

Mortality certification and cause-of-death reporting in developing countries

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Certification of death is the foundation for monitoring mortality patterns and documenting the leading causes of death, with the results being used to inform health policies and improve prevention strategies. It has been vital to our understanding of the demographic transition.

Despite efforts made by the United Nations, the International Institute for Vital Registration and Statistics and WHO to facilitate the organization and management of civil registration and to standardize reporting and coding practices of cause of death, death registration remains inadequate in several countries and mortality patterns are based on vague estimates. Factors contributing to deficient registration systems include incomplete coverage, late registration, missing data, and errors in reporting or classifying the cause of death.

Studies examining these deficiencies in the developing world are rare. Nevertheless, the limited information available suggests that inaccuracies in data derived from death certificates are influenced by various characteristics of the certifier, the certificate, the deceased, and the cause of death (1). The responsibility for non-reporting is shared between the family of a deceased person failing to call a physician and the physician failing to report the cause of death (2), accentuated in countries where there are no laws to enforce the obligations of the certifying physician. Moreover, the majority of medical schools in these countries do not give instruction about the process of mortality certification, so physicians have little understanding of the importance of completing death certificates.

Reporting is less accurate when death is sudden, attributable to stigmatized conditions, or occurs among certain minorities, social classes and older age groups (3, 4). Cause of death may also be distorted when doctors in developing

countries who have been trained in diverse local and foreign educational systems use different terminology in the native language for the same diagnosis (5).

The lack of reliable mortality statistics has prompted public health workers and researchers to search for alternative methodologies. These include the sample registration system used in India, in which events are recorded routinely from a representative sample of the population; demographic surveillance systems using verbal autopsies to assess cause of death in Africa and South-East Asia, where most people die at home without having had contact with the health care system; and, in some cases, verbal autopsies at the national level to assess mortality in children under five years of age (6). Researchers differ, however, in the format and content of their verbal autopsies, so the validity and reliability of the data remains questionable and findings are only relevant to the particular social, economic and cultural climate.

While these approaches can draw some valid inferences, they have their limits, and comprehensive, comparable cause-of-death statistics from vital registration remain a necessity for all countries. Several practical responses may be suggested to resolve problems in the death certification process. Complete registration necessitates a long social and economic development with an autonomous infrastructure, a political will and a compulsory reporting to death registers in a timely manner. Valid reporting and coding of cause of death requires a concerted effort that fosters links between all those involved. Local problems must have local solutions. For example, in countries where cause-of-death structure is largely lacking, using larger aggregates of *The international statistical classification of diseases and related health problems* groupings tends to lessen errors and

improve comparability of data (7).

Instructions in the native language should be developed and made widely available. Steps should be taken to include training in death certificate completion for students and practising physicians. In some countries, the notification form may need to be revised and updated (2).

Studies are also needed in various communities to develop verbal autopsies that are culturally and scientifically valid in the settings in which they are to be used. Where a basic registration system exists, uncertainty of reporting should be quantified and relayed to decision-makers. Routine checks should be conducted. Analyses of existing data are needed, in a manner that would transform information to action, for example leading to a new government policy that in turn would improve the registration process.

The value of routine sources of data collection for national well-being and public health progress in several poorer countries is often not acknowledged, either by physicians or policy-makers. Furthermore, researchers tend to work in isolation, and the extent to which their studies cross boundaries and translate into practice is questionable. In particular, it is in the poorer countries that partnership at different levels and among different stakeholders including government, medical associations, academics and civil society is difficult to realize. What can donor agencies and WHO do to formulate the research in such a way that it becomes a driver of change? WHO has always been instrumental in setting guidelines on the development and reform of health information systems, but can it lead such a partnership as well? ■

References

Web version only, available at: <http://www.who.int/bulletin>

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