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## ORGANIZATION OF THE MEDICAL AND SANITARY PROGRAM, ALASKA HIGHWAY PROJECT

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On April 4, 1942, the Administrator of the Federal Works Agency requested the assistance of the Surgeon General of the United States Public Health Service in the operation of hospitals and clinics on the Alaska Highway project of the Public Roads Administration. The Surgeon General agreed to assume responsibility for medical care of civilians engaged in construction of the Alaska Highway and for the supervision of the various features of sanitation on the project. Under the terms of the agreement, the Surgeon General undertook to furnish the necessary medical, dental, and sanitary officers; the Commissioner of the Public Roads Administration undertook to recruit all additional personnel on recommendation of the Public Health Service officer in charge, to build and equip hospitals, provide ambulances, furnish transportation, and meet such other nonprofessional needs as might arise.

On May 21 a director of the medical and sanitary program,<sup>1</sup> a chief sanitation officer,<sup>2</sup> and an assistant medical officer,<sup>3</sup> were assigned to the project. The director was instructed to report, by June 1, to the district engineer of the Public Roads Administration in charge of the project, in Seattle, Wash.

The task that confronted this small vanguard was to set up facilities that would provide medical care for thousands of men scattered over 1,600 miles of wilderness in over 100 widely separated camps, to supervise sanitation, recruit additional personnel, obtain equipment, and establish sources and means of supply.

### PRELIMINARY SURVEY

Before plans could be made for organization, hospital construction, sanitary installations, and procurement of personnel, it was necessary to survey the area and obtain detailed information concerning the plans of the Public Roads Administration in regard to distribution and number of personnel and location of camps. Shortly after arriv-

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<sup>2</sup> Passed Assistant Sanitary Engineer R. W. Kahr (deceased).

<sup>3</sup> Passed Assistant Surgeon M. B. Noyes.

ing in Seattle, the director and the chief sanitation officer arranged for airplane transportation from Seattle to Fairbanks, with stops at all airports along the route of the proposed highway.

Obtaining airplane transportation from the States to Alaska via various airports in Canada proved to be a fairly complicated process. Because of the enormous acceleration of travel to Canada and Alaska in connection with the war effort, the various air lines were overtaxed. The first step necessary was to secure priority for travel, since priority was granted in accordance with the importance of each traveler's mission. The next step was to obtain a permit from the Alaska Travel Control of the Western Defense Command to enter Alaska. These steps accomplished, the air lines then booked passage as seats were available.

The next obstacle to be overcome was one beyond the control of any official—the weather. A delay of several days in starting, or en route, because of unsuitable weather conditions was a familiar concomitant of air travel. During the course of numerous flights up and down the line the officer in charge was "held" at every airport between Vancouver, British Columbia, and Fairbanks, Alaska, for periods varying from a few hours to several days. Another prospect the air traveler had to consider was the possibility of being "bumped" or "off-loaded" at any port en route by someone holding a higher priority and thus finding himself stranded until the high priority holders had been flown to their destinations.

Equipped with priorities, permits, and a bottle of perchloron, the survey trip was begun. The first leg of the flight was from Vancouver to Fort St. John, British Columbia, site of the Public Roads Administration headquarters for the southern sector of the highway and assembly point of survey parties and contractors. Fort St. John is 48 miles from Dawson Creek, the railhead and beginning of the Alaska Highway. After a survey of medical facilities and sanitary conditions at Fort St. John, the party proceeded to Fairbanks, stopping at Fort Nelson, Watson Lake, and Whitehorse, headquarters for the northern sector. From Fairbanks it was necessary to travel southeast to Gulkana and Slana, Alaska, on the Richardson Highway, which was to be improved to give access from the sea at Valdez to points on the western end of the Alaska Highway. On the advice of the sanitary officer, all water for personal consumption was liberally dosed with perchloron. The taste of chlorine is associated strongly with memories of the survey trip.

#### PLAN OF ORGANIZATION

Following the survey trip, a tentative plan of organization was drawn up. To provide medical facilities on the highway, a base hospital was recommended for each of the two sectors, one to be located at Fort

Nelson, British Columbia, the other at Whitehorse. To supplement these base hospitals, it was proposed to contract for beds in small civilian hospitals already in operation at Dawson Creek, Fort St.

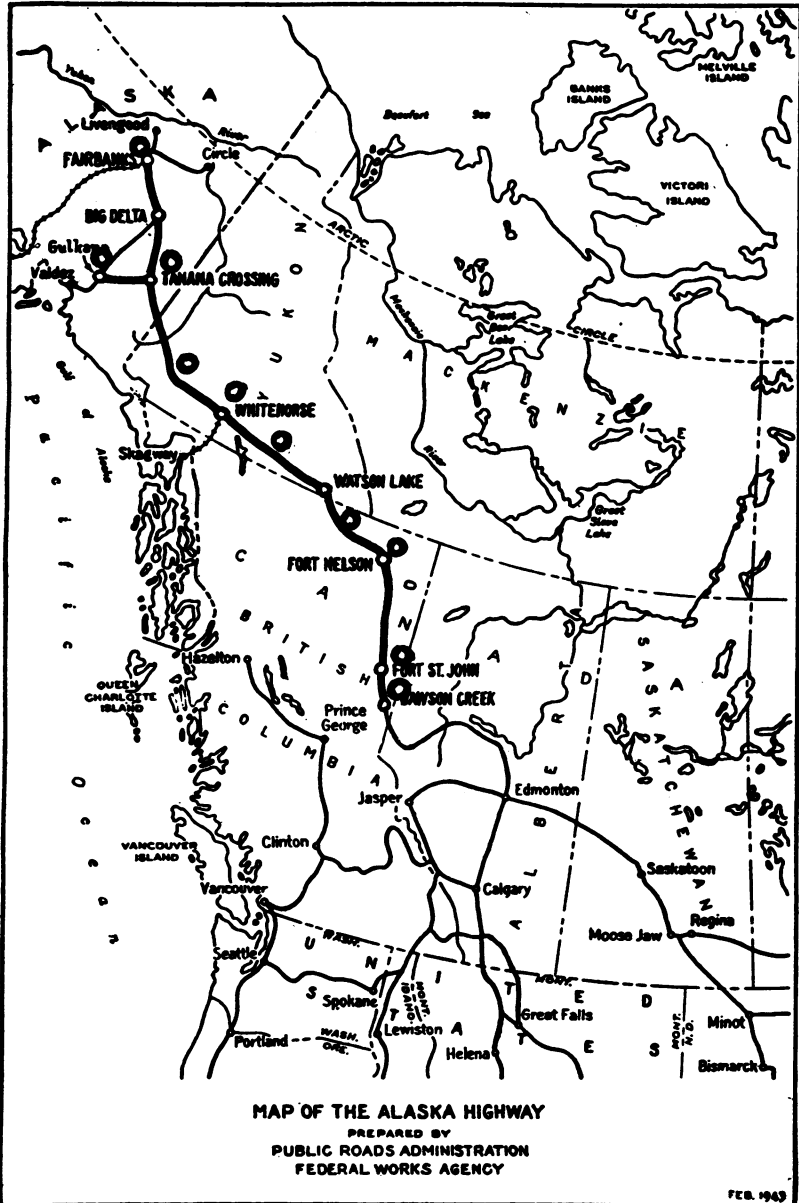


FIGURE 1.—Circles on the Alaska Highway indicate the approximate position of the various medical facilities.

John, Whitehorse, and Fairbanks and to install dispensaries at 200-mile intervals between these points so that no camp would be over 100 miles from medical facilities.

In addition, it was recommended that each camp install a first-aid station, with a competent first-aid attendant on duty at all times and equipped with necessary first-aid supplies. An ambulance was proposed for each camp of over 100 men.

The chief sanitation officer divided the area into three sections and requested the assignment to each section of a sanitary engineer whose duties would consist of inspection of camp sanitation, water-supply and sewerage systems, and the furnishing of technical advice in the design and installation of such systems.

To put this paper organization into actual operation proved an arduous task. At the very beginning it was necessary to send the medical assistant into the field to render medical care. As a result, his assistance in organizational work was not available. Early in the program a second medical officer was active in the field. Thus, from the outset there was a continuous demand by medical personnel for supplies.

In the early throes of organization, no office space was available for the headquarters of the medical and sanitary program; secretarial help was available only on loan, and 2 months passed before an administrative assistant with the essential specialized training was assigned. The director of the program was confronted with the immediate and urgent necessity of obtaining suitable office space, securing secretarial help, supplying the two medical officers already in the field, and drawing plans and designs for hospitals, dispensaries, and first-aid stations.

Having obtained a room for temporary use as an office, which was moved four times in 2 weeks, the medical program fell heir to a heterogeneous collection of WPA medical and surgical supplies. To expedite packing and shipping, the most urgently needed items were moved into the office. Here, surrounded by bottles of aspirin tablets, packages of bandages, bedpans, urinals, and other hospital impedimenta, the officer in charge alternated between packing supplies into trunk lockers for shipment and interviewing prospective medical officers, nurses, hospital attendants, and other personnel. Within a few days, however, enough supplies and equipment were shipped to enable the field medical staff to set up small dispensaries equipped for minor surgery and routine medical care and to inoculate hundreds of employees against typhoid fever.

#### HOSPITAL CONSTRUCTION

As no plans for hospitals suitable for rapid construction and adaptable for use in the sub-Arctic were available, it was necessary to evolve such plans. The services of W. I. Turner, architect on duty with the United States Forestry Service, were obtained on loan, and a mechanical engineer was engaged on a temporary status.

The medical officer in charge served as consultant in hospital requirements, and work was begun immediately on the plans and continued uninterruptedly until their completion and approval by the district engineer and the Commissioner of the Public Roads Administration.

The plans were based on the use of prefabricated panels manufactured in Seattle, which could be shipped to the field and erected at desired points. The Public Roads Administration had used the same material in the construction of barracks. The comparative simplicity of construction, the speed with which the panels could be manufactured and erected, and the substantial structural characteristics of the completed building indicated the suitability of this type of construction for medical purposes.

The plans for the base hospitals were fairly elaborate, providing a capacity of 50 beds each, with potential expansion to 100 beds or more by the addition of ward sections. The main portion of the building was planned to house the administrative and clinical facilities, with wings added for wards, kitchen, and mess hall.

These hospitals and dispensaries are now operated by the Health Service, United States Army Corps of Engineers, in connection with collateral projects in that area.

All buildings are of one story; the walls and floors are lined and insulated to withstand outside temperatures from 40° to 60° below zero. Heating, except for the operating suite, is furnished by oil-burning stoves, which are located at strategic points throughout the building.

The chief purpose of the smaller, 15-bed dispensary units was to provide facilities for out-patient service, with sufficient beds to handle routine cases. They were equipped for the performance of minor surgery, although major emergencies such as compound fractures, strangulated hernias, and appendectomies have been handled successfully, as have cases of cerebrospinal meningitis and pneumonia. The normal dispensary staff consisted of one medical officer, three or four registered nurses, and two attendants. Food for the bed patients was brought from the main kitchen and served on individual trays from a small diet kitchen.

The first base hospital, prefabricated in Seattle, was destined for Whitehorse. On its arrival at Whitehorse, however, it was diverted to the Army, as the requirements of the military personnel were far more pressing. With a sub-Arctic winter ahead, there was urgent need to move the Army hospital, then housed in a temporary shelter, into more substantial quarters. In general, the basic hospital plant was erected in accordance with the original plan, although its capacity was increased from 50 to 150 by the addition of wings. The Whitehorse hospital, under Army control, admitted cases beyond the scope of the 15-bed dispensary originally erected by the Public Roads

Administration for use pending construction of the larger hospital.

Construction of the base hospital at Fort Nelson and the dispensary at the Liard River Crossing, 213 miles north of Fort Nelson, was begun in midwinter. As transportation of prefabricated panels to these points, accessible neither by rail nor water, would have been fraught with considerable difficulty, it was decided to use material at hand. At the Liard River Crossing, a portable sawmill was set up to saw the lumber for the dispensary. The hospital at Fort Nelson, situated in the midst of dense woods, was built of logs. These were cut, stripped, and erected on a foundation of wooden piles driven 8 feet into the ground. Such construction called for highly skilled craftsmen, whom we were fortunate enough to obtain. Lumber needed for door and window casings, flooring, and similar uses was sawed on the site; the interior was lined with composition board. This building was completed and equipped, and hospital operations were started, in less than 6 months after construction began.

The beautifully matched and fitted log walls harmonize with the rustic environment; and, in appearance, this building would do credit to Banff, Jasper, or other world-famous lodge resorts. In interior fittings and equipment, it is the equal of any small modern hospital. In this isolated spot, hundreds of miles from any other hospital, the Kehr General Hospital, named in honor of Passed Assistant Sanitary Engineer R. W. Kehr, who lost his life in line of duty, will perform a valuable service to humanity for years to come.

Repeated trips by airplane, under all sorts of weather conditions, were necessary to select sites for erection of the various facilities, determine the need for additional installations, equip, staff, and activate them, and to make periodic inspections. It was on one of these trips that Mr. Kehr lost his life; the airplane in which he was flying crashed, with the loss of all on board. This tragedy was a shock and bitter loss to all his associates. The Alaska Highway project and the Public Health Service lost one of their finest and most valuable officers.

#### MEDICAL FACILITIES

With the exception of the base hospital at Whitehorse, which was diverted to military use, all the facilities originally planned and recommended have been completed and are in active operation. Beginning at Dawson Creek and proceeding north along the highway, dispensaries and hospitals are located as indicated in the following list:

Dawson Creek.....	Dispensary—beds available under contract with St. Joseph's Hospital.
Fort St. John, British Columbia...	Dispensary—beds available under contract with Providence Hospital.
Fort Nelson, British Columbia...	Kehr General Hospital—50 beds.
Mile 107 north of Fort Nelson...	Dispensary—10 beds.

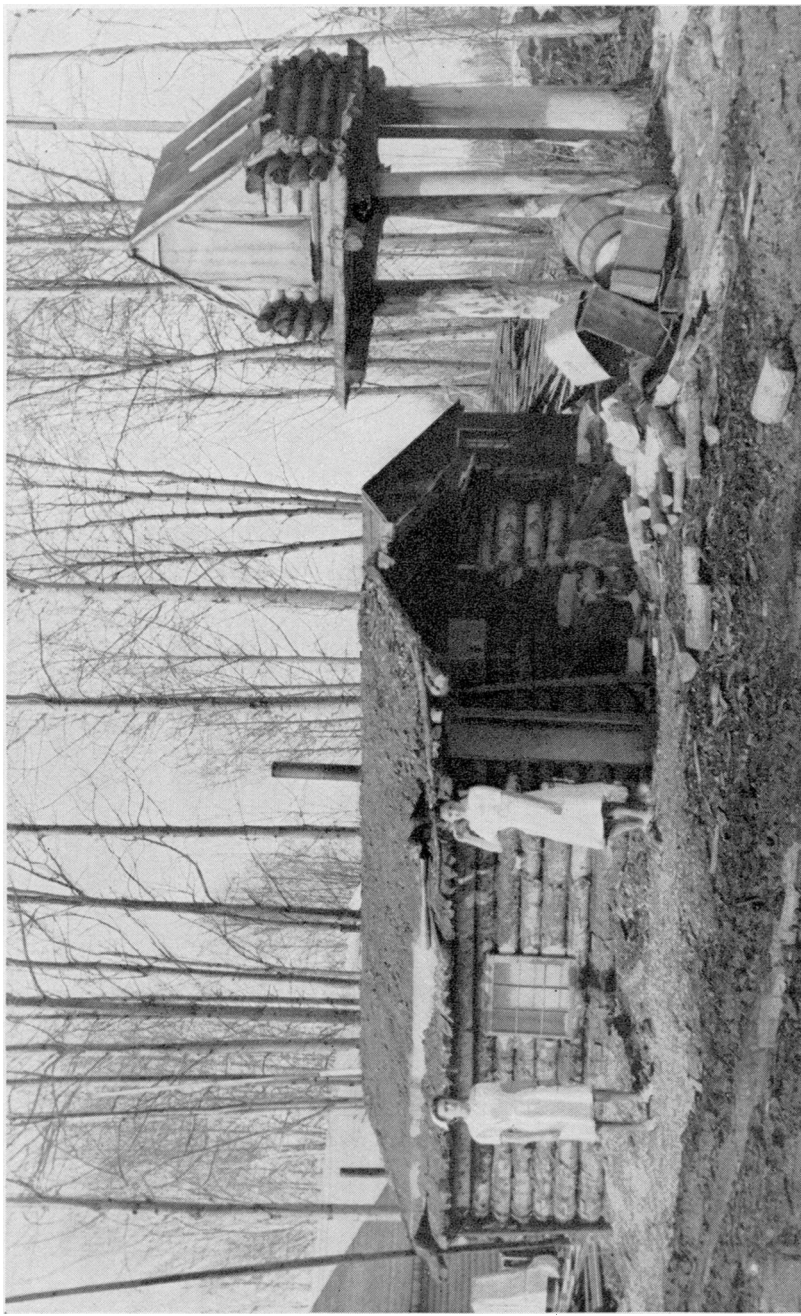


FIGURE 2.—Nurses' home at Fort Nelson, British Columbia, in pioneering days of project. (Photo by U. S. Public Roads Administration.)

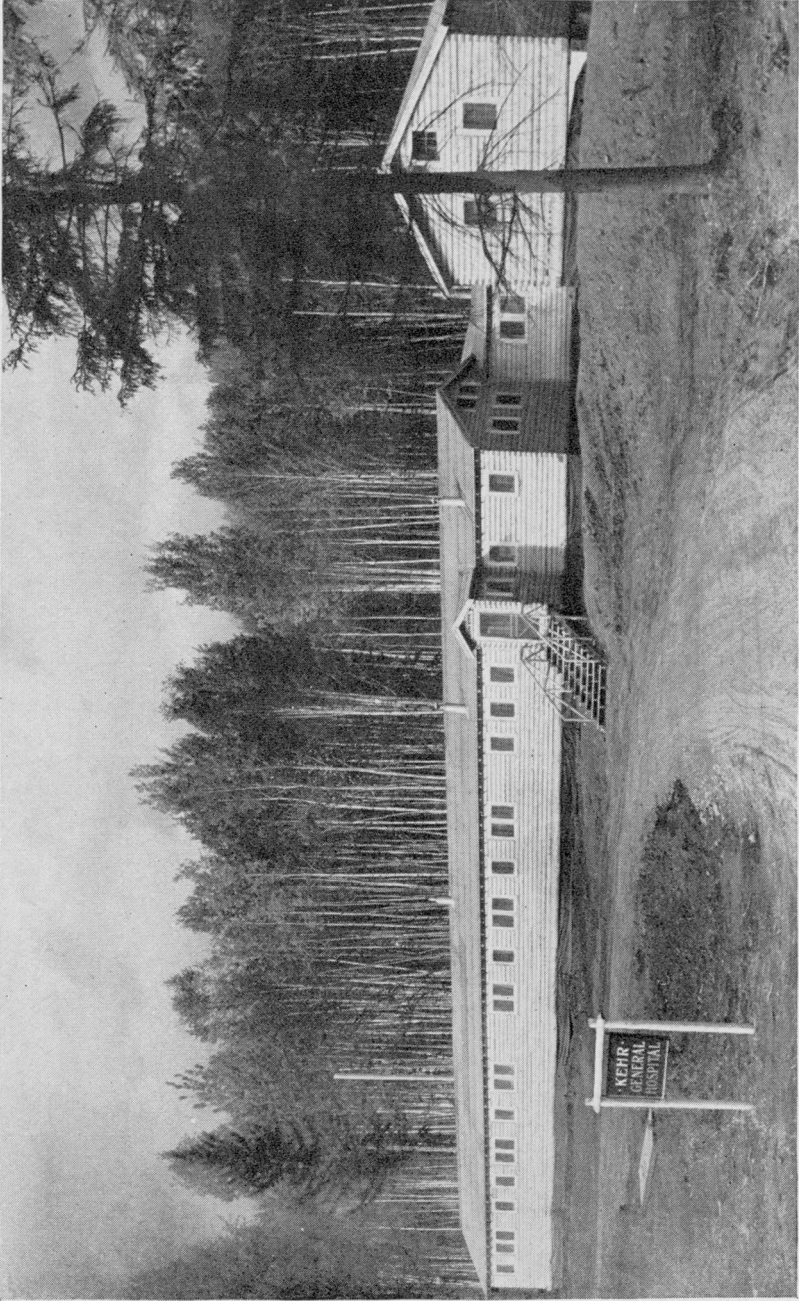


FIGURE 3.—Kehr General Hospital, Fort Nelson, British Columbia. (Photo by U. S. Public Roads Administration.)



Liard River Crossing (213 miles Dispensary—20 beds.  
north of Fort Nelson).

Mile 195 east of Whitehorse----- Dispensary—12 beds.

Whitehorse, Yukon Territory----- Dispensary—30 beds (access to U. S. Army  
hospital).

Mile 152 west of Whitehorse----- Dispensary—12 beds.

Tanacross, Alaska----- Dispensary—20 beds.

Gulkana, Alaska----- Dispensary—20 beds.

Fairbanks, Alaska----- Beds available under contract with St. Joseph's  
Hospital.

Headquarters of the director of the program and the chief sanitation officer were situated at Whitehorse, selected because of its central location. The director also maintained an office at Edmonton, Alberta, for liaison with the district office of the Public Roads Administration and the officer in charge of the Health Service, United States Army Corps of Engineers. This office also recruited personnel, arranged for hospitalization of cases referred from the various stations on the project, and maintained close contact with the insurance companies covering the project, the Compensation Boards of British Columbia and Alberta, and the United States Employees' Compensation Commission.

An office, under the supervision of an administrative assistant, was maintained at Seattle, Wash., for the procurement and shipment of supplies to the various stations. Supplies were shipped by water to Valdez, Alaska, for transport by truck to the Alaska stations; by water to Skagway, Alaska, for transshipment by rail over the White Pass and Yukon railroad to Whitehorse, and thence by truck to other points in the Yukon; by rail to Dawson Creek, British Columbia, for transshipment by truck to stations along the southern sector of the highway. Some supplies, urgently needed, were shipped by commercial air line or by cargo planes belonging to the United States Army Air Force Transport Command.

Throughout the period of organization and operation of the Alaska Highway medical and sanitary program, medical officers of the United States Army attached to various military units along the way gave the fullest cooperation and practical help in rendering medical care to civilian workers on the project. In the early stages of the program, before the necessary staff could be assembled and hospitals and dispensaries constructed and placed in operation, the services of these officers, freely offered at all times, were indispensable.

#### MEDICAL RELIEF AND STATISTICS

The professional staff consisted of 13 medical officers, 3 dental officers, 4 sanitary engineers, 23 nurses, and 2 administrative assistants.

During the fiscal year ended June 20, 1943, the following medical relief was furnished:

Out-patient treatments .....	46,907
Physical examinations.....	1,891
Hospital days.....	9,591
Operations performed (major and minor).....	693

For the most part, the types of cases treated were those normally encountered in the United States. The majority were general medical cases of a routine nature; next in volume were surgical cases, which included elective surgical operations as well as emergencies. The injuries, in traumatic cases, were either of moderate severity or so extensive as to cause immediate death. Mortality from injuries, however, was quite low, being only 0.037 per 1,000.

The venereal disease rate was unusually low, less than 1 percent of the total cases treated being venereal. This was due, it is believed, to the lack of opportunity to contract the diseases, rather than to any active campaign against venereal diseases.

During the summer months, insect bites constituted a minor, but annoying, problem. No insect-borne diseases were encountered. Men working in the "bush" wore headnets and gloves for protection against mosquitoes. The bite of a gnat (*Phlebotomus*, species undetermined) was more harassing, perhaps, than that of the mosquitoes. The bite of this insect frequently produced infected lesions which were comparatively slow in healing. Occasionally they were accompanied by transitory systemic reactions.

Morbidity and mortality statistics for the 4 months' period ended June 30, 1943, were as follows:

Morbidity rate due to illness.....	157.78 per 1,000
Morbidity rate due to injury.....	31.92 per 1,000
Mortality rate due to illness.....	0.179 per 1,000
Mortality rate due to injury.....	0.037 per 1,000

While exact figures are not available, the estimated total cost of construction of the dispensaries and the Kehr General Hospital is in the neighborhood of \$150,000.

SANITATION

A sanitary engineer was stationed in each of the two sectors of the highway. These officers made periodic inspections of all camps, reporting any deviation from standards of sanitation set up by the Sanitary Engineering Section, and they made definite recommendations for the correction of defects found. In the initial stages of camp construction, they gave technical advice with reference to water supply and sewage disposal and, when necessary, furnished plans and designs for water-supply and sewerage systems.

A highly successful water-sampling program was established by

the Sanitation Section. A scheduled weekly collection program was inaugurated, samples being collected from the various camps on the highway and shipped by Air Transport Command planes to the water-analysis laboratory at Whitehorse. When the water was found to be contaminated, steps were immediately taken to insure the potability of the water supply from which these samples were taken and were followed up later by laboratory checks. During the month of August 1943 alone, 236 water samples were examined at the laboratory. Wallace and Tiernan purification units, Army type, were of considerable assistance in handling the water-purification problem. These units combined pumping, filtration, and purification operations in one piece of equipment. However, because of late delivery, the usefulness of these units was limited. Chlorination of all water was required, and periodic checks were made to determine whether the chlorination was adequate. The facilities of this laboratory were available to other Government agencies.

#### COORDINATION WITH HEALTH SERVICE, ARMY CORPS OF ENGINEERS

To coordinate the two services, both of which rendered medical care to civilian workers, all commissioned officers of the Public Health Service, by request of the Secretary of War, were assigned to the Health Service of the United States Army Corps of Engineers on March 23, 1943. The medical and sanitary officers of the Public Health Service were concerned primarily with the care of those civilians engaged in highway construction under the Public Roads Administration; the officers of the Army Corps Health Service, with the care of those civilians engaged in the construction of various projects such as pipe-line and refinery construction, telephone lines, and various other developmental activities under the United States Army Corps of Engineers. This arrangement was mutually beneficial and prevented duplication of services and construction.

#### ACKNOWLEDGMENTS

The director of the medical and sanitary program was fortunate in having a hard-working, conscientious, and cooperative staff. The cooperation of J. S. Bright, district engineer in charge of the project, C. F. Capes and F. W. Andrews, construction engineers at Fort St. John and Whitehorse, respectively, was wholehearted and of great benefit. Mr. Pinkstaff, official staff photographer of the Public Roads Administration, furnished the excellent photographs accompanying this article. The invaluable assistance of the staff of the medical and sanitary program and of the many members of the Public Roads Administration who cooperated so willingly is gratefully acknowledged.

## **PATHOLOGIC CHANGES IN SHEEP RESULTING FROM EXPOSURE TO LOW BAROMETRIC PRESSURES<sup>1</sup>**

By JOHN W. MILLER, *Surgeon (R), United States Public Health Service*

The purpose of this paper is to present the pathologic picture of lethal exposure of sheep to low pressures.

Twelve sheep were subjected at normal temperature to reduced pressures equivalent to 31,000, 36,000, 40,000, and 46,000 feet altitude in an atmosphere of oxygen. The number of exposures ranged from 1 to 16. The intervals between the fatal exposure and the one immediately preceding were 1 to 14 days. The planned duration of exposure at the maximum altitude was 2 hours. All but one of the animals died during the exposure after one or more tests. The sheep sacrificed had survived thirteen 2-hour exposures at simulated altitudes of 36,000 and 40,000 feet. All animals were autopsied immediately after death.

Four conspicuous pathologic findings were observed in these animals: (1) air emboli, (2) epicardial and endocardial hemorrhages, (3) effusion in the serous cavities, and (4) contraction of the spleen. All of these manifestations were usually found in the same animal and the first three showed an appreciable relationship to each other.

*Air emboli.*—Air emboli were usually found in the vessels of the brain and heart but were also occasionally noted in the vessels of the diaphragm, the jugular, superior mesenteric, and portal veins, the subcutaneous tissue, and in the perirenal fat. The incidence of bubbles varied markedly in the individual sheep. Bubbles were present in the vessels of the brain alone in one sheep, in the brain and heart in two, in the brain and other tissues in three, in brain, heart, and other tissues in four, and in the heart and other tissues in one. Air embolism was greatest in the brain, somewhat less in the heart, and still less in the other tissues. In the brain the air bubbles were present both in the vessels and under the pia, along the sulci. They were generally over the cerebral cortex but were occasionally found in the vessels of the base. In the heart they were found only in the vessels, most frequently in the left branch, and in two instances in the right branch of coronary artery and vein. No gross emboli were found in the joints, bone marrow, testes, or adrenals.

*Cardiac hemorrhages.*—Petechial hemorrhages were found either in the endocardium, epicardium, or in both in eight of the animals dying as a result of the exposure. In the eleven sheep which died, these hemorrhagic areas occurred in the endocardium in six, in the epicardium in two, and in both in one. The average size of endocar-

<sup>1</sup> From the Industrial Hygiene Research Laboratory, National Institute of Health. This material was taken from experiments on altitude tolerance which were conducted by the Aviation Medicine Unit under the direction of Passed Assistant Surgeon Benjamin F. Jones.

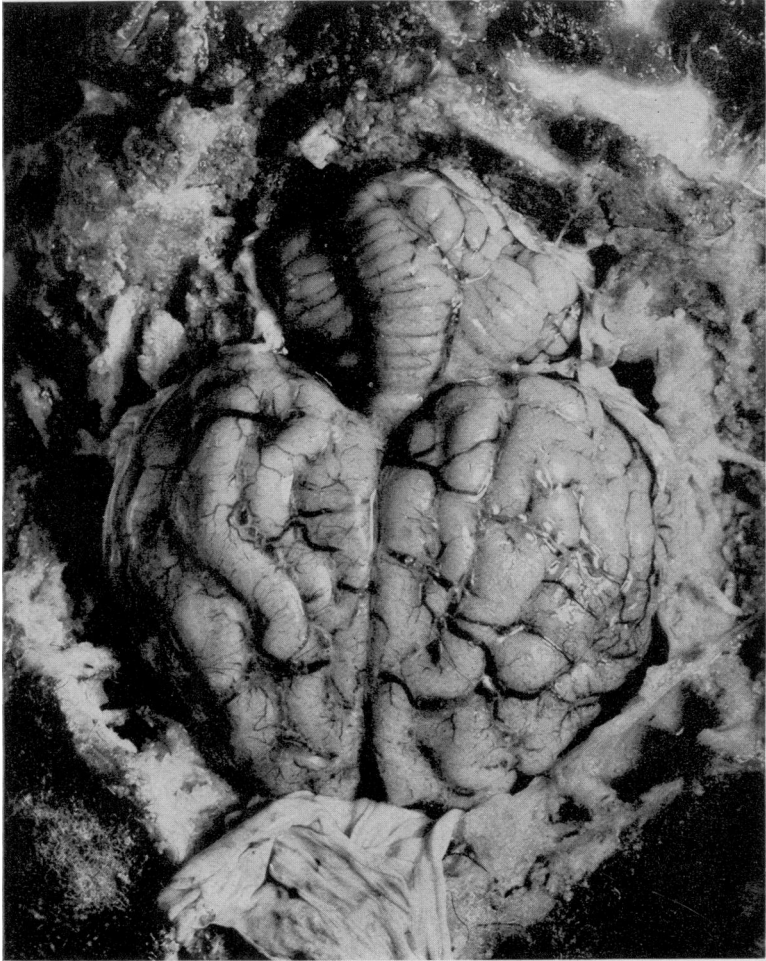


FIGURE 1.—Air bubbles in vessels and under pia mater of brain of sheep exposed to simulated high altitudes.

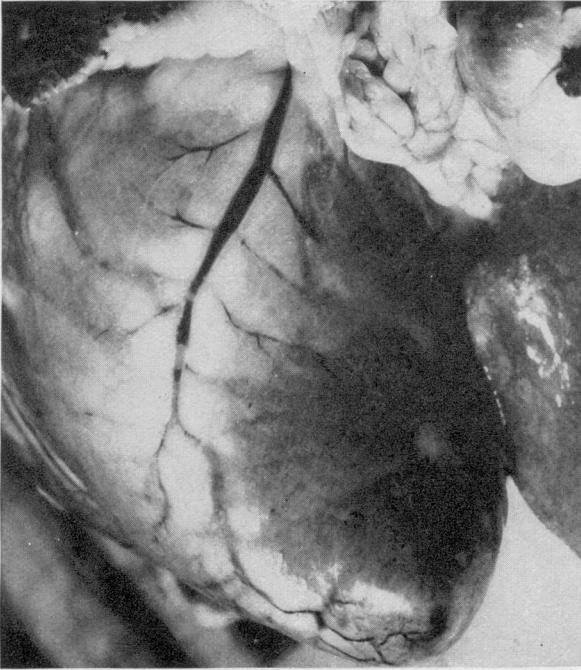


FIGURE 2.--Air emboli in coronary vessels. Small petechiae in epicardium of apex.

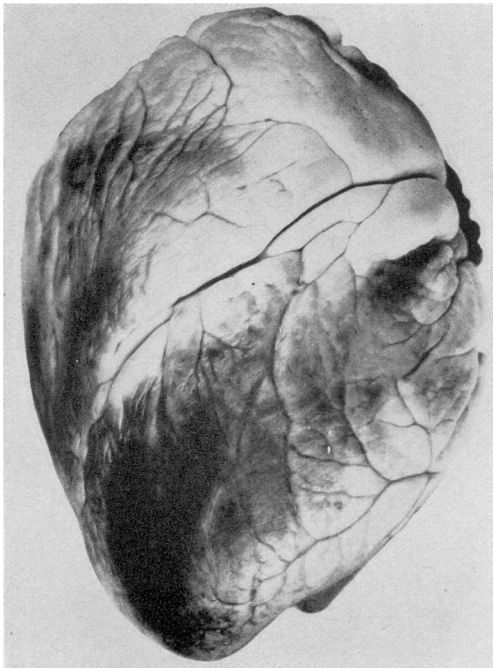


FIGURE 3.—Massive area of epicardial hemorrhage with softening of underlying myocardium.

dial hemorrhages was greater than those found in the epicardium. In all instances they were present only in the left ventricle. They varied from a few small petechial areas on the wall or papillary muscles to a single area completely covering the entire lining of the left ventricle. In the epicardium they were generally along the left branches of the coronary vessels or near the apex.

In one sheep a massive epicardial hemorrhage covered almost the entire surface of the left ventricle and the underlying muscle was soft and flabby. On gross section it presented the appearance of myocardial rupture. The endocardium of the left ventricle in this animal presented no ecchymoses.

*Effusions in serous cavities.*—Effusions of clear fluid were observed in the serous cavities in all but two of the sheep exposed to low pressure. It was present in the pleural cavities in six animals. The effusion was generally bilateral, and the amount varied from about 60 to 500 cc. Eight and 60 cc. were present in the pericardial cavity of two sheep. Small but abnormal amounts were found in both pericardial and pleural cavities of one sheep, while about 100 cc. were found in the peritoneal cavity of another. In all cases the fluid coagulated rapidly when the serous cavities were opened.

*Contracted spleen.*—The spleen was small and contracted in all of the sheep that died as a result of the exposure. It was also moderately contracted in the animal sacrificed following 2 hours of exposure at 40,000 feet altitude. In the two sheep exposed to oxygen alone the spleens were large, soft, and friable.

The condition found in the one animal sacrificed following the thirteenth exposure, while not as extensive as in some of the others, was similar. A moderate number of air bubbles were present in the left coronary artery and in the vessels of the cerebral cortex, while a few occurred under the pia along the sulci. About 75 cc. of clear straw-colored fluid which coagulated fairly rapidly was noted in each pleural cavity. The spleen was moderately contracted, but not as much as in the animals which died as result of low pressure. No epicardial or endocardial hemorrhages were present. In this animal it appears that the changes found did not exceed the limits of toleration to the reduced pressure.

There appeared to be a certain reciprocal relationship between the different pathologic manifestations. Air emboli were much less marked in average degree when the amount of serous effusion was increased. Cardiac hemorrhages were, however, slightly more marked in average degree when effusions were prominent, but no difference was noted in the relation between the presence of air emboli and cardiac hemorrhages. It is quite possible that these hemorrhages may be due to increased cardiac effort.

## SUMMARY

Four pathologic conditions—air emboli, epicardial and endocardial hemorrhage, serous effusion, and contracted spleen—were consistently present in 12 sheep exposed to simulated altitudes from 31,000 to 46,000 feet.

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**SICKNESS ABSENTEEISM AMONG INDUSTRIAL WORKERS,  
FINAL QUARTER OF 1943, WITH A NOTE ON THE OCCUR-  
RENCE OF THE RESPIRATORY DISEASES, 1934-43<sup>1</sup>**

By W. M. GAFAFER, *Principal Statistician, United States Public Health Service*

The accompanying data on absences of 8 days or longer accounted for by sickness and nonindustrial injuries are derived from analyses of periodic reports from sick benefit associations, company relief departments, and group insurance plans. The population covered represents over 260,000 male workers.

*Final quarter of 1943.*—Interest in table 1 centers around the respiratory group of diseases which shows an increase in frequency of 59 percent when the fourth quarter of 1943 is compared with the corresponding quarter of 1942. This change reflects principally the spectacular increase of 130 percent in influenza and grippe, and the increase of 30 percent in bronchitis. It will be observed that the frequency of pneumonia continues on the high level set by the fourth quarter of 1942.

The group of digestive diseases presents an increase of 14 percent. Among this group of diseases the increase of 34 percent for diseases of the stomach except cancer is noteworthy.

*Fourth quarters, 1934-43.*—The fourth quarter rates for the broad cause groups, and for influenza and grippe, are presented graphically for the 10 years 1934-43 in figure 1. It will be observed that for any selected cause group the rate for 1943 has never been equalled or exceeded during the 10-year period. Of particular interest is the upward movement of the respiratory group beginning in 1939, a movement which is at first slow and later relatively rapid. The rapid increase of the respiratory diseases definitely reflects the behavior of influenza and grippe. Attention is directed to the gradually increasing rates for the nonrespiratory-nondigestive diseases, and the relatively high level for 1941-43 determined by the rates for the digestive diseases. It is notable that the rate for influenza and grippe became sufficiently large in 1942 to exceed again the rate for the digestive diseases and that the further increase in 1943 was sufficiently large to exceed for the first time in the 10 years the rate for the nonrespiratory-nondigestive diseases.

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<sup>1</sup> From the Industrial Hygiene Division, Bureau of State Services. The report for the third quarter appeared in *PUBLIC HEALTH REPORTS*, 59: 363-367 (Mar. 17, 1944).



TABLE 1.—Average annual number of absences on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer among MALE employees in various industries, by cause, the fourth quarter of 1943 compared with the fourth quarter of 1942, and the year 1943 compared with the years 1938-42, inclusive

Cause. (Numbers in parentheses are disease title numbers from the International List of Causes of Death, 1939)	Annual number of absences per 1,000 males				
	Fourth quarter		Year		
	1943	1942	1943	1942	1938-42
Sickness and nonindustrial injuries <sup>1</sup> .....	147.7	111.9	136.7	106.3	96.8
Nonindustrial injuries (169-195).....	10.9	11.8	11.9	11.7	11.4
Sickness.....	136.8	100.1	124.8	94.6	85.4
Respiratory diseases.....	79.0	49.7	65.8	41.8	37.3
Tuberculosis of the respiratory system (13).....	.8	.8	.8	.8	.8
Influenza, grippé (33).....	44.4	19.3	28.5	15.7	16.0
Bronchitis, acute and chronic (106).....	10.8	8.3	10.6	6.8	5.5
Pneumonia, all forms (107-109).....	7.3	7.1	8.9	5.6	3.8
Diseases of the pharynx and tonsils (115b, 115c).....	4.6	5.0	6.6	5.2	5.0
Other respiratory diseases (104, 105, 110-114).....	11.1	9.2	10.4	7.7	6.2
Digestive diseases.....	16.7	14.7	16.8	16.1	14.7
Diseases of the stomach except cancer (117, 118).....	6.3	4.7	5.8	4.7	4.1
Diarrhea and enteritis (120).....	2.0	1.6	2.0	1.8	1.4
Appendicitis (121).....	4.2	4.0	4.4	4.9	4.8
Hernia (122a).....	1.6	1.7	1.9	1.8	1.6
Other digestive diseases (115a, 115d, 116, 122b-129).....	2.6	2.7	2.7	2.9	2.8
Nonrespiratory-nondigestive diseases.....	35.2	33.3	37.5	34.5	31.1
Infectious and parasitic diseases (1-12, 14-24, 26-29, 31, 32, 34-44) <sup>2</sup> .....	1.6	1.7	2.5	2.5	2.2
Rheumatism, acute and chronic (58, 59).....	3.5	3.7	4.4	3.9	3.8
Neurasthenia and the like (part of 84d).....	1.5	1.1	1.5	1.1	1.0
Neuralgia, neuritis, sciatica (87b).....	2.8	2.4	2.8	2.2	2.2
Other diseases of the nervous system (80-85, 87, except part of 84d, and 87b).....	1.6	1.2	1.6	1.2	1.2
Diseases of the heart and arteries, and nephritis (90-99, 102, 130-132).....	5.5	5.0	5.4	4.5	4.3
Other diseases of the genitourinary system (133-138).....	2.7	2.7	2.7	2.6	2.5
Diseases of the skin (151-153).....	3.2	2.8	3.2	2.9	2.8
Diseases of the organs of movement except diseases of the joints (156b).....	3.3	3.1	3.5	3.0	2.9
All other diseases (45-57, 60-79, 88, 89, 100, 101, 103, 154, 155, 156a, 157, 162).....	9.5	9.6	9.9	10.6	8.2
Ill-defined and unknown causes (200).....	5.9	2.4	4.7	2.2	2.3
Average number of males covered in the record.....	265,986	266,969	269,683	261,432	1,042,219
Number of organizations.....	18	21	21	21	-----

<sup>1</sup> Industrial injuries, venereal diseases, and a few numerically unimportant causes of disability are not reported.

<sup>2</sup> Except influenza and grippé, respiratory tuberculosis, and the venereal diseases.

The movement of the fourth quarter rates of three other causes of absenteeism of more than passing interest is shown graphically in figure 2. During the past 3 or 4 years the quarterly rates for bronchitis and diseases of the stomach except cancer moved upward, the former more rapidly than the latter. The quarterly rates for pneumonia, on the other hand, describe a more or less level trend to 1941 when the rate abruptly changes from 2.9 to 7.1 in 1942 and 7.3 in 1943.

When the fourth quarter rates for 1943 are related to the corresponding mean rates for the 10 years, three causes or cause groups emerge with ratios that are greater than 2, namely, influenza and grippé (2.76), respiratory diseases (2.14), and pneumonia (2.03).

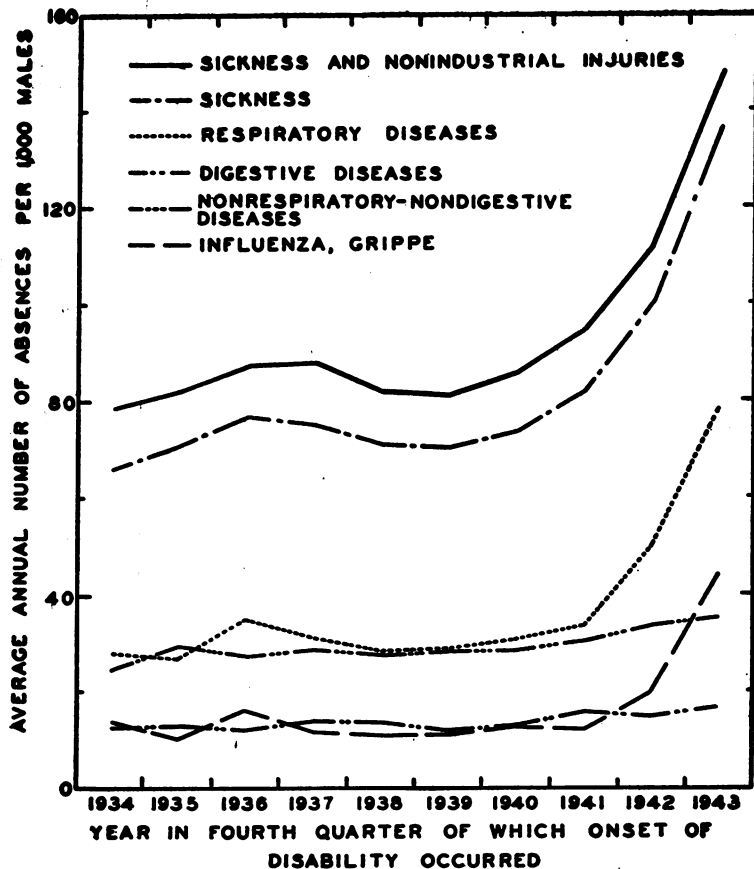


FIGURE 1.—Average annual number of absences per 1,000 males on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer, variation of the fourth quarter rates with time; experience of male employees in various industries, 1934-43, inclusive.

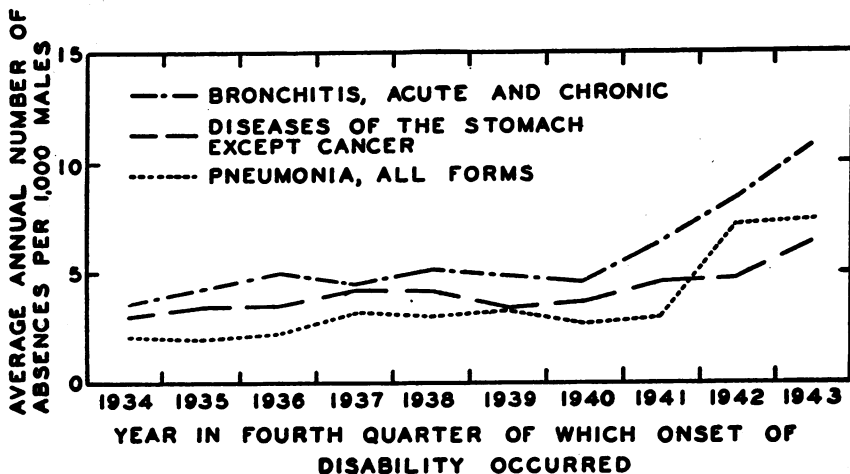


FIGURE 2.—Average annual number of absences per 1,000 males on account of certain selected causes disabling for 8 consecutive calendar days or longer, variation of the fourth quarter rates with time; experience of male employees in various industries, 1934-43, inclusive.

## PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

March 26–April 22, 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 April 22, the number reported for the corresponding period in 1943, and the median for the years 1939–43.

### DISEASES ABOVE MEDIAN PREVALENCE

*Measles*.—The number of cases of measles dropped from about 306,000 during the preceding week to 126,248 for the 4 weeks ended April 22. Compared with preceding years the current incidence was about 20 percent above the 1943 figure for this period and more than 30 percent above the 1939–43 median. All sections of the country contributed to the excess. In 5 of the 9 geographic regions the number of cases was more than twice the normal seasonal expectancy and smaller increases were reported from each of the other 4 regions.

*Meningococcus meningitis*.—The number of cases (2,005) of this disease reported during the current period was about 85 percent of the number reported for the corresponding period in 1943, but it was about 9 times the 1939–43 median. Practically every section of the country was represented by States with a relatively high incidence, viz, New York (212 cases), Illinois (153), Pennsylvania (141), Ohio (137), California (136), Michigan (106), Missouri (87), Tennessee and Texas (69 each), Delaware (57), and Connecticut (37)—more than 60 percent of the total cases reported occurred in those 12 States. The incidence was higher than last year in only 3 sections, but every section reported an increase over the preceding 5-year median; the excesses ranged from 4.5 times the median in the South Atlantic region to more than 18 times the median in the East North Central region.

*Poliomyelitis*.—For the country as a whole this disease was only slightly above the normal seasonal level, 80 cases, as compared with a 5-year median of 74 cases. A comparison of geographic regions, however, shows that in the Middle Atlantic region there were twice as many cases as might have been expected; in the West South Central region the number of cases (20) was 2.5 times the median, while in the Pacific region the number of cases (21) was 3.5 times the median; in all other sections the situation was more favorable.

*Scarlet fever*.—For the current 4-week period there were 29,070 cases of scarlet fever reported, an increase over the 1939–43 median of

approximately 12,000 cases. All sections of the country contributed to the increase of this disease. The greatest increase was reported from the Pacific region, where the number of cases (3,161) was about 4 times the 5-year median, and the smallest increase was reported from the East South Central region, with an increase over the median of less than 30 percent.

#### DISEASES BELOW MEDIAN PREVALENCE

*Diphtheria.*—For the 4 weeks ended April 22 there were 781 cases of diphtheria reported, as compared with 903 for the corresponding period in 1943, and a preceding 5-year median of 1,055 cases. The highest incidence was reported from the Pacific region, the number of cases (147) in that region being about 80 percent greater than the 5-year median. The number of cases occurring in the New England region was slightly above normal, but in all other regions the incidence was relatively low. For the country as a whole the incidence was the lowest on record for this period.

*Influenza.*—The number of cases (8,650) of influenza was less than 70 percent of the 1939–43 median for this period. In the New England region the number of cases was 4 times the 5-year median, but other regions reported a comparatively low incidence. After reaching an unusually high level earlier in the year, the incidence of influenza for the country as a whole dropped during the current period to the lowest level since 1938; in that year, which was the lowest on record, the cases reported for this period totaled approximately 4,800.

*Smallpox.*—For the current period there were 37 cases of smallpox reported, as compared with 105 cases in 1943, and a median of 146 cases for the preceding 5 years. The Mountain region reported 8 cases as compared with a 5-year median of 2 cases, but in all other sections the situation was most favorable.

*Typhoid and paratyphoid fever.*—While the number of cases (255) of this disease was slightly higher than the number reported for the corresponding period in 1943, it was only about 80 percent of the 1939–43 median. In the Pacific section the number of cases was almost twice the 5-year median, and in the Mountain section the incidence was about normal, but all other regions reported very appreciable declines from the normal seasonal expectancy.

*Whooping cough.*—The number of cases of this disease was also relatively low, 6,805 cases being reported for the current period, as compared with a 5-year median of 14,592 cases. The situation was favorable in all sections of the country, but especially so in the Middle Atlantic and East North Central sections, where the incidence was the lowest in the 7 years for which these data are available.

*Number of reported cases of 9 communicable diseases in the United States during the 4-week period Mar. 26-Apr. 23, 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 <sup>1</sup>			Measles <sup>2</sup>		
United States.....	781	903	1,055	8,650	12,335	12,684	126,248	104,809	93,649
New England.....	29	14	24	108	37	27	8,474	10,300	7,754
Middle Atlantic.....	99	163	163	72	145	145	20,955	23,935	10,294
East North Central.....	99	176	176	427	510	976	26,395	26,587	9,652
West North Central.....	60	62	83	189	108	298	10,424	8,226	7,223
South Atlantic.....	114	118	176	2,486	4,171	4,240	22,005	7,035	9,332
East South Central.....	68	62	86	606	1,076	1,262	3,443	4,341	1,634
West South Central.....	136	152	168	3,809	5,255	5,255	15,895	5,963	5,963
Mountain.....	29	74	70	609	681	706	4,643	7,577	3,930
Pacific.....	147	82	82	344	362	1,232	14,014	7,945	7,945
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	2,005	2,390	225	80	81	74	29,070	17,096	17,096
New England.....	130	274	14	1	3	2	2,499	3,091	1,315
Middle Atlantic.....	440	523	52	10	5	5	6,540	4,423	4,574
East North Central.....	490	272	25	7	5	9	7,992	4,247	5,632
West North Central.....	152	143	9	4	5	5	3,385	1,552	1,552
South Atlantic.....	252	441	56	9	6	10	2,836	1,120	871
East South Central.....	175	248	35	5	14	7	782	475	620
West South Central.....	145	163	22	20	7	8	566	492	336
Mountain.....	82	79	6	3	14	5	1,309	855	451
Pacific.....	169	247	12	21	22	6	3,161	841	778
	Smallpox			Typhoid and paratyphoid fever			Whooping cough <sup>3</sup>		
United States.....	37	105	146	255	244	308	6,805	17,158	14,592
New England.....	0	0	0	7	17	14	527	1,217	1,291
Middle Atlantic.....	0	0	0	40	37	54	960	3,164	3,276
East North Central.....	5	38	38	27	37	37	849	3,343	3,346
West North Central.....	8	8	48	8	10	15	362	1,031	531
South Atlantic.....	3	13	6	63	52	79	1,533	2,413	2,265
East South Central.....	4	6	15	19	23	35	463	765	666
West South Central.....	8	32	33	39	40	51	946	2,903	1,399
Mountain.....	8	2	2	15	16	14	547	577	815
Pacific.....	1	6	14	37	12	20	619	1,745	1,722

<sup>1</sup> Mississippi and New York excluded; New York City included.

<sup>2</sup> Mississippi excluded.

#### MORTALITY, ALL CAUSES

For the 4 weeks ended April 22 there were 37,645 deaths reported to the Bureau of the Census by 93 large cities, an average of 9,411 deaths per week. The average number of deaths reported for the corresponding weeks in 1940-43 was 9,047. The number of deaths was higher during each week of the current 4-week period than the average for its corresponding week in 1940-43, and the total number of deaths for the 4 weeks represented an increase over the preceding 3-year average of about 4 percent. The greatest excesses in the number of deaths were reported from the Middle Atlantic and East North Central regions. The Mountain region alone reported a decrease in the number of deaths from the preceding 3-year average.

## TOXICITY AND POTENTIAL DANGERS OF PENTA-ERYTHRITOL-TETRANITRATE (PETN)<sup>1</sup>

### A Review

The toxicity and potential dangers of penta-erythritol-tetranitrate were studied. Methods for the determination of aliphatic nitrate esters and of nitrite in biological fluids are described. It was shown that *in vitro* and *in vivo* Petn is a very stable compound as compared with erythritol-tetranitrate and nitroglycerine. Petn is absorbed from the gastro-intestinal tract, through the lungs, and, at best, very slowly through the skin. In man Petn has a very moderate effect on the circulatory functions, less than that observed with erythritol-tetranitrate. It is neither a primary irritant nor a strong sensitizer. In dogs Petn causes changes of the respiration, circulation, and spinal pressure similar to those observed with erythritol-tetranitrate and nitroglycerine, being, however, less potent than the former and much less effective than the latter. Continued feeding of Petn in doses of 2 mg. per kilo over a period of 1 year does not cause in rats untoward effects on their growth, their blood picture, or their lungs, livers, kidneys, spleens, femora, or brains, and specifically no injuries of the vascular walls. The customary methods of good housekeeping and of personal hygiene should be sufficient to prevent injurious effects in workers handling this material.

### DEATHS DURING WEEK ENDED APRIL 29, 1944

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

	Week ended Apr. 29, 1944	Corresponding week, 1943
<b>Data for 93 large cities of the United States:</b>		
Total deaths.....	9,332	10,079
Average for 3 prior years.....	9,070	-----
Total deaths, first 17 weeks of year.....	169,772	171,544
Deaths under 1 year of age.....	609	671
Average for 3 prior years.....	588	-----
Deaths under 1 year of age, first 17 weeks of year.....	10,737	11,942
<b>Data from industrial insurance companies:</b>		
Policies in force.....	66,339,327	65,501,549
Number of death claims.....	12,498	12,537
Deaths claims per 1,000 policies in force, annual rate.....	9.8	10.0
Death claims per 1,000 policies, first 17 weeks of year, annual rate.....	11.1	10.6

<sup>1</sup> Toxicity and potential dangers of penta-erythritol-tetranitrate (Petn). By W. F. von Oettingen, D. D. Donahue, A. H. Lawton, A. R. Monaco, H. Yagoda, and P. J. Valser. Pub. Health Bull. No. 282. Government Printing Office, 1944. For sale by the Superintendent of Documents, Washington 25, D. C. Price 10 cents.

# PREVALENCE OF DISEASE

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

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED MAY 6, 1944

#### Summary

A further decline occurred in the incidence of meningococcus meningitis. A total of 382 cases was reported, as compared with 449 last week, 605 for the corresponding week last year, and a 5-year (1939-43) median of 47. Decreases were reported in all of the nine geographic divisions except the South Atlantic, Mountain, and Pacific areas. Eight States reporting currently 15 or more cases each are as follows (figures for last week in parentheses):

*Increases*—Pennsylvania 40 (34), Texas 21 (18), California 25 (22); *decreases*—New York 50 (56), New Jersey 16 (21), Ohio 31 (41), Illinois 22 (43), Missouri 15 (22). The number of cases reported for the year to date is 9,465, as compared with 8,817 for the same period last year and a 5-year median of 897.

The incidence of both measles and scarlet fever declined. Totals reported are 26,067 for measles and 6,672 for scarlet fever, as compared with 29,995 and 7,439, respectively, for last week. The current figures are approximately 10 and 73 percent above the respective 5-year medians, and the cumulative figures (454,635 for measles and 112,268 for scarlet fever) are 38 percent and 56 percent, respectively, above the medians.

Current totals reported for diphtheria, influenza, poliomyelitis, typhoid fever, and whooping cough are below both the figures for last week and the corresponding 5-year medians. A total of 15 cases of smallpox was reported, as compared with 9 for the preceding week, and a 5-year median of 71. The current figure is below that for any corresponding week of prior years.

Cumulative figures for other diseases included in the following table (figures for the corresponding period last year in parentheses) are as follows: Anthrax 17 (25), dysentery, all forms 5,652 (4,863), encephalitis, infectious, 207 (200), leprosy 11 (8), Rocky Mountain spotted fever 15 (40), tularemia 181 (291), typhus fever, endemic, 722 (817).

A total of 8,922 deaths was registered for the week in 93 large cities of the United States, as compared with 9,322 last week and a 3-year (1941-43) average of 8,772. The aggregate for the year to date is 178,684, as compared with 181,060 for the same period last year.

*Telegraphic morbidity reports from State health officers for the week ended May 6, 1944, and comparison with corresponding week of 1943 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		
	Week ended		Median 1939-43	Week ended		Median 1939-43	Week ended		Median 1939-43	Week ended		Median 1939-43
	May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943	
<b>NEW ENGLAND</b>												
Maine.....	2	0	0	1	1	238	15	142	1	2	0	0
New Hampshire.....	0	0	0	2		28	74	13	0	3	0	0
Vermont.....	0	0	1			145	276	72	0	1	0	0
Massachusetts.....	8	2	2			952	1,762	1,264	8	33	2	0
Rhode Island.....	1	1	1	23		102	11	66	2	14	0	0
Connecticut.....	0	0	1		1	610	442	442	7	9	1	1
<b>MIDDLE ATLANTIC</b>												
New York.....	12	11	15	1	13	1,624	3,628	2,181	50	110	7	7
New Jersey.....	1	5	4		17	1,262	2,050	906	16	12	3	3
Pennsylvania.....	10	5	19	2	1	818	1,678	1,678	40	34	5	5
<b>EAST NORTH CENTRAL</b>												
Ohio.....	8	16	16	10	14	591	899	500	31	21	1	1
Indiana.....	4	1	6	3	22	261	486	216	9	10	0	0
Illinois.....	5	29	20	40	18	719	1,942	396	22	26	1	1
Michigan.....	5	5	4	1	63	2,067	2,286	629	13	12	1	1
Wisconsin.....	0	0	0	51	38	2,293	1,854	1,389	5	5		
<b>WEST NORTH CENTRAL</b>												
Minnesota.....	6	3	1	1		511	390	390	4	1	0	0
Iowa.....	2	1	2			278	249	249	2	4	0	0
Missouri.....	0	2	2	3	3	183	282	282	15	13	2	2
North Dakota.....	1	0	1	55	27	6	182	31	1	0	0	0
South Dakota.....	0	0	0			39	86	23	0	3	1	1
Nebraska.....	3	1	1	8	3	220	157	157	2	0	0	0
Kansas.....	2	2	4		1	633	645	645	5	5	0	0
<b>SOUTH ATLANTIC</b>												
Delaware.....	0	0	0			30	75	23	3	7	1	1
Maryland.....	7	1	3	6	10	664	223	292	10	25	3	3
District of Columbia.....	0	1	1	1	2	179	77	121	0	5	1	1
Virginia.....	4	4	5	143	180	680	452	452	14	21	3	3
West Virginia.....	5	3	5	15	13	416	52	60	5	6	2	2
North Carolina.....	4	7	11	1	8	1,136	353	543	8	21	2	2
South Carolina.....	2	2	5	229	422	349	134	134	4	9	2	2
Georgia.....	1	4	3	2	29	123	229	164	3	5	1	1
Florida.....	2	2	4	3	10	221	87	220	10	12	0	0
<b>EAST SOUTH CENTRAL</b>												
Kentucky.....	1	4	4	165	7	153	290	95	3	20	3	3
Tennessee.....	6	4	4	26	32	196	393	190	10	19	1	1
Alabama.....	5	4	5	21	60	322	156	198	11	9	1	1
Mississippi.....	1	5	5						4	13	1	1
<b>WEST SOUTH CENTRAL</b>												
Arkansas.....	0	4	4	53	16	58	162	122	0	3	0	0
Louisiana.....	7	2	2	9	5	5	124	173	2	5	2	2
Oklahoma.....	4	4	5	34	14	61	507	52	3	2	2	2
Texas.....	30	13	19	379	512	511	2,993	647	1,120	21	15	2
<b>MOUNTAIN</b>												
Montana.....	3	0	1	5	12	12	105	145	81	2	0	0
Idaho.....	0	0	0		2		174	58	57	0	6	0
Wyoming.....	1	0	0		6		104	162	67	0	0	0
Colorado.....	4	11	11	19	18	18	299	576	384	3	1	0
New Mexico.....	0	0	0	8	3	1	136	14	35	0	0	0
Arizona.....	1	0	1	36	42	56	150	36	98	1	0	0
Utah.....	0	1	0	25	13	13	33	179	179	1	6	0
Nevada.....	0	0	0				132	16	2	1	0	0
<b>PACIFIC</b>												
Washington.....	2	7	1				307	389	389	2	14	1
Oregon.....	3	1	1	16	30	20	191	332	226	3	4	1
California.....	27	20	11	29	71	70	3,612	1,186	1,186	25	59	1
<b>Total</b> .....	<b>190</b>	<b>188</b>	<b>211</b>	<b>1,426</b>	<b>1,732</b>	<b>1,732</b>	<b>26,067</b>	<b>26,032</b>	<b>23,979</b>	<b>382</b>	<b>605</b>	<b>47</b>
<b>18 weeks</b> .....	<b>4,184</b>	<b>4,739</b>	<b>5,070</b>	<b>329,607</b>	<b>70,068</b>	<b>141,425</b>	<b>454,635</b>	<b>340,866</b>	<b>329,134</b>	<b>9,465</b>	<b>8,817</b>	<b>897</b>

1 New York City only.



Telegraphic morbidity reports from State health officers for the week ended May 6, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended		Median 1939-43	Week ended		Median 1939-43	Week ended		Median 1939-43	Week ended		Median 1939-43
	May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943		May 6, 1944	May 8, 1943	
<b>NEW ENGLAND</b>												
Maine.....	0	0	0	55	12	14	0	0	0	0	0	0
New Hampshire.....	0	0	0	11	14	4	0	0	0	0	0	0
Vermont.....	0	0	0	9	15	7	0	0	0	1	0	0
Massachusetts.....	0	0	0	365	472	196	0	0	0	0	0	0
Rhode Island.....	0	0	0	22	28	12	0	0	0	2	0	0
Connecticut.....	0	0	0	100	124	77	0	0	0	1	1	1
<b>MIDDLE ATLANTIC</b>												
New York.....	1	3	1	595	553	553	0	0	0	2	7	5
New Jersey.....	0	0	0	235	148	223	0	0	0	0	0	3
Pennsylvania.....	0	0	0	757	262	388	0	0	0	7	0	7
<b>EAST NORTH CENTRAL</b>												
Ohio.....	0	2	1	546	320	320	0	6	1	4	0	9
Indiana.....	0	0	0	253	78	103	4	1	6	2	2	1
Illinois.....	0	0	0	419	156	287	0	0	2	1	2	4
Michigan.....	0	1	0	224	112	285	0	0	1	1	1	1
Wisconsin.....	0	1	0	384	315	167	2	1	1	2	0	0
<b>WEST NORTH CENTRAL</b>												
Minnesota.....	0	0	0	161	70	77	0	0	2	0	0	0
Iowa.....	0	0	0	225	57	53	2	0	2	0	0	1
Missouri.....	0	0	0	129	91	81	0	0	3	3	1	1
North Dakota.....	0	0	0	30	11	9	0	0	1	0	0	1
South Dakota.....	0	0	0	39	13	15	0	3	1	0	0	0
Nebraska.....	0	0	0	66	17	23	1	0	0	0	1	0
Kansas.....	2	1	1	81	37	46	1	0	0	0	0	1
<b>SOUTH ATLANTIC</b>												
Delaware.....	0	0	0	20	0	9	0	0	0	0	0	0
Maryland.....	0	0	0	260	136	40	0	0	0	1	2	2
District of Columbia.....	0	0	0	146	22	14	0	0	0	1	0	1
Virginia.....	0	0	0	84	39	31	0	0	0	3	1	1
West Virginia.....	0	0	0	85	25	30	0	0	0	1	1	3
North Carolina.....	0	0	0	35	37	23	0	0	0	2	2	1
South Carolina.....	0	0	0	1	2	3	0	0	0	3	1	3
Georgia.....	0	0	0	25	6	12	0	0	0	0	2	2
Florida.....	3	0	0	5	12	3	0	0	0	2	4	4
<b>EAST SOUTH CENTRAL</b>												
Kentucky.....	0	0	0	76	65	65	0	0	0	1	0	6
Tennessee.....	0	0	0	62	41	42	0	1	0	1	1	2
Alabama.....	0	0	0	9	11	12	1	3	1	3	2	2
Mississippi.....	0	0	0	2	5	5	1	1	1	1	1	1
<b>WEST SOUTH CENTRAL</b>												
Arkansas.....	1	0	0	7	0	1	0	0	0	2	2	2
Louisiana.....	0	0	0	6	10	6	1	0	0	3	2	2
Oklahoma.....	1	0	1	27	12	18	0	0	0	2	0	0
Texas.....	1	4	2	63	48	41	0	2	5	8	3	6
<b>MOUNTAIN</b>												
Montana.....	1	0	0	48	21	21	0	0	0	0	0	1
Idaho.....	0	0	0	37	112	5	0	0	0	0	0	0
Wyoming.....	0	0	0	16	3	9	0	0	0	0	0	0
Colorado.....	0	0	0	61	59	30	1	0	0	0	0	0
New Mexico.....	0	0	0	30	4	6	0	0	0	1	1	1
Arizona.....	0	4	0	13	9	6	0	0	0	0	1	0
Utah.....	0	0	0	73	46	11	0	0	0	0	6	0
Nevada.....	0	0	0	7	0	0	0	0	0	0	0	0
<b>PACIFIC</b>												
Washington.....	0	0	0	404	37	35	0	0	0	0	0	0
Oregon.....	1	0	0	124	18	13	0	0	4	0	0	1
California.....	3	10	3	238	174	126	1	0	0	6	4	4
Total.....	14	26	19	6,672	3,859	3,859	15	17	71	67	50	102
18 weeks.....	389	455	418	112,268	71,761	71,761	213	476	823	1,290	1,029	1,405

Telegraphic morbidity reports from State health officers for the week ended May 6, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Whooping cough			Week ended, May 6, 1944								
	Week ended		Median 1939-43	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularia	Typhus fever
	May 6, 1944	May 8, 1943			Amebic	Bacillary	Unspecified					
<b>NEW ENGLAND</b>												
Maine.....	32	41	30	0	0	0	0	0	0	0	0	0
New Hampshire.....	1	6	6	0	0	0	0	0	0	0	0	0
Vermont.....	7	12	24	0	0	0	0	0	0	0	0	0
Massachusetts.....	93	136	166	0	0	3	0	2	0	0	0	0
Rhode Island.....	4	34	21	0	0	0	0	0	0	0	0	0
Connecticut.....	18	22	46	0	0	1	0	1	0	0	0	0
<b>MIDDLE ATLANTIC</b>												
New York.....	124	294	294	0	0	8	0	2	0	0	0	0
New Jersey.....	24	181	181	0	3	0	0	1	0	0	0	1
Pennsylvania.....	105	208	327	0	0	0	0	0	0	0	1	0
<b>EAST NORTH CENTRAL</b>												
Ohio.....	74	154	173	0	2	0	0	1	0	0	0	0
Indiana.....	18	47	47	0	0	0	1	0	0	0	0	0
Illinois.....	34	157	157	0	0	0	0	4	0	0	0	0
Michigan.....	83	239	157	0	0	0	0	0	0	0	0	0
Wisconsin.....	68	209	143	0	1	0	0	1	0	0	0	0
<b>WEST NORTH CENTRAL</b>												
Minnesota.....	12	90	30	0	2	0	0	0	0	0	0	0
Iowa.....	0	21	21	0	0	0	0	0	0	0	0	0
Missouri.....	6	22	15	0	0	0	0	1	0	0	0	0
North Dakota.....	1	28	13	0	0	0	0	0	0	0	0	0
South Dakota.....	0	13	1	0	0	0	0	0	0	0	0	0
Nebraska.....	9	8	8	0	0	0	0	0	0	0	0	0
Kansas.....	44	136	40	0	0	0	0	1	0	0	0	0
<b>SOUTH ATLANTIC</b>												
Delaware.....	1	0	5	0	0	0	0	0	0	0	0	0
Maryland.....	24	128	88	0	0	0	1	0	0	1	0	0
District of Columbia.....	3	28	14	0	0	0	38	0	0	0	0	0
Virginia.....	63	118	61	0	0	0	0	0	0	0	0	0
West Virginia.....	31	51	33	0	0	0	0	0	0	0	0	0
North Carolina.....	97	203	203	0	0	0	0	0	0	0	0	3
South Carolina.....	98	67	67	0	1	11	0	0	0	0	1	0
Georgia.....	14	11	21	0	0	3	0	0	0	0	0	8
Florida.....	42	52	52	0	0	0	1	0	0	0	0	14
<b>EAST SOUTH CENTRAL</b>												
Kentucky.....	75	39	79	0	0	0	0	0	0	0	0	0
Tennessee.....	29	72	47	0	0	0	0	0	0	0	0	1
Alabama.....	37	56	44	0	2	0	0	0	0	0	0	9
Mississippi.....	0	0	0	0	0	0	0	0	0	0	1	2
<b>WEST SOUTH CENTRAL</b>												
Arkansas.....	16	45	27	0	1	7	0	0	0	0	2	0
Louisiana.....	1	5	5	0	1	0	0	0	0	0	1	3
Oklahoma.....	39	37	33	0	0	0	0	0	0	0	0	0
Texas.....	195	612	347	0	10	248	0	2	1	0	0	30
<b>MOUNTAIN</b>												
Montana.....	3	15	15	0	0	0	0	0	0	0	1	0
Idaho.....	2	14	3	0	0	0	0	0	0	0	0	0
Wyoming.....	6	3	2	0	0	0	0	0	0	1	0	0
Colorado.....	53	23	23	0	0	0	0	0	0	0	1	0
New Mexico.....	4	4	29	0	0	0	0	0	0	0	0	0
Arizona.....	14	32	26	0	0	0	49	0	0	0	0	0
Utah.....	48	66	66	0	0	0	0	0	0	0	1	0
Nevada.....	36	3	0	0	0	0	0	1	0	1	0	0
<b>PACIFIC</b>												
Washington.....	26	46	64	0	0	0	0	0	0	0	0	0
Oregon.....	8	19	19	0	0	0	0	0	0	0	0	0
California.....	93	582	354	0	1	10	0	1	1	0	0	1
<b>Total.....</b>	<b>1,817</b>	<b>4,389</b>	<b>3,977</b>	<b>0</b>	<b>24</b>	<b>291</b>	<b>90</b>	<b>18</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>72</b>
18 weeks.....	32,524	72,653	72,625	17	473	3,959	1,220	207	11	15	181	722
18 weeks, 1943.....				25	528	3,495	840	200	8	40	291	817

## WEEKLY REPORTS FROM CITIES

City reports for week ended April 22, 1944

This table lists the reports from 85 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	Ecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
<b>NEW ENGLAND</b>												
Maine:												
Portland.....	0	0		0	40	1	0	0	8	0	0	3
New Hampshire:												
Concord.....	0	0		0	2	0	1	0	0	0	0	1
Vermont:												
Barre.....	0	0		0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston.....	1	0		1	163	3	14	0	75	0	0	8
Fall River.....	0	0		0	18	0	0	0	2	0	0	2
Springfield.....	0	0		0	41	0	2	0	46	0	1	3
Rhode Island:												
Providence.....	0	0		1	128	2	3	0	17	0	0	2
Connecticut:												
Bridgeport.....	0	1		0	26	2	2	0	0	0	0	0
Hartford.....	0	0		0	7	0	0	0	20	0	0	0
New Haven.....	0	0		0	113	2	2	0	3	0	0	0
<b>MIDDLE ATLANTIC</b>												
New York:												
Buffalo.....	0	0		0	7	1	5	0	9	0	0	1
New York.....	15	3	2	2	1,334	34	79	0	304	0	0	36
Rochester.....	0	0		0	12	1	4	0	6	0	0	1
Syracuse.....	0	0		1	4	2	2	0	11	0	0	3
New Jersey:												
Camden.....	1	0		0	11	1	4	0	64	0	1	0
Newark.....	0	0	1	1	255	4	8	0	15	0	0	5
Trenton.....	0	0		0	13	0	3	0	16	0	0	1
Pennsylvania:												
Philadelphia.....	0	0	6	4	45	9	40	0	132	0	2	7
Pittsburgh.....	2	0	3	3	15	11	16	0	11	0	0	2
Reading.....	0	0		0	3	1	2	0	0	0	0	0
<b>EAST NORTH CENTRAL</b>												
Ohio:												
Cincinnati.....	0	0		1	41	5	2	0	61	0	0	6
Cleveland.....	0	1	4	0	69	4	9	0	83	0	0	14
Columbus.....	0	0		0	57	2	5	0	3	0	0	8
Indiana:												
Fort Wayne.....	0	0		0	2	0	2	0	5	0	0	0
Indianapolis.....	3	0		0	59	2	6	0	41	0	0	1
South Bend.....	0	0		0	1	0	0	0	5	0	0	1
Terre Haute.....	0	0	1	0	3	0	1	0	3	0	0	0
Illinois:												
Chicago.....	1	0	3	0	166	25	21	0	199	0	0	13
Springfield.....	0	0		0	36	0	6	0	5	0	0	2
Michigan:												
Detroit.....	3	0		0	120	8	17	0	135	0	1	9
Flint.....	0	0		0	0	0	0	0	3	0	0	1
Grand Rapids.....	0	0	1	49	2	0	0	0	6	0	0	0
Wisconsin:												
Kenosha.....	0	0		0	179	0	0	0	3	0	0	0
Milwaukee.....	0	1		0	215	6	3	0	79	0	0	10
Racine.....	0	0		0	51	0	0	0	3	0	0	3
Superior.....	0	0		0	3	0	0	0	32	0	0	0
<b>WEST NORTH CENTRAL</b>												
Minnesota:												
Duluth.....	0	0		0	65	0	4	0	25	0	0	4
Minnesota.....	2	0		0	286	3	2	0	40	0	0	4
St. Paul.....	0	0		0	317	1	2	0	29	0	1	5
Missouri:												
Kansas City.....	0	0		0	115	2	3	0	36	0	0	1
St. Joseph.....	0	0		0	6	1	0	0	7	0	1	1
St. Louis.....	0	1		0	115	6	11	0	71	0	0	5
North Dakota:												
Fargo.....	0	0		0	1	1	1	0	4	0	0	0
Nebraska:												
Omaha.....	8	0		0	38	0	5	0	22	0	0	1
Kansas:												
Topeka.....	0	0		0	75	0	0	0	8	0	1	0
Wichita.....	0	0	1	0	0	0	3	0	6	0	0	0

City reports for week ended April 22, 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								
<b>SOUTH ATLANTIC</b>												
Delaware:												
Wilmington.....	0	0		0	1	1	1	0	3	0	0	0
Maryland:												
Baltimore.....	10	0	2	1	679	7	10	0	112	0	1	17
Cumberland.....	0	0		0	0	0	0	0	0	0	0	0
Frederick.....	0	0		0	2	0	0	0	2	0	0	0
District of Columbia:												
Washington.....	0	0	3	1	238	3	9	0	137	0	0	2
Virginia:												
Lynchburg.....	0	0		0	15	0	0	0	2	0	0	1
Richmond.....	0	0	1	2	63	1	4	0	5	0	0	0
Roanoke.....	0	0		0	17	0	0	0	0	0	0	1
West Virginia:												
Charleston.....	0	0		0	1	0	0	0	15	0	0	0
Wheeling.....	0	0		0	27	0	1	0	15	0	0	0
North Carolina:												
Raleigh.....	0	0		0	0	0	0	0	1	0	0	4
Wilmington.....	0	0		0	66	0	1	1	0	0	0	13
Winston-Salem.....	0	0		0	39	0	0	0	0	0	0	0
South Carolina:												
Charleston.....	0	0	2	1	6	2	3	0	1	0	0	0
Georgia:												
Atlanta.....	1	0	3	0	19	2	2	0	16	0	0	0
Brunswick.....	0	0		0	0	2	0	0	0	0	0	3
Savannah.....	0	0	1	1	4	0	1	0	0	0	0	0
Florida:												
Tampa.....	0	0	2	0	12	2	0	0	6	0	0	0
<b>EAST SOUTH CENTRAL</b>												
Tennessee:												
Memphis.....	0	0	2	0	39	5	3	0	39	0	1	2
Nashville.....	0	0		0	27	0	1	0	11	0	0	1
Alabama:												
Birmingham.....	0	0	2	1	13	1	5	0	1	0	0	0
Mobile.....	1	0		0	8	1	0	0	2	0	0	0
<b>WEST SOUTH CENTRAL</b>												
Arkansas:												
Little Rock.....	0	0		0	8	0	1	0	0	0	0	0
Louisiana:												
New Orleans.....	1	0	3	1	29	5	14	1	8	0	0	0
Texas:												
Dallas.....	4	0	1	1	224	0	3	0	9	0	0	9
Galveston.....	1	0		0	58	0	3	0	0	0	0	0
Houston.....	0	0		0	24	0	4	0	1	0	0	1
San Antonio.....	3	0		1	18	3	3	0	1	0	0	0
<b>MOUNTAIN</b>												
Montana:												
Billings.....	0	0		0	17	0	1	0	0	0	0	0
Great Falls.....	0	0		0	8	0	0	0	2	0	0	0
Helena.....	0	0		0	2	0	0	0	0	0	0	0
Missoula.....	0	0		0	7	0	0	0	2	0	0	0
Idaho:												
Boise.....	0	0		0	3	0	0	0	1	0	0	0
Colorado:												
Denver.....	0	0	2	3	114	3	5	0	28	0	0	10
Pueblo.....	0	0		0	17	0	0	0	5	0	0	0
Utah:												
Salt Lake City.....	0	0		1	24	0	0	0	26	0	0	3
<b>PACIFIC</b>												
Washington:												
Seattle.....	0	0		2	48	0	6	0	32	0	0	9
Spokane.....	0	0		0	81	0	2	0	14	0	0	0
Tacoma.....	1	0		0	13	0	0	0	41	0	0	1

## City reports for week ended April 29, 1944—Continued

	Diphtheria cases	Enecephalitis, infectious, 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								
PACIFIC—continued												
California:												
Los Angeles.....	5	0	11	0	401	4	5	1	24	0	0	8
Sacramento.....	1	0	1	1	40	0	7	0	2	0	0	3
San Francisco.....	0	0	2	-----	218	1	8	1	36	0	0	0
Total.....	64	7	50	32	6,956	185	393	4	2,253	0	10	252
Corresponding week, 1943.....	56	0	121	36	7,902	221	424	6	1,707	1	15	1,100
Average, 1939-43.....	69	-----	165	133	26,195	-----	1,419	-----	1,566	4	16	1,130

<sup>1</sup> 3-year average.

<sup>2</sup> 5-year median.

*Dysentery, amebic.*—Cases: New York, 1; Columbus, 1; Chicago, 1; St. Louis, 1; Tampa, 1; Denver, 1.

*Dysentery, bacillary.*—Cases: Providence, 1; New York, 15; Charleston, S. C., 10; Los Angeles, 2.

*Dysentery, unspecified.*—Cases: Baltimore, 2; San Antonio, 18; Great Falls, 1.

*Typhus fever, endemic.*—Cases: Philadelphia, 1; Savannah, 1; Birmingham, 2; Little Rock, 1; New Orleans, 1.

*Rates (annual basis) per 100,000 population, by geographic groups, for the 88 cities in the preceding table (estimated population, 1942, 34,475,200)*

	Diphtheria case rates	Enecephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Pollomyelitis 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.....	2.7	2.7	0.9	5.5	1,473	27.4	65.7	0.0	468	0.0	2.7	52
Middle Atlantic.....	8.0	1.3	5.4	4.9	760	28.6	72.9	0.0	254	0.0	1.3	25
East North Central.....	4.1	1.2	4.7	1.2	615	31.6	42.2	0.0	390	0.0	0.6	40
West North Central.....	19.6	2.0	2.0	0.0	1,995	27.4	60.7	0.0	486	0.0	5.9	41
South Atlantic.....	18.6	0.0	23.7	10.1	2,045	33.8	54.1	1.7	533	0.0	1.7	69
East South Central.....	6.0	0.0	23.8	6.0	518	41.7	53.6	0.0	316	0.0	6.0	18
West South Central.....	28.1	0.0	12.5	9.4	1,127	25.0	87.4	3.1	59	0.0	0.0	31
Mountain.....	0.0	0.0	16.1	32.2	1,548	24.2	48.4	0.0	516	0.0	0.0	105
Pacific.....	12.3	0.0	24.5	5.3	1,404	8.8	49.1	3.5	261	0.0	0.0	37
Total.....	9.7	1.1	8.9	4.9	1,055	28.1	59.6	0.6	342	0.0	1.5	38

## TERRITORIES AND POSSESSIONS

## Hawaii Territory

*Honolulu—Dengue fever.*—For the period April 1-15, 1944, 17 cases of dengue fever were reported in Honolulu, T. H., bringing the total number of cases reported from the beginning of the outbreak to 1,473.

*Plague—In rodents and ectoparasites.*—Five rats found in Paauhu area, Hamakua District, Island of Hawaii, T. H., have been proved positive for plague on the dates specified: April 2, 1944, 3 rats; April 3, 1 rat; April 5, 1 rat. On March 7, 1944, 53 fleas recovered from 176 rodents trapped during the month of February 1944, in Hamakua Mill area, Hamakua District, Island of Hawaii, T. H., were proved positive for plague.

## FOREIGN REPORTS

### CANADA

*Provinces—Communicable diseases—Week ended April 8, 1944.*—During the week ended April 8, 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.....		3	35	166	329	40	28	35	147	783
Diphtheria.....	1	5	1	33	1	3	1		1	46
Dysentery (bacillary).....				2						2
German measles.....				79	67	6	59	15	37	263
Influenza.....		11	2		42		1		10	66
Measles.....		105	17	888	665	220	57	184	22	2,168
Meningitis, meningococcus.....				6	1	1			3	11
Mumps.....		3	69	157	208	27	12	35	80	591
Scarlet fever.....	1	8	7	55	219	61	27	72	77	527
Tuberculosis (all forms).....		2	4	317	59	9	14	20	43	468
Typhoid and paratyphoid fever.....				52	6		2	11		71
Undulant fever.....				2					1	3
Whooping cough.....		30		60	39	1	5	8	16	169

### FINLAND

*Notifiable diseases—January 1944.*—During the month of January 1944, cases of certain notifiable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	19	Paratyphoid fever.....	135
Chickenpox.....	856	Pneumonia (all forms).....	2,674
Conjunctivitis.....	17	Pollomyelitis.....	14
Diphtheria.....	1,025	Puerperal fever.....	59
Dysentery.....	7	Rheumatic fever.....	392
Gastroenteritis.....	1,602	Scabies.....	3,033
Gonorrhoea.....	708	Scarlet fever.....	1,102
Hepatitis, epidemic.....	810	Syphilis.....	477
Influenza.....	2,536	Typhoid fever.....	25
Laryngitis.....	64	Undulant fever.....	1
Lymphogranuloma, inguinale.....	1	Vincent's angina.....	15
Measles.....	11,011	Whooping cough.....	921
Mumps.....	499		

## JAMAICA

*Notifiable diseases—4 weeks ended April 8, 1944.*—For the 4 weeks ended April 8, 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.....		1	Leprosy.....		1
Chickenpox.....	7	54	Puerperal sepsis.....	1	3
Diphtheria.....	3	3	Tuberculosis.....	28	42
Dysentery.....	1	1	Typhoid fever.....	7	79
Erysipelas.....	1		Typhus fever.....	3	

## NEW ZEALAND

*Notifiable diseases—4 weeks ended March 25, 1944.*—For the 4 weeks ended March 25, 1944, certain notifiable diseases were reported in New Zealand as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis.....	21	1	Puerperal fever.....	9	1
Diphtheria.....	64	1	Scarlet fever.....	430	
Dysentery (bacillary).....	36	1	Tetanus.....	2	
Erysipelas.....	36		Trachoma.....	4	
Food poisoning.....	6		Tuberculosis (all forms).....	206	43
Ophthalmia neonatorum.....	1		Typhoid fever.....	10	1
Pollomyelitis.....	11	1	Undulant fever.....	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 the current year. 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.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

#### Plague

*British East Africa—Uganda.*—For the week ended April 1, 1944, 1 case of plague with 1 death was reported in Uganda, British East Africa.

*French West Africa—Dakar.*—For the week ended April 22, 1944, 1 death from plague (confirmed) and 2 suspected deaths from plague were reported in Dakar, French West Africa.

*Madagascar—Tananarive.*—Plague has been reported in Tananarive, Madagascar, as follows: January 1944, 2 cases, 1 death; February 1944, 1 case, 1 death.

*Morocco—Casablanca.*—For the period April 1–10, 1944, 1 case of plague was reported in Casablanca, Morocco.

**Smallpox**

*British East Africa—Uganda.*—Smallpox has been reported in Uganda, British East Africa, as follows: Weeks ended March 25, 1944, 100 cases; April 1, 180 cases; April 8, 170 cases.

*India.*—For the week ended April 1, 1944, 260 cases of smallpox with 75 deaths were reported in Bombay and for the week ended April 8, 1944, 407 deaths from smallpox were reported in Calcutta, India.

*Italy—Palermo.*—For the month of March 1944, 19 cases of smallpox were reported in Palermo, Italy.

*Nigeria.*—For the week ended March 25, 1944, 278 cases of smallpox with 34 deaths were reported in Nigeria.

**Typhus Fever**

*Arabia—Western Aden Protectorate.*—According to a report dated March 30, 1944, it is stated that about 100 cases of typhus fever have occurred in Western Aden Protectorate, Arabia, in an area west of a line running due south from Dala to the sea. The most southerly cases reported are in an area forty miles northwest of Aden.

*Irish Free State—Galway County—Oughterard.*—For the week ended April 1, 1944, 1 case of typhus fever was reported in Oughterard, Galway County, Irish Free State.

*Syria and Lebanon.*—Typhus fever has been reported in Syria and Lebanon as follows: Weeks ended March 18, 1944, 65 cases, March 25, 33 cases.

*Union of South Africa—Cape Province.*—During the month of January 1944, 1,692 deaths from typhus fever have occurred in the Transkei region of Cape Province, Union of South Africa. For the weeks ended March 18 and 25, 116 cases and 85 cases respectively, have been reported. According to press reports fresh outbreaks have occurred in the districts of Bedford, Adelaide, and Alice in the Ciskei area 100 miles from Port Elizabeth.

**Yellow Fever**

*Belgian Congo—Leopoldville.*—For the week ended March 11, 1944, 1 case of yellow fever with 1 death was reported in Leopoldville, Belgian Congo.