

## II. RECOMMENDATIONS OF THE WORKING GROUP

Reliable and timely mortality data serve many purposes in national planning: identification of a population's demographic circumstances; delineation of major health problems; identification of associations between diseases and underlying factors; and provision of the opportunity for demonstrating impacts of health and development programmes on mortality. Many types of data-collection systems exist for generating mortality information. These systems include civil registration, sample vital registration, censuses, multi-round surveys and single-round surveys. There are many possibilities for building on or combining these systems for more intensive investigations of mortality differentials and determinants. Which set of approaches is adopted in a particular country will depend upon its needs and pre-existing capabilities. Nevertheless, accumulated evidence on the performance of different systems makes it possible to draw certain lessons. The following recommendations, based on these lessons, were made by the Working Group.

### A. CIVIL REGISTRATION

With respect to civil registration, the Working Group recommended that:

1. Countries lacking adequate civil registration systems should:

(a) Strengthen such systems with the aim of achieving complete and timely registration of deaths by age, sex, cause and region. Such data are indispensable for an accurate understanding of national health problems and achievements. The Working Group recommended the goal of achieving "birth and death registration for all by the year 2000". Progress towards this goal may, for example, be advanced by constituting a "civil registration area" within which the registration reaches a prescribed minimum level of completeness. If initiated, a registration area should tabulate deaths by place of normal residence of the decedent;

(b) Consider formulation of an intermediate system that would provide nationally representative and continuous mortality data. An example of such a system is the Sample Registration System of India. Another possibility is a geographically stratified sample of areas in which more or less complete civil registration is attained. These systems are not substitutes for complete national-level civil registration but they do constitute an interim strategy until complete registration is achieved;

(c) Consider adoption of an active system of registration in which influential village heads or persons

associated with health services, local governments or religious institutions would act to supplement registration by relatives of the decedent;

2. Countries should periodically evaluate the products of their civil registration system for completeness and accuracy;

3. Countries should make full use of internationally recommended definitions of a live birth and of death, as well as of internationally recommended classifications of causes of death, age groups and other relevant variables. These standards help to ensure comparability of results both within countries and among countries. The United Nations and the World Health Organization should disseminate appropriate guidelines as widely as possible and should attempt, in particular, to encourage their use in medical and public health curricula;

4. There should be recognition of the need to establish administrative systems that would provide a regular and continuous flow of basic data on births, deaths and causes of death as part of the routine reporting structures within the department concerned. The scope and content of such reporting systems would be dependent upon available levels of financing, personnel and current needs of data; but every effort should be made towards establishing such regular systems of reporting;

5. Beginning with the sixth revision of the International Classification of Diseases, Injuries, and Causes of Death, there has been an increasing emphasis on the morbidity aspects of the classification. In the ninth revision, the International Classification was additionally oriented towards uses for medical delivery systems. However, because a majority of deaths are not medically certified in many developing countries, it is necessary to develop and test alternative systems of collection and classification. Therefore, the Working Group recommended that additional studies should be undertaken on ways and means of obtaining cause-of-death information from lay informants and on providing a suitable classification of cause of death for the developing countries, using, as far as possible, the International Classification of Diseases as a base. A system in which lay informants report cause of death should be considered for adoption where a large proportion of deaths are not medically attended;

6. Complete civil registration necessarily entails complete registration of births. In turn, complete birth registration facilitates the measurement and analysis of infant and child mortality. When registration is incomplete, countries should consider recording information on the registration form on the order of the

births together with information on the mother's age and the number of the mother's previous children who are still living and the number who have died. This information may permit the indirect estimation of infant and child mortality.

#### B. CENSUSES AND SURVEYS

The Working Group made the following recommendations concerning censuses and surveys:

1. Population censuses provide important information for mortality measures and analysis. They provide the essential denominators for most mortality measures and permit distinctions in those measures by region and by major socio-economic and demographic groups. Where registration is incomplete, regular censuses should be undertaken to provide important information on adult mortality levels through intercensal comparisons of population change. Such censuses should also be used to provide opportunities for the evaluation of registration completeness;

2. Countries should take note of the successes in mortality estimation achieved through questions on the survivorship of relatives, particularly in the area of child mortality. These questions have vastly improved knowledge of mortality levels and differentials in many countries; and they should be considered for inclusion in all censuses and surveys with a mortality component, whether the survey is single-round or multi-round;

3. Many types of mortality-oriented surveys or survey topics could be usefully included within the context of national survey programmes, for example, those which are part of the National Household Survey Capability Programme. Such an integrated approach was seen not only as being cost-effective but as contributing to the analysis of mortality in relation to its socio-economic and health context.

#### C. OTHER DATA NEEDS

With respect to other data needs, the Working Group recommended that:

1. In certain intensive mortality investigations and surveys, recent deaths should be followed up by suitably trained interviewers who would visit the family and obtain information concerning the fatal illness (or injury) and the medical attention received. If a record was available in a hospital or health centre, the information should be utilized to assist in the assignment of the underlying cause of death. This method of medical interviewing has been found to be successful in improving cause-of-death assignments and thus in identifying disease patterns. At the same time, this follow-back approach could also be used to provide better information on determinants of mortality, provided it was accompanied by a survey of the living population at risk;

2. In view of the complexity of mortality and mor-

idity processes, small-area intensive studies of those processes in developing countries should be expanded in size and scope. A great deal of the existing knowledge about the biological processes and their social correlates leading to disease, death or recovery is derived from such projects, for example, those of the International Centre for Diarrhoeal Disease Research (Bangladesh) and the Institute for Nutrition in Central America and Panama. These projects deserve continued support and additional projects of this nature should be initiated because of the variety of disease patterns and social circumstances in developing countries;

3. In view of the critical importance of low birth weight and prematurity in neonatal mortality, countries should attempt to record information on birth weight, to tabulate birth-weight distributions; and, where possible, to calculate mortality rates by birth weight. Such activities might well begin in hospitals. However, because of the importance of low birth weights in rural areas, midwives and village workers should also be encouraged to weigh babies soon after birth, and scales should be made available for this purpose;

4. Greater emphasis should be given to the need for community participation in data-collection systems both in mobilizing public interest and in the use of community workers, institutions, elders etc., as participants in the collection of mortality data. At the international level, a review should be undertaken to synthesize experience both in this area of community participation and in lay reporting.

#### D. RESEARCH STRATEGIES

The Working Group made the following recommendations concerning research strategies:

1. Special investigations of infant and child mortality should be undertaken in every country where the levels of such mortality are considered excessive or problematical. These investigations should include the determination of the underlying causes of death; and, where possible, the associated causes, such as short gestation period, low birth weight and nutritional deficiencies. They should also include an analysis of the major socio-economic differentials in mortality and an examination of the impacts of environmental factors and health care availability. The importance of personal health practices, such as breast-feeding, care of sick children, immunization and personal sanitation, should also be investigated. Such investigations provide the data base necessary for effective policy formulation and implementation;

2. The shortage of reliable information on mortality levels, trends and differentials for adults was particularly acute in developing countries. Because the death of an adult usually has very serious economic and social consequences, major efforts should be undertaken for collection and analysis of data on adult mortality, using a wide range of approaches and

procedures and expanding this range where possible by extension of analytical techniques;

3. Many disciplines contribute to the study of mortality, and the Working Group stressed the advantages of combining several approaches. In particular, ways should be sought to combine the typical concerns, data and procedures of epidemiology with those of demography. Institutional arrangements for encouraging collaboration of epidemiologists and demographers should be encouraged. Furthermore, training programmes that combine major elements of the two approaches should be fortified or initiated.

#### E. DATA MANAGEMENT

With respect to data management, the Working Group recommended that:

1. In conducting mortality data initiatives, research organizations should from the outset have a clear and feasible plan for data processing, tabulation and analysis. Although there is a great need for additional mortality data and research, no increment in knowledge will result from activities that never get beyond the data-collection stage. It is quite common to find unprocessed or unanalysed data. National Governments, international organizations and funding agencies should support the mobilization of these resources in view of the cost-effectiveness of incremental expenditures. It is also important that ample support should be given to developing data-processing and analytical capabilities within developing countries;

2. Statistics resulting from mortality investigations should be placed in archives and ultimately should be made available to any interested user, since it is not possible to anticipate all potentially valuable uses of the statistics at the time they are produced. The archival and public nature of civil registration statistics is one of their intrinsic advantages. Investigators, organizations and countries should also consider the scientific advantages of making accessible the basic microlevel records within the constraints of national laws pertaining to the confidentiality of certain information.

#### F. ROLE OF INTERNATIONAL ORGANIZATIONS AND FUNDING AGENCIES

As concerns the role of international organizations and funding agencies, the Working Group recommended that:

1. The study of fertility and related topics, including infant child mortality, has been greatly advanced

through the World Fertility Survey. However, no comparable internationally organized activity has been tailored specifically to the requirements of mortality studies. International organizations and non-governmental organizations should consider ways of serving as visible and effective focal points for assistance to countries that wish to improve their mortality data. Efforts should be made to develop and document a variety of approaches to meet the needs of individual countries. The activities that need expansion relate both to the collection and cumulation of national experience with mortality studies and to the development, testing and evaluation of new data instruments and their accompanying technical documentation;

2. Studies of determinants of mortality are of extreme importance for policy formulation on health. International organizations should assist and co-operate with national Governments to undertake such studies. Because of the diversity of data, environments and cultural and social situations, the studies themselves are best organized on a national level. However, the international organizations could play a pivotal role by responding to national requests for assistance, by fostering studies based on common protocols and by ensuring that experiences in mortality studies shall be widely shared. In their role as international organizations, the United Nations and the World Health Organization are in a unique position to integrate these studies into a comparative framework;

3. A review of the current state of knowledge of mortality in the developing countries caused great concern about the almost total absence of even the most basic mortality data in most countries of Africa and in many parts of Asia and Latin America. Even where data are more abundant, they are usually inadequate or improperly analysed for health and development planning. There is concern also about the lack of national and international resources to stimulate mortality data and research in developing countries. An expanded national and international effort should be made to promote studies on health and mortality in order to provide appropriate and reliable data for socio-economic and health planning and for reducing the current high levels of mortality in these countries. Donor agencies have a critical role to play in advancing the state of mortality knowledge and in putting that knowledge to work in improving health conditions. The Working Group stated in the strongest possible terms its belief that donor agencies concerned with advancing human welfare should expand sharply their support for programmes of mortality data collection and analysis and for implementation of the results of these programmes.

## ANNEX

### List of documents

<i>Document No.</i>	<i>Title and author</i>	<i>Document No.</i>	<i>Title and author</i>
IESA/P/AC.17/1	Provisional agenda		and multi-round demographic surveys A. Adlakha and M. Nizamuddin
IESA/P/AC.17/2	Use of mortality data for identifying general health conditions and major health problems Luis Massé	IESA/P/AC.17/12	Experience of Pan American Health Organization using death certificates for intensive studies of mortality Ruth R. Puffer
IESA/P/AC.17/3	Use of mortality data for evaluating the success of specific health and development programmes Douglas C. Ewbank	IESA/P/AC.17/13	Birth records as a sample frame for intensive studies of infant and childhood mortality—the IFORD experience Antoine Houehougbe
IESA/P/AC.17/4	Options for collection of mortality data for various uses United Nations Secretariat	IESA/P/AC.17/14	Small-area intensive studies for understanding mortality and morbidity processes. Two models from Bangladesh: The Matlab Project and the Companiganj Health Project Stan D'Souza
IESA/P/AC.17/5	Experiences in estimating differentials in mortality in developed countries—achievements and shortcomings of the various approaches Elsebeth Lynge	IESA/P/AC.17/15	The role of surveys in providing health and related data, for policy analysis and social planning Ken Williams
IESA/P/AC.17/6	Advantages and disadvantages of continuous registration systems for national, subnational, and differential mortality analysis Iwao M. Moriyama	IESA/P/AC.17/CRP.1	Country statement for the Arab Republic of Egypt Bothina Mahmoud El Deeb
IESA/P/AC.17/7	Use of sample registration system for studying levels, trends and differentials in mortality P. Padmanabha	IESA/P/AC.17/CRP.2	Country statement for the Republic of Sierra Leone Fatu Yumkella
IESA/P/AC.17/8	The use of direct and indirect techniques for estimating the completeness of death registration systems Samuel H. Preston	IESA/P/AC.17/CRP.3	Country statement for Malaysia Kwok Kwan Kit
IESA/P/AC.17/9	Experiences in the use of special mortality questions in multipurpose surveys: the single round approach John G. C. Blacker	IESA/P/AC.17/CRP.4	Country statement for the Republic of Cuba O. Ramos Piñol
IESA/P/AC.17/10	Use of special mortality questions in fertility surveys—the WFS experience John Hobcraft	IESA/P/AC.17/CRP.5	Country statement for Mexico Leopoldo Nuñez Fernández
IESA/P/AC.17/11	Mortality data collection: A review of integrated multi-purpose household surveys	IESA/P/AC.17/CRP.6	Country statement for Peru Teodora Morales de Diaz
		IESA/P/AC.17/CRP.7	Country statement for Sri Lanka Siva Subramaniam
		IESA/P/AC.17/CRP.8	Country statement for Hong Kong Anthony S. K. Mak