Further Comments on Problems in Death Certification

Analyses of information recorded on death certificates or their predecessors comprise one of the oldest and most extensive public health surveillance systems. Numerous examples of the usefulness of this elementary form of surveillance can be cited, such as Farr’s use of information from the Bills of Mortality to promote social reforms (1); Chapin’s watch on infectious diseases in Providence, Rhode Island (2); and the charting of the rise and recent gradual fall in mortality from arteriosclerotic heart disease (3, 4). Virtually all mortality statistics, however, deal only with the underlying causes of death and ignore most other conditions mentioned on death certificates. As Israel et al. (5) point out, multiple cause-of-death analyses could make good use of much of this discarded information.

Unfortunately, there are difficulties with the current mortality system that are much more fundamental than the failure to take into account all conditions that are mentioned. In our experiences, there are major problems:

1) Most physicians have had no training in the purpose and process of death certification. Only the exceptional few have had adequate instruction in what information is desired and how to record it.

2) Medical information on death certificates is often incomplete. In the period July 1983 through June 1984, 33% of the death certificates for residents of a county known to one of the authors (G.W. C.) had no indication of duration of any of the conditions mentioned in Part I of the death certificate. Numerous articles have reported that important medical conditions present at death did not appear on the death certificate, either through oversight or because the attending physician did not consider that the omitted condition contributed to death (6).

3) Diagnoses on death certificates do not necessarily reflect information obtained after death. Physicians often feel compelled to complete death certificates promptly to expedite funeral arrangements. Although they have the privilege of amending the original certificate to take into account subsequent historical information or the results of necropsy and toxicologic examinations, this is apparently rarely done. One of the authors (G.W.C.) has been reviewing death certificates from three areas of the United States over a 32-year period and cannot recall that any physician, other than a medical examiner or coroner, ever submitted an amended certificate.

4) Physicians are not routinely queried regarding inadequate diagnoses (e.g., congestive heart failure as the only condition mentioned), unlikely sequences of diagnoses (e.g., bronchogenic carcinoma due to coronary heart disease), or missing information, most often the duration of conditions listed in Part I. Failure to query in such instances means that an important opportunity for postgraduate education in death certification is being missed.


Correcting these defects will not be easy or quick. Given the importance of improved death certification to epidemiology and preventive medicine, should not the American College of Epidemiology, the American College of Preventive Medicine, the American Public Health Association, and the Society for Epidemiologic Research (together with others with similar interests) cooperate with the National Center for Health Statistics in efforts to improve this elementary and fundamental surveillance of the health of the nation? As citizens, we should demand that a system that entails untold amounts of money and time be made optimally productive. As preventers of disease, we need prompt reporting of the causes of death, and as scientists, we need accurate and complete information on that hardest of end points, death.

Some corrections could undoubtedly be made by the National Center for Health Statistics if they had adequate funding. Other corrections will require our combined influences as professionals and citizens on medical schools, and most importantly, on government. A nation that prides itself on being the leader in medical science should not neglect the basic form of evaluating the effects of that science.

All this is not to denigrate multiple cause-of-death analyses. Far from it. We should still try to get the most information out of our present imperfect system.
We should not, however, forget fundamental issues. Improving the basic raw material, the death certificate, will yield benefits at all levels of analysis and action.

References


(Source: George W. Comstock, Department of Epidemiology, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, Maryland, and Robert E. Markush, Department of Psychiatry, University of Alabama, Birmingham, Alabama, United States of America.)

Editorial Comment

This article joins several others in discussing the problems that hamper a wider utilization of the data from death certificates, even in those countries that have good vital statistics systems.1 In the Latin American and Caribbean countries these problems are compounded by those stemming from under-registration of deaths and low coverage of the population with medical care services, with the ensuing low proportion of medical certification of cause of death. Nevertheless, the conclusions and recommendations of the authors have pertinence for all countries of the Region of the Americas, especially so the one that refers to trying “to get the most information out of our present imperfect system,” while seeking to improve the coverage and reliability of the basic data.

On the other hand, it is stimulating to observe a resurgence of interest in the analysis of mortality statistics and the renewed stress on their importance to epidemiology and preventive medicine, as they offer one of the basic elements for the surveillance of health.

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