Editorials

Setting international standards for verbal autopsy

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In many countries most deaths occur at home. Such countries often have civil registration systems that are limited or non-existent and therefore most deaths go unrecorded. Countries that cannot record the number of people who die or why they die cannot realize the full potential of their health systems. Health systems need reliable numbers and causes of death to function properly. But in these circumstances – in the absence of a complete picture of the population's health – there are tools and techniques that can be used to obtain a fairly accurate representation of mortality trends.

It takes a long time for countries to achieve a fully functioning civil registration system with medical certification of cause of death. In the meantime, more and more countries are using verbal autopsies (VA) to meet the information needs of their health systems.[1] Verbal autopsy is a method of ascertaining probable causes of a death based on an interview with primary caregivers about the signs, symptoms and circumstances preceding that death.

Different institutions have been researching and developing all aspects of the verbal autopsy process over the past two decades. We have also been working on this process, particularly to improve the questionnaire and the methods of analysing the resulting information. However, this has been a largely uncoordinated effort and one that has not reached consensus on what to cover in the interview and how to analyse the results, despite previous attempts to promote standard tools.[2–4] The main consequence of this failure to agree on a standard approach is that now we cannot compare results from different countries. Currently, 36 Demographic Surveillance Sites (DSS) in 20 countries, the Sample Registration System (SRS) sites in India, and the Disease Surveillance Points (DSP) in China regularly use VA on a large scale, primarily to assess the causes-of-death structure of a defined population.[1] Despite such a widespread use of verbal autopsy, we are unable to assess how consistent and reliable the data are. We are also unable to replicate procedures used to assign cause of death. Because verbal autopsy data sets are not widely shared, it is impossible to independently assess the quality of the assignment. Really useful validation studies are rare and verbal autopsy research is often done on small and non-representative samples of the population.

The Millennium Development Goals (MDG) have put pressure on countries to track their progress in terms of population health. But to track that progress, countries need reliable numbers. In other words, they need a strong empirical basis for cause-specific mortality data. This is essential for evaluating the impact of disease control programmes and major global health initiatives. One way of dealing with incomplete information is to use models of mortality patterns. But cause-of-death information predicted by such models is not suitable for monitoring progress on what works and what does not.[5] That leaves verbal autopsy as the only practical option in these countries and one that will play a key role in tracking progress towards the MDGs. Agreement on a core set of verbal autopsy tools (including technical standards and guidelines for their use) and their widespread adoption is needed now.

To tackle this challenge, WHO led an expert group of researchers, data users, and other stakeholders, with sponsorship from the Health Metrics Network (HMN), in developing the necessary standards. The expert group systematically reviewed, debated, and condensed the accumulated experience

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and evidence from the most widely-used and validated procedures. This synthesis was done to achieve a high degree of consistency and comparability across verbal autopsy data sets.

WHO has now published the results of this collaboration as: *Verbal autopsy standards: ascertaining and attributing cause of death*.

The new standards include:

- Verbal autopsy questionnaires for three age groups (under four weeks; four weeks to 14 years; and 15 years and above);
- Cause-of-death certification and coding resources consistent with the *International Classification of Diseases and Related health Problems, tenth revision* (ICD-10); and
- A cause-of-death list for verbal autopsy prepared according to the ICD-10.

The content is freely available on the WHO web site (www.who.int) and will be distributed in print; and incorporated into HMN's resource kit.

This is an important publication, but it is not the last word on verbal autopsy methods. Research is needed to validate these standard core procedures in several countries with different patterns of mortality. Other areas of research include further development of items included in questionnaires, and automated methods for assigning causes of death from verbal autopsy that remove human bias, while producing replicable and valid results.[6] Operational issues need addressing: sampling methods and size when using verbal autopsy tools in research demographic surveillance sites; sample or sentinel registration; censuses; and household surveys. Research is also required when adapting these questionnaires to specific situations in different countries, taking into account relevant cultural, epidemiological and administrative considerations. WHO is working with partners to do this research and develop guidelines on these issues. With time, this guidance and experience will better inform the users of verbal autopsy, and improve the comparability and consistency of its results. For the present, we urge that these new international consensus standards become the foundation of verbal autopsy practices wherever possible. ■

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