of auxiliary personnel, the only more or less acceptable clinical histories are usually those obtained from teaching hospitals.

(12) In some parts of Latin America, information on pregnancy, lactation, and other examinations in health centres is becoming so abundant and valuable that it should be collected and put to use.

(13) Examinations of potable water and of milk probably serve little purpose until a certain level of progress has been reached. The examination of water might give a false sense of security where sanitation is defective, and it is impracticable to examine milk when it is sold in bulk. The latter examination, however, is not of great urgency since milk is usually boiled before consumption.

(14) A certain abuse of surveys has been noticeable in that many are far too ambitious and do not lead to any practical action; on the contrary, they often prove to be obstacles. Surveys should be carried out as the opportunity arises and if definitely needed.

NEEDS IN HEALTH STATISTICS IN THAILAND *

Immediate needs

Births

Natality data are obtained under the national registration law by the use of a birth certificate which conforms to the international standard. The number of births and other relevant data are used for a variety of purposes. However, there are certain data concerning the mother, such as duration of pregnancy, complication of pregnancy, and labour, and concerning the child, especially the weight and other conditions at birth, that are needed by maternal and child health workers. The data, of course, are valuable only when provided by well-organized, official organizations or by persons who are themselves maternal and child health workers.

Deaths and causes of death

Information concerning deaths is obtained under the national registration law by the use of a death certificate based on the International Form of Medical Certificate of Cause of Death. The causes of death at present constitute the main statistical data immediately needed by the public-health administration. Other data relating to the event and to the deceased, such as certifier or notifier, date and place of death, date of registration, age or date of birth, sex, race, and place of residence, are also considered of great value. So far, the classification of causes of death has only been made according to age and sex by month and by province, but it will also be available by rural and urban areas, and by principal towns, in the near future.

* Abridged from a document submitted by the delegation of Thailand to the International Conference of National Committees on Vital and Health Statistics.

The completeness of the figures reported, except for some negligence in the case of the new-born and infants, has been found quite satisfactory. The entries in the death certificate are quite complete; but, of course, the diagnosis of the cause of death is not always correct. This is due to the shortage of physicians and auxiliary medical personnel.

Measures are being taken to obtain more complete figures and more correct information on the causes of death. The population is encouraged to co-operate by being made to understand that in giving information, besides observing the law and serving their country, they benefit personally. The laws governing registration of births and deaths are also being revised and, when completed, will make for more correct interpretation of important data; competent registrars will be available, and special financial allowances will be made to registrars. Moreover, all physicians throughout the country will be required to use the International Form of Medical Certificate of Cause of Death. The diagnostic facilities and free services are also to be developed.

Foetal deaths

Data on foetal deaths, collected by the use of the certificates of birth and death, are also of great use. But so far only the figures for stillbirths have been obtained. Information on foetal deaths is thought to be far more incomplete than that on the death of the new-born and infants. Though the knowledge of the causes of foetal death are of great importance, especially for maternal and child health services, their practical value, except for those collected by the said services and in well-organized official institutions where the cases were attended to, is considered still limited.

Notifiable diseases

At present, six diseases, called " dangerous infectious diseases ", are notifiable in the whole country—cholera, plague, smallpox, cerebrospinal meningitis, yellow fever, and typhus fever. Relapsing fever is to be added to this list. There are also four other communicable diseases—typhoid fever, diphtheria, leprosy, and poliomyelitis—which are notifiable within the municipal areas of Bangkok and Thonburi.

The lack of physicians and auxiliary medical personnel, as well as of diagnostic facilities, makes it impossible to add more diseases to the list. However, plans are being made, and measures have already been taken, to give more training to auxiliary personnel and to provide more laboratory facilities, which would be accessible to every medical practitioner. The general public is also being given increased health education in order to be able to recognize at least the principal symptoms of important diseases. It is hoped that by these means more diseases will be recognized, correctly

diagnosed, and reported; the data recorded will thus be of greater practical value.

Immunization and vaccination

The only important method of preventing and controlling a certain group of diseases at present is mass and routine immunization and vaccination. Data concerning these diseases have been obtained regularly from the reports sent in by vaccinators throughout the country, but would be of greater practical value if supervision were closer and more thorough.

Morbidity statistics

Among the data considered most valuable in public health are the morbidity statistics collected and recorded by hospitals, health centres, and other health institutions. These are of great value in supplementing the information needed for determining the importance of certain diseases which are not included among the causes of death or the notifiable diseases. These data are recorded in the first place for use by the institutions themselves and do not cover the entire population. Methods must be devised to facilitate the tabulation of the number of cases of different diseases diagnosed and treated as well as the number of visits and days of hospitalization, so as to make the information more readily available and more useful in the future.

In addition, the morbidity data obtained by special health units—especially surveys, such as those dealing with malaria, tuberculosis, leprosy, yaws, filariasis, venereal, mental, and dental diseases, intestinal parasites, maternal and child welfare, and school health—are considered to be most valuable.

Long-term needs

Among the long-term needs in public-health administration are certain personal and other data connected with the certification of births and deaths. These deal, inter alia, with hospitalization, legitimacy, occupation and status in industry, nationality, literacy, and religion. Records of weight, height, etc. taken by maternal and child health services, well-baby clinics, school health and nutrition services, and military recruitment services all serve an immediate purpose but are also valuable for long-term studies.

Information on the number and qualifications of both professional and non-professional personnel in the medical and other health fields is of considerable value. The members of the professional group are required by law to register before they may practise, and their qualifications are therefore classified. Lists are also kept of the auxiliary and non-professional groups working in the public-health services. But the information on

various facilities, equipment, and supplies—particularly beds, drugs, and other necessities—and on the hours lost by workers confined in institutions will have to be reassembled to become really valuable.

TYPES OF HEALTH STATISTICS NEEDED IN COUNTRIES WITH WELL-DEVELOPED HEALTH PROGRAMMES *

The determination of the efficacy of public-health programmes in areas where mortality and morbidity from infectious and communicable diseases are so high that the total death-rate is 25 or more per 1,000 of the population does not require very precise statistical measures. This statement should not be interpreted as implying that adequate statistics are not needed. They are needed; but the kinds of statistics required, as well as their precision, are quite different from those required in areas where a well-organized, efficient health programme has been in operation for several decades, and the total death-rate is below 15 per 1,000 of the population. The absence of epidemics of cholera, smallpox, plague, and yellow fever is not difficult to determine. The widespread prevalence of malaria or of diarrhoea and dysentery can be ascertained by rather simple methods of measurement. Insanitary practices in the handling of food and water supplies and in the disposal of garbage, sewage, and other waste products are easily detected by observation. A reasonably complete registration of deaths, combined with notification of cases of selected communicable diseases, the latter usually quite deficient, have provided the principal statistical data available to measure the improvement of health. This experience has given rise to the development of complete registration and universal reporting of vital events as the chief methods of collecting vital statistics.

In areas where almost all the common infectious and communicable diseases, which historically have been the leading causes of serious morbidity and mortality, have been either practically eliminated or are so well controlled that they no longer menace the health of the population, the scope of public-health programmes has been greatly expanded beyond the traditional efforts to control communicable diseases, to provide a pure food- and water-supply, and to improve environmental sanitation. Public-health activities increasingly reflect the idea of health as " a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity " given in the Constitution of the World Health Organization.

Any catalogue of the elements of public-health programmes is almost certain to be incomplete. It will suffice to indicate here that these include

* Abridged from an unpublished communication by Harold F. Dorn, Ph.D., Chief, Office of Biometry, National Institutes of Health, Bethesda, Md., USA.