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A BLUEPRINT FOR THE CONQUEST OF HUNGER

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The United Nations Conference on Food and Agriculture reached conclusions that carry far-reaching implications for the future health of mankind. Meeting at Hot Springs, Va., May 18 to June 3, 1943, in response to an invitation from President Roosevelt, representatives of 44 nations considered the world problems of food and agriculture and declared their belief that freedom from want of food can be achieved for all the peoples.

The Conference was held against the somber background of the greatest of all wars. The suffering and heroism of the fighting forces and the millions held in enemy bondage seemed to spur every delegate to plan boldly for the future, confident of ultimate victory and convinced that the peace no less than the war must be won. Once freedom from fear has been attained through victory, the efforts of nations, both individual and collective, must be no less determined, no less concerted, to attain for all peoples freedom from want. And food is the first want of man. There was a general feeling that President Roosevelt showed rare intuition in making food and agriculture the topic of the first of the United Nations Conferences to plan for dealing with long-term problems after the war.

At the first plenary session, May 18, the Conference was organized into four sections dealing broadly with four main questions:

1. What are the needs of the peoples of the world for foods essential to health, and for other agricultural products?
2. What are the prospects for organizing world agricultural production so as to expand it and better direct it for supplying consumption needs?
3. By what means can the increased production be distributed to meet human requirements?

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4. What kind of continuing international organization is necessary to aid in accomplishing the above objectives?

This article deals primarily with the first topic—consumption levels and requirements—which was the cornerstone upon which other discussions of the Conference were built. In the deliberations of Section I, reports were received and conclusions reached concerning the relation of food to health, the nature and extent of food consumption and deficiencies in the various nations, the causes and consequences of malnutrition, the measures which can be taken to improve standards of consumption, and, finally, reasonable national and international nutritional goals.

From the outset, competent nutrition experts and health authorities from many countries were agreed that there never has been freedom from want of food among all the people in any land. In every country the consumption of food adequate for health is deficient. There are wide variations in nutritional status between nation and nation. However, even in the nations considered to be the best fed, widespread and serious malnutrition was reported. In those countries, regions, and population groups where consumption deficiencies are most marked, disease and death rates are the highest, life expectancy is shortest, and the mental and physical vigor of the people is the lowest.

It was clear that the one-time excessive accumulations of certain agricultural products were not surpluses at all when measured by the world's minimum needs of food and clothing. Rather these accumulations were the results of maldistribution and underconsumption. Indeed, the greatest possible increase in world production of those foods essential for health will not satisfy for many years the minimum nutritional requirements of the world's population.

Yet, at Hot Springs, for the first time in history, delegates representing 44 nations agreed unanimously that the conquest of hunger and progressive improvements of diets are attainable goals. At the close of the last war, such a conference and such conclusions would not have been possible. It is the growth of scientific knowledge in this century which will implement the realization of the high goals set by the Conference. The advance of science in three sectors has an important bearing on solving the problems of food and health.

First, the development of agricultural science has made it possible to grow two bushels of food where one grew before.

Second, mechanical science applied to production and transportation has lightened the labor of man, replaced domestic draft animals, and multiplied greatly the capacity to produce and distribute foods.

Third, the newer knowledge of nutrition and its relation to human health—one of the greatest scientific miracles of our time—has taught what is required to nourish the human body. Thus it is possible to

eradicate many diseases directly caused by a deficiency in diet, to reduce infant and maternal mortality, to prolong the active productive span of life, and to attain a higher level of physical and mental vigor.

Since the Conference was a technical and exploratory one, the delegates were not empowered to commit their governments to specific courses of action. They were authorized only to "recommend." With this limitation, the countries recommended in a formal declaration that the governments accept "the obligation to their respective peoples and to one another henceforth to collaborate in raising levels of nutrition and standards of living of their peoples, and to report one to another on the progress achieved." Further, the Conference recommended that a permanent international organization in the field of food and agriculture be established. For this purpose an interim commission was created to be convened in Washington promptly. This commission will have for its function the development of a specific plan for a permanent organization. The exact nature and scope of the permanent body will be determined later. Subjects to be considered by the interim commission will include nutrition, standards of food consumption, agricultural production, distribution and conservation statistics, and economic studies in the field of agriculture and food with respect to world economy, agriculture, agricultural education and extension work, agricultural credit and commodity arrangements, cooperative movements, land tenure, and so on.

In declaring its conviction that "the goal of freedom from want of food suitable and adequate for the health and strength of all peoples can be achieved," the Conference recognized that the first task is to win the war and then, through urgent and concerted efforts to prevent hunger and starvation by economies in consumption, increasing supplies and distributing them where most needed.

The Conference stated that there never has been enough food, a lack justified neither by ignorance nor by the harshness of nature. We have the knowledge by which to accomplish the necessary increased production of food. The attainment of this goal requires imagination and firm will on the part of each government and each people to make use of that knowledge.

Food and agriculture, however, cannot function entirely apart from other spheres of national and international life. Poverty must be alleviated by policies of full employment, a greater flow of trade within and between countries, by an expansion of world economy to provide the purchasing power for adequate diets.

The primary responsibility for appropriate action in these fields rests with each country itself, but the Conference held that "national

action alone is not enough. The efforts of each nation can be enhanced by international collaboration for the benefit of all."

Here then is a daring plan and the first draft of a blueprint for the conquest of hunger.

Among the objectives accepted by the Conference is the wiping out of widespread devastating diseases caused directly by lack of the proper food. The conviction that this can be accomplished flows naturally from the traditional policy in every civilized society to see that, insofar as possible, no one should be allowed to starve or to go hungry. But science has given us a new definition of starvation and hunger. No nation has ever been free of hunger in its modern sense. The pellagrous sharecropper dragging his feeble body along the cotton row, the coolie with swollen legs working in the rice paddie, the child with bones deformed by rickets—these are, in truth, hungry, starving people.

Moreover, many deaths and much disease not directly attributed to malnutrition result from the lack of enough food of the right kinds. In some of the worst fed countries, nearly 50 percent of the total mortality occurs among children under 10 years of age. This proportion is about five times greater than in the best fed countries. In the poor countries, too, tuberculosis deaths are seven or eight times higher than among the better fed populations.

Over and above the negative achievement of decreased disease and death is the goal of a higher standard for mankind, the goal of a race more fit, more vigorous, with greater physical and mental stamina than the world has ever known.

Since malnutrition with its attendant suffering is a close and constant companion of poverty, measures to alleviate poverty are of cardinal importance. But general economic advances, while contributing indirectly to the improvement of nutrition, do not in themselves insure that everyone will have an adequate diet. Their benefits are spread unevenly among the population. Therefore, each government must seek to improve the diet of its own people by providing for those whose need is greatest in proportion to their physiological needs, however scarce or plentiful the supplies of food may be.

The report from Great Britain gave a striking example demonstrating how effective such a food and nutrition policy, based on scientific knowledge and experience, can be in safeguarding the health of a population. For example, in Great Britain "food imports have been greatly restricted in the war, and the Government found it necessary to assume control of food importation, production and trade, and to institute strict rationing. The distribution of food was planned with the assistance of nutrition experts so as to assure to each section of the community an equitable share of the food needed for the maintenance of health. The needs of children, mothers, and heavy workers were

given special consideration. The result has been that, in spite of a deterioration in housing and other social conditions, the health of the nation has been maintained at a high level, and in 1942 the infant mortality was the lowest on record and the general death rate showed a fall."

The technical reports of the Conference made clear that there are certain "vulnerable groups" in a population whose physiological needs are relatively greater, and for whom the national policy should provide extra measures and, if necessary, direct action to insure an adequate food supply. These groups include the pregnant women, infants, school children (especially the adolescents), workers in heavy industries, and the poor, particularly those with large families. In this connection, the Conference stated that "direct acceptance of responsibility by public authorities for bringing the needed foods free or at a low cost to the vulnerable groups is the most practical way of improving their nutrition. It also increases the total demand for food and the income of producers, with resulting better health and capacity to produce. Such measures should therefore form a part of a national policy in every country."

Reports were presented from every continent describing the problems of malnutrition. In India, China, and Java very similar nutritional problems were encountered. A large proportion of the population does not get *enough* to eat. Diets consist largely of cereals, with inadequate amounts of meat, milk, eggs, fish, vegetables, and fruits. Beri-beri is prevalent, killing infants and paralyzing adults. Osteomalacia is also widespread, softening the bones and leading to an extreme degree of painful crippling. Among these nations, the expectation of life at birth is low, the mortality among infants, children, and women in the child-bearing period is high, and resistance to diseases of many kinds is feeble. "Numerous lines of evidence converge to show that malnutrition is the chief cause of this rapid and tragic exit of young human beings from the world so soon after their arrival in it," reported the delegate from India.

In tropical Africa and some colonial and other tropical areas of the world, there was abundant evidence of malnutrition and deficiency diseases. Typically, their peoples depend upon a single crop. There is little or no milk and the supply of proteins, fats, calcium, and vitamins is low. Malnutrition and widespread tropical diseases interact upon each other; each aggravates the other, thus creating a vicious circle.

In short, taking the world as a whole, "the picture is one of world-wide underconsumption, leading to malnutrition and its attendant evils. One of the tasks of the proposed United Nations Food and Agriculture Organization will be to complete the picture in dismal detail and to replace it by a brighter one."

These reports did not refer primarily to the situation created by the war, which has reduced the world's food supply, affected consumption in almost every country, and brought scarcity and famine to countries occupied by the enemy. And although the Conference was not directly concerned with the existing situation and postwar relief, it was abundantly demonstrated that the acute and immediate problem and the long-range problem are parallel in many respects, each calling urgently for concerted action.

There were dramatic moments at the Conference. Each of the major nations put forward a statement of national policy in reference to the objectives of the Conference. With unanimity of purpose, then, the Conference was able to report: "Nutrition, therefore, becomes a primary concern of governments everywhere. To give conscious planned direction to mankind's need for food in the modern sense, each nation should develop a national food and nutrition policy, to the full fruition of which related social and economic policies will need to be adapted."

The United States delegation advanced a general proposition for a continuing organization to carry forward the work of the Conference. China and Great Britain indicated their acceptance in principle. The Russian delegation called Moscow for instructions. After two days, the chairman of the Russian delegation arose and gave the answer—in Russian. What was he saying! Then came the interpretation. The answer was, "Yes." Russia, already carrying the heaviest fighting load and contributing the greatest amount of blood to the common victory, would very gladly join other free nations in an international organization of free peoples to attain freedom from the want of food.

The report of Section I outlined many specific tasks as goals for the future. For example, the training of professional personnel for nutritional and educational services presents a formidable task. Likewise, much can be done to improve the quality of available foods in preparation, processing, and storing. Basic sanitary measures are necessary to prevent contamination, particularly in the production and handling of milk and green vegetables consumed frequently in the raw state. The conservation of vital elements—minerals and vitamins—during processing will do much to improve available foods, as does also the enrichment of white flour and bread, the addition of iodine to salt, or of vitamins A and D to margarine.

The great value of synthetic vitamins in the medical treatment and prophylaxis for deficiency diseases, under special circumstances, was recognized. However, the indiscriminate distribution of synthetic vitamins was not recommended as a public health procedure. Many countries reported that consumers are misled as to the content of foods, vitamin products, food extracts, and other food preparations.

Regulations were recommended for adoption to provide for correct labeling and otherwise to insure the standards and quality of foods.

The Conference emphasized that the habits and tastes of a people must be taken into consideration in planning nutrition policies. The aim of those responsible for securing improvements in national nutrition should be to frame their policies in tune with the social traditions. Traditional dietary practices are supported by the whole cultural complex of attitudes toward social class, religion, the rhythms of work and rest periods, the education of children, and the formalized social ties between persons and groups. Many of these attitudes are often imperfectly understood and the imposition of a practice foreign to a community may indeed have very unfortunate results upon agricultural production, and, in turn, on the supply of food. This is particularly true of measures which result in the breakdown of unity and collaboration within a social unit. This important factor emphasizes the influence of education, not only of individuals but also of professional, governmental, and other groups of the community who are in a position to affect nutritional and related policies.

Of greatest significance to the public health profession was the responsibility placed by the Conference upon medical and health authorities in the attainment of the world-wide goals there defined. Nutrition is linked on the one hand with public health, on the other with agriculture. At all stages, from the recognition of the existence of malnutrition in a community to its elimination, knowledge of the behavior of the human body is essential. Because they possess and can contribute this knowledge, medical and health administrators have a primary responsibility in nutritional fields. Any advance in health through better nutrition will demand the full collaboration of public health and agricultural authorities. The former will play an important role both in determining needs and in guiding the available forces toward the practical attainment of freedom from hunger for the peoples of the world.

DERMATITIS FROM RESIN GLUE IN WAR INDUSTRIES[1,2]

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The use of plywood in the manufacture of planes, gliders, propellers, and other airplane accessories has increased enormously. With the requisitioning of more and more wood for the manufacture of airplane parts, the shortage in other industries has necessitated the manufacture of substitutes such as laminated asbestos, laminated glass

[1] From the Division of Industrial Hygiene, National Institute of Health.

[2] This report is based on studies in seven war plants using glue for laminating wood and fabrics.

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fabrics, laminated paper, etc. An increased use of glues is entailed in the manufacture and use of wood substitutes, and, coinciding with this, an increase in occupational dermatitis among workers in these industries has been observed.

Dermatitis from glues has often been reported in the past (*1*), but there has been no such outbreak as that which is now occurring in the plywood and laminating industries. In one factory laminating plywood for planes and gliders (where about 800 workers are employed) 600 cases of glue dermatitis occurred in the first six months of operation. These workers lost about 1,500 work days, not counting the time lost by those who stayed on the job while receiving treatment in the factory first aid station. In a factory making tool handles from laminated glass fabric and phenol-formaldehyde molding resin, there was a monthly labor turnover, because of dermatitis, of over 40 for the first six months of operation among a total of 100 employees.

Twelve workers in a factory where paper is coated with a phenol-formaldehyde glue for use in making plywood were affected with dermatitis, and in another, where an alkaline casein glue was used for small wooden airplane parts, the fingers of most of the workers were inflamed and fissured by the glue.

COMPOSITION OF GLUES

Glue compositions vary widely. They can be roughly classified as (1) protein glues, (2) natural resin glues, (3) synthetic resin glues, (4) combinations of the foregoing.

Catalysts may be used in glues containing the synthetic resins.

The protein glues can be made from gelatin, hides, bone, cartilage, casein, isinglass (air bladder of the fish), fish heads (cod, haddock, hake), and vegetable protein (soya bean).

The natural resin glues may be made from dextrin, gum arabic, acacia, shellac, copal, dammar, rosin, etc. To any of these may be added such chemicals as sodium silicate, sodium hydroxide, sodium fluoride, zinc chloride, and copper salts. It is evident that a glue, the name of which may lead one to think that it is quite harmless (gelatin glue, casein glue), may actually contain powerful primary skin irritants.

Synthetic resin glues caused the majority of cases of dermatitis observed in this study. The following synthetic resins, either alone or in combination with each other or with natural resins, may be used as liquid cold glues, thermal setting glues, or molding powder glues: Cumarone, polyvinyl esters, ethyl esters, methyl esters, cellulose esters, cellulose nitrate, alkyd, dicyanodiamide, urea-formaldehyde, phenolformaldehyde.

In the manufacture of these synthetic glues, catalysts are often added. For this purpose mineral acids (HCl or H_2O_4S), alkalis

(NaOH, KOH, CaO, NH_4OH, etc.), zinc oxide, potassium cyanide, hydrazines, amine hydrochloride, sodium ethyl sulfate, alkyd resins, and dicyanodiamide resins are employed. The completely polymerized or cured resins rarely cause dermatitis, but completely polymerized resins can seldom be used as glues. The incompletely polymerized or partially cured resins are the ones most used as adhesives and these contain the incompletely combined irritant chemicals which can and do cause dermatitis. The addition of the catalysts, many of which are themselves primary irritants, increases the skin irritant properties of resin glues.

The urea-formaldehyde and the phenol-formaldehyde resin adhesives are the ones found to cause most of the dermatitis in the factories inspected in the course of this study.

The urea-formaldehyde resins may contain thiourea or may be modified with furfural, acrolein, alkyd, ketone, phenol resins, etc.

The phenol-formaldehyde resins may contain cresol, naphthol, catechol, resorcinol, xylenol (tar acid), and salicylic acid combinations with formaldehyde or with butaryl, benz-, acet-, and paraldehydes. These combinations may also be chlorinated. They may be modified with any of the other resins mentioned above.

To determine the irritating chemical radical causing the dermatitis, the actual composition of the resin and the stage of polymerization should be known before patch tests can be performed intelligently. This information must be obtained from the manufacturers, as chemical analysis often fails in this respect.

In previous studies on resin molding powders (*2*) it was found that formaldehyde was the chief irritant in these powders, being responsible for about four-fifths of the cases. The phenol fraction was responsible for the remainder. Hexamethylene tetramine, which is present in many of the molding powders to supply the additional formaldehyde needed to complete the cure in the mold, is not present in the glues. But since formaldehyde is present in the urea and phenol-formaldehyde glues, the absence of hexamethylene tetramine does not deprive them of their skin irritative properties. The presence of phenols and formaldehyde in the glues can often be detected by the odor.

The resin glues are used in the manufacture of plywood, fiberboard, laminated asbestos, glass cloth tool handles and partitions, for coating paper and fabric to be used for adhesives, and for many other purposes.

They are used in powder form, paste form, in solution, and as cold glues, or thermal setting glues (with the addition of pressure).

That these glues are primary skin irritants if they come in contact with the skin in sufficient concentration has been proved by 24-hour patch tests on several controls.[3] That these glues are also sensitizers

[3] Controls often show delayed reactions appearing 24 to 72 hours after removal of the patch.

is proved by the fact that the workers having dermatitis react more rapidly to patch tests than do the controls, as well as by the fact that about 50 percent of the affected workers, if they are permitted to work while undergoing treatment, develop a tolerance to limited contact with the glues containing comparatively weak concentrations of the irritant chemicals.

In making plywood for planes and gliders, those who apply the cold liquid glues to the edges of the sheets of wood and those who apply the glue tapes (Tego) to the surface of the panels to cover defects are the ones most likely to be affected with dermatitis. The parts most often affected are the palms (fig. 1) where they contact glue-soiled brush handles and spatulas, the dorsum of the hands, from glue-soiled washing solutions and glue-soaked sponges, and the forearms (fig. 2) which are touched with glue-soiled fingers and tools. Those who work without stockings while shaping the panels in the molds often develop dermatitis on the legs (fig. 3) where the glue touches the skin.

In some cases dermatitis begins as early as the third day after exposure (the primary irritant effect of the glue) while others may be exposed several weeks before dermatitis occurs. No doubt the degree of exposure to the glues and the personal cleanliness of the worker are the main factors determining the time of onset of dermatitis.

Those working on the presses, which heat and press together the sheets causing them to adhere and form plywood, are only occasionally affected. These workers are subjected mainly to the fumes of formaldehyde coming off the presses and only occasionally to contact with the uncured glue.

In factories where plywood propellers and other rigid parts are made, the contact is somewhat different. Here the pieces of veneer are impregnated with liquid resin glue by dipping them into a vat and then placing them in a pressure chamber. The workers at this operation are exposed to strong fumes of formaldehyde and to splashes of liquid. Unless properly protected these men will develop dermatitis, conjunctivitis, and irritation of the respiratory tract. Those engaged in mixing the glues are similarly exposed. Workers who machine, sandpaper, and polish plywood are exposed to wood and resin dusts. Some of the plywood is machined before the resin glue is completely cured and at such operations there is more dermatitis than at operations where the completely cured resin dust is encountered.

In factories where glass cloth is made into tool handles and translucent partitions, workers thought the glass fabric was the cause of the dermatitis, but patch tests showed that the condition was caused by phenol-formaldehyde molding powder which is spread on the fabric before it is placed in the hot pressure molds. The operation of placing the molding resin powder on the cloth should be performed in such

FIGURE 1.—Dermatitis of palm from glue-soiled brush handles and spatulas.

FIGURE 2.—Dermatitis of forearms touched with glue-soiled fingers and tools.

FIGURE 3.—Dermatitis of leg where glue has touched uncovered skin.

manner that the resin powder does not come in contact with the worker.

An occasional case of dermatitis occurs because of the workers' sensitivity to the woods. The following woods were used in the factories inspected: Ash, basswood, birch, cedar, elm, gum, magnolia, mahogany, maple, oak, poplar, red gum, satinwood, and spruce. While dermatitis caused by sensitivity to cedar, poplar, satinwood, spruce, and mahogany has been reported, all the cases of wood sensitivity seen in this study were said to be caused by mahogany coming from Central and South America. (Because the mahogany causes dermatitis, some workers call it "tobasco mahogany.")

The trade names of the resin glues encountered in this study were: Urea-formaldehyde type, Uformite powder, Uformité liquid, Plaskon, phenol-formaldehyde type, Durez, Bakelite, Amberlite, Tego.

The catalysts used were ammonium chloride, ammonium sulfate, oxalic acid ester, hypophosphorous acid ester, and benzoyl peroxide.

The principles of treatment of dermatitis caused by the glues are the same as for any other form of contact dermatitis. In the acute stages where there is edema, vesicles, and oozing, only soothing wet dressings should be used, such as boric acid solution, Burow's solution, and tannic acid solution 3 to 5 percent, this last on parts other than the face or neck. In the later stages, when the eruption begins to dry and crust, the use of mild fatty-base ointments such as boric acid ointment, calamine ointment, or zinc oxide ointment should be used. The use of phenols for antipruritic purposes should be avoided, because they may increase the dermatitis. If complications, such as infection, set in, special treatment may be required. Workers with mild cases should be given protective clothing, and should be treated on the job in order to give them the chance to become "hardened" (if the dermatitis is caused by allergy) and to learn how to protect themselves (if it is due to primary irritation).

To prevent dermatitis among workers with resin glues, the management should first of all provide suitable exhausts to draw away from the workers all irritant dusts or fumes coming off the operations. The management should provide, daily, clean coveralls for all workers exposed to irritant glues, dusts, and fumes.

Workers who apply the glues to the veneer should be provided with impervious gloves, made either of washable leather or fabric-lined rubber, and sleeves and aprons of impervious materials (*3*). The sleeves should fasten over the gloves at the wrist to prevent irritants from falling into the gloves.

Facilities for washing the hands with soap and running water should be installed at strategic places so that the workers can frequently wash glue from the gloves and skin. The brushes and sponges used for glueing should be washed or changed about every 2 hours and workers

should be cautioned against touching the face and other parts of the body with glue-soiled fingers, gloves, or tools.

Sufficient shower baths should be provided for workers, and they should be compelled to take showers after work. Sufficient time should be allowed for this and the workers should be paid for the time.

Protective ointments or applications are not necessary if these precautions are observed, but if they are used they should be furnished by the management and should be used in addition to all of the other preventive measures. The type of applications best suited to prevent glues from touching the skin are either those of the water insoluble invisible glove type, or of the water repellant fatty type described (as type 2B and type 3, respectively) in an earlier article (*4*).

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ACTIVITIES OF STATE AND LOCAL INDUSTRIAL HYGIENE SERVICES IN A WAR YEAR [1]

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In a plant formerly making stoves and now producing metal boats, several workers on an operation involving the use of lead are showing symptoms of lead poisoning. In a large aircraft plant, spray painting inside the fuselage and gas tanks of large aircraft is offering a ventilation problem. A textile plant, now making bomb parts, is suddenly experiencing an alarmingly high accident rate. In a shipyard, keratoconjunctivitis is assuming epidemic proportions not only among welders and burners, but also among other workers. A radium dial painting plant is about to begin operation and the effectiveness of its newly installed control measures needs checking.

These, in brief, are examples of typical health problems on the war production front today. Assisting industry to solve such problems and a multiplicity of others is a major function of the State and local industrial hygiene services in the country. The responsibility for extending similar services to the war industries as expeditiously as possible was delegated to them as their role in the present Nation-wide industrial hygiene program.

[1] From the Division of Industrial Hygiene, National Institute of Health.

The contribution of the industrial hygiene services to the war effort, insofar as it can be evaluated statistically, is perhaps not as dramatic as the story of industry's output of war material in 1942. It is, however, real and, as will be shown, commensurate with their resources for doing such work and a definite aid to the war production effort.

SCOPE OF INDUSTRIAL HYGIENE SERVICES

The organization of industrial hygiene services in the country has never been so extensively developed as today, although limitations in personnel and facilities control the extent of their activities. In January 1943, industrial hygiene services were established in 38 States, 6 cities, and 2 counties, making a total of 46 units altogether. These units are located in the State and local health departments with the exception of one State unit which functions in the State labor department, and another which functions jointly with the State health and State labor departments. Six of the units were established since the entry of the United States into the war, 9 units during the defense preparation years 1940 and 1941, 24 units from 1936 to 1939, and the remaining 7 units prior to 1936.

As a rule the professional personnel of an industrial hygiene unit function as a team, each person having certain services to perform. A typical unit consists of a physician, an engineer, a chemist, frequently a nurse, and the usual supporting staff of one or more clerks. However, only 14 of the 38 State organizations have staffs consisting of more than 4 professional employees. Altogether there are 300 personnel, both professional and clerical, in these States. It can be observed that the organization that is working towards the reduction of some of the 500 million man days lost annually in industry from disability is not numerically an impressive one.

As compared with the economic cost of these disabilities, which amount to at least 10 billion dollars annually, the amount that the industrial hygiene services spend for preventive work is likewise not startling. The units are allotted for the 1943 fiscal year, a year of major war production, $1,006,000 for this work. This is only $75,000 more than was spent in the 1942 fiscal year.

Without Federal assistance many of the units would be unable to meet the additional demands placed upon them by the war effort. As it is, a cooperative relationship exists between the State and local industrial hygiene services and the Division of Industrial Hygiene, National Institute of Health. Early in 1941 this Division was designated by the Subcommittee on Industrial Health and Medicine of the Office of Defense Health and Welfare Services to assume the leadership for activities in connection with the Nation-wide industrial hygiene program, and not only guides the units in their work but

gives them practical assistance. It is through this Division that the units maintain contact with the war agencies such as the War Manpower Commission, War Production Board, and Office of Civilian Defense, and help to carry out locally the policies formulated nationally.

The practical assistance the units receive from this Division is of various types. As of January 1943, 57 professional personnel were assisting 27 States on a lend-lease basis from the Division of Industrial Hygiene. Much of the educational material such as workers' health pamphlets, radio scripts, and movies is prepared for their use and distribution. The units call upon the Division for consultation services in the fields of administration, industrial medicine, engineering, nursing, and dentistry. The units are loaned needed field and laboratory equipment and receive assistance with laboratory work involving expensive apparatus and detailed procedures. For instance, State units submitted approximately 700 samples for analysis to the Division's laboratories last year. They benefit from the results of research which the Division conducts on toxic materials such as benzol, toluol, synthetic rubber, and others. Through a monthly news letter, issued by the Division, and periodic gatherings, activities are publicized and ideas exchanged, making for further unity and closer relations.

Thus, the State and local industrial hygiene services, despite limited resources, are in an excellent position to help industry with its health problems and to advise on general services concerned with adult health. Moreover, the legal responsibility for industrial health maintenance lies with these organizations. The 38 States in which they function contain 95 percent of the country's labor force and include all the highly industrialized States. The typical war problems of industrial health are found in all their ramifications in these States.

FIELD ACTIVITIES

Unfortunately, it is not possible to show what all 46 units in the 38 States have accomplished during a uniform period of time. A voluntary system for reporting field activities was developed early in 1939 by a special committee of the National Conference of Governmental Industrial Hygienists (*1*). After some trial this system was revised and at present consists of a brief individual history of each plant investigation and certain information on promotional and educational activities. Such reports have been received from 35 units in 29 States covering their field activities for the fiscal period ended June 1942.

In general each unit engages to some degree in three types of activities: Promotional, educational, and technical. The objective of each unit is closely tied up with the war effort and is the same for all—the reduction of lost time in industry through the promotion and conservation of the health of the worker. Each unit's program, at present,

calls for a concerted effort to contact each industrial establishment working on Government contract, and to render to the plant certain services pertaining to the conservation of the worker's health. Because no one unit can possibly hope to cover all phases of industrial health, cooperative working relationships are established with the various official and nonofficial agencies in the State.

During the 1942 fiscal year, the 35 reporting units rendered some type of industrial hygiene service to 2,600,000 workers in 5,688 establishments. When we realize that about 12 million workers were directly engaged in war production by the middle of 1942, 2,600,000 workers by comparison is small. On the other hand, the organization undertaking this work is likewise small. In many instances the plants were converting and had not yet employed their full complement of workers at the time of the plant investigation. Moreover, we have no way of telling how many more workers were indirectly benefited nor the extent of saving in terms of lives, prevented illnesses, and days for production.

Type of industries investigated.—Among the 2,600,000 workers involved in the investigations were workers who helped to attain the 1942 quota of ships, airplanes, guns, and automotive vehicles, and helped to produce the machinery, radio equipment, uniforms, and other materials needed for the maintenance of the armed forces. For example, it was estimated that in the early part of 1942 some 500,000 workers were engaged in shipyards and about 700,000 in aircraft plants in the whole country. The 29 States reported investigations in such industries which employed 707,000 workers at the time the investigation was made or, roughly, 59 percent of the workers thus engaged in the whole country. If the total employment in the transportation equipment industries were limited to only those States reporting—several of the large States like New York and Ohio are not listed among these—the comparison would reveal still greater proportions.

The Bureau of the Census estimates that there were 1,263,215 workers in the country engaged in the iron and steel industries in 1940. The 504,000 workers served by the reporting units in these industries represent 40 percent of all the workers thus engaged in the whole country at the time the census was taken. Another strategic industry is the manufacture of machinery and parts. The 408,000 workers contacted in these industries represent 38 percent of all the workers thus engaged in the country in 1940. It is evident from these few examples that the industrial hygiene units are extending their services to the essential war industries.

However, the work of the industrial hygiene units is not limited to these industries only. Although the three groups just mentioned accounted for 42 percent of the 5,688 plants and 64 percent of the

2,600,000 workers, many other types of manufacturing industries were investigated, as well as a number of the mining and service industries. Among these were textile mills, plants engaged in making clothing for the armed and civilian forces, plants producing food products, lumber and furniture, leather goods, and stone, clay, and glass products.

Experience has demonstrated that the manufacturing industries offer most of the industrial health problems. It is significant that 86 percent of all the plants investigated and 95 percent of the workers were in these industries.

Size of plants investigated.—No plant is too small or too large to receive or to require industrial hygiene services. It has been reiterated over and over again that in small plants of the size employing less than 500 workers, industrial health services are in general lacking or at a minimum. The analysis showed that 83 percent of the plants receiving industrial hygiene services were of this size, and only 17 percent employed more than 500 workers. Three percent of the plants were of the size employing more than 2,500 workers and contained one-half of all the workers affected by the services.

Nature of investigations.—Often more than one investigation is made in the same plant during the course of a year. The analysis revealed that close to 6,000 initial investigations were made in the 5,688 plants. An investigation, as the term is used throughout this report, may refer to an inspection, a preliminary survey, an engineering study, or a medical study or survey. It may include one or all of these phases.

Unless a request is received to investigate a particular hazard in the plant, a survey of the plant is first made in order to obtain information on materials and processes associated with each occupation or operation. The results are then used as a guide in selecting particular occupations or operations for further study. Over half of the investigations, 59 percent, were of the survey type. Twenty-two percent of the investigations were engineering studies, 15 percent were predominantly medical studies and surveys, and 4 percent were follow-up investigations in plants which were first visited during the previous fiscal year.

In connection with the engineering studies, some 10,000 samples of air and materials were collected for analysis, and countless numbers of determinations were made in the field, such as velocity measurements, illumination readings, and ventilation measurements. Engineering studies often involve the review or the actual drawing up of plans for control measures, and the subsequent check-up on the adequacy of the installed control measures.

Moreover, engineering studies are made because a specific operation or process is suspected of presenting a potential health hazard. The reports submitted by the reporting units mentioned hundreds of such conditions and materials, but exposures to silica dust were

mentioned most frequently. Among others, in order of frequency mentioned, were exposures to solvents, lead and its compounds, dermatitis producers, and spray painting, welding, and changes in temperature. Evidently those materials and conditions that have long been associated with adverse health conditions are still sources of trouble for management of industry today.

A medical survey or study may involve the actual physical examinations of workers, if indicated, or assistance with these examinations; the taking of chest X-rays or reading the films; the promotion and assistance in establishing systems of recording absenteeism in the plant, so that the plant can estimate the causes of absences and take appropriate measures for lessening the absenteeism rate; assistance in outlining the needs of an adequate medical department, and in establishing complete industrial hygiene programs in the plant.

At least 15,000 visits were made to these plants and others during the course of a year by the reporting units. At a glance, this number seems impressive. Actually it is an understatement, since it is impossible to determine the number of visits with any degree of uniformity. This is particularly true for the engineering studies. A study may take one day and involve one visit; it may take several days, or even months to complete. This number of plant visits, however, is some indication of the number of contacts made with industry.

Sources of investigations.—Because the program of each industrial hygiene unit is so closely allied with the war effort, much of the work done is self-initiated. Over one-half, or 64 percent, of the initial investigations were of this type, whereas 31 percent were made in response to requests for service, and 5 percent were investigations of occupational diseases reported through an official agency or by management itself.

Industry and labor accounted for most of the requests for services. Management itself made 38 percent of the requests, indicating the desire on its part for such services. State labor departments and industrial commissions accounted for 28 percent, and labor unions and employees for 10 percent, indicating the recognition on the part of the official labor agencies and labor of the need for such services, as well as their cooperation. Official State and local agencies made 13 percent of the requests; another 9 percent were complaints made anonymously or by groups of individuals; and the remaining 2 percent included requests from Federal agencies, insurance companies, and private physicians.

Occupational disease investigations.—Although not a major activity of the units, an extremely important activity is the epidemiological investigation of cases of occupational illness among the workers. At present 25 States in the country have enacted legislation compensating workers for one or more occupational diseases. Stimulating such

reporting, and suggesting systems for reporting, is usually an important activity of industrial hygiene units. But like many other activities that take long to promote, progress has been slow, especially since the emphasis has been on rendering service to essential war industries without delay.

Fifteen States reported that they made 215 investigations of 2,465 cases of occupational diseases in 191 plants which employed approximately 200,000 workers. However, only 5 of these States reported more than 100 cases each. Such investigations usually involve detailed study of particular operations and processes suspected of causing the disease, and medical examinations including laboratory tests of affected workers.

It is difficult to ascertain the extent to which the speeded war production drive has increased the incidence of occupational diseases and injuries. General data are lacking, but from isolated reports it is known that an increase has occurred in the number of injuries occurring on the job as well as in the number of occupational diseases. For example, in one State the number of occupational diseases reported in the 1942 fiscal year increased 45 percent over the 1941 fiscal year. Moreover, most of the diseases which were investigated occurred in the strategic war industries, such as shipbuilding, aircraft, machinery, and iron and steel production.

The most common types of occupational diseases investigated were conjunctivitis and dermatoses, accounting for 61 percent and 25 percent of the 2,465 cases, respectively. Conjunctivitis cases occurred chiefly in shipbuilding industries among welders, burners, and workers in similar occupations. Keratoconjunctivitis, which at one time assumed epidemic proportions in many States, was first investigated by one of the reporting States, and, after considerable study, attributed to possible nonoccupational origin. Dermatoses occurred in practically all types of industries. The chief causative agents were given as cutting oils, chlorinated hydrocarbons, alkaline compounds, solvents, and food products.

Ninety-seven cases of cotton fever were investigated in connection with mattress-making projects and textile industries using infected cotton. Among other cases investigated were: Lead poisoning, 69 cases; silicosis (diagnosis was not confirmed for all), 33 cases; anthrax, 39 cases, several of which were fatal; metal fume fever, 14 cases; mercury poisoning, 7 cases; carbon monoxide poisoning from solvents, 6 cases; and respiratory infections, 28 cases.

These cases are not necessarily an indication of the frequency with which they occur in industry. Nor do they represent all cases of occupational diseases reported to the central agency in those States with a compulsory reporting system. These cases represent only that

portion of States' activities dealing with direct control of reported occupational diseases.

Recommendations made.—Perhaps no other phase of activity of the industrial hygiene services reflects so strikingly the effect of the war effort on problems needing solutions in industry as the type of recommendations made. Recommendations for improvements in the plant health and welfare services, and in the control of potential health hazards, were made by the reporting units for 30 percent of the 2,600,000 workers, and reported as carried out by management for 45 percent of those affected.

It is significant to note that at a time when plants were converting, or expanding, and new ones were being built, recommendations which involved the most workers concerned improvements or expansions in medical services in the plant. In fact, 47 percent of the workers for whom any recommendation was made were thus affected, and for almost one-half of these, or 48 percent, the recommendations were reported as complied with. These included suggestions for general industrial health programs when warranted by the number of workers, installations or improvements in facilities of first-aid rooms, the procurement of adequate personnel for first-aid work, and, frequently, the adoption of systems of reporting absenteeism in the plant. The large proportion of workers affected by compliances with the recommendations may reflect on the part of industry the recognition of the value of such services in keeping down sickness and accident rates.

However, other recommendations which affected 12 percent of the workers called for expansion of prevailing medical programs to include preplacement and particularly periodic medical examinations or chest X-rays of workers in hazardous occupations. These were complied with for only 8 percent of the workers involved, as contrasted with almost one-half for the former type of recommendation. A further study of the reports indicates that, although the expanding war industries are in general willing to provide the necessary emergency medical services, the rapid hiring of workers and high labor turn-over has in many cases interfered with having medical examinations made.

Improvements in the sanitation facilities were suggested to management for 31 percent of the workers and were reported as carried out for 40 percent of these workers. Such recommendations involved the installation of additional toilet and washing facilities, lockers for workers, improved drinking facilities, and cleanliness of such facilities.

Personal protective measures were recommended for 25 percent and carried out for only 10 percent. These included protective clothing, especially for women, protective ointments and creams in preventing dermatoses, personal respiratory protective devices, and improvement in personal hygiene practices in the prevention of occupational diseases.

Recommendations on the engineering control of air contaminants were made for a relatively small proportion of workers, 14 percent. These included specific types of improvements in the local exhaust ventilation systems, and enclosure or isolation of hazardous operations and processes.

These improvements were reported as complied with for 44 percent of the workers so involved, and probably would have been higher had the proper equipment been made available. The reports show that time and time again difficulties were experienced in obtaining the necessary control equipment because of priorities or late deliveries. Moreover, many plants are now engaged in making war products that have no value in peacetime, and do not find it economical to install permanent equipment. The makeshift control measures are often found to be adequate over temporary periods of time if given proper care.

Many other kinds of recommendations were also made, such as improvement in the general ventilation of the workroom, in illumination, especially on the night shift, housekeeping of the workrooms, the reduction of noise, and the prevention of fatigue and crowding.

PROMOTIONAL AND EDUCATIONAL ACTIVITIES

The more recent endeavors of the industrial hygiene services have been extended to health promotion and education on various phases of industrial health. As a result of the in-migration of workers to newly industrialized areas, many plants find it necessary to make some provision for certain health services to the families of workers as well as to the workers themselves, in order to keep the worker on the job. Among these are services concerned with the nonoccupational illnesses, such as colds and, at times, with outbreaks of dysentery and other communicable diseases caused by inadequate sanitary facilities in the community. Several States are assisting industry with venereal disease and tuberculosis control programs. For example, a number of the units are promoting tuberculosis case-finding programs in industry. One unit alone had X-rayed some 44,000 workers during the 1942 fiscal year.

Several States are doing a great deal of work in promoting the recording and reporting of absenteeism. In fact, a few State units receive such reports and analyze them for industry, and others are prepared to do so.

Within the past two years a number of States have added the services of nursing consultants in industrial hygiene to their staffs. In January 1943, 14 States had 16 such consultants. Their functions are primarily concerned with the improvement of existing nursing services in industry and the stimulation of such services where they are nonexistent and needed. A major phase of their activities is

promoting part-time nursing services to industry by utilization of the local visiting nurse associations. These consultants further advise management on health education among workers in the plants, nutrition, elimination of fatigue, war problems resulting from the employment of large numbers of women in industry, and on functions of nurses in industry. The recent industrial nursing survey, in which the nursing consultants participated actively, will furnish them a guide in further advising industry on acceptable practices for industrial nurses.

More recently, State health departments have shown an interest in promoting dental programs in industry. This activity was still in its early stages of development during the 1942 fiscal year, but since then 3 State industrial hygiene divisions have added to their staffs the services of full-time dentists, and in 26 other States the divisions of dental health and industrial hygiene are beginning to cooperate in the establishment of plant dental programs in industry.

In the field of health promotion the industrial hygiene services have been particularly active. No count was made of their publications on various phases of industrial hygiene work, of the informative pamphlets, bulletins, and circulars which were distributed to industry, local physicians, and others interested, nor of the speeches, talks, radio lectures, and lectures delivered at schools and universities and before other groups, but these were quite numerous.

Comparison with the 1941 fiscal year.—Although the present analysis represents the third one of its kind (*2*, *3*), variations from previous analyses prevent satisfactory comparisons. Uniform reporting of industrial hygiene activities in the country is still a fairly new undertaking, and minor inconsistencies in the interpretation of certain factors by the units are still likely to occur.

On the whole, it can be stated that the reporting units investigated fewer plants in the 1942 fiscal year than in the 1941 fiscal year but that the plants visited in 1942 employed more workers. More units submitted reports in the past year, but approximately the same number of personnel carried on the field activities. It is possible that personnel disruptions and the time involved in recruiting and training new personnel may be reflected here.

The proportion of request work was slightly greater in the past year and more requests for services came from the State labor departments and industrial commissions. No gain was made in the investigations of occupational diseases, although more cases occurred in the plants where such investigations were made in the 1942 fiscal year.

The most notable difference is apparently in the amount of follow-up work done on recommendations. The reporting on this phase is subject to fewer inconsistencies, thus making comparison quite reliable. Recommendations were made for more workers in the 1942 fiscal

year in proportion to the total number of workers involved in the investigations but were reported as carried out for less workers. In fact, the percentage is 40 for the 1942 fiscal year and 67 for the 1941 fiscal year. Here again wartime disruptions in personnel and other difficulties are reflected. Many reports received from the industrial hygiene services indicate that with the personnel available follow-up work had to be curtailed in order to visit as soon as possible each new industry working on Government contract.

CONCLUSION

In conclusion it can be stated that all the available resources of the State and local industrial hygiene services are geared to the war effort. The task set for them is tremendous from the standpoint of the size and composition of the manpower as well as the complexity of the industrial health problems. Their contribution to the war effort in terms of plants and workers served is not great, but it is commensurate with their resources for doing such work.

The programs of the industrial hygiene services are being constantly broadened to include all phases of industrial health. Rendering technical assistance to industry is but one part of their work, although a major one. More States have added the services of nursing consultants to their staffs and more recently have begun to promote dental programs in industry. They are stimulating rounded out industrial health programs, especially in the new industrialized areas where the chief contact with the worker and even his family is through the plant. Such programs are developed with some thought for the postwar period.

On the other hand, little gain has been made in the field of occupational disease reporting and absenteeism reporting. The amount of the follow-up work on recommendations made has decreased.

It is evident that in order to reach more workers, to maintain the gains in general health promotion, and to meet in part the shortcomings of present programs the resources of the industrial hygiene units will need to be increased. However, this may not be possible in view of the shortages of professional personnel and limited budgets. The alternative, then, is the more effective utilization of personnel in these units and of community resources now available. The professional personnel can be used in key positions to train and direct the endeavors of untrained personnel and to strengthen the working relationships with community agencies concerned with health matters.

For example, the health programs of official agencies concerned with venereal disease and tuberculosis control and with improved nutrition can be more closely integrated with those of the industrial hygiene services. More effective use of labor-management committees can be made. There are some 2,000 such committees in war industries today

whose efforts could be directed toward the reduction of illness and accidents in the plant and in the community. Many units are collaborating to their mutual benefit with State medical society committees on industrial health affiliated with the Council on Industrial Health of the American Medical Association. These committees are developing industrial health programs, setting up standards for medical practice in industry, and sponsoring emergency educational institutes on industrial hygiene.

Just recently an arrangement was made between the Division of Industrial Hygiene and the Office of the Provost Marshal General whereby the State units can benefit from inspections of war plants made by officers of the latter agency. These officers will complete an additional form on potential health hazards in the plant and will submit this form with the request, if so indicated, that a further study of the plant be made by the State unit concerned.

These are but a few of the ways in which the industrial hygiene services can compensate for limitations in their own resources and still strengthen their contribution to the war effort.

REFERENCES

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(3) Trasko, V. M., and Bloomfield, J. J.: An analysis of industrial hygiene activities in State and local health departments, 1940–41. Pub. Health Rep., 57: 853–872 (June 5, 1942). Reprint 2385.

STUDENT WAR NURSING RESERVE

The Bolton-Bailey Act providing for the training of nurses for the armed forces, governmental and civilian hospitals, health agencies, and war industries through grants to institutions giving such training was passed by the House on May 14, 1943, and by the Senate on June 4, 1943. The program is under the administration of the United States Public Health Service. The legislation was introduced into the House by Congresswoman Frances P. Bolton of Ohio and in the Senate by Senator Josiah W. Bailey of North Carolina.

Although the Act does not specify it, the Public Health Service proposes to carry out the program by establishing a Student War Nursing Reserve. Private industry and the military services are at this time competing for the services of recent high school graduates and college students. It is thought that the provision of free professional training, maintenance, service in an organized government unit,

attractive uniforms and insignia will attract a considerable number of these young women to the War Nursing Reserve. The stipend, while small, will make it possible for student nurses to pay for all personal expenses in connection with their nursing education.

Under the Bolton-Bailey Act, the usual training period for nurses will be accelerated from 36 months to 24 or 30 months in such a way that all essential courses, including clinical experience, will be completed during the shortened period. Student nurses will thus be made available for full-time nursing practice under supervision during the last 12 or 6 months, the cadet period, in approved civilian or military organizations. Besides increasing the nursing supply, the program will also release much-needed dormitory facilities, since cadet nurses will not live in the dormitories.

The Act provides that courses of study and training meet standards prescribed by the Surgeon General after consultation with the Advisory Council and that institutions furnish student nurses, without charge for tuition, fees or other expenses, courses of study and training, uniforms, insignia, and maintenance in accordance with regulations.

Institutions participating in this training program will pay student nurses a stipend of not less than $15 a month during the first 9 months of study; $20 a month during the next period; and not less than $30 a month during the last or cadet period.

Any school which provides adequate clinical experience for its students in the four basic services and whose graduates are eligible for the Red Cross War Nursing Reserve may apply through the Public Health Service for participation in the nurse training program.

No student or graduate nurse is eligible to receive training under this plan unless the nurse signifies her intention to be available for military or other governmental or essential civilian services for the duration of the present war.

The Act also provides for the compensation of institutions furnishing postgraduate and refresher courses of study for graduate nurses, and authorizes the Surgeon General to enter into agreements with nonprofit organizations for the recruitment of student and graduate nurses on a reimbursable basis.

The plan proposed by the Public Health Service makes it possible for student nurses enrolled after January 1, 1941, in one of the schools participating in the training program to become a member of the Student War Nursing Reserve. Each of these students must agree to serve wherever needed for the duration of the war and 6 months thereafter.

Although the Act does not specify the amount of appropriation needed to carry out the program, it is estimated that the cost will be $64,000,000 a year.

A survey of military and civilian nursing needs has been made and it has been determined that 100,000 more nurses are needed than will be available under the present circumstances on June 30, 1944. Every inactive nurse who responded to a recent inventory will be given a refresher course and will be urged to return to active duty. However, these nurses will not fill the existing gap between actual nursing services available and those needed. To meet critical nursing shortages, 65,000 additional student nurses must begin their training this fall.

INCREASE IN INFANT MORTALITY AND INFANT DIARRHEA IN SAN FRANCISCO, CALIF.

Dr. J. C. Geiger, Director of the Department of Public Health of San Francisco, reports an unusually high infant mortality, with diarrhea of the newborn a definite contributing cause, in San Francisco during the current year. For the first 4 months of the year the infant deaths represent 5 percent of the total deaths, as compared with a normal expectancy of between 3 and 4 percent. For the first 4-month period, the infant mortality rate was 41.6, as compared with 38.0 for the corresponding period of 1942. The births for this period in 1943 show a 37 percent increase over the same period in 1942.

The excess of deaths from diarrhea is apparently the most important factor in the increased infant mortality in San Francisco. For the first 4 months of the current year, deaths from diarrhea constituted 15 percent of the total infant deaths, as compared with 8 percent in infants under 1 year of age and 1.7 in those under 1 month for the country as a whole (1941).

Under date of April 3, 1943, the California State Board of Public Health revised the regulations for the control of communicable diseases. Epidemic diarrhea of the newborn is required to be reported by physicians, superintendents or managers of hospitals, dispensaries, or clinics, as formerly. In addition, epidemic diarrhea of the newborn is defined and the isolation of infant patients is required.

Reportable cases of diarrhea of the newborn are defined as follows:

Diarrhea in the newborn up to 3 weeks of age occurring in a hospital giving maternity service. Diarrhea shall be considered to exist when an infant has four or more loose stools in 24 hours, except in the case of entirely breast fed infants who show no other signs of illness and who are gaining weight.

With regard to isolation of the patient, the regulations require that—

The infant patient shall be immediately placed in strict isolation until discharged from the hospital.

Infant contacts shall be kept in strict isolation until discharged from the hospital or institution.

In addition to these regulations the rules and regulations pertaining to maternity homes and hospitals shall be followed.

Detailed instructions regarding isolation procedures have been issued by Dr. Wilton L. Halverson, State Director of Public Health, to all hospitals and maternity homes in the State admitting maternity patients.

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

April 25–May 22, 1943

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 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-week period ended May 22, 1943, the number reported for the corresponding period in 1942, and the median number for the years 1938–42.

DISEASES ABOVE MEDIAN PREVALENCE

Meningococcus meningitis.—The number of cases of meningococcus meningitis dropped from 2,389 for the preceding 4-week period to 2,221 for the 4 weeks ended May 22. The number of cases was, however, almost 7 times the number reported for the corresponding period in 1942 and more than 12 times the 1938–42 median. In 1929 there were 1,116 cases reported during the period corresponding to the one under consideration, the current incidence being the highest since that year.

The table shows, by geographic regions, the number of cases reported for recent weeks in 1943 in comparison with the experience of the 2 preceding years and also that of the peak year 1929. While the incidence for the country as a whole dropped during the current period, the Middle Atlantic and East North Central regions reported the largest numbers of cases for any 4-week period since the beginning of the outbreak. In all other regions the peak apparently was reached during the preceding 4-week period and marked declines were noted during the current 4-week period. Each section of the country has contributed to the epidemic of this disease and the excesses over the 1938–42 median are still significantly large, ranging from almost 5 times the median in the West South Central region to 25 times the median in the Pacific region.

Meningococcus meningitis cases reported by weeks during 1943 with comparative data for the corresponding period in 1942, 1941 and 1929 [1]

Division	1943, week ended—													
	Feb. 27	Mar. 6	Mar. 13	Mar. 20	Mar. 27	Apr. 3	Apr. 10	Apr. 17	Apr. 24	May 1	May 8	May 15	May 22	May 29
All regions:														
1943	503	556	525	619	572	595	606	619	549	592	604	481	544	427
1942	87	70	88	91	90	111	112	88	79	80	89	86	81	81
1941	44	56	43	53	54	70	48	53	62	33	53	33	49	38
1929 [2]	303	297	332	325	330	326	338	295	276	283	298	309	235	258
New England:														
1943	52	61	56	76	88	59	79	72	64	64	62	52	50	37
1942	14	17	10	12	11	13	13	7	12	13	14	10	11	10
1941	3	2	3	4	4	4	5	1	2	2	7	0	3	2
1929	6	11	9	7	6	11	9	5	12	5	7	7	8	5
Middle Atlantic:														
1943	108	117	104	125	133	145	115	135	128	159	156	146	169	157
1942	16	14	19	29	31	40	38	29	25	25	23	21	28	18
1941	8	11	7	9	15	14	13	10	14	9	9	6	18	9
1929	61	54	68	55	27	79	55	48	42	52	38	56	46	54
East North Central:														
1943	41	44	58	40	57	67	51	68	86	96	74	63	80	53
1942	7	4	9	7	5	5	8	4	8	3	4	2	3	1
1941	2	8	8	7	4	7	2	12	4	5	7	6	9	2
1929	63	78	89	65	123	115	122	101	102	105	145	132	97	121
West North Central:														
1943	34	43	25	38	31	22	38	55	27	39	26	38	23	19
1942	4	2	2	2	2	3	3	8	2	2	3	3	3	6
1941	1	5	2	4	1	2	2	3	3	2	2	2	5	2
1929	46	49	42	63	30	29	34	40	29	31	27	32	21	29
South Atlantic:														
1943	[3] 104	[4] 105	105	159	95	106	119	131	85	103	111	75	87	[7] 70
1942	20	14	21	19	20	22	20	21	13	17	22	18	17	17
1941	17	10	8	8	13	21	10	12	18	9	12	6	10	5
1929	7	6	15	13	5	10	5	7	8	7	14	15	8	3
East South Central:														
1943	64	45	54	74	53	90	52	44	62	38	61	46	60	24
1942	10	3	6	5	8	6	8	9	12	10	6	4	5	6
1941	8	9	7	8	11	11	11	8	10	5	8	10	1	6
1929	5	2	8	12	6	6	5	14	3	4	1	6	3	5
West South Central:														
1943	29	27	45	48	46	29	66	[6] 35	13	26	24	21	19	13
1942	10	8	15	11	4	8	11	8	1	6	12	13	3	8
1941	1	8	4	5	4	7	3	2	7	0	4	2	2	9
1929	15	13	18	15	13	18	31	11	13	11	10	6	9	6
Mountain:														
1943	18	[5] 25	20	12	8	6	30	18	25	16	13	14	10	17
1942	3	1	1	1	0	1	3	0	1	0	0	4	0	4
1941	2	0	2	2	0	2	1	0	1	0	1	0	0	1
1929 [2]	61	54	56	41	50	34	33	28	35	32	25	27	21	13
Pacific:														
1943	53	89	58	47	61	71	56	61	59	51	77	26	46	37
1942	3	7	5	5	9	13	8	2	5	4	5	11	11	11
1941	2	3	2	6	2	2	1	5	3	1	3	1	1	2
1929	39	30	27	54	70	24	44	41	32	36	31	28	22	22

[1] Similar tables appeared in Public Health Reports for Mar. 19, 1943, p. 494, Apr. 16, 1943, p. 648, and May 14, 1943, p. 777.
[2] Exclusive of Nevada.
[3] Delayed report of 19 cases in Virginia included.
[4] Delayed report of 15 cases in Virginia included.
[5] Delayed report of 10 cases in Arizona included.
[6] Delayed report of 15 cases in Arkansas included.
[7] Delayed report of 4 cases in Virginia included.

The weekly incidence of meningococcus meningitis has fluctuated considerably. There have been 2 peak weeks, March 14–20 and April 4–10, of 619 cases each, and during the week ended May 22 there were more cases reported than during the preceding week. However, it is probable that the numbers of cases will soon decline in all regions as the incidence is usually low during the summer months. During

the week ended May 29, the cases declined in all regions except the Mountain.

Influenza.—For the current period there were 6,337 cases of influenza reported, as compared with 5,196, 7,530, and 5,650 for the corresponding period in 1942, 1941, and 1940, respectively. The 1938–42 median is represented by the 1940 figure. The small excess of cases of this disease over the median appears to be largely due to a relatively high incidence in the South Central region, particularly in Alabama and Texas. In other regions the incidence compares favorably with the median expectancy.

Measles.—For measles the incidence (approximately 108,000 cases) was about 15 percent above the normal seasonal expectancy (approximately 93,000 cases). Excesses over the median were reported from each region except the South Atlantic and West South Central, but the largest excesses were reported from the North Atlantic and East North Central regions. With the exception of the year 1941 when approximately 172,000 cases were reported, the incidence for the country as a whole was the highest for this period in 6 years.

Poliomyelitis.—The number of cases (118) of poliomyelitis reported was about 1.7 times the 1938–42 median. An increase in this disease may be expected at this season of the year; with the possible exception of California, Arizona, and Texas, no State reported more than the normal seasonal increase. California reported 41 cases for the current period as compared with a 5-year median of 21 cases, Arizona 11 cases as against a median of 1 case, and Texas with a median of only 4 cases reported 15 cases for the current period.

Whooping cough.—The number of cases of whooping cough (16,854) was somewhat above the 5-year median of 15,291 cases. Of the nine geographic regions, the West North Central, South Atlantic, and West South Central reported excesses over the 1938–42 median; the New England, Middle Atlantic, and Mountain regions reported declines in the number of cases; in the East North Central, East South Central, and Pacific regions the incidence stood at about the normal median level.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—For the 4 weeks ended May 22 there were 783 cases of diphtheria reported, as compared with 757 in 1942 and a 1938–42 median of 927 cases. In the East North Central and Pacific regions the incidence was higher than it was during the corresponding period in 1942 and more than 20 percent above the 1938–42 median; but in all other regions the incidence was below the normal seasonal level.

Scarlet fever.—While the number of cases (15,612) of scarlet fever was about 14 percent above the figure for the corresponding period in 1942, it was slightly lower than the 1938–42 median. Of the nine

geographic regions only three, the Middle Atlantic, East North Central, and East South Central, reported fewer cases than normally occur during this period. In the New England and Mountain regions the numbers of cases were more than twice the 1938–42 median and in the South Atlantic the incidence was 1½ times the seasonal expectancy; other regions reported minor excesses.

Smallpox.—Of 93 cases of smallpox reported for the current period, 40 occurred in Ohio, 7 each in Iowa and Texas, and 5 each in Indiana and Colorado; no more than 4 cases were reported from any other State. The incidence was about 15 percent in excess of that for the corresponding period in 1942 but it was only about one-third of the median expectancy.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period April 25–May 22, 1943, the number for the corresponding period in 1942, and the median number of cases reported for the corresponding period, 1938–42

Division	Current period	1942	5-year median	Current period	1942	5-year median	Current period	1942	5-year median
	Diphtheria			Influenza [1]			Measles [2]		
United States	783	757	927	6,337	5,196	5,650	108,057	93,056	93,056
New England	21	27	27	4	5	14	10,317	9,578	6,623
Middle Atlantic	120	112	187	96	41	81	30,675	12,447	12,447
East North Central	194	113	157	352	169	301	33,719	11,276	11,276
West North Central	36	73	77	116	93	118	7,756	9,969	7,304
South Atlantic	107	118	152	1,972	1,577	2,012	6,866	7,852	9,119
East South Central	52	64	68	709	374	374	3,062	1,635	1,635
West South Central	124	158	159	2,156	1,850	1,850	3,310	6,894	5,873
Mountain	42	46	58	461	797	476	5,039	8,311	4,054
Pacific	87	46	67	471	290	290	7,313	25,094	6,367
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States	2,221	336	181	118	73	70	15,612	11,551	15,980
New England	228	48	11	1	3	1	2,773	1,458	1,206
Middle Atlantic	630	97	44	9	8	7	4,104	3,802	4,606
East North Central	313	12	20	14	8	8	4,013	3,208	5,223
West North Central	126	11	11	4	4	3	1,153	1,041	1,141
South Atlantic	376	74	45	3	20	19	1,104	708	718
East South Central	205	25	32	12	13	9	339	372	411
West South Central	90	34	19	19	11	11	319	174	299
Mountain	53	4	4	12	2	3	1,001	262	437
Pacific	200	31	8	44	4	12	806	526	771
	Smallpox			Typhoid and paratyphoid fever			Whooping cough [2]		
United States	93	75	280	286	384	415	16,854	15,291	15,291
New England	0	1	0	36	14	20	1,110	1,632	1,605
Middle Atlantic	0	0	0	44	51	59	2,640	4,149	3,607
East North Central	51	12	59	25	49	71	3,367	3,615	3,331
West North Central	14	9	107	15	19	19	1,063	475	573
South Atlantic	3	8	8	51	108	91	2,657	1,596	2,357
East South Central	9	14	28	25	42	54	641	680	680
West South Central	9	27	51	46	75	75	2,658	998	1,623
Mountain	5	1	32	25	9	21	560	513	926
Pacific	2	3	28	19	17	28	2,158	1,633	2,103

[1] Mississippi, New York, and Pennsylvania excluded; New York City included.
[2] Mississippi excluded.

Typhoid and paratyphoid fever.—The incidence of these diseases during the 4 weeks ended May 22 was the lowest on record for this period. The number of cases (286) was about 75 percent of the number reported during the corresponding period in 1942, and less than 70 percent of the 1938–42 median (415 cases). The total cases included 35 from Massachusetts, 34 from New York, 23 from Texas, 14 from Georgia, and 13 each from Colorado and California—more than 40 percent of the total cases were reported from these 6 States.

MORTALITY, ALL CAUSES

For the 4 weeks ended May 22 there were approximately 37,700 deaths from all causes reported to the Bureau of the Census by the group of large cities. This figure represents an increase of more than 12 percent over the 1940–42 average number of deaths for the corresponding period. Rates for the cities will be published by the Census Bureau when current population estimates become available. With the excessive internal migration that has taken place since 1940, no accurate population estimates can be made, so it is uncertain as to how much of the current increase is due to increased population and how much represents an increased death rate.

DEATHS DURING WEEK ENDED MAY 29, 1943

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

	Week ended May 29, 1943	Corresponding week, 1942
Data for 89 large cities of the United States:		
Total deaths	8,946	7,822
Average for 3 prior years	7,741	
Total deaths, first 21 weeks of year	204,172	185,391
Deaths under 1 year of age	610	531
Average for 3 prior years	492	
Deaths under 1 year of age, first 21 weeks of year	14,099	11,814
Data from industrial insurance companies:		
Policies in force	65,536,014	64,981,793
Number of death claims	12,470	11,135
Death claims per 1,000 policies in force, annual rate	9.9	8.9
Death claims per 1,000 policies, first 21 weeks of year, annual rate	10.5	10.0

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 JUNE 5, 1943

Summary

The reported cases of meningococcus meningitis and poliomyelitis for the current week are above the figures for both the preceding week and the medians of the corresponding weeks of the past 5 years. A slight increase for the week is also shown for typhoid fever, although the current incidence and the reported cases to date this year are below both the figures for last year and the 5-year median. Of the other nine common communicable diseases included in the following table, for which comparable data are available, the current incidence of all except diphtheria and smallpox is above the corresponding medians.

A total of 437 cases of meningococcus meningitis was reported for the week, as compared with 423 for the preceding week. Slight increases during the week were shown in all of the nine geographic areas except the New England, Middle Atlantic, and East South Central States. States reporting increases of 5 or more cases (last week's figures in parentheses) were as follows: New Hampshire, 5 (0); Indiana, 9 (1); Illinois, 26 (16); Missouri, 23 (13); Georgia, 8 (1); Florida, 20 (5); Louisiana, 7 (0); Utah, 14 (2); California, 31 (22). A total of 10,720 cases has been reported to date, as compared with 1,716 for the corresponding period last year.

Of the current total of 52 cases of poliomyelitis, as compared with 27 last week and 22 for the 5-year median, 33 occurred in California, where only 9 cases were reported last week. Of the remainder, 6 cases were reported in Texas, 3 in Florida, and 10 cases in 8 other States.

Diseases with accumulated totals for the first 22 weeks of the year above the median figures for the corresponding periods of the past 5 years (medians in parentheses) are as follows: Measles, 444,654 (408,494); meningococcus meningitis, 10,720 (1,062); poliomyelitis 598 (502); whooping cough, 89,019 (87,076). The incidence of these

4 diseases for the first 22 weeks of the year also exceeds that for last year, as does that of scarlet fever, smallpox, the dysenteries, and endemic typhus fever. Cumulative figures for diphtheria, Rocky Mountain spotted fever, tularemia, and typhoid fever are below the corresponding figures for last year.

Deaths registered during the week in 89 large cities of the United States totaled 8,870, as compared with 9,039 for the preceding week and a 3-year average of 8,302. The accumulated total for the first 22 weeks of the year is 215,063, as compared with 195,001 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended June 5, 1943, and comparison with corresponding week of 1942 and 5-year median

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

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1938–43	Week ended—		Median 1938–42	Week ended—		Median 1938–42	Week ended—		Median 1938–42
	June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942	
NEW ENGLAND												
Maine	2	0	0	1	-----	-----	95	113	105	5	3	0
New Hampshire	0	0	0	-----	8	-----	50	27	23	5	2	0
Vermont	0	0	0	-----	-----	-----	178	155	79	0	0	0
Massachusetts	0	5	3	-----	-----	-----	1,168	1,037	976	17	4	1
Rhode Island	0	0	0	-----	-----	-----	96	220	136	3	0	0
Connecticut	1	0	0	2	1	1	271	404	397	7	0	0
MIDDLE ATLANTIC												
New York	14	9	15	[1] 4	[1] 9	[1] 6	3,205	1,144	2,150	76	18	5
New Jersey	3	1	7	5	2	2	2,041	659	724	27	3	0
Pennsylvania	7	7	16	1	-----	-----	949	1,044	1,044	32	17	3
EAST NORTH CENTRAL												
Ohio	7	6	8	16	8	8	644	320	320	11	0	1
Indiana	7	3	5	3	10	6	420	111	111	9	0	0
Illinois	30	29	23	12	5	9	1,707	241	241	26	0	1
Michigan [2]	6	3	3	1	-----	1	2,279	289	610	9	1	1
Wisconsin	1	0	2	24	22	22	2,457	1,284	1,284	2	0	0
WEST NORTH CENTRAL												
Minnesota	2	3	2	-----	1	1	466	391	216	0	0	0
Iowa	4	1	2	-----	-----	1	109	234	188	2	1	0
Missouri	2	2	2	-----	1	1	234	172	137	23	0	0
North Dakota	1	0	0	3	1	1	11	15	15	0	0	0
South Dakota	0	1	0	-----	-----	-----	602	27	4	3	0	0
Nebraska	2	0	4	2	2	-----	190	290	160	1	0	0
Kansas	4	1	1	-----	9	2	402	214	358	3	2	0
SOUTH ATLANTIC												
Delaware	1	0	0	-----	-----	-----	47	6	7	1	0	0
Maryland [2]	2	5	1	2	-----	2	186	195	129	14	1	1
Dist. of Col	0	1	3	-----	-----	-----	104	59	59	5	1	1
Virginia	5	7	7	94	95	71	538	97	607	[3] 15	1	1
West Virginia	4	0	3	2	2	5	32	108	108	4	2	1
North Carolina	7	10	8	-----	-----	1	235	439	459	15	1	0
South Carolina	0	3	3	145	154	154	103	105	105	3	0	1
Georgia	2	0	3	2	12	12	58	103	106	8	1	0
Florida	2	0	4	36	-----	1	127	73	73	20	0	0
EAST SOUTH CENTRAL												
Kentucky	2	3	3	11	-----	2	111	50	79	6	1	1
Tennessee	2	0	3	4	7	18	120	151	151	7	1	1
Alabama	3	1	4	33	18	18	116	77	148	1	1	3
Mississippi [2]	5	3	3	-----	-----	-----	-----	-----	-----	1	2	1
WEST SOUTH CENTRAL												
Arkansas	2	7	3	2	7	7	43	77	108	2	1	0
Louisiana	2	2	4	6	-----	4	35	62	27	7	0	0
Oklahoma	2	2	3	28	30	22	25	57	127	2	0	0
Texas	13	17	16	403	239	181	345	423	423	3	1	1
MOUNTAIN												
Montana	0	0	0	4	4	3	70	88	88	0	0	0
Idaho	0	0	0	-----	-----	-----	29	57	37	2	0	0
Wyoming	0	1	1	15	-----	-----	94	32	24	0	0	0
Colorado	8	4	6	65	31	8	503	336	178	1	0	0
New Mexico	1	1	1	-----	-----	-----	17	45	45	0	0	0
Arizona	3	1	1	44	36	36	34	62	35	3	0	0
Utah [2]	1	0	0	2	1	1	94	811	344	14	0	0
Nevada	0	0	-----	-----	-----	-----	20	13	-----	1	0	-----
PACIFIC												
Washington	1	1	1	1	3	-----	115	425	320	2	0	0
Oregon	2	0	1	15	3	7	155	102	79	8	0	0
California	11	13	15	38	33	33	741	4,202	624	31	3	2
Total	174	153	183	1,026	754	754	21,671	16,646	16,646	[3] 437	68	49
22 weeks	5,471	5,743	7,032	74,749	76,059	147,113	444,654	408,494	408,494	10,720	1,716	1,062

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended June 5, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42
	June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942		June 5, 1943	June 6, 1942	
NEW ENGLAND												
Maine	0	1	0	24	4	4	0	0	0	0	0	0
New Hampshire	0	0	0	8	28	5	0	0	0	1	1	0
Vermont	1	0		14	19	10	0	0	0	0	0	0
Massachusetts	0	0	0	381	244	138	0	0	0	0	2	2
Rhode Island	0	0	0	17	9	8	0	0	0	2	0	0
Connecticut	0	0	0	78	10	39	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York	0	0	0	477	267	389	0	0	0	9	5	5
New Jersey	0	0	0	68	107	119	0	0	0	1	0	1
Pennsylvania	0	0	0	189	234	271	0	0	0	3	11	9
EAST NORTH CENTRAL												
Ohio	0	0	0	191	211	232	1	1	1	0	1	8
Indiana	0	0	0	53	44	78	2	1	1	0	3	3
Illinois	0	1	0	116	142	277	1	8	9	0	3	3
Michigan [3]	0	0	0	99	38	238	0	0	1	0	0	1
Wisconsin	0	1	1	292	111	109	0	5	2	0	0	1
WEST NORTH CENTRAL												
Minnesota	0	3	0	51	35	55	0	0	7	0	1	1
Iowa	0	0	0	34	26	26	0	0	8	1	1	1
Missouri	0	0	0	81	43	43	0	1	2	6	6	6
North Dakota	0	0	0	1	16	2	0	0	0	0	2	2
South Dakota	0	0	0	12	15	9	0	0	3	0	0	0
Nebraska	1	0	0	22	13	13	1	0	1	0	0	0
Kansas	1	0	0	29	42	42	0	0	1	0	0	1
SOUTH ATLANTIC												
Delaware	0	0	0	2	14	5	0	0	0	0	0	0
Maryland [3]	0	1	0	73	67	46	0	0	0	0	4	3
Dist. of Columbia	0	0	0	8	4	11	0	0	0	4	1	1
Virginia	0	0	0	20	15	19	0	0	0	5	1	6
West Virginia	1	0	0	17	17	20	0	1	0	1	3	5
North Carolina	2	0	0	16	16	13	0	0	0	4	2	4
South Carolina	0	0	0	6	1	4	0	1	0	1	4	4
Georgia	0	0	0	10	12	9	0	0	0	9	15	15
Florida	3	0	1	4	2	2	0	0	0	5	3	3
EAST SOUTH CENTRAL												
Kentucky	0	1	0	29	25	25	0	0	1	1	2	5
Tennessee	0	0	0	10	27	38	0	3	3	2	4	9
Alabama	0	3	1	7	16	10	0	1	0	2	2	3
Mississippi [3]	0	0	0	1	5	2	0	0	0	1	6	3
WEST SOUTH CENTRAL												
Arkansas	2	0	0	8	4	4	0	7	5	4	5	5
Louisiana	0	0	0	7	5	2	0	4	1	3	15	11
Oklahoma	0	0	0	16	11	10	0	0	2	0	1	5
Texas	6	3	2	20	35	30	0	0	3	10	11	11
MOUNTAIN												
Montana	0	0	0	9	11	11	0	0	0	1	0	0
Idaho	0	0	0	74	2	4	1	0	0	0	0	0
Wyoming	0	0	0	15	11	4	0	0	0	0	1	0
Colorado	0	0	0	69	29	29	0	3	3	2	2	2
New Mexico	0	0	0	0	2	2	0	0	0	0	0	0
Arizona	1	0	0	5	4	4	0	0	0	0	0	1
Utah [2]	1	0	0	13	9	9	0	0	0	0	0	0
Nevada	0	0	------	0	0	------	0	0	------	0	0	------
PACIFIC												
Washington	0	1	0	16	22	22	1	0	0	0	1	2
Oregon	0	1	1	14	8	8	1	0	1	0	1	1
California	33	1	7	138	105	105	0	0	1	2	3	6
Total	52	17	22	2,844	2,137	2,559	8	36	47	80	123	147
22 weeks	[4] 598	453	502	85,342	78,950	103,808	544	507	1,545	1,316	1,823	1,958

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended June 5, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended June 5, 1943								
	Week ended—		Median 1938–42	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	June 5, 1943	June 6, 1942			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine	19	31	25	0	0	0	0	0	0	0	0	0
New Hampshire	4	8	3	0	0	0	0	0	0	0	0	0
Vermont	15	63	20	0	0	0	0	0	0	0	0	0
Massachusetts	97	240	143	0	0	0	0	1	1	0	0	0
Rhode Island	19	19	24	0	0	0	0	0	0	0	0	0
Connecticut	31	91	47	0	0	0	0	0	0	1	0	0
MIDDLE ATLANTIC												
New York	227	381	343	0	2	6	0	1	0	0	1	0
New Jersey	126	420	191	0	1	1	0	1	0	0	0	0
Pennsylvania	246	233	233	1	1	0	0	1	0	0	0	0
EAST NORTH CENTRAL												
Ohio	146	131	169	0	0	0	0	1	0	0	0	0
Indiana	60	54	47	0	0	0	0	0	0	1	0	1
Illinois	145	268	230	0	0	0	0	1	0	0	1	0
Michigan [1]	164	130	217	0	0	1	0	0	0	0	0	0
Wisconsin	199	211	140	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL												
Minnesota	86	31	43	0	2	0	0	0	0	0	0	0
Iowa	38	16	26	0	0	0	0	0	0	0	0	0
Missouri	41	18	28	0	0	0	1	0	0	0	0	0
North Dakota	2	6	6	0	0	0	0	0	0	0	0	0
South Dakota	4	2	3	0	0	0	0	0	0	0	0	0
Nebraska	14	13	13	0	0	0	0	0	0	0	0	0
Kansas	76	63	63	1	0	1	0	1	0	0	0	0
SOUTH ATLANTIC												
Delaware	10	1	6	0	0	0	0	0	0	0	0	0
Maryland [1]	94	50	50	0	0	0	0	0	0	4	0	0
Dist. of Col	30	21	12	0	0	0	0	0	0	0	0	0
Virginia	204	64	68	0	0	0	53	0	0	3	2	0
West Virginia	41	57	83	0	0	0	0	0	0	2	0	0
North Carolina	207	112	197	0	0	1	0	0	0	0	0	3
South Carolina	66	126	69	0	0	48	0	0	0	0	0	0
Georgia	47	62	44	0	0	17	4	0	0	0	1	14
Florida	26	9	20	0	1	2	0	1	0	0	0	4
EAST SOUTH CENTRAL												
Kentucky	29	70	65	0	0	0	0	1	0	0	0	0
Tennessee	42	48	66	0	0	0	1	1	0	1	0	0
Alabama	44	53	53	0	0	0	0	0	0	0	0	10
Mississippi [2]	------	------	------	0	0	0	0	0	0	0	1	1
WEST SOUTH CENTRAL												
Arkansas	52	17	20	0	0	10	0	0	0	0	3	0
Louisiana	2	4	6	0	5	3	0	0	0	0	3	4
Oklahoma	43	4	10	0	0	0	0	0	0	0	0	0
Texas	592	147	274	0	38	161	0	2	0	0	0	13
MOUNTAIN												
Montana	12	14	12	0	0	0	0	0	0	2	2	0
Idaho	8	3	7	0	0	0	0	0	0	1	0	0
Wyoming	3	3	3	0	1	0	0	0	0	0	2	0
Colorado	24	43	28	0	0	2	0	0	0	1	2	0
New Mexico	5	4	13	0	0	2	1	0	0	0	0	0
Arizona	23	14	18	0	0	0	37	0	0	0	0	0
Utah [2]	47	33	51	0	0	0	0	0	0	0	3	0
Nevada	0	6	------	0	0	0	0	0	0	0	1	0
PACIFIC												
Washington	23	41	41	0	0	0	0	0	0	0	0	0
Oregon	23	22	22	0	0	0	0	0	0	0	0	0
California	365	313	385	0	0	15	0	2	0	0	0	0
Total	3,821	3,765	3,765	2	51	270	97	14	1	16	23	50
22 weeks	89,019	84,303	87,076	30	677	4,612	1,139	244	11	86	387	1,017
22 weeks, 1942	------	------	------	33	379	1,821	1,028	188	26	122	409	783

[1] New York City only. [2] Period ended earlier than Saturday.
[3] Exclusive of delayed report of 7 cases in Virginia.
[4] Later information shows 1 case of poliomyelitis in Pennsylvania for the week ended May 29 instead o· 2 as previously reported.

NOTIFIABLE DISEASES, FIRST QUARTER 1943

The figures in the following table are the totals of the monthly morbidity reports received from the State health authorities for January, February, and March 1943, and are therefore preliminary and incomplete. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State. The lists of diseases required to be reported are not the same for each State, although the common communicable diseases are notifiable in all the States. Some diseases, however, may be a health problem in some States but not in others. There are variations among the States also in the degree of completeness of reporting of cases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while other diseases, such as puerperal septicemia and Vincent's infection, are not reportable in many of the States.

In spite of these known deficiencies, however, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating a trend by providing a comparison with similar preliminary figures for prior years. To some extent they also give a picture of the geographic prevalence of certain diseases, as the States are arranged by geographic location.

Leaders are used in the table to indicate that no case of the disease was reported.

Consolidated monthly State morbidity reports for January, February, and March 1943

	Anthrax	Chickenpox	Diphtheria	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria	Measles	Meningitis, meningococcus	Mumps	Ophthalmia neonatorum	Pellagra	Pneumonia, all forms	Poliomyelitis
NEW ENGLAND																		
Maine	---	871	2	---	---	---	---	181	---	20	---	132	142	913	---	---	238	4
New Hampshire	4	357	---	---	---	---	---	571	---	12	---	534	10	113	---	---	21	---
Vermont	---	531	---	---	---	---	---	1,168	---	24	---	4,183	8	534	---	---	40	---
Massachusetts	---	4,243	24	---	14	---	8	12,864	---	---	2	10,967	226	3,304	59	---	[1] 1,037	10
Rhode Island	---	501	13	---	---	---	7	1,830	---	58	1	338	277	624	2	---	121	2
Connecticut	---	2,442	4	2	18	---	5	3,343	---	80	2	4,751	57	1,640	1	---	1,345	---
MIDDLE ATLANTIC																		
New York	4	9,377	148	116	371	---	11	[2] 4,365	---	[2] 182	22	20,112	559	[2] 1,873	21	---	8,823	8
New Jersey	2	10,298	54	5	---	---	5	11,255	---	221	1	12,612	286	5,917	1	---	1,816	4
Pennsylvania	8	9,752	129	3	9	---	3	4,508	---	24	1	31,650	286	6,309	3	---	1,831	7
EAST NORTH CENTRAL																		
Ohio	---	8,537	129	1	---	3	6	1,228	---	155	5	2,604	81	4,412	117	---	1,280	8
Indiana	---	1,254	65	---	---	1	1	3,213	---	234	1	3,306	75	1,313	---	---	619	6
Illinois	1	5,522	143	10	49	---	18	6,293	---	191	9	7,266	137	2,642	94	---	4,084	5
Michigan	---	7,161	56	---	15	---	---	1,852	---	113	16	4,750	125	2,653	5	---	1,878	6
Wisconsin	---	6,612	33	---	---	---	4	33,488	---	817	---	9,067	74	8,043	---	---	[1] 627	3
WEST NORTH CENTRAL																		
Minnesota	---	2,421	59	9	24	1	1	---	---	26	---	567	36	---	---	---	281	3
Iowa	---	1,278	36	---	---	---	3	1,280	---	32	2	2,557	11	1,327	---	---	337	5

Missouri		744	73	4			4			68	15	3,084	204	938	1		634	6
North Dakota		451	3				1			240	1	566	4	744			895	
South Dakota		303	69							5		1,599	9	205			60	3
Nebraska		1,412	30				1			353		2,729	25	1,465			132	7
Kansas		2,598	70	1	1		7	2,746		121		4,367	68	1,889			676	5
SOUTH ATLANTIC																		
Delaware	1	143	4							7		465	13	43			9	
Maryland		1,581	50	1	4	1		1,370		129	7	643	209	546	2		1,284	
District of Columbia		381	9				1			34	1	889	43	129			640	2
Virginia		1,202	123	1		321				8,194	7	4,058	385	834		4	2,762	10
West Virginia		623	57							298		240	27	346			125	4
North Carolina		1,999	148	3	7					774	39	633	156			1	680	4
South Carolina		763	388	1	20		7	444	146	10,041	838	608	162	2,164	4	132	1,895	5
Georgia		627	70	6	11	13	2		756	1,871	54	1,114	55	1,043		11	1,171	5
Florida		1,100	56	12	3		4			81	16	340	74	1,042		2	429	10
EAST SOUTH CENTRAL																		
Kentucky		1,520	70		7		4	227		122		8,054	109	975		1	432	12
Tennessee		820	69	4		7	4	580	9	1,055	9	2,307	89	720	10	6	1,025	5
Alabama		621	103	3			3	416		2,859	514	896	116	588		25	1,969	7
Mississippi		2,468	74	277	1,289				1,417	23,745	2,287	4,796	161	3,866	22	468	6,718	6
WEST SOUTH CENTRAL																		
Arkansas		654	104	10	19			1,076		1,773	43	1,371	39	412		4	1,147	5
Louisiana	2	208	66	18	7		2		38	136	45	1,373	104	545		4	798	2
Oklahoma		388	76	2	9		1		25	1,318	53	1,149	35	131		3	714	3
Texas	1	4,324	594	105	1,959		23			20,384	970	6,154	168	3,299	14	233	4,634	66
MOUNTAIN																		
Montana		575	21	1	2	4	1	172		225		2,190	6	1,177			25	
Idaho		357	72					644		17	1	1,549	17	869			54	1
Wyoming		221	3	2			4	61		588		1,009	13	573			50	2
Colorado		1,930	122	2	4		3			661		4,633	29	1,454			565	2
New Mexico		250	18	1	2	3	1	152		32	1	356	10	165		2	403	4
Arizona		953	16			167	3	199		1,533	5	348	28	561		4	767	12
Utah		1,853	11			5		599		708	4	5,148	60	1,068			394	6
Nevada		242								51		230	13	50			60	
PACIFIC																		
Washington		2,362	94	1	2		3	1,775		102	2	10,256	140	3,229			278	12
Oregon		611	12	5		2				364	1	5,018	141	1,515			584	4
California		22,193	347	24	83		10	16,065		1,144	41	7,543	475	9,541	11		[1] 1,551	54
1943	23	127,634	3,917	630	3,929	528	161	113,965	2,391	81,222	5,016	201,111	5,577	83,743	367	900	57,938	335
1942	29	128,372	4,221	492	1,839	1,094	106	47,024	7,059	86,624	4,781	222,463	911	121,678	573	1,423	52,346	304
Median, 1938–42	18	125,099	4,988	568	1,490	139	149		8,517	153,949	5,367	222,463	690	65,174	531	1,635	61,920	304
Alaska		27	24		4			12		309		163	8	356			45	
Hawaii Territory		411	28	1	20			166	6	10	14	62	14	1,162			[1] 66	10
Panama Canal Zone [3]		128	47	15	10						1,028	54	2	144				

[1] Lobar pneumonia only.

[2] New York City only.

[3] Including terminal cities.

Consolidated monthly State morbidity reports for January, February, and March 1943—Continued

	Puerperal septicemia	Rabies in animals	Rabies in man	Rocky Mountain spotted fever	Scarlet fever	Septic sore throat	Smallpox	Tetanus	Trachoma	Trichinosis	Tuberculosis, all forms	Tuberculosis, respiratory	Tularemia	Typhoid and paratyphoid fever	Paratyphoid fever	Typhus fever	Undulant fever	Vincent's infection	Whooping cough
NEW ENGLAND																			
Maine					157	3	1	1		1	157	138		2			10	10	887
New Hampshire					136	13					66			2			4	10	74
Vermont					132						27						8	4	363
Massachusetts		1			6,052	54			4	1	750	698		12	9	1	3		2,414
Rhode Island					406	28			1		350	340		1			2		405
Connecticut					910	75		1		12	311	305		7	3	1	12		730
MIDDLE ATLANTIC																			
New York		58			6,192	152		1		29	2,454	2,336		39	6	3	44		4,946
New Jersey				1	1,663	48		2	4	14	958			6	1		20		2,290
Pennsylvania					3,569		8			1	1,380		1	55			16		4,200
EAST NORTH CENTRAL																			
Ohio	1	192			3,818	25	32	1	3	1	1,422	1,389	11	19	3		14	21	2,608
Indiana			1	1	1,336	4	96	1	2		651	514	12	14			2	52	459
Illinois		88			2,784	146	18	6	50		1,924	1,740	17	22	1		40	62	2,074
Michigan					1,576	236	1	4	1	1	1,203			21	5		17	52	3,636
Wisconsin					3,500	26	3				215		2	7			18		2,588
WEST NORTH CENTRAL																			
Minnesota					879	97			2		303		1	6			48		937
Iowa		10			941	21	8				161	161	4	16	7		112		300
Missouri					1,375	13	2	2	251		462		7	8			6	9	237
North Dakota					142	2			11		48	34	2				3	4	186
South Dakota					262	6	8				55		1	1	1		1		47
Nebraska					473	21	7				50		1	2			2		96
Kansas					964	24	13		2		139	132	7	6	1		18	44	668
SOUTH ATLANTIC																			
Delaware					111						29	29		2					101
Maryland				1	1,119	49	1	1			952	940		11	1	1	2	3	1,075
District of Columbia					303						528	510		8	3		1		280
Virginia					612	507					780	780	22	36	2	2	6		1,042
West Virginia					433	7	2				404			9		1			564
North Carolina					598	51	14				284	277	3	22		43	2		1,705
South Carolina		91			131		1	2			137		5	10		35	3		486
Georgia					282	163	11	1	18	1	557	1	34	28	4	148	15		385
Florida					140	14					342			10		52	4		229

EAST SOUTH CENTRAL																		
Kentucky					706	31	4				691	678	9	9			5	476
Tennessee	2				703	68		2	1	2	865		39	12		4	8	73	963
Alabama		49	1		250		10	3			673		8	13	1	62	6		464
Mississippi	73				199		4		7		342	334	20	12		8	11		2,789
WEST SOUTH CENTRAL																		
Arkansas		75	1		98	284	16		128		209	197	7	26	1	2	6		440
Louisiana		4			136	5	2	9			366	297	8	43	4	22	10		78
Oklahoma	2				260	96	15				325		4	14		2	3		214
Texas					811		32		38		1,984		6	41	4	243	44		4,565
MOUNTAIN																		
Montana				1	153	20	2		2		82			5			5	11	325
Idaho	1				129	8	5				13	11		2	1				31
Wyoming					744	8			22		15	1	3				1	1	38
Colorado					671	7	2				508			8	3		3		245
New Mexico	4	11	1		55	6	2		13		237	225		17	5		4		246
Arizona					169	87	1		117		341			4					227
Utah					941	1			3		31	25		5			4		428
Nevada					24	26			9		16		1	1			1	21	36
PACIFIC																		
Washington					432	66	2	2			412	388	1	9	5		8	30	324
Oregon					159	8	6	1	4		131			16	9			24	116
California		155			2,439	7	3	12	70	5	2,721	2,585	1	32	6	10	38		4,698
1943	83	734	4	4	50,075	2,513	332	52	753	68	27,061	15,065	237	651	86	640	585	436	52,715
1942	86	483	7	5	51,491	1,999	299	59	784	101	22,221	11,972	234	924		558	624	302	53,103
Median, 1938–42	112	693	7	9	61,317	3,440	1,070	63	784	153	24,961	19,497	265	1,011		326	631	596	56,626
Alaska					11	2					35	34							15
Hawaii Territory					11	2		3	3	6						11			444
Panama Canal Zone[3]					2									17	11				

Actinomycosis: Massachusetts, 1; Illinois, 3; Minnesota, 5.

Botulism: California, 2.

Coccidioidomycosis: Arizona, 70; California, 4.

Conjunctivitis: New Hampshire, 2 (kerato), 11 (epidemic); Massachusetts, 87 (suppurative); Rhode Island, 1; Connecticut, 7 (infectious); Michigan, 67 (also 152 kerato); Maryland, 30 (also 3 kerato); Georgia, 3 (infectious); Oklahoma, 1; Montana, 7; Idaho, 1; New Mexico, 4; Washington, 5; Hawaii Territory, 4 (epidemic).

Dengue: Mississippi, 2; Texas, 11.

Diarrhea and enteritis: New Jersey, 16 (infant diarrhea); Ohio, 29; Indiana, 73 (diarrhea only); Illinois, 6 (diarrhea under 1 year); Michigan, 23 (infant diarrhea); Maryland, 25 (diarrhea only); South Carolina, 1,616 (diarrhea only); New Mexico, 19; Nevada, 15 (infant diarrhea); Washington, enteritis only, (under 2 years, 10; over 2 years, 5).

Food poisoning: Ohio, 11; Illinois, 52; Louisiana, 6; New Mexico, 2; California, 168.

Granuloma: Ohio, 5 (unspecified); Missouri, 1 (inguinale); Tennessee, 20 (inguinale); Mississippi, 244 (inguinale); Louisiana, 5 (inguinale); Arizona, 2 (inguinale); Washington, 3 (inguinale).

Impetigo contagiosa: Ohio, 76; Illinois, 39; Michigan, 239; Kansas, 21; Maryland, 1; Oklahoma, 14; Idaho, 17; Wyoming, 3; Washington, 14; Oregon, 67; Hawaii Territory, 20.

Leprosy: New York, 1; New Jersey, 1; Louisiana, 1; Texas, 1; Colorado, 1; Hawaii Territory, 12.

Lymphocytic choriomeningitis: Massachusetts, 2, Minnesota, 1.

Lymphogranuloma venereum: Missouri, 9; Tennessee, 18; Louisiana, 41; Arizona, 2.

Plague (human): Hawaii Territory, 2. (One death from plague was reported in California on January 10. Onset of case, November 8 or 9, 1942.)

Relapsing fever: Texas, 13.

Weil's disease: Michigan, 4; Hawaii Territory, 3.

WEEKLY REPORTS FROM CITIES

City reports for week ended May 22, 1943

This table lists the reports from 86 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	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								
NEW ENGLAND												
Maine:												
Portland	0	0	------	0	35	0	1	0	2	0	0	9
New Hampshire:												
Concord	0	0	------	0	0	0	1	0	1	0	0	0
Vermont:												
Barre	0	0	------	0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston	0	0	------	1	335	5	18	0	204	0	0	33
Fall River	1	0	------	0	124	1	2	0	3	0	1	6
Springfield	0	0	------	0	24	0	0	0	31	0	0	0
Worcester	0	0	------	0	65	0	5	0	9	0	0	5
Rhode Island:												
Providence	0	0	------	0	22	7	2	0	24	0	0	39
Connecticut:												
Bridgeport	0	0	------	0	6	3	1	0	0	0	0	2
Hartford	5	0	------	0	55	0	0	0	2	0	0	1
New Haven	0	0	------	0	22	1	0	0	3	0	0	11
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	------	0	48	3	7	0	10	0	0	2
New York	19	4	5	1	1,588	56	71	0	328	0	6	77
Rochester	0	0	------	0	123	7	3	0	11	0	0	12
Syracuse	0	0	------	0	87	0	3	0	6	0	0	19
New Jersey:												
Camden	1	0	------	0	0	1	4	0	0	0	0	2
Newark	0	0	3	0	412	9	3	0	17	0	0	13
Trenton	0	0	1	0	21	1	4	0	5	0	0	0
Pennsylvania:												
Philadelphia	0	0	1	0	421	14	34	0	114	0	1	60
Pittsburgh	1	0	1	1	43	4	19	0	11	0	1	43
Reading	0	0	------	0	34	0	3	0	2	0	0	3
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	1	0	------	0	67	2	2	0	25	0	2	0
Cleveland	0	0	8	1	27	6	8	0	45	0	1	23
Columbus	0	0	------	0	60	1	5	0	5	0	0	1
Indiana:												
Fort Wayne	0	0	------	0	10	0	1	0	0	0	0	0
Indianapolis	0	0	------	0	198	2	6	0	29	0	0	6
Terre Haute	0	0	------	0	11	0	5	0	0	0	0	0
Michigan:												
Detroit	2	0	------	0	1,764	12	9	0	28	0	0	98
Flint	0	1	------	0	193	0	0	0	2	0	0	2
Grand Rapids	0	0	------	0	43	0	2	0	4	0	0	17
Wisconsin:												
Kenosha	0	0	------	0	1	0	0	0	7	0	0	1
Milwaukee	0	0	2	2	593	1	3	0	137	0	1	71
Racine	0	0	------	0	2	0	0	0	14	0	0	3
Superior	0	0	------	0	49	0	0	0	2	0	0	2
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	------	1	29	0	1	0	3	0	0	1
Minneapolis	0	0	------	0	272	0	1	0	22	0	1	15
St. Paul	0	0	------	0	28	1	6	0	1	0	0	47
Missouri:												
Kansas City	3	0	------	0	73	2	0	0	22	0	0	7
St. Joseph	0	0	------	0	18	0	1	0	2	0	0	1
St. Louis	0	0	1	0	40	10	8	0	4	0	1	10
North Dakota:												
Fargo	0	0	------	0	1	0	0	0	1	0	0	1
Nebraska:												
Omaha	1	0	------	0	10	0	1	0	3	0	0	6
Kansas:												
Topeka	0	0	------	0	58	0	0	0	0	0	0	10
Wichita	1	0	------	0	3	0	3	0	1	0	0	7

City reports for week ended May 22, 1943—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								
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	12	1	2	0	3	0	0	0
Maryland:												
Baltimore	4	0	6	1	141	15	16	0	53	0	0	82
Cumberland	0	0	------	0	0	0	2	0	0	0	0	1
Frederick	0	0	------	0	5	0	0	0	1	0	0	0
Dist. of Col.:												
Washington	0	0	1	0	119	6	8	0	12	0	0	24
Virginia:												
Lynchburg	0	0	------	0	2	0	2	0	2	0	0	12
Richmond	0	0	------	1	15	4	3	0	1	0	0	7
Roanoke	0	0	------	0	0	0	0	0	0	0	0	1
West Virginia:												
Charleston	0	0	------	0	0	0	0	0	0	0	0	0
Wheeling	0	0	------	0	0	0	1	0	1	0	0	8
North Carolina:												
Wilmington	0	0	------	0	6	0	2	0	0	0	0	16
Winston-Salem	0	0	------	0	6	0	1	0	0	0	0	28
South Carolina:												
Charleston	1	0	1	0	4	1	1	0	0	0	0	2
Georgia:												
Atlanta	0	0	1	1	23	0	1	0	2	0	0	1
Brunswick	0	0	------	0	3	0	1	0	0	0	0	0
Savannah	0	0	------	0	2	0	2	0	0	0	0	1
Florida:												
Tampa	0	0	------	0	1	0	1	0	0	0	0	1
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	1	0	------	1	92	1	0	0	4	0	1	9
Nashville	0	0	------	1	14	0	0	0	1	0	0	8
Alabama:												
Birmingham	0	0	6	0	29	1	2	0	0	0	0	2
Mobile	0	0	------	0	0	0	1	0	3	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	------	0	5	0	1	0	1	0	0	2
Louisiana:												
New Orleans	1	0	4	0	17	0	9	1	4	0	0	7
Shreveport	0	0	------	0	0	0	3	0	0	0	0	0
Texas:												
Dallas	3	0	------	0	1	1	2	0	3	0	0	15
Galveston	1	0	------	0	2	0	0	0	0	0	1	0
Houston	1	0	------	0	14	0	5	0	2	0	0	0
San Antonio	0	0	1	0	3	0	0	0	0	0	0	5
MOUNTAIN												
Montana:												
Billings	0	0	------	0	8	0	0	0	0	0	0	0
Great Falls	0	0	------	0	26	0	0	0	2	0	0	0
Helena	0	0	------	0	13	0	0	0	0	0	0	4
Missoula	0	0	------	0	27	0	1	0	3	0	0	0
Idaho:												
Boise	0	0	------	0	0	0	0	0	0	0	0	0
Colorado:												
Denver	2	0	6	0	164	0	5	0	7	0	0	10
Pueblo	0	0	------	0	5	0	1	0	0	0	0	3
Utah:												
Salt Lake City	0	0	------	0	49	1	2	0	7	0	0	39
PACIFIC												
Washington:												
Seattle	0	0	------	0	117	8	4	0	14	0	0	13
Spokane	1	0	2	2	28	0	1	0	2	0	0	5
Tacoma	0	0	------	0	1	0	0	0	1	0	0	1

City reports for week ended May 22, 1943—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—continued												
California:												
Los Angeles	4	0	5	1	181	6	10	3	26	0	1	61
Sacramento	1	0	1	1	5	1	1	0	5	0	0	26
San Francisco	2	0	1	0	61	5	14	1	19	0	0	57
Total	57	5	57	16	8,216	200	348	5	1,319	0	18	1,120
Corresponding week, 1942	44	3	61	14	5,861	37	257	2	956	0	13	1,218
Average, 1938–42	69	------	63	[1] 16	[2] 5,492	------	[1] 299	------	1,185	10	22	1,146

Dysentery, amebic.—Cases: Boston, 1; New York, 3; Trenton, 1.
Dysentery, bacillary.—Cases: New York, 23; Philadelphia, 1; St. Louis, 1; Charleston, S. C., 14; Dallas ,1; Los Angeles, 19; San Francisco, 1.
Dysentery, unspecified.—Cases: San Antonio, 22.
Leprosy.—Cases: Philadelphia, 1.
Tularemia.—Cases: Atlanta, 1; Nashville, 1.
Typhus fever.—Cases: New York, 1; New Orleans, 1; Houston, 2.

[1] 3-year average, 1940–42.
[2] 5-year median.

Rates (annual basis) per 100,000 population, by geographic groups, for the 86 cities in the preceding table (estimated population, 1942, 31,045,900)

	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	Small pox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	14.9	0.0	0.0	2.5	1,709	42.2	74.5	0.0	693	0.0	2.5	263
Middle Atlantic	9.4	1.8	4.9	.9	1,239	42.4	67.3	0	225	0	3.6	103
East North Central	3.0	1.0	9.9	3.0	2,995	23.8	40.7	0	296	0	4.0	225
West North Central	9.8	0	2.0	2.0	1,040	25.4	41.0	0	115	0	3.9	205
South Atlantic	8.6	0	15.4	5.1	581	46.2	73.6	0	128	0	0	315
East South Central	5.9	0	35.6	11.9	802	11.9	17.8	0	48	0	5.9	113
West South Central	17.6	0	14.7	0	123	2.9	58.7	2.9	29	0	2.9	85
Mountain	16.1	0	48.2	0	2,347	8.0	72.4	0	153	0	0	450
Pacific	14.0	0	15.7	7.0	687	35.0	52.4	7.0	117	0	1.7	285
Total	9.6	0.8	9.6	2.7	1,380	33.6	58.4	.8	222	0	3.0	188

PLAGUE INFECTION IN CALIFORNIA

Plague infection has been reported proved in a pool of organs from rats in California as follows:

Contra Costa County: In organs from 18 rats, *R. norvegicus*, taken at Richmond, Calif., on March 12.

FOREIGN REPORTS

ANGOLA

Notifiable diseases—January–March 1943.—During the months of January, February, and March 1943, certain notifiable diseases were reported in Angola as follows:

Disease	January		February		March	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Beriberi	11	2	6	1	8	1
Cerebrospinal meningitis			1	1		
Chickenpox	12		9		12	
Dysentery (amebic)	169	8	168	6	141	6
Dysentery (bacillary)	4	1	2	2	2	
Gonorrhea	234	4	264		308	
Grippe	834	4	721	8	1,114	22
Hookworm disease	503	6	363	3	475	5
Leprosy	5		5		11	
Measles	124	3	112	9	111	15
Mumps	23		26		25	
Pneumonia (all forms)	140	14	174	24	181	41
Poliomyelitis	6		1		1	1
Relapsing fever	43		44		39	
Sleeping sickness	99	13	135	6	127	16
Smallpox (alastrim)	482	1	11	1	12	1
Syphilis	425		489		436	
Tetanus	8	3	4	1	6	
Tuberculosis (respiratory)	59	6	41	7	70	4
Typhoid and paratyphoid fever	8		14	3	9	2
Whooping cough	404	10	386	17	391	27
Yaws	708		583		557	

CANADA

Provinces—Communicable diseases—Week ended May 8, 1943.—During the week ended May 8, 1943, 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		11	2	119	340	51	15	21	70	629
Diphtheria		27		24	1	5				57
Dysentery (bacillary)				32						32
German measles		1		44	106	6	21	23	35	236
Influenza			2		3	5	2		53	65
Measles		85	5	198	2,111	87	134	178	616	3,414
Meningitis, meningococcus		1	1	5	5				3	15
Mumps		78	3	159	1,095	111	63	105	247	1,861
Scarlet fever		38	24	45	227	35	31	39	39	478
Tuberculosis (all forms)	1		3	201	69	30	6	1	39	350
Typhoid and paratyphoid fever				20	1	1		1		23
Undulant fever				1	2					3
Whooping cough		3	1	116	103	74	18	50	90	455

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

NOTE.—Except in cases of unusual prevalence, 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 cumulative table showing the reported prevalence of 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

Senegal—Thies (vicinity of).—For the period May 1–10, 1943, 20 cases of plague, 3 of which were septicemic, with 17 deaths were reported near Thies, in the subdivision of Tivaouane, Senegal.

Smallpox

Iran.—For the period February 13–26, 1943, 40 cases of smallpox were reported in Iran.

Typhus Fever

Hungary.—For the week ended May 15, 1943, 22 cases of typhus fever were reported in Hungary.

Iran.—For the period February 13–26, 1943, 172 cases of typhus fever were reported in Iran.

Iraq.—Typhus fever (endemic and epidemic) has been reported in Iraq as follows: Week ended May 8, 1943—Baghdad, 13 cases; Basra city, 13 cases; Basra Liwa, 27 cases, 9 deaths; Kirkuk, 5 cases; Mosul including 5 Liwas, 39 cases, 4 deaths. Week ended May 15, 1943—Baghdad, 14 cases; Basra city, 17 cases; Basra Liwa, 6 cases with 6 deaths in the Basra area; Diyala, 2 cases; Erbil, 4 cases; Kirkuk, 2 cases; Mosul, 23 cases, 3 deaths; Sulaimaniya, 8 cases.

Morocco—Casablanca.—For the period April 11–20, 1943, 52 cases of typhus fever with 1 death were reported in Casablanca, Morocco.

Rumania.—For the week ended May 15, 1943, 256 cases of typhus fever were reported in Rumania.

Slovakia.—For the week ended May 8, 1943, 17 cases of typhus fever were reported in Slovakia.

Spain.—For the week ended April 10, 1943, 11 cases of typhus fever were reported in Spain.

Yellow Fever

Belgian Congo—Stanleyville Province—Bondo.—On April 16, 1943, 1 death from yellow fever was reported in Bondo, Stanleyville Province, Belgian Congo.