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CONFERENCE OF WOMEN'S ADVISORY COUNCIL.

CONFERENCE OF THE WOMEN'S ADVISORY COUNCIL TO THE U. S. PUBLIC HEALTH SERVICE ON THE SUBJECT OF INDUSTRIAL HYGIENE.[1]

INTRODUCTORY NOTE.

The Women's Advisory Council to the Public Health Service consists of representatives from the more important national women's organizations. Although a number of informal meetings of the council were held prior to the conference on March 1–2, 1922, this was the first occasion when a full meeting took place. The second occasion was May 16, 1922.

The opening session of the first conference was presided over by Dr. C. C. Pierce, Assistant Surgeon General, and the opening address was made by Dr. Hugh S. Cumming, Surgeon General, who prefaced his remarks as follows:

I have felt that the activities of the Public Health Service are of such a nature that the support of the women of this country would naturally be attracted to the work of the service if they were familiar with the various phases.

It will be of great help to the Public Health Service to know that the national organizations of women in this country are familiar with the service activities and that we can count on the women's organizations to confer with us in regard to plans for mutual help and cooperation in service work, which has as its object the prevention of disease and the promotion of health and efficiency. I am sure that the program of the national organizations has many phases in common with the program of the Public Health Service, because each of the agencies represented here to-day has as one of its aims the promotion of the welfare and prosperity of the people of this country. As many of our aims are toward a common end, it will certainly be of mutual help for your organizations and the Public Health Service to get better acquainted, so that we may be of mutual service.

The program of the first conference consisted of an account of the more important activities of the service, which were discussed by the assistant surgeon generals, chiefs of the various divisions, and of reports made by the delegates on the work of their organizations.

At the close of the morning session, Dr. Rachelle S. Yarros, special consultant, division of venereal diseases, gave the aim of the conference, which she characterized as threefold; first, that the various

[1] Held at Washington, D. C., May 16, 1922.

national organizations of women might understand the work being carried on by the Public Health Service; second, that the Public Health Service might know what was being done by the national organizations; and, third, that through mutual knowledge, a clear understanding of each other's aims and a coordination of programs might be reached. The ultimate aim of the council, as its name implies, was, she said, to advise the service as to the standpoint taken by the organizations of women on any matters that might come up. The Public Health Service was, of course, bound to a definite policy through its organizations; it might be able to accept the advice given, or it might be unable to do so, but at least it would have a clear understanding of the attitude of the women throughout the country.

At the first conference it was decided that the second conference of the advisory council should be held at the time of the State and Territorial health officers' conference. The date set was May 16, and the subject later selected was industrial hygiene.

MEMBERS OF THE WOMEN'S ADVISORY COUNCIL TO THE PUBLIC HEALTH SERVICE PRESENT AT THE CONFERENCE, MAY 16, 1922.

Organization.	*Representative appointed.*
General Federation of Women's Clubs	Mrs. Eleanor Slagle.
Medical Women's National Association	Dr. Amy Jean Rule.
National Association of Colored Graduate Nurses	Miss Susan C. Barks.
National Congress of Mothers and Parent-Teachers' Associations	Mrs. Wm. Tilton.
National Council of Catholic Women	Miss Agnes G. Meagher.
National Council of Jewish Women	Dr. Luba Robin Goldsmith.
National Council of Women	Dr. Elizabeth B. Thelberg.
National Federation of Colored Women's Clubs	Mrs. S. C. Fernandis.
National Organization for Public Health Nursing	Miss Elizabeth G. Fox.
Women's Christian Temperance Union	Dr. Patience S. Bordeau-Sisco.
Women's Foundation for Health Young Women's Christian Association	Dr. L. L. Meanes.
Women's Lawyers' Association	Dr. Maryland E. Burns.
Women's Trade Union League	Miss Mathilde Lindsay.

Miss Harlean James was appointed to represent the American Association of University Women, and Miss Mary Stewart was appointed to represent the Federation of Business and Professional Women's Clubs, but they were both unable to attend the conference.

Mrs. Ann Webster attended as observer for the American Social Hygiene Association and the National League of Women Voters.

OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE PRESENT AT THE CONFERENCE.

Dr. Hugh S. Cumming, Surgeon General.
Dr. Claude C. Pierce, Assistant Surgeon General.
Dr. Claude H. Lavinder, Assistant Surgeon General.
Dr. John W. Kerr, Assistant Surgeon General.
Dr. Joseph W. Schereschewsky, Assistant Surgeon General.

Dr. Allan J. McLaughlin, Assistant Surgeon General.
Dr. Benj. S. Warren, Assistant Surgeon General.
Dr. Richard H. Creel, Assistant Surgeon General.
Dr. Samuel B. Grubbs, Surgeon.
Dr. Leslie L. Lumsden, Surgeon.
Dr. Jos. Goldberger, Surgeon.
Dr. L. R. Thompson, Surgeon.
Dr. Daisy M. O. Robinson, Surgeon (Reserve)
Dr. Rachelle S. Yarros, Special Consultant.

Those attending the Conference of the State and Territorial Health Officers were invited to be present at the meeting of the women's advisory council, and a number of them came. There were, in addition, guests especially invited because of their work in connection with industrial hygiene or because of their interest in the subjects under discussion.

Two of these guests took part in the discussion: Miss Ethel M. Smith, executive secretary, Washington Branch Women's Trade Union League, and Dr. S. Dana Hubbard, director, bureau of public education, department of health, New York City.

PROGRAM.

Morning Session.

Dr. Hugh S. Cumming, Surgeon General, United States Public Health Service, presiding.

The scope of the problem of industrial hygiene—Dr. Alice Hamilton, associate professor of Industrial Medicine, Harvard Medical School.
The place of venereal-disease control in industrial hygiene—Dr. Joseph S. Lawrence, acting assistant surgeon, United States Public Health Service.
The responsibility of the employer for the health of the worker—Dr. E. C. Jackson, plant physician, Edison Lamp Works, General Electric Company.
The responsibility of the worker in promoting industrial hygiene—Mrs. Grace Burnham, Workers' Health Bureau.
Questions by delegates.

Afternoon Session.

Dr. Elizabeth Thelberg, National Council of Women, presiding.

The functions of the State in enforcing industrial hygiene legislation—Dr. Francis Patterson, Pennsylvania State Department of Labor and Industry.
The functions of the United States Public Health Service in the field of industrial hygiene—Dr. L. R. Thompson, surgeon, United States Public Health Service.
The need of educated public opinion on industrial hygiene—Dr. Rachelle S. Yarros, special consultant, United States Public Health Service.
Discussion.

MORNING SESSION.

(Dr. Hugh S. Cumming, Surgeon General, United States Public Health Service, presiding.)

DR. CUMMING. I wish to thank the representatives of the various organizations for attending this meeting of the council in order to discuss the problems of industrial hygiene. The Public Health Serv-

ice is endeavoring to carry on a well-balanced program of public-health work, and it is appropriate that, since at the first meeting of the council rural work was discussed, Dr. L. R. Thompson should now have an opportunity to present to the members of the council suggestions in regard to a further development of the work of the Public Health Service in the field of industrial hygiene. The Public Health Service feels the importance and necessity of the Federal Government's fulfilling its obligations in regard to protecting the health of its employees as well as of the tremendous number of industrial workers. I wish to emphasize the fact that the service is in need of your help in taking up these problems. I feel that you probably know more about the industrial phases of industrial hygiene than I, so I shall simply welcome the delegates to the conference and permit the actual work of the day to start as early as possible.

I must apologize for having to leave early in order to preside at a meeting of the International Sanitary Bureau, at which a considerable number of representatives of other Governments are to be present. I should like to extend an invitation to the members of the council to come to my residence this afternoon and meet the various State and Territorial health officers present in Washington at their annual conference. I am sure that we are all delighted to have Dr. Alice Hamilton with us to-day. She will give the first address; and I am quite sure that Doctor Hamilton does not need any introduction on my part.

The Scope of the Problem of Industrial Hygiene.

Dr. ALICE HAMILTON, Assistant Professor of Industrial Medicine, Harvard Medical School.

This subject of industrial hygiene in the United States is very new, and it is difficult to explain why it is so new. I suppose it is the result of our pioneer spirit that takes for granted that people can take care of themselves and that the less interference there is the better. This has long ceased to be true in this country. Women are going more and more into industry; industry is growing more complicated, and it is growing more dangerous. Especially is this true since the war. Since 1914, industry has become more complicated and dangers have increased a good deal. To study these dangers is a task not only for big cities but for rural communities. In a charming, quiet little town that had always been a banking, religious, and school center for a well-to-do farming population, a big factory was established, and within 18 months tuberculosis had become a problem. This particular community suddenly found that it could not take care of all of the tuberculous workers; it was faced with an entirely new problem. Often the communities into which factories have moved are unacquainted with such a problem and all are not equipped to cope with it.

The best thing I can do this morning is to give a bird's-eye view of industrial diseases in this country—tell what is known about them and what remains to be learned and how we can learn it.

The fields which have been pretty well surveyed in the United States are certain of the poisons and a very few of the dusts. I will speak first of the dusts, though industrial poisons are my specialty, for the number of persons exposed to industrial poisons is very insignificant compared to those exposed to dusts.

For a long time it was assumed that all dusts were dangerous; that they caused tuberculosis and other respiratory diseases. However, when the New York City department of health inquired into the physical condition of the men who were working with the air-driven hammer, making breaks in the pavement of New York City to get at the gas pipes, and working in clouds of dust, which has always been supposed to be very bad dust, the health of these men was found to be quite above the average.

Is it, then, the quality of dust in itself that is dangerous? We know that linen, cotton, and woolen mill operatives in the older countries and textile workers of all kinds have a high average sickness rate and death rate, but we have no proof that it is the dust that causes this. We do know definitely that dusts containing silicon are harmful. We can speak authoritatively on the harmfulness of granite dust. There is a very high incidence of tuberculosis and a very high death rate from tuberculosis among the granite cutters. The investigation made in the zinc mines of Joplin, Mo., by Dr. A. J. Lanza, of the Public Health Service, showed a very harmful action of the flint in which the zinc is embedded. The use of ground flint in pottery is known to be very harmful. But softer stone has less effect, marble and sandstone, for instance, and we do not find a higher mortality rate from diseases of the lungs among Indiana limestone workers than in the population at large. There has been a great deal of controversy about other mineral dusts. We have no proof that Portland cement dust is harmful to the lungs, nor that any harm comes from soapstone dust. Probably these dusts do not reach the lungs, but are caught in the saliva and swallowed.

As for organic dusts, I can not tell you anything definite about them. For instance, in the making of felt hats (felt is matted fur), the fur is cut from the pelt of the rabbit and there is a great deal of fur dust in the cutting departments. People work in an atmosphere of fur dust, but no one knows whether the fur dust reaches their lungs and does any harm. We do not know what forms of organic dust do harm. We are trying to find that out now, and the only way to find out is by actual investigation of the people in the particular industry. This should be done by physical examinations of large groups of workers. After X raying the lungs of the felt-hat

makers, we should be able to say something about the effect of fur dust on the human lung. The organic dusts belong to an enormous field that remains to be explored. We have only done a very little pioneer work in it.

A short and intensive study was made in one trade two years ago by a commission of the industrial hygiene department of the Harvard Medical School. Some investigators went to a town which has a single industry, a mill where jute is worked up into twine. The jute dust is purely organic. Dust experts collected dust and estimated how many particles there were to the cubic foot of air. The character of the dust was noted, whether it was plain dirt or jute dust. Physicians examined with X rays the chests of 100 working people, and in some of them they found a thickening of the hilum of the lungs, showing that the lung was undergoing a slight fibrous change. The largest number of cases with this change came from the department that did not have much jute dust but just plain dirt. We did not have any proof that the workers were being harmed by the jute dust.

In investigating manganese poison, Dr. Edsall did not find any evidence of injury to the lungs from the manganese dust; but when the influenza epidemic came, there was a very excessive death rate from pneumonia among the people exposed to manganese dusts. This seems to be one of the dusts which do not cause tuberculosis, but may bring about a change in the lungs which unfavorably affects the outcome of pneumonia. The tuberculosis rate is lower in the coal towns of Pennsylvania than in other towns, but the death rate from pneumonia is higher. The theory is that the slow action of these dusts results in a lowered capacity of the lung to throw off pneumonia.

Now we come to the poisons, which I want to speak of rather briefly. Although much headway has been made in studying the poisonous trades in the United States before the war, new trade poisons came pouring in on us after the summer of 1914, and they have been increasing ever since.

I will begin with the coal-tar industry. Before the war we knew little about coal tar. We did not produce benzol nor aniline, but bought what we needed from Germany. The war closed that market. Then came the demand from England for T. N. T., and from France for picric acid explosives, which must be made from coal tar. We met the demand by building great plants to produce coal tar; but when the armistice came, the demand for explosives ceased and new markets had to be found. The price of benzol began to drop, and the manufacturer who needed a solvent for rubber, for resins, and gums, found that the coal-tar solvents were cheaper than those he had used before, but infinitely more dangerous.

The use of benzol in rubber manufacture has enormously increased and is still increasing, and the same thing is true in shoe manufacture, in dry-cleaning, and in making varnishes, shellac, and paint removers. I know of no thorough investigation of benzol poisoning that has ever been made in the United States. Benzol is a poison which acts rapidly upon the central nervous system, and death comes with startling suddenness. We still do have cases of fatal benzol poisoning from such accidents as the leaking of a benzol tank or still; but much more important to investigate is chronic benzol poisoning. Benzol, when it acts slowly, destroys both the red and the white corpuscles of the blood, and upon the white corpuscles we depend largely for defense against infections. It has been proved that benzol poison lessens the resistance of the body against germs of disease. Benzol attacks the marrow of the long bones and prevents the formation of the new blood cells. We do not know about the capacity of the bone marrow of human beings to recover from an attack like that. Animals whose marrow has been thus impaired do not recover their full capacity for blood building again. This is one of the industrial poisons to which women and girls are exposed. Indeed, the most serious cases in this country were in girls of 14 years of age, who had been using rubber dissolved in benzol as a sealing mixture for cans. This is one instance of trying to protect the health of the public and injuring the health of the employee, for lead solder might dissolve a little and contaminate the contents of the can.

We know quite a good deal about the old and familiar metallic or gaseous poisons, such as lead, mercury, carbon monoxide; but we do not know enough about certain less familiar poisons, such as arseniuretted hydrogen. This is a very obscure form of industrial poisoning, little known in this country, and we have to go to Europe for knowledge of it. It may occur whenever a metal such as iron, lead, zinc, or copper, contaminated with arsenic, is in contact with a heavy acid. A warning against assuming that zinc marked chemically pure is chemically pure was published recently by the United States Public Health Service. Seven out of eight specimens, all marked chemically pure, were shown to have arsenic; and there are many industrial processes in which such zinc is used with muriatic acid to produce hydrogen, with the risk of arsenic-gas formation. Certain processes in dye manufacture as carried on in England may result in these dangerous fumes. In German dye works they have, because of this danger, installed artificial exhausts to carry off the fumes from every receptacle. They found that the only way to be sure they would not poison a man sometime from vapor was to assume that all vapors were dangerous, and carry off all fumes.

The poisons that came into use during the war are many and varied, especially many new solvents that are very poisonous and that we know little about. One of these new solvents was used in airplane cloth during the war, and now is used in making artificial silk, and I rather suppose in the making of noninflammable moving-picture reels. These must be studied and methods worked out to protect persons who must work with them.

Then we have the whole field of industrial fatigue. You know that both in England and in the United States we made great efforts to investigate industrial fatigue during the war, and the results of these extensive studies have been very unsatisfactory. We are unable to answer such questions as "How long can I work men and women without injuring them." We can not tell you. The reason is that an experiment of that kind must be carried out over such a long period of time. People can work long hours for a while without injury, but we do not know what the effect is after a year, or 5 years, or 10 years. It is the cumulative effect of fatigue that must be studied, and in some way we must devise a plan to test that.

Another field of study should be the exact effect which industrial poisons actually have on the men and women in America who work with them. We must study American industry and study the American working men and women. The only body that can do this is the Public Health Service.

The Public Health Service has recently made a study of the effect on the health of men and women, of work in the lead departments of the pottery industry. This was done by going into the industrial plants and studying the processes and then making physical examinations of the men and women engaged in them. The effect of the lead was noted and was then compared with the amount of lead found in the air. There are dozens of trades in the United States waiting for just that sort of investigation, and it can only be made by some agency outside the industry. You can not ask the industrial doctor attached to the plant to make such a study and publish it for all the world to read. The study must be made by an impartial body that can make its report public.

Consequently, even after we have investigated the nature of all of the poisons and dusts in this country, there will be the question of industrial fatigue to be studied, and the actual effect upon men and women of the trade poisons to which they are exposed. You see how much more remains to be done than has been done as yet. Although there have been excursions made to this field, the study can be thoroughly made only by the Public Health Service.

The Place of Venereal-Disease Control in Industry.

Dr. JOSEPH S. LAWRENCE, Acting Assistant Surgeon, United States Public Health Service.

Industry has, during the last few decades, achieved historical distinction by its remarkable efficiency in production. No little share in this prosperity is due to the scientific application of hygienic principles in the construction of buildings. It is almost impossible for us to believe that the conditions of the factories could ever have been as deplorable as Charles Read pictured them to have been at one time in England and as the magazine articles described the sweatshops to be but a few years ago in our industrial centers. Great strides have been made since then in producing conditions that will conserve human health and energy. Regard, for instance, the findings of a special survey of 143 industries employing approximately 76,000 persons, reported in a bulletin of the New York State department of labor. The study covered six months (the latter half of 1919), and during that time 8,761 cases of illness necessitating an absence from work of three days or more were recorded. Among these 76,000 employees, about 19 out of every 1,000 reported ill each month. The industries selected for the survey were not the least hazardous either, but included a wide variety of factories and occupations. The diseases reported include most of those to which the adult is susceptible. Approximately 40 per cent were attributable to diseases of the respiratory tract, and 25 per cent to disorders of the digestive system. The others were widely distributed, the next largest group being disturbances of the nervous system, to which 5.6 per cent of the cases were attributable.

What place have the venereal diseases been given in this survey? They are recorded as the immediate cause of sickness in only one-tenth of 1 per cent of the cases; however, it is possible that they were the cause of some of the paralyses, diseases of the heart and arteries, headaches, rheumatism, and pathological conditions of the bones. But these combined were reported as causing but 2.5 per cent of the total disability. It seemed incredible that the venereal diseases could play so insignificant a rôle, and an attempt was made to disprove or confirm this conclusion by submitting the following questionnaire to 523 industries of all characters in New York State:

1. Have you made any special effort to avoid employing men or women infected with a venereal disease?
2. Have you made any provision for the treatment of employees who are infected?
3. Have you had any experience involving employees infected with syphilis or gonorrhea in which the disease may have exerted an influence?
4. Do you have any data to show what loss of time might be attributed to syphilis or gonorrhea infections?
5. If you have no data perhaps you can estimate whether there has been any special loss of time due to these infections.

A total of 257 replies were received giving the following data:

Of 257 industries answering the first question, 184 admitted that they made no effort to exclude venereally infected applicants. Sixty-eight employed some form of examination, or would at least debar an applicant if they had reason to know he or she was infected with a venereal disease. The second question was answered by 251, of whom 211 reported that they made no provisions for treating venereal diseases.

Fourteen would recommend the municipal clinic, and 26 either had a clinic, first-aid room, or a company physician at the disposal of the employees.

The third question was not fully understood by all, but 37 gave some statement of one or more instances in which a person suffering with a venereal disease came to their notice. It is interesting in this connection to say that unless the infected persons were drawing compensation, they invariably deserted the factory when asked to take treatment or to confirm by examination the charge of infection.

The next two questions which refer to the amount of time lost by venerally infected persons, are answered very indefinitely, because rarely do records state the cause connected with specific absences. Twenty-three physicans ventured an opinion, the most condemning being a charge that 25 per cent of the sickness loss should be charged to venereal diseases, but most of the others thought these diseases caused very little loss of time.

The results from the two investigations mentioned above are in striking contrast with the experiences of the West Virginia industry cited by Everett, in which the installation of a venereal disease clinic increased the efficiency of the plant 33⅓ per cent; and are also in contrast with observations by Chase and Stokes, of the prevelence of syphilis among railway employees. They do not conform either with our observations of the occupations named on the case reports received during the last two years from practicing physicians in New York State. In the two years of 1920 and 1921, 35 per cent of the 19,032 cases of syphilis reported, and 42 per cent of the 7,160 cases of gonorrhea, gave their occupations as industrial.[1] A survey of the State hospitals of New York State showed that of the 7,615 patients admitted with syphilis during the last 13 years, approximately 48 per cent had been employed in manufacturing and transportation. But not all of the syphilitic insane of the State are included in this number, for there are private hospitals and sanatoria open to those who are able and willing to pay for their care.

Let us now consider what economic influence infections of venereal disease have upon industry. Here again there is a variety of opinions.

[1] Industry represents manufacturing and transportation in the tabulations of this paper, and together they total about one-third of the population engaged in gainful occupations.

The instance cited above by Everett may be exceptional; but two large insurance companies of New York City found, after operating a disability policy for 10 years, that 5.8 per cent of the claims paid were to persons disabled by conditions well recognized as due to syphilis. In their experience, syphilis ranks third to tuberculosis and insanity as a cause of disability from disease.

That there is much disability due to syphilis and gonorrhea not diagnosed as such is very well known by every physician. Many physicians still avoid the names of venereal diseases, and diagnostic methods are far from perfect and so, in the meantime, industry will be obliged to pay many claims for compensation which may be entirely due to a venereal disease or which may be materially increased because of a complication arising from the presence of a venereal infection in the disabled. Klauder, in a recent publication, cited several instances in which minor injuries, which ordinarily would not have been noticed, occurring in persons infected with syphilis years before the injury, provoked an aggravation of the disease which resulted in a long-standing partial or total disability.

The principal loss to industry from the venereal diseases may be from irregular attendance and the payment of compensation claims, but there are occasions when syphilis may be the cause of accidents involving the loss of life. The following instance will illustrate this point:

An engineer on one of the great railroads, 45 years of age, and a very careful man, ran past a stop signal in broad daylight. He could give no explantation for his act; there was no denying the presence of the signal or his ability to see it. He was apparently in good health and had not been ill for years. The seriousness of the affair, however, called for careful investigation, and the man was given a thorough medical examination. No physical or mental defects could be found, but the blood test for syphilis was positive and there was a history of infection early in life. On the strength of these findings he was relieved of his position as engineman and given one of lesser responsibility and antisyphilitic treatment was recommended. In two month's time there were pronounced evidences of the advance of the disease, and in six months it was necessary to place him in a State hospital for the insane, where he died a few months later of general paralysis. Had this man's negligence resulted in a collision in which he lost his life, the exact cause of the accident would never have been discovered. How often may such temporary aphasias be the cause of accidents is a question that will bear investigation.

Let me cite another case. A man in charge of a large heating plant, who has always been careful and for years possessed the complete confidence of his associates, has recently grown careless of little

things about the plant and resents having his attention called to them. He has grown morose and suspicious of the good intentions of his employers, thinking they are seeking an excuse for discharging him. When he came to the clinic he said he had enjoyed the best of health for 25 years and was in good health then, except that he found it a little difficult to come downstairs and his memory was not quite as clear as it was when he was a boy; but these failings he attributed to hard work, and thought that they should be recognized that way by his employers. A careful physical examination revealed a well-advanced case of syphilis. It was thought very unwise to permit the man to continue his employment, and immediate hospitalization was recommended. It was learned at the plant that before coming to the clinic he had grown very careless and irresponsible. The plant officials had found it necessary to place a close watch over him to prevent an accident resulting from his carelessness. Daily those persons working in the vicinity of the plant were in jeopardy of their lives because of the responsibility resting on this sick man.

Syphilitic degeneration of the nervous system, blood vessels, and heart may progress for years before it is discovered. Sudden death or insanity is the Damoclean sword threatening these people, and when they are employed in a factory or upon a railroad, scores of others may be living under the same threat.

Before closing the investigation we should make some inquiry as to whether industry contributes to the spread of venereal diseases, since it is the prevention of the diseases that interests us specifically. In our educational work we have frequently concentrated our efforts on industrial centers, and occasionally we have been asked whether we consider syphilis more prevalent among industrial workers or whether, in our opinion, the industry contributes to the spread of the diseases. It must be admitted that employment in a factory offers very small opportunity for infection, except, perhaps, in a glass factory. A few instances have been reported in which one of the diseases has been spread through the use of the same towel. However, it is not while working that the diseases are spread, but during the idle hours, and industry's share is innocent enough, being simply that it attracts to certain centers greater numbers of people than the community can provide proper homes for or safely entertain during their idle hours. Places of amusement are the foci from which the venereal diseases are spread. It should, therefore, be made clear that the charge of promoting the spread of venereal diseases is not against industry, but against the communities where industries are located.

A statement, too, is due the industrial worker, emphasizing the fact that he is not the only individual who, when infected, may become dangerous to society. The progress of the disease is just as

insidious in the case of the business man or professional man. A prominent business man who was celebrated for his judgment, after a long life of conservatism recently surprised and later startled some of his clients by his daring and optimism in investments. The truth was not suspected until he came to town one morning and bought a half dozen pianos at three stores and ordered them sent to his home. Within a week he had a nervous breakdown, and syphilis was discovered to be the cause.

The professions, too, have not escaped. A prominent judge, at the close of a strenuous term of court, appeared worn, and his wife took him to the mountains for a rest. While there he developed a marvelous change in character; he grew careless of his dress, forgetful and impatient. His wife was obliged to take him to a hospital, where an examination revealed well advanced general paralysis, from which he died a few months later.

Our conclusion, therefore, is that the venereal diseases may be slightly more prevalent among industrial workers than among some other occupational groups; that this increase is not due to their work, but to the unsatisfactory conditions surrounding their efforts at rest or recreation; that they occasion only slight economic burden because of loss of time, when compared with other diseases, but that one of them, namely, syphilis, because of its insidious development, may be the cause of many accidents.

The Responsibility of the Employer for the Health of the Worker.

Dr. E. C. Jackson, Plant Physician, Edison Lamp Works, General Electric Co.

What industry is, what it exists for, and what its responsibilities are, will be explained differently, according to the aspect from which it is viewed. Several observers may declare, truly, that the light falling on a prism appears to this one blue, to the next green, to another yellow, and to a fourth red—each is right from his limited outlook. So the responsibilities of the employer bear a different outlook as seen from economic, social, or medical viewpoints. We can deal only briefly, in the short time alloted, with the responsibilities of the employer for the health of persons associated with him in industry or those whom you prefer to call "the worker."

Every social institution is specialized to perform one function—the bank, to handle our money; the hospital, to care for our sick; the police department, to guard our personal safety; and so on. Interference with this function cripples or destroys the institution. The function of industry is to produce goods needed by society. Whatever interferes with production, threatens industry and the society built upon and around it. Contrariwise, anything which

increases production, strengthens, improves, and develops industry, thus making society better generally.

In industry we have employers and employees, because each has something the other needs and which they wish to exchange. They associate themselves to produce because the employer wants the employee's labor and the employee wants the employer's money. The leadership in the association naturally falls on the man with the money, the employer, and along with this leadership go certain responsibilities with which we are directly concerned in this talk.

You can make a man work for you by compulsion up to a certain point of fatigue, of course, or you can make him want to work by fitting him to his job, helping him to be regular, dependable, and efficient, taking an interest in his health, his working conditions, his tools, safeguarding him from danger while at work, giving him proper rest, nourishment at cost during working-days, and by practice of the golden rule generally.

Modern industry employs the latter method, and the employer who is "on the job" appreciates that if he wishes to have maximum production, minimum turnover, and happy, healthy workers, he must do so by providing certain things as his share of the contract toward the worker and society in general. Some time ago Dr. Selby investigated the medical end of numerous industries throughout the country and tabulated his findings in a report which he presented to the Public Health Service. This report has suggested the way of presenting the responsibility of the employer to the employee in regard to health conditions, and, if I may be permitted, I will follow it in my talk.

First.—The work place should be not only safe and healthful, but suitable. Properly constructed buildings forestall many undesirable and unprofitable features of employment. Expert engineers should be consulted, so that the layout may be arranged with a view of doing the work that is to be done in the factory with the least possible fatigue and the greatest possible safety and comfort; and not a little thought should also be given to agreeable surroundings. There is neither Federal nor State law in this Nation which compels us to build our factories to look like hideous barracks, although a visitor from another planet might think so. Certain French cities have laws which insist upon certain standards of beauty as well as comfort in industrial structures. Workers buy the most goods. If they are trained by both their work and surroundings to appreciate beauty, they will make beautiful things and will buy no other. The worker who is proud of the plant in which he works and the product he makes, is a valuable industrial asset. Any other type is a liability to all concerned.

Second.—The employer who appreciates his responsibility for the health of the worker provides well guarded machinery and tools which permit of rapid and accurate work of good quality; and he sees to it that all methods and processes used have health and body hazards reduced to a minimum. It was only as late as 1911 that Mackenzie King, then Commissioner of Labor in Canada, introduced a bill which was later passed, prohibiting the sale of matches made with white phosphorus. During his investigations leading up to the presentation of this bill, he discovered that some of the worst cases of necrosis caused by phosphorus poisoning were in workers whose homes were within a stone's throw of the buildings of Parliament itself. These cases stand out glaringly, but many employers among us can still look over their own methods and processes with a view to lowering health hazards.

Third.—Industry as we know it to-day does not and can not have the personal contact between the head of the industry and the worker in the factory which prevailed when work was not specialized and businesses were smaller. Therefore, the employer must establish his contact through foremen and heads of departments. The worker gets his ideas about the work, the boss, the industry in general, from his foreman or supervisor.

It is therefore a responsibility of the employer to employ only those in a supervising capacity who can be taught modern ideas in regard to fatigue, safety, and health of workers, factors which have such a large and important part to play in production, and who can understand and put over measures which the employer in his broader knowledge knows to be good. Where, as under the domestic system of industry, the employer supplied the necessary capital and himself directed the business, responsibility was plain enough. The personal relationship was immediate and its obligations were self-evident. To-day large corporations are made up of stockholders, directors, executive officers, and employees. The stockholders provide the capital and remain the real, though unidentified employers. Personal relationship has all but disappeared. It can not be pretended, however, that with the disappearance of personal relationships, personal responsibility has also vanished. Personal responsibility is passed on through manager to foreman. The men whose work is that of directing other men can not be too considerate in attitude, too attentive to irritations, or too impartial. The art of obtaining cooperation by methods other than those of force requires some understanding of human nature and a great deal of sympathy with its shortcomings. Men who do not possess these qualities in addition to their technical knowledge should not be placed in positions of authority. Employers with a perfect understanding of the relation of the health and well-

being of their employees to their production and the general well-being, wreck the whole plan by putting single-track supervisors in direct contact with the vital machinery of industry, the human worker. Sensible, humane employers have relegated the slave-driving foreman to the scrap heap, where he belongs.

Fourth. Employers now feel that they have the responsibility, not only to themselves and to workers already hired, but to the man or woman looking for a job, of placing them on work which suits them both mentally and physically. In order to do this, competent employment and medical departments are necessary, and the success or failure with which they function shows quite plainly in the amount of absenteeism, the general turnover of the business, and the peace and health and good will of the worker. About two years ago a man applied to one of our factories for a job. Two years before, he had been burned in a factory, and as a result of the accident received, had two claw hands. He had applied to many employers for work and was turned down always because of his deformed hands. He became a radical, as was to be expected, and was about ready to be the tool of any mischief-maker he came in contact with. We had an operation in one of our factories that he could do very well without increased hazard to us or to him, so he was given a job. After he had worked some time and had gotten back his self-respect, his hands were operated on and he got back to a useful place in society. The responsibility lay with the employer to give him a job that he could do and then help him back to where he was before his accident. The selection of qualified employees implies, of course, the rejection of disqualified applicants. As a matter of fact, the only ones turned down are those who because of their physical disabilities are likely to prove harmful to themselves or their fellow workmen. When such applicants are turned down, the employer should feel responsible, through his medical department, for helping the applicant to help himself to recover, and to a job later.

Fifth. The employer has a responsibility in protecting his workers from communicable diseases. It is not possible, of course, for the doctor to see each individual daily. It is possible, however, for the company physician to instruct foremen and supervisors in this regard, and to have it understood that all suspicious cases must be sent to the dispensary for diagnosis and treatment, if necessary.

Sixth. The responsibility of the employer for the prevention and the treatment of injuries is well known, but his responsibility in the prevention of disease is not so well recognized. He should be interested in anything which will help to maintain the standard of his workers' health; sick workers can not produce and are liabilities. He should remove the chance of illness from his workers by education,

by frequent examination, and by aiding in any way possible to free the worker of conditions outside the factory which tend to impair his health. Preventive medicine in industry is our biggest and hardest task, but much is being done and something has been accomplished. The largest industries to-day appreciate the fact that the tying on of a bandage is the smallest part of their medical department's work; health propaganda of all sorts is the biggest. The losses which still arise in industry from preventable causes are enormous. Frightful as were the losses in war, they are more than paralleled by sacrifices in industry, of which the world takes little or no account. The horrors of war should arouse us to the horrors of industry, as they are the same. The loss of a leg, of an arm, of an eye, is the same whether incurred in a factory or in a fort. Tuberculosis is the same, no matter whether contracted by the cutting of granite, from a sand blast, or in a trench. "The recognition of industry as being in the nature of public or social service is very recent, but emphasis given this point of view by the war will prove enduring. Once industry is so regarded, all that is said on behalf of those who serve the State in time of war becomes equally applicable to those who face the perils of industry through long and continuous service in times of peace."

Seventh. Another responsibility that the employer of to-day owes his employees from a health standpoint is that concerning time for rest and recuperation. The importance of fixing the right number of hours of labor is coming to be recognized more and more. The old idea that if a worker can make 100 articles in one hour, in 10 hours he can make 1,000, in 12 hours 1,200, and so on, is just as foolish as to expect a runner who makes 100 yards in 10 seconds to do a mile in 176 seconds. In the middle of the last century the Manchester School of Industrial Economists said that "It is in the last hour of work that profits are made," without regard for the number of previous working hours. This dictum is now countered by the truth that "overtime does not pay." In many cases the shortening of hours with increasing chance for rest and recovery from fatigue has resulted in an increase of total output. Taylor, in 1911, in his Principles of Scientific Management, accepted as a principle that *rest must adequately balance exertion.* Hours of labor may be modified in other ways, of course, than by lengthening or shortening the hours worked. Activity is the cause of fatigue; activity may be mental or physical, excessive or moderate. Moderate activity is followed by healthy fatigue, that is, by fatigue which entirely disappears during rest. Sir Arthur Paget's saying that, "Fatigue has a larger share in the promotion or permission of disease than any other single causal condition you can name," is much truer for industrial employment than for any other walk of life. The employer has a great responsibility resting on him

in determining the number of hours to be worked and whether or not they should be broken by periods which will enable the worker to recover from the fatigue encountered.

In a very crude way I have enumerated some of the responsibilities as I see them and as I think a great many employers in industries to-day see them. Certainly the General Electric Co., with whom I am fortunate enough to be connected, sees the situation in about the way I have tried to present it. We are trying to build up from every angle the health of our employees, not only because we can make better lamps, but because we feel that we have a responsibility to our fellow workers in this matter. I will close by reading an extract from the Hansard report of the House of Commons Debates, which, to me, is quite apropos of the subject under consideration.

"We talk a great deal these days about the conservation of natural resources, but more important than the conservation of natural resources is the conservation of human resources, the conservation of human health and of human life. Resources are well enough; our lumber, forests, ore, and minerals were given to us for a purpose, but they were given for the preservation and not for the destruction of life. So in the Department of Labor, we have taken as one of the objects before us, as part of the work which, I trust, it will be possible to carry on through years to come, this question of the preservation of health, the conservation of human life, the protection of the working people, the great mass of people of this country, from occupational and other diseases which help to undermine the strength of the Nation. If this country is to be what we wish it to be, a country of happy, contented, and prosperous people, it will be only by safeguarding the lives and welfare of the many, and by protecting from injustice the homes of the humble in the land."

The Responsibility of the Worker in Promoting Industrial Hygiene.

Mrs. M. Grace Burnham, Director, Workers' Health Bureau.

I want to read to you, to begin with, the history of a worker, which was sent me from the industrial medical department of one of our hospitals. This young Italian was 31 years old. He came to America as a small boy, and his first job was with a railroad gang as a water boy. His second job was in a marble shop polishing marble; his third job was in a shop making bamboo furniture; his fourth job was as teamster on an ice wagon; his fifth job was in a Pennsylvania coal mine; his sixth job was in a lead smelter; his seventh, in a steel mill; his eighth, as a pick and shovel laborer; his ninth job was in a cold room in a candy factory. He ended as a tunnel worker, and was "burned out" at the age of 31 years.

The majority of our workers in this country are "burned out" before middle age, in industries which have never been watched from any angle. As an individual, this Italian was doomed to become a victim of the whole industrial system of which he became a whirling part. As a member of an organized trade, his trade-union might have protected him against trade poisons and other dangerous conditions of his employment.

The Workers' Health Bureau is a cooperative trade-union health research agency which was organized in response to this need. It was organized to help trade-unions fight trade diseases; it unites science and labor to show workers how to safeguard their bodies; it recommends that trade-unions establish their own health departments, financed and controlled by the union.

We have voluminous reports by the United States Public Health Service and health agencies in other countries which are absolutely unintelligible to the average worker. The subject of my talk to-day, "The responsibility of the worker in promoting industrial hygiene," would mean nothing to the average worker. He doesn't know what industrial hygiene is. If he is a painter, he knows that he has lead poisoning when he gets it. If he is a baker and stands all day long and his feet gradually become flat and he develops varicose veins, he knows what has happened to him. As an individual he can not cope with the intricate problems of health in industry which even expert technicians have been unable to cope with. At the present time his only chance is through his organization engaged in cooperative health work. Now where there is a labor turnover of from 200 to 400 per cent in many of our industries, no matter how well organized a plant medical department, the individual who is turned in and out of that plant may get a week of industrial hygiene or a year of it, but the effect of it on his whole life is negligible. The plan of the Workers' Health Bureau is to gather information on specific trades for trade-unions and to plan a preventive industrial health program to serve the worker for the remainder of his life. This program will include the services of the trade-union's own physician, a nurse, a dentist, and an X-ray expert, to make the necessary physical examinations. In addition, through studies and statistics, members will be shown just what conditions in a particular trade which have to go. We can not leave it to the employer, and probably you will say we can not leave it to the employee; but when we have the facts, the workers can say "we refuse to work in a trade where the introduction of certain poisonous substances—because they are a little cheaper—means sure death or injury to the men working here."

In the painting trade in New York City, 4,000 workers have inaugurated such a cooperative health department. We hope to have it opened on the 1st of July. One hundred and fifty thousand organized painters in the country will have a path made for them leading to the protection of their own health. In Europe, at the Hague, 100,000 workers have gotten together and organized a medical department at a cost of 9 cents a week. They provide expert health service in every way. At the cooperative health department at the Hague the money that is paid in by single and widowed men—7½ cents a week—is sufficient to pay out-of-work benefits to all members, and maternity benefits to women members during the time when, because of pregnancy, they are forced out of industry. The individual worker can not afford high-grade medical service. The cost of a thorough physical examination with blood and urine tests, with necessary X-ray, is $25. Then, too, many doctors do not perceive the industrial origin of many diseases. We had a man, a painter, who came in with a case of lead colic. The doctor he had gone to told him it was a case of gallstones. A young girl, whose condition is now being investigated, was employed at trimming felt hats. She was sent to a hospital. The hospital stated it was rheumatism. The case is now being taken up by the Industrial Commission of New Jersey and it is claimed to be arsenic poisoning. The individual doctor does not know. I have in mind a well-known physician who said, "You don't mean to tell me that a man is a painter and only a painter?" Unfortunately, a man who is a painter is a great many other things during the six months' time in which he is usually out of work each year. The remainder of the time he is very often a push-cart peddler or engaged in other such work.

Dr. Edsall made the statement that, until very recently, a man who was brought into a hospital was not even asked what trade he worked at. With the ever-changing introduction of poisonous substances and ever-increasing technique of industrial processes, the Workers Health Bureau feels that the worker should be initiated into the dangers of the job that he takes.

In this connection, we are planning a series of lectures on the body for our workers in the painters' health department. We are going to start with the digestive system because the painter is most affected by lead through his digestive system. The lectures will be divided into three parts. First, elementary physiology given in simple language, beginning with food as it enters the mouth and following the course of the food and showing how in certain parts of the body it is turned from food into blood material. The second part of the lecture will show the application of his trade as a painter to what goes on in his digestive tract, showing, in other words, how lead gets

into his body. The lecture will conclude by showing the worker how, as a painter, he can protect himself against lead poisoning; why it is important to eat breakfast before going to work; how the lead is dissolved unless there is food there to hold it; what happens if he does not eat breakfast; how milk coats the stomach; how much lead can be carried on the fingers if the hands are not washed before eating, and similar information. When we lecture to the bakers, it will be bakers' education; we will talk about tiredness, calling it a poison and telling how it acts on the body just like the other poisons, and how constant standing before heat affects the worker. When we get through, the worker will have a picture of his body, and will see the necessity for protecting himself. In his health department he can get the medical care. We hope to have the thorough cooperation of the United States Public Health Service in this work, in the use of such laboratories as they have, and such information as they can give us. We hope to bring medical science to the worker, in language which the worker understands and without the suspicion of somebody doing something for him and putting something over on him. That is the plan of the Workers' Health Bureau.

DISCUSSION.

DOCTOR THOMPSON. The Workers' Health Bureau has started this work in a scientific way. They have gotten the representative authorities of industrial hygiene in the United States on their advisory staff, and plans are being worked out to put it on a scientific, fundamental basis that will mean something in the future. Another thing is that the workers themselves are starting this movement. We have had occasion in the Public Health Service to go into many plants. We are not concerned with enforcing any laws, so we can go anywhere without exciting the resentment of either employer or employee, as the only thing we are after is the information. Several times it has been a little difficult to get the employees to come up for physical examination. We can not force them to do this; but in every plant we have been to in the study of the pottery industry, the employees have come to recognize the value of physical examinations, and after we have finished our work the industrial physician has had very little difficulty in carrying it on. After they once get the idea, there is no more suspicion. I think that the painters have a very excellent program, and as far as the Public Health Service is concerned we are certainly going to try to cooperate as far as we can, giving them the benefit of our laboratories.

MISS SMITH. Mr. Chairman and friends, I am rather unprepared for this, but I have been following with interest all that has been said this morning, and I am deeply impressed, especially with what Mrs.

Burnham has said. We feel very keenly the problem she has presented, we representatives of the workers. You can not begin to talk about the responsibility of the worker for industrial hygiene until he has an organization, and, therefore, the worker's problem is the double one of getting his health protected and getting for his organization the right to live. He can only get his health protected through organization, and he is being fought all the time on account of that organization, so that he has a double burden. It is necessary to recognize, I think, that in this list of occupations, such as those of the Italian worker that Mrs. Burnham mentioned, very few were occupations which any of us would think of choosing. The hardest work is the work done by people whose experiences and conditions of life are the same as those of this young Italian. They are at the bottom of the scale in every respect. They don't know how to protect themselves against ill health, for the simple reason that they have never had an opportunity to learn about themselves, and they subject themselves to all sorts of conditions which ruin their health without every knowing they do so. It is not their fault if this is the case. Yet, as an individual, what can the worker do to protect himself?

Then, we find that another very serious problem is, and I think the United States Public Health Service will agree with this, that the very biggest employer in the world, the United States Government, is not very careful of the health of his own employees. I might mention a point Doctor Hamilton brought out. If I am not mistaken, she told us that ordinary dirt is one of the dangers. Am I right about that Dr. Hamilton?

Doctor Hamilton. Yes, I think so.

Miss Smith. Yet, at one time, we had difficulty in convincing the Post Office Department that one of its establishments ought to be very carefully looked after with reference to the health of the workers, because of the amount of dirt that they have to breathe. I refer to the mail equipment shop, where the mail bags that are dragged about all over the country come back and are repaired by the men and women working there; mostly women. You know that these bags must be filthy. You see them in bundles, stacked up in mail cars and on station platforms. At one time these bags were not being touched before the women had to handle them. According to the latest information we have, the best that is being done now is a tumbling process by which the bags are hurled from point to point on a big wheel, which beats out some of the dust, we don't know how much. Then they are taken into a large room and stacked. They are taken from the stacks as the women work on them. The women mend the bags on machines. The bags are held not a foot from their faces, and the workers have to have caps on their heads to protect them from the

dust. I think that any layman, considering the facts that these women are handling, according to the statement of their superintendent, from 9,000 to 15,000 of those bags daily, that these are all carried through one room, that the only cleaning they have is that I have spoken of, can readily believe that it can not be a healthful condition.

Question. Would it injure the bags to wash them?

Miss Smith. No, it would not injure them, and if it did, it seems to me that the United States Government might better make new bags when these are worn out than subject women to the hazards of working over dusty bags. However, I am told it is not the only alternative. There is a laundry process which could be installed.

To go back to the question of the workers' responsibility. I have had some experience in the District of Columbia as a member of the Minimum Wage Board here. When we were holding the conference for the hotel and restaurant industry, the women were meeting with me as their representative to talk about their needs, and I found that a charwoman working at night, for $1. 26, worked during the day also at another job most every day in the week. I asked her when she slept. She had excused herself at nine o'clock so that she could go get a nap before she went to work at 12. When I asked her about how much sleep she got she said, "I gets about four hours." Is that her responsibility? I don't think so.

Doctor Yarros. Perhaps in this discussion a question will come to you, Doctor Thompson, as to the responsibility of the Public Health Service in the industrial hygiene program, and give you a chance to explain what that responsibility is. I would, therefore, suggest, that you, first of all, answer this question. Has the United States Public Health Service, in its industrial hygiene program, the privilege even to suggest as to health conditions among Federal employees any more than any private citizen? I would like to have that question answered.

Doctor Thompson. I am not going to apologize for what has not been done in the Public Health Service, or for what has been done. The Public Health Service has a rather peculiar position in relation to Government employees. We have no authority to make any investigation regarding the health of any of the employees in other branches of the service except our own. We have nothing to say regarding the industrial hazards in the Bureau of Printing and Engraving, the Government Printing Office, or any department of the Government. We are, as a matter of fact, trying to put in a wedge, as I will try to bring out this afternoon. The wedge is this: It was all right in the past to discharge employees when they were disabled, or rather it was not all right, but they did so. At the present time the Government pays compensation to everybody who is discharged with a compensable disease, and, consequently, you and other taxpayers in the

country are interested where your money goes. That is perfectly sound business. In private industry, they investigate all health hazards which cause sickness among their employees, because it reduces compensation. We are going to use the fact that the Government pays compensation as a lever, ask for permission to go into various departments of Government where records show there are illnesses from occupational diseases. First of all, however, we must have records to show what people are sick of in these departments. The Public Health Service started last September in keeping such records of its own employees, and I believe they represent the first complete record of sickness of Government employees that has ever been undertaken. The Veterans' Bureau has already taken the idea up. I am inclined to think that by next year a number of other bureaus will have followed suit.

Doctor ROBINSON. Apropos of what Doctor Lawrence stated in his paper on "The place of venereal disease control in industrial hygiene," I would like to state an action recently taken by some of the physicians in a mining district of Virginia. I recently made a survey of this section of Virginia with regard to the control exercised in venereal diseases. At a meeting of the medical society, the physician in charge of one of the large hospitals stated that it should be obligatory for the workers in the mines to have a blood test made. He cited several cases showing the urgency of making such tests, and one case in particular, of a miner who had sued for a large sum of money, having sustained a fracture where it was not possible to get a fibrous union, and the case was compromised for the sum of $500. It was later shown that this miner had syphilis. Another case he cited, where several lives were jeopardized through the action of one of the miners in charge, and, upon investigation, when the blood test was made of this person, it was found he had syphilis. The health officer in this county is endeavoring to have the coal operators require that a test be made upon each man prior to his entrance into the mine.

It may also be of interest, with reference to tuberculosis among the coal miners, to read a communication which was recently presented to the medical society already referred to, which letter was addressed to the health commissioner of Virginia. The physician in question made a study of the influence of the modern mining industry upon the health and well-being of the coal digger, especially with reference to tuberculosis. His findings as stated in the letter are as follows. (Letter was read by Doctor Robinson.)

Doctor JACKSON. The General Electric Co. has 150,000 men employees. Suppose we did a Wassermann on every employee. Where would we get, and what else would we do? We only do them on those whom we suspect of having syphilis. I think we don't miss very many. What is there in laboratory examination? One Wassermann doesn't mean anything in the first place; two Wassermanns

don't mean anything in the first place; nor do these by three different men.

Miss MATHILDE LINDSAY. I am here today representing the Women's Trade-Union League. Having worked in the Bureau of Engraving and Printing for a number of years, I know about some of the conditions that exist there. We have a live trade organization there, through which organization we are able to take care of health problems, such as ventilation, clean surroundings, etc. Realizing the result, in the health of the employees, of the kind of processes employed at the bureau about a year ago we asked the Women's bureau to make an investigation, bringing in a medical expert, but on account of Government regulations and lack of appropriations, it could not be done. There is one process of machine work done there which is very harmful. In this process of handling material, it is necessary to use the whole right side with every sheet that goes into the machine. Now in that division we have a great many operations for appendicitis, to which we think the continual use of the entire right side at the machine has a causal relation.

During the war, when the bureau was working 24 hours, there was a considerable number of accidents. One employee had her arm cut off above the wrist. It happened at 5 o'clock in the morning. Some of the accidents do happen in the daytime, but reports show that the greater number of them happen between 12 at night and 8 in the morning. Some of these conditions have improved since a great part of the night work has been stopped, but there are still some processes at the Bureau that are harmful to the health of the girls. There are a great many cases of headache in the divisions. In some divisions there is considerable noise and a lot of heavy machinery on the floor above going all day long. What we want to do is prevent the accidents and headaches. To cure them after they happen is not enough. We have, of course, a compensation agreement that you spoke of.

We know that it is not safe for a girl to work at a machine without safeguards. We may have the safeguards put on, but even that doesn't stop accidents. What we still have to hope for is the prevention of these things in the government service.

AFTERNOON SESSION.

Dr. Elizabeth Thelberg, National Council of Women, presiding, introduced Doctor Patterson as the first speaker.

The Functions of the State in Enforcing Industrial Hygiene Legislation.

Dr. FRANCIS D. PATTERSON, Chief Division of Industrial Hygiene and Engineering, Department of Labor and Industry of Pennsylvania.

On December 15, 1791, the several States adopted Article X amending the Constitution of the United States, which amendment reads as follows:

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Briefly, part of this amendment as has been aptly stated, "reserves to each State full power of self-government in all that affects only the interest of that State and its own citizens."

In other words, this amendment to the Constitution guarantees to the States what has been termed "States' rights". It is a guaranty to the States of the police power of the States as a means of regulating affairs within their borders; and under this amendment it is a very proper function of the State to enact and to enforce legislation for the conservation of the health of those who toil within its borders.

In delivering the unanimous opinion of the Supreme Court of the United States, that the so called "Federal child labor law" is unconstitutional, in the case of Bailey (collector of internal revenue for the district of North Carolina) *v.* the Drexel Furniture Co., Mr. Chief Justice Taft said in part:

It is the high duty and function of this court in cases regularly brought to its bar to decline to recognize or enforce seeming laws of Congress dealing with subjects not entrusted to Congress but left or committed by the supreme law of the land to the control of the States. We can not avoid the duty even though it require us to refuse to give effect to legislation designed to promote the highest good. The good sought in unconstitutional legislation is an insidious feature because it leads citizens and legislators of good purpose to promote it without thought of the serious breach it will make in the ark of our covenant or the harm which will come from breaking down recognized standards. In the maintenance of local self-government on the one hand and the national power on the other, our country has been able to endure and prosper for near a century and a half.

Out of a proper respect for the acts of a coordinate branch of the Government, this court has gone far to sustain taxing acts as such, even though there has been ground for suspecting from the weight of the tax, it was intended to destroy its subject. But in the act before us, the presumption of validity can not prevail, because the proof of the contrary is found on the very face of its provisions. Grant the validity of this law, and all that Congress would need to do hereafter in seeking to take over to its control any one of the great number of subjects of public interest, jurisdiction of which the States have never parted with and which are reserved to them by the tenth amendment, would be to enact a detailed measure of complete regulation of the subject and enforce it by a so-called tax upon departures from it. To give such magic to the word "tax" would be to break down all constitutional limitation of the powers of Congress and completely wipe out the sovereignty of the States.

The difference between a tax and a penalty is sometimes difficult to define and yet the consequences of the distinction in the required method of their collection often are important. Where the sovereign enacting the law has power to impose both tax and penalty, the difference between revenue production and mere regulation may be immaterial, but not so when one sovereign can impose a tax only, and the power of regulation rests in another. Taxes are occasionally imposed in the discretion of the legislature on proper subjects with the primary motive of obtaining revenue from them and with the incidental motive of discouraging them by making their continuance onerous. They do not lose their character as taxes because of the incidental motive. But there comes a time in the extension of the penalizing features of the so-called tax when it loses its character as such and becomes a mere penalty with the characteristics of regulation and punishment. Such is the case in the law before us.

Although Congress does not invalidate the contract of employment or expressly declare that the employment within the mentioned ages is illegal, it does exhibit its intent practically to achieve the latter result by adopting the criteria of wrongdoing and imposing its principal consequence on those who transgress its standard.

I can not too strongly emphasize that the State, rather than the Federal Government, is the proper authority to have control of such legislation, for the State is more likely to have intimate personal knowledge of the needs of its citizens than is the Federal Government.

Good health is the capital of the worker, and an impairment of that capital is to him or her a more serious calamity than is a similar misfortune to the capital of the employer, who, in addition to capital in the form of money, has that intangible something, known as "credit", which may tide him over a financial emergency.

Unfortunately, there is no such thing as a "good health credit", upon which the worker may draw to tide him or her over the crisis of impaired good health; and when illness comes, he or she is confronted with a calamity of partial or complete loss of earning power and consequent hardship to those near and dear.

When we reach that happy state of Utopia, good health, in addition to being the capital, will also be the heritage of the worker, whose family will then have the benefit of prenatal, maternity, and child hygiene clinics for the care of future generations; and they will live in adequately ventilated and sanitary homes; they will have the benefit of properly cooked and nutritious food, purchased for its caloric value, rather than for its taste; they will have proper clothing that will protect against temperature variations; and their employment will be in a factory in every way ideal, the lighting, ventilation, sanitation, and safeguards, of which will be all that anyone could desire. Until that happy time arrives, we must deal with conditions as they are, and so it is proper and fitting that the protecting cloak of law should be thrown around those who toil as well as upon those who employ; and the law should ever be for their mutual protection and should be enacted only after conference upon the part of the State with employee as well as with employer; and each should be given the opportunity to share in the drafting of the proposed legislation.

To my mind, the ideal plan is that in force in the State of Pennsylvania, which, in 1913, created by act of the legislature, "The Industrial Board," as a part of the department of labor and industry. This board consists of the commissioner of labor and industry and four other members, one of whom is an employer of labor, one a wage earner, one a woman, and one representing the general public, and it is the duty of this board to see that all rooms and buildings and places in the Commonwealth of Pennsylvania wherein labor is employed, shall be so constructed and equipped, arranged, and operated and conducted in all respects, as to provide reasonable and adequate protection for the life, health, safety, and morals of all persons em-

ployed therein; and this board has power to make, alter, amend, and repeal general rules and regulations necessary for applying such provisions to specific conditions, and to prescribe means, methods, and practices to carry into effect and enforce such provisions.

In pursuance of this power the board has created 38 codes of safety standards, and you will be interested to learn their procedure.

These codes are drafted by a committee representing employers and employees of the particular trade or industry, and are then submitted to the board, which then ratifies the work of the committee only after advertising and holding at least three public hearings at different cities within the Commonwealth, so that all interested may appear and present such changes as they believe are indicated. In this way, the law is drafted by those whom it affects and who have practical knowledge as well as experience in guarding against the hazards of the particular industry.

The passing of time has seen a great change in industrial relations. The high-speed motor has replaced the water wheel of old; the electric light the tallow dip; acres of buildings, with their countless thousands of employees and high-speed machinery, have replaced the small room wherein a few artisans toiled side by side at the workbench; and, finally, an intangible something, known as "stockholders," has replaced the employer of old, who, like his workmen, was an artisan, working side by side with them at the daily task.

Dust and fumes are the curse of our industrial life; for, while some dust is less harmful than others, all dust is deleterious and should be taken care of at its point of origin, rather than depend upon general ventilation to insure a pure air at the breathing level.

The time at my disposal does not permit of the consideration in detail of all industrial hygiene legislation; but I would emphasize the thought that this legislation and its enforcement should be considered to be the index of the material progress of a State rather than statistics of the quantity of goods that are manufactured within its borders.

This legislation should comprise the following:

Care of the pregnant wage earner.—The pregnant wage earner should have advice from a prenatal clinic, and her physical effort and hours of labor should be so adjusted that injury to herself and her unborn child would be obviated. I am in favor of all States enacting legislation to prevent the employment of pregnant women for a period of four weeks before and for an equal time after childbirth.

2. *Child labor.*—No child under the age of 14 years should be permitted to work, and from 14 to 16 years their employment should be restricted as to both occupation and duration. It is unfortunate that no one has yet been able to enforce this legislation as regards the so-called "street trades," which, in many instances, are merely sub-

terfuges for begging and which, in many cases, result in undermining the morals and the physical health of those who are engaged therein.

I can not stress too strongly the need for legislation requiring the physical examination of the child before granting the work permit and for reexamination at stated intervals. It is not hard to realize the serious and permanent injury that might result to a child with heart disease placed at a task which could not help but aggravate the condition.

3. *Seats for female employees.*—The provision of seats for female employees is good business as well as good legislation. Fatigue as a factor in inefficiency is well recognized by all who have given the subject consideration. All chairs, however, are not ideal, and the investigations of Doctors Goldthwaite and Emmons of Boston have resulted in the devising of a chair the use of which results in maximum efficiency.

4. *Hours of labor—Female employees.*—Night work should be and is prohibited in most of the States; so, too, labor for more than 6 hours continuously must be followed by a rest period, and female workers shall not legally be employed more than 54 hours in any one week, nor more than 10 hours in any one day, with an adequate period of at least 55 minutes for the midday meal.

5. *Washing facilities.*—Adequate washing facilities—shower baths, toilets, locker room, or change house—with soap and individual paper or fabric towel should be provided by law.

In the dangerous trades adequate time, paid for by the employer, should be given the employee to use these washing facilities; and one company has even gone so far as to pay its employees their time and a nominal sum of money for each shower bath taken.

6. *Eating facilities.*—Provision of a room or rooms wherein employees may eat their meals, protected from the elements, is good business. You are familiar, I am sure, with the cafeterias (in some cases elaborate installations) provided by a number of the larger corporations.

In the dangerous trades the law in many States very properly provides that eating facilities separated from the workroom shall be provided. Food in the workroom in industries where lead and other poisons are handled would soon become a source of occupational poisoning.

7. *Plant cleanliness.*—All workrooms should be kept clean. Where practicable, thorough flushing with a hose is an ideal method of insuring cleanliness; but in no case should dry sweeping be permitted, and it should be prohibited by law in the dangerous trades. The vacuum-cleaner method has proved an ideal one of insuring cleanliness in many industries.

8. *Drinking water.*—The provision of an adequate supply of potable water within or adjacent to all workrooms should be mandatory. Practically everywhere the use of a common cup is rightfully prohibited by law.

9. *Ventilation and heating.*—The provision of adequate natural or artificial ventilation is essential to efficiency; dust and fumes should be taken care of by suitable exhausts at points of origin, and pure air insured at the breathing level. Wherever practicable, rooms should, in wintertime, be heated.

10. *Vocational diseases.*—Laws for the prevention of occupational poisoning are present on the statute books of most of the States and provide for mechanical means for the prevention of poisoning, as well as the physical examination by a licensed physician of process workers prior to and during employment.

All workers should be cautioned concerning the hazard of their employment and instructed how to avoid this hazard.

I would express not only my personal appreciation, but also the debt of gratitude which many industries and their employees owe to Dr. Alice Hamilton for her splendid work in improving conditions in the poisonous trades. Her work has been characterized by consummate ability and tact and efficiency, and has resulted in the conservation of the health of many thousands of workers.

In conclusion, I would emphasize, first, the need for an educational campaign to teach all persons the value of good health and its maintenance. While, unfortunately, it can not be enacted into law, the importance of the value of periodic physical examinations can not be overstated, for it means that disease is diagnosed in its incipiency and proper measures are taken for its relief.

Second, that in the exercise of the police power in administering any industrial hygiene law, the test of efficiency of the law and its administration should be the lack of rather than the number of prosecutions for violation of the law.

In other words, laws should be so framed that employer and employee will cooperate in their enforcement, and this will surely be true if they are consulted in the drafting of the law; for, after all, it is then their law, and the true function of the State should be through constant effort to show employer and employee how the work place may be made safe rather than spend its time in prosecuting those who do not do so. This is not an ideal, it is not a theory; and we believe that we have made it a success in the greatest industrial State in the world, the great Commonwealth of Pennsylvania, of which I am proud to be an humble citizen.

The Functions of the United States Public Health Service in the Field of Industrial Hygiene.

Dr. L. R. THOMPSON, Surgeon, United States Public Health Service, Medical Officer in Charge, Office of Industrial Hygiene.

Acting as host for the Public Health Service and having next to the last paper on the program has its disadvantages if I am expected to add anything new to the discussion that has already taken place. Since the scope of the problem of industrial hygiene has been covered, the viewpoint of the employer and the employee, and the functions of the State authorities in this work have been stated, there seems almost to be no niche for the Federal Government to fit into. Fortunately, the work of the Public Health Service in industrial hygiene does not try to add a new field, for the whole usefulness of our work is found in our attempt to coordinate on a sound basis all the views you have heard expressed, so that the result may be of the utmost practical value to the employer, employee, the State, and Federal Government.

Before I speak of our program in industrial hygiene, there are a few points that I want to bring out so as to make our position plain. From a review of the literature on industrial hygiene in England, Germany, France, Belgium, and our own country I believe that it may be safely said that the foundation of industrial hygiene in this or any other country is based on industrial laws. Prior to 1802, when the first industrial law was written in England, the only interest that was ever taken in the welfare of workers was that taken by the employer who was in reality a worker himself, and whose interest in the health of his employee was his interest in his neighbor. Where there was no personal contact between the employer and the employee, the laborer received very little consideration as to his health and comfort; for it was cheaper to hire the new worker and discharge the worn out, as there was no penalty attached for those industries the work processes of which caused the wearing out of the employee. With the rapidity of changing conditions in the past century, the small factory, with its human touch, died out from competition, and the breach between the employer and the employee widened greatly. This probably represented the worst period labor has had to pass through. But, if the pendulum was swung out of balance by the unscrupulous employer, it was the law of reaction that swung it back again through industrial laws.

The necessity of industrial laws is no less vital at the present time than it was 100 years ago. In States like Pennsylvania, New York, Ohio, Massachusetts, and others, where good industrial laws exist, industrial hygiene has advanced. In other States that do not have industrial laws, and I believe they are by far in the majority, you will find that working conditions are in the last century class, except where an individual industry has done its own work. What I have

tried to point out is that industrial laws are generally necessary for the progress of industrial hygiene; but now let us take up the subject of the law itself.

Industrial laws, like other statutes, materially differ between countries, and, in the United States, between States. The tourist finds traffic laws are widely different in each community into which he drives. The industrial corporation finds important variations in industrial laws in each State in which it establishes a new factory. Here is a practical field of usefulness for the Public Health Service, and here our work begins. What is the effect of these differences in industrial laws?

First, on the State or city that is constructing or developing its first industrial code. Not long ago I had an interesting letter from Mr. Connelly, commissioner of the department of labor and industry of Pennsylvania, regarding the procedure of formulating an industrial code. He said: "Tentative draft was submitted to a committee consisting of employers and employees, safety engineers, manufacturers of safety appliances, and others. It was then rewritten and submitted to public hearing throughout the State, and was again rewritten." This great amount of work was necessary, and his brief statement does not include the preliminary and the final work that was also required. It is probably true that other States were just as conscientious in the formation of their codes as Pennsylvania, yet the State or city drawing up its first code is confronted with considerable differences of opinion when the other codes are investigated. Which code shall it take? Which code is the best?

Again, what is the effect of these differences in industrial laws on industry? In general, industry is not so much opposed to obeying industrial laws as it is to having a law with which it has complied, frequently modified or changed because it has been learned that the original requirement was either too lenient or too strict. The vice president of one of the largest industries in the United States, which is located in a western city, told me the other day that it had cost them $75,000 to put in a ventilating system to comply with a State law, only to have that law modified the next year when a system costing less than $25,000 would have met the requirement. This may represent an isolated case, but it does bring out the natural irritation of industries against needless expense caused by complying with statutory regulations.

And, lastly, what do these differences in industrial laws mean to the worker? All industrial laws are framed for the benefit of the worker and for the protection of his health against the hazard of the occupation in which he is engaged. It is quite evident that if there are different standards, some of these standards will not give adequate protection; and if this is true, the whole foundation of the industrial law is at fault.

As I said before, this is the field of work for the Public Health Service. We should study, by scientific investigation, the basic elements of our industrial laws and make the results available for use in the formation of State industrial laws. It is certainly not economy to expect a dozen or so States each to maintain a laboratory for such scientific investigation, and for each to spend funds and time working on the same problem, which work can as well be done in one laboratory and the results be made available to all. It is just such work that is of practical value to the State, to industry, and to the employer, that can best be done by a cooperating organization like the Public Health Service.

In the circular that was sent to you there was a brief explanation as to why industrial hygiene was important. It was intended to bring out briefly that the industrial hazards of occupation are innumerable, and that industrial hygiene is merely a name for a practical attempt to study these hazards and to prevent them. The few hazards that were named in the circular brought out the fact that in our present complicated process of manufacture we are quite likely to lose sight of the fact that our next door neighbor may handicap his life expectancy because of the particular health hazard to which he is exposed.

Fatigue seems to be a harmless little word, but, industrially speaking, its ramifications are almost countless. In our studies of fatigue we have tried to base our reasons for the number of hours in the working day, our reasons for rest periods, our reasons for recommending seats, for alternating seating and standing while at work, for the elimination of noise in work processes, the necessity for good illumination, and so on down the long list. Yet despite the fact that the elimination of fatigue has been the underlying value in the correction of these industrial health hazards, what do we know of the changes in the human body which cause fatigue so that we may test this or that individual and regulate his work so that too great a strain may not be put upon him? We do know that certain changes in the body take place; that the stored up fuel of the body, glycogen, is used up, and that certain products, fatigue bodies they are called, such as lactic acid, are produced; that urine examinations give us an inkling that certain kinds of work are more arduous than others; but as to a rough measurement even, of the amount of fatigue, of the effect of atmospheric conditions, of humidity and high and low temperatures, we are only opening the doors to this great field of investigative work. What I have said of fatigue is true of most of our important industrial hazards. It is especially true of the dust hazard, to which approximately four million of our workers are exposed. Here in the United States we have not, as yet, even reached a conclusion as to the best type of instrument to be used in the collection of our dust samples. We are not yet sure of what

size dust particles are the most dangerous for us to breathe, and, lastly, we are frankly uncertain when we speak of standards of dustiness, or of how many particles of dust we must have in each cubic foot of air before we can consider breathing such air, to be harmful.

From what I have said I am afraid that most of you will think that industrial hygiene is in a chaotic state. This is not true, but there is an enormous amount of investigative work yet to be done. This is most certainly part of our field of work, for, as I said before, it is not quite fair, nor is it economically possible, for every industry or every State to maintain research laboratories to work out their problems. If this were done, there would be a hundred duplications of the same work. But since these hazards are general, because they affect many industries in many States, it is only logical that we should assist other investigators in this type of work.

In addition to our investigative work we are attempting to maintain a small consulting service for the benefit of State and local authorities, industries, and individual workers; although for the past year this work has increased to such an extent that we are hardly able to meet its requirements. In many ways this work is comparable to the investigative work I spoke of in regard to industrial hazards. Here again it is too costly for the individual industries and takes too much time for the industrial physician to attempt to investigate many of the hazards and difficulties they meet with in everyday work. Suppose, for instance, an industry long experienced in metal working suddenly goes into the manufacturing of cutlery. There follows almost an epidemic of dermatitis among its woodworkers. For the management to investigate the cause means not only the expense of the investigation but the consequent loss of time and decreased production. In our consulting work we have tried to meet just such demands as this. It is frankly impossible for us to make a scientific research of every problem; but with our facilities, our consultants in industrial hygiene, many of whom are the leading authorities in America in their subjects, and with the aid of the Library of Congress and that of the Surgeon General of the Army, we are at least able to tell them what is known in literature on the subject. You would be surprised at the number of these requests that we receive—from the American who is starting a cotton mill in Mexico to the motion-picture operator in New York.

Speaking as briefly as I have done, of our consultation work, does not seem to give it very much importance; yet to the industry or the industrial physician in the field who is without facilities for investigation, whose plant is being hindered more or less from the industrial hazard he has encountered, the information that we furnish him is very vital.

I have talked mostly about giving, but just for a moment I am going to diverge and talk of getting. There are a great many manu-

facturing plants in the United States who, independently of Federal of State laws, are keeping complete and important records of their employees. These industries in the aggregate have spent thousands and hundreds of thousands of dollars to this end and, in the majority of cases, what they have done has paid them in actual cash returns through efficiency and improved production which has resulted from the better health and comfort of their employees. The Public Health Service is interested in the health of the Nation, and what we know of the health of the Nation comes mainly from death, or mortality, records, or, more accurate still, from morbidity, or sickness, records. The industrial sickness records kept by manufacturers are the ideal index of the health of the workers engaged in various trades. If we would attempt to keep such records ourselves, the cost would be out of the question; yet if we are to interpret correctly the effect of various types of work processes on the health of workers, we must have access to just such information. That is the getting; for industry can give us something that it is impracticable to get for ourselves.

And now what can we give in return? What industry has saved by the analyses of their own individual records is only a partial gain, for it is quite evident that although they are entirely familiar with their own health conditions, they have no way to compare their plant with the conditions of any other plant. If the Public Health Service can have access to such records, we feel sure that we could offer the individual industry a broader and more complete study of its own records than it can ever hope to attain for itself; and still more important, we can tell the worker of the effect of his individual health hazard as compared to that of others.

Lastly, let us consider the greatest employer in the country, the Federal Government. Everyone of us in these days of income tax are Government tax payers, and what the Government spends for its business is our business. There was a time not long ago when the Government employed people for hazardous work, and by this I mean work which might lead to lead poisoning, aniline poisoning, skin diseases, and many other incapacitating conditions; and if the disease did develop, the employee was discharged. This might have been a pseudo saving for the taxpayer, but under our present industrial laws such an employee now receives compensation. It is all very well to be free and liberal if it does not cost anything, but at the present time when industry finds it good business to eliminate industrial hazards from private factories, it must also be good business for the Government.

The Public Health Service can cooperate with the taxpayer in several ways: First, by making complete physical examinations of all employees entering the civil service of the Government, not for the purpose of excluding those who have physical defects, but to

prevent unscrupulous persons from entering the Government service with a definite physical handicap and, in a few months, blaming such handicap on the work processes they are engaged in and claiming compensation. Second, studying sickness records of the employees in the different divisions of the Government to learn what classes, if any, of the employees are exposed to dangerous health hazards and to eliminate such hazards for the benefit of the health of the employee. Third, to establish dispensaries wherever a sufficient number of Government employees warrants it, to render first aid.

CONCLUSIONS.

I do not, by any means, want you to understand that the general outline of work that I have suggested belongs especially to the Public Health Service. Outside of that section pertaining to the care of Government employees, which is essentially a Federal public health function, the investigation of health hazards is open to industrial, State, and university research workers, and many are engaged in such work. I do believe that because of its broad ramifications, because of the fact that it affects many industries, many classes of employees, and many States, we can do this work as economically as any other organization.

Finally, we have been so far afield in the discussion of the functions of the Public Health Service in industrial hygiene, and we have taken up so much time looking at the machinery of the work, that I want to clear away any confusion that may exist and make the last thought deal with the power plant that operates the machines. The fundamental principle of industrial hygiene is now, as it was and will continue to be, a specific study of the conditions of industry which have a direct or indirect bearing on the health of the employee. No matter how you view it, the hub of the wheel is the health of the employee, and industrial laws, industrial hygiene, industrial sanitation, industrial medicine, and scientific research are merely the spokes of the wheel, dependent on the hub for their existence. Industrial hygiene is nothing more nor less than the hygiene of the industrial worker, and in our field of work the furtherance of industrial laws, the investigation of industrial health hazards, and the placing of Federal industrial work on a plane with private industry are all founded on the one basic principle—the protection of the health of the worker.

The Need of Educated Public Opinion in Industrial Hygiene.

Dr. RACHELLE S. YARROS, Special Consultant, United States Public Health Service.

It is my privilege to sum up the discussion and point out what public education can do for industrial hygiene.

Health is not a question of normal bodily functions alone. Psychologists tell us that we have too long neglected the part played by the

mind and the emotions in seeking to promote health. We all know that they are right; and it is necessary henceforth to define health and disease in broader and more scientific terms. We can not be industrially efficient if we are physically well but mentally depressed, nor can we be efficient if we are mentally serene but physically ill. Moderate health and reasonable contentment or mental peace are alike indispensable to efficiency.

Thus in considering the problems of industrial hygiene we must take into account not only bodily health, but also the mental and emotional well being of the worker. How can we secure for the worker conditions and surroundings that not only are necessary to keep him or her in good physical condition, but that will afford him or her the mental and emotional satisfactions and outlets that are essential to reasonable happiness? And how can the general public cooperate with the special agencies, public and private, that are seeking to promote the true welfare of the worker?

Those of us who have practiced medicine for a long time know the remarkable advance that has been made in that science and its application. This advance has not been due merely to fuller knowledge, to more accurate diagnosis, and to better methods of treating disease. With the discovery of germs, the realization of the contagious and infectious nature of certain diseases, it became necessary to take the patients' families and friends more and more into the physician's confidence, and to instruct them in the proper ways of caring for the patient and at the same time protecting others, or preventing the spread of the malady. This was really the beginning of information and education in public health. Without the education and cooperation of the public, little could have been done for health in the modern sense of the term by the most competent and scholarly of the medical practitioners. The appeal in medicine has been more and more to the great lay public.

Another impressive illustration of the results of public education may be found in the campaign against venereal disease that has been carried on by the United States Public Health Service in conjunction with State boards of health and various private agencies. Prior to the World War we had plenty of technical, scientific knowledge of venereal disease. It was in the possession of specialists; the public was utterly ignorant of the subject. During the war it became clear that it was essential that the knowledge in question should be widely diffused, given to men and women, boys and girls, in simple terms, so that they might help the specialists to carry on needed protective and preventive work. From that time on, a far-reaching program of sex and social hygiene education has been steadily and systematically carried out by official and private bodies, and the public has gained much useful knowledge that will make for more wholesome and

sounder relations between the sexes, and for health and happiness in the homes and families.

What I wish to advocate or emphasize briefly is the employment of the same methods in connection with the problems of industrial hygiene, so little known or understood by the public.

These problems concern directly or indirectly forty or fifty million people. They affect every trade and almost every profession. They have to do with hours of work, with wage standards, and with conditions under which work is performed in factory, office, mill, mine, and shop. We must take the problems of industrial hygiene to the public—educate it and also learn something from it—from the workers, from the leaders of the workers, from the scientific students of industry and labor. We can no longer be satisfied with insisting on primary health requirements—sanitary facilities, air, rest rooms, seats for workers, washrooms, pure water to drink, and the like. Indeed, we ought not to have to discuss such elementary requirements. We can and should take a broader view of industrial hygiene. We now understand, as I said at the outset, that the human being is not a machine for the production and distribution of wealth. There is the mind to consider, the emotional nature, the spiritual side of life. Last year I had occasion to take part in a very significant conference on work and conditions of work so far as boys and girls are concerned. All the speakers agreed that if industry takes in young girls and boys that require special care, industry should take thought of the needs of such workers and supply them till maturity is reached. These needs are not always obvious. There are subtler aspects of industrial hygiene that are revealed only after analysis and reflection. Not every menace to health is palpable and direct.

Take fatigue, for example. Fatigue may be relieved by providing chairs and rest rooms, but this is superficial treatment. Fatigue is also a question of hours—cumulative effects of long hours. What is the effect of daily fatigue at the end of a year, five years, ten years of work? This is one of the questions that should be thoroughly investigated; and while investigating we can act in certain directions as to which there is already sufficient knowledge.

Again, you can not be efficient or contented unless you receive a living wage. Industrial hygiene can not ignore the wage question, and eventually will not ignore it. Further, if one works so hard and is so tired out that recreation and amusement are impossible, or if one's wages preclude recreation and amusement, then his efficiency is soon impaired. Unhappiness and dull monotony are bad for the worker and, therefore, bad for industry.

Finally, as to child labor. We have made considerable progress in restricting child labor, but we can not stop at the point reached. To prohibit children under 14 from working is right and proper, but

would we wish our children to go to work at 14? We must have an ideal in regard to society, to the race, and perceive that children can not use up all their energy during adolescence without grave injury to the social body and the race.

In short, the true goal of industrial hygiene, rationally understood, is to make labor efficient, contented, and happy by providing it, as fast and as far as possible, with all the comforts and advantages that we know to be essential to civilized and human existence. The problem will grow and expand on our hands, as other health problems have expanded.

Now, the great work of public education as to the import and value of industrial hygiene will not be done exclusively by Federal and State health agencies, though these can and will do much. Private agencies will help. I am glad to see the working people taking increasing interest in health education. I rejoice to note that they are studying their own opportunities and possibilities in conserving and improving health. Indeed, without them, progress would be very slow. At the same time, I wish to feel that the employers are being educated in their responsibilites and enlightened self-interest. I wish we could have as much rivalry among employers as regards industrial hygiene as we had among communities in the adoption of measures against venereal disease during the war.

As for the Government, it is a large employer of labor, and is in a position to lead to set standards. The industrial department of the United States Public Health Service should have the power and the means to look after the welfare of public employees, to make recommendations, and to apply progressive ideas. Private employers would surely follow the Government.

To conclude, we have been slow, too slow and too careless, in dealing with the question of health and hygiene, in the modern sense, in the case of a vast number of working people. We must set out to educate all groups, all sorts and types of employers and employees and the neutral public as well, respecting these vital matters if we would prolong life, improve the general health, and give every one the opportunity to pursue rational happiness. Public support, if intelligent, will enable governmental agencies to do more and better work, and will elevate the standards in public and private employment with justice to all concerned. Let us, then, popularize and democratize the industrial hygiene movement.

DISCUSSION.

Dr. GOLDBERGER. It occurred to me in the course of Dr. Yarros's discussion that the Public Health Service, through its division of industrial hygiene, might well function as the industrial health service of the United States employees. Such industrial health service

might well be developed as a model of what such service should be. In connection with such proposal, however, it must be remembered that Congress must be consulted and must approve. Before approval can be expected, the gentlemen of the Congress will have to be educated with respect to the needs and benefits that will accrue from such a service.

Miss SMITH. I should like to say, as a representative of the National Federation of Federal Employees, that we appreciate very much indeed such suggestions as Dr. Goldberger has made. We are working all the time trying to get better health standards in the Government service and secure the health standards for other workers, too. We have not as yet got to the point of asking for special legislation of this kind, having had our hands full with reclassification legislation, but I do believe that if the Public Health Service would give us some suggestions as to the best way to get at these problems we could help to secure the necessary authority. We are actually doing educational work on the Hill. It is our job, and we do find occasionally that we make progress. The way we do it, of course, is to communicate with the Congressmen by personal interview and by letter from our field locals, where people vote. So that if the Public Health Service has its program, or if we can help the Public Health Service in formulating a health program of any kind, I think I am safe in saying on behalf of the National Federation of Federal Employees that we will do our best to put it over the Hill.

Mrs. TILTON. I came from Cambridge, and what I am about to say may have no bearing on the rest of the country. As I understand it, we are going shortly to have a report, as I suppose we all know, on the reorganization committee for a new department. When this report comes out, there will be hearings on this new department which is to include education, public health, social service. Now do you think that when the report comes out and when we have these hearings, the women's organizations could go forth and say that they want included in this organization something that really would, in a large way, help give the employees of the Government everything necessary to public hygiene? Would that be a good way to say it or a very poor way to say it? I wonder if it would not be possible to include this in some resolutions which we will formulate this evening?

Dr. HAMILTON. I do not wish to close the discussion. It has been immensely interesting to me. I think that if the Public Health Service succeeds in doing one-quarter of the things we have suggested it will be a very great achievement. The mere fact that industrial hygiene is now a subject of recognized interest is important. It is pretty young yet. It would be an admirable thing if the Public Health Service could so manage that the United States Government became a model employer.

Dr. THELBERG. In closing the afternoon discussion I will remind the women here present that the dinner is to be at the Grace Dodge at 6.30, and the round table will follow at 8 o'clock. Another one personal word. Why expend all our last thought and energy toward the gentlemen on the Hill? A lot of them are pretty hopeless. They are quite old. I have three grandchildren. One of them may be a Senator some day. I propose to have him educated in industrial hygiene, in sanitation, in all the questions that would make him a good Senator. But I think here is a message we can take home, and that is to do our very utmost to put courses in sanitation and industrial hygiene into every medical school in the country.

I see no reason why every reputable college for men and women should not have similar courses, so that when a man gets into public life, he will, as a matter of course, know something about practical things. Further, I see no reason why the great normal schools which instruct teachers have no instruction in industrial hygiene. Why should they not have courses in industrial hygiene and sanitation in colleges, normal schools, medical schools, and why could we not even go farther? I think there is a point toward which we all ought to work—that of instructing all high-school pupils in the principles of public as well as personal hygiene.

Dr. HUBBARD. In New York City we have a division of industrial hygiene connected with the department of health. This division is a working part of the bureau of public health education.

The division cooperates with the board of education—the vocational, training, and cooperative schools being the fields of practical operation of this work—in teaching health work to the young worker or beginner.

Efforts have been made to reach the high schools and the several colleges operating in our city, but as yet with only part success—perhaps because these are only partly free, New York University and the other university being only partly subsidized by the city. These two institutions confer degrees on a large number of students from all over our country, very many of whom would be helped by this work and could be useful in passing it along to others.

Health is dependent upon hygiene of the individual and sanitation of the surroundings. Of these, very many of our best workmen are in ignorance. To know what to do to preserve and maintain health requires careful teaching, especially early in a career. This is but rarely done.

To be practical, hygiene and sanitation must be taught not theoretically, but by application—a daily home and shop affair. This is best done in cooperation with public health departments.

My point is that if industrial hygiene is to be put over successfully, this group of delegates, representing many thousands of women all

over the country, should go on record as approving and recommending that every public health body should teach the principles of public health to the workers.

ROUND TABLE.

On the evening of May 16 a round table of the members of the advisory council and representatives of the Public Health Service was held at the Grace Dodge Hotel. Dr. Yarros presided.

The following resolution was passed by the council in regard to continuing the work of the Interdepartmental Social Hygiene Board:

Resolved, That the Women's Advisory Council to the United States Public Health Service indorse the bill, H. R. 11490, regarding the transference of the work of the United States Interdepartmental Social Hygiene Board to the Department of Justice; and be it further

Resolved, That each member of the advisory council shall request her respective organization to indorse this bill; and be it further

Resolved, That each organization represented by this council shall write the organization representative in Washington, urging the necessity of the passage of this measure.

Following a discussion of the tentative programs of conferences for lay women, it was decided that a general public-health program would be preferable to one devoted entirely to social hygiene, and the forms of programs for one and two day conferences submitted by the Public Health Service were indorsed with a few modifications.

The question of industrial hygiene was discussed, and the recommendations submitted by Dr. Thompson were read as follows:

It has been suggested that a few brief recommendations should be made, pointing out the most practical way in which you can be of assistance in industrial hygiene and sanitation.

1. It would seem advisable, first of all, for you to investigate your State laws. If your State is one where, as yet, no industrial laws have been made, to impress on your State legislature the importance of these laws and their relation to the health of the community. If there are industrial laws, and your State health or labor department contains a division of industrial hygiene, to lend your assistance in furthering the work of this division, for it has been my experience that in most States the division of industrial hygiene is accomplishing excellent practical work on limited appropriations.

2. To assist the Public Health Service in making plain to organizations that are interested in this field of work, the value and importance of the help the Service can render to State and local authorities and to employers and employees, and the limitation of its authority under law.

The field of investigative work in industrial hygiene has only been touched, and investigative work is essential for practical basis of industrial laws and the elimination of health hazards. Frankly, the Service is limited in its work by the appropriations received. Larger appropriations must come from a demand by the public for the furtherance of the work. If you can assist in putting before the public the necessity and importance of the work, the demand will come, and largely from the people whom the work most affects—the workers themselves.

Upon motion by Dr. Thelberg, these recommendations were indorsed by the council.

A committee was also appointed to draft a resolution and to arrange an interview with the Surgeon General to ascertain what steps should be taken to secure for the Public Health Service authority to investigate and supervise health conditions among Federal employees. The following resolution was drafted by this committee:

Whereas no comprehensive investigation has ever been made of health conditions surrounding the Government employees, and no authority exists whereby the Public Health Service can make such investigations except upon the request of the heads of the respective departments; and

Whereas it is known that unhealthful conditions do exist in some branches of the Government service: Therefore, be it

Resolved, That the Women's Advisory Council to the United States Public Health Service recommend to various organizations of citizens throughout the United States that they ask Congress to give the Public Health Service the necessary authority to make complete investigation in any or all branches of the Government service and to urge that the highest standards of industrial hygiene be inaugurated.

REPORT OF COMMITTEE.

A conference of the committee with the Surgeon General was held on the morning of May 19. The resolution was presented, and the Surgeon General was requested to make suggestions regarding the best method of procedure.

Dr. Cumming advised that a program for work among the Federal employees be drafted by Dr. Thompson for presentation to the Secretary of the Treasury for approval. With the indorsement of the Secretary, this program would then become a matter for executive action. At the same time, he said, the question might be brought to the attention of the United States Civil Service and Compensation Commissions.

Since the conference, on May 19, the following program has been prepared and approved by the Surgeon General:

Outline of Industrial Hygiene and Sanitation Work Among Government Employees.

Briefly, the plan of work consists of investigation of the amount of time lost by illnesses; classes of diseases from which employees are sick; the connection between certain occupational groups and certain diseases, and the underlying cause of the work processes which contribute to the diseases.

It consists further in the study of compensation paid to Government employees, including (*a*) a comparison of the amounts of compensation paid in different bureaus of the Government per thousand employees; (*b*) a study of the diseases or injuries for which compensation is paid; and (*c*) a study of the work processes in different bureaus and their special relation to compensable disability.

Lastly, it consists of an establishment of dispensaries for emergency treatment, and the treatment of beneficiaries of the United States Employees' Compensation Commission.

To meet the requirements of the above plan, the following scheme of procedure is suggested:

A required complete and careful physical examination by an officer of the Public Health Service for every civil service employee of the Government, on the day of entrance into Government work, not for the purpose of excluding defective applicants, but to prevent claims for compensation for physical defects acquired prior to entrance into the civil service.

More important, still, a copy of this physical examination should be kept in the Public Health Service and studied with the employee's sickness record, in order that recommendations may be made regarding the placement of the employee in Government work so as to minimize the effect of the work he performs on his special defects and general health.

The establishment of the same type of sickness records in all bureaus of the Government; this record should be the same as that which has been used in the Public Health Service during the past nine months and which has also been successfully established in the Veterans' Bureau.

This record has been designed to bring out the relationship of occupation, color, sex, age, length of service, etc., and the type of disease from which the employee is ill. The record can very readily be kept in connection with the rest and emergency room that is found in practically every bureau. The Public Health Service could be authorized either to conduct or supervise all emergency rooms, or, if they are left under the control of separate bureaus, could agree to furnish the record cards and to assist in the analysis of the records.

The compensation information can readily be obtained from the present records of the Compensation Commission, with but little change in their present punch-card system, and could be furnished to the section of industrial hygiene and sanitation through the medical officer detailed to the Compensation Commission.

In addition to keeping records, the same class of emergency treatment should be installed in all bureaus, either directly under the Public Health Service, or under its supervision, to secure adequate and uniform treatment in all emergency cases.

Lastly, when sickness records or compensation records point toward the fact that certain work processes in any Government bureau appear extra hazardous, compared to other processes, the Public Health Service should have general or departmental authority to investigate the suspected hazard and to suggest methods for its control.

DEATH RATES IN A GROUP OF INSURED PERSONS.

COMPARISON OF DEATH RATES FOR PRINCIPAL CAUSES, JULY AND AUGUST, 1922.

The accompanying table is taken from the Statistical Bulletin of the Metropolitan Life Insurance Co. for September, 1922, and presents the mortality experience of the industrial department of the company for July and August, 1922, and for August and year, 1921. The figures are based on a strength of approximately 14,000,000 insured persons.

The death rate for this group for August, 1922 (8.2), shows an increase over that for July (7.6), but was slightly lower than the rate for August, 1921 (8.3). Much lower rates were recorded this year for typhoid fever, diarrhea and enteritis, and diphtheria than for the month of August, 1921, but higher rates prevailed for cerebral hemorrhage, organic heart disease, and Bright's disease, which causes, it is stated, were chiefly responsible for the slight excess in the total death rate for the first eight months of 1922 as compared with the corresponding period of 1921.

It is stated that the indicated rate for tuberculosis for the year 1922 assures the most favorable record for that disease in the history of the company.

Death rates (annual basis) for principal causes per 100,000 lives exposed, July and August, 1922, and August and year, 1921.

Cause of death.	Death rate per 100,000 lives exposed.			
	August, 1922.	July, 1922.	August, 1921.	Year 1921.
Total, all causes	816.7	756.9	829.8	870.6
Typhoid fever	8.9	6.8	10.6	6.7
Measles	3.0	3.3	1.1	3.2
Scarlet fever	2.0	2.3	3.8	7.0
Whooping cough	3.1	2.1	4.4	3.9
Diphtheria	9.1	10.4	14.7	23.8
Influenza	3.8	3.9	2.5	8.7
Tuberculosis (all forms)	115.1	105.4	116.4	117.4
Tuberculosis of respiratory system	105.0	95.0	105.2	105.6
Cancer	74.4	64.1	74.1	71.7
Cerebral hemorrhage	56.3	49.0	49.3	62.1
Organic diseases of heart	111.8	100.0	103.5	117.4
Pneumonia (all forms)	26.8	29.3	27.5	67.8
Other respiratory diseases	10.4	10.7	10.1	14.1
Diarrhea and enteritis	17.3	14.1	32.1	14.2
Bright's disease (chronic nephritis)	64.6	59.9	62.3	68.0
Puerperal state	16.4	15.2	16.8	19.8
Suicides	8.0	7.0	8.2	7.6
Homicides	6.4	5.6	6.5	6.7
Other external causes (exeluding suicides and homicides)	67.3	68.8	72.9	57.6
Traumatism by automobile	15.5	14.2	14.1	12.2
All other causes	212.2	199.1	214.1	192.9

TERM "INJURY" IN OHIO WORKMEN'S COMPENSATION LAW CONSTRUED.

The Supreme Court of Ohio has decided [1] that the term "injury" in the Workmen's Compensation Law does not include diseases contracted in the course of employment, and accordingly holds that death from typhoid fever is not compensable. The question of the compensability of occupational diseases was not involved in the case. The following is a portion of the court's opinion:

* * * But in view of the constitutional interpretation, in view of the fact that during the eight years that the compulsory compensation law has been in force, the industrial commission has given the term "injury" an interpretation which excludes diseases which are contracted as distinguished from diseases which are occasioned by or follow as a result of some physical injury, and in view of the fact that to interpret the term "injury" as including diseases generally would enlarge the scope of disabilities compensable to such an extent as to either bankrupt the fund or require a complete readjustment of premiums upward, we hold that, if the scope of cases compensable is to be extended, it should be done by unambiguous legislative enactment rather than by judicial construction. For it must be recognized that if the term "injury" is to be construed to include typhoid fever contracted in the course of employment, it may as well include influenza, pneumonia, tuberculosis, smallpox, ordinary colds, rheumatism, and practically every disease which may be contracted by workmen in the course of employment, and the workmen's compensation department will become a health and life insurance department for workmen, compulsorily supported by employers, and the constitutionality of the whole scheme be endangered.

DEATHS DURING WEEK ENDED OCTOBER 7, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended October 7, 1922, and corresponding week 1921. (From the Weekly Health Index, October 10, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Oct. 7, 1922.	Corresponding week, 1921.
Policies in force	48,834,171	47,794,871
Number of death claims	7,161	7,305
Death claims per 1,000 policies in force, annual rate	7.6	8.0

[1] Industrial Commission *v.* Cross et al., 136 N. E. 283. (This case reverses the judgment of the Ohio Court of Appeals in the case of the Industrial Commission of Ohio *v.* Cross et al., an abstract of which was published in the Public Health Reports of Nov. 11, 1921, pp. 2770-2771.)

Deaths from all causes in certain large cities of the United States during the week ended October 7, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, October 10, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922.	Week ended Oct. 7, 1922.		Annual death rate per 1,000, corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Oct. 7, 1922.[2]
		Total deaths.	Death rate.[1]		Week ended Oct. 7, 1922.	Corresponding week 1921.	
Total	27,516,678	5,875	11.1	10.6	853	845	.....
Akron, Ohio	[3] 208,435	21	5.3	7.5	5	7	53
Albany, N. Y.	116,223	26	11.7	16.3	5	3	112
Atlanta, Ga.	220,047	63	11.9	18.1	10	5	.....
Baltimore, Md.	762,222	174	11.9	13.8	21	36	59
Birmingham, Ala.	191,017	50	13.6	12.6	5	8	.....
Boston, Mass.	764,017	208	14.2	11.7	30	25	80
Bridgeport, Conn.	[3] 143,555	23	8.4	8.3	4	7	50
Buffalo, N. Y.	528,163	129	12.7	10.1	25	30	98
Cambridge, Mass.	110,944	30	14.1	5.7	9	0	164
Camden, N. J.	121,915	38	16.3	8.7	4	6	61
Chicago, Ill.	2,833,238	597	11.0	9.5	71	94	.....
Cincinnati, Ohio.	404,865	93	12.0	11.9	12	10	80
Cleveland, Ohio.	854,003	166	10.1	8.2	28	28	72
Columbus, Ohio.	253,455	63	13.0	13.0	6	7	63
Dallas, Tex.	171,974	35	10.6	8.2	5	1	.....
Dayton, Ohio.	161,824	18	5.8	11.9	2	4	34
Denver, Colo.	267,591	75	14.6	13.1	11	7	.....
Detroit, Mich.	[3] 993,678	201	10.5	9.0	46	37	89
Fall River, Mass.	120,790	37	16.0	15.1	11	12	154
Fort Worth, Tex.	114,717	26	11.8	.....	1	.....	.....
Grand Rapids, Mich.	143,572	29	10.5	7.8	5	7	83
Houston, Tex.	150,087	27	9.4	14.1	3	5	.....
Indianapolis, Ind.	333,257	90	14.1	13.9	10	11	76
Jersey City, N. J.	305,911	61	10.4	12.7	11	16	70
Kansas City, Kans.	113,801	33	15.1	14.6	4	4	92
Los Angeles, Calif.	634,866	180	14.8	12.8	22	16	91
Louisville, Ky.	236,877	61	13.4	12.8	5	7	54
Lowell, Mass.	114,423	32	14.6	10.5	8	6	135
Memphis, Tenn.	167,862	65	20.2	14.8	6	5	.....
Milwaukee, Wis.	476,603	78	8.5	9.2	9	17	44
Minneapolis, Minn.	400,970	60	7.8	12.5	4	9	22
Nashville, Tenn.	122,832	53	22.5	17.5	3	6	.....
New Bedford, Mass.	127,542	22	9.0	8.3	5	5	74
New Haven, Conn.	169,987	35	10.7	11.6	7	3	86
New Orleans, La.	399,616	118	15.4	13.6	23	9	.....
New York, N. Y.	5,939,746	1,135	10.1	9.0	174	159	67
Newark, N. J.	431,792	67	8.1	10.2	14	11	62
Norfolk, Va.	124,915	29	12.1	10.3	3	2	53
Oakland, Calif.	233,279	38	8.5	11.1	4	5	50
Omaha, Nebr.	200,739	52	13.5	13.2	4	7	42
Paterson, N. J.	138,521	29	10.9	9.1	5	4	77
Philadelphia, Pa.	1,894,500	392	10.8	11.1	66	62	78
Pittsburgh, Pa.	607,902	149	12.8	10.9	33	26	105
Portland, Oreg.	269,240	45	8.7	9.6	7	4	69
Providence, R. I.	241,011	56	12.1	11.8	8	7	63
Richmond, Va.	178,365	35	10.2	16.3	2	8	24
Rochester, N. Y.	311,548	61	10.2	9.6	8	10	62
St. Louis, Mo.	795,008	180	11.8	10.5	15	9	.....
St. Paul, Minn.	239,836	46	10.0	9.2	4	3	38
Salt Lake City, Utah.	128,918	16	6.7	11.1	0	3	89
San Antonio, Tex.	178,056	39	11.4	.....	3	.....	.....
San Francisco, Calif.	529,792	114	11.2	12.0	10	7	58
Seattle, Wash.	[3] 315,312	43	7.1	6.5	4	4	34
Spokane, Wash.	104,445	24	12.0	12.5	1	2	21
Springfield, Mass.	140,952	25	9.3	13.4	6	5	89
Toledo, Ohio.	260,717	56	11.2	12.1	8	10	78
Trenton, N. J.	125,075	28	11.7	12.3	5	6	77
Washington, D. C.	[3] 437,571	97	11.6	10.8	15	12	88
Wilmington, Del.	115,568	27	12.2	9.2	8	4	156
Worcester, Mass.	188,449	36	10.0	11.0	0	8	0
Yonkers, N. Y.	105,422	13	6.4	7.6	1	3	21
Youngstown, Ohio.	144,970	26	9.4	11.6	3	11	40

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1921. Cities left blank are not in the registration area for births.
[3] Enumerated population Jan. 1, 1920.

PREVALENCE OF DISEASE.

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

UNITED STATES.

CURRENT STATE SUMMARIES.

Reports for Week Ended October 14, 1922.

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

ARKANSAS.	Cases.
Chicken pox	5
Dengue	201
Diphtheria	26
Hookworm disease	3
Influenza	4
Malaria	101
Measles	1
Pellagra	7
Scarlet fever	8
Tuberculosis	12
Typhoid fever	15
Whooping cough	6

COLORADO. (Exclusive of Denver.)	
Chicken pox	7
Diphtheria	20
Lethargic encephalitis	1
Measles	1
Mumps	2
Scarlet fever	19
Smallpox	1
Tuberculosis	81
Typhoid fever	23
Whooping cough	4

CONNECTICUT.	
Chicken pox	16
Diphtheria	93
Influenza	3
Malaria	5
Measles	35
Mumps	25
Pneumonia (lobar)	19
Poliomyelitis	3
Scarlet fever	37
Septic sore throat	2
Tetanus	1
Trachoma	2
Tuberculosis (all forms)	23
Typhoid fever	17
Whooping cough	49

FLORIDA.	
Dengue	392
Diphtheria	25
Influenza	13
Malaria	23
Pneumonia	16
Scarlet fever	1
Smallpox	1
Typhoid fever	22

GEORGIA.	
Dengue	837
Diphtheria	134
Dysentery (bacillary)	2
Hookworm disease	6
Influenza	22
Malaria	38
Pellagra	1
Pneumonia	2
Scarlet fever	14
Tetanus	1
Tuberculosis (pulmonary)	7
Typhoid fever	13

ILLINOIS.	
Cerebrospinal meningitis:	
Cook County	1
Du Page County	1
Effingham County	2
Diphtheria:	
Cook County (including Chicago)	197
Chicago	169
Kane County	8
Lake County	11
Madison County	12
Morgan County	9

ILLINOIS—continued.

	Cases.
Diphtheria—Continued.	
Pike County	8
Scattering	139
Influenza	8
Pneumonia	200
Poliomyelitis:	
Iroquois County	1
Scarlet fever:	
Cook County (including Chicago)	85
Chicago	75
Peoria County	14
Williamson County	10
Scattering	116
Smallpox:	
Whiteside County	16
Scattering	2
Typhoid fever	58
Whooping cough	134

IOWA.

Diphtheria	86
Scarlet fever	65
Smallpox	1
Typhoid fever	4

KANSAS.

Chicken pox	13
Diphtheria	156
German measles	1
Influenza	3
Measles	9
Mumps	4
Pneumonia	9
Poliomyelitis	2
Scarlet fever	156
Smallpox	3
Tuberculosis	56
Typhoid fever	20
Whooping cough	15

LOUISIANA.

Dengue	584
Diphtheria	22
Hookworm disease	72
Influenza	3
Lethargic encephalitis	1
Malaria	32
Scarlet fever	5
Smallpox	5
Typhoid fever	37

MARYLAND.[1]

Cerebrosphinal meningitis	2
Chicken pox	12
Diphtheria	96
Dysentery	6
German measles	1
Influenza	14
Lethargic encephalitis	1
Malaria	2
Measles	8
Mumps	6
Ophthalmia neonatorum	1
Paratyphoid fever	3
Pellagra	1

MARYLAND—continued.

	Cases.
Pneumonia (all forms)	49
Poliomyelitis	2
Scarlet fever	35
Septic sore throat	1
Tuberculosis	41
Typhoid fever	51
Whooping cough	28

MASSACHUSETTS.

Cerebrospinal meningitis	3
Chicken pox	29
Conjunctivitis (suppurative)	10
Diphtheria	225
Dysentery	1
German measles	5
Influenza	2
Lethargic encephalitis	2
Malaria	1
Measles	158
Mumps	70
Ophthalmia neonatorum	5
Pneumonia (lobar)	59
Poliomyelitis	5
Scarlet fever	131
Septic sore throat	1
Tetanus	1
Trachoma	2
Tuberculosis (all forms)	128
Typhoid fever	18
Whooping cough	143

MICHIGAN.

Diphtheria	226
Measles	12
Pneumonia	66
Scarlet fever	207
Smallpox	10
Tuberculosis	58
Typhoid fever	46
Whooping cough	44

MONTANA.

Diphtheria	5
Poliomyelitis	1
Scarlet fever	18
Smallpox	1
Typhoid fever	8

NEBRASKA.

Chicken pox	4
Diphtheria:	
Lincoln	10
Omaha	14
Scattering	19
German measles	1
Influenza	2
Mumps	3
Poliomyelitis:	
Sarpy County	1
McCook County	1
Scarlet fever	22
Septic sore throat	1
Smallpox	1
Tuberculosis	3
Typhoid fever	10
Whooping cough	4

[1] Week ended Friday.

NEW JERSEY.	Cases.
Anthrax	1
Chicken pox	30
Diphtheria	173
Influenza	20
Measles	126
Paratyphoid fever	1
Pneumonia	57
Poliomyelitis	1
Scarlet fever	80
Trachoma	1
Typhoid fever	29
Whooping cough	78

NEW MEXICO.	
Chicken pox	2
Conjunctivitis	1
Diphtheria:	
Albuquerque	8
Scattering	13
Mumps	1
Pneumonia	1
Scarlet fever	6
Tuberculosis	35
Typhoid fever	24
Whooping cough	3

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis	3
Diphtheria	199
Influenza	9
Lethargic encephalitis	7
Measles	98
Pneumonia	180
Poliomyelitis	33
Scarlet fever	189
Smallpox	18
Typhoid fever	53
Whooping cough	195

NORTH CAROLINA.	
Cerebrospinal meningitis	2
Chicken pox	23
Diphtheria	459
German measles	3
Measles	17
Poliomyelitis	1
Scarlet fever	157
Septic sore throat	9
Smallpox	3
Typhoid fever	38
Whooping cough	46

OREGON.	
Chicken pox	9
Diphtheria	4
Influenza	4
Measles	3
Mumps	1
Pneumonia	4
Scarlet fever	11
Smallpox	13
Tuberculosis	12

OREGON—continued.	Cases.
Typhoid fever:	
Portland	8
Scattering	8
Whooping cough	1

SOUTH DAKOTA.	
Measles	2
Scarlet fever	34
Smallpox	7
Tonsillitis	1
Tuberculosis	1
Typhoid fever	11
Whooping cough	5

TEXAS.	
Dengue	1,259
Diphtheria	45
Pellagra	4
Pneumonia	6
Scarlet fever	11
Typhoid fever	9

VERMONT.	
Chicken pox	30
Diphtheria	8
Measles	1
Mumps	1
Poliomyelitis	9
Scarlet fever	15
Typhoid fever	1
Whooping cough	14

WASHINGTON.	
Chicken pox	53
Diphtheria	21
Measles	4
Mumps	9
Scarlet fever	37
Smallpox	4
Tuberculosis	22
Typhoid fever:	
Pullman	12
Scattering	17
Whooping cough	11

WEST VIRGINIA.	
Diphtheria	33
Scarlet fever:	
Parkersburg	13
Scattering	18
Typhoid fever	7

WISCONSIN.	
Milwaukee:	
Cerebrospinal meningitis	2
Chicken pox	7
Diphtheria	30
German measles	2
Measles	125
Pneumonia	1
Scarlet fever	31
Smallpox	2
Tuberculosis	9
Typhoid fever	1
Whooping cough	21

WISCONSIN—continued.

Scattering:	Cases.
Cerebrospinal meningitis	3
Chicken pox	26
Diphtheria	47
Influenza	4
Measles	95
Pneumonia	2
Poliomyelitis	7
Scarlet fever	94
Smallpox	31
Trachoma	1
Tuberculosis	28
Typhoid fever	12
Whooping cough	54

Reports for Week Ended October 7, 1922.

ALABAMA.

	Cases.
Cerebrospinal meningitis	1
Dengue	60
Diphtheria	47
Influenza	126
Malaria	104
Pellagra	4
Scarlet fever	18
Tuberculosis	13
Typhoid fever	11

CALIFORNIA.

Diphtheria	141
Influenza	27
Lethargic encephalitis—Dinuba	1
Measles	10
Poliomyelitis:	
Fresno	1
Fresno County	1
Los Angeles County	1
Scarlet fever	94
Smallpox	4
Typhoid fever	19

CONNECTICUT.

Chicken pox	31
Conjunctivitis (infectious)	1
Diphtheria:	
Bridgeport	18
Hartford	8
New Britain	20
Scattering	42
Dysentery (bacillary)	2
German measles	1
Influenza	6
Malaria	8
Measles:	
Norwalk	11
Trumbull	23
Scattering	19
Mumps	15
Pneumonia (lobar)	13
Poliomyelitis	2
Scarlet fever:	
Waterbury	9
Scattering	40
Septic sore throat	1
Tuberculosis (all forms)	26
Typhoid fever	8
Whooping cough	71

DISTRICT OF COLUMBIA.

Chicken pox	5
Diphtheria	10
Poliomyelitis	2
Scarlet fever	9
Tuberculosis	17
Typhoid fever	6
Whooping cough	7

ILLINOIS.

Cerebrospinal meningitis—Chicago	2
Diphtheria:	
Cook County (including Chicago)	140
Chicago	128
Crawford County	16
Kane County	9
Madison County	14
Mason County	16
Saline County	8
Stephenson County	9
Scattering	128
Influenza	12
Pneumonia	104
Poliomyelitis:	
Coles County	1
Cook County (including Chicago)	4
Chicago	3
McLean County	1
Scarlet fever:	
Cook County (including Chicago)	71
Chicago	67
Iroquois County	18
Peoria County	15
Will County	11
Scattering	168
Smallpox	5
Typhoid fever	102
Whooping cough	133

INDIANA.

Cerebrospinal meningitis:	
Hancock County	1
Laporte County	1
Marion County	1
Diphtheria	177
Rabies in animals—Clay County	1
Scarlet fever	115
Smallpox	22
Typhoid fever	33

KENTUCKY.

Cerebrospinal meningitis:	
McCracken County	1
Chicken pox	5
Diphtheria:	
Anderson County	9
Jefferson County	32
Scattering	42

KENTUCKY—continued.

	Cases.
Dysentery	1
Influenza	3
Measles	3
Pneumonia	10
Scarlet fever	29
Septic sore throat	4
Smallpox	7
Trachoma	104
Tonsillitis	2
Tuberculosis:	
Jefferson County	23
Scattering	6
Typhoid fever	39
Whooping cough	7

MAINE.

Chicken pox	2
Diphtheria	11
Measles	5
Pneumonia	1
Poliomyelitis	1
Scarlet fever	14
Tuberculosis	4
Typhoid fever	6
Whooping cough	6

MINNESOTA.

Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	156
Measles	2
Pneumonia	10
Poliomyelitis	1
Scarlet fever	129
Smallpox	28
Trachoma	1
Tuberculosis	60
Typhoid fever	27
Whooping cough	6

MISSISSIPPI.

Dengue	76
Diphtheria	60
Poliomyelitis	2
Scarlet fever	19
Typhoid fever	21

MISSOURI.

	Cases.
Chicken pox	2
Diphtheria	111
Epidemic sore throat	9
Measles	2
Mumps	5
Pneumonia	2
Scarlet fever	55
Trachoma	5
Tuberculosis	17
Typhoid fever	20
Whooping cough	6

NORTH CAROLINA.

Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria	585
German measles	5
Measles	28
Poliomyelitis	1
Scarlet fever	142
Septic sore throat	4
Smallpox	5
Typhoid fever	45
Whooping cough	68

SOUTH DAKOTA.

Cerebrospinal meningitis	1
Diphtheria	20
Pneumonia	4
Poliomyelitis	2
Scarlet fever	43
Smallpox	2
Tuberculosis	3
Typhoid fever	4
Whooping cough	3

WEST VIRGINIA.

Diphtheria:	
Clarksburg	106
Scattering	24
Scarlet fever	18
Typhoid fever	10

WYOMING.

Diphtheria	8
Pneumonia	1
Scarlet fever	2
Typhoid fever	1

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

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

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
Montana (July, 1922)	.....	17	1	.....	7	.....	6	22	12	13
Montana (August, 1922)	.....	22	.....	.....	5	.....	28	11	10	18
September, 1922.										
Connecticut	4	175	11	22	49	.....	11	144	2	39
District of Columbia	.....	40	.....	.....	5	.....	.....	19	.....	18
Florida	.....	80	54	91	1	1	.....	2	7	20
Louisiana	.....	74	43	191	4	24	3	10	4	129
Michigan	.....	567	.....	5	36	.....	6	531	39	173
Nebraska	2	104	1	.....	10	.....	6	90	2	29
Vermont	.....	56	1	.....	21	.....	2	41	.....	7

SUMMARY OF CASES REPORTED MONTHLY BY STATES—Continued.

Cases of Certain Communicable Diseases Reported for the Month of August, 1922, by State Health Officers.

State.	Number of cases reported.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama	6	252	3	9	59	11	50	294	18
Arizona [1]									
Arkansas	13	37	7		23	11	103	117	66
California	107	511	43	59	169	113	638	132	263
Colorado	15	198	5	9	50	17	564	85	124
Connecticut	6	97	131	20	65	1	152	57	137
Delaware		7	2		11		34	27	
District of Columbia	3	23	9		12	0	92	24	46
Florida	1	69	2	2	10	15	75	43	1
Georgia [2]									
Idaho	14	23	2		9	6		12	4
Illinois	149	654	373	92	370	39	1,171	255	1,000
Indiana		102	58		86	17	97	95	
Iowa		65	2		48	8		[3]	
Kansas	12	166	15	14	104	5	286	158	167
Kentucky [2]									
Louisiana		55	6		24	2	221	98	34
Maine	11	46	11	11	18	1	2	42	59
Maryland	20	109	82	37	58	5	250	247	140
Massachusetts	60	482	338	75	210		591	101	483
Michigan	50	327	99	17	313	24		97	690
Minnesota	19	207	37		249	60	399	56	76
Mississippi	164	262	48	35	39	10	252	318	593
Missouri [1]									
Montana [1]									
Nebraska	10	26	9	15	36	5	10	13	27
Nevada									
New Hampshire									
New Jersey	47	347	214		165		363	124	514
New Mexico	3	100	1	1	13	1	74	41	5
New York	165	906	606	211	453	5	1,964	397	1,275
North Carolina	31	1,235	62		252	57		387	531
North Dakota	1	36		1	37	24	5	12	1
Ohio	55	445	241	25	426	35	558	340	801
Oklahoma		29	1		12	1	40	116	
Oregon	21	26	6	4	9	32	83	27	12
Pennsylvania	134	857	833	91	453	1	550	411	980
Rhode Island	4	31	27	5	15		52	4	51
South Carolina		303	1	2	29	1	18	80	21
South Dakota	3	22	13		45	6	49	13	15
Tennessee									
Texas [2]									
Utah									
Vermont	8	22	32	11	10	0	16	8	80
Virginia	26	498	78		168	8	297	363	
Washington	35	55	9	25	37	32	91	52	128
West Virginia	9	97	5		80	7	59	164	12
Wisconsin	50	177	217		173	47	194	27	394
Wyoming		1			7		8	29	

[1] Report for August not received. [2] Reports received weekly. [3] Not notifiable.

SUMMARY OF CASES REPORTED MONTHLY BY STATES—Continued.

Reported Cases per 1,000 Population (Annual Basis) for the Month of August, 1922.

State.	Case rates per 1,000 population.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama	0.03	1.24	0.01	0.04	0.29	0.05	0.25	1.44	0.09
Arizona [1]									
Arkansas	.09	.24	.05		.15	.07	.67	.77	.43
California	.34	1.63	.14	.19	.54	.36	2.03	.42	.84
Colorado	.18	2.39	.06	.11	.60	.21	6.81	1.03	1.50
Connecticut	.05	.79	1.06	.16	.53	.01	1.24	.46	1.11
Delaware		.36	.10		.57		1.75	1.39	
District of Columbia	.08	.58	.23		.30	.00	2.33	.61	1.16
Florida	.01	.79	.02	.02	.11	.17	.86	.49	.01
Georgia [2]									
Idaho	.36	.59	.05		.23	.15		.31	.10
Illinois	.26	1.15	.66	.16	.65	.07	2.06	.45	1.88
Indiana		.40	.23		.34	.07	.38	.37	
Iowa		.31	.01		.23	.04		[3]	
Kansas	.08	1.09	.10	.09	1.28	.03	1.88	1.04	1.10
Kentucky [2]									
Louisiana		.35	.04		.15	.01	1.42	.63	.22
Maine	.17	.70	.17	.17	.27	.02	.03	.64	.90
Maryland	.16	.86	.65	.29	.46	.04	1.98	1.95	1.11
Massachusetts	.18	1.43	1.00	.22	.62		1.75	.30	1.43
Michigan	.15	.99	.30	.05	.95	.07		.29	2.09
Minnesota	.09	.99	.18		1.19	.29	1.90	.27	.36
Mississippi	1.08	1.72	.32	.23	.26	.07	1.66	2.09	3.90
Missouri [2]									
Montana [1]									
Nebraska	.09	.23	.08	.13	.32	.04	.09	.12	.24
Nevada									
New Hampshire									
New Jersey	.17	1.23	.76		.59		1.29	.44	1.83
New Mexico	.19	3.19	.03	.03	.41	.03	2.36	1.31	.16
New York	.18	1.00	.67	.23	.50	.01	2.16	.44	1.40
North Carolina	.14	5.49	.28		1.12	.25		1.72	2.36
North Dakota	.02	.64		.02	.66	.43	.09	.21	.02
Ohio	.11	.87	.47	.05	.83	.07	1.09	.67	1.57
Oklahoma		.16	.01		.07	.01	.22	.64	
Oregon	.30	.38	.09	.06	.13	.46	1.20	.39	.17
Pennsylvania	.18	1.12	1.09	.12	.59	.00	.72	.54	1.22
Rhode Island	.08	.59	.51	.09	.28		.99	.08	.97
South Carolina		2.10	.01	.01	.20	.01	.12	.55	.14
South Dakota	.05	.40	.24		.81	.11	.89	.24	.27
Tennessee									
Texas [2]									
Utah									
Vermont	.27	.74	1.07	.37	.33	.00	.53	.27	2.67
Virginia	.13	2.47	.39		.83	.04	1.47	1.80	
Washington	.29	.46	.08	.21	.31	.27	.76	.43	1.07
West Virginia	.07	.75	.04		.62	.05	.46	1.27	.09
Wisconsin	.22	.77	.94		.75	.20	.84	.12	3.89
Wyoming		.06			.40		.46	1.65	

[1] Report for August not received. [2] Reports received weekly. [3] Not notifiable.

RECIPROCAL NOTIFICATION.

Massachusetts—September, 1922.

Cases of communicable diseases referred during September, 1922, to other State health departments by the Department of Health of the State of Massachusetts.

Disease and locality of notification.	Referred to health authority of—	Why referred.
Typhoid fever:		
Springfield	State Department of Health, Concord, N. H.	Patient was taken sick while at camp in New Hampshire.
Boston	....do	Do.
East Brookfield	State Department of Health, Jacksonville, Fla.	Patient came home ill from St. Petersburg, Fla.
Pittsfield	State Department of Health, Augusta, Me.	Patient was taken sick en route from Maine to Massachusetts.
Framingham	....do	Patient became ill while staying at York Beach, Me.

PLAGUE-INFECTED GROUND SQUIRREL.

Santa Cruz County, Calif.

Two ground squirrels (*Citellus beecheyi*) found 10 miles south of Watsonville, Santa Cruz County, Calif., September 27, 1922, were reported positive for plague infection October 3 (diagnosis based on animal inoculation and cultures).

Intensive hunting operations are being carried on.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 30, 1922.	
		Cases.	Deaths.
California:			
Long Beach	0	.....	2
Oakland	0	3	.....
Florida:			
Tampa	.....	1	1
Illinois:			
Chicago	2	2	.....
Kentucky:			
Paducah	0	1	1
Maryland:			
Baltimore	0	1	.....
Michigan:			
Detroit	0	1	2
Highland Park	0	.....	1
Missouri:			
St. Louis	1	.....	1
Nebraska:			
Omaha	0	1	1
New Jersey:			
Morristown	0	.....	1
New York:			
Buffalo	0	.....	1
New York	5	3	2
Rochester	0	.....	1
Pennsylvania:			
Philadelphia	0	.....	1
Utah:			
Salt Lake City	0	1	1
Wisconsin:			
La Crosse	0	1	.....
Manitowoc	0	1	.....

DENGUE.

City.	Cases.	Deaths.
Florida:		
Tampa	1	.....
Georgia:		
Albany	12	.....
Louisiana:		
New Orleans	40	.....

DIPHTHERIA.

See p. 2661; also Current State summaries, p. 2648, and Monthly summaries by States, p. 2652.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

INFLUENZA.

City.	Cases. Week ended Oct. 1, 1921.	Cases. Week ended Sept. 30, 1922.	Deaths, week ended Sept. 30, 1922.
California:			
Alameda	1		
San Diego	1	1	1
San Francisco	1	3	1
Santa Cruz		1	1
Connecticut:			
Bridgeport	1	1	1
Greenwich	1		
Hartford		1	
New Britain	1		
District of Columbia:			
Washington	2		
Florida:			
Tampa	4	1	
Georgia:			
Atlanta	2		
Illinois:			
Chicago	1	4	3
Kentucky:			
Louisville	1		1
Louisiana:			
Baton Rouge	2		
New Orleans	1	2	2
Maine:			
Lewiston		2	
Maryland:			
Baltimore	1	1	
Cumberland		1	1
Massachusetts:			
Boston	1	2	
Everett	1		
Fall River		1	
Waltham	1		
Webster	1		
Worcester	1		
Michigan:			
Detroit		3	2
Grand Rapids		2	
Missouri:			
St. Joseph	1		
New Jersey:			
Newark	1		
New York:			
New York	14	11	2
Ohio:			
Cincinnati	1	1	
Cleveland	1		
Pennsylvania:			
Philadelphia	2	5	1
West Virginia:			
Martinsburg	1		
Wisconsin:			
Racine			1

LEPROSY.

City.	Cases.	Deaths.
Massachusetts:		
Boston	1	
New York:		
New York	1	

MALARIA.

City.	Cases.	Deaths.
Alabama:		
Montgomery	1	
Arkansas:		
Little Rock	4	
California:		
Los Angeles	2	
Sacramento	2	
San Bernardino		1
Connecticut:		
Hartford	14	
Florida:		
Tampa	3	1
Georgia:		
Augusta	1	1
Macon	9	
Rome	1	
Savannah		1
Illinois:		
Alton	1	
Louisiana:		
New Orleans	1	
Maryland:		
Baltimore	2	
Massachusetts:		
Boston	1	
Lowell	1	1
New Jersey:		
East Orange	2	
New York:		
New York	10	
Ohio:		
Akron	6	
South Carolina:		
Charleston		1
Tennessee:		
Memphis	19	1
Texas:		
Waco		1
Virginia:		
Richmond	1	

MEASLES.

See p. 2661; also Current State summaries, p. 2648, and Monthly summaries by States, p. 2652.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

PELLAGRA.

City.	Cases.	Deaths.
California:		
Oakland	1	
Georgia:		
Savannah		1
Louisiana:		
New Orleans	2	1
North Carolina:		
Wilmington		1
Winston-Salem	1	1
Pennsylvania:		
Philadelphia		1
South Carolina:		
Charleston		1

PNEUMONIA (ALL FORMS).

City.	Cases.	Deaths.
Alabama:		
Birmingham		3
Mobile		1
Montgomery		1
Arizona:		
Tucson		2
Arkansas:		
Hot Springs		1
Little Rock	1	
California:		
Long Beach		1
Los Angeles	13	6
Oakland		5
Riverside		1
Sacramento	2	
San Francisco	6	3
Santa Barbara		1
Vallejo		1
Colorado:		
Denver		5
Connecticut:		
Bridgeport	3	1
Hartford	1	
New Haven		1
New London		1
District of Columbia:		
Washington		4
Florida:		
Tampa	1	
Georgia:		
Atlanta		3
Augusta		2
Brunswick	1	
Savannah		1
Illinois:		
Champaign	1	
Chicago	80	25
Elgin		1
Evanston	1	
La Salle	1	
Oak Park	2	1
Peoria		3
Rockford	1	
Springfield		1
Indiana:		
Anderson		3
East Chicago		2
Gary		4
Indianapolis		7
La Fayette		1
Mishawaka		1
Muncie		2
Terre Haute		2
Kansas:		
Kansas City	2	
Topeka	1	
Wichita		1
Kentucky:		
Louisville		5
Louisiana:		
New Orleans		3
Maine:		
Bath		1
Portland		3
Maryland:		
Baltimore	21	11
Massachusetts:		
Arlington		1
Attleboro	1	
Boston		13
Cambridge		3
Chelsea		1
Easthampton	1	
Fall River		1
Holyoke		3
Leominster	1	
Lowell		2
Lynn		2
Melrose	1	
Newburyport		1
Salem		1
Waltham		2
Worcester		2
Michigan:		
Benton Harbor	1	
Detroit	14	8
Grand Rapids	2	
Muskegon	1	
Port Huron	2	
Saginaw		1
Minnesota:		
Duluth		3
Minneapolis		1
St. Paul		1
Missouri:		
Kansas City		6
Springfield		2
Montana:		
Missoula		1
Nebraska:		
Lincoln		2
Omaha		5
New Hampshire:		
Dover		1
New Jersey:		
East Orange	1	
Garfield	1	
Harrison	1	
Hoboken		2
Jersey City	2	
Montclair	1	
Morristown	1	
Passaic		2
Paterson	4	
Perth Amboy		1
Plainfield	1	
Summit	1	
Trenton	3	1
West New York		1
West Orange	1	
New York:		
Albany	7	
Buffalo	10	3
Cohoes	2	
Lackawanna	2	
Mount Vernon	2	1
New York	138	74
Niagara Falls	1	
Olean	1	
Rochester	5	1
Rome	1	
Schenectady	1	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.
New York—Continued		
Syracuse	3	1
Troy		2
Watervliet		1
North Carolina:		
Raleigh		1
Wilmington		2
Ohio:		
Akron	2	
Alliance		1
Cincinnati		3
Cleveland	14	5
Columbus		2
Dayton	1	
East Cleveland	1	
Hamilton		1
Newark		2
Niles	1	
Salem		1
Springfield		1
Toledo		5
Oregon:		
Portland		1
Pennsylvania:		
Philadelphia	24	16
South Carolina:		
Greenville		2
Tennessee:		
Memphis		4
Nashville		2
Texas:		
Dallas		2
El Paso		1
Fort Worth		3
Houston		1
Vermont:		
Burlington		1
Virginia:		
Alexandria		1
Petersburg		1
Portsmouth		2
Richmond		4
West Virginia:		
Charleston		1
Huntington		1
Wisconsin:		
Milwaukee	3	
Superior		1

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 30, 1922.	
		Cases.	Deaths.
California:			
Los Angeles	0	1	
Connecticut:			
New Haven	0	2	
Illinois:			
Chicago	6	3	2
Iowa:			
Burlington	0	1	1
Maryland:			
Baltimore	1	1	
Massachusetts:			
Attleboro	0	1	
Boston	1	4	
Clinton	0	1	
Fall River	0	1	
Lawrence	0	1	
Lynn	0		1
Medford	0	1	
New Bedford	0	1	
Webster		1	
Michigan:			
Detroit	1	1	
Minnesota:			
St. Paul	1		1
Montana:			
Billings	0	1	
New Jersey:			
Orange	0	1	
Paterson	0	1	
New York:			
Auburn	0		1
Hornell		1	
New York	9	15	1
Peekskill	0	1	
Rochester	0	1	1
Rome	0	3	
Syracuse	0	5	1
Ohio:			
Cincinnati	0	1	
Columbus	0	1	
Dayton	0	2	
Rhode Island:			
Providence	0	3	
South Carolina:			
Columbia	0	1	
Tennessee:			
Memphis	0	1	
Virginia:			
Richmond	0	1	
Wisconsin:			
Madison	0	1	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

RABIES IN ANIMALS.

City.	Cases.	City.	Cases
California:		Massachusetts:	
Los Angeles	8	Chelsea	1
Kentucky:		Missouri:	
Louisville	3	Kansas City	5

SCARLET FEVER.

See p. 2661; also Current State summaries, p. 2648, and Monthly summaries by States, p. 2652.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 30, 1922.		City.	Median for previous years.	Week ended Sept. 30, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Colorado:				New York:			
Denver	0	7	2	Jamestown	0	2	.....
Georgia:				Watertown	0	1	.....
Augusta	.....	1	.....	Ohio:			
Idaho:				Toledo	0	2	.....
Boise	0	1	.....	Oregon:			
Kansas:				Portland	1	8	.....
Salina	0	1	.....	Washington:			
Minnesota:				Seattle	2	1	.....
Duluth	0	1	.....	Tacoma	0	1	.....
Faribault	.....	1	.....	Wisconsin:			
St. Paul	2	6	.....	Ashland	0	1	.....
				Superior	0	5	.....

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			North Carolina:		
Mobile	.....	1	Raleigh	.....	1
California:			Ohio:		
Los Angeles	1	1	Columbus	.....	1
Maryland:			Texas:		
Baltimore	1	1	Houston	.....	1
New York:			Virginia:		
Buffalo	1	.....	Norfolk	.....	1
New York	1	.....			

TUBERCULOSIS.

See p. 2661; also Current State summaries, p. 2648.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 30, 1922.	
		Cases.	Deaths.
Alabama:			
Birmingham	7	4	.....
Mobile	1	.....	1
Arkansas:			
North Little Rock	0	1	1
California:			
Eureka	0	1	.....
Los Angeles	7	8	.....
Oakland	1	2	.....
San Diego	0	2	.....
San Francisco	3	.....	2
Stockton	0	2	.....
Colorado:			
Denver	9	13	2
Trinidad	3	1	.....
Connecticut:			
Bridgeport	1	2	.....
Hartford	0	1	.....
New Haven	4	2	.....
New London	0	2	.....
District of Columbia:			
Washington	6	3	1
Georgia:			
Atlanta	4	9	.....
Augusta	0	1	.....
Macon	2	4	.....
Savannah	2	1	.....
Illinois:			
Alton	0	1	.....
Aurora	0	4	.....
Chicago	13	1	1
Mattoon	0	1	.....
Rock Island	0	1	.....
Rockford	0	1	.....
Nebraska:			
Omaha	3	4	.....
New Hampshire:			
Concord	0	.....	1
New Jersey:			
Atlantic City	0	1	.....
Bayonne	0	1	.....
East Orange	1	1	.....
Hackensack	0	2	.....
Jersey City	1	1	.....
Paterson	0	1	.....
Summit	0	1	1
New Mexico:			
Albuquerque	2	12	.....
New York:			
Ithaca	0	.....	1
Middletown	0	1	.....
New York	51	36	2
Rochester	3	2	.....
Schenectady	0	2	.....
Watervliet	0	.....	1
North Carolina:			
Durham	3	1	.....
Raleigh	0	2	.....
Salisbury	.....	.....	1
Wilmington	0	1	.....
Winston-Salem	4	2	1
Ohio:			
Akron	2	3	.....
Cambridge	.....	1	.....
Canton	0	6	1
Cincinnati	3	4	.....
Cleveland	8	2	.....
Hamilton	0	3	.....
Lancaster	0	.....	1
Middletown	0	1	.....
Newark	2	1	.....
Ohio—Continued.			
Steubenville	0	1	.....
Youngstown	1	2	.....
Oklahoma:			
Oklahoma	1	2	1
Oregon:			
Portland	2	4	.....
Pennsylvania:			
Allentown	2	2	.....
Berwick	0	1	.....
Butler	1	1	.....
Canonsburg	0	1	.....
Hazleton	0	1	.....
Johnstown	1	1	.....
Lebanon	0	1	.....
Norristown	0	1	.....
Philadelphia	22	8	1
Pittsburgh	9	8	.....
Pottstown	0	1	.....
West Chester	0	1	.....
Indiana:			
Fort Wayne	1	3	1
Indianapolis	5	1	1
Kokomo	1	.....	1
Newcastle	1	1	.....
Iowa:			
Council Bluffs	0	4	.....
Kansas:			
Kansas City	2	1	.....
Topeka	2	4	.....
Wichita	3	1	1
Kentucky:			
Lexington	1	2	.....
Louisville	4	4	.....
Louisiana:			
New Orleans	4	1	.....
Maine:			
Bangor	0	1	.....
Biddeford	0	1	.....
Portland	3	1	.....
Maryland:			
Baltimore	18	15	1
Cumberland	2	1	1
Massachusetts:			
Adams	0	1	.....
Boston	5	4	.....
Cambridge	1	3	.....
Chelsea	0	1	.....
Chicopee	0	.....	1
Fall River	3	1	.....
Gardner	0	1	1
Lynn	1	1	.....
Malden	0	1	2
Medford	0	1	.....
New Bedford	2	1	.....
North Adams	0	1	.....
Salem	0	2	.....
Southbridge	1	1	.....
Michigan:			
Benton Harbor	0	1	.....
Detroit	16	4	.....
Hamtramck	1	1	.....
Port Huron	1	.....	1
Saginaw	0	2	.....
Sault Ste. Marie	0	1	.....
Minnesota:			
Duluth	0	1	.....
Mankato	0	1	.....
St. Paul	2	1	1

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

TYPHOID FEVER—Continued.

City.	Median for previous years.	Week ended Sept. 30, 1922.		City.	Median for previous years.	Week ended Sept. 30, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Missouri:				Virginia:			
Kansas City	3	7	1	Lynchburg	1	1	
St. Louis	14	5	1	Norfolk	1	1	
Montana:				Petersburg	3	1	
Missoula	0	2		Richmond	2	4	1
Rhode Island:				Roanoke	1		1
Cranston	0	1		Washington:			
Providence	5	2		Seattle	1	1	
Tennessee:				West Virginia:			
Knoxville	1	3	2	Bluefield	0	1	1
Memphis	3		1	Charleston	0	2	1
Nashville	4	2		Fairmont	0	3	
Texas:				Martinsburg	0	1	
El Paso	0	1		Wheeling	1	2	
Fort Worth	0	1		Wisconsin:			
Houston	0		1	Appleton	0	2	
Utah:				Janesville	0	1	
Salt Lake City	2	2	1	Milwaukee	1	2	

TYPHUS FEVER.

City.	Cases.	Deaths.
Georgia:		
Atlanta	1	

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Birmingham	178,806	53	6				7		5	3
Mobile	60,777	17	1				1			3
Montgomery	43,464	5	2				1		2	1
Tuscaloosa	11,998		5							
Arizona:										
Tucson	20,292	15		1						5
Arkansas:										
Hot Springs	11,695	4								
Little Rock	65,142		5				2		3	
North Little Rock	14,048		3				1			
California:										
Alameda	28,806	2	1				1			
Eureka	12,923	5	2				1		1	
Glendale	13,536	15								3
Long Beach	55,593	13								
Los Angeles	576,673	154	42	2			17		45	20
Oakland	216,261	49	11				3		4	2
Pasadena	45,354	10								2
Richmond	16,843	3	3							
Riverside	19,341	11	2				1			
Sacramento	65,908	14	2		1		9	1		1
San Bernardino	18,721	12							1	1
San Diego	74,683	12	6				1		9	
San Francisco	506,676	129	13	1	3		6		21	8
Santa Ana	15,485	3	1							
Santa Barbara	19,441	5								
Santa Cruz	10,917	4								
Stockton	40,296	6								2
Vallejo	21,107	6								

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Colorado:										
Denver	256,491	68	80	4			12			7
Greeley	10,958	3								1
Pueblo	43,050	12	2							1
Trinidad	10,906		1							
Connecticut:										
Bridgeport	143,555	36	13	1	3		3		4	
Bristol	20,620	2					2		2	
Derby	11,238	2								1
Fairfield (town)	11,475	1							1	
Hartford	138,036	33	4				1		2	2
Meriden (city)	29,867		2						1	
Milford (town)	10,193	1								
New Haven	162,537	20	1		2				5	2
New London	25,688	8	4				2			
District of Columbia:										
Washington	437,571	88	6	1	3		14		28	4
Florida:										
Tampa	51,608	18	2							2
Georgia:										
Atlanta	200,616	62	23	2			12		2	2
Augusta	52,548	25	5				1		1	1
Brunswick	14,413	5								
Macon	52,995		4	1						
Rome	13,252		1				4			
Savannah	83,252	40	9							6
Idaho:										
Boise	21,393	4	1				1			
Illinois:										
Alton	24,682	3	3		1		3			1
Aurora	36,397	13	7	1						1
Bloomington	28,725	7					2		4	
Centralia	12,491	4								
Champaign	15,873		1							
Chicago	2,701,705	538	113	5	25	1	44		170	39
Cicero	44,995	10	2				3			2
Decatur	43,818	12	6				3			1
Elgin	27,454	3	1							
Evanston	37,234	10					1		1	
Galesburg	23,834	3								
Kewanee	16,026	4	1		1					
Mattoon	13,552	1	2							1
Oak Park	39,858	10	3				1		2	
Pekin	12,086	1	1							
Peoria	76,121	24	2	1			20			
Rock Island	35,177	3	1				2			
Rockford	65,651	9	2				7			
Springfield	59,183	21								
Indiana:										
Anderson	29,767	14								
Bloomington	11,595	3							1	
Clinton	10,962	3								
Crawfordsville	10,139	4								
East Chicago	35,967	7	2				3			
Fort Wayne	86,549	23	2						3	
Frankfort	11,585	2	2						1	
Gary	55,378	11	2		1					
Hammond	36,004	1					1			
Huntington	14,000	0								
Indianapolis	314,194	102	58	2	2		7		3	7
Kokomo	30,067	9	3				2			
La Fayette	22,486	7							2	
Logansport	21,626	4					1			
Mishawaka	15,195	6					1			1
Muncie	36,524	6	1	1						
Newcastle	14,458	3								
South Bend	70,983	8	1		2		2		4	
Terre Haute	66,083	22	19				1			
Iowa:										
Burlington	24,057	4	7							
Cedar Rapids	45,566		2				1			
Clinton	24,151		18							
Council Bluffs	36,162	7	2				2			

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Iowa—Continued.										
Davenport	56,727		8				1			
Des Moines	126,468		19				12			
Dubuque	39,141		2				1			
Mason City	20,065	7		1						
Muscatine	16,068	4	9							
Ottumwa	23,003		5							
Sioux City	71,227		4				3			
Waterloo	36,230		1		4					
Kansas:										
Coffeyville	13,452	3					1		1	
Fort Scott	10,893	2	4							
Kansas City	101,177		6						4	
Lawrence	12,456	4	1							
Leavenworth	16,912		1		1		1			
Parsons	16,028	3	1				1			
Salina	15,085	4							1	
Topeka	50,022	9	14		1		3		1	
Wichita	72,217	32	16	4			9			1
Kentucky:										
Covington	57,121	5	4						1	
Lexington	41,534	14	1				1			
Louisville	234,891	56	20		1		3		13	3
Owensboro	17,424		1				2			
Paducah	24,735		2		2					
Louisiana:										
New Orleans	387,219	132	13				2		18	15
Maine:										
Auburn	16,985	6	1		1					
Bangor	25,978						1			
Bath	14,731	3								
Biddeford	18,008	2								
Lewiston	31,791	5	1				8			
Portland	69,272	36	5				3			3
Sanford (town)	10,691	0								
Maryland:										
Baltimore	733,826	186	32	1	5		7		32	16
Cumberland	29,837	17	1		1		1	1		1
Massachusetts:										
Adams (town)	12,967	0	5						1	
Amesbury (town)	10,036	0	2				1			
Arlington (town)	18,665	1	1							
Attleboro	19,731	4			1					1
Belmont (town)	10,749	0								
Beverly	22,561	7	2				1			
Boston	748,060	199	57	1	34	1	15	1	37	11
Braintree (town)	10,580	1					1		1	
Brookline	37,748	10	1				1		1	2
Cambridge	109,694	28	5		2		4		3	2
Chelsea	43,184	7	10		6		1		1	
Chicopee	36,214	6	2							
Clinton	12,979	6	1						1	
Danvers	11,108		1				1			
Dedham	10,792	2								
Easthampton	11,261	1	1	1						
Everett	40,120	5	4				1			
Fall River	120,485	30	10		41	1			4	1
Framingham	17,033	3			2					
Gardner	16,971	6	5				2		1	
Greenfield	15,462	2								
Haverhill	53,884	8								
Holyoke	60,203	18	6						3	
Lawrence	94,270	16	1				2		3	1
Leominster	19,744	3							2	1
Lowell	112,759	28	4				1		1	
Lynn	99,148	15	5		3		1		3	1
Malden	49,103	10	4	2	1		3		3	1
Medford	39,038	9	2				2			
Melrose	18,204	7					1			
Methuen	15,189	5								
New Bedford	121,217	34	6		4		1		11	5
Newburyport	15,618	3			3					
Newton	46,054	10	1				3		2	1
North Adams	22,282	7								

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Northampton	21,951	4					4			
Pittsfield	41,763	7	2						1	1
Plymouth	13,045	1								
Quincy	47,876	5								
Salem	42,529	9			2					
Saugus	10,874	3								
Somerville	93,091	12	3	1			4		1	
Southbridge	14,245	3								
Springfield	129,614	22	6	1			6		4	1
Taunton	37,137	12					1		2	3
Waltham	30,915	5	3				7			
Watertown	21,457	0	6				2		2	
Webster	13,258	1								
Westfield	18,604	3	2						2	
Winthrop	15,455	1			1		1			
Woburn	16,574	4								
Worcester	179,754	35	6	1			3		7	
Michigan:										
Alpena	11,101	0								
Ann Arbor	19,516	8	1							
Benton Harbor	12,233	5	2	2			3			
Detroit	993,678	198	58	2			53		50	18
Grand Rapids	137,634	39	4				3		5	2
Hamtramck	48,615	8	4				1			
Highland Park	46,499	8	1						3	1
Holland	12,183	1		1			2			
Kalamazoo	48,487	18	20	1			3			
Marquette	12,718	0			1					
Muskegon	36,570	11	4	1			2			1
Pontiac	34,273	6	2							
Port Huron	25,944	9	2							1
Saginaw	61,903	16	1				4			2
Sault Ste. Marie	12,096	3	1						1	
Minnesota:										
Duluth	98,917	19	1		2		5		2	1
Faribault	11,089	2								
Hibbing	15,089	1					2			1
Minneapolis	380,582	75	47				37	1	28	6
Rochester	13,722	18	1							3
St. Cloud	15,873				1		8			
St. Paul	234,698	35	12				27		6	3
Winona	19,143	4	1							
Missouri:										
Cape Girardeau	10,252		2							
Independence	11,686	3								
Joplin	29,902						1			
Kansas City	324,410	88	21		1		7		5	6
St. Joseph	77,939	26					3			
St. Louis	772,897	178	23	1	2		29	1	32	11
Springfield	39,631	14		1						
Montana:										
Anaconda	11,668	2								
Billings	15,100	4	1							1
Great Falls	24,121	4	2	1						
Missoula	12,668	9	2		1				1	
Nebraska:										
Lincoln	54,948	12	3		1		1		1	
Omaha	191,601	43	10				2			2
Nevada:										
Reno	12,016	2								
New Hampshire:										
Berlin	16,104	3								
Concord	22,167	7	2							
Dover	13,029	2								
Keene	11,210	4								
Manchester	78,384	11	6							
New Jersey:										
Asbury Park	12,400	3								1
Atlantic City	50,707	10					2			
Bayonne	76,754		5				2		5	
Belleville	15,660		1						2	
Bloomfield	22,019	2							1	
Clifton	26,470	3	1				1			

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New Jersey—Continued.										
East Orange	50,710	3							3	
Englewood	11,627	2								1
Garfield	19,381	4	2		4		1		1	1
Hackensack	17,667	1	4						1	
Hoboken	68,166	17	1						1	
Jersey City	298,103		11				6		18	
Kearney	26,724	3	2		4					
Montclair	28,810	3					1			
Morristown	12,548	5	1							
Orange	33,268	6	2		2				1	1
Passaic	63,841	8	7		1				1	1
Paterson	135,875		3		1		1		4	
Perth Amboy	41,707	8	4	1						
Phillipsburg	16,923	1	1							
Plainfield	27,700	4			1					1
Summit	10,174	1					6			
Trenton	119,289	32	23	1					2	1
Union (town)	20,651		2				1			
West Hoboken	40,074	3	3							
West New York	29,926	1								
West Orange	15,573	2	1				2			
New Mexico:										
Albuquerque	15,157	4		1						
New York:										
Albany	113,344		4						4	
Auburn	36,192	12								
Buffalo	506,775	133	15		3		16		22	7
Cohoes	22,987	3	2				1		1	
Geneva	14,648	3		1						
Hornell	15,025	3								
Hudson	11,745	5	1							1
Ithaca	17,004	7								1
Jamestown	38,917	8	3				3			
Lackawanna	17,918	1					2		1	
Lockport	21,308	8					1			
Middletown	18,420	1					1		1	
Mount Vernon	42,726	6	2		1					1
New York	5,620,048	1,039	128	4	30		46	1	[1] 247	[1] 81
Newburgh	30,366	10	1							
Niagara Falls	50,760	10	4	1			8		5	
North Tonawanda	15,482	1	1				2			
Ogdensburg	14,609	4								
Olean	20,506	6							1	
Peekskill	15,868	1			1		2		1	1
Plattsburg	10,909	8								
Port Chester	16,573	3			1					
Rochester	295,750	64	8		10		1		21	2
Rome	26,341	8	3				6			
Saratoga Springs	13,181	4								
Schenectady	88,723	13					12		2	2
Syracuse	171,717	39	28	2	1		16	1	5	2
Troy	72,013	18	2	1			1		4	3
Watertown	31,285	12					2		2	1
Watervliet	16,073	6								
White Plains	21,031	3								
North Carolina:										
Durham	21,719	6		2			1			1
Greensboro	15,861	8								2
Raleigh	24,418	12	10				3			1
Rocky Mount	12,742	5								
Salisbury	13,884	5								
Wilmington	33,372	10	3	1			1			
Winston-Salem	48,395	13	2	1			2		6	2
North Dakota:										
Fargo	21,961	0	1				4			
Grand Forks	14,010						1			
Ohio:										
Akron	208,435	30	10		1		17		31	
Alliance	21,603	6								
Ashtabula	22,082	8								

[1] Pulmonary tuberculosis only.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Ohio—Continued.										
Barberton	18,811	1	1							
Bucyrus	10,425	1								
Cambridge	13,104	3	1							1
Canton	87,091	15	10		2		3		1	
Chillicothe	15,831	3	2				3			1
Cincinnati	401,247	94	8		2		6		11	10
Cleveland	796,841	144	44	2			26		22	14
Columbus	237,031	42	35		2		6		19	2
Coshocton	10,847						1			
Dayton	152,559	39	13				16		3	
East Cleveland	27,292	3								1
Findlay	17,021	10								
Fremont	12,458	3					1			
Hamilton	39,675	13	1				3			
Kenmore	12,683		1						1	
Lancaster	14,706	3	1							
Lorain	37,295		1				4		1	
Mansfield	27,824	5	4							
Martins Ferry	11,634	1					1			
Middletown	23,594	4	1							
Newark	26,718	7	2							
Niles	13,080	1	2						1	
Piqua	15,044	2	1							
Salem	10,305	2	1							
Sandusky	22,897	9	1	1						
Springfield	60,840	11	2		1				2	1
Steubenville	28,508	5					1			
Tiffin	14,375	1	1							
Toledo	243,164	54	29	3	11	1	1		1	1
Youngstown	132,358	14	61	4	1		4			1
Zanesville	29,569	10	1		1		1		3	1
Oklahoma:										
Oklahoma	91,295	24	5				5		1	
Tulsa	72,075		2							
Oregon:										
Portland	258,288	58	10		2		3		11	3
Pennsylvania:										
Allentown	73,502		5				1			
Altoona	60,331		8				3			
Berwick	12,181		1				1			
Bethlehem	50,358		7				3			
Braddock	20,879		1		5					
Butler	23,773						1			
Canonsburg	10,632		2		1				1	
Charleroi	11,516						4			
Chester	58,030				1		2			
Columbia	10,836		1				2			
Easton	33,813		1							
Erie	93,372		3				3		2	
Greensburg	15,033		1							
Harrisburg	75,917		5				2			
Hazleton	32,277		1				1			
Homestead	20,452								1	
Johnstown	67,327		4							
Lancaster	53,150		1							
Lebanon	24,643		1						1	
McKees Rocks	16,713		19							
Monessen	18,179		2				1			
Nanticoke	22,614		1							
New Castle	44,933		1						2	
Norristown	32,319		2							
North Braddock	14,928		1							
Philadelphia	1,823,779	396	55	3	78	3	28		58	35
Pittsburgh	588,343		31		20		35		12	
Plymouth	16,500		2							
Shenandoah	24,726		2							
Swissvale	10,908		1				2			
Washington	21,480		2				5			
Wilkes-Barre	73,833		2							
York	47,512		2				1			
Rhode Island:										
Cranston	29,407	0								
Cumberland (town)	10,077	1			1					

CITY REPORTS FOR WEEK ENDED SEPTEMBER 30, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Rhode Island—Continued.										
Newport	30,255	2	7							
Pawtucket	64,248	15	2	2	1					
Providence	237,595	52	6				4			2
South Carolina:										
Charleston	67,957	19								2
Columbia	37,524		7				2		2	
Greenville	23,127	12	4	1			2			
South Dakota:										
Sioux Falls	25,202	5	4				1			
Tennessee:										
Chattanooga	57,895		2	1			7			
Knoxville	77,818		1				2		1	1
Memphis	162,351	58	16	1			4			3
Nashville	118,342	35	10				1		3	5
Texas:										
Beaumont	40,422	7	1							1
Dallas	158,976	45	18	2			6		3	2
El Paso	77,560	19					2		2	7
Fort Worth	106,482	17	5				1			
Galveston	44,255	6	1							3
Houston	138,276	37								4
San Angelo	10,050	3								1
Waco	38,500	16								
Utah:										
Salt Lake City	118,110	27	1						4	
Vermont:										
Burlington	22,779	18								1
Rutland	14,954	5								
Virginia:										
Alexandria	18,060	2	2							
Lynchburg	30,070	4	2							
Norfolk	115,777		6				5		2	2
Petersburg	31,012	14	5				4		2	3
Portsmouth	54,387	15	5	1						
Richmond	171,667	36	20	1			19		7	1
Roanoke	50,842	10	23	1			3			
Washington:										
Bellingham	25,585		1							
Seattle	315,312		2		3		2		23	
Spokane	104,437		7				1			
Tacoma	96,965				1		1			
Yakima	18,539						1		1	
West Virginia:										
Bluefield	15,282	4	7				2			
Charleston	39,608	21	1				1			1
Clarksburg	27,869	4	1							1
Huntington	50,177	15	6				4			1
Morgantown	12,127		1							
Moundsville	10,669	4	1							
Parkersburg	20,050	2					2			
Wheeling	56,208	18	4	1	2		5			
Wisconsin:										
Appleton	19,561		1						2	
Beloit	21,284	5			1		9			
Fond du Lac	23,427	4								
Janesville	18,293	5	2				2			1
Kenosha	40,472	4								1
La Crosse	30,421				1		4			
Madison	38,378		2		2		4		1	
Manitowoc	17,563						1			
Marinette	13,610						1			
Milwaukee	457,147		18		43		18		11	
Oshkosh	33,162	6					1		3	
Racine	58,593	11	10				6		3	2
Sheboygan	30,955		8							
Superior	39,671	5								2
West Allis	13,745						2			

FOREIGN AND INSULAR.

AUSTRALIA.

Leprosy—Northern Territory.

Under date of August 25, 1922, two cases of leprosy, occurring in natives, were reported in the Northern Territory of Australia.

CANADA.

Communicable Diseases—Ontario—September, 1921 and 1922.

The following table shows the number of cases of certain communicable diseases reported in the Province of Ontario, Canada, for the month of September, 1922, and comparative statistics for the same diseases during the month of September, 1921. (Population, estimated, for both periods, 2,523,200.)

Disease.	September, 1922.		September, 1921.	
	Cases.	Deaths.	Cases.	Deaths.
Cerebrospinal meningitis	8	6	8	8
Diphtheria	180	19	171	5
Measles	62	0	14	0
Pneumonia (influenzal)	(1)	4	35	4
Pneumonia (primary)	6	76	(1)	98
Poliomyelitis	55	9	17	1
Scarlet fever	180	4	171	5
Smallpox	19	1	43	0
Tuberculosis	160	111	175	115
Typhoid fever	79	7	120	31
Whooping cough	196	8	150	10

[1] Not stated.

The chief incident in communicable diseases reported for the Province for the month of September, 1922, is the increase in poliomyelitis (infantile paralysis) compared with the corresponding month of 1921. The number of cases of this disease, viz, 55, shows a decrease as compared with the number reported for the month of August last, the number of cases reported for that month being 92.

Venereal Diseases.

During the month of September, 1922, venereal diseases were reported in the Province as follows: Chancroid, 3 cases; gonorrhea, 210 cases; syphilis, 138 cases. For the month of September, 1921, there were reported one case of chancroid, 166 cases of gonorrhea, and 226 cases of syphilis.

CUBA.

Communicable Diseases—Habana—Provinces.

Communicable diseases have been reported in Cuba as follows:

Habana.

Disease.	Sept. 1-30, 1922.		Disease.	Sept. 1-30, 1922.	
	New cases.	Deaths.		New cases.	Deaths.
Chicken pox	6	.....	Measles	1	.....
Diphtheria	16	1	Paratyphoid fever	2	.....
Leprosy	2	1	Scarlet fever	7	.....
Malaria	59	3	Typhoid fever	46	13

Provinces.

Province.	New cases reported, Aug. 1-20, 1922.										
	Cerebrospinal meningitis.	Chicken pox.	Diphtheria.	Infantile tetanus.	Malaria.	Measles.	Paratyphoid fever.	Poliomyelitis (infantile paralysis).	Scarlet fever.	Smallpox.	Typhoid fever.
Camaguey	2	1	1	.....	27	4	4	.....	.....	3	24
Habana	.....	2	9	.....	62	2	7	.....	6	3	48
Matanzas	.....	1	1	2	.....	.....	8	.....	.....	1	21
Oriente	.....	12	1	.....	138	.....	.....	.....	.....	18	43
Pinar	.....	.....	.....	.....	14	2	2	.....	.....	.....	12
Santa Clara	.....	2	4	.....	8	.....	23	.....	.....	3	70
Total	2	18	16	2	249	8	44	.....	6	28	218

ECUADOR.

Plague-Infected Rats—Guayaquil.

During the period September 1 to 15, 1922, 33 rats were found plague infected out of 4,150 rats examined.

MEXICO.

Plague-Infected Rat—Tampico.

During the week ended September 30, 1922, one plague-infected rat was reported found at Tampico, Mexico, making a total of 19 plague-infected rats found at Tampico from January 1 to September 30, 1922.

Yellow Fever—Tuxpam.

A case of yellow fever was reported October 14, 1922, at Tuxpam, Mexico.

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

Reports Received During Week Ended October 20, 1922.[1]

The reports contained in the following tables must not be considered as complete or final, either as regards the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Aug. 6–12, 1922: Cases, 2,224; deaths, 1,377.

PLAGUE.

Ceylon:				
Colombo	Aug. 20–Sept. 2	4	4	
Ecuador:				
Guayaquil				Sept. 1–15, 1922: Rats examined, 4,150; found infected, 33.
India				Aug. 6–12, 1922: Cases, 790; deaths, 575.
Mexico:				
Tampico				Sept. 24–30, 1922: One plague-infected rat.
Turkey:				
Constantinople	Sept. 10–16	2	1	

SMALLPOX.

Canada:				
Manitoba—				
Winnipeg	Sept. 3–9	1		
Ontario	Sept. 1–30	19	1	
Ceylon:				
Colombo	Aug. 20–26	1		
Cuba				Aug. 1–20, 1922: Cases, 28.
Santiago	Sept. 1–30	1		
Dominican Republic:				
San Pedro de Macoris	Sept. 4–10	18		
Ecuador:				
Guayaquil	Sept. 1–15	5		
Milagro	do	1		
Nobol	do	1		
India				Aug. 6–12, 1922: Cases, 795; deaths, 183.
Karachi	Sept. 3–9	1		
Java:				
West Java—				
Batavia	Aug. 25–Sept. 1	5	1	Province.
Spain:				
Cadiz	Aug. 1–31		1	
Seville	Sept. 12–24		18	
Turkey:				
Constantinople	Sept. 10–16	4	1	
Union of South Africa:				
Cape Province	Aug. 20–26			Outbreaks.
Transvaal	do			Do.

TYPHUS FEVER.

Egypt:				
Cairo	July 9–15	6	6	
Port Said	do	1	1	
Germany:				
Coblenz	Sept. 10–16	2	1	
Turkey:				
Constantinople	do	3		
Union of South Africa:				
Cape Province	Aug. 20–26			Outbreaks.
East London	do	1		

YELLOW FEVER.

Mexico:				
Tuxpam	Oct. 14	1		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	May 14–June 24	1	4	
Newchwang	July 27			Present. Stated to have been imported from Shanghai.
Pootung	Aug. 3			Present.
Shanghai	June 25–July 31	198		Aug. 1–Sept. 3, 1922: Cases, 4, foreign; deaths, 45, Chinese. July 29: Stated to be 250 cases in Chinese isolation hospital.
Tientsin	July 25–Aug. 19	4	2	
Woosung	Aug. 3			About 75 deaths reported for previous week.
Greece:				
Athens	June 29	1	1	
Saloniki	June 7–17	30	11	At quarantine station, among passengers from vessel carrying Russian refugees.
India				Feb. 26–June 24, 1922: Deaths, 33,979. June 25–Aug. 5, 1922: Deaths, 9,346. (Report for week ended Feb. 25, 1922, not received.)
Bombay	Apr. 23–June 17	12	5	
Do	July 2–29	2	2	
Calcutta	Apr. 23–June 24	536	378	
Do	June 25–Sept. 2	63	59	
Madras	May 21–June 17	3	1	
Do	July 16–Aug. 5	4	2	
Rangoon	May 7–June 24	116	65	
Do	June 25–Aug. 26	93	58	
Indo-China:				
Saigon	June 25–Aug. 19	30	28	Including area of 100 square km.
Japan:				
Tokyo	Oct. 4			Epidemic.
Yokohama	Oct. 5			Present.
Philippine Islands:				
Manila	May 21–June 24	8		
Do	June 25–Aug. 26	13	2	
Province—				
Bataan	June 4–10	1		
Batangas	May 26–June 24	15	11	
Do	June 25–July 22	7	4	
Bulacan	Apr. 30–May 6	1	1	
Camarines Sur	Mar. 25–Apr. 1	1	1	
Laguna	Apr. 16–22	1		
Marinduque	June 25–July 15	6	6	
Mindoro	Apr. 23–29	1		
Nueva Ecija	June 11–17	1	1	
Pampanga	Apr. 16–June 24	6	5	
Do	June 25–July 8	1	1	
Pangasinan	June 18–24	3	1	
Rizal	Apr. 2–June 24	3	1	
Tarlac	May 21–June 10	4	4	
Union	Aug. 6–12	1	1	
Poland				July 9–Aug. 5, 1922: Cases, 61; deaths, 19.
Rovno	June 11–24	8	3	Repatriation station: Cases occurring among persons repatriated from Russia.
Do	June 25–Aug. 5	33	10	
Volhynia	July 2–8	1	1	
Zamosc	Aug. 21		1	
Rumania:				
Bucharest	....do	1		
Crangasi				To July 31, 1922: Cases 11; deaths, 6. First case in soldier from frontier on Dniester River. Crangasi, a suburb of Bucharest.
Province—				
Bessarabia—				
Cobusca	July 24	1		
Codaeshti		3		Reported Aug. 11.
Orhei				Prefecture. Cholera reported Aug. 11 among troops in garrison.
Rascautzi		11	1	Reported July 29.
Siam:				
Bangkok	Apr. 30–June 17	15	9	
Do	July 2–Aug. 12	8	4	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Straits Settlements:				
Singapore	July 16–22	1	1	
Syria:				
Aleppo	May 27–June 3			A few cases in interior.
Do	June 25–Sept. 2			Present in interior.
On vessel:				
S. S. Chios	July 16	1		At Kavak Quarantine Station, Bosporus, from Novorossysk, a Russian Black Sea port. Case occurred in a recognized carrier. Vessel carried refugees for Saloniki, Greece. Six bodies buried at sea: 12 cases landed at Kavak during stay.

PLAGUE.

Algeria:				
Algiers	Aug. 27	1		
Oran	Aug. 1–31	10	3	
Asia Minor:				
Smyrna	May 28–June 17	3	1	
Do	June 30–Aug. 26	8	1	District.
Australia:				
New South Wales—				
Sydney	June 1–15	2		Apr. 2–June 10, 1922: 19 plague-infected rats found.
Queensland—				
Brisbane	July 23–29			One plague rat.
Azores:				
St. Michaels Island	June 25–Sept. 2	85	23	From 3 to 9 miles from port of Ponta Delgada.
Brazil:				
Bahia	June 11–17	1		May 7–June 4, 1922: Rodent; occurring in one section of the city.
Do	Aug. 20–26	1		
Pernambuco	May 7–13	1		Many dead rats found.
Porto Alegre	July 30–Aug. 26	1	3	
British East Africa:				
Kenya Colony				Mar. 1–June 30, 1922: Cases, 371; deaths, 344. July 9–15, 1922: Deaths, 14.
Nairobi	Feb. 1–28	15	15	
Cape Verde Islands:				
St. Vincent	Sept. 4			Present.
Ceylon:				
Colombo	May 6–June 24	13	10	Plague rats, 5.
Do	June 25–Aug. 12	14	15	Plague rats, 9.
China:				
Amoy	May 7–June 24		87	May 20: From 10 to 20 deaths reported daily. July 16–Aug. 12, 1922: Present; stated to be decreasing.
Do	June 25–July 15		76	
Canton	May 1–June 30	28	23	
Foochow	May 7–June 10	5	4	June 17–24, 1922: Present. June 21: Mildly epidemic; 2 fatal cases in foreign physicians. Aug. 13–19: Present.
Do	July 2–Aug. 12	3	1	
Hongkong	June 4–24	176	104	
Do	June 25–Aug. 26	136	101	
Ecuador:				
Guayaquil	June 1–15			Rats found infected, 16; examined, 3,400.
Do	July 1–Aug. 31			Rats examined, 17,459; found infected, 23.
Egypt				Jan. 1–June 29, 1922: Cases, 280; deaths, 120. Jan. 1–Aug. 10, 1922: Cases, 435; deaths, 200. (Corrected report.)
City—				
Alexandria	June 1–28	21	6	Septicemic, 1.
Do	July 2–Sept. 9	18	7	
Port Said	June 12–25	2	5	Foreign cases, 2; deaths, 2.
Do	July 2–Sept. 9	28	21	
Suez	May 24–June 25	7	6	
Do	July 10–Aug. 8	3	2	Aug. 5: One case imported from Mauritius on S. S. Dumbea.
Province—				
Assiout	May 30–June 23	14	8	Septicemic, 1.
Do	July 11–Aug. 5	6	3	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks
Egypt—Continued.				
Province—Continued.				
Benisouef	May 23–June 30	19	7	
Do	July 2–Sept. 2	29	13	
Fayoum	June 3–29	8	4	
Do	July 2–20	13	3	
Gharbieh	May 26–June 30	37	13	
Do	July 2	3		
Menoufieh	July 20	1	1	
Minieh	June 2–29	24	7	
Do	July 14–Aug. 19	16	7	
Sinnuris (district)	Sept. 3–9	1		
France:				
Paris	Aug. 11–18	4		
Greece:				
Patras	Apr. 24–June 25	5	3	
Piræus	Aug. 1–31	3	1	
Hawaii:				
Hamakua	June 30–July 4	1	1	At Kalopa Homesteads. Case, Hawaiian.
Do	July 8			Hamakua Mill Co. One plague rat trapped; found positive, July 14, 1922.
Honokaa	Aug. 19–Sept. 10		4	Japanese and Filipinos; bubonic and septicemic. Aug. 12–Sept. 13, 1922: 3 plague rats found.
Honokaa Mill	Aug. 24	1	1	Japanese; pneumonic.
Kalopa	July 13	1	1	Contact with case at Kalopa Homesteads, July 4.
Paauhau	June 30			One plague rat trapped at Paauhau Gulch, June 29; found positive June 30, 1922.
Paauilo	July 7		1	At Pohakea; Japanese.
Pohakea	Aug. 1–16	2	2	Aug. 1, Japanese child; case reported positive for plague Aug. 6, 1922. Form, pneumonic. Aug. 16, 1 fatal case in Japanese.
Pohakuhaku	July 12	1	1	Hawaiian. Reported positive, July 19.
India				Apr. 23–June 24, 1922: Cases, 6,310; deaths, 4,812. June 25–Aug. 5, 1922: Cases, 2,264; deaths, 1,637.
Bombay	Apr. 23–June 24	168	123	Surrounding country, July 2–8, 1922: Cases, 21; deaths, 16.
Do	June 25–Aug. 12	19	12	
Calcutta	Apr. 23–June 24	56	54	
Do	June 25–Aug. 19	16	16	
Karachi	May 23–June 24	59	55	
Do	June 25–July 8	3	3	
Madras Presidency	May 21–June 24	74	36	
Do	June 25–Sept. 2	704	447	
Rangoon	May 6–June 24	175	161	
Do	June 25–Aug. 26	333	301	
Indo-China:				
Saigon	Apr. 23–June 24	30	21	
Do	June 25–Aug. 19	10	7	Including area of 100 square kilometers.
Italy:				
Catania	June 17	1		
Naples	July 18–25	4		Occurring in suburbs, viz, at Torre Annunziata, July 18–20, 3 cases; San Giovanni a Teduccio, July 25, 1 case.
Japan:				
Osaka	July 11–20	7	6	Reported as having occurred during past month, cases, 9; deaths, 8.
Java				Month of April, 1922: Report of the 7 Provinces of Java: Cases, 413; deaths, 495. May 1–31, 1922: Cases, 293; deaths, 310; occurring in 6 Provinces. June 1–30, 1922: Cases, 222; deaths, 259; occurring in 5 Provinces. July 1–31, 1922: Cases, 208; deaths, 223; occurring in 5 Provinces.
East Java—				
Soerabaya	May 7–June 24	3	3	
Soerakarta—				
Keporen	May 20			Epidemic.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Madagascar:				
Tananarive Province—				
Anketrina	May 4		1	Native village; disease stated to have been present since about Apr. 27, 1922. (Name of locality corrected.)
Tamatave	June 26–July 2	2	1	
Do	Aug. 21–Sept. 13			Present.
Tananarive	May 29–June 18	2	1	
Do	July 10–23	2	2	
Mesopotamia:				
Bagdad	Apr. 1–June 30	268	188	
Do	July 1–31	23		
Mexico:				
Vera Cruz	June 30			One plague-infected rat.
Palestine:				
Jerusalem	July 4–Sept. 11	40	2	In native quarter of Jaffa.
Peru				May 1–15, 1922: Cases, 36; deaths, 19. June 1–30, 1922: Cases, 87; deaths, 15. July 1–Aug. 31, 1922: Cases, 95; deaths, 51.
Callao				Jan. 1–June 30, 1922: Deaths, 13.
Philippine Islands:				
Manila	June 3	1	1	From S. S. Taisang from Amoy, China.
Do	Aug. 20–26	2		Aug. 1–31, 1922: Cases, 32: deaths, 16.
Portugal:				
Lisbon	July 23–Sept. 2	4	5	
Portuguese West Africa:				
Guinea				Reported present Aug. 24, 1922.
Senegal:				
Dakar	June 1–30	1	1	
Do	July 1–31	2	2	
Siam:				
Bangkok	Apr. 30–June 3	4	3	
Do	July 2–Aug. 12	5	4	
Spain:				
Barcelona	Sept. 24		1	
Straits Settlements:				
Singapore	Apr. 30–June 24	8	9	
Do	July 9–Aug. 12	2	2	
Syria:				
Beirut	July 30	2		
Tunis:				
Tunis	June 30–Sept. 9	4	1	
Turkey:				
Constantinople	Aug. 20–Sept. 9	4	2	
Union of South Africa:				
Orange Free State—				
Grootkom Farm	May 7–13			One dead plague-infected rodent found. Locality adjoins Trucart's Berg Farm, on which plague-infected mouse was found preceding week.
Rendezvous Ry. Station.	May 14–20			Plague-infected wild rodent found near.
On vessels:				
S. S. Ardeola	June 25–July 8			At Liverpool. Four plague-infected rats found dead. Vessel from Las Palmas, Canary Islands, June 26, 1922.
S. S. Dumbea	Aug. 5	1		At Suez, Egypt, from Island of Mauritius. Patient ill two days before arrival. Declared positive Aug. 6.
Greek vessel ———	July 19			At Messina, Italy. Cases on board. Vessel not allowed to enter.
S. S. Legie	July 29			At Hamburg, Germany. Plague rats found. Vessel from Buenos Aires, Argentina.
S. S. Southgate	May 30	1		At Thursday Island quarantine, Australia. Vessel left Calcutta May 2; Rangoon, May 9. Vessel badly rat-infested.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels—Continued.				
S. S. Taisang	June 1-3	1	1	At Manila, P. I., from Amoy, China. Patient landed at Manila June 1, 1922. The Taisang was 2½ days en route direct from Amoy.

SMALLPOX.

Arabia:				
Aden	May 7-June 24	69	21	
Do	July 2-Sept. 9	42	21	
Argentina:				
Rosario	June 1-30		3	
Asia Minor:				
Smyrna	May 14-June 24	4		In district.
Do	June 25-Aug. 26	13		Do.
Bermuda:				
Hamilton	Sept. 3-30	3		
Bolivia:				
La Paz	Mar. 1-Apr. 30	97	16	
Brazil:				
Bahia	June 25-July 1	1	1	
Para	May 29-June 25	8		
Do	July 3-Sept. 17	141	2	
Rio de Janeiro	May 14-June 24	48	12	
Do	June 25-Aug. 26	67	14	
Sao Paulo	Apr. 10-June 11	3	10	
British East Africa:				
Kenya Colony				Apr. 1-June 30, 1922: Cases, 15; July 9-15, 1922: Deaths, 5.
Dar es Salaam	Apr. 16-June 10	26		
Do	July 16-Aug. 12	18	2	
Nairobi	Mar. 1-31	22	2	
Zanzibar	May 1-June 10	36	6	
Do	June 24-July 1	2		
Canada:				
Alberta—				
Calgary	June 18-24	1		
Manitoba—				
Winnipeg	May 6-June 17	3		
New Brunswick—				
Kent County	June 25-July 1	2		
Madawaska County	June 4-17	6		
Do	Sept. 10-16	1	1	
Ontario—				
Fort William and Port Arthur	Aug. 6-Sept. 23	3		
Hamilton	July 30-Aug. 12	2		
London	Aug. 26-Sept. 2	1		
North Bay	June 3-17	2		
Do	July 16-Aug. 12	3		
Ottawa	June 11-July 1	17		
Do	July 2-Aug. 26	14		
Toronto	June 18-Sept. 9	10		
Saskatchewan—				
Regina	Sept. 17-23	1		Imported.
Saskatoon	Aug. 20-26	1		
Ceylon:				
Colombo	May 14-20	1		
Do	July 16-22	1		
Chile				Prevalent, July 3, 1922, throughout southern Provinces.
Concepcion	Mar. 14-June 20		71	
Do	June 27-Sept. 4		30	
Quillon				In Concepcion Province; epidemic in May, 1922, with 60 reported cases. To June 5, epidemic.
Do	June 27-July 3			Epidemic.
San Patricio	May 16-22	13		
Talcahuano	May 22-June 24	33	19	May 16-22, 1922: Present.
Do	June 25-July 30	5	7	
Temuco				Province of Cautin; epidemic in May, 1922.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile—Continued.				
Valparaiso	Mar. 26–June 19		115	Incomplete; several districts not reporting.
Do	June 25–July 30		46	
China:				
Amoy	May 7–20			Present. June 18–24: 1 death.
Do	July 16–Aug. 26			Present.
Antung	May 29–June 18	4		
Do	July 3–16	5		
Chungking	May 28–June 24			Do.
Do	June 25–July 29			Do.
Foochow	May 14–20	1		Aug. 13–19, 1922: Present.
Hankow	June 25–July 1	1		
Hongkong	May 14–June 24	41	32	
Do	July 16–Aug. 12	3	2	Aug. 13–26, 1922: Present.
Manchuria—				
Dairen	May 15–June 18	4	1	
Do	June 26–July 17	4	1	
Harbin	May 22–28	1		
Do	July 30–Aug. 5	1		
Mukden	June 18–24			Present.
Do	July 16–22			Do.
Nanking	May 7–June 24			Do.
Do	June 25–Aug. 26			Do.
Shanghai	May 22–28	1		Native.
Tientsin	May 14–20			Present.
Tsingtau	May 9–June 18	4	3	Including leased territory of Kiaochow, Japanese population along Shantung Railway, and Japanese residents, Tsinan.
Do	June 26–July 30	5	3	Do.
Chosen (Korea):				
Chemulpo	May 1–31	1		
Fusan	May 1–June 30	147	60	
Do	July 1–31	13	9	
Seoul	May 1–June 30	26	5	
Do	July 1–31	23	8	
Cuba				July 1–31, 1922: Cases, 40.
Antilla	June 18–24	1		Reported for Preston.
Do	Sept. 17–23	1		
Cienfuegos	June 24–July 1	1		
Habana	July 1–Aug. 31	10		
Santiago	June 1–30	3		
Domenica	Aug. 5–Sept. 9			Present. Aug. 23,1922: Epidemic. Island in Leeward Islands.
Dominican Republic:				
Puerto Plata	Sept. 12–25	6		
San Pedro de Macoris	May 21–June 24	167	2	City and country. Corrected report.
Do	June 25–Sept. 2	260	2	City and district. Corrected report.
Santo Domingo	June 4–24	3	9	Including vicinity.
Do	June 25–July 29	2	4	July 30–Aug. 5, 1922: A few cases city and vicinity.
Ecuador	July 16–Aug. 31	3		
Egypt:				
Alexandria	July 23–Aug. 12	2	2	
Cairo	Apr. 30–June 24	13	5	
Port Said	May 7–June 24	3	1	
Finland	June 1–30	2		
Do	July 1–15	1		
Fiume	June 13–19	1		
Do	July 10–16	1		
France:				
Paris	June 1–10	1	1	
Great Britain:				
Halifax				Outbreak reported under date of June 17, 1922.
Huddersfield				Do.
Liverpool	Aug. 13–19	1		In port hospital.
London	July 30–Aug. 19	5	1	
Sheffield	May 28–June 17	5		
Southampton	June 18–24	2		
Greece:				
Saloniki	May 1–June 25	3	1	
Do	July 17–23		1	
Syra Island	May 26	12	5	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Haiti:				
Cape Haitien	June 11–17	1		
Plaine du Nord	do			Vicinity of Cape Haitien. Present.
India				Feb. 26–Mar. 25, 1922: Deaths, 1,162 (date of report corrected). Mar. 26–May 20, 1922: Deaths, 6,015. June 4–24: Cases, 2,813; deaths, 919. June 25–Aug. 5, 1922: Cases, 5,303, deaths, 1,490.
Bombay	Apr. 23–June 24	38	17	
Do	July 2–15	4	2	
Calcutta	Apr. 23–June 24	84	67	
Do	June 25–Sept. 2	27	19	
Karachi	May 23–June 24	35	9	
Do	July 16–Aug. 26	15	4	
Madras	May 14–June 24	207	94	June 19–25: Cases, 30; deaths, 15.
Do	July 2–Aug. 26	377	174	
Rangoon	May 7–June 24	37	16	
Do	July 2–Aug. 26	32	15	
Indo-China:				
Saigon	June 30–Aug. 19	36	26	Including area of 100 square km.
Japan:				
Kobe	June 19–25	2		
Taiwan Island	June 11–30	26	3	
Do	July 22–Aug. 10	27	4	
Yokohama	May 29–June 25	4	2	
Do	June 26–July 20	48	8	
Java:				
West Java—				
Batavia	Apr. 28–June 30	20	3	City and Province.
Do	July 9–Aug. 25	33	6	Province.
Luxemburg	June 15–30	1	1	
Malta	May 1–June 15	4		June 1–30, 1922: Cases, 2.
Mesopotamia:				
Bagdad	Apr. 1–June 30	36	40	
Do	July 1–31	38		
Mexico:				
Chihuahua	June 22–Sept. 17		2	
Guadalajara	May 1–June 30	13		
Do	July 1–31	4	1	
Manzanillo	June 6–25		4	Estimated cases, 4 to 10.
Do	June 27–July 3	6	1	Estimated.
Mexico City	May 21–June 24	129		Including municipalities in Federal district. Report June 11–17, not received.
Do	June 25–Sept. 2	189		Including municipalities in Federal district.
Nogales	July 22–Aug. 5	26	3	State of Sonora.
San Luis Potosi	July 23–Sept. 9		11	
Torreon	July 1–31		1	
Panama				July 1–31, 1922: Cases, 4; of which 1 in nonresident and not locally reported.
Colon	July 1–31	2		
Panama	do	1		
Persia:				
Teheran	Apr. 23–May 22	2		
Peru				May 1–15, 1922: Cases, 5; deaths, 4. June 1–30, 1922: Cases, 16; deaths, 7; Aug. 1–31, 1922: Cases, 23; deaths, 5.
Callao				Jan. 1–June 30, 1922: Deaths, 1.
Lima				Jan. 1–June 30, 1922: Deaths, 23.
Poland				Mar. 26–June 24, 1922: Cases, 1,210; deaths, 241.
Do				June 25–Aug. 5, 1922: Cases, 191; deaths, 40.
Portugal:				
Lisbon	May 29–June 25	6	8	Corrected report.
Do	June 26–Sept. 9	123	60	
Oporto	Aug. 27–Sept. 2	1		July 22–Aug. 5: Cases, 19; deaths, 4.
Portuguese East Africa:				
Lourenco Marques	July 23–29	1		
Portuguese West Africa:				
Angola—				
Loanda	June 25–July 1		1	
Russia:				
Esthonia	May 1–June 30	6		
Do	July 1–31	1		
Lettonia	May 1–June 30	51		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Senegal:				
Dakar	June 1-30	4	4	
Spain:				
Barceiona	June 22-28		1	
Do	June 29-Aug. 16		2	
Bilbao	Aug. 1-31		4	
Corunna	June 11-17		1	
Huelva	Apr. 1-June 30		4	
Seville	June 11-17		36	Week ended June 11: Many cases.
Do	June 18-Sept. 10		115	
Valencia	May 21-27	1		
Straits Settlements:				
Singapore	Apr. 30-June 5	11	2	
Do	July 30-Aug. 19	3	1	
Switzerland:				
Basel	May 28-June 3	1		
Berne	May 14-20	1		
Do	July 9-Sept. 9	18		
Lucerne	July 1-31	1		
Zurich	Apr. 23-June 12	9		
Do	June 25-Sept. 9	55		
Syria:				
Aleppo	June 4-24			Present.
Damascus	June 18-24		2	
Do	June 25-Aug. 26	14	2	
Tunis:				
Tunis	July 17-23	1		
Turkey:				
Constantinople	May 21-June 24	21	6	
Do	June 25-Sept. 9	26	7	
Union of South Africa				Apr. 1-June 30, 1922: Cases, 173; deaths, 12 (colored); white, cases, 36. July 1-31, 1922: Colored—Cases, 171; deaths, 3. White—6 cases.
Cape Province				Apr. 1-June 30, 1922: Cases, 87; deaths, 3 (colored); white, 6 cases. July 1-31, 1922: Cases, 59; deaths, 2 (colored).
Natal				Apr. 1-May 31, 1922: Cases, 20; deaths, 8 (colored); white, 20 cases. July 1-31, 1922: Cases, 5 (colored).
Orange Free State				May 1-31, 1922: Cases, 12; deaths, 1 (colored). July 1-31, 1922: 1 case (colored).
Southern Rhodesia	May 11-June 28	67	4	In natives, 3 cases.
Do	June 29-Aug. 23	35		
Transvaal				Apr. 1-June 30, 1922: Cases, 54 (colored); white, 10 cases. July 1-31, 1922: Colored—cases, 106; deaths, 1. White, 6 cases.
Johannesburg	May 1-31	1		
Virgin Islands:				
St. Thomas	June 5-18	1	1	At quarantine. From vessel from Dominican Republic.
Yugoslavia				Sept. 4-24, 1921: Cases, 11; deaths, 4.
Croatia-Slavonia—				
Zagreb	June 4-10	1		
Do	Aug. 6-12	1		
Serbia				Oct. 23-29, 1921: Cases, 5.
Belgrade	June 11-17	1		
On vessels:				
S. S. Changsha	May 11	1		At Hongkong, China. Case landed from vessel; patient, intending passenger. Vessel proceeded to Australian ports.
S. S. Comeric	do	1		At sea, en route to Durban, S. A., from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555.)
Schr. Fancy Me	May 28			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. One case removed to quarantine June 5; died June 18.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels—Continued.				
S. S. Montoro	July 8	1		At Darwin, Australia. Vessel left Singapore June 28 for Darwin via Java ports; Case, Chinese, developed July 4. Case landed at quarantine; vessel proceeded in quarantine to Sydney, via northern ports.
S. S. Shelley	Apr. 19	1		At sea, en route from Hongkong. Vessel left Hongkong Apr. 17. Arrived Thursday Island quarantine, Australia, Apr. 28, 1922. Case, member of crew; type, confluent hemorrhagic.
S. S. St. Albans	May 18	1		At Thursday Island quarantine, Australia. Case in person of Chinese steerage passenger. Vessel left Shimonoseki, Japan, for Melbourne via Hongkong and Manila. Left Thursday Island for Australian ports.

TYPHUS FEVER.

Algeria:				
Algiers	May 1-31	16	4	
Do	Aug. 1-31	2	1	
Oran	June 1-30	3	1	
Do	July 1-Aug. 10		3	
Asia Minor:				
Smyrna	May 14-June 24	8		City and district. Corrected report.
Do	June 25-Aug. 19	11		District.
Austria:				
Vienna	May 7-June 10	3	1	
Do	July 2-15	2	1	
Australia:				
Brisbane	July 9-Aug. 12	2		
Bolivia:				
La Paz	Mar. 1-Apr. 30	15	8	
Bulgaria:				
Sofia	May 28-June 17	4		
Chile:				
Concepcion	Apr. 11-May 29		10	
Do	June 27-Sept. 4		7	
Valparaiso	Apr. 2-22		6	
Do	July 18-24		1	
China:				
Antung	May 15-21	1		
Do	July 10-Aug. 20	8		
Foochow	May 14-20	1		
Do	Aug. 6-12	4		
Hankow	July 9-15	1	1	
Manchuria—				
Harbin	May 8-June 11	4		
Do	June 26-Sept. 3	6		
Czechoslovakia:				
Prague	June 11-17	1		
Do	July 1-Aug. 26	2	1	
Danzig (Free City)	June 4-10	1		
Egypt:				
Alexandria	June 4-24	9	6	
Do	June 25-Sept. 9	25	13	July 22-29, 1922: 1 imported paratyphoid.
Cairo	Mar. 19-July 1	97	67	Relapsing fever, Mar. 26-Apr. 8, 1922: 1 case.
Do	July 2-8	8	4	
Port Said	May 28-June 3	1		
Do	July 2-Sept. 2	3	3	
Germany				May 1-6, 1922: Five cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Berlin	Apr. 30-June 24		7	
Do	June 25-Aug. 19		15	
Coblenz	July 2-Sept. 16	16		
Königsberg	May 28-June 3	1		
Do	Sept. 3-9	1		
Stuttgart	July 22-Aug. 26	2	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece:				
Pirseus	Aug. 1–31	1		
Saloniki	May 1–June 18	25	1	2 in Russian refugees.
Indo-China:				
Saigon	Aug. 6–19	1		
Java:				
East Java—				
Soerabaya	July 23–Aug. 5	4	2	
Mesopotamia:				
Bagdad	Apr. 1–June 30	7	2	
Mexico:				
Mexico City	Apr. 23–June 24	111		Including municipalities in Federal District.
Do	June 25–Sept. 2	162		Do.
San Luis Potosi	Sept. 10–23			Present.
Netherlands:				
Amsterdam	July 30–Aug. 5	1		
Norway:				
Christiania	Aug. 15	1	1	
Province—				
Finmarken	July 26–Aug. 5	12	2	Occurring in 3 localities.
Palestine:				
Jerusalem	June 27–Sept. 4	3		
Persia:				
Teheran	Mar 22–June 22		8	
Poland				Mar. 26–Apr. 22, 1922: Cases, 5,695; deaths, 349. Apr. 23–June 24, 1922: Cases, 9,402; deaths, 631. Recurrent typhus—Mar. 26–Apr. 22, 1922: Cases, 4,515; deaths, 155. Apr. 23–May 6, 1922: Cases, 1,598; deaths, 34. (Corrected report.) May 7–June 24, 1922: Cases, 4,790; deaths, 111.
Do				June 25–Aug. 5, 1922: Cases, 2,040; deaths, 149. Recurrent typhus—June 25–Aug. 5, 1922: Cases, 2,585; deaths, 84.
Warsaw	Apr. 23–June 24	156		Among transient and permanent residents.
Portugal:				
Oporto	May 4–June 24	9	4	
Do	June 29–Aug. 19	2	1	
Seixal	Aug. 4	1		Village opposite Lisbon.
Rumania				Apr. 1–May 31, 1922: Cases, 62.
City—				
Bucharest	May 1–31	14		
Cerenauti	do	5		
Chisinau	Apr. 1–30	21		
Cluj	May 1–31	18		
Constanza	do	1		
Galata	do	1		
Sulina	do	2		
Province—				
Bucovina	Jan. 1–31	35	13	
Chisinau	Apr. 1–30	14		Recurrent typhus: Cases, 7.
Transylvania	Jan. 1–31	16	3	
Russia:				
Esthonia	Apr. 1–June 30	44		
Do	July 1–31	7		
Lettonia	Apr. 1–June 30	635		Recurrent typhus: Cases, 40.
Siberia:				
Vladivostok	July 1–31	3		
Spain:				
Barcelona	July 13–19		1	
Madrid	May 1–June 30		16	
Do	July 1–31		6	
Seville	May 21–June 3		1	
Switzerland:				
Lucerne	Aug. 1–31	2		
Syria:				
Aleppo	Aug. 27–Sept. 2			Present in interior.
Tunis:				
Tunis	June 4–10	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from July 1 to October 13, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Turkey:				
Constantinople	May 21-June 24	16		
Do	July 9-Sept. 9	24	3	
Union of South Africa				Apr. 1-June 30, 1922: Cases, 1,220; deaths, 214 (colored); white, 171 cases. July 1-31, 1922: Colored—cases, 629; deaths, 95. White—2 cases.
Cape Province				Apr. 1-June 30, 1922: Cases, 1,037; deaths, 194 (colored); white, 16 cases. July 1-31, 1922: Colored—cases, 591; deaths, 83. White—2 cases.
Natal				Apr. 1-June 30, 1922: Cases, 57; deaths, 7 (colored). July 1-31, 1922: Colored—cases, 9; deaths, 4.
Orange Free State				Apr. 1-June 30, 1922: Cases, 97; deaths, 10 (colored); white, 1 case. July 1-31, 1922: Colored—cases, 25; deaths, 8.
Transvaal				Apr. 1-June 30, 1922: Cases, 29; deaths, 2 (colored). July 1-31, 1922: Colored—4 cases.
Do	June 18-July 29			Outbreaks.
Johannesburg	May 1-June 30	7	1	
Do	July 1-31	1		
Yugoslavia				Aug. 7-13, 1921: 2 new cases.
Bosnia-Herzegovina	Aug. 7-13	1		(1921.)
Croatia-Slavonia	Sept. 4-10	1		Do.
Serbia—				
Belgrade	May 6-June 3	2		
Voivodina	Aug. 7-13	1		(1921.)
From vessels:				
S. S. Chios	July 18	1		At Kavak quarantine station, Bosporus, from Novorossysk, a Russian Black Sea port. Vessel carried refugees for Saloniki, Greece. Six bodies buried at sea, 12 cases landed at Kavak.
S. S. Smolensk	June 14	1	1	From Danzig, May 30, 1922. At embarkation detention camp, Southampton, England. (Public Health Reports, June 30, 1922, p. 1610.)

YELLOW FEVER.

Brazil:				
Bahia	July 30-Aug. 26	3	2	
Mexico:				
Tampico	July 27-29	1	1	From Panuco. Patient brought to Tampico on eighth day of illness.
Do	Aug. 30		6	Of these, 5 with origin at Panuco, State of Vera Cruz; 1 with origin at Tampico.
On vessel:				
Schr. William E. Burnham	Sept. 13		1	At sea between Paramaribo and Mobile Quarantine, Ala., where the vessel arrived Sept. 14, 1922. The vessel left Freetown, Sierra Leone, June 25, and touched at Mungo and Paramaribo.