....	C	179	3					
Trans-Jordan.....	C	2						
EUROPE								
France.....	C	1						
Gibraltar.....	P							
Great Britain.....	C	18						
Greece.....	C	321						
Italy.....	C	878	123	23	28	28	29	
Portugal.....	C	32			25			
Spain.....	C	176	2					
Turkey.....	C	5,629	48	9	33	11	54	3

¹ Approximate number of cases reported from Jan. 1944 to Nov. 9, 1944.

² Includes imported cases.

³ Includes 1 case imported from the Middle East.

⁴ For the period Sept. 10 to Dec. 9, 1944.

SMALLPOX—Continued

[C indicates cases; P, present]

Place	January-October 1944	November 1944	December 1944—week ended—				
			2	9	16	23	30
NORTH AMERICA							
Dominican Republic.....	C	1					
Guatemala.....	C	9					
Honduras.....	C	9					
Mexico.....	C	2,483					
Panama (Republic).....	C	1					
SOUTH AMERICA							
Bolivia.....	C	986					
Brazil.....	C	7,934	16	3	14		
Chile.....	C	15					
Colombia.....	C	1,506	3	5	3	2	
Ecuador.....	C	22					
Peru.....	C	291					
Lima.....	C	19					
Venezuela.....	C	417			74		

* Included delayed reports for the year to date.

TYPHUS FEVER*

[C indicates cases; P, present]

Place	January-October 1944	November 1944	December 1944—week ended—				
			2	9	16	23	30
AFRICA							
Algeria.....	C	1,381					
Basutoland.....	C	95					
Belgian Congo.....	C	56					
British East Africa: Kenya.....	C	13					
Egypt.....	C	17,562					
French Guinea.....	C	2					
French West Africa: Dakar ¹	C	53					
Gold Coast.....	C	6					
Morocco (French).....	C	2,548			49		
Morocco (Spanish).....	C	9					
Mozambique.....	C	3					
Nigeria.....	C	2					
Rhodesia, northern.....	C	96					
Sierra Leone.....	C	33					
Sudan (Anglo-Egyptian).....	C	3					
Tunisia.....	C	778			185	10	
Union of South Africa.....	C	5,788		7			
ASIA							
Arabia: Western Aden Protectorate.....	C	2 16					
Ceylon.....	C	1					
China: Kunning (Yunnan Fu).....	C	109		21			
India.....	C	10					
Indochina.....	C	1,004					
Iran.....	C	6,427					
Iraq.....	C	606		13			
Palestine.....	C	488		8		6	
Syria and Lebanon.....	C	428					
Trans-Jordan.....	C	46		1			
EUROPE							
Belgium.....	C	10					
Bulgaria.....	C	686					
France.....	C	11					
Germany.....	C	2,467					
Gibraltar.....	C	1					
Greece.....	C	294					
Hungary.....	C	3,314		9	13		
Irish Free State.....	C	7		1			
Italy.....	C	10					
Netherlands.....	C	8					
Norway.....	C	1					
Portugal.....	C	18		7	3	2	
Rumania.....	C	6,000					
Slovakia.....	C	337					
Spain.....	C	467		7			
Turkey.....	C	2,334		153	20	71	98
Yugoslavia.....	C	8,088					78

* Reports from some areas are probably murine type, while others probably include both murine and louse-borne types.

¹ Reports cases as murine type.² A report dated Mar. 30, 1944, states that an estimated 800 deaths from typhus fever have been reported in Western Aden Protectorate, Arabia.

TYPHUS FEVER—Continued

[C indicates cases; P, present]

Place	January-October 1944	November 1944	December 1944—week ended—				
			2	9	16	23	30
NORTH AMERICA							
Costa Rica ¹	C	2					
Dominican Republic.....	C	10					
Guatemala.....	C	1,929	132				
Jamaica.....	C	56	2		1		
Mexico.....	C	1,557					
Panama Canal Zone.....	C	1					
Puerto Rico ¹	C	178	6	1	1		
Salvador.....	C	7					
Virgin Islands ¹	C	19					
SOUTH AMERICA							
Bolivia.....	C	310	34				
Brazil.....	C	4					
Chile.....	C	395	68				
Colombia ¹	C	303					
Curacao.....	C	6					
Ecuador.....	C	444	45				
Peru.....	C	911					
Venezuela.....	C	88	6				
OCEANIA							
Australia ¹	C	174	5		2		
Hawaii Territory ¹	C	140	17	4			

¹ Reports cases as murine type.

YELLOW FEVER

[C indicates cases; D, deaths]

AFRICA							
Belgian Congo:							
Babeyru.....	D	2					
Banyville.....	C	113					
Bonde.....	D	1					
Leopoldville.....	C	1					
Gold Coast:							
Cape Coast.....	C	21					
Ho.....	C	21					
Kintampo.....	C	1					
Northern Territories.....	C	1					
Sekondi.....	C	21					
Tamale.....	C	21					
Yendi.....	C	21					
Ivory Coast:							
Abidjan.....	C	1					
Daloa.....	C				21		
Diyo.....	C		1				
Nigeria: Bukuru.....	C	1					
Portuguese Guinea: Port Bintam.....	C	1					
EUROPE							
Portugal: Lisbon. ²							
SOUTH AMERICA							
Bolivia:							
La Paz Department.....	C	1					
Santa Cruz Department.....	C	3					
Brazil:							
Acre Territory.....	D	1					
Matto Grosso State.....	D	3					
Para State.....	D	2					
Colombia:							
Amazonas Department.....	D	1					
Boyaca Department.....	D	4					
Caldas Department.....	D	1					
Cundinamarca Department.....	D	1					
Intendencia of Meta.....	C	1					
Santander Department.....	D	4					
Venezuela:							
Barinas State.....	C				2		
Tachira State.....	C	30					

¹ Includes 11 cases of suspected yellow fever.² Suspected.³ According to information dated Jan. 21, 1944, it is reported that a vessel which called at the islands of Sao Tome and Cape Verde arrived at Lisbon, Portugal, with cases of yellow fever on board.⁴ Includes 21 cases of suspected yellow fever.