# Time for civil registration with verbal autopsy

The Ministerial Conference on Civil Registration and Vital Statistics (CRVS) in Asia and the Pacific is taking place on Nov 24–28, 2014, in Bangkok, Thailand. In recognition of this and parallel plans from the UN Economic Commission for Africa for a Ministerial Conference on CRVS for African countries, to be held in Côte d'Ivoire in February, 2015, it is timely to reiterate that the health sector's most pressing need within CRVS systems is the inclusion of reliable and standardised cause-of-death procedures. Solid cause-of-death data are absolutely essential to well functioning public health systems. Overburdened health-care providers are not necessarily able to deliver reliable cause-of-death data consistently, and many deaths do not occur in health-care facilities. However, methods for verbal autopsy have recently advanced notably under WHO's leadership.[1] Verbal autopsy is the interpretation of the cause of death on the basis of structured interviews with families, or other witnesses, about the final stages of illness and death. Development of reliable and automated processes for assigning cause of death from verbal autopsy material mean that, typically, a 15 minute interview after the death of a person can yield cause-of-death data of substantial public health relevance at modest cost and effort. The verbal autopsy procedure can be implemented on hand-held technology,[2] which brings great scope for integration within CRVS systems (figure).

The INDEPTH Network has recently demonstrated proof of this principle on a large scale, using the InterVA-4 model;[3] analyses of a public-domain dataset, covering more than 110 000 deaths across sub-Saharan Africa and southeast Asia,[4] yielded headline mortality findings in accordance with expectations from globally estimated sources, but the wealth of underlying detail points to the substantial potential of using the same methods routinely within CRVS procedures. The burden of non-communicable disease mortality was shown not to be the largest cause of adult mortality in Africa and Asia, although there were apparently inflated rates of premature adult non-communicable disease mortality in areas with high levels of HIV infection.[5] Quantification of external causes of death at the population level revealed particular issues of childhood drowning in Bangladeshi Delta areas, high rates of assault among men in eastern and southern Africa, and hazardous road travel in western Africa.[6] Pregnancy-related mortality is much easier to understand if all deaths in women of reproductive age are documented, rather than specifically surveying maternal deaths.[7] Although verbal autopsy has often been viewed with some scepticism in relation to identifying deaths caused by malaria, this dataset showed a strong correlation between childhood malaria mortality rates and geospatial data for childhood incidence of *Plasmodium falciparum* infection from the Malaria Atlas Project.[8] Similarly, HIV/AIDS-related mortality patterns were congruent with estimates from UNAIDS and the Global Burden of Disease project.[9]

Although there will undoubtedly be further improvements in cause-of-death assignment methods, it is clear that usable and credible methods already exist. WHO's Ties Boerma, in an editorial[10] accompanying the INDEPTH Network analyses, calls on established Health and Demographic Surveillance System (HDSS) sites to strengthen national CRVS capacity by sharing experiences. HDSS sites may continue to collect more detailed population data in local areas than would be reasonable on a national basis, but there is an equally urgent need to expand the collection of core data items, such as cause of death, into reliable national CRVS systems.

In some countries, it can be difficult to bring together stakeholders, who are often representing several ministries, to appreciate the vision of an effective national CRVS system as a great common good that enhances health, education, welfare, and human rights. Although initiation of CRVS systems, including verbal autopsy, is bound to be expensive and time-consuming, it is crucial to approach the CRVS systems as a virtuous cycle that not only requires resources but also yields positive results. The alternative, denying citizens of the right to be counted, might seem an easy option, but in reality, this is a very expensive mistake that holds back development across all sectors.

For the **INDEPTH Network** see
http://www.indepth-network.org



*Figure:* A verbal autopsy interview, using smart-phone technology, in rural South Africa

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10   Boerma T. Moving towards better cause of death registration in Africa and Asia. *Glob Health Action* 2014; **7:** 25931.