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## DISTRIBUTION OF HEALTH SERVICES IN THE STRUCTURE OF STATE GOVERNMENT\*

### CHAPTER I. THE COMPOSITE PATTERN OF STATE HEALTH SERVICES

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The desirability of periodically taking stock of the organization, activities, policies, and resources of the agencies responsible for public health work in the various States has been recognized for over a quarter of a century. In 1914 the Council on Health and Public Instruction of the American Medical Association requested Dr. Charles V. Chapin, of Providence, Rhode Island, to make a survey of the activities, equipment, and accomplishments of the various State boards of health. Dr. Chapin's report was published by the American Medical Association in 1915.

Ten years later the Conference of State and Provincial Health Authorities of North America agreed that it was impossible to evaluate progress or trends in the field of public health without current information which might be compared with that collected at an earlier date. Consequently, that body passed a resolution requesting the International Health Division of the Rockefeller Foundation to collect and compile the data necessary to show what changes had taken place between 1915 and 1925. The results of this survey were published by the United States Public Health Service in Public Health Bulletin No. 184 entitled "Health Departments of States and Provinces of the United States and Canada." In addition to material comparative with the earlier report, this bulletin contained certain information regarding financial resources, personnel, salaries, expenditures, and activities which was not included in the report of the American Medical Association survey.

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\*From the States Relations Division. This is the first chapter of the third edition of Public Health Bulletin No. 184. Succeeding chapters will be published in subsequent issues of the PUBLIC HEALTH REPORTS.

A few years later Public Health Bulletin 184 was revised and again published by the United States Public Health Service. As before, the International Health Division of the Rockefeller Foundation assembled the data. The particular event leading up to this revision was the second White House Conference on Child Health and Protection. In preparing for the Conference, the section on Health Service and Administration asked the International Health Division to collect data from the States in regard to the organization of official health agencies. Inasmuch as information in the original Bulletin 184 was out of date, the necessary additional data were gathered for the new edition in 1930 and published in 1932.

Since 1930 there has been no source of information which comprehensively describes prevailing health organization, policies, and practices at the State level. That no decade in the history of public health work has witnessed more far-reaching changes in organization and scope of service than the period between 1930 and 1940 is a statement which has been made often enough to be labeled as platitudinous. Although those who are interested in public health progress know that there is a sound foundation for this somewhat trite observation, their knowledge is apt to be based upon vague generalities rather than upon specific facts. It is realized, of course, that the effect of the Federal Social Security Act and of the Federal Venereal Disease Control Act has been felt by all States, and in varying degrees. Federal grants-in-aid under Title V, Title VI, and Venereal Disease Control Act funds have made possible expansion of health activities long engaged in by some States and initiation of new services by others. Furthermore, during the past ten years there has been envisioned a broader scope of public responsibility for health measures than had previously prevailed. Many health departments are now participating in programs which in 1930 would have been regarded as outside the realm of public health concern.

In spite of the implications of so noticeable a change in public health practices, few concrete expressions of this change have been published, and these few have been for selected areas only. Once more recognizing the need for definite, up-to-date, Nation-wide information concerning the functions of State agencies engaged in health work, the Conference of State and Provincial Health Authorities requested that Public Health Bulletin No. 184 again be revised to describe the situation as it existed for the year 1940. This time the United States Public Health Service was elected to carry the full burden of collecting, compiling, interpreting, and publishing the data. The survey was to cover the forty-eight States, the District of Columbia, the Territories of Alaska, Hawaii, and Puerto Rico, and the Virgin Islands.

In general, the 1940 edition of Public Health Bulletin No. 184 was planned to carry much of the same sort of information as is contained in the earlier publications. However, a rather fundamental shift of emphasis has been made. The first two editions were designed to deal solely with public health administrative practices as limited to and defined by the State department of health. The present version gives consideration to the health activities of all State agencies, since, with the tremendous increase in Federal grants and the substantial augmentation of State and local budgets, the pattern of practice is no longer so simple as it was some years ago. As stated before, the concept of public responsibility in matters pertaining to community and personal health has undergone a marked transition through the passage of time. Recently, more and more attention has been given to improvement of the personal health of every citizen. Provision of facilities for the diagnosis and treatment of cancer, pneumonia, dental defects, and crippling conditions, and the introduction of programs of industrial hygiene and general medical care for the needy bear witness to the newer trend of social thought. Prevention of the development of mental disorders and an increased attack upon the venereal diseases are other features now receiving special consideration. These newer lines of activity are not substitutes for such services as control of communicable diseases, maintenance of vital statistics, regulation of water supplies and sewage disposal facilities, or sanitation of milk and other food supplies which have been recognized as bona fide public health measures throughout the years. Rather, they are a supplement to or enrichment of those earlier functions.

This expansion of public health interest is not restricted to new fields of activity within the health department, but extends to the programs of other official State agencies as well. For instance, it extends to the problems of hospitalizing the tuberculous and the mentally ill, of arranging for general medical care of the needy, of administering child health programs, or of improving milk and food sanitation, notwithstanding the fact that State agencies other than the health department are often officially responsible for these activities. Consequently, it was believed that no complete picture of health organization at the State level would be possible unless inquiries were extended to include the functions of all State agencies insofar as they touch upon health activity.

Since there was known to be considerable variation among the States in the particular agencies which would contribute to an over-all picture of this type, it was decided that the service rather than the organization should be made the basis of questioning. Thus the information collected would represent the aggregate official State effort toward solving the particular health problem under consideration. Some thirty-five separate categories of activity which are now

recognized as having public health significance were listed for investigation. They are as follows:

- Vital statistics
- Acute communicable disease control
- Tuberculosis control (prevention and treatment—including hospitalization)
- Venereal disease control
- Maternity hygiene
- Infant and preschool hygiene
- School health services
- Industrial hygiene
- Workingmen's compensation
- Sanitation of water supplies and sewage disposal facilities
- Housing control
- Plumbing control
- Smoke, fumes, and odors control
- Rodent control
- Garbage collection and disposal
- Shellfish sanitation
- Milk sanitation
- Malaria control
- Pest mosquito control
- Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public
- Food and drug control
- Mental hygiene (prevention and treatment—including hospitalization)
- Care of crippled children
- Cancer control
- Prevention and care of blindness
- Vocational rehabilitation
- Pneumonia control
- Hookworm control
- Health services for migratory labor
- General medical care of the needy
- Dental services
- Laboratory services
- Health education
- Research activities
- Licensure of professions and agencies significant to the public health

The wide range of interests encompassed by this list is, in itself, representative of the many skeins which go to make up a modern tapestry of total public effort in the interest of human health.

In order that the picture of State health services might be complete, sponsorship of each of the activities listed was followed through the entire structure of State government, regardless of where administrative responsibility had been placed. For instance, acute communicable disease control is primarily a health department function; yet in some States the department of education is the agency charged with certain regulatory aspects of the program when school children are involved. Field service for tuberculosis control is, with few exceptions, a health department responsibility. Hospitalization of

the tuberculous, on the other hand, may be charged to the department of welfare, to a special tuberculosis commission, or to a board of control, of institutions, or of affairs. Industrial hygiene programs are frequently split between the departments of health and labor, the former being responsible for surveys, studies, and recommendations for the improvement of conditions leading to occupational illnesses, and the latter being vested with complete authority for ordering corrections. Food and drug control probably represents the most extreme example of multiple-agency organization, for, when the country as a whole is considered, fifteen separate State agencies either singly or jointly participate in some phase of the States' food and drug activities.

Experimental work in one State showed plainly that because of the overlapping and interweaving of health services provided by the several State agencies, the true comprehensive pattern could not feasibly be obtained through the medium of a mailed questionnaire. It was decided, therefore, that medical officers attached to the district offices of the United States Public Health Service should, through personal interview with the directors of the various health activities, collect the desired information. By this method, individual differences in interpretation of the questions were reduced to a minimum, and description of the exact function of each agency with respect to a specific health problem was facilitated. Participants in collection of the field data are noted at the conclusion of this article.

The schedule used for field work was not designed to elicit the sum total of services *received* by the public, but rather, what the various State organizations *contribute* to those services in terms of regulatory functions, financial grants-in-aid, or direct service programs. In other words, a State agency operates in *one* or a *combination* of the following ways with respect to each of the public health activities being studied: It promulgates rules and regulations; it is a law enforcing body; it provides promotional, supervisory, and/or consultative service to local units; it distributes and/or administers financial grants-in-aid to local units; it conducts educational programs; it renders direct service through staff members of the State central and district offices. Any one or any combination of these approaches may be used by the agency participating in the various health services. Questioning was limited to activity at the State level. No inquiries were made regarding local services even though they were partially or wholly State financed. The State's function in such an arrangement would be described as financial aid to local units, and there the questioning would cease. Consequently, absence of any specific direct service in a State scheme does not necessarily mean that service of that kind is not available. It may, or may not, be provided locally.

Actual field work extended through most of the calendar year 1940. Completed schedules were then forwarded to the Washington office where the editing, tabulating, and interpreting of the material have taken place. In presenting the findings, tabulations followed by brief discussions will be used to show the exact function of each official agency with respect to the health problem under consideration. When direct service programs are operated, the more detailed variations in procedure will also be indicated. A standard method will be used to tabulate the presence or absence of services about which questions were specifically asked in collecting the field data, an assigned code number being used to designate the State agency providing each service. Special treatment in the form of explanatory footnotes will be given modified and additional services which do not fit into the standard tabulation.

The plan for publishing the information gathered differs rather decidedly from that used for the previous editions. Because so many fields of activity are covered in the current survey, relatively few persons would be interested in the bulletin as a whole; consequently, it seemed better to handle the material in a series of discrete articles designed for the special concern of various groups of readers than to incorporate the mass of information in one bulky volume. Furthermore, publication of subject matter for which there are particularly urgent requests can be released as prepared without waiting for completion of the entire job. Reprints of the whole series of articles can then be bound for limited distribution.

The present article represents the first chapter of the complete report and will give a general inclusive picture of health work at the State level, of the official agencies participating in the work, and of the particular activities with which these agencies are identified. It will also deal with approximate gross expenditures for all health activities considered and with the number and professional classification of personnel employed to carry on the aggregate services. Briefly, this first chapter will be factual rather than analytical. Succeeding chapters will feature selected activities and portray in detail the exact manner in which each agency functions with respect to the specific problem under discussion. The following order of presentation is planned:

- Acute communicable disease control
- Tuberculosis control
- Venereal disease control
- Sanitation
  - Water and sewage
  - Other

- Food and drug control
  - General
  - Hotels and restaurants
  - Milk
  - Shellfish
- Medical care
  - General
  - Mental disorders
  - Cancer
  - Crippled children
  - Pneumonia
  - Blindness
- Dental services
- Industrial hygiene and workingmen's compensation
- Maternity-child health activities
- Records and statistics
- Health education
- Laboratory service
  - Diagnostic
  - Research
- Health department organization
- Summary article

With completion of the entire series, a full description will have been given of the distribution of health services in the structure of State government.

Because the health department has major responsibility for a large proportion of State health activities, a special chapter will be devoted to the organization of that agency, with diagrams included to show in a graphic manner existing differences among the States.

#### DISPERSION OF HEALTH SERVICES AMONG MANY STATE AGENCIES

When one reviews the many interesting findings regarding the total State effort to promote and conserve human health, wide dispersion of functions among multiple State agencies is found to be the most striking. The composite pattern of health activity for the several States includes contributions of State health departments, departments of welfare, agriculture, education, labor, mining, conservation, public utilities, engineering, public safety, State institutions, and registration; of boards of control or boards of affairs; of State universities, independent hospitals, and independent laboratories; of special boards, commissions, or independent offices created especially for a particular activity; and of independent licensing boards.

In all, for the country as a whole, forty-eight separate agencies were listed as participating in one or another of the health activities included in this study. Obviously, a list of this length is too cumbersome for purposes of tabulation or discussion; therefore, some scheme had to be devised for classifying or combining the agencies according to function or type. The fact that terminology represents the primary difference

between a number of the agencies facilitated this course. Even after those having common characteristics were combined, however, there still remain seventeen distinct types of governmental units which are engaged in service having some bearing upon the health of the community. In order that the wide distribution of service might be depicted in tabular form, the several types of agencies have been assigned the following code numbers for purposes of identification:

1. Department of health
2. Department of welfare, social security, emergency relief, general assistance, etc.
3. Department of agriculture
4. Department of labor, labor and industry, labor and immigration, etc.
5. Department of education, public instruction, etc.
6. Special boards, commissions, or independent offices established specifically for the activity indicated (tuberculosis board or commission, cancer commission, workmen's compensation commission or bureau, industrial accident board, dairy and food commission, hotel commission, livestock sanitary board, water resources board, commission for the blind, crippled children's commission, mental disease commission or department, State toxicologist, State veterinarian, etc.)
7. Board of control, board of affairs, department of State institutions, etc.
8. Independent State hospital, independent State laboratory
9. Department of conservation
10. State university or college
11. Department of mines and minerals
12. Department of engineering, department of public utilities
13. State experiment station
14. Independent licensing and examining boards
15. Department of motor vehicles, department of public safety
16. Department of civil service and registration, department of registration and education
17. Other departments or offices of State government

Table 1 shows the extent of the dispersion referred to, both for designated activities and for each State or Territorial jurisdiction. From this table it is possible to identify by code number the types of all official State agencies which participate in some manner in each health activity studied. Attention is called to the use of code number 6 which represents special boards, commissions, or independent offices created especially for a particular activity. This number designates a different agency practically each time it is used within a given State. For instance, when code 6 is entered for industrial hygiene or workmen's compensation activities it refers to an industrial commission, workmen's compensation commission, or industrial accident board;



when it appears for milk sanitation it stands for a dairy commission, livestock sanitary board, or milk control board; in the field of mental hospitals it represents a special mental disease or mental hospital board, department, or commission; in tuberculosis control the agency indicated is a special tuberculosis commission; and so on, throughout the complete list of activities. In some States there are several special boards or commissions participating in a single health activity. Footnotes are used to indicate this situation.

TABLE 1.—*Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands*

| Activity  | State or Territory |          |           |                       |              |               |            |                        |
|---|--------------------|----------|-----------|-----------------------|--------------|---------------|------------|------------------------|
|   | Ala-bama           | Ari-zona | Ar-kansas | Cal-i-fornia          | Colo-rado    | Con-necti-cut | Del-a-ware | Dis-trict of Colum-bia |
| Vital statistics.....   | 1                  | 1        | 1         | 1                     | 1            | 1             | 1          | 1                      |
| Acute communicable disease control.....   | 1, 5               | 1, 8     | 1, 10     | 1                     | 1, 10        | 1, 6          | 1, 2, 5    | 1, 5, 17               |
| Tuberculosis control.....   | 1                  | 1, 8     | 1         | 1                     | 1            | 1, 6          | 1          | 1, 17                  |
| Tuberculosis hospitals.....   | 1                  | 2        | 6         | 1                     | 2            | 6, 17         | 1          | 1, 17                  |
| Venereal disease control.....   | 1                  | 1, 8     | 1, 10     | 1                     | 1, 10        | 1             | 1          | 1, 17                  |
| Maternity hygiene.....  | 1, 2, 14           | 1        | 1, 10     | 1, 14                 | 1, 10, 14    | 1             | 1          | 1, 16, 17              |
| Infant and preschool hygiene.....   | 1, 2               | 1        | 1         | 1, 2                  | 1            | 1, 2          | 1          | 1, 17                  |
| School health services.....   | 1, 5               | 1, 5     | 1, 5      | 1, 5                  | 1            | 1, 5          | 1, 5       | 1, 5, 17               |
| Industrial hygiene.....   | 1, 4               | 6, 11    | -----     | 1, 4                  | 1, 6, 10, 11 | 1, 4          | 1, 4, 6    | -----                  |
| Workingmen's compensation.....  | 4                  | 6        | -----     | 4                     | 6            | 4             | 6          | 6                      |
| Sanitation of water supplies.....   | 1, 5               | 1, 8     | 1         | 1, 4                  | 1, 6         | 1             | 1          | 1, 12, 17              |
| Sanitation of sewage disposal facilities.....   | 1                  | 1        | 1         | 1, 4                  | 1, 6         | 1, 6          | 1          | 1, 12, 17              |
| Housing control.....  | 17                 | -----    | 17        | 4                     | -----        | -----         | -----      | 1, 6, 17               |
| Plumbing control.....   | -----              | -----    | -----     | -----                 | 1            | -----         | 1          | 1, 12, 17              |
| Smoke, fumes, and odors control.....  | -----              | -----    | -----     | 1                     | 1, 6         | -----         | -----      | 12, 17                 |
| Rodent control.....   | 1                  | -----    | -----     | 1, 3                  | -----        | -----         | -----      | -----                  |
| Garbage collection and disposal.....  | 1                  | -----    | -----     | 1                     | 1            | 1             | 1          | 1, 12, 17              |
| Shellfish sanitation.....   | 1                  | -----    | -----     | -----                 | -----        | -----         | -----      | 1, 17                  |
| Milk sanitation.....  | 1, 3, 4, 6         | 6        | 1, 6      | 3                     | 1, 3, 6      | 1, 6          | 1          | 1, 17                  |
| Malaria control.....  | 1                  | -----    | 1         | 1                     | -----        | -----         | -----      | 12, 17                 |
| Pest mosquito control.....  | 1                  | -----    | 1         | 1                     | -----        | 13            | 17         | 12, 17                 |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public..... | 1, 17              | 1        | 1, 4, 14  | 1, 2, 4               | 1, 4, 14     | 1, 14         | 1          | 1, 12, 17              |
| Food and drug control.....  | 1, 3               | 1, 8, 14 | 1         | 1, 3, 17              | 1, 10        | 1, 4, 6, 13   | 1          | 1, 17                  |
| Mental hygiene (preventive).....  | 6                  | 1        | -----     | 7                     | 2, 10        | 1             | 8          | -----                  |
| Mental hospitals.....   | 6                  | 7        | 7         | 7                     | 8, 10        | 1, 8          | 8          | 1, 6                   |
| Care of crippled children.....  | 5                  | 2        | 2         | 1                     | 1, 10        | 1, 2          | 1          | 1                      |
| Cancer control.....   | 1                  | -----    | 1, 10     | 1                     | 1, 10        | 1             | -----      | -----                  |
| Prevention and care of blindness.....   | 1, 2, 5            | 1        | 1, 2      | 1, 2                  | 1, 2, 10     | 1, 6          | 1          | 1                      |
| Vocational rehabilitation.....  | 5                  | 6        | 5         | 5                     | 6            | 5             | 5          | 6                      |
| Pneumonia control.....  | 1                  | -----    | -----     | -----                 | 1            | 1             | 1          | 1, 17                  |
| Hookworm control.....   | 1                  | -----    | 1         | -----                 | -----        | -----         | 1          | -----                  |
| Health services for migratory labor.....  | -----              | -----    | -----     | 1, 2, 4               | 1            | -----         | 4          | -----                  |
| General medical care of the needy.....  | 2                  | -----    | 2, 10     | 2, 10                 | 2, 10        | 2, 17         | -----      | 1                      |
| Dental services.....  | 1                  | -----    | 1         | 1                     | 1            | 1             | 1          | 1                      |
| Laboratory services.....  | 1, 3, 6            | 8        | -----     | 1                     | 1, 10        | 1, 6          | 1          | 1                      |
| Health education.....   | 1, 4, 5            | 1, 5     | 1, 5      | 1, 5                  | 1            | 1             | 1, 5       | 1, 5, 12               |
| Research activities.....  | 1                  | 1        | -----     | 1                     | 1            | 1             | -----      | 1                      |
| Licensure of professions and agencies significant to public health.....                               | 14                 | 6, 14    | 14        | { 1, 2, 3, 4, 7, 16 } | 1, 3, 14     | 1, 14         | 1, 14      | 1, 14, 16              |

See footnotes at end of table.

TABLE 1.—*Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

| Activity   | State or Territory |                 |          |                      |                |                   |             |          |
|--|--------------------|-----------------|----------|----------------------|----------------|-------------------|-------------|----------|
|  | Florida            | Georgia         | Idaho *  | Illinois             | Indiana        | Iowa <sup>b</sup> | Kansas      | Kentucky |
| Vital statistics   | 1                  | 1               | 1        | 1                    | 1              | 1                 | 1           | 1        |
| Acute communicable disease control   | 1, 3, 5            | 1               | 1, 2     | 1                    | 1, 2, 5, 10    | 1, 10             | 1           | 1        |
| Tuberculosis control   | 1, 2, 5, 6         | 1               | 1        | 1                    | 1, 5, 10       | 1, 10             | 1           | 1        |
| Tuberculosis hospitals   | 6                  | 1               | 1        | 1                    | 2              | 7                 | 2           | 1, 17    |
| Veneral disease control  | 1, 5, 6            | 1               | 1        | 1                    | 1, 5, 10       | 1                 | 1           | 1        |
| Maternity hygiene  | 1                  | 1               | 1, 2     | 1, 16                | 1, 2, 10       | 1, 2, 10          | 1, 2, 10    | 1        |
| Infant and preschool hygiene   | 1                  | 1, 2            | 1        | 1, 2                 | 1, 2           | 1, 2              | 1, 2, 10    | 1        |
| School health services   | 1, 5               | 1, 5            | 1, 5     | 1                    | 1, 5           | 1, 5, 15          | 1, 5        | 1, 5     |
| Industrial hygiene   | 1                  | 4, 6            | 1, 6, 11 | 1, 4, 11             | 1, 4, 11       | 1, 4, 11          | 1, 4        | 1, 4     |
| Workmen's compensation   | 6                  | 6               | 6        | 4                    | 4              | 6                 | 4, 6        | 6        |
| Sanitation of water supplies   | 1                  | 1               | 1        | 1, 11                | 1              | 1                 | 1, 10       | 1        |
| Sanitation of sewage disposal facilities   | 1                  | 1               | 1        | 1, 6                 | 1              | 1                 | 1           | 1        |
| Housing control  | 1, 14              |                 |          | 6, 17                | 1, 6, 17       | 1                 |             | 1        |
| Plumbing control   | 1, 14              |                 |          |                      | 1              | 1                 |             | 1        |
| Smoke, fumes, and odors control  |                    |                 |          | 1                    |                |                   |             |          |
| Rodent control   |                    | 1               |          |                      |                |                   | 1           | 1        |
| Garbage collection and disposal  | 1                  | 1               |          | 1                    | 1              | 1                 |             | 1        |
| Shellfish sanitation   | 1, 9               | (*)             |          |                      |                |                   |             |          |
| Milk sanitation  | 1, 3, 4, 6         | 1, 3, 6         | 1, 3     | 1, 3                 | 1, 4, 6        | 1, 3              | 1, 3, 6, 10 | 1, 6     |
| Malaria control  | 1                  | 1               | 1        | 1                    | 1              | 1, 6              |             | 1        |
| Pest mosquito control  | 1                  |                 |          | 1                    | <sup>b</sup> 1 |                   | 1           |          |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public | 1, 6, 414          | 1, 3            | 1        | 1, 3, 16             | 1              | 1, 3              | 1, 6        | 1        |
| Food and drug control  | 1, 3, 6            | 3               | 1, 3     | 3, 16                | 1              | 3, 14             | 1, 6, 10    | 1        |
| Mental hygiene (preventive)  |                    | 2, 6            |          | 2, 10                | 2              | 2, 6, 7           | 2           | 1        |
| Mental hospitals   | 7                  | 2, 6            | 2        | 2                    | 2              | 7                 | 2           | 2        |
| Care of crippled children  | 5, 6               | 1, 2, 5         | 1        | {2, 6, 10, 16}       | 2, 5, 10       | 10, 15            | 6           | 6        |
| Cancer control   |                    | 1               | 1        | 1, 2, 10             | 1              | 1, 10             | 1, 10       |          |
| Prevention and care of blindness   | 1, 5               | 1, 5            | 1        | {1, 2, 10, 17}       | 1, 2           | 1, 2, 5, 6        | 1, 2, 10    | 1, 5     |
| Vocational rehabilitation  | 5                  | 5               | 1, 6     | 16                   | 1, 5           | 6                 | 1           | 5        |
| Pneumonia control  |                    | 1               | 1        | 1                    | 1              | 1, 10             | 1           |          |
| Hookworm control   | 1                  | 1               |          |                      |                |                   |             | 1        |
| Health services for migratory labor  | 1                  |                 |          |                      |                |                   |             |          |
| General medical care of the needy  |                    |                 |          | <sup>a</sup> 2, 10   | 2, 5, 10       | 2, 10             | 2, 10       |          |
| Dental services  | 1                  | 1               |          | 1                    | 1, 10          | 1, 10             | 1           | 1        |
| Laboratory services  | 1, 3               | 1, 3            | 1        | 1, 3, 4              | 1              | 1, 3, 10          | 1, 4, 10    | 1        |
| Health education   | 1, 3, 5, 4, 6      | {1, 2, 3, 4, 5} | 1        | {1, 2, 3, 4, 10, 16} | 1, 2, 5, 10    | 1, 4, 5, 10       | 1, 2, 5     | 1, 5     |
| Research activities  | 1, 7               | 1, 3            |          | 1, 2, 4, 10          | 1, 10          | 1, 10             | 1, 10       |          |
| Licensure of professions and agencies significant to public health                               | 1, 4, 6, 14        | 1, 2, 6, 17     | 2, 16    | 1, 2, 16             | 2, 14          | 1, 2, 3, 14       | 2, 3, 6, 14 | 1, 14    |

See footnotes at end of table.

TABLE 1.—Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

| Activity  | State or Territory |          |                  |                        |                |              |             |             |
|---|--------------------|----------|------------------|------------------------|----------------|--------------|-------------|-------------|
|   | Louisiana          | Maine    | Maryland         | Massachusetts          | Michigan       | Minnesota    | Mississippi | Missouri    |
| Vital statistics.....   | 1                  | 1        | 1                | 17                     | 1              | 1            | 1           | 1           |
| Acute communicable disease control.....   | 1, 5, 8            | 1        | 1, 5             | 1, 3                   | 1              | 1            | 1           | 1           |
| Tuberculosis control.....   | 1, 2, 8            | 1, 7     | 1, 6             | 1                      | 1, 6           | 1, 2         | 1           | 1, 7        |
| Tuberculosis hospitals.....   | 6, 8               | 7        | 6, 17            | 1, 2                   | 6              | 2            | 1           | 7           |
| Venereal disease control.....   | 1, 4, 8            | 1        | 1                | 1                      | 1              | 1            | 1           | 1           |
| Maternity hygiene.....  | 1, 14              | 1        | 1, 10            | 1, 2                   | 1, 2           | 1, 2, 10, 14 | 1           | 1, 2        |
| Infant and preschool hygiene.....   | 1                  | 1, 2     | 1                | 1, 2                   | 1, 2           | 1, 2, 10     | 1           | 1, 2        |
| School health services.....   | 1, 5               | 1, 5     | 1, 5             | 1, 5                   | 1, 5           | 1, 5         | 1, 5        | 1, 5        |
| Industrial hygiene.....   | 4                  | —        | 1, 4, 6          | 4, 6                   | 1, 4           | 1, 4         | 1           | 1, 4, 6, 11 |
| Workingmen's compensation.....  | —                  | 4, 6     | 6                | 4, 6                   | 4              | 6            | —           | 6           |
| Sanitation of water supplies.....   | 1                  | 1, 12    | 1                | 1, 4                   | 1, 5           | 1, 6         | 1           | 1           |
| Sanitation of sewage disposal facilities.....   | 1                  | 1, 12    | 1                | 1                      | 1, 5           | 1, 6         | 1           | 1           |
| Housing control.....  | 17                 | —        | —                | 6, 15                  | 1, 17          | —            | —           | —           |
| Plumbing control.....   | 1                  | 1        | 1                | 1, 14                  | 14             | 1            | —           | 1           |
| Smoke, fumes, and odors control.....  | —                  | 1        | —                | 1, 15                  | —              | —            | —           | —           |
| Rodent control.....   | 1                  | —        | —                | —                      | —              | 6            | 6           | —           |
| Garbage collection and disposal.....  | 1                  | —        | 1                | 1                      | 1              | 1            | 1           | —           |
| Shellfish sanitation.....   | 1                  | 3, 13    | 1, 9             | 1, 9                   | —              | —            | 1           | —           |
| Milk sanitation.....  | 1, 4, 6            | 3, 6, 13 | 1, 3             | 1, 3                   | 1, 3, 10       | 1, 3, 6, 10  | 1, 6        | 1, 3        |
| Malaria control.....  | 1                  | —        | —                | —                      | —              | 1, 10        | 1           | 1           |
| Pest mosquito control.....  | 1                  | 1        | 3, 10            | 1, 3                   | —              | 1, 10        | 1           | —           |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public..... | 1, 14              | 1, 3, 14 | 1                | { 1, 4, 14, 15 }       | 1, 2, 3, 4, 14 | 1, 3, 4, 14  | 1           | 1           |
| Food and drug control.....  | 1                  | 1, 3     | 1                | 1, 14                  | 1, 3, 14       | 1, 3, 14     | 1, 3        | 1           |
| Mental hygiene (preventive).....  | 4, 8               | —        | 1, 6             | 6                      | 6              | 2, 5, 10     | —           | —           |
| Mental hospitals.....   | 8                  | 7        | 6, 17            | 6                      | 6              | 2, 10        | 7           | 7           |
| Care of crippled children.....  | 1                  | 1, 2     | 1                | 1, 2, 5                | 6              | 2, 10        | 5           | 10          |
| Cancer control.....   | 1, 4, 8            | —        | 1                | 1                      | 1              | 1, 10        | 1, 6        | 6           |
| Prevention and care of blindness.....   | 1, 6, 8            | 1        | 1                | 1, 2, 5                | 1, 2           | 1, 2, 10     | 1, 2        | 1           |
| Vocational rehabilitation.....  | 5                  | 5        | 5                | 5                      | 6              | 5            | 5           | 5           |
| Pneumonia control.....  | 1                  | 1        | 1                | 1                      | 1              | 1            | 1           | 1           |
| Hookworm control.....   | —                  | —        | —                | —                      | —              | —            | 1           | —           |
| Health services for migratory labor.....  | —                  | —        | —                | —                      | 1, 4           | 1, 2         | —           | —           |
| General medical care of the needy.....  | 1, 8, 17           | 2        | { 2, 8, 10, 17 } | 1, 2                   | 2, 10          | 2, 10        | 7, 6        | —           |
| Dental services.....  | 2                  | 2        | 1                | 1                      | 1              | 1, 2         | 1           | 1           |
| Laboratory services.....  | 1                  | 1        | 1                | 1, 4                   | 1, 3           | 1, 3         | 1, 3        | 1           |
| Health education.....   | 1, 5               | 1, 5     | 1, 4, 5, 6       | 1, 4, 5, 16            | 1, 5, 10       | 1, 4, 5, 10  | 1, 5        | 1           |
| Research activities.....  | 1, 14              | —        | 1                | 1                      | 1, 10          | 1, 10        | 1           | 1           |
| Licensure of professions and agencies significant to public health.....                               | 14                 | 1, 2, 14 | 14               | { 1, 2, 3, 6, 15, 16 } | 1, 2, 3, 14    | 1, 2, 14     | 1, 14       | 1, 2, 14    |

See footnotes at end of table.

TABLE 1.—Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

| Activity  | State or Territory |            |              |               |            |            |               |                |
|---|--------------------|------------|--------------|---------------|------------|------------|---------------|----------------|
|   | Montana            | Nebraska   | Nevada       | New Hampshire | New Jersey | New Mexico | New York      | North Carolina |
| Vital statistics.....   | 1                  | 1          | 1            | 1             | 1          | 1          | 1             | 1              |
| Acute communicable disease control.....   | 1, 6               | 1          | 1            | 1             | 1          | 1          | 1, 5          | 1              |
| Tuberculosis control.....   | 1                  | 1, 7       | 1            | 1             | 1, 7       | 1          | 1             | 1, 6           |
| Tuberculosis hospitals.....   | 7                  | 7          | -----        | 2, 6          | 7          | 2          | 1             | 6              |
| Venereal disease control.....   | 1                  | 1          | 1            | 1             | 1          | 1          | 1             | 1              |
| Maternity hygiene.....  | 1                  | 1, 7       | 1            | 1             | 1, 14      | 1, 2       | 1             | 1, 2           |
| Infant and preschool hygiene.....   | 1                  | 1          | 1            | 1, 2          | 1          | 1, 2       | 1, 2          | 1, 2           |
| School health services.....   | 1                  | 1          | 1, 5         | 1, 5          | 1, 5       | 1, 5       | 1, 5          | 1, 5           |
| Industrial hygiene.....   | 1, 6               | 4, 6       | 6, 10, 11    | 1, 4          | 4          | 1, 4, 11   | 4             | 1, 4, 6        |
| Workingmen's compensation.....  | 6                  | 6          | 6            | 4             | 4          | 4          | 4             | 6              |
| Sanitation of water supplies.....   | 1                  | 1          | 1, 10        | 1, 5          | 1, 4       | 1          | 1, 4, 5       | 1              |
| Sanitation of sewage disposal facilities.....   | 1                  | 1          | 1            | 1, 4, 5       | 1, 6       | 1, 4, 6    | 1, 5          | 1              |
| Housing control.....  | -----              | -----      | 1            | -----         | 4, 6       | -----      | 6             | -----          |
| Plumbing control.....   | -----              | -----      | 1            | 1             | -----      | -----      | 1             | -----          |
| Smoke, fumes, and odors control.....  | -----              | -----      | 1            | 1             | -----      | -----      | -----         | -----          |
| Rodent control.....   | -----              | -----      | 1            | -----         | -----      | 1          | -----         | 1              |
| Garbage collection and disposal.....  | 1                  | -----      | 1            | 1             | -----      | 1          | 1             | -----          |
| Shellfish sanitation.....   | -----              | -----      | -----        | 1             | 1          | -----      | 1, 9          | 1, 9           |
| Milk sanitation.....  | 4, 6               | 3          | 1, 3         | 1, 3, 6       | 1, 3, 6    | 1, 6       | 1, 3          | 1, 3           |
| Malaria control.....  | -----              | -----      | -----        | -----         | 1, 13      | 1          | -----         | 1              |
| Pest mosquito control.....  | -----              | -----      | 1            | -----         | 13         | -----      | -----         | -----          |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public..... | 1, 4, 14           | 1, 3       | 1, 10, 4, 14 | 1, 4, 14      | 1, 4, 14   | 1          | 1             | 1              |
| Food and drug control.....  | 1, 3, 6            | 3          | 1, 10        | 1, 14         | 1, 4, 14   | 1          | 1, 3, 5       | 1, 3           |
| Mental hygiene (preventive).....  | -----              | -----      | -----        | 8             | 1, 7       | -----      | 6             | 2              |
| Mental hospitals.....   | 6, 7               | 7          | 7            | 4, 8          | 7          | 4, 8       | 6             | 8              |
| Care of crippled children.....  | 2                  | 7          | 1, 10        | 1, 5          | 6          | 2          | 1, 5          | 1, 8           |
| Cancer control.....   | 1                  | -----      | -----        | 6             | 1          | -----      | 1, 2          | -----          |
| Prevention and care of blindness.....   | 1, 2               | 1, 7       | 1            | 1, 2          | 1, 7       | 1, 2       | 1, 2, 5       | 1, 6           |
| Vocational rehabilitation.....  | 5                  | 6          | 6            | 5             | 4          | 6          | 1, 5          | 6              |
| Pneumonia control.....  | 1                  | -----      | -----        | 1             | 1          | 1          | 1             | -----          |
| Hookworm control.....   | -----              | -----      | -----        | -----         | -----      | -----      | -----         | 1              |
| Health services for migratory labor.....  | -----              | -----      | -----        | 1, 4          | 1          | -----      | 1             | -----          |
| General medical care of the needy.....  | 2                  | -----      | -----        | 2             | 2          | 2          | 2             | -----          |
| Dental services.....  | 1                  | 1          | 1            | 5             | 1, 2, 7    | -----      | 1, 2          | 1              |
| Laboratory services.....  | 1, 6               | 1, 3       | 1            | 1, 6          | 1          | 1          | 1, 3, 4, 15   | 1, 3           |
| Health education.....   | 1, 2, 3, 6         | 1, 3       | 1            | 1, 5          | 1, 5       | 1          | 1, 3, 4, 5    | 1, 5           |
| Research activities.....  | 1, 6               | -----      | -----        | -----         | 1          | -----      | 1, 4          | 1              |
| Licensure of professions and agencies significant to public health.....                               | 1, 6, 14           | 1, 3, 5, 7 | 14           | 2, 3, 6, 14   | 1, 14      | 1, 14      | 1, 2, 3, 5, 6 | 2, 14          |

See footnotes at end of table.

TABLE 1.—*Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

| Activity  | State or Territory |                |          |          |              |              |                |              |
|---|--------------------|----------------|----------|----------|--------------|--------------|----------------|--------------|
|   | North Dakota       | Ohio           | Oklahoma | Oregon   | Pennsylvania | Rhode Island | South Carolina | South Dakota |
| Vital statistics.....   | 1                  | 1              | 1        | 1        | 1            | 1            | 1              | 1            |
| Acute communicable disease control.....   | 1                  | 1, 10          | 1        | 1        | 1            | 1, 2, 5      | 1              | 1            |
| Tuberculosis control.....   | 1, 6               | 1, 2           | 1        | 1, 7     | 1            | 1            | 1              | 1, 10        |
| Tuberculosis hospitals.....   | 7                  | 2              | 7        | 7, 10    | 1            | 1, 17        | 1              | 7            |
| Venereal disease control.....   | 1                  | 1, 10          | 1        | 1        | 1            | 1            | 1              | 1            |
| Maternity hygiene.....  | 1, 2               | 1, 10, 14      | 1, 10    | 1        | 1, 2, 5      | 1, 2, 17     | 1              | 1            |
| Infant and preschool hygiene.....   | 1, 2               | 1, 2           | 1        | 1        | 1, 2         | 1, 2         | 1              | 1, 2         |
| School health services.....   | 1, 5               | 1, 4, 5        | 1, 5     | 1, 5     | 1, 5         | 1, 5         | 1              | 1, 5         |
| Industrial hygiene.....   | 6, 11              | 1, 4, 6        | 1, 4, 11 | 4, 6     | 1, 4, 11     | 1, 4         | 1, 4, 6        | 6            |
| Workingmen's compensation.....  | 6                  | 6              | 6        | 6        | 4            | 1, 4         | 6              | 6            |
| Sanitation of water supplies.....   | 1                  | 1              | 1, 5     | 1        | 1            | 1, 4         | 1              | 1            |
| Sanitation of sewage disposal facilities.....   | 1                  | 1              | 1, 6     | 1, 6     | 1, 6         | 1            | 1              | 1, 6         |
| Housing control.....  |                    | 4, 6, 17       | 17       |          |              | (*)          |                |              |
| Plumbing control.....   | b 1                | 1              | b 1      | 1        |              |              |                |              |
| Smoke, fumes, and odors control.....  | b 1                |                |          |          | 1            |              |                |              |
| Rodent control.....   |                    |                |          | b 1      |              |              | 1              |              |
| Garbage collection and disposal.....  | b 1                | 1              | 1        | 1        | 1            |              |                | 1            |
| Shellfish sanitation.....   |                    |                |          | 1        | 1            | 1            | 1              |              |
| Milk sanitation.....  | 1, 3, 6, 8         | 1, 3           | 1, 3     | 1, 3, 6  | 1, 3, 6      | 1, 3         | 1, 3, 10       | 1, 3, 6      |
| Malaria control.....  |                    | 1              | 1        | 1        |              |              | 1              |              |
| Pest mosquito control.....  | b 1                | b 1            |          | 1        |              | 3            | 1              |              |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public..... | 1, 8, d14          | 1, 4, d 14, 17 | 1, 14    | 1, 3, 14 | 1            | 1            | 1, 14          | 1, 3, d14    |
| Food and drug control.....  | 8                  | 3, 14, 17      | 1        | 1, 3, 14 | 1, 3         | 1            | 1, 3           | 3, 14        |
| Mental hygiene (preventive).....  |                    | 2, 5           | 7        | 7, 10    | 2            | 1, 2, 17     | 8              |              |
| Mental hospitals.....   | 7                  | 2              | 7        | 7        | 2            | 2, 17        | 8              | 7            |
| Care of crippled children.....  | 2                  | 2, 5           | 2, 6, 10 | 2        | 1            | 1, 5, 15     | 1              | 1            |
| Cancer control.....   |                    | 1, 10          |          | 1, 10    | 1            | 1, 2         | 1              |              |
| Prevention and care of blindness.....   | 1, 2               | 1, 2, 5, 6     | 1, 7, 10 | 1, 10    | 1, 2, 5      | 1, 2, 5      | 1              | 1, 2         |
| Vocational rehabilitation.....  | 6                  | 2, 5           | 5, 6     | d 6      | 5            | 5            | 5              | 5            |
| Pneumonia control.....  | 1                  | 1              | 1        |          | 1            | 1            |                |              |
| Hookworm control.....   |                    |                | 1        |          |              |              |                |              |
| Health services for migratory labor.....  |                    |                |          |          |              |              |                |              |
| General medical care of the needy.....  | 2                  | 2, 10, 15      | 7, 10    | 2        | 2            | 2            |                | = 2          |
| Dental services.....  | 1, 2               | 1, 2, 10       | 1        | (*)      | 1, 2         | 1, 2         | 1              | 1            |
| Laboratory services.....  | 1, 8               | 1, 3, 10       | 1        | 1, 3, 10 | 1, 3, 4, 14  | 1, 3         | 1              | 1, 10        |
| Health education.....   | 1, 5               | 1, 3, 4, 5, 6  | 1, 4     | 1, 3, 5  | 1, 5         | 1, 2         | 1              | 1            |
| Research activities.....  |                    | 1, 10          | 1        |          | 1            | 1            | 1              |              |
| Licensure of professions and agencies significant to public health.....                               | 2, 3, 8, 14        | 1, 2, 14       | 1, 14    | 1, 3, 14 | 1, 2, 5      | 1, 2, 3      | 14             | 1, 2, 14     |

See footnotes at end of table.

TABLE 1.—*Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

| Activity  | State or Territory |          |          |             |               |                 |                  |                |
|---|--------------------|----------|----------|-------------|---------------|-----------------|------------------|----------------|
|   | Tennes-<br>see     | Texas    | Utah     | Vermont     | Vir-<br>ginia | Wash-<br>ington | West<br>Virginia | Wiscon-<br>sin |
| Vital statistics.....   | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Acute communicable disease con-<br>trol.....  | 1, 5               | 1, 5     | 1, 5     | 1           | 1, 3, 5       | 1, 2            | 1, 2, 3          | 1, 5, 10       |
| Tuberculosis control.....   | 1, 5               | 1        | 1        | 1, 2        | 1, 5          | 1               | 1, 1, 7          | 1, 6, 10       |
| Tuberculosis hospitals.....   | 1                  | 7        | 1        | 2           | 1             | 17              | 2, 7, 17         | 1              |
| Venereal disease control.....   | 1                  | 1        | 1        | 1           | 1             | 1, 2            | 1, 2, 7          | 1, 2, 10       |
| Maternity hygiene.....  | 1                  | 1        | 1, 16    | 1           | 1, 2          | 1               | 1, 2             | 1, 2, 10, 14   |
| Infant and preschool hygiene.....   | 1                  | 1, 2     | 1        | 1, 2        | 1, 2, 5       | 1               | 1, 2             | 1, 2           |
| School health services.....   | 1, 5               | 1, 5     | 1, 5     | 1, 5        | 1, 5          | 5               | 1, 5             | 1, 5, 6        |
| Industrial hygiene.....   | 1, 4               | 1, 4     | 1, 6     | 1, 6        | 1, 4          | 1, 4            | 1, 4, 6, 11      | 1, 6           |
| Workingmen's compensation.....  | 4                  | 6        | 6        | 6           | 4, 6          | 4               | 6                | 6              |
| Sanitation of water supplies.....   | 1                  | 1        | 1        | 1           | 1, 3, 5       | 1, 2, 4, 6      | 1                | 1              |
| Sanitation of sewage disposal facili-<br>ties.....  | 1                  | 1        | 1        | 1           | 1, 3          | 1, 4, 6         | 1, 6             | 1, 6           |
| Housing control.....  | 1, 6               | 1, 6     | 14       | 1           | 1, 4          | 1               | 1                | 6              |
| Plumbing control.....   | 1                  | 1        | 14       | 1           | 1, 4          | 1, 3, 4         | 1                | 1              |
| Smoke, fumes, and odors control.....  | 1                  | 1        | 1        | 1           | 1             | 1, 3, 4         | 1                | 1              |
| Rodent control.....   | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1, 1, 3        |
| Garbage collection and disposal.....  | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Shellfish sanitation.....   | 1, 3               | 1, 6     | 3        | 1, 3        | 1, 3          | 1, 3, 6         | 1, 3             | 1, 3           |
| Milk sanitation.....  | 1                  | 1        | 1        | 1           | 1, 5          | 1               | 1                | 1              |
| Malaria control.....  | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Pest mosquito control.....  | 1, 4, 9, 14        | 1, 4, 14 | 1, 4, 14 | 1, 4, 14    | 1, 3          | 1, 2, 3         | 1                | 1              |
| Supervision of hotels, restaurants,<br>tourist camps, and other facilities<br>for the traveling public..... | 3, 9               | 1        | 3, 16    | 1           | 1, 3          | 1, 3            | 1, 3, 14         | 1, 3, 14       |
| Food and drug control.....  | 1                  | 1        | 1        | 2           | 2             | 1               | 1, 2, 7          | 2, 10          |
| Mental hygiene (preventive).....  | 7                  | 7        | 4, 8     | 2, 6        | 6             | 17              | 2, 7             | 2              |
| Mental hospitals.....   | 1                  | 5        | 1        | 1           | 1, 2, 5       | 2               | 2, 5             | 5, 10          |
| Care of crippled children.....  | 1                  | 1        | 1        | 1, 6        | 1             | 1               | 1                | 1, 10          |
| Cancer control.....   | 1, 2               | 1        | 1, 2     | 1           | 1, 5, 6       | 1, 2            | 1, 2             | 1, 5, 10       |
| Prevention and care of blindness.....   | 5                  | 5        | 5        | 1, 5        | 5, 6          | 6               | 2, 5             | 1, 6           |
| Vocational rehabilitation.....  | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Pneumonia control.....  | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Hookworm control.....   | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Health services for migratory labor.....  | 10                 | 10       | 10       | 2           | 2, 10         | 2               | 2, 6, 7          | 2, 10          |
| General medical care of the needy.....  | 1                  | 1        | 1        | 1           | 1             | (*)             | 1, 2             | 1, 2           |
| Dental services.....  | 1, 3               | 1, 15    | 1, 6     | 1, 3        | 1, 3          | 1, 6            | 1                | 1, 3, 10       |
| Laboratory services.....  | 1, 3, 5, 10        | 1        | 1        | 1, 5        | 1, 5          | 1               | 1, 2, 3, 5       | 1, 3           |
| Health education.....   | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1, 10          |
| Research activities.....  | 1                  | 1        | 1        | 1           | 1             | 1               | 1                | 1              |
| Licensure of professions and<br>agencies significant to public<br>health.....                               | 3, 14              | 1, 2, 14 | 1, 16    | 1, 2, 3, 14 | 2, 14         | 3, 16           | 1, 14            | 1, 2, 14       |

See footnotes at end of table.

TABLE 1.—Department of State government\* responsible for specific health activities in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

| Activity  | State or Territory |         |          |             |                |
|---|--------------------|---------|----------|-------------|----------------|
|   | Wyoming            | Alaska  | Hawaii   | Puerto Rico | Virgin Islands |
| Vital statistics.....   | 1                  | • 1, 17 | 1        | 1           | 1              |
| Acute communicable disease control.....   | 1                  | 1       | 1        | 1, 5, 17    | 1, 17          |
| Tuberculosis control.....   | 1                  | 1       | 1        | 1           | 1, 17          |
| Tuberculosis hospitals.....   | 7                  | 2       | 1        | 1           | 1              |
| Veneral disease control.....  | 1                  | 1       | 1        | 1           | 1              |
| Maternity hygiene.....  | 1, 14              | 1, 2    | 1        | 1           | 1              |
| Infant and preschool hygiene.....   | 1                  | 1       | 1        | 1           | 1              |
| School health services.....   | 1, 5               | 1, 5    | 1, 5     | 1, 5        | 1              |
| Industrial hygiene.....   | 4, 11              | 11      | 1        | 1, 4        | 1              |
| Workmen's compensation.....   | 6                  | (6)     | 4        | 6           | 2              |
| Sanitation of water supplies.....   | 1                  | 1       | 1        | 1           | 1              |
| Sanitation of sewage disposal facilities.....   | 1                  | 1       | 1        | 1           | 1              |
| Housing control.....  | 1                  | 1       | 1        | 1           | 17             |
| Plumbing control.....   | 1                  | 1       | 1        | 1           | 17             |
| Smoke, fumes, and odors control.....  | 1                  | 1       | 1        | 1, 12       | 1              |
| Rodent control.....   | 1                  | 1       | 1        | 1           | 1, 17          |
| Garbage collection and disposal.....  | 1                  | 1       | 1        | 1           | 1              |
| Shellfish sanitation.....   | 1                  | 1       | 1        | 1           | 1              |
| Milk sanitation.....  | 3, 4, 6            | 1       | 1        | 1           | 1              |
| Malaria control.....  | 1                  | 1       | 1        | 1           | 1              |
| Pest mosquito control.....  | 1                  | 1       | 1        | 1           | 1              |
| Supervision of hotels, restaurants, tourist camps, and other facilities for the traveling public..... | 1, 3, 14           | 1       | 1        | 1           | 1              |
| Food and drug control.....  | 3, 6               | 1       | 1        | 1           | 1              |
| Mental hygiene (preventive).....  | 1                  | 1       | 1        | 6           | 1              |
| Mental hospitals.....   | 7                  | 1       | 1, 7     | 1           | 1              |
| Care of crippled children.....  | 1                  | 1       | 1, 5     | 1           | 1              |
| Cancer control.....   | 1                  | 1       | 1        | 1           | 1              |
| Prevention and care of blindness.....   | 1, 5               | 1       | 1, 2, 5  | 1           | 1              |
| Vocational rehabilitation.....  | 5                  | 1       | 5        | 1           | 1              |
| Pneumonia control.....  | 1                  | 1       | 1        | 1           | 1              |
| Hookworm control.....   | 1                  | 1       | 1        | 1           | 1              |
| Health services for migratory labor.....  | 1                  | 2       | 1, 8     | 1           | 1              |
| General medical care of the needy.....  | 1                  | 1, 2    | 5        | 1           | 1              |
| Dental services.....  | 1, 6               | 1       | 1        | 1           | 1              |
| Laboratory services.....  | 1, 5               | 1, 5    | 1, 5     | 1           | 5              |
| Health education.....   | 1                  | 1       | 1        | 1           | 1              |
| Research activities.....  | 1                  | 1       | 1        | 1           | 1              |
| Licensure of professions and agencies significant to public health.....                               | 14                 | 1, 14   | 1, 2, 14 | 1, 14       | 1              |

## \*Code:

1. Department of health.
  2. Department of welfare, social security, emergency relief, general assistance, etc.
  3. Department of agriculture.
  4. Department of labor, labor and industry, labor and immigration, etc.
  5. Department of education, public instruction, etc.
  6. Special boards, commissions, or independent offices established specifically for the activity indicated (tuberculosis board or commission, cancer commission, workmen's compensation commission or bureau, industrial accident board, dairy and food commission, hotel commission, livestock sanitary board, water resources board, commission for the blind, crippled children's commission, mental disease commission or department, State toxicologist, State veterinarian, etc.).
  7. Board of control, board of affairs, department of State institutions, etc.
  8. Independent State hospital, independent State laboratory.
  9. Department of conservation.
  10. State university or college.
  11. Department of mines and minerals.
  12. Department of engineering, department of public utilities.
  13. State experiment station.
  14. Independent licensing and examining boards.
  15. Department of motor vehicles, department of public safety.
  16. Department of civil service and registration, department of registration and education.
  17. Other departments or offices of State government.
- The department of health is really a division (Idaho) and bureau (Maine) of public health, subordinate to the department of public welfare (Idaho) and the department of health and welfare (Maine).
- The State University of Iowa is administered by a board of education which is independent of the regular department of public instruction.
- Grant-in-aid to the Territorial auditor only.
- Two separate agencies of this classification participate in this activity.
- By the industrial accident commission, an autonomous unit within the department of industrial relations.
- Through courts only—no administrative agency.
- Temporarily no activity.
- Advisory service only.
- Regulatory authority only—no real program.
- Three separate agencies of this classification participate in this activity.
- Swimming pools only.
- Four separate agencies of this classification participate in this activity.
- Medicines only.

Realization that within a single State as many as 18 separate agencies contribute something to the health activities covered is somewhat startling. In no jurisdiction are less than 6 agencies involved, and the median number of departments, boards, and commissions concerned with programs having public health significance is 11 per State. When dispersion is viewed from the point of specific activity among all the States, the situation is quite as remarkable. Records for a few activities are cited. For the Nation as a whole, 15 different types of State organizations participate in food and drug control work; 11 are engaged in sanitation of water supplies; 11 touch upon the problem of general medical care of the needy. The latter statement, by the way, represents only about three-fourths of the areas included because 14 States make no provision for service of this type. Hospitalization of the tuberculous is the product of 9 different types of State agencies and hospitalization of mental patients, of 7. Mental hygiene, a relatively new entrant into public health awareness, is split among 9 separate organizations in the 17 States which have initiated such activities.

It should be stated at this point that the participating agencies rarely share responsibility on an equal basis for either complete or partial programs. In this first chapter no distinction is made between agencies having major responsibility and those functioning in a supplementary capacity. The more detailed analyses will be reserved for later discussions of the series which will feature separate activities. Nevertheless, a general statement regarding differences in extent of the several programs is appropriate at this time.

In magnitude, programs cover the entire range from regulatory functions only or advisory service only—and that limited to requests—to operation of complex direct service units. From the standpoint of organizational schemes, greatest variation exists among the States in their conception of the portion of responsibility to be borne by the State agency and the portion to be delegated to local jurisdictions. In one place it is the policy to limit State assistance to advice, supervision, or promotion. In another, the State agency actively engages in direct service. In still another, the first plan is followed for some activities and the second plan for others. Distribution of financial aid for approved projects is also a form of State participation now in common use. The exact function of each agency with regard to the several activities listed will be described in successive articles devoted to the respective health interests.

Expansion of old and development of new programs are the criteria selected for judging progress in organization of health activities.



Inasmuch as comparative details will be more adequately presented in later articles, it is fitting at this point merely to generalize from the data and say that for the health departments proper, the past decade has shown marked growth and improvement in organization. For the other numerous State agencies engaged in one or more phases of public health work, there is no basis for comparing the present situation with that of ten years ago. However, with few exceptions, greater emphasis is placed upon the public health aspects of any of the problems included in this survey when the health department is the controlling agency than when some other agency is primarily responsible.

#### APPROXIMATE EXPENDITURES FOR OFFICIAL STATE HEALTH SERVICES

After tracing throughout the entire structure of State government the scope of all official activities for the promotion of health, an effort was made to determine the cost of such services. That no absolutely complete and accurate figure is available or ascertainable for the aggregate health services described in the foregoing section of this report was soon apparent. Explanation of the difficulty in arriving at such a figure is simple. Those agencies which carry on health work subordinatedly to or coordinately with other activities irrelevant to this study are not apt to keep their records in a fashion which permits separating precise expenditure figures for health work from expenditures for other types of services. In the absence of exact records, estimates or approximations by the director in charge were requested. Therefore, all financial data must be regarded as representing index instead of absolute amounts. Minimum rather than maximum expenditures are indicated since sometimes, because of overlapping and interweaving of activities, it was impossible even to secure estimates. The health aspects of workingmen's compensation and vocational rehabilitation activities are excellent examples of this situation. Naturally, however, the complete list of items for which fiscal information was not available varies among the several States.

Nevertheless, in spite of the qualifications noted, it is believed that the expenditure figure finally obtained is more complete than that provided by any previous survey. According to table 2, a total of over 285 million dollars was reported as an annual expenditure by the forty-eight States, the District of Columbia, the Territories of Alaska, Hawaii, and Puerto Rico, and the Virgin Islands for the sum total of State-operated health activities under discussion. The amount expended by each jurisdiction and the resulting per capita cost may be determined from the same tabulation.

TABLE 2.—Approximate total and per capita annual expenditures\* by all official State agencies for health activities, and proportion of the total amount which was expended by agencies of each specified type

| State or Territory        | Approximate total annual expenditure <sup>a</sup> by all official State agencies for health activities | Approximate per capita annual expenditure <sup>a</sup> by all official State agencies for health activities | Percent of total** expended by each agency |                               |                       |                  |                                     |                     |                             |                           |  |
|---------------------------|--|---|--|-------------------------------|-----------------------|------------------|-------------------------------------|---------------------|-----------------------------|---------------------------|--|
|                           |  |   | Health department                          | Special boards or commissions | Department of welfare | Board of control | State hospitals, laboratories, etc. | Department of labor | State university or college | Department of agriculture | All other agencies of State government |
| Total.....                | \$285,715,800  | \$1.90  | 18.5                                       | 25.0                          | 21.3                  | 16.0             | 5.4                                 | 3.2                 | 3.2                         | 2.3                       | 5.1                                    |
| Alabama.....              | 2,668,900  | .94   | 42.9                                       | 45.2                          | (a)                   |                  |                                     | 1.1                 |                             | 2.9                       | 7.9                                    |
| Arizona.....              | 1,130,500  | 2.26  | 15.6                                       | 34.3                          | 14.0                  | 30.6             | 1.0                                 |                     |                             |                           | 4.5                                    |
| Arkansas.....             | 2,721,000  | 1.40  | 23.6                                       | 23.9                          | 8.7                   | 33.4             |                                     |                     | 8.5                         |                           | 1.9                                    |
| California.....           | 14,096,400   | 2.04  | 17.4                                       |                               |                       | 2                |                                     | 20.4                | 7.2                         | 1.6                       | 3.3                                    |
| Colorado.....             | 2,752,600  | 2.45  | 16.8                                       | .5                            | 13.1                  |                  | 42.0                                |                     | 23.1                        | .3                        | 4.2                                    |
| Connecticut.....          | 6,007,200  | 3.51  | 9.3  | 31.1                          | 1.5                   |                  | 49.3                                | 1.2                 |                             |                           | 7.6                                    |
| Delaware.....             | 1,076,100  | 4.04  | 41.7                                       | (*)                           | (*)                   |                  | 55.2                                | (*)                 |                             |                           | 3.1                                    |
| District of Columbia..... | 6,608,800  | 10.44   | 40.2                                       | 1.4                           |                       |                  |                                     |                     |                             |                           | 58.4                                   |
| Florida.....              | 3,109,900  | 1.64  | 17.7                                       | 22.0                          | (*)                   | 53.1             |                                     |                     |                             | 3.8                       | 3.4                                    |
| Georgia.....              | 2,964,200  | .95   | 38.7                                       | (*)                           | 55.4                  |                  |                                     | .8                  |                             |                           | 4.9                                    |
| Idaho.....                | 986,000  | 1.88  | 25.7                                       | b 23.3                        | 37.1                  |                  |                                     |                     |                             | 12.2                      | 1.7                                    |
| Illinois.....             | 17,678,000   | 2.94  | 8.7  | 2                             | c 80.0                |                  |                                     | 1.2                 | (d)                         |                           | 5.3                                    |
| Indiana.....              | 7,332,900  | 2.14  | 9.1  | 1.6                           | 76.4                  |                  |                                     | (*)                 | 10.2                        |                           | 2.7                                    |
| Iowa.....                 | 4,780,300  | 1.88  | 10.0                                       | b 4                           | b 4                   | 47.9             |                                     | .2                  | 34.0                        | 4.7                       | 2.4                                    |
| Kansas.....               | 3,008,400  | 1.67  | 13.5                                       | 9.7                           | 72.2                  |                  |                                     | .8                  | (*)                         | 1.0                       | 2.8                                    |
| Kentucky.....             | 2,522,500  | .89   | 40.1                                       | 8.6                           | 47.3                  |                  |                                     | (*)                 |                             |                           | 4.0                                    |
| Louisiana.....            | 5,754,200  | 2.43  | 17.9                                       | 3.5                           | (*)                   |                  | 76.2                                | 0.1                 |                             |                           | 2.3                                    |
| Maine.....                | 2,023,800  | 2.39  | 18.3                                       | 5                             | b 9.5                 | 61.7             |                                     | (*)                 |                             | 7.8                       | 2.2                                    |
| Maryland.....             | 4,102,000  | 2.25  | 18.6                                       | 48.5                          |                       |                  | .7                                  | .8                  | 15.9                        | 5.5                       | 14.9                                   |
| Massachusetts.....        | 13,781,200   | 3.19  | 27.5                                       | 52.2                          | b 12.8                |                  |                                     | 1.4                 |                             | 3.3                       | 2.8                                    |
| Michigan.....             | 12,439,100   | 2.37  | 10.5                                       | 80.4                          | b 2                   |                  |                                     | (*) b               | 6.2                         | 1.5                       | 1.2                                    |
| Minnesota.....            | 6,148,500  | 2.20  | 11.3                                       | 2.4                           | 66.9                  |                  |                                     | .7                  | 15.5                        | 1.4                       | 1.8                                    |
| Mississippi.....          | 2,143,900  | .98   | 42.4                                       | b 11.6                        | .5                    | 41.2             |                                     |                     |                             | (d)                       | 4.3                                    |
| Missouri.....             | 5,058,400  | 1.34  | 14.2                                       | (*)                           | .1                    | 79.3             |                                     | .6                  | 2.7                         | .8                        | 2.3                                    |
| Montana.....              | 1,472,700  | 2.63  | 11.4                                       | 25.9                          | 11.7                  | 46.9             |                                     |                     |                             | 1.9                       | 2.2                                    |
| Nebraska.....             | 1,724,700  | 1.31  | 9.1  | (*)                           |                       | 82.3             |                                     | .9                  |                             | 7.7                       |  |
| Nevada.....               | 469,200  | 4.26  | 21.9                                       | 51.3                          |                       | 17.9             |                                     |                     | 1.8                         | 1.6                       | 5.5                                    |
| New Hampshire.....        | 1,637,400  | 3.33  | 12.7                                       | 8.9                           | 9.5                   |                  | 61.5                                | .6                  |                             | 5.1                       | 1.7                                    |
| New Jersey.....           | 10,875,900   | 2.61  | 8.3  | 3.4                           | 6.7                   | 76.8             |                                     | 1.5                 |                             | 1.3                       | 2.0                                    |
| New Mexico.....           | 690,000  | 1.30  | 32.2                                       | (*)                           | b 19.0                |                  | 40.8                                |                     |                             |                           | 8.0                                    |
| New York.....             | 44,054,800   | 3.27  | 15.9                                       | 78.6                          | (*)                   |                  |                                     | 2.1                 |                             | 2.1                       | 1.3                                    |
| North Carolina.....       | 3,260,400  | .91   | 36.3                                       | 14.1                          | .6                    |                  | 45.1                                | .1                  |                             | b 1.6                     | 2.2                                    |
| North Dakota.....         | 2,090,900  | 3.26  | 8.4  | 13.3                          | 16.4                  | 56.5             | 2.8                                 |                     |                             | 1.0                       | 1.6                                    |
| Ohio.....                 | 12,932,800   | 1.87  | 7.2  | 31.1                          | 51.2                  |                  |                                     | 1.9                 | b 3.6                       | 1.7                       | 3.3                                    |
| Oklahoma.....             | 3,470,300  | 1.49  | 15.6                                       | 6.0                           | (f)                   | 54.8             |                                     | .4                  | 20.4                        | (*)                       | 2.8                                    |
| Oregon.....               | 3,119,600  | 2.86  | 9.1  | b 33.8                        | b 3.7                 | 45.7             |                                     | 1.1                 | b 1.4                       | 2.9                       | 2.3                                    |
| Pennsylvania.....         | 26,098,000   | 2.64  | 14.2                                       | 1.0                           | 65.2                  |                  |                                     | 12.4                |                             | 4.9                       | 2.3                                    |
| Rhode Island.....         | 2,355,300  | 3.30  | 33.7                                       | 1.4                           | 60.2                  |                  |                                     | .9                  |                             | 2.1                       | 1.7                                    |
| South Carolina.....       | 3,523,800  | 1.85  | 25.1                                       | (*)                           |                       |                  | 71.9                                |                     | 1.2                         | (*)                       | .9                                     |
| South Dakota.....         | 1,359,400  | 2.11  | 15.1                                       | 2.6                           | 13.4                  | 62.9             |                                     | (d)                 | 1.9                         | 2.0                       | 2.1                                    |
| Tennessee.....            | 2,228,500  | .76   | 50.8                                       |                               | (*)                   | 44.2             |                                     | (*)                 |                             | b 2.2                     | 2.8                                    |
| Texas.....                | 5,512,600  | .86   | 20.5                                       | (*)                           | (*)                   | 70.3             |                                     | (*)                 |                             |                           | 9.2                                    |
| Utah.....                 | 1,401,400  | 2.55  | 31.8                                       | 28.1                          | .9                    |                  | 34.4                                |                     |                             | 3.4                       | 1.4                                    |
| Vermont.....              | 889,700  | 2.48  | 20.4                                       | 16.4                          | 57.3                  |                  |                                     |                     |                             | 3.8                       | 2.1                                    |
| Virginia.....             | 4,392,700  | 1.64  | 42.6                                       | b 52.5                        | 2.7                   |                  |                                     | .5                  | (*)                         | 1.4                       | .3                                     |
| Washington.....           | 3,818,900  | 2.20  | 7.5  | b 1                           | b 2.6                 |                  |                                     | b 20.2              |                             | 4.3                       | 65.3                                   |
| West Virginia.....        | 3,781,600  | 1.99  | 10.4                                       | 17.8                          | 21.9                  | 39.1             |                                     | 1.3                 |                             | 1.7                       | 7.8                                    |
| Wisconsin.....            | 7,092,400  | 2.26  | 9.1  | 1.7                           | 2.9                   | c 60.2           |                                     |                     | 17.0                        | 5.5                       | 3.6                                    |
| Wyoming.....              | 569,500  | 2.27  | 19.2                                       | 22.7                          |                       | 48.9             |                                     | .9                  |                             | 2.0                       | 6.3                                    |
| Alaska.....               | 182,900  | 2.51  | 93.6                                       |                               | (*)                   |                  |                                     |                     |                             |                           | 6.4                                    |
| Hawaii.....               | 2,129,900  | 5.03  | 52.4                                       |                               | 2.3                   | 19.9             | 22.6                                |                     |                             |                           | 2.8                                    |
| Puerto Rico.....          | 3,534,200  | 1.89  | 99.2                                       | .8                            |                       |                  |                                     | (*)                 |                             |                           |  |
| Virgin Islands.....       | 151,500  | 6.09  | 96.4                                       |                               | (*)                   |                  |                                     |                     |                             |                           | 3.6                                    |

\* Expenditures for the health services considered represent index rather than absolute amounts. Because of variations in fiscal practices, figures cover the most recent year for which information was available at the date of interview. In some instances, estimates were accepted in the absence of precise expenditure records; in others, it was impossible to secure even an estimate.

\*\* Percentage distribution is based upon the expenditure information reported for each agency even though that amount might be incomplete.

<sup>a</sup> Information not available.

<sup>b</sup> Information incomplete.

<sup>c</sup> Represents expenditures of two separate agencies of this classification.

<sup>d</sup> Units of the University of Illinois rendering service included here operate jointly with the department of welfare and are financed by that agency.

<sup>e</sup> Less than one-tenth of 1 percent.

<sup>f</sup> Financial grant-in-aid to the crippled children's commission for administration. Figure included in expenditure of that agency.

<sup>g</sup> The board of control no longer functions in Wisconsin. Operation of tuberculosis hospitals has been transferred to the State health department and operation of mental hospitals is now a function of the department of public welfare. However, records for a complete fiscal year were not available under the new administrative set-up.

The extremely wide range in annual per capita expenditures by State governments for health activities which could be segregated as such is manifest from Tennessee's \$0.76 and Nevada's \$4.26. This contrast is drawn for the forty-eight States only, inasmuch as situations found in the District of Columbia, the Territories, and island possessions do not characterize true State organization. The average figure for the country as a whole is \$1.90, while the median is \$2.20. Differences in expenditures for State health services appear to be conditioned largely by the State's ability to purchase service, for when States are arranged according to per capita expenditures for all State health activities and compared with a corresponding array by wealth,<sup>1</sup> two-thirds of them fall within the same quarterly divisions. Another extremely important consideration, naturally, is difference in the amount of central and local responsibility. Low expenditure by State agencies does not necessarily represent a deficiency, since it may be complemented by high local expenditure.

Probably the most striking disclosure of table 2 is the fact that, for the country as a whole, State health departments, agencies established solely for health work, spend less than one-fifth of the total amount devoted to aggregate health activities by all State agencies. Indeed, health expenditures of both special boards and commissions set up for specific problems and of State departments of welfare exceed those of State health departments, while expenditures of boards of control closely approach those of the health departments. This situation appears to result from the relatively infrequent inclusion of hospitalization (one of the most expensive health services) in State health department programs as contrasted with the more general provision of hospital care by separate agencies with particular interests, by departments of welfare, and by boards of control.

Actually, the difference between expenditures of health departments and of special boards and commissions and departments of welfare is probably even more pronounced than table 2 indicates, for the health department expenditures reported are believed to be complete, whereas it was impossible to obtain the cost of all health activities engaged in by agencies of the other two types. For example, in a number of States financial grants-in-aid by State welfare departments to counties for general medical care of the needy were one particular item which would not be separated from expenditures for general relief—a service not significant to this study.

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<sup>1</sup> Martin, John L., National Income Division, Department of Commerce: *Income Payments to Individuals by States, 1929-39*. Survey of Current Business, October 1940.

Such is the composite State health scene for the several jurisdictions. As might be suspected from the earlier discussion of diversity in organization for State health work, extreme variation characterizes the pattern when individual States are studied with regard to types of agencies responsible for financing the health activities under consideration. The health department is the only type of agency listed which participates in some way in every State. However, the proportion of the total expense which is borne by the health department is smaller than might be expected in most instances. True, more than 90 percent of the total amount allotted to health work is administered by the health department in Alaska, Puerto Rico, and the Virgin Islands, but these jurisdictions do not represent true States. In only one-third of the States does the health department spend more than 25 percent of the total sum, and in one-fourth of them not more than 10 percent is charged to this agency.

No participation by the department of welfare is recorded for six States, and for nine, which do participate, no estimate of expenditures for health services could be obtained. For the remaining States, the portion of the total financial burden which is borne by the department of welfare extends from one-tenth of 1 percent to 80 percent. Practically the same range obtains for the special boards and commissions. However, expenditures of one or more agencies of this category are recorded for all but five States.

Boards of control and State hospitals administered by independent boards of managers operate in only about two-fifths and one-fourth of the States, respectively. In these particular States, however, they are responsible for a considerable portion of the total health expenditures. Half of the boards of control account for as much as 50 percent of their States' aggregate health expenses, while expenditures of half the independent State hospitals reach 42 percent of the grand total. In general, the departments of labor and agriculture spend relatively small sums per State for health work, but participate in small measure in many places. Health services of State universities, on the other hand, are confined to fewer States, but where provided they are apt to represent an appreciable part of the entire bill for health work.

Untabulated material confirms what is suggested by table 2, namely, that preventive health activities still receive relatively less emphasis from official agencies than do corrective and custodial services.

State, local, and Federal appropriating bodies contribute to the general fund for health work of State agencies, while license fees and insurance fees collected under State authority are depended upon to

support several of the services discussed. From table 3 may be determined the proportion of all money expended which was derived from each source and the variation of this distribution from State to State.

TABLE 3.—Approximate total and per capita annual expenditures\* by all official State agencies for health activities, and proportion of the total amount which was derived from each specified source

| State or Territory        | Approximate total annual expenditure* by all official State agencies for health activities | Approximate per capita annual expenditure* by all official State agencies for health activities | Percent of total derived from each source |       |                                      |   |                                 |       |
|---------------------------|--|---|---|-------|--------------------------------------|---|---------------------------------|-------|
|                           |  |   | State                                     | Local | U. S. Public Health Service Title VI | U. S. Public Health Service V. D. funds | U. S. Children's Bureau Title V | Other |
| Total.....                | \$285,715,800  | \$1.90  | 81.4                                      | 3.9   | 3.2                                  | 1.0                                     | 2.5                             | 8.0   |
| Alabama.....              | 2,668,900  | .94   | 66.6                                      | ----- | 11.0                                 | 5.3                                     | 8.9                             | 8.2   |
| Arizona.....              | 1,130,500  | 2.26  | 53.8                                      | ----- | 4.9                                  | 1.2                                     | 8.3                             | 31.8  |
| Arkansas.....             | 2,721,000  | 1.40  | 80.4                                      | ----- | 8.2                                  | 3.7                                     | 5.5                             | 2.2   |
| California.....           | 14,096,400   | 2.04  | 62.7                                      | 7.9   | 2.2                                  | 1.2                                     | 1.8                             | 24.2  |
| Colorado.....             | 2,752,600  | 2.45  | 62.2                                      | 9.3   | 4.5                                  | 1.2                                     | 4.8                             | 18.0  |
| Connecticut.....          | 6,007,200  | 3.51  | 72.6                                      | 13.0  | 1.7                                  | .4                                      | 1.2                             | 11.1  |
| Delaware.....             | 1,076,100  | 4.04  | 83.1                                      | ----- | 4.0                                  | .5                                      | 4.6                             | 7.8   |
| District of Columbia..... | 6,608,800  | 10.44   | 97.3                                      | ----- | 1.0                                  | .1                                      | 1.6                             | ----- |
| Florida.....              | 3,109,900  | 1.64  | 73.7                                      | 3.4   | 4.4                                  | 1.0                                     | 4.4                             | 13.1  |
| Georgia.....              | 2,964,200  | .95   | 78.8                                      | .1    | 9.9                                  | 2.0                                     | 7.1                             | 2.1   |
| Idaho.....                | 986,000  | 1.88  | 49.3                                      | 2.1   | 7.4                                  | 1.4                                     | 7.0                             | 32.8  |
| Illinois.....             | 17,678,000   | 2.24  | 93.9                                      | ----- | 2.4                                  | .6                                      | 1.9                             | 1.2   |
| Indiana.....              | 7,332,800  | 2.14  | 93.4                                      | 1.7   | 2.7                                  | .7                                      | 1.5                             | ----- |
| Iowa.....                 | 4,780,300  | 1.88  | 49.6                                      | 31.5  | 3.8                                  | .9                                      | 2.4                             | 11.8  |
| Kansas.....               | 3,008,400  | 1.67  | 74.3                                      | 4.7   | 4.5                                  | 1.8                                     | 4.2                             | 10.5  |
| Kentucky.....             | 2,522,500  | .89   | 75.3                                      | ----- | 9.0                                  | 2.2                                     | 7.4                             | 6.1   |
| Louisiana.....            | 5,754,200  | 2.43  | 93.8                                      | ----- | 3.0                                  | .6                                      | 1.7                             | .9    |
| Maine.....                | 2,023,900  | 2.39  | 85.0                                      | 1.0   | 3.2                                  | .4                                      | 4.5                             | 5.9   |
| Maryland.....             | 4,102,000  | 2.25  | 72.9                                      | .8    | 3.2                                  | .6                                      | 4.1                             | 18.4  |
| Massachusetts.....        | 13,781,200   | 3.19  | 95.7                                      | ----- | 1.6                                  | .4                                      | 1.3                             | 1.0   |
| Michigan.....             | 12,439,100   | 2.37  | 87.3                                      | 6.1   | 2.2                                  | .9                                      | 2.4                             | 9.0   |
| Minnesota.....            | 6,148,500  | 2.20  | 73.5                                      | 11.4  | 3.2                                  | .5                                      | 2.4                             | 2.1   |
| Mississippi.....          | 2,143,900  | .98   | 75.8                                      | ----- | 10.0                                 | 4.3                                     | 6.5                             | 3.4   |
| Missouri.....             | 5,058,400  | 1.34  | 88.7                                      | .7    | 5.4                                  | 1.5                                     | 2.1                             | 1.6   |
| Montana.....              | 1,472,700  | 2.63  | 53.2                                      | 6.3   | 3.9                                  | .2                                      | 5.6                             | 30.8  |
| Nebraska.....             | 1,724,700  | 1.31  | 72.2                                      | 9.7   | 3.3                                  | .5                                      | 4.4                             | 9.9   |
| Nevada.....               | 469,200  | 4.26  | 31.3                                      | 2.3   | 6.7                                  | .7                                      | 7.0                             | 52.0  |
| New Hampshire.....        | 1,637,400  | 3.33  | 84.5                                      | .9    | 3.1                                  | .7                                      | 3.4                             | 7.4   |
| New Jersey.....           | 10,875,900   | 2.61  | 67.2                                      | 23.1  | 1.9                                  | .6                                      | 1.8                             | 5.4   |
| New Mexico.....           | 690,000  | 1.30  | 64.0                                      | ----- | 10.4                                 | 1.3                                     | 17.5                            | 6.8   |
| New York.....             | 44,054,800   | 8.27  | 97.6                                      | ----- | 1.3                                  | .4                                      | .7                              | (*)   |
| North Carolina.....       | 3,260,400  | .91   | 68.0                                      | ----- | 9.6                                  | 1.6                                     | 7.3                             | 13.5  |
| North Dakota.....         | 2,090,900  | 3.26  | 30.7                                      | 47.2  | 2.9                                  | .1                                      | 4.8                             | 14.3  |
| Ohio.....                 | 12,932,800   | 1.87  | 63.2                                      | .3    | 2.4                                  | 1.0                                     | 1.5                             | 31.6  |
| Oklahoma.....             | 3,470,300  | 1.49  | 82.7                                      | 2.7   | 5.4                                  | 2.6                                     | 3.3                             | 3.3   |
| Oregon.....               | 3,119,600  | 2.86  | 58.2                                      | ----- | 2.9                                  | 1.0                                     | 4.1                             | 33.8  |
| Pennsylvania.....         | 26,098,000   | 2.64  | 85.9                                      | ----- | 1.5                                  | .5                                      | 1.1                             | 11.0  |
| Rhode Island.....         | 2,355,300  | 3.30  | 93.2                                      | ----- | 2.3                                  | .4                                      | 2.2                             | 1.9   |
| South Carolina.....       | 3,523,800  | 1.85  | 87.0                                      | .6    | 5.5                                  | 1.5                                     | 4.5                             | .9    |
| South Dakota.....         | 1,359,400  | 2.11  | 77.4                                      | ----- | 5.4                                  | .5                                      | 5.0                             | 11.7  |
| Tennessee.....            | 2,228,500  | .76   | 63.4                                      | 4.6   | 13.6                                 | 3.0                                     | 7.6                             | 7.8   |
| Texas.....                | 5,512,600  | .88   | 80.6                                      | ----- | 7.6                                  | 4.7                                     | 6.4                             | .7    |
| Utah.....                 | 1,401,400  | 2.55  | 58.9                                      | 2.5   | 4.8                                  | 1.0                                     | 6.2                             | 26.6  |
| Vermont.....              | 888,700  | 2.48  | 85.8                                      | .7    | 4.8                                  | .1                                      | 6.1                             | 2.5   |
| Virginia.....             | 4,392,700  | 1.64  | 81.0                                      | 7.0   | 5.8                                  | 2.4                                     | 3.6                             | .2    |
| Washington.....           | 3,818,900  | 2.20  | 73.0                                      | .6    | 2.8                                  | 1.1                                     | 2.2                             | 20.3  |
| West Virginia.....        | 3,781,600  | 1.99  | 73.0                                      | .5    | 3.9                                  | .6                                      | 3.2                             | 18.8  |
| Wisconsin.....            | 7,092,400  | 2.26  | 71.9                                      | 17.0  | 2.3                                  | .3                                      | 1.9                             | 6.6   |
| Wyoming.....              | 569,500  | 2.27  | 67.5                                      | (*)   | 4.8                                  | .3                                      | 7.0                             | 20.4  |
| Alaska.....               | 182,900  | 2.51  | 22.6                                      | 13.4  | 22.2                                 | 1.1                                     | 38.1                            | 2.6   |
| Hawaii.....               | 2,129,900  | 5.03  | 91.9                                      | .5    | 2.7                                  | .6                                      | 2.9                             | 1.4   |
| Puerto Rico.....          | 3,534,200  | 1.89  | 81.8                                      | ----- | 7.4                                  | 3.4                                     | 7.4                             | ----- |
| Virgin Islands.....       | 151,500  | 6.09  | 86.1                                      | ----- | 11.4                                 | 2.5                                     | -----                           | ----- |

\*Expenditures for the health services considered represent index rather than absolute amounts. Because of variations in fiscal practices, figures cover the most recent year for which information was available at the date of interview. In some instances, because of overlapping and interweaving of activities, estimates were accepted in the absence of precise expenditure records; in others, it was impossible to secure even an estimate.

\* Less than one-tenth of 1 percent.

It must be borne in mind constantly that the data herewith presented pertain only to health activities of official State agencies as measured by regulatory functions, promotional, educational, and supervisory work, financial grants-in-aid to local units, and direct service programs. They do not include the services of local units. Local money recorded in table 3 represents contributions of counties, cities, or townships to service provided directly by State agencies.

For the country as a whole, about four-fifths of the entire sum expended for State activities which have a direct bearing upon human health is appropriated by the State. Monies collected as special fees and donations by voluntary organizations constitute 8 percent of the aggregate expenditures; 7 percent of the total amount represents grants-in-aid from Federal governmental agencies; and the remaining 4 percent is made up of assessments from local political subdivisions. This break-down is not constant for all States, of course. In one State, for example, one-half of the total amount expended is derived from special fees, assessments, or premiums levied on selected occupational groups. In three others, conversely, financial participation from other than State tax sources is relatively negligible, being less than 5 percent of the total.

#### ADMINISTRATIVE AND FIELD PERSONNEL ENGAGED IN OFFICIAL STATE HEALTH SERVICES

Full-time administrative and field personnel engaged in carrying out the health programs of the various State agencies number 18,737. It should be stated at this point that efforts of personnel recorded in the accompanying tables (tables 4 and 5) are supplemented by work of additional persons who spend only part of their time on health work. Because of the variability of part-time employment, however, it has not been considered practicable to include other than full-time personnel. Institutional employees have been omitted from the count likewise, because the data at hand in central State offices are not susceptible to break-down by classification or by description of duties. Moreover, examination of the internal administration of institutions is not within the province of this study.

TABLE 4.—Full-time administrative and field personnel employed by official State agencies of different types for health activities

| State or Territory        | Number of persons employed full time for health work by State agencies of each type |                   |                               |                       |                  |   |                     |                             |                           |  |
|---------------------------|---|-------------------|-------------------------------|-----------------------|------------------|---|---------------------|-----------------------------|---------------------------|--|
|                           | All agencies of State government  | Health department | Special boards or commissions | Department of welfare | Board of control | Independent State hospitals, laboratories, etc. | Department of labor | State university or college | Department of agriculture | All other agencies of State government |
| Total.....                | 18,737  | 11,269            | 1,070                         | 617                   | 106              | 80  | 1,086               | 90                          | 1,496                     | 2,923                                  |
| Alabama.....              | 313   | 232               | 7                             | (*)                   |                  |   | 15                  |                             | 33                        | 26                                     |
| Arizona.....              | 77  | 31                | 7                             | 13                    | (*)              | 11  |                     |                             |                           | 15                                     |
| Arkansas.....             | 98  | 67                | 4                             | 17                    | (*)              |   |                     | (*)                         |                           | 10                                     |
| California.....           | 637   | 374               |                               | 12                    | (*)              |   | 88                  | (*)                         | 57                        | 106                                    |
| Colorado.....             | 160   | 110               | 8                             | 2                     |                  | (*)   |                     | (*)                         | (*)                       | 40                                     |
| Connecticut.....          | 282   | 174               | 65                            | (*)                   |                  | (*)   | 30                  |                             |                           | 13                                     |
| Delaware.....             | 97  | 64                | (*)                           | (*)                   |                  | (*)   | (*)                 |                             |                           | 33                                     |
| District of Columbia..... | 1,864   | 302               | 77                            |                       |                  |   |                     |                             |                           | 1,485                                  |
| Florida.....              | 279   | 195               | 77                            | (*)                   | 5                |   |                     |                             | (*)                       | 2                                      |
| Georgia.....              | 294   | 195               | (*)                           | 17                    |                  |   | 7                   |                             | 73                        | 2                                      |
| Idaho.....                | 46  | 36                | (*)                           | 2                     |                  |   |                     |                             | 5                         | 3                                      |
| Illinois.....             | 1,012   | 490               | 8                             | 131                   |                  |   | 75                  | (*)                         | 170                       | 148                                    |
| Indiana.....              | 398   | 223               | 30                            | 49                    |                  |   | 15                  | (*)                         |                           | 81                                     |
| Iowa.....                 | 288   | 168               | (*)                           | 11                    | 3                |   | 3                   | (*)                         | 56                        | 47                                     |
| Kansas.....               | 162   | 95                | 31                            | 7                     |                  |   | 11                  | (*)                         | 11                        | 7                                      |
| Kentucky.....             | 231   | 187               | 7                             | 6                     |                  |   | (*)                 |                             |                           | 31                                     |
| Louisiana.....            | 559   | 470               | 12                            | (*)                   |                  | 34  | 2                   |                             |                           | 41                                     |
| Maine.....                | 159   | 127               | 3                             |                       | 4                |   | (*)                 |                             | 18                        | 7                                      |
| Maryland.....             | 178   | 135               | 6                             | 2                     |                  | (*)   | 19                  | (*)                         | 12                        | 4                                      |
| Massachusetts.....        | 893   | 420               | 146                           | (*)                   |                  |   | 71                  |                             | 99                        | 157                                    |
| Michigan.....             | 555   | 377               | 41                            | 8                     |                  |   | 3                   | (*)                         | 69                        | 57                                     |
| Minnesota.....            | 470   | 272               | 32                            | 70                    |                  |   | 26                  | 7                           | 37                        | 26                                     |
| Mississippi.....          | 140   | 123               | 4                             | 3                     | (*)              |   |                     |                             | (*)                       | 10                                     |
| Missouri.....             | 309   | 230               | 3                             | 2                     |                  | 12  | 11                  | 11                          | 13                        | 27                                     |
| Montana.....              | 76  | 43                | 14                            | 5                     | 1                |   |                     |                             | 7                         | 6                                      |
| Nebraska.....             | 102   | 55                | (*)                           |                       | 7                |   | 6                   |                             | 34                        |  |
| Nevada.....               | 58  | 35                | (*)                           |                       | 3                |   |                     | 5                           | 11                        | 4                                      |
| New Hampshire.....        | 96  | 70                | 6                             | (*)                   |                  | (*)   | 4                   |                             | 15                        | 1                                      |
| New Jersey.....           | 548   | 315               | 61                            | (*)                   | 25               |   | 88                  |                             | 18                        | 41                                     |
| New Mexico.....           | 65  | 51                | (*)                           | 11                    |                  | (*)   |                     |                             |                           | 3                                      |
| New York.....             | 1,973   | 1,282             | 103                           | 12                    |                  | (*)   | 358                 |                             | 174                       | 44                                     |
| North Carolina.....       | 203   | 185               | (*)                           | 5                     |                  |   | 1                   |                             | 12                        | (*)                                    |
| North Dakota.....         | 106   | 63                | 4                             | 14                    | (*)              | 22  |                     | (*)                         | 7                         | 6                                      |
| Ohio.....                 | 470   | 153               | 87                            | 70                    |                  |   | (*)                 | (*)                         | 54                        | 106                                    |
| Oklahoma.....             | 208   | 132               | 26                            | (*)                   | 26               |   | 11                  | (*)                         | (*)                       | 13                                     |
| Oregon.....               | 157   | 60                | 15                            | 10                    | 1                |   | 12                  | 4                           | 35                        | 20                                     |
| Pennsylvania.....         | 1,587   | 1,013             | 79                            | 23                    |                  |   | 162                 |                             | 208                       | 102                                    |
| Rhode Island.....         | 170   | 118               | 15                            | 16                    |                  |   | 5                   |                             | 16                        | (*)                                    |
| South Carolina.....       | 157   | 126               | 2                             |                       |                  | (*)   | 16                  |                             | (*)                       | (*)                                    |
| South Dakota.....         | 80  | 41                | 5                             | (*)                   | (*)              |   |                     | 13                          | 11                        | 6                                      |
| Tennessee.....            | 321   | 294               | (*)                           | (*)                   | (*)              |   | (*)                 | (*)                         | 21                        | 16                                     |
| Texas.....                | 376   | 351               | (*)                           | (*)                   | 3                |   | (*)                 |                             |                           | 22                                     |
| Utah.....                 | 154   | 130               | 9                             | 1                     |                  | (*)   |                     |                             | 8                         | 6                                      |
| Vermont.....              | 100   | 74                | 15                            | (*)                   |                  |   |                     |                             | 7                         | 4                                      |
| Virginia.....             | 433   | 392               | 8                             | 6                     |                  |   | 8                   | (*)                         | 17                        | 2                                      |
| Washington.....           | 177   | 64                | 1                             | 12                    |                  |   | 27                  |                             | 59                        | 14                                     |
| West Virginia.....        | 236   | 81                | 1                             | 49                    | 14               |   | 9                   |                             | 24                        | 58                                     |
| Wisconsin.....            | 415   | 201               | 35                            | 22                    | (*)              |   |                     | 33                          | 102                       | 22                                     |
| Wyoming.....              | 55  | 34                | 6                             |                       | 2                |   | 3                   |                             | 3                         | 7                                      |
| Alaska.....               | 31  | 28                |                               | (*)                   |                  |   |                     |                             |                           | 3                                      |
| Hawaii.....               | 314   | 261               |                               | 9                     | (*)              | 13  |                     |                             |                           | 31                                     |
| Puerto Rico.....          | 508   | 498               | 10                            |                       |                  |   | (*)                 |                             |                           |  |
| Virgin Islands.....       | 60  | 52                |                               | (*)                   |                  |   |                     |                             |                           | 8                                      |

\* Part-time or institutional personnel only.

† The board of control no longer functions in Wisconsin. Operation of tuberculosis hospitals has been transferred to the State health department and operation of mental hospitals is now a function of the department of public welfare. However, records for a complete fiscal year were not available under the new administrative set-up.

Health departments employ by far the greatest personnel body—about three-fifths of the total. Additional agencies which account for over 1,000 persons each are the department of agriculture, the department of labor, special boards or commissions, and agencies grouped under the designation "Other." Exclusion of part-time and institutional personnel is partly responsible, of course, for the relatively high ranking of health departments with respect to the number of persons employed, as health work is the sole function of such organizations and apt to receive the full-time attention of most staff members. On the other hand, it is often only an incidental feature of the programs of other types of State agencies, thus making it impossible to convert the part-time health activities of many employees into the equivalent of full-time employment. In view of this situation, double interest is attached to the fact that nearly 7,500 persons associated with State agencies other than health departments devote all of their time to work which has bearing of one kind or another upon the public health.

The personnel picture is not complete without some consideration of the professional classification of those who participate in the health activities covered by this survey. Table 5 presents this classification for all jurisdictions studied. For the country as a whole, clerical and records personnel head the list in point of number employed; inspectors of various sorts (environmental sanitation, food and drug, hotel and restaurant, milk, plumbing, factory, and mine inspectors) follow; and those designated as "Other and unclassified" rank third. Among others, this group includes educators, nutritionists, social workers, attorneys, pharmacists, psychologists, veterinarians, draftsmen, entomologists, chauffeurs, and messengers, all of whom perform some type of duties related to health.

A relatively large number of laborers is employed also. The total for this classification of workers is markedly influenced by the District of Columbia which accounts for over two-thirds of the number for the entire country. The organization for health among the several District agencies naturally embodies combined characteristics of State and municipal units and represents a rather atypical situation.

Nurses outnumber physicians nearly two to one, and somewhat fewer engineers than physicians are employed. Dentists constitute the smallest single professional group. The term "Technicians" like "Inspectors" is used in a broad sense and represents widely varying skills. X-ray technicians, physical therapists, dental hygienists, and all technical laboratory personnel from the highest grade of specialized worker—bacteriologist, serologist, chemist, pathologist, or toxicologist—down to the lowest rating for technical assistants are included here. Glass washers, nontechnical aides, and the like are classified as laborers, however.



TABLE 5.—Full-time administrative and field personnel of different professional classifications employed by all official State agencies for health activities

| State or Territory        | Number of persons of each classification employed full time for health work by all State agencies |            |        |           |            |             |          |   |                                |                                  |
|---------------------------|---|------------|--------|-----------|------------|-------------|----------|---|--------------------------------|----------------------------------|
|                           | All classifications   | Physicians | Nurses | Engineers | Inspectors | Technicians | Dentists | Administrators not covered by other classifications | Clerical and records personnel | Other and unclassified personnel |
| Total.....                | 18,737  | 1,064      | 2,091  | 830       | 2,927      | 1,464       | 154      | 442   | 5,555                          | 1,769                            |
| Alabama.....              | 313   | 24         | 38     | 17        | 50         | 45          | 2        | 6   | 78                             | 23                               |
| Arizona.....              | 77  | 3          | 8      | 2         | 6          | 10          |          | 6   | 27                             |                                  |
| Arkansas.....             | 98  | 9          | 10     | 6         | 6          | 11          | 3        | 2   | 42                             | 2                                |
| California.....           | 637   | 46         | 50     | 45        | 163        | 39          | 4        | 11  | 186                            | 2                                |
| Colorado.....             | 160   | 7          | 39     | 1         | 29         | 9           | 1        | 5   | 51                             | 3                                |
| Connecticut.....          | 282   | 16         | 18     | 13        | 58         | 37          | 1        | 8   | 105                            | 3                                |
| Delaware.....             | 97  | 9          | 21     | 2         | 5          | 11          |          | 26  | 18                             | 4                                |
| District of Columbia..... | 1,864   | 13         | 94     | 41        | 113        | 37          |          | 32  | 165                            | 1,203                            |
| Florida.....              | 279   | 21         | 22     | 8         | 58         | 29          | 2        | 16  | 99                             | 15                               |
| Georgia.....              | 294   | 25         | 20     | 28        | 47         | 46          |          | 1   | 94                             | 19                               |
| Idaho.....                | 46  | 2          | 3      | 4         | 3          | 12          |          | 3   | 16                             | 1                                |
| Illinois.....             | 1,012   | 61         | 101    | 41        | 200        | 71          | 6        | 14  | 331                            | 35                               |
| Indiana.....              | 398   | 21         | 48     | 20        | 73         | 28          | 2        | 55  | 111                            | 8                                |
| Iowa.....                 | 268   | 18         | 50     | 18        | 44         | 20          | 1        | 11  | 84                             | 4                                |
| Kansas.....               | 162   | 8          | 16     | 13        | 31         | 21          | 1        | 5   | 56                             | 2                                |
| Kentucky.....             | 231   | 17         | 14     | 6         | 19         | 18          | 13       | 9   | 103                            | 11                               |
| Louisiana.....            | 559   | 13         | 15     | 7         | 180        | 7           | 15       | 15  | 64                             | 5                                |
| Maine.....                | 159   | 13         | 36     | 9         | 22         | 14          | 1        | 2   | 53                             |                                  |
| Maryland.....             | 178   | 9          | 2      | 10        | 34         | 19          |          |   | 71                             | 13                               |
| Massachusetts.....        | 893   | 66         | 46     | 33        | 96         | 92          | 2        | 12  | 305                            | 26                               |
| Michigan.....             | 555   | 23         | 13     | 73        | 29         | 59          | 2        | 25  | 160                            |                                  |
| Minnesota.....            | 470   | 27         | 53     | 20        | 72         | 39          | 2        | 10  | 200                            | 12                               |
| Mississippi.....          | 140   | 10         | 12     | 5         | 3          | 18          |          | 2   | 57                             | 8                                |
| Missouri.....             | 369   | 25         | 70     | 14        | 70         | 8           | 3        | 9   | 95                             | 15                               |
| Montana.....              | 76  | 4          | 8      | 3         | 18         | 8           |          | 3   | 24                             | 1                                |
| Nebraska.....             | 102   | 8          | 16     | 1         | 26         | 6           | 1        | 5   | 34                             |                                  |
| Nevada.....               | 58  | 3          | 14     | 1         | 8          | 7           | 1        | 2   | 15                             |                                  |
| New Hampshire.....        | 96  | 4          | 22     | 9         | 7          | 10          |          | 1   | 37                             | 3                                |
| New Jersey.....           | 548   | 28         | 95     | 14        | 59         | 46          | 1        | 16  | 160                            | 15                               |
| New Mexico.....           | 65  | 4          | 8      | 2         | 4          | 9           |          | 2   | 26                             |                                  |
| New York.....             | 1,973   | 107        | 209    | 100       | 314        | 142         | 3        | 6   | 631                            | 101                              |
| North Carolina.....       | 203   | 12         | 10     | 14        | 12         | 38          | 30       | 1   | 72                             | 8                                |
| North Dakota.....         | 106   | 6          | 12     | 7         | 15         | 15          |          | 4   | 35                             | 3                                |
| Ohio.....                 | 470   | 21         | 22     | 30        | 85         | 22          | 2        | 16  | 220                            | 16                               |
| Oklahoma.....             | 208   | 17         | 42     | 7         | 27         | 18          | 1        | 7   | 74                             |                                  |
| Oregon.....               | 157   | 6          | 8      | 4         | 45         | 15          | 1        | 7   | 61                             |                                  |
| Pennsylvania.....         | 1,587   | 47         | 234    | 55        | 368        | 56          | 2        | 28  | 544                            | 25                               |
| Rhode Island.....         | 170   | 9          | 23     | 6         | 30         | 24          |          | 8   | 52                             | 7                                |
| South Carolina.....       | 157   | 19         | 20     | 15        | 1          | 17          | 6        | 2   | 62                             | 1                                |
| South Dakota.....         | 80  | 5          | 6      | 5         | 14         | 13          |          | 1   | 28                             | 4                                |
| Tennessee.....            | 321   | 52         | 45     | 11        | 25         | 47          | 3        | 1   | 88                             | 13                               |
| Texas.....                | 376   | 25         | 52     | 31        | 31         | 75          | 6        | 8   | 96                             | 9                                |
| Utah.....                 | 154   | 12         | 58     | 3         | 20         | 9           | 2        | 7   | 32                             | 2                                |
| Vermont.....              | 100   | 11         | 32     | 2         | 16         | 5           | 1        | 2   | 26                             | 1                                |
| Virginia.....             | 433   | 63         | 108    | 9         | 81         | 28          | 22       | 2   | 112                            | 3                                |
| Washington.....           | 177   | 7          | 8      | 6         | 76         | 13          |          | 5   | 50                             | 2                                |
| West Virginia.....        | 236   | 8          | 22     | 15        | 64         | 15          |          | 5   | 88                             | 5                                |
| Wisconsin.....            | 415   | 38         | 33     | 24        | 75         | 38          | 1        | 9   | 151                            | 6                                |
| Wyoming.....              | 55  | 3          | 14     | 1         | 5          | 6           |          | 5   | 18                             | 1                                |
| Alaska.....               | 31  | 3          | 14     | 1         | 2          | 2           |          |   | 8                              | 1                                |
| Hawaii.....               | 314   | 9          | 67     | 6         | 47         | 42          |          | 2   | 67                             | 53                               |
| Puerto Rico.....          | 508   | 38         | 79     | 12        | 35         | 34          | 7        | 1   | 170                            | 79                               |
| Virgin Islands.....       | 60  | 9          | 12     |           | 7          | 4           | 2        | 1   | 3                              | 17                               |

Absence of a common pattern among the several States obtains for distribution of personnel according to professional classification just as it does for the agency charged with any particular activity, for expenditures made in behalf of each type of service, and for total

personnel employed. For instance, although in the aggregate approximately twice as many nurses as physicians are employed for State health work, in two States this ratio is as high as seven to one, whereas in another the order is reversed and there are four times as many physicians as nurses. Here again, local programs which complement the various State plans, but which were not incorporated in this study, probably influence the picture to a greater extent than any other single factor.

Training and public health interest are the standards generally used for evaluating the quality of personnel employed. On the whole, health departments are increasingly insistent that these standards be met by all prospective staff members. Other State agencies which carry on health activities are apt to have less clearly defined public health training requirements.

#### ACKNOWLEDGMENTS

The current revision of Public Health Bulletin No. 184 would not have been possible without the cordial cooperation and interest of staff members of the various agencies of State government. Their willingness to supply the mass of information requested and their assistance in adapting such material to the limits of the schedule are deeply appreciated.

Particular recognition is made of the services of the State health officers and their staffs who, in addition to providing the desired information regarding activities of their own departments, suggested other units of State government doing related work, arranged the necessary entree to these agencies, and checked the material collected for completeness of coverage. Likewise, courtesy of the health departments in making available office space and in supplying clerical assistance for the duration of the field work in the respective States greatly facilitated the assignment.

To Dr. Don W. Gudakunst, now Medical Director of the National Foundation for Infantile Paralysis, is due the credit for laying the groundwork for the survey, constructing the preliminary questionnaire, and collaborating in drafting the final form.

Actual collection of the field data represents the painstaking work of the following medical officers of the United States Public Health Service: Medical Director J. F. Worley, Senior Surgeon M. F. Haralson, Surgeon J. O. Dean, Passed Assistant Surgeons Henry A. Holle, David C. Elliott, J. R. Heller, Jr., F. W. Kratz, Charles F. Blankenship, Otis L. Anderson, and L. E. Burney, and Assistant Surgeons A. L. Chapman and David B. Wilson.

## ROCKY MOUNTAIN SPOTTED FEVER<sup>1</sup>

### A NOTE ON SOME ASPECTS OF ITS EPIDEMIOLOGY

By NORMAN H. TOPPING, *Passed Assistant Surgeon, United States Public Health Service*

In spite of several published statements to the contrary (1), it has long been the popular conception that Rocky Mountain spotted fever is a more highly virulent, and, therefore, a more fatal disease in the West than in the East. Up to comparatively recently, reported observations in the laboratory lent support to this belief because the strains of virus isolated and reported in the West were more pathogenic for guinea pigs than the strains isolated in the East.

For the past few years strains of the virus of Rocky Mountain spotted fever have been isolated in guinea pigs at the National Institute of Health in Washington, D. C., upon every presenting occasion along the Atlantic seaboard. These strains have all been studied during their routine passage in guinea pigs, some for as long as a year, others for not such an extended period. These isolated strains were all similar; none of them produced scrotal lesions in male guinea pigs with any degree of consistency; they all had rather prolonged incubation periods; and their fatality rates were considerably lower than our passage strain of virus which has been isolated in Montana. During the summer of 1939, however, a different strain of spotted fever virus was recovered (2). This strain was from a young man hospitalized with Rocky Mountain spotted fever at the Gallinger Municipal Hospital in Washington, D. C. The patient had been berry picking across the Potomac River in Virginia, where ticks were abundant. He was not critically ill, but the strain isolated from his blood was extremely virulent for guinea pigs. The fatality rates in these animals on this, the "W" strain, are as high as those for our passage virus isolated in the Bitterroot Valley of Montana, being around 80 percent for each strain. The typical scrotal lesions associated with a highly pathogenic strain of Rocky Mountain spotted fever are consistently present. The incubation period for this strain is shorter than for any of the other strains of spotted fever isolated in the East.

More recently Brigham and Watt (3) reported the isolation of two highly virulent strains from ticks, *D. variabilis*, in Georgia.

During the summer of 1940 the occasion arose to isolate a strain of spotted fever from a typical case of the disease in a Denver, Colo., hospital. This patient had acquired a tick while fishing near Lander, Wyo., which is located in the center of the so-called *D. andersoni* territory. The "L" strain (4) of spotted fever, from this patient, is extremely mild for guinea pigs, a fatality rate of 4.4 percent being observed with this strain, lower than any other strain of spotted fever

<sup>1</sup> From the Division of Infectious Diseases, National Institute of Health.

that we have studied. The incubation period is usually 5 days and there are no consistent scrotal reactions in guinea pigs. In all comparative tests in guinea pigs this "L" strain is indistinguishable from the usual strains of Rocky Mountain spotted fever isolated from eastern United States.

With the isolation of these two strains it became obvious that the terminology "eastern" and "western," as well as "*andersoni*" and "*variabilis*," were no longer applicable and that isolated strains had best be classified and reported according to their virulence for guinea pigs. Further, since there are highly virulent and mild strains of spotted fever virus in the East and highly virulent and mild strains in the West, as judged by pathogenicity for the guinea pig, it was thought advisable to compare data from several selected States in both areas.

The data to be presented were kindly furnished by the State health officers of 4 States, Montana and Idaho in the West, and Virginia and Maryland in the East. The data for Montana, Idaho, and Maryland cover a 10-year period, 1930-1939, inclusive. Cases and deaths were not available by sex and age in Virginia until 1933 so that the figures given for that State are for 1933-1939, inclusive.

During these periods, Idaho and Montana reported 747 cases, with a crude case fatality rate of 28.1 percent, while Maryland and Virginia reported 661 cases, with a fatality rate of 18.4 percent. In the two western States 50.2 percent of the total, or 375 cases, occurred in persons aged 40 years or over, 35.3 percent (264) in the age group 15-39 years, and only 14.4 percent (108) in persons under 15 years. In the East this age distribution was almost reversed, with the largest number of cases, 46.8 percent (310), occurring in persons under 15 years of age; 28.5 percent (189) occurred in the age group 15-39 years, and only 24.5 percent (162) in the group aged 40 or over.

When the fatality rates for the two areas are compared on the basis of age, it is seen that there is very little difference. For the age group under 15 years the fatality rate was 12.9 percent in the East and 12 percent in the West; for the group 15-39 years, 11.1 percent in the East and 15.1 percent in the West, and for the group aged 40 and over, 37.6 percent in the East and 41.8 percent in the West. No significant difference in these rates was found for the various age groups. It is apparent, however, that there are important differences in the fatality rates for the groups aged 40 and over in both areas as compared to the rates for the younger persons.

The accompanying graph and tables show the age and sex distributions in the two areas, as well as the fatality rates. It will be noted that there are proportionately more females infected in the East than in the West.

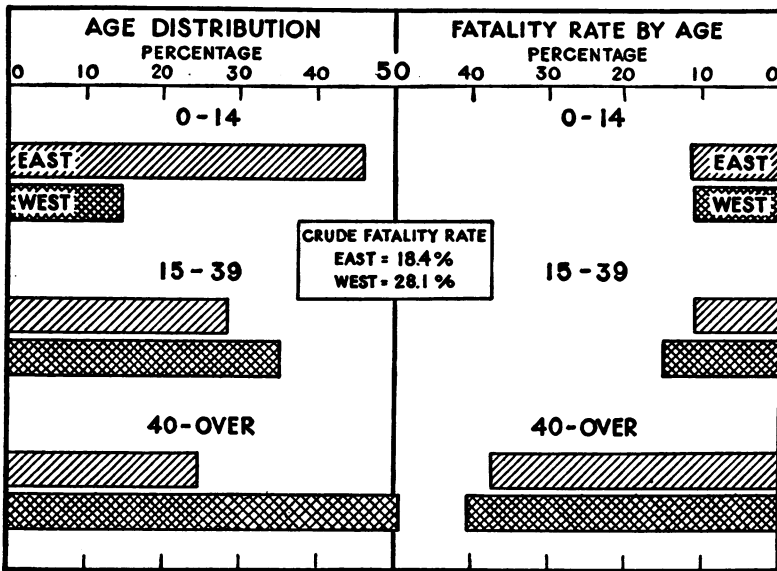


FIGURE 1.—Rocky Mountain spotted fever, eastern and western cases.

TABLE 1.—Rocky Mountain spotted fever. Cases occurring in certain western and eastern States, by age and fatality rate

| State          | Number of cases | Number of deaths | Fatality rate | Under 15 years |                  |        |               | 15-39 years |                  |        |               | 40 and over |                  |        |               |
|----------------|-----------------|------------------|---------------|----------------|------------------|--------|---------------|-------------|------------------|--------|---------------|-------------|------------------|--------|---------------|
|                |                 |                  |               | Cases          | Percent of total | Deaths | Fatality rate | Cases       | Percent of total | Deaths | Fatality rate | Cases       | Percent of total | Deaths | Fatality rate |
| West:          |                 |                  |               |                |                  |        |               |             |                  |        |               |             |                  |        |               |
| Idaho .....    | 293             | 101              | 34.4          | 27             | 9.2              | 7      | 25.9          | 108         | 36.8             | 22     | 20.3          | 158         | 53.9             | 72     | 45.5          |
| Montana .....  | 454             | 109              | 24.0          | 81             | 17.8             | 6      | 7.4           | 156         | 34.3             | 18     | 11.5          | 217         | 47.8             | 85     | 39.1          |
| Total .....    | 747             | 210              | 28.1          | 108            | 14.4             | 13     | 12.0          | 264         | 35.3             | 40     | 15.1          | 375         | 50.2             | 157    | 41.8          |
| East:          |                 |                  |               |                |                  |        |               |             |                  |        |               |             |                  |        |               |
| Maryland ..... | 330             | 66               | 20.0          | 155            | 46.9             | 19     | 12.2          | 85          | 25.7             | 13     | 15.2          | 90          | 27.2             | 34     | 37.7          |
| Virginia ..... | 331             | 56               | 16.9          | 155            | 46.8             | 21     | 13.5          | 104         | 31.4             | 8      | 7.6           | 72          | 21.7             | 27     | 37.5          |
| Total .....    | 661             | 122              | 18.4          | 310            | 46.8             | 40     | 12.9          | 189         | 28.5             | 21     | 11.1          | 162         | 24.5             | 61     | 37.6          |

NOTE: All cases and deaths as reported to the State Health Officer; Montana, Idaho, and Maryland, 1930-39, inclusive; Virginia, 1933-39, inclusive.

TABLE 2.—Rocky Mountain spotted fever. Cases occurring in certain western and eastern States, by sex and age

| Sex          | Number of cases | Percent | Number of deaths | Rate | Under 15 years |                  |        |               | 15-39 years |                  |        |               | 40 and over |                  |        |               |
|--------------|-----------------|---------|------------------|------|----------------|------------------|--------|---------------|-------------|------------------|--------|---------------|-------------|------------------|--------|---------------|
|              |                 |         |                  |      | Cases          | Percent of total | Deaths | Fatality rate | Cases       | Percent of total | Deaths | Fatality rate | Cases       | Percent of total | Deaths | Fatality rate |
| West:        |                 |         |                  |      |                |                  |        |               |             |                  |        |               |             |                  |        |               |
| Male .....   | 624             | 83.5    | 182              | 29.1 | 55             | 7.3              | 5      | 9.0           | 239         | 31.9             | 32     | 13.3          | 330         | 44.1             | 145    | 43.9          |
| Female ..... | 123             | 16.5    | 28               | 22.7 | 53             | 7.0              | 8      | 15.0          | 25          | 3.3              | 8      | 32.0          | 45          | 6.0              | 12     | 26.6          |
| Total .....  | 747             |         | 210              | 28.1 | 108            | 14.4             | 13     | 12.0          | 264         | 35.3             | 40     | 15.1          | 375         | 50.2             | 157    | 41.8          |
| East:        |                 |         |                  |      |                |                  |        |               |             |                  |        |               |             |                  |        |               |
| Male .....   | 401             | 60.6    | 83               | 20.6 | 170            | 25.7             | 23     | 13.5          | 124         | 18.7             | 17     | 13.7          | 107         | 16.1             | 43     | 40.1          |
| Female ..... | 260             | 39.4    | 39               | 15.0 | 140            | 21.2             | 17     | 12.1          | 65          | 9.8              | 4      | 6.1           | 55          | 8.3              | 18     | 32.7          |
| Total .....  | 661             |         | 122              | 18.4 | 310            | 46.8             | 40     | 12.9          | 189         | 28.5             | 21     | 11.1          | 162         | 24.5             | 61     | 37.6          |

## DISCUSSION AND SUMMARY

Although it is realized that there are inherent inaccuracies in the data presented, it is believed that they are sufficiently reliable to show rather clearly certain interesting facts concerning the epidemiology of Rocky Mountain spotted fever. The first is the high percentage of infections among children in the East and among males 40 years of age and over in the West. There are several possible explanations of this difference in incidence. It may be due merely to the amount of tick exposure among persons of the different age and sex groups. In the East only a small percentage of the total adult male population is engaged in occupations which would bring them into contact with the vector. In that area, many persons would be exposed to ticks only during recreational activities, while in the West a large percentage of the total adult male population is engaged in occupations which would expose them to tick contacts. In both areas children would be exposed to ticks while playing, but, since the East is more densely populated, more children in that area would be exposed to risk of infection.

Another possible explanation might be concerned with the biology of the two ticks in question, *D. andersoni* in the West and *D. variabilis* in the East. The hosts for the adults of both species are the larger mammals. The West, with large numbers of large wild mammals such as deer, elk, mountain goats, and the like, may be more heavily infested with ticks in areas removed from habitation. The hosts of *D. variabilis* are mainly domesticated animals, such as the dog, horse, cow, etc., and, therefore, tick infestation may be greater about the areas of habitation. If this were true, adult males in the West in the course of rural occupations in these remote areas would risk tick exposure more frequently than persons of any other age group. But in the East, children at play about their homes would represent the group with the greatest exposure. The actual explanation of age and sex distribution of cases of Rocky Mountain spotted fever in the two areas is not known and may represent a combination of several such factors.

The question of virulence of spotted fever has been discussed by various writers. Large local variations in case fatality rates have been reported, ranging from 70 to 80 percent for western Montana to about 5 percent for certain areas in Idaho. The data here reported represent relatively large numbers and local differences in case fatality rates do not appear. However, since the figures were collected in a comparable manner in the two areas, the differences or the lack of differences should be significant. If the reported cases with either high or low fatality rates represented an appreciable percentage of the total cases, then this should be reflected in the final figures. If it is

assumed that the figures for the West represent only an average for several local areas of high virulence plus several areas of low virulence, then the same assumption holds for the two eastern States. In any event, the data presented warrant the statement that for the period studied Rocky Mountain spotted fever is as fatal a disease in Maryland and Virginia as it is in Montana and Idaho for cases of the disease in comparable age groups.

#### REFERENCES

- (1) a. Parker, R. R.: Rocky Mountain spotted fever. *J. Am. Med. Assoc.*, 110: 1185-1188; 1273-1278 (April 9, 16, 1938).  
b. Parker, R. R.: Certain phases of the problem of Rocky Mountain spotted fever. *Arch. Path.*, 15: 398-429 (March 1933).
- (2) Topping, Norman H., and Dyer, R. E.: A highly virulent strain of Rocky Mountain spotted fever virus isolated in the eastern United States. *Pub. Health Rep.*, 55: 728-731 (April 26, 1940).
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- (4) Topping, Norman H.: A strain of Rocky Mountain spotted fever virus of low virulence isolated in the western United States. In press.

### PUBLIC HEALTH SERVICE PUBLICATIONS

#### A List of Publications Issued During the Period January-June 1941

The following is a list of publications of the United States Public Health Service issued during the period January-June 1941.

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

Those publications marked with an asterisk (\*) may be obtained only by purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices noted.

#### Periodicals

- \*Public Health Reports (weekly), January-June, vol. 56, nos. 1 to 26, pages 1 to 1349. 5 cents a number.
- \*Venereal Disease Information (monthly), January-June, vol. 22, nos. 1 to 6, pages 1 to 231. 5 cents a number.
- \*Journal of the National Cancer Institute (bimonthly), August-April, vol. 1, nos. 1 to 5, pages 1 to 725. 40 cents a number.

#### Reprints from the Public Health Reports

- 2221. Mental hygiene in the State health department. By Victor H. Vogel. January 3, 1941. 10 pages.
- 2222. Directory of State and insular health authorities, 1940. January 3, 1941. 14 pages.

2223. Summary of physical findings on men drafted in the World War. By Rollo H. Britten and George St. J. Perrott. January 10, 1941. 22 pages.
2224. Report of a new type of pneumococcus which crosses with types X, XI, XX, XXIX, and XXXI antipneumococcic serums. By Alice L. Chinn and Bernice E. Eddy. January 10, 1941. 14 pages.
2225. A study of certain factors which influence the determination of the mouse protective action of meningococcus antiserum. By Margaret Pittman. January 17, 1941. 18 pages.
2226. An institutional outbreak of pneumonitis. III. Histopathology in man and rhesus monkeys in the pneumonitis due to the virus of "Q" fever. By R. D. Lillie, T. L. Perrin, and Charles Armstrong. January 24, 1941. 7 pages; 2 plates.
2227. Principal provisions of smallpox vaccination laws and regulations in the United States. By William Fowler. January 31, 1941. 23 pages.
2228. Procedure for the maintenance of housing standards in Milwaukee. By Charles L. Senn. January 31, 1941. 9 pages.
2229. Qualifications of professional public health personnel. III. Nurses. By Mayhew Derryberry and George Caswell. February 7, 1941. 19 pages.
2230. Note on the "most probable number" index as used in bacteriology. By J. M. DallaValle. February 7, 1941. 5 pages.
2231. Biological products. Establishments licensed for the propagation and sale of viruses, serums, toxins, and analogous products. February 7, 1941. 7 pages.
2232. Report on market milk supplies of certain urban communities, January 1, 1939-December 31, 1940. February 7, 1941. 5 pages.
2234. The response of peritoneal tissue to industrial dusts. By John W. Miller and R. R. Sayers. February 14, 1941. 9 pages.
2235. Immunological relationships between the rickettsiae of Australian and American "Q" fever. By Ida A. Bengtson. February 14, 1941. 10 pages.
2236. The inhibiting effect of urea on the microbiological assay of riboflavin. By Harris Isbell, J. G. Wooley, and H. F. Fraser. February 14, 1941. 4 pages.
2237. Qualifications of professional public health personnel. IV. Sanitation personnel. By Mayhew Derryberry and George Caswell. February 21, 1941. 17 pages.
2238. Studies on active and passive immunity in "Q" fever infected and immunized guinea pigs. By Ida A. Bengtson. February 21, 1941. 18 pages.
2239. Domestic water and dental caries. I. A dental caries study, including *L. acidophilus* estimations, of a population severely affected by mottled enamel and which for the past 12 years has used a fluoride-free water. By H. Trendley Dean, Philip Jay, Francis A. Arnold, Jr., and Elias Elvove. February 28, 1941. 17 pages.
2240. A further study of the Rorschach test applied to delinquents. By M. J. Pescor. February 28, 1941. 16 pages.
2241. *Ornithodoros vigueraei*, a new species of tick from bats in Cuba (Acarina: Ixodoidea). By R. A. Cooley and Glen M. Kohls. February 28, 1941. 4 pages; 1 plate.
2242. Carbon monoxide: its toxicity and potential dangers. March 7, 1941. 13 pages.
2243. Financial support of hospitals controlled by State and local governments. By Elliott H. Pennell, Joseph W. Mountin, and Kay Pearson. March 7, 1941. 13 pages.



2244. Qualifications of professional public health personnel. V. Laboratory workers. By Mayhew Derryberry and George Caswell. March 7, 1941. 10 pages.
2245. Alcoholism and public health. By Lawrence Kolb. March 14, 1941. 14 pages.
2246. Hospitals existing singly in counties have similar financial structure. By Joseph W. Mountin, Elliott H. Pennell, and Kay Pearson. March 14, 1941. 12 pages.
2247. Human riboflavin requirement estimated by urinary excretion of subjects on controlled intake. By W. H. Sebrell, Jr., R. E. Butler, J. G. Wooley, and Harris Isbell. March 14, 1941. 10 pages.
2248. Benzene (benzol): its toxicity and potential dangers. March 14, 1941. 8 pages.
2249. War and infectious disease. By Clara E. Councell. March 21, 1941. 27 pages.
2250. Carbon disulfide: its toxicity and potential dangers. March 21, 1941. 8 pages.
2251. Experimental poliomyelitis. The use of a variety of laboratory techniques in efforts to establish seven strains of poliomyelitis virus in the cotton rat. By S. D. Kramer and W. N. Mack, with the assistance of A. T. Himes. March 21, 1941. 6 pages.
2252. Three new species of *Ornithodoros* (Acarina: Ixodoidea). By R. A. Cooley and Glen M. Kohls. March 21, 1941. 8 pages; 2 plates.
2253. Illness and accidents among persons living under different housing conditions. Data based on the National Health Survey. By Rollo H. Britten and Isidore Altman. March 28, 1941. 32 pages.
2254. Factors influencing the efficacy of phenolized rabies vaccines. II. Virus content of vaccine. By Karl Habel. March 28, 1941. 9 pages.
2255. Complement fixation in endemic typhus fever. By Ida A. Bengtson. March 28, 1941. 5 pages.
2256. Hydrogen sulfide: its toxicity and potential dangers. April 4, 1941. 9 pages.
2257. Tissue factors in antirabies immunity of experimental animals. By Karl Habel. April 4, 1941. 11 pages.
2258. The incidence of cancer in Detroit and Wayne County, Michigan, 1937. By Arthur J. McDowell. April 4, 1941. 37 pages.
2259. Mobile laboratory units of the Ohio River Pollution Survey. By F. E. DeMartini. April 11, 1941. 7 pages; 2 plates.
2260. Domestic water and dental caries. II. A study of 2,832 white children, aged 12-14 years, of 8 suburban Chicago communities, including *Lactobacillus acidophilus* studies of 1,761 children. By H. Trendley Dean, Philip Jay, Francis A. Arnold, Jr., and Elias Elvove. April 11, 1941. 32 pages.
2261. The application of the human serum opacity reaction for evaluating the antitoxin binding power (Lb) of *Clostridium perfringens* (type A) toxoid. By S. C. Seal and Sarah E. Stewart. April 11, 1941. 8 pages.
2262. Disabling morbidity among industrial workers, final quarter of 1940, with an index of the previous publications of this series. By William M. Gafafer. April 11, 1941. 4 pages.
2263. Mechanical aids for stream surveys. By C. T. Carnahan. April 18, 1941. 7 pages; 4 plates.

2264. Studies on immunizing substances in pneumococci. XI. Effect of variation in dosage of antigenic polysaccharide on serum antibody titer in human beings. By Lloyd D. Felton, W. Ross Cameron, and Perry Franklin Prather. April 18, 1941. 16 pages.
2265. Studies on trichinosis. XIII. The incidence of human infection with trichinae as indicated by post-mortem examination of 3,000 diaphragms from Washington, D. C., and five eastern seaboard cities. By K. B. Kerr, Leon Jacobs, and Eugenia Cuvillier. April 18, 1941. 21 pages.
2266. Recent developments relating to public health interest in housing. By John C. Leukhardt. April 25, 1941. 4 pages.
2267. Prevalence of poliomyelitis in the United States in 1940. By C. C. Dauer. April 25, 1941. 9 pages.
2268. A preliminary survey of the anopheline mosquito fauna of southeastern Minnesota and adjacent Wisconsin areas. By Richard H. Daggy, Oswald J. Muegge, and William A. Riley. April 25, 1941. 13 pages; 1 plate.
2269. Post-sanatorium tuberculosis survival rates in Minnesota. By H. E. Hilleboe. April 25, 1941. 13 pages.
2270. Choriomeningitis virus infection without central nervous system manifestations. Report of a case. By Charles Armstrong and J. W. Hornibrook. April 25, 1941. 4 pages.
2271. Further new species of *Ornithodoros* from bats (Acarina: Argasidae). By R. A. Cooley and Glen M. Kohls. April 25, 1941. 5 pages; 1 plate.
2272. The Dick reaction and scarlet fever morbidity following injections of a purified and tannic acid precipitated erythrogenic toxin. By M. V. Veldee, E. C. Peck, J. P. Franklin, and H. R. DuPuy. May 2, 1941. 18 pages.
2273. Bactericidal effect of the paraffining of paperboard used for paper milk containers. By Frederic J. Moss, Robert C. Thomas, and Mildred K. Havens. May 2, 1941. 13 pages; 1 plate.
2274. Special problems in our health defenses. By Paul V. McNutt. May 9, 1941. 5 pages.
2275. A clinical study of poliomyelitis in Charleston County, South Carolina, 1939. By Dorland J. Davis, Francis J. Weber, and Margaret S. Arey. May 9, 1941. 11 pages.
2276. Causes of physical disqualification under the Selective Service Law. Early indications. By Rollo H. Britten and George St. J. Perrott. May 9, 1941. 5 pages.
2277. A portable unit for the determination of halogenated hydrocarbons. By H. C. Dudley. May 9, 1941. 7 pages.
2278. Tannic acid treatment of poison ivy (*Rhus* spp.) dermatitis. By Louis Schwartz and Leon H. Warren. May 16, 1941. 3 pages; 1 plate.
2279. Studies on immunizing substances in pneumococci. XII. Comparison of the effect of whole-cell vaccine and of polysaccharide antigen in human beings. By Lloyd D. Felton, Carl F. Jordan, E. N. Hesbacher, and Ellis K. Vaubel. May 16, 1941. 14 pages.
2280. An outbreak of psittacosis at the National Zoological Park, Washington, D. C. By T. H. Tomlinson, Jr. May 23, 1941. 9 pages.
2281. Quantitative studies of the tuberculin reaction. I. Titration of tuberculin sensitivity and its relation to tuberculous infection. By Michael L. Furcolow, Barbara Hewell, Waldo E. Nelson, and Carroll E. Palmer. May 23, 1941. 19 pages.
2282. The responsibility of the nursing profession in industrial hygiene. By J. J. Bloomfield. May 30, 1941. 11 pages.

2283. The incidence of cancer in New Orleans, La., 1937. By Arthur J. McDowell. May 30, 1941. 30 pages.
2284. State and territorial health officers confer on health defenses. June 6, 1941. 24 pages.
2285. The National Nutrition Conference. June 13, 1941. 23 pages.
2286. Cirrhosis of the liver in rats on a deficient diet and the effect of alcohol. By R. D. Lillie, F. S. Daft, and W. H. Sebrell, Jr. June 13, 1941. 4 pages; 1 plate.
2287. Radio pratique at the port of New York. June 20, 1941. 9 pages.
2288. The growth and effects of the tubercle bacillus on the chorio-allantoic membrane of the chick embryo: a method for studies in chemotherapy. By E. W. Emmart and M. I. Smith. June 20, 1941. 10 pages; 4 plates.
2289. Medical evaluation of nutritional status. IV. The ocular manifestations of avitaminosis A, with especial consideration of the detection of early changes by biomicroscopy. By H. D. Kruse. June 27, 1941. 24 pages.

#### Supplement to the Public Health Reports

163. The notifiable diseases. Prevalence during 1939 in States. 1941. 14 pages.

#### Reprints from Venereal Disease Information

134. Survey of venereal diseases in the District of Columbia. By Lida J. Usilton and George C. Ruhland. Vol. 21, August 1940. 11 pages.
135. Medical and social research in the treatment and control of gonorrhea. By Rogers Deakin, Morris S. Wortman, and John V. Lawrence. Vol. 21, August 1940. 10 pages.
136. Malaria and artificial fever in the treatment of paresis. By Paul A. O'Leary, Walter L. Breutsch, Franklin G. Ebaugh, Walter M. Simpson, Harry C. Solomon, Stafford L. Warren, R. A. Vonderlehr, Lida J. Usilton, and I. V. Sollins. Vol. 21, September 1940. 10 pages.
138. Prophylaxis. Report of special joint committee. By H. H. Hazen, Ira V. Hiscock, P. S. Pelouze, William F. Snow, Hans Zinsser, and Ray H. Everett. Vol. 21, October 1940. 3 pages.
139. Why don't we stamp out gonorrhea? By N. A. Nelson. Vol. 21, October 1940. 7 pages.
140. A limited survey of public opinion on syphilis. By Morris S. Wortman. Vol. 21, October 1940. 7 pages.
141. Studies in the epidemiology of syphilis. I. Material on which epidemiologic studies are based. II. Contact investigation. By E. Gurney Clark. Vol. 21, November 1940. 21 pages.
142. Social hygiene. By N. A. Nelson. Vol. 21, December 1940. 9 pages.
143. Purification of antigen for microscopic slide precipitation tests for syphilis. By B. S. Kline. Vol. 21, December 1940. 3 pages.
144. Severe reactions to arsphenamine. By J. R. Waugh and Elizabeth Milovich. Vol. 21, December 1940. 6 pages.
145. Studies in the epidemiology of syphilis. III. Conjugal syphilis. By Louis J. Klingbeil and E. Gurney Clark. Vol. 22, January 1941. 6 pages.
146. Studies in the epidemiology of syphilis. IV. The value of patient education. By H. H. Cowper and E. Gurney Clark. Vol. 22, January 1941. 5 pages.
147. Purification of the antigen of syphilis. By John W. Wellman and Herman P. Laukelma. Vol. 22, January 1941. 3 pages.
148. Prince Albert Morrow, M. D. By Edward L. Keyes. Vol. 22, February 1941. 5 pages.

149. Syphilis and gonorrhea control. By C. C. Pierce. Vol. 22, February 1941. 10 pages.
150. Progress in the control of venereal diseases in Virginia. By Otis L. Anderson. Vol. 22, March 1941. 12 pages.
151. Extragenital chancroid. By Robert Brandt, Everett S. Sanderson, and David V. Hicks. Vol. 22, March 1941. 2 pages.
152. The biochemistry of the gonococcus and its practical importance. By Wolfgang A. Casper. Vol. 22, April 1941. 5 pages.
153. The effect of sodium thiosulfate on excretion of arsenic. By E. T. Ceder, Leo Zon, and Mary E. Klinger. Vol. 22, April 1941. 6 pages.

#### Supplements to Venereal Disease Information

13. The newer chemotherapy of venereal diseases. A symposium. 42 pages.
14. Modern serologic tests for syphilis and their interpretation by the physician. 81 pages.

#### Venereal Disease Folders

4. The doctor says. 8 pages.
7. Venereal disease and national defense. 8 pages.

#### Venereal Disease Posters

12. Syphilitic mothers—untreated and treated.
13. Know for sure. Get a blood test.

#### Reprints From the Journal of the National Cancer Institute

1. The Federal cancer control program. By Carl Voegtlin and R. R. Spencer. August 1940. 9 pages.
2. The approaches to cancer research. By Carl Voegtlin. August 1940. 5 pages.
3. Intestinal carcinoma and other lesions in mice following oral administration of 1, 2, 5, 6-dibenzanthracene and 20-methylcholanthrene. By Egon Lorenz and Harold L. Stewart. August 1940. 24 pages; 5 plates.
4. Relative importance of local and constitutional effects of methylcholanthrene in production of skin tumors in the mouse. By G. Burroughs Mider and John J. Morton. August 1940. 4 pages.
5. Studies in carcinogenesis. XII. Effect of the basic fraction of creosote oil on the production of tumors in mice by chemical carcinogens. By Robert D. Sall and M. J. Shear, with the assistance of Joseph Leiter and Adrien Perrault. August 1940. 11 pages.
6. Comparative carcinogenicity of three carcinogenic hydrocarbons. By Michael B. Shimkin and Howard B. Andervont. August 1940. 6 pages.
7. The effect of variation in oxygen tension and sulfhydryl concentration on nuclear growth and fission in *Amoeba proteus*. By H. W. Chalkley and Carl Voegtlin. August 1940. 13 pages.
8. Chemical studies on the components of normal and neoplastic tissues. I. Viscosity and streaming birefringence of sodium thymonucleate. By Jesse P. Greenstein, with the technical assistance of Wendell V. Jenrette. August 1940. 14 pages.
9. Chemical studies on the components of normal and neoplastic tissues. II. The nucleoprotein fraction of normal animal liver. By Jesse P. Greenstein, with the technical assistance of Wendell V. Jenrette. August 1940. 14 pages.

10. Lung tumors and heredity. I. The susceptibility of four inbred strains of mice and their hybrids to pulmonary tumors induced by subcutaneous injection. By W. E. Heston. August 1940. 7 pages.
11. Glutamic acid from normal and cancerous tissue. By J. M. Johnson. August 1940. 5 pages.
12. Carcinogenic potency of stilbestrol and estrone in strain C<sub>3</sub>H mice. By Michael B. Shimkin and Hugh G. Grady. August 1940. 10 pages; 6 plates.
13. Effect of carcinogens on small free-living organisms. I. *Eberthella typhi*. By R. R. Spencer and M. B. Melroy. October 1940. 8 pages.
14. Further studies on the susceptibility of hybrid mice to induced and spontaneous tumors. By H. B. Andervont. October 1940. 13 pages.
15. The influence of foster nursing upon the incidence of spontaneous mammary cancer in resistant and susceptible mice. By H. B. Andervont. October 1940. 9 pages.
16. Breast cancer in mice as influenced by nursing. By John J. Bittner. October 1940. 16 pages.
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18. The complement-fixing capacity of the rabbit-papilloma-virus protein. By W. Ray Bryan, Dorothy W. Beard, and J. W. Beard. October 1940. 9 pages.
19. The rate of turnover of the lecithins and cephalins of carcinosarcoma 256 as measured by radioactive phosphorus. By Frances L. Haven. October 1940. 7 pages.
20. Biologic testing of carcinogens. I. Subcutaneous injection technique. By Michael B. Shimkin. October 1940. 15 pages.
21. Biologic testing of carcinogens. II. Pulmonary-tumor-induction technique. By Howard B. Andervont and Michael B. Shimkin. October 1940. 17 pages; 3 plates.
22. Induced pulmonary tumors in mice. III. The role of chronic irritation in the production of pulmonary tumors in strain A mice. By Michael B. Shimkin and Joseph Leiter. October 1940. 16 pages; 6 plates.
23. The action of 2-amino-5-azotoluene in the production of liver tumors of rats and the behavior of these tumors in vitro. By Emily W. Emmart. October 1940. 20 pages; 5 plates.
24. Squamous cell carcinoma and other lesions of the forestomach in mice, following oral administration of 20-methylcholanthrene and 1, 2, 5, 6-dibenzanthracene. By Egon Lorenz and Harold L. Stewart. October 1940. 6 pages; 3 plates.
25. Radiation and the cell. By Paul S. Henshaw. December 1940. 14 pages.
26. Studies in carcinogenesis. XIII. Splenic and hepatic tumors in mice following the introduction of hydrocarbons into the spleen and liver. By M. J. Shear, Harold L. Stewart, and Arnold Seligman. December 1940. 12 pages; 7 plates.
27. Studies in carcinogenesis. XIV. 3-substituted and 10-substituted derivatives of 1, 2-benzanthracene. By M. J. Shear and Joseph Leiter, with the assistance of Adrien Perrault. December 1940. 34 pages.
28. Retardation of growth of the rat ingesting p-dimethylaminoazobenzene (butter yellow). I. The effect of various dietary supplements. By Julius White. December 1940. 5 pages.
29. Effect of carcinogens on small free-living organisms. II. Survival value of methylcholanthrene adapted paramecium. By R. R. Spencer and M. B. Melroy. December 1940. 6 pages.

30. Tumors in mice injected with colloidal thorium dioxide. By H. B. Andervont and M. B. Shimkin. December 1940. 5 pages; 3 plates.
31. Preparation of dispersions of carcinogenic hydrocarbons and hormones with the aid of dioctyl ester of sodium sulfosuccinate (Aerosol O. T.). By Egon Lorenz, Michael B. Shimkin, and Harold L. Stewart. December 1940. 6 pages.
32. Effect of colchicine and bacterial products upon transplantable and spontaneous tumors in mice. By H. B. Andervont. December 1940. 6 pages.
33. Chemical studies on the components of normal and neoplastic tissues. III. The composition and amphoteric properties of the nucleoprotein fraction of the Jensen rat sarcoma. By Jesse P. Greenstein, J. W. Thompson, and Wendell V. Jenrette. December 1940. 10 pages.
34. Chemical studies on the components of normal and neoplastic tissues. IV. The melanin-containing pseudoglobulin of the malignant melanoma of mice. By Jesse P. Greenstein, Floyd C. Turner, and Wendell V. Jenrette. December 1940. 9 pages.
35. The influence of genetic constitution upon the induction of resistance to transplantable mouse tumors. By Morris K. Barrett. December 1940. 7 pages.
36. Convenient inexpensive device for quantitative hand feeding of mice. By Harold P. Morris and J. W. Thompson. December 1940. 2 pages; 2 plates.
37. Sunlight and cancer of the skin. By Harold F. Blum. December 1940. 25 pages.
38. Trend and geographic variation in cancer mortality and prevalence, with special reference to gastric cancer. By Selwyn D. Collins, Mary Gover, and Harold F. Dorn. February 1941. 25 pages.
40. Experimental observations on achlorhydria of gastric cancer. By Alexander Brunschwig, Robert L. Schmitz, and Richard Rasmussen. February 1941. 8 pages.
41. Hyperplastic and neoplastic lesions of the stomach in mice. By Harold L. Stewart. February 1941. 21 pages; 12 plates.
42. Gastric cancer as a sequel to gastritis, particularly the gastritis of pernicious anemia. By C. P. Rhoads. February 1941. 12 pages.
43. The use of clinical material for the investigation of gastric cancer. By Mont R. Reid. February 1941. 15 pages.
44. A program for the study of cancer of the stomach. By Carl Voegtlin. February 1941. 20 pages.
45. Experimental gastric carcinoma: A critical review with comments on the criteria of induced malignancy. By Alfred J. Klein and Walter Lincoln Palmer. February 1941. 26 pages.

#### Public Health Bulletins

260. The prevalence of disabling illness among male and female workers and housewives. By David E. Hailman. 1941. 40 pages.
261. Urban housing and crowding. Relation to certain population characteristics as indicated by National Health Survey data. By Rollo H. Britten and J. E. Brown. 1941. 123 pages.
262. The control of the lead hazard in the storage battery industry. By Waldemar C. Dreessen, Thomas I. Edwards, Warren H. Reinhart, Richard T. Page, Stewart H. Webster, David W. Armstrong, and R. R. Sayers. 1941. 138 pages; 24 halftones.

263. **Mercurialism and its control in the felt-hat industry.** By Paul A. Neal, Robert H. Flinn, Thomas I. Edwards, Warren H. Reinhart, J. Walter Hough, J. M. DallaValle, Frederick H. Goldman, David W. Armstrong, Albert S. Gray, Allan L. Coleman, and B. F. Postman. 1941. 132 pages; 14 halftones.
264. **Medical and nursing services for the maternal cases of the National Health Survey.** By Jennie C. Goddard. 1941. 63 pages.
265. **Fatigue and hours of service of interstate truck drivers.** By Benjamin F. Jones, Robert H. Flinn, E. Cuyler Hammond, Wallace H. Wulfack, Richard H. Lee, D. D. Donahue, Heinz Specht, H. D. Baernstein, Ralph C. Channell, and J. Walter Hough. General supervision of R. R. Jones and R. R. Sayers. 1941. 286 pages; 12 halftones.
266. **Occupational and related dermatoses.** Abstracts from the literature for the years 1935 to 1939, inclusive. By Louis Schwartz and Leon H. Warren. 1941. 160 pages.
267. **A study of the effect of lead arsenate exposure on orchardists and consumers of sprayed fruit.** By Paul A. Neal, Waldemar C. Dreessen, Thomas I. Edwards, Warren H. Reinhart, Stewart H. Webster, Harold T. Castberg, and Lawrence T. Fairhall. 1941. 181 pages; 13 halftones.

#### National Institute of Health Bulletins

175. **Siphonaptera.** A study of the species infesting wild hares and rabbits of North America north of Mexico. By Glen M. Kohls. 1940. 34 pages; 3 plates.
177. **Pathology of Rocky Mountain spotted fever.** I. The pathology of Rocky Mountain spotted fever. II. The pathologic histology of Rocky Mountain spotted fever in the rhesus monkey *Macaca mulatta*. By R. D. Lillie. 1941. 59 pages; 36 halftones.

#### Workers Health Series

1. . . . but flu is tougher.
2. **Leonard's appendix—and how it burst.**

#### Posters

1. **Cancer.** Early diagnosis would save 50,000 lives every year.
2. **Cancer.** From 7th to 2nd place among the big killers—in the last 25 years.
3. **Cancer.** Only X-ray, radium, surgery, ever cured cancer.
4. **Cancer danger signals.**

#### Unnumbered Publications

- Index to Public Health Reports, volume 55, part 2, July–December 1940.** 18 pages.
- National Negro Health Week bulletin.** This pamphlet is published annually, usually about the middle of March, for community leaders in an effort to suggest ways and means by which interested individuals and organizations may be organized for a concerted and effective attack upon the community's disease problems. Twenty-seventh observance, March 30–April 6, 1941. 8 pages.
- National Negro Health Week poster.** Twenty-seventh observance, March 30–April 6, 1941.
- National Negro Health Week leaflet.** Twenty-seventh observance, March 30–April 6, 1941. 2 pages.

## Annual Report

Annual Report of the Surgeon General of the United States Public Health Service  
for the fiscal year 1940. 191 pages; 2 halftones.

## DEATHS DURING WEEK ENDED AUGUST 9, 1941

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

|   | Week ended<br>Aug. 9, 1941 | Correspond-<br>ing week,<br>1940 |
|---|----------------------------|----------------------------------|
| <b>Data from 88 large cities of the United States:</b>                    |                            |                                  |
| Total deaths.....   | 7,584                      | 7,210                            |
| Average for 3 prior years.....  | 7,266                      |                                  |
| Total deaths, first 32 weeks of year.....                                 | 277,697                    | 278,732                          |
| Deaths per 1,000 population, first 32 weeks of year, annual rate.....     | 12.1                       | 12.2                             |
| Deaths under 1 year of age.....   | 550                        | 481                              |
| Average for 3 prior years.....  | 484                        |                                  |
| Deaths under 1 year of age, first 32 weeks of year.....                   | 16,902                     | 16,171                           |
| <b>Data from industrial insurance companies:</b>                          |                            |                                  |
| Policies in force.....  | 64,409,728                 | 64,946,651                       |
| Number of death claims.....   | 11,901                     | 12,147                           |
| Death claims per 1,000 policies in force, annual rate.....                | 9.6                        | 9.8                              |
| Death claims per 1,000 policies, first 32 weeks of year, annual rate..... | 9.9                        | 10.0                             |



# PREVALENCE OF DISEASE

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

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED AUGUST 16, 1941

#### Summary

For the current week, 549 cases of poliomyelitis were reported in the United States, as compared with 422 for the preceding week and with the 1936-40 median of 343. The current rate of increase was the same as for last week—about 30 percent. The current figure is higher than that for the corresponding week of any other year since 1935, when 721 cases were reported.

More than one-half of the cases were reported from the South Atlantic and East South Central States, and these States, together with the Middle Atlantic group, reported approximately 72 percent of the total. The incidence continues low in the West Central, Mountain, and Pacific areas. The following 12 States reported 15 or more cases during the current week (last week's figures in parentheses): Alabama, 82 (80); Georgia, 69 (71); New York, 49 (30); Pennsylvania, 45 (17); Ohio, 37 (27); Tennessee, 37 (31); Illinois, 18 (8); New Jersey, 17 (13); Michigan, 16 (10); Maryland, 16 (11); North Carolina, 16 (10); and Kentucky, 15 (13).

North Dakota reported 340 cases of encephalitis, Minnesota 121, South Dakota 44, and Colorado 32. Approximately 700 cases, with about 55 deaths, have been reported in North Dakota since July 1. Twenty-two cases were reported in the Province of Manitoba, Canada, for the week ended August 15.<sup>1</sup>

One human case of plague was reported in California.

Of 166 cases of endemic typhus fever, 123 cases were reported in Texas and 24 cases in Georgia. Of 19 cases of Rocky Mountain spotted fever only 2 occurred in the Rocky Mountain States. Four cases of tularemia were reported in Utah.

The death rate for the current week in 88 large cities was 10.2 per 1,000 population, as compared with 10.6 for the preceding week and with a 3-year (1938-40) average of 10.1.

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<sup>1</sup> See p. 1721.

*Telegraphic morbidity reports from State health officers for the week ended August 16, 1941, and comparison with corresponding week of 1940 and 5-year median*

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

| Division and State | Diphtheria          |                     |                            | Influenza           |                     |                            | Measles             |                     |                            | Meningitis,<br>meningococcus |                     |                            |
|--------------------|---------------------|---------------------|----------------------------|---------------------|---------------------|----------------------------|---------------------|---------------------|----------------------------|------------------------------|---------------------|----------------------------|
|                    | Week ended—         |                     | Medi-<br>an<br>1936-<br>40 | Week ended—         |                     | Medi-<br>an<br>1936-<br>40 | Week ended—         |                     | Medi-<br>an<br>1936-<br>40 | Week ended—                  |                     | Medi-<br>an<br>1936-<br>40 |
|                    | Aug.<br>16,<br>1941 | Aug.<br>17,<br>1940 |                            | Aug.<br>16,<br>1941 | Aug.<br>17,<br>1940 |                            | Aug.<br>16,<br>1941 | Aug.<br>17,<br>1940 |                            | Aug.<br>16,<br>1941          | Aug.<br>17,<br>1940 |                            |
| NEW ENG.           |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Maine              | 0                   | 1                   | 0                          | -----               | 1                   | 1                          | 31                  | 15                  | 7                          | 1                            | 0                   | 0                          |
| New Hampshire      | 0                   | 0                   | 0                          | -----               | -----               | -----                      | 0                   | 1                   | 1                          | 0                            | 0                   | 0                          |
| Vermont            | 0                   | 0                   | 0                          | -----               | -----               | -----                      | 24                  | 12                  | 9                          | 0                            | 0                   | 0                          |
| Massachusetts      | 0                   | 6                   | 4                          | -----               | -----               | -----                      | 66                  | 97                  | 52                         | 1                            | 0                   | 1                          |
| Rhode Island       | 0                   | 0                   | 0                          | -----               | -----               | -----                      | 6                   | 11                  | 0                          | 0                            | 0                   | 0                          |
| Connecticut        | 1                   | 0                   | 0                          | -----               | 1                   | 1                          | 22                  | 11                  | 10                         | 0                            | 0                   | 0                          |
| MID. ATL.          |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| New York           | 11                  | 7                   | 17                         | 1 3                 | 16                  | 11                         | 134                 | 152                 | 127                        | 5                            | 4                   | 7                          |
| New Jersey         | 2                   | 7                   | 5                          | 2                   | 2                   | 3                          | 45                  | 64                  | 36                         | 0                            | 0                   | 0                          |
| Pennsylvania 1     | 3                   | 5                   | 14                         | -----               | -----               | -----                      | 91                  | 61                  | 53                         | 0                            | 2                   | 4                          |
| E. NO. CEN.        |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Ohio 1             | 2                   | 2                   | 8                          | 2                   | 5                   | 5                          | 35                  | 15                  | 15                         | 1                            | 0                   | 0                          |
| Indiana 1          | 3                   | 5                   | 5                          | 3                   | 1                   | 1                          | 7                   | 3                   | 5                          | 0                            | 0                   | 0                          |
| Illinois           | 7                   | 13                  | 13                         | -----               | 1                   | 2                          | 27                  | 27                  | 20                         | 0                            | 2                   | 1                          |
| Michigan 1         | 4                   | 0                   | 7                          | 2                   | -----               | -----                      | 39                  | 101                 | 36                         | 0                            | 0                   | 1                          |
| Wisconsin          | 0                   | 0                   | 1                          | 11                  | 8                   | 11                         | 101                 | 125                 | 37                         | 0                            | 0                   | 0                          |
| W. NO. CEN.        |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Minnesota          | 1                   | 0                   | 2                          | -----               | 1                   | 1                          | 2                   | 6                   | 6                          | 0                            | 0                   | 0                          |
| Iowa               | 2                   | 0                   | 3                          | 2                   | -----               | -----                      | 18                  | 15                  | 5                          | 0                            | 2                   | 1                          |
| Missouri           | 10                  | 2                   | 8                          | -----               | -----               | 22                         | 17                  | 0                   | 1                          | 0                            | 0                   | 0                          |
| North Dakota       | 0                   | 2                   | 0                          | 6                   | 5                   | 1                          | 16                  | 1                   | 1                          | 0                            | 0                   | 0                          |
| South Dakota       | 1                   | 1                   | 1                          | -----               | -----               | -----                      | 1                   | 2                   | 0                          | 0                            | 0                   | 0                          |
| Nebraska           | 0                   | 1                   | 1                          | -----               | -----               | -----                      | 0                   | 0                   | 2                          | 0                            | 1                   | 1                          |
| Kansas             | 4                   | 3                   | 3                          | 1                   | -----               | -----                      | 22                  | 14                  | 5                          | 1                            | 0                   | 1                          |
| SO. ATL.           |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Delaware           | 0                   | 0                   | 0                          | -----               | -----               | -----                      | 0                   | 0                   | 0                          | 0                            | 0                   | 0                          |
| Maryland 1         | 1                   | 1                   | 5                          | 1                   | -----               | -----                      | 40                  | 4                   | 4                          | 3                            | 0                   | 1                          |
| Dist. of Col. 1    | 1                   | 0                   | 1                          | 2                   | -----               | -----                      | 6                   | 1                   | 4                          | 0                            | 1                   | 1                          |
| Virginia 1         | 1                   | 6                   | 13                         | 42                  | 47                  | -----                      | 60                  | 33                  | 33                         | 2                            | 1                   | 1                          |
| West Virginia 1    | 4                   | 11                  | 8                          | 9                   | 7                   | 9                          | 22                  | 4                   | 4                          | 0                            | 0                   | 1                          |
| North Carolina     | 13                  | 6                   | 23                         | -----               | -----               | -----                      | 27                  | 2                   | 5                          | 2                            | 0                   | 1                          |
| South Carolina 1   | 5                   | 4                   | 5                          | 95                  | 145                 | 52                         | 36                  | 3                   | 3                          | 0                            | 0                   | 0                          |
| Georgia 1          | 12                  | 6                   | 20                         | 7                   | 7                   | -----                      | 29                  | 4                   | -----                      | 0                            | 0                   | 0                          |
| Florida 1          | 0                   | 1                   | 3                          | 2                   | 1                   | -----                      | 3                   | 1                   | 2                          | 1                            | 0                   | 0                          |
| E. SO. CEN.        |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Kentucky           | 2                   | 10                  | 8                          | 1                   | 8                   | 3                          | 21                  | 26                  | 8                          | 0                            | 2                   | 2                          |
| Tennessee          | 6                   | 5                   | 11                         | 27                  | 26                  | 11                         | 18                  | 5                   | 5                          | 2                            | 1                   | 1                          |
| Alabama 1          | 9                   | 9                   | 13                         | 11                  | 2                   | 5                          | 7                   | 13                  | 5                          | 0                            | 0                   | 0                          |
| Mississippi 1      | 8                   | 4                   | 9                          | -----               | -----               | -----                      | -----               | -----               | -----                      | 0                            | 1                   | 1                          |
| W. SO. CEN.        |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Arkansas           | 4                   | 5                   | 8                          | -----               | 4                   | 4                          | 36                  | 13                  | 6                          | 0                            | 0                   | 0                          |
| Louisiana 1        | 7                   | 6                   | 10                         | -----               | 1                   | 5                          | 1                   | 4                   | 4                          | 2                            | 0                   | 2                          |
| Oklahoma           | 0                   | 3                   | 4                          | 15                  | 3                   | 3                          | 6                   | 1                   | 1                          | 0                            | 0                   | 1                          |
| Texas 1            | 25                  | 27                  | 28                         | 320                 | 122                 | 45                         | 60                  | 47                  | 14                         | 1                            | 2                   | 2                          |
| MOUNTAIN           |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Montana 1          | 2                   | 1                   | 1                          | -----               | 3                   | 2                          | 5                   | 10                  | 10                         | 0                            | 0                   | 1                          |
| Idaho              | 0                   | 0                   | 0                          | -----               | -----               | -----                      | 3                   | 2                   | 2                          | 0                            | 0                   | 0                          |
| Wyoming 1          | 1                   | 1                   | 0                          | -----               | -----               | -----                      | 5                   | 1                   | 1                          | 0                            | 0                   | 0                          |
| Colorado           | 5                   | 4                   | 2                          | 9                   | 4                   | -----                      | 8                   | 5                   | 5                          | 1                            | 0                   | 0                          |
| New Mexico         | 0                   | 0                   | 1                          | 1                   | 1                   | -----                      | 21                  | 9                   | 8                          | 0                            | 0                   | 0                          |
| Arizona            | 1                   | 0                   | 1                          | 9                   | 9                   | 9                          | 12                  | 3                   | 3                          | 0                            | 0                   | 1                          |
| Utah 1             | 0                   | 0                   | 0                          | 3                   | -----               | -----                      | 7                   | 19                  | 9                          | 0                            | 0                   | 0                          |
| Nevada             | 0                   | -----               | -----                      | -----               | -----               | -----                      | 0                   | -----               | -----                      | 0                            | -----               | -----                      |
| PACIFIC            |                     |                     |                            |                     |                     |                            |                     |                     |                            |                              |                     |                            |
| Washington         | 1                   | 2                   | 1                          | -----               | -----               | -----                      | 4                   | 20                  | 11                         | 1                            | 0                   | 0                          |
| Oregon             | 0                   | 3                   | 1                          | 5                   | 3                   | 6                          | 8                   | 11                  | 7                          | 0                            | 1                   | 0                          |
| California         | 7                   | 7                   | 19                         | 25                  | 9                   | 10                         | 101                 | 54                  | 55                         | 1                            | 0                   | 3                          |
| Total              | 166                 | 177                 | 316                        | 616                 | 433                 | 324                        | 1,250               | 1,028               | 879                        | 25                           | 20                  | 49                         |
| 33 weeks           | 7,626               | 8,865               | 13,743                     | 599,872             | 169,222             | 151,650                    | 830,447             | 228,492             | 270,050                    | 1,416                        | 1,158               | 2,163                      |

See footnotes at end of table.

*Telegraphic morbidity reports from State health officers for the week ended August 16, 1941, and comparison with corresponding week of 1940 and 5-year median—Con.*

| Division and State    | Poliomyelitis |               |                 | Scarlet fever |               |                 | Smallpox      |               |                 | Typhoid and para-typhoid fever |               |                 |
|-----------------------|---------------|---------------|-----------------|---------------|---------------|-----------------|---------------|---------------|-----------------|--------------------------------|---------------|-----------------|
|                       | Week ended—   |               | Med-ian 1936-40 | Week ended—   |               | Med-ian 1936-40 | Week ended—   |               | Med-ian 1936-40 | Week ended—                    |               | Med-ian 1936-40 |
|                       | Aug. 16, 1941 | Aug. 17, 1940 |                 | Aug. 16, 1941 | Aug. 17, 1940 |                 | Aug. 16, 1941 | Aug. 17, 1940 |                 | Aug. 16, 1941                  | Aug. 17, 1940 |                 |
| NEW ENG.              |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Maine.....            | 0             | 3             | 3               | 0             | 4             | 2               | 0             | 0             | 0               | 0                              | 0             | 0               |
| New Hampshire.....    | 0             | 0             | 0               | 2             | 2             | 1               | 0             | 0             | 0               | 1                              | 0             | 0               |
| Vermont.....          | 2             | 0             | 0               | 0             | 5             | 3               | 0             | 0             | 0               | 0                              | 0             | 0               |
| Massachusetts.....    | 11            | 3             | 3               | 40            | 18            | 25              | 0             | 0             | 0               | 10                             | 2             | 2               |
| Rhode Island.....     | 2             | 2             | 0               | 1             | 0             | 0               | 0             | 0             | 0               | 1                              | 2             | 1               |
| Connecticut.....      | 7             | 3             | 3               | 1             | 3             | 6               | 0             | 0             | 0               | 0                              | 0             | 2               |
| MID. ATL.             |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| New York.....         | 49            | 9             | 9               | 38            | 55            | 55              | 0             | 0             | 0               | 15                             | 11            | 25              |
| New Jersey.....       | 17            | 1             | 4               | 25            | 21            | 20              | 0             | 0             | 0               | 1                              | 8             | 8               |
| Pennsylvania 1.....   | 45            | 3             | 5               | 42            | 40            | 53              | 0             | 0             | 0               | 14                             | 18            | 18              |
| E. NO. CEN.           |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Ohio 1.....           | 37            | 36            | 11              | 34            | 38            | 40              | 0             | 0             | 1               | 14                             | 10            | 16              |
| Indiana 2.....        | 3             | 58            | 2               | 6             | 14            | 14              | 1             | 0             | 2               | 7                              | 6             | 8               |
| Illinois.....         | 18            | 7             | 9               | 31            | 52            | 64              | 2             | 1             | 2               | 6                              | 11            | 19              |
| Michigan 2.....       | 16            | 41            | 21              | 32            | 37            | 65              | 0             | 1             | 1               | 8                              | 3             | 14              |
| Wisconsin.....        | 5             | 2             | 1               | 28            | 30            | 34              | 1             | 0             | 1               | 0                              | 1             | 1               |
| W. NO. CEN.           |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Minnesota.....        | 14            | 5             | 5               | 10            | 18            | 19              | 0             | 0             | 0               | 1                              | 3             | 1               |
| Iowa.....             | 5             | 25            | 2               | 9             | 16            | 15              | 1             | 2             | 2               | 4                              | 1             | 3               |
| Missouri.....         | 4             | 11            | 1               | 8             | 1             | 13              | 4             | 0             | 2               | 22                             | 6             | 22              |
| North Dakota.....     | 0             | 4             | 0               | 1             | 2             | 2               | 0             | 0             | 1               | 0                              | 0             | 0               |
| South Dakota.....     | 0             | 3             | 1               | 2             | 5             | 7               | 0             | 0             | 0               | 0                              | 0             | 1               |
| Nebraska.....         | 0             | 2             | 1               | 1             | 0             | 4               | 0             | 0             | 0               | 0                              | 3             | 1               |
| Kansas.....           | 1             | 30            | 3               | 12            | 21            | 21              | 0             | 0             | 0               | 2                              | 4             | 4               |
| SO. ATL.              |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Delaware.....         | 2             | 0             | 0               | 0             | 1             | 1               | 0             | 0             | 0               | 0                              | 2             | 1               |
| Maryland 2 1.....     | 16            | 0             | 1               | 7             | 8             | 9               | 0             | 0             | 0               | 4                              | 5             | 9               |
| Dist. of Col. 2.....  | 8             | 0             | 3               | 7             | 2             | 2               | 0             | 0             | 0               | 0                              | 1             | 3               |
| Virginia 2.....       | 7             | 9             | 1               | 15            | 6             | 6               | 0             | 0             | 0               | 8                              | 9             | 18              |
| West Virginia 2.....  | 0             | 31            | 2               | 11            | 12            | 11              | 0             | 0             | 0               | 12                             | 15            | 15              |
| North Carolina.....   | 16            | 3             | 5               | 16            | 14            | 19              | 0             | 0             | 0               | 13                             | 11            | 22              |
| South Carolina 4..... | 11            | 0             | 0               | 4             | 2             | 1               | 2             | 0             | 0               | 20                             | 14            | 14              |
| Georgia 4.....        | 69            | 1             | 2               | 6             | 9             | 9               | 0             | 0             | 0               | 11                             | 24            | 24              |
| Florida.....          | 10            | 2             | 3               | 0             | 0             | 0               | 0             | 0             | 0               | 1                              | 0             | 1               |
| E. SO. CEN.           |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Kentucky.....         | 15            | 19            | 4               | 7             | 15            | 21              | 0             | 0             | 0               | 23                             | 19            | 41              |
| Tennessee.....        | 37            | 3             | 3               | 7             | 15            | 15              | 1             | 0             | 0               | 13                             | 21            | 30              |
| Alabama.....          | 82            | 3             | 3               | 12            | 12            | 12              | 0             | 1             | 0               | 2                              | 13            | 17              |
| Mississippi 2 4.....  | 11            | 0             | 2               | 4             | 0             | 2               | 0             | 0             | 0               | 23                             | 14            | 7               |
| W. SO. CEN.           |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Arkansas.....         | 4             | 2             | 1               | 2             | 11            | 6               | 0             | 0             | 0               | 14                             | 13            | 18              |
| Louisiana 4.....      | 3             | 4             | 2               | 3             | 5             | 5               | 0             | 0             | 0               | 15                             | 36            | 21              |
| Oklahoma.....         | 0             | 9             | 1               | 3             | 7             | 6               | 0             | 0             | 0               | 9                              | 27            | 27              |
| Texas 4.....          | 3             | 8             | 8               | 11            | 17            | 17              | 0             | 0             | 0               | 46                             | 75            | 56              |
| MOUNTAIN              |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Montana 2.....        | 1             | 7             | 0               | 10            | 4             | 8               | 0             | 0             | 0               | 0                              | 0             | 2               |
| Idaho.....            | 0             | 0             | 0               | 3             | 1             | 1               | 0             | 0             | 0               | 1                              | 0             | 2               |
| Wyoming 2.....        | 1             | 0             | 0               | 0             | 0             | 0               | 0             | 0             | 0               | 0                              | 0             | 0               |
| Colorado.....         | 0             | 0             | 2               | 2             | 10            | 10              | 0             | 1             | 0               | 3                              | 2             | 1               |
| New Mexico.....       | 0             | 1             | 1               | 3             | 1             | 4               | 0             | 0             | 0               | 10                             | 2             | 5               |
| Arizona.....          | 0             | 0             | 0               | 0             | 0             | 1               | 0             | 0             | 0               | 2                              | 0             | 2               |
| Utah 2.....           | 3             | 1             | 0               | 2             | 5             | 5               | 0             | 0             | 0               | 0                              | 1             | 0               |
| Nevada.....           | 0             | —             | —               | 0             | —             | —               | 0             | —             | —               | 0                              | —             | —               |
| PACIFIC               |               |               |                 |               |               |                 |               |               |                 |                                |               |                 |
| Washington.....       | 4             | 13            | 3               | 18            | 8             | 8               | 0             | 0             | 0               | 3                              | 4             | 4               |
| Oregon.....           | 3             | 4             | 2               | 4             | 5             | 8               | 0             | 0             | 0               | 5                              | 0             | 2               |
| California.....       | 5             | 23            | 23              | 44            | 53            | 51              | 0             | 0             | 1               | 9                              | 4             | 11              |
| Total.....            | 549           | 391           | 343             | 524           | 602           | 732             | 12            | 6             | 30              | 353                            | 401           | 554             |
| 33 weeks.....         | 2,822         | 2,072         | 2,072           | 91,895        | 118,887       | 137,185         | 1,190         | 1,958         | 7,974           | 4,496                          | 4,902         | 7,195           |

See footnotes at end of table.

*Telegraphic morbidity reports from State health officers for the week ended August 16, 1941, and comparison with corresponding week of 1940—Continued*

| Division and State               | Whooping cough   |                  | Division and State                | Whooping cough   |                  |
|----------------------------------|------------------|------------------|-----------------------------------|------------------|------------------|
|                                  | Week ended—      |                  |                                   | Week ended—      |                  |
|                                  | Aug.<br>16, 1941 | Aug.<br>17, 1940 |                                   | Aug.<br>16, 1941 | Aug.<br>17, 1940 |
| NEW ENG.                         |                  |                  | SO. ATL.—continued                |                  |                  |
| Maine.....                       | 18               | 34               | South Carolina <sup>4</sup> ..... | 74               | 13               |
| New Hampshire.....               | 0                | 0                | Georgia <sup>4</sup> .....        | 19               | 8                |
| Vermont.....                     | 0                | 21               | Florida <sup>4</sup> .....        | 3                | 3                |
| Massachusetts.....               | 148              | 142              | E. SO. CEN.                       |                  |                  |
| Rhode Island.....                | 13               | 0                | Kentucky.....                     | 46               | 85               |
| Connecticut.....                 | 20               | 32               | Tennessee.....                    | 67               | 47               |
| MID. ATL.                        |                  |                  | Alabama <sup>4</sup> .....        | 14               | 15               |
| New York.....                    | 214              | 298              | Mississippi <sup>2 4</sup> .....  |                  |                  |
| New Jersey.....                  | 124              | 88               | W. SO. CEN.                       |                  |                  |
| Pennsylvania <sup>2</sup> .....  | 178              | 348              | Arkansas.....                     | 22               | 11               |
| E. NO. CEN.                      |                  |                  | Louisiana <sup>4</sup> .....      | 11               | 8                |
| Ohio <sup>2</sup> .....          | 247              | 310              | Oklahoma.....                     | 18               | 4                |
| Indiana <sup>2</sup> .....       | 15               | 9                | Texas <sup>4</sup> .....          | 132              | 202              |
| Illinois.....                    | 181              | 155              | MOUNTAIN                          |                  |                  |
| Michigan <sup>2</sup> .....      | 242              | 275              | Montana <sup>2</sup> .....        | 23               | 17               |
| Wisconsin.....                   | 214              | 98               | Idaho.....                        | 8                | 5                |
| W. NO. CEN.                      |                  |                  | Wyoming <sup>2</sup> .....        | 24               | 8                |
| Minnesota.....                   | 52               | 42               | Colorado.....                     | 109              | 13               |
| Iowa.....                        | 60               | 20               | New Mexico.....                   | 50               | 45               |
| Missouri.....                    | 35               | 11               | Arizona.....                      | 33               | 7                |
| North Dakota.....                | 22               | 23               | Utah <sup>2</sup> .....           | 56               | 64               |
| South Dakota.....                | 5                | 7                | Nevada.....                       | 1                |                  |
| Nebraska.....                    | 8                | 2                | PACIFIC                           |                  |                  |
| Kansas.....                      | 84               | 55               | Washington.....                   | 86               | 59               |
| SO. ATL.                         |                  |                  | Oregon.....                       | 22               | 18               |
| Delaware.....                    | 4                | 7                | California.....                   | 332              | 326              |
| Maryland <sup>2 3</sup> .....    | 56               | 123              | Total.....                        |                  |                  |
| Dist. of Col. <sup>2</sup> ..... | 9                | 12               |                                   | 3,383            | 8,295            |
| Virginia <sup>2</sup> .....      | 38               | 71               | 33 weeks.....                     |                  |                  |
| West Virginia <sup>2</sup> ..... | 43               | 69               |                                   | 146,779          | 107,172          |
| North Carolina.....              | 203              | 90               |                                   |                  |                  |

<sup>1</sup> New York City only.

<sup>2</sup> Rocky Mountain spotted fever, week ended Aug. 16, 1941, 19 cases as follows: Pennsylvania, 3; Ohio, 2; Indiana, 1; Maryland, 8; District of Columbia, 1; Virginia, 2; Montana, 1; Wyoming, 1.

<sup>3</sup> Period ended earlier than Saturday.

<sup>4</sup> Typhus fever, week ended Aug. 16, 1941, 166 cases as follows: South Carolina, 1; Georgia, 24; Florida, 3; Alabama, 8; Mississippi, 1; Louisiana, 6; Texas, 123.

## PLAGUE INFECTION IN CALIFORNIA AND MONTANA

### IN FLEAS FROM GROUND SQUIRRELS AND BURROWS IN SISKIYOU COUNTY, CALIF.

Under date of August 8, 1941, Dr. Bertram P. Brown, State Director of Public Health of California, reported plague infection proved, by animal inoculation and cultures, in a pool of 300 fleas from 10 ground squirrels, *C. douglasii*, submitted to the laboratory on July 11 from a ranch 8 miles east and 3 miles south of Montague; in a pool of 143 fleas from burrows and another pool of 34 fleas from 3 ground squirrels, *C. douglasii*, collected on July 12 on a ranch 8½ miles east and 3 miles south of Montague, Siskiyou Co., Calif.

### IN GROUND SQUIRRELS IN RAVALLI COUNTY, MONT.

Under date of August 4, 1941, plague infection was reported found, upon examination at the laboratory in San Francisco, in tissue from each of 2 ground squirrels found dead on July 18 at a location 5 miles north of Sula, west of Highway No. 93, in Ravalli Co., Mont.

## WEEKLY REPORTS FROM CITIES

City reports for week ended August 2, 1941

This table summarizes the reports received weekly from 135 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

| State and city               | Diph-<br>theria<br>cases | Influenza |        | Mea-<br>sles<br>cases | Pneu-<br>monia<br>deaths | Scar-<br>let<br>fever<br>cases | Small-<br>pox<br>cases | Tuber-<br>culosis<br>deaths | Ty-<br>phoid<br>fever<br>cases | Whoop-<br>ing<br>cough<br>cases | Deaths,<br>all<br>causes |
|------------------------------|--------------------------|-----------|--------|-----------------------|--------------------------|--------------------------------|------------------------|-----------------------------|--------------------------------|---------------------------------|--------------------------|
|                              |                          | Cases     | Deaths |                       |                          |                                |                        |                             |                                |                                 |                          |
| Data for 89 selected cities: |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| 5-year average               | 71                       | 25        | 10     | 510                   | 267                      | 247                            | 4                      | 339                         | 63                             | 1,390                           | -----                    |
| Current week                 | 52                       | 36        | 5      | 412                   | 298                      | 210                            | 1                      | 364                         | 55                             | 1,251                           | -----                    |
| <b>Maine:</b>                |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Portland                     | 0                        | -----     | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 8                               | 15                       |
| <b>New Hampshire:</b>        |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Concord                      | 0                        | -----     | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 4                        |
| Nashua                       | 0                        | -----     | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 7                        |
| <b>Vermont:</b>              |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Burlington                   | 0                        | -----     | 0      | 1                     | 0                        | 0                              | 0                      | 0                           | 0                              | 1                               | 9                        |
| Rutland                      | 0                        | -----     | 0      | 0                     | 1                        | 0                              | 0                      | 0                           | 0                              | 0                               | 8                        |
| <b>Massachusetts:</b>        |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Boston                       | 0                        | -----     | 0      | 25                    | 7                        | 26                             | 0                      | 7                           | 1                              | 44                              | 178                      |
| Fall River                   | 1                        | -----     | 0      | 1                     | 0                        | 0                              | 0                      | 2                           | 0                              | 8                               | 32                       |
| Springfield                  | 0                        | -----     | 0      | 11                    | 0                        | 1                              | 0                      | 0                           | 0                              | 11                              | 29                       |
| Worcester                    | 0                        | -----     | 0      | 0                     | 2                        | 0                              | 0                      | 0                           | 0                              | 15                              | 53                       |
| <b>Rhode Island:</b>         |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Pawtucket                    | 0                        | -----     | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 10                       |
| Providence                   | 1                        | -----     | 0      | 10                    | 1                        | 0                              | 0                      | 0                           | 0                              | 22                              | 55                       |
| <b>Connecticut:</b>          |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Bridgeport                   | 0                        | -----     | 0      | 6                     | 1                        | 1                              | 0                      | 0                           | 0                              | 2                               | 22                       |
| Hartford                     | 0                        | -----     | 0      | 0                     | 5                        | 0                              | 0                      | 0                           | 0                              | 1                               | 38                       |
| New Haven                    | 0                        | -----     | 0      | 3                     | 1                        | 0                              | 0                      | 1                           | 0                              | 6                               | 39                       |
| <b>New York:</b>             |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Buffalo                      | 0                        | -----     | 1      | 6                     | 8                        | 1                              | 0                      | 9                           | 0                              | 5                               | 147                      |
| New York                     | 14                       | 1         | 1      | 41                    | 37                       | 32                             | 0                      | 82                          | 8                              | 109                             | 1,238                    |
| Rochester                    | 0                        | -----     | 0      | 8                     | 0                        | 0                              | 0                      | 0                           | 1                              | 5                               | 76                       |
| Syracuse                     | 0                        | -----     | 0      | 10                    | 0                        | 0                              | 0                      | 1                           | 0                              | 18                              | 43                       |
| <b>New Jersey:</b>           |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Camden                       | 0                        | -----     | 0      | 0                     | 1                        | 0                              | 0                      | 0                           | 0                              | 1                               | 34                       |
| Newark                       | 0                        | -----     | 0      | 3                     | 13                       | 5                              | 0                      | 3                           | 0                              | 14                              | 80                       |
| Trenton                      | 0                        | -----     | 0      | 0                     | 2                        | 1                              | 0                      | 2                           | 0                              | 0                               | 39                       |
| <b>Pennsylvania:</b>         |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Philadelphia                 | 0                        | 1         | 0      | 6                     | 20                       | 12                             | 0                      | 28                          | 3                              | 29                              | 450                      |
| Pittsburgh                   | 0                        | -----     | 0      | 15                    | 12                       | 4                              | 0                      | 9                           | 3                              | 47                              | 174                      |
| Reading                      | 0                        | -----     | 0      | 0                     | 1                        | 0                              | 0                      | 2                           | 1                              | 0                               | 21                       |
| Scranton                     | 0                        | -----     | -----  | 5                     | -----                    | 0                              | 0                      | -----                       | 0                              | 1                               | -----                    |
| <b>Ohio:</b>                 |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Cincinnati                   | 0                        | -----     | 0      | 0                     | 0                        | 5                              | 0                      | 8                           | 0                              | 5                               | 180                      |
| Cleveland                    | 0                        | 1         | 0      | 0                     | 7                        | 10                             | 0                      | 8                           | 1                              | 61                              | 127                      |
| Columbus                     | 0                        | -----     | 0      | 3                     | 2                        | 4                              | 0                      | 4                           | 0                              | 17                              | 88                       |
| Toledo                       | 0                        | -----     | 0      | 32                    | 5                        | 2                              | 0                      | 5                           | 0                              | 73                              | 107                      |
| <b>Indiana:</b>              |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Anderson                     | 0                        | -----     | 0      | 4                     | 1                        | 0                              | 0                      | 0                           | 0                              | 0                               | 7                        |
| Fort Wayne                   | 0                        | -----     | 0      | 1                     | 3                        | 0                              | 0                      | 0                           | 1                              | 4                               | 35                       |
| Indianapolis                 | 0                        | -----     | 0      | 10                    | 14                       | 3                              | 1                      | 6                           | 1                              | 1                               | 162                      |
| Muncie                       | 0                        | -----     | 0      | 0                     | 2                        | 0                              | 0                      | 0                           | 0                              | 0                               | 16                       |
| South Bend                   | 0                        | -----     | 0      | 3                     | 0                        | 0                              | 0                      | 0                           | 0                              | 1                               | 18                       |
| Terre Haute                  | 1                        | -----     | 0      | 0                     | 2                        | 0                              | 0                      | 0                           | 0                              | 0                               | 24                       |
| <b>Illinois:</b>             |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Alton                        | 0                        | -----     | 0      | 0                     | 2                        | 0                              | 0                      | 0                           | 0                              | 0                               | 12                       |
| Chicago                      | 10                       | -----     | 1      | 16                    | 28                       | 17                             | 0                      | 40                          | 1                              | 92                              | 865                      |
| Elgin                        | 0                        | -----     | 0      | 0                     | 0                        | 1                              | 0                      | 0                           | 0                              | 1                               | 11                       |
| Moline                       | 0                        | -----     | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 6                               | 10                       |
| Springfield                  | 0                        | -----     | 0      | 1                     | 3                        | 0                              | 0                      | 0                           | 0                              | 0                               | 23                       |
| <b>Michigan:</b>             |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Detroit                      | 0                        | -----     | 0      | 22                    | 9                        | 18                             | 0                      | 13                          | 1                              | 76                              | 285                      |
| Flint                        | 0                        | -----     | 0      | 1                     | 5                        | 1                              | 0                      | 0                           | 0                              | 1                               | 28                       |
| Grand Rapids                 | 0                        | -----     | 0      | 3                     | 0                        | 0                              | 0                      | 0                           | 1                              | 4                               | 28                       |
| <b>Wisconsin:</b>            |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Kenosha                      | 0                        | -----     | 0      | 1                     | 0                        | 1                              | 0                      | 0                           | 0                              | 1                               | 12                       |
| Madison                      | 0                        | -----     | 0      | 4                     | 0                        | 0                              | 0                      | 0                           | 0                              | 1                               | 9                        |
| Milwaukee                    | 0                        | -----     | 0      | 40                    | 3                        | 9                              | 0                      | 2                           | 0                              | 108                             | 115                      |
| Racine                       | 0                        | -----     | 0      | 17                    | 0                        | 1                              | 0                      | 0                           | 0                              | 1                               | 15                       |
| Superior                     | 0                        | -----     | 0      | 1                     | 0                        | 4                              | 0                      | 0                           | 0                              | 5                               | 11                       |
| <b>Minnesota:</b>            |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Duluth                       | 0                        | -----     | 0      | 0                     | 1                        | 0                              | 0                      | 1                           | 0                              | 7                               | 21                       |
| Minneapolis                  | 0                        | -----     | 0      | 0                     | 3                        | 2                              | 0                      | 3                           | 0                              | 13                              | 168                      |
| St. Paul                     | 0                        | -----     | 0      | 0                     | 6                        | 1                              | 0                      | 2                           | 0                              | 13                              | 76                       |

## City reports for week ended August 8, 1941—Continued

| State and city  | Diph-<br>theria<br>cases | Influenza |        | Meas-<br>les<br>cases | Pneu-<br>monia<br>deaths | Scar-<br>let<br>fever<br>cases | Small-<br>pox<br>cases | Tuber-<br>culosis<br>deaths | Ty-<br>phoid<br>fever<br>cases | Whoop-<br>ing<br>cough<br>cases | Deaths,<br>all<br>causes |
|-----------------|--------------------------|-----------|--------|-----------------------|--------------------------|--------------------------------|------------------------|-----------------------------|--------------------------------|---------------------------------|--------------------------|
|                 |                          | Cases     | Deaths |                       |                          |                                |                        |                             |                                |                                 |                          |
| Iowa:           |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Cedar Rapids    | 0                        |           |        | 1                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Davenport       | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Des Moines      | 0                        |           |        | 1                     |                          | 0                              | 0                      |                             | 0                              | 8                               | 44                       |
| Sioux City      | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 8                               |                          |
| Waterloo        | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Missouri:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Kansas City     | 0                        | 0         | 0      | 5                     | 1                        | 6                              | 1                      | 6                           | 1                              | 108                             |                          |
| St. Joseph      | 0                        |           | 1      | 2                     | 2                        | 1                              | 0                      | 1                           | 0                              | 0                               | 22                       |
| St. Louis       | 2                        |           | 0      | 7                     | 4                        | 8                              | 0                      | 9                           | 3                              | 35                              | 248                      |
| North Dakota:   |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Fargo           | 0                        | 0         | 0      | 0                     | 0                        | 1                              | 0                      | 0                           | 0                              | 11                              | 13                       |
| Grand Forks     | 0                        |           |        | 1                     |                          | 0                              | 0                      |                             | 0                              | 1                               |                          |
| Minot           | 0                        |           | 0      | 4                     | 0                        | 0                              | 0                      | 0                           | 0                              | 2                               | 8                        |
| South Dakota:   |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Aberdeen        | 1                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Sioux Falls     | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               | 8                        |
| Nebraska:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Lincoln         | 0                        |           |        | 1                     |                          | 0                              | 0                      |                             | 0                              | 3                               |                          |
| Omaha           | 0                        |           | 0      | 0                     | 0                        | 1                              | 0                      | 1                           | 0                              | 2                               | 69                       |
| Kansas:         |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Lawrence        | 0                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 6                               | 3                        |
| Topeka          | 0                        | 0         | 0      | 2                     | 2                        | 0                              | 0                      | 0                           | 0                              | 21                              | 15                       |
| Wichita         | 0                        | 0         | 0      | 0                     | 3                        | 3                              | 0                      | 1                           | 0                              | 4                               | 32                       |
| Delaware:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Wilmington      | 0                        |           | 0      | 2                     | 1                        | 0                              | 0                      | 1                           | 0                              | 0                               | 19                       |
| Maryland:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Baltimore       | 0                        | 0         | 0      | 58                    | 4                        | 13                             | 0                      | 10                          | 3                              | 55                              | 232                      |
| Cumberland      | 3                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 11                       |
| Frederick       | 9                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 0                        |
| Dist. of Col.:  |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Washington      | 0                        |           | 0      | 11                    | 6                        | 2                              | 0                      | 17                          | 0                              | 20                              | 169                      |
| Virginia:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Lynchburg       | 0                        | 0         | 0      | 10                    | 0                        | 0                              | 0                      | 0                           | 0                              | 4                               | 11                       |
| Norfolk         | 0                        | 0         | 0      | 1                     | 1                        | 0                              | 0                      | 2                           | 0                              | 1                               | 35                       |
| Richmond        | 2                        | 0         | 0      | 0                     | 2                        | 1                              | 0                      | 3                           | 1                              | 0                               | 50                       |
| Roanoke         | 0                        | 0         | 0      | 1                     | 0                        | 0                              | 0                      | 0                           | 0                              | 2                               | 22                       |
| West Virginia:  |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Charleston      | 0                        | 0         | 0      | 1                     | 2                        | 1                              | 0                      | 0                           | 0                              | 1                               | 29                       |
| Huntington      | 0                        | 0         | 0      | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Wheeling        | 0                        | 0         | 0      | 0                     | 1                        | 0                              | 0                      | 0                           | 2                              | 1                               | 26                       |
| North Carolina: |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Gastonia        | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Raleigh         | 0                        | 0         | 0      | 1                     | 4                        | 0                              | 0                      | 2                           | 0                              | 10                              | 25                       |
| Wilmington      | 0                        | 0         | 0      | 2                     | 2                        | 0                              | 0                      | 0                           | 0                              | 17                              | 13                       |
| Winston-Salem   | 1                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 2                           | 0                              | 5                               | 12                       |
| South Carolina: |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Charleston      | 0                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 1                           | 0                              | 4                               | 21                       |
| Florence        | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 1                               |                          |
| Greenville      | 0                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 4                               | 3                        |
| Georgia:        |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Atlanta         | 0                        | 2         | 0      | 0                     | 3                        | 2                              | 0                      | 8                           | 0                              | 3                               | 87                       |
| Brunswick       | 0                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 0                               | 4                        |
| Savannah        | 0                        | 0         | 0      | 3                     | 1                        | 0                              | 0                      | 1                           | 1                              | 3                               | 40                       |
| Florida:        |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Miami           | 0                        | 0         | 0      | 1                     | 1                        | 1                              | 0                      | 2                           | 0                              | 5                               | 33                       |
| St. Petersburg  | 0                        | 0         | 0      | 0                     | 2                        | 0                              | 0                      | 1                           | 0                              | 1                               | 22                       |
| Tampa           | 0                        | 0         | 0      | 0                     | 3                        | 0                              | 0                      | 1                           | 1                              | 1                               | 37                       |
| Kentucky:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Ashland         | 0                        | 0         | 0      | 0                     | 1                        | 0                              | 0                      | 0                           | 0                              | 0                               | 9                        |
| Covington       | 0                        | 0         | 0      | 0                     | 0                        | 1                              | 1                      | 0                           | 0                              | 0                               | 20                       |
| Lexington       | 6                        | 0         | 0      | 0                     | 0                        | 0                              | 0                      | 0                           | 0                              | 6                               | 13                       |
| Louisville      | 1                        | 0         | 0      | 8                     | 4                        | 4                              | 0                      | 5                           | 1                              | 27                              | 56                       |
| Tennessee:      |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Knoxville       | 0                        | 0         | 0      | 2                     | 0                        | 2                              | 0                      | 1                           | 6                              | 0                               | 25                       |
| Memphis         | 0                        | 9         | 0      | 1                     | 4                        | 0                              | 0                      | 7                           | 0                              | 17                              | 59                       |
| Nashville       | 0                        | 0         | 0      | 2                     | 0                        | 0                              | 0                      | 3                           | 9                              | 13                              | 49                       |
| Alabama:        |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Birmingham      | 1                        | 1         | 0      | 0                     | 3                        | 0                              | 0                      | 4                           | 0                              | 3                               | 76                       |
| Mobile          | 0                        | 1         | 0      | 0                     | 0                        | 0                              | 0                      | 1                           | 1                              | 0                               | 20                       |
| Montgomery      | 0                        |           |        | 1                     |                          | 2                              | 0                      |                             | 0                              | 0                               |                          |
| Arkansas:       |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Fort Smith      | 0                        |           |        | 0                     |                          | 0                              | 0                      |                             | 0                              | 0                               |                          |
| Little Rock     | 0                        |           | 0      | 1                     | 3                        | 0                              | 0                      | 1                           | 0                              | 2                               | 24                       |
| Louisiana:      |                          |           |        |                       |                          |                                |                        |                             |                                |                                 |                          |
| Lake Charles    | 0                        | 0         | 0      | 1                     | 0                        | 0                              | 0                      | 6                           | 0                              | 0                               | 3                        |
| New Orleans     | 0                        | 1         | 0      | 0                     | 16                       | 0                              | 0                      | 7                           | 2                              | 17                              | 140                      |
| Shreveport      | 1                        |           | 0      | 0                     | 3                        | 0                              | 0                      | 2                           | 1                              | 0                               | 26                       |

## City reports for week ended August 2, 1941—Continued

| State and city   | Diphtheria cases | Influenza |        | Measles cases | Pneumonia deaths | Scarlet fever cases | Small-pox cases | Tuberculosis deaths | Typhoid fever cases | Whooping cough cases | Deaths, all causes |
|------------------|------------------|-----------|--------|---------------|------------------|---------------------|-----------------|---------------------|---------------------|----------------------|--------------------|
|                  |                  | Cases     | Deaths |               |                  |                     |                 |                     |                     |                      |                    |
| Oklahoma:        |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Oklahoma City    | 0                | 1         | 0      | 0             | 3                | 0                   | 0               | 2                   | 1                   | 0                    | 44                 |
| Tulsa            | 0                | 5         | 0      | 0             | 1                | 2                   | 0               | 0                   | 1                   | 3                    | 18                 |
| Texas:           |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Dallas           | 4                | —         | 0      | 5             | 0                | 5                   | 0               | 3                   | 1                   | 11                   | 63                 |
| Fort Worth       | 0                | —         | 0      | 2             | 2                | 1                   | 0               | 0                   | 1                   | 0                    | 32                 |
| Galveston        | 0                | —         | 0      | 0             | 1                | 0                   | 0               | 0                   | 0                   | 0                    | 13                 |
| Houston          | 2                | —         | 0      | 9             | 8                | 1                   | 0               | 9                   | 0                   | 5                    | 115                |
| San Antonio      | 0                | —         | 0      | 0             | 4                | 0                   | 0               | 10                  | 0                   | 2                    | 76                 |
| Montana:         |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Billings         | 0                | —         | 0      | 0             | 1                | 0                   | 0               | 0                   | 0                   | 0                    | 9                  |
| Great Falls      | 0                | —         | 0      | 0             | 1                | 0                   | 0               | 0                   | 0                   | 6                    | 7                  |
| Helena           | 0                | —         | 0      | 0             | 0                | 0                   | 0               | 0                   | 0                   | 0                    | 2                  |
| Missoula         | 0                | —         | 0      | 0             | 0                | 0                   | 0               | 0                   | 0                   | 0                    | 4                  |
| Idaho:           |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Boise            | 0                | —         | 0      | 0             | 0                | 0                   | 0               | 0                   | 0                   | 0                    | 8                  |
| Colorado:        |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Colorado Springs | 0                | —         | 0      | 18            | 0                | 0                   | 0               | 2                   | 0                   | 4                    | 6                  |
| Denver           | 5                | 10        | 0      | 3             | 2                | 1                   | 0               | 3                   | 0                   | 73                   | 66                 |
| Pueblo           | 0                | —         | 0      | 1             | 0                | 0                   | 0               | 1                   | 0                   | 7                    | 9                  |
| New Mexico:      |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Albuquerque      | 0                | —         | 0      | 1             | 0                | 0                   | 0               | 3                   | 2                   | 4                    | 14                 |
| Arizona:         |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Phoenix          | 0                | 9         | —      | 2             | —                | 0                   | 0               | —                   | 0                   | 6                    | —                  |
| Utah:            |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Salt Lake City   | 0                | —         | 0      | 0             | 0                | 0                   | 0               | 0                   | 0                   | 14                   | 19                 |
| Washington:      |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Seattle          | 0                | —         | 0      | 1             | 3                | 0                   | 0               | 5                   | 4                   | 24                   | 82                 |
| Spokane          | 0                | —         | 0      | 1             | 1                | 1                   | 0               | 0                   | 0                   | 10                   | 30                 |
| Tacoma           | 0                | —         | 0      | 1             | 0                | 1                   | 0               | 0                   | 0                   | 10                   | 31                 |
| Oregon:          |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Portland         | 0                | —         | 0      | 1             | 0                | 3                   | 0               | 0                   | 0                   | 1                    | 65                 |
| Salem            | 0                | —         | —      | 0             | —                | 0                   | 0               | —                   | 0                   | 0                    | —                  |
| California:      |                  |           |        |               |                  |                     |                 |                     |                     |                      |                    |
| Los Angeles      | 4                | 9         | 1      | 15            | 2                | 5                   | 0               | 11                  | 1                   | 52                   | 280                |
| Sacramento       | 2                | —         | 0      | 2             | 1                | 1                   | 0               | 0                   | 0                   | 11                   | 28                 |
| San Francisco    | 0                | —         | 0      | 6             | 3                | 2                   | 0               | 0                   | 0                   | 14                   | 143                |

| State and city | Meningitis, meningococcus |        | Polio-myelitis cases | State and city  | Meningitis, meningococcus |        | Polio-myelitis cases |
|----------------|---------------------------|--------|----------------------|-----------------|---------------------------|--------|----------------------|
|                | Cases                     | Deaths |                      |                 | Cases                     | Deaths |                      |
| Massachusetts: |                           |        |                      | Minnesota:      |                           |        |                      |
| Springfield    | 1                         | 0      | 0                    | Minneapolis     | 1                         | 0      | 0                    |
| Rhode Island:  |                           |        |                      | St. Paul        | 0                         | 0      | 1                    |
| Providence     | 0                         | 0      | 1                    | Iowa:           |                           |        |                      |
| Connecticut:   |                           |        |                      | Des Moines      | 0                         | 0      | 1                    |
| Hartford       | 0                         | 0      | 1                    | Missouri:       |                           |        |                      |
| New York:      |                           |        |                      | St. Joseph      | 1                         | 0      | 0                    |
| Buffalo        | 3                         | 2      | 0                    | Maryland:       |                           |        |                      |
| New York       | 2                         | 1      | 3                    | Baltimore       | 0                         | 0      | 9                    |
| Pennsylvania:  |                           |        |                      | South Carolina: |                           |        |                      |
| Philadelphia   | 1                         | 0      | 4                    | Charleston      | 0                         | 0      | 1                    |
| Pittsburgh     | 0                         | 0      | 1                    | Georgia:        |                           |        |                      |
| Ohio:          |                           |        |                      | Atlanta         | 0                         | 0      | 6                    |
| Cincinnati     | 0                         | 0      | 1                    | Savannah        | 0                         | 0      | 3                    |
| Cleveland      | 0                         | 0      | 16                   | Tennessee:      |                           |        |                      |
| Indiana:       |                           |        |                      | Nashville       | 0                         | 0      | 6                    |
| Indianapolis   | 0                         | 0      | 2                    | Alabama:        |                           |        |                      |
| Illinois:      |                           |        |                      | Birmingham      | 0                         | 0      | 5                    |
| Chicago        | 1                         | 0      | 1                    | Mobile          | 0                         | 0      | 1                    |
| Michigan:      |                           |        |                      | Louisiana:      |                           |        |                      |
| Detroit        | 1                         | 0      | 6                    | New Orleans     | 0                         | 0      | 3                    |
| Wisconsin:     |                           |        |                      | Shreveport      | 0                         | 0      | 2                    |
| Milwaukee      | 0                         | 0      | 1                    |                 |                           |        |                      |
| Superior       | 0                         | 0      | 1                    |                 |                           |        |                      |

*Encephalitis, epidemic or lethargic.*—Cases: Pittsburgh, 1; Cleveland, 1; Chicago, 1; St. Paul, 1; St. Louis, 1; Fargo, 9; Grand Forks, 5; Minot, 9; Aberdeen, 2; Omaha, 4; Wichita, 1; Fort Worth, 1; Denver, 1; Albuquerque, 1. Deaths: Cleveland, 1; Chicago, 1; St. Louis, 1; Fargo, 3; Wichita, 1.

*Pellagra.*—Cases: Birmingham, 1; Dallas, 1.

*Typhus fever.*—Cases: New York, 2; Brunswick, 1; Savannah, 4; Miami, 3; Birmingham, 3; Dallas, 1; Fort Worth, 2; Houston, 1; Los Angeles, 1.

## TERRITORIES AND POSSESSIONS

## PANAMA CANAL ZONE

*Notifiable diseases—April–June 1941.*—During the months of April, May, and June 1941, certain notifiable diseases were reported in the Panama Canal Zone, including the terminal cities, as follows:

| Disease                        | April |        | May   |        | June  |        |
|--------------------------------|-------|--------|-------|--------|-------|--------|
|                                | Cases | Deaths | Cases | Deaths | Cases | Deaths |
| Chickenpox.....                | 13    | -----  | 18    | -----  | 6     | -----  |
| Diphtheria.....                | 5     | 1      | 3     | -----  | 7     | 2      |
| Dysentery (amoebic).....       | 5     | 1      | 5     | -----  | 5     | 1      |
| Leprosy.....                   | 2     | -----  | 1     | -----  | ----- | -----  |
| Malaria.....                   | 151   | 4      | 187   | 2      | 347   | 8      |
| Measles.....                   | 107   | -----  | 102   | -----  | 115   | -----  |
| Meningitis, meningococcus..... | 1     | -----  | 2     | -----  | 1     | 1      |
| Mumps.....                     | 1     | -----  | ----- | -----  | ----- | -----  |
| Paratyphoid fever.....         | ----- | -----  | 3     | -----  | 2     | -----  |
| Pneumonia.....                 | 115   | 8      | 113   | 37     | 115   | 15     |
| Relapsing fever.....           | ----- | -----  | ----- | -----  | 2     | -----  |
| Tuberculosis.....              | 18    | 35     | 16    | 42     | 13    | 33     |
| Typhoid fever.....             | ----- | -----  | 2     | 1      | ----- | -----  |
| Typhus fever.....              | 2     | -----  | ----- | -----  | ----- | -----  |
| Whooping cough.....            | 3     | -----  | 1     | -----  | ----- | -----  |

<sup>1</sup> In the Canal Zone only.

## VIRGIN ISLANDS

*Notifiable diseases—April–June 1941.*—During the months of April, May, and June 1941, cases of certain notifiable diseases were reported in the Virgin Islands of the United States as follows:

| Disease               | April | May   | June  |
|-----------------------|-------|-------|-------|
| Dengue.....           | 2     | 2     | 20    |
| Filariasis.....       | 1     | 8     | 7     |
| Gonorrhea.....        | 21    | 6     | 4     |
| Hookworm disease..... | 2     | 4     | 4     |
| Malaria.....          | 4     | 1     | ----- |
| Pneumonia.....        | 1     | ----- | ----- |
| Syphilis.....         | 21    | 15    | 14    |
| Tuberculosis.....     | 10    | 1     | ----- |



## FOREIGN REPORTS

### CANADA

*Provinces—Communicable diseases—Week ended July 12, 1941.*—During the week ended July 12, 1941, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

| Disease                       | Prince<br>Edward<br>Island | Nova<br>Scotia | New<br>Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British<br>Columbia | Total |
|-------------------------------|----------------------------|----------------|------------------|--------|---------|----------|--------------|---------|---------------------|-------|
| Cerebrospinal meningitis      | 1                          | 2              | 2                | —      | 6       | —        | 2            | 1       | —                   | 14    |
| Chickenpox                    | —                          | 28             | —                | 9      | 126     | 13       | 12           | 46      | 17                  | 251   |
| Diphtheria                    | —                          | 9              | 1                | 5      | 4       | —        | 1            | —       | —                   | 20    |
| Dysentery                     | —                          | —              | —                | 7      | 2       | —        | —            | —       | —                   | 9     |
| Influenza                     | —                          | 1              | —                | —      | 7       | —        | —            | —       | —                   | 8     |
| Measles                       | —                          | —              | —                | 38     | 309     | 17       | 16           | 4       | —                   | 416   |
| Mumps                         | —                          | —              | —                | 18     | 61      | 13       | —            | 2       | 4                   | 98    |
| Pneumonia                     | —                          | 1              | —                | —      | 8       | 1        | —            | 1       | 4                   | 15    |
| Poliomyelitis                 | —                          | —              | 1                | 1      | 2       | 17       | 1            | —       | 1                   | 23    |
| Scarlet fever                 | —                          | 5              | 1                | 50     | 92      | 7        | 1            | 7       | 7                   | 170   |
| Tuberculosis                  | —                          | 19             | 10               | 87     | 47      | 36       | 21           | 1       | —                   | 221   |
| Typhoid and paratyphoid fever | —                          | —              | —                | 31     | 5       | 1        | —            | —       | 1                   | 38    |
| Whooping cough                | —                          | —              | —                | 74     | 127     | 2        | —            | 5       | 40                  | 248   |

*Manitoba—Poliomyelitis.*—During the week ended August 15, 1941, 147 cases of poliomyelitis were reported in the Province of Manitoba, making a total of 435 cases during the present outbreak. Approximately one-third of the cases have been reported from Greater Winnipeg, but the epidemic has now spread to 28 municipalities outside of the city, with occasional cases reported in sparsely populated areas of the Province. The disease continues to be of mild type, with comparatively few deaths and paralysis in less than 25 percent of the cases. The total number of cases to date is about the same as in the 1928 epidemic and about 100 less than in the serious outbreak of 1936.

*Encephalitis.*—Concurrently (during the same week), 22 cases of encephalitis were reported from widely separated localities in Manitoba, the majority being reported in the southern part of the Province, bordering on the States of North Dakota and Minnesota, where an outbreak of the disease is occurring at the present time.<sup>1</sup>

<sup>1</sup> See p. 1713.

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

NOTE.—Only those places are included which had not previously reported any of the above-named diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday of each month.

**Plague**

*Indochina (French)—Saigon.*—For the week ended August 2, 1941, 1 case of plague was reported in Saigon, French Indochina.

*Peru—Moquegua Department—Ilo.*—For the period June 1–30, 1941, 3 cases of plague with 1 death were reported in the port of Ilo, Moquegua Department, Peru.

**Yellow Fever**

*Colombia.*—Yellow fever has been reported in Colombia as follows: Boyaca Department, July 8, 1941, 1 death; Intendencia of Meta, June 27, 1941, 1 death; Santander Department, June 27, 1941, 1 death.

*Ivory Coast—Dimbokro.*—On August 7, 1941, 1 fatal case of yellow fever was reported in Dimbokro, Ivory Coast.

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