Control of Communicable Diseases in Man

An Official Report of the
American Public Health Association
1955

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Eighth Edition

This Report has been Approved in Principle by
The United States Public Health Service
and
The Surgeons General of the United States Army,
Navy, and Air Force

The substance of this Report has been accepted by the Ministry of Health for England and Wales and the Department of Health for Scotland with certain reservations to meet international commitments and agreements and differences in legislative and administrative practice in Great Britain.

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CONTROL OF COMMUNICABLE DISEASES IN MAN

Preface to the Eighth Edition

THE first edition of this official report of the American Public Health Association was prepared by a committee of the Health Officers Section and published October 12, 1917. In 1935 responsibility for the text passed to the Committee on Research and Standards and revisions by its Subcommittee on Communicable Disease Control have appeared at 5-year intervals. The present eighth edition was prepared by the Subcommittee with the following membership:

John E. Gordon, M.D., Chairman
Gaylord W. Anderson, M.D.
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Donald T. Fraser, M.B.*
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Ralph S. Muckenfuss, M.D.
Philip E. Sartwell, M.D.
Joseph E. Smadel, M.D.
Franklin H. Top, M.D.

Collaboration was requested by the Committee from the following national and international organizations, which designated their respective representatives:

American Academy of Pediatrics—Aims C. McGuiness, M.D.
Federal Civil Defense Administration—John J. Phair, M.D.
Conference of Public Health Veterinarians—James H. Steele, D.V.M.
Department of the Army—Tom F. Whayne, M.D.
Department of the Navy—James J. Sapero, M.D.
Department of the Air Force—Theodore C. Bedwell, Jr., M.D.
Ministry of Health for England and Wales—G. S. Wilson, M.D.
Department of Health for Scotland—Andrew Davidson, M.D.
Pan American Sanitary Bureau—Carlos Luis González, M.D.
World Health Organization—W. M. Bonné, M.D.

Committee members and consultants took part in exchange of documents and in the meetings of November, 1953 in New York and in Buffalo, New York in 1954, by which common agreement was reached as to the facts and opinions to be presented and the form of their expression. This is the third edition in which the Ministry of Health for England

* Deceased.

and Wales and the Department of Health for Scotland have collaborated, and the second in which the World Health Organization has participated.

Purposes of the Manual. The aim is to provide an informative text for ready reference by public health workers of official and voluntary health agencies, to include physicians, dentists, veterinarians, sanitary engineers, public health nurses, social workers, health educators and sanitarians; and for physicians, dentists and veterinarians in private practice having a concern with the control of communicable disease. The booklet is also designed for military physicians and others serving with the armed forces at home and abroad, and for health workers stationed in foreign countries. School administrators, medical students, and students of public health are others finding use for the material presented. The stated aim determines the format of the manual and its pocket size. The booklet does not substitute for standard text books. To meet the defined uses, the content is broadly representative of global infectious disease. While primarily intended for workers in the Americas and therefore largely expressive of American practices and ideas, a wider usefulness of the publication is seen in its translation into French, German, Spanish, Portuguese, Serbo-Croatian, Japanese, Chinese, Thai and Finnish.

A second general purpose is to serve public health administrators as a guide and as a source of materials in preparation of regulations and legal requirements for the control of the communicable diseases, in development of programs for health education of the public, and in the administrative acts of official health agencies toward management of communicable disease. The needs of field workers have had attention through inclusion of much information applicable to field operations, primarily methods of control as they relate to preventive measures, to control of the infected individual, contacts and environment, and to management of epidemics.

The intent is to present factual knowledge in brief fashion and to advance opinion consistent with those facts as a basis for intelligent management of communicable disease, unhampered by local usage and not restricted to prevailing practices. Recommendations towards standard administrative or technical procedure are avoided, because local conditions and

interrelated problems commonly require variation from state to state within the United States, and between countries. The emphasis is on principle, because variations in practice are also due to incomplete knowledge of recent advances and of successful practices under other and similar conditions. Attempt is made to keep facts and opinions current by periodic revision of the manual.

Scope and Content. The report originally was designed as an aid in formulating standard regulations for administrative control of communicable diseases for which notification was usually required by state and municipal health authorities of the United States. Subsequently the content was enlarged to include diseases of South America, and eventually some of the more important infections wholly outside the Western Hemisphere. Largely because of overseas military activities, this feature was expanded in the 5th and 6th editions. Because of increasing international health activities in which many American workers participate, decision was taken that the 8th edition give more comprehensive coverage of world infections. The list is by no means complete, but most conditions of public health importance are included, with a goodly representation of the less common and less significant which so often present puzzling problems. The 7th edition had descriptions of 92 diseases, the 8th edition has 118. Presentation of infections due to fungi, spirochetes, protozoa and helminths has been materially strengthened.

Modern methods of antibiotic treatment and chemotherapy have become a significant feature of control procedures by limiting periods of communicability and thus decreasing community dosage of infectious agents. This is aside from their value in reducing fatality and mortality. The present edition therefore presents more detailed information on specific methods of management of infected persons.

The index is much enlarged. An added feature is the collection of references to various diseases according to sources of infection, reservoirs, common vehicles and vectors involved in transmission, measures against arthropods, methods for active and passive immunization, and for chemoprophylaxis.

As in earlier editions, the terms used are first defined. Each disease is briefly identified, with regard to clinical

nature, laboratory diagnosis and differentiation of allied or related conditions. Etiologic agent, source and reservoir of infection, mode of transmission, incubation period, period of communicability, susceptibility and resistance, and occurrence are next presented. Following this are described methods of control under the following four headings.

A. *Preventive Measures:* Applicable generally to individuals and groups when and where the particular disease may occur in sporadic, epidemic, or endemic form, whether or not the disease is an active threat at the moment, e.g., vaccination against smallpox, chlorination of water supplies, pasteurization of milk, control of rodents and arthropods, animal control, and immunization.

B. *Control of the Infected Individual, Contacts, and Environment:* Those measures designed to prevent infectious matter present in the person and environment of the infected individual from being conveyed to other persons, arthropods or animals in a way to spread the disease, and to keep contacts under surveillance during the assumed period of incubation of the disease and carriers under control until they are found to be free of infecting agents of the disease in question. Specific treatment is included under this heading and represents opinion as of 1955.

C. *Epidemic Measures:* Those procedures of emergency character designed to limit the spread of a communicable disease which has developed widely in a group or community or within an area, state, or nation, such measures being unnecessary or not justified when the disease occurs sporadically or separated by considerable intervals in time, and only among widely separated individuals.

D. *International Measures:* Such controls of population movements, commerce, and transportation of immigrants and travellers across national boundaries as may arise from international sanitary regulations or result from conferences or agreements between governments and give promise of protection of uninfected populations in one or more nations against the known and notified risk of infection from another nation where the

particular disease in question may be present in endemic or epidemic form. Vaccination and other immunization precautions, and quarantine and surveillance of travellers are included, also animal control and immunization.

Reporting of Communicable Disease. Notification to the local health authority that a case of communicable disease exists within the particular jurisdiction is the first step toward control. Administrative practice as to what diseases are to be reported and how they should be reported varies greatly from one region to another. This is justified in part by different conditions and different frequencies of disease. The present edition of this manual presents a basic scheme of reporting, directed toward practical working procedure rather than ideal practice, and uninhibited by tradition of what is now done. The purpose is encouragement and uniformity of morbidity reporting, to permit comparability of data within this country and between nations.

A system of reporting functions at four levels. The first is collection of the basic data in the local community where disease occurs. The data are next assembled at district, state or provincial level. The third step is the collection of total information under national auspices. Finally, for certain prescribed diseases report is made by the national health authority to the World Health Organization.

Adequate control of communicable disease requires action at all four levels, for each jurisdictional authority has its prescribed responsibilities for application and development of necessary measures. To function effectively, each needs an exchange of current information on disease frequencies, which is accomplished through forwarding data collected at the local level, and summarization and return report by higher jurisdiction. The local health authority is thus informed of prevailing disease in its own particular area, in areas from which disease may invade, and is in position to make use of the extensive knowledge and facilities available in the whole health organization.

Consideration is here limited to the first stage of a reporting system, the collection of the basic data at local level; first because that is the fundamental part of any scheme, and sec-

ond because this manual is primarily for local health workers. The basic data sought at local level are of two kinds (Definition 27, Report of a Disease, p. 16).

1. Report of Cases. Each local health authority, in conformity with regulations of higher authority, will determine what diseases are to be reported as a routine and regular procedure, who is responsible for reporting, the nature of the report required and the manner in which reports are forwarded to the next superior jurisdiction.

   Physicians are required to report all notifiable illnesses which come to their attention; in addition, the statutes or regulations of many localities require reporting by hospital, householder or other person having knowledge of a case of a reportable disease.

   Case Report of a communicable disease provides minimal identifying data of name, address, diagnosis, age, sex, and date of report for each patient and in some instances for suspects; dates of onset and of diagnosis are useful.

   Collective Report is the assembled number of cases by diagnosis occurring within a prescribed time and without individual identifying data, e.g. 20 cases of malaria, week ending Oct. 6.
2. Report of Epidemics. In addition to requirement of individual case report, any unusual or group expression of illness which may be of public concern (Definition 11, Epidemic, p. 14) is desirably reported to the local health authority by the most expeditious means, whether well known and subject to routine report, indefinite or unknown, or absent from the list of diseases officially reportable in the particular locality. Pertinent data of the Epidemic Report include number of cases, within what time, approximate population involved, and apparent mode of spread. The report is forwarded to next superior jurisdiction by telephone or telegraph.

Aside from the recommended requirement on Report of Epidemics, just stated, the communicable diseases listed in this manual are distributed among the following five classes, according to desirability and practical benefit presumably to be derived from reporting. These classes are referred to by number throughout the text, under Section 9B1 of each disease. The purpose is to provide a basis by which each health jurisdiction may determine its list of regularly reportable diseases.

Class 1. *Case Report Universally Required by International Sanitary Regulation*

This class is limited to the six internationally quarantinable diseases, which are cholera, plague, louse-borne relapsing fever, smallpox, louse-borne typhus fever and yellow fever.

Obligatory case report to local health authority by telephone, telegraph or other rapid means. The local health authority forwards the report to next superior jurisdiction by similar method if it is the first recognized case in the local area, or the first case outside those limits of the local area already affected; otherwise weekly by mail, or telegraphically in unusual situations.

Class 2. *Case Report Regularly Required Wherever the Disease Occurs*

Two subclasses are recognized, based on relative urgency for investigation of contacts and source of infection, or for starting control measures.

A. Case report by telephone, telegraph or other rapid means; forward to next superior jurisdiction weekly by mail, except that first recognized case in territory or first case outside limits of local area already affected is by telegraph; examples, typhoid fever, diphtheria.

B. Case report by most practicable means; forward to next superior jurisdiction as a collective report, weekly by mail; examples, brucellosis, leprosy.

Class 3. *Selectively Reportable in Recognized Endemic Areas*

In many states and countries, diseases of this class are not reportable. Reporting may be prescribed in particular regions, states or countries by reason of undue frequency or severity. Where applicable to the United States, USA is specified after "endemic areas." Three subclasses are recognized; A and B are primarily useful under conditions of established endemicity as a means toward prompt control measures and to judge effectiveness of control programs; the main purpose of C is to stimulate control measures or to acquire essential epidemiological data.

A. Case report by telephone, telegraph or other rapid means in specified areas where the disease ranks in importance with Class 2A; not reportable in many countries; examples, tularemia, scrub typhus.

B. Case report by most practicable means; forwarded to next superior jurisdiction as a collective report by mail weekly or monthly; not reportable in many countries; examples, Bartonellosis, coccidioidomycosis.

C. Collective report weekly by mail to local health authority; forward to next superior jurisdiction by mail weekly, monthly, quarterly or sometimes annually; examples, clonorchiasis, phlebotomus fever.

Class 4. *Obligatory Report of Epidemics; No Case Report Required*

Prompt report of outbreaks of particular public health importance by telephone, telegraph or other rapid means; forward to next superior jurisdiction by telephone or telegraph. Pertinent data include number of cases, within what time, approximate population involved, and apparent mode of spread; examples, food poisoning, influenza.

Class 5. *Official Report Not Ordinarily Justifiable*

Diseases of this class are of two general kinds: those typically sporadic and uncommon, often not directly transmissible from man to man; or of such epidemiological nature as to offer no practical measures for control; examples, blastomycosis, common cold.

Diseases are often made reportable although the information gathered is put to no practical use. This frequently has the result that the general level of reporting deteriorates, even for diseases of much importance. Better case reporting is usually to be had by restricting official report to those diseases for which control services are provided, or potential control procedures are under evaluation, or epidemiological information is needed for a definite purpose.

Acknowledgments. Grateful acknowledgment is made for expert opinion and critical comment received from many physicians and others, both within and without the Association. Many colleagues from other countries have contributed to the accuracy and completeness of the report, especially through personal experience in research and control of infections absent or not commonly present in the United States. Diseases common to animals and man have had the benefit of veterinary opinion. The final acknowledgment is fittingly reserved for Haven Emerson, M.D.; he originated this manual and directed its activities throughout its history, including the 1950 revision. In the preparation of this 8th edition he has been a most industrious unofficial consultant.

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