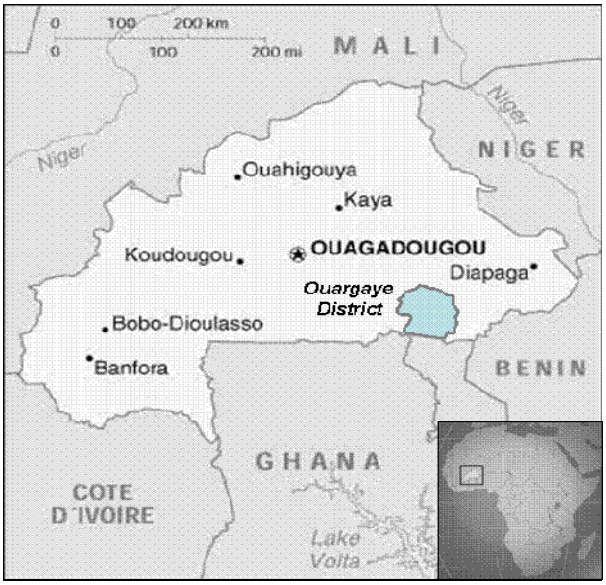
BURKINA FASO: Extending verbal autopsy to examine social and medical causes of maternal mortality

BRIEFING NOTE 01.10.2008

Background

This briefing note describes a methodological adaptation of the Verbal Autopsy (VA) survey method. VA is a technique that is used to establish levels and causes of mortality for people who die outside hospitals and health facilities. Over 20 countries in Africa and Asia use VA for large-scale surveillance, monitoring and public health planning. In a VA, an interview is conducted with the primary carer(s), usually family members, on medical signs and symptoms of the deceased prior to death.



By virtue of the fact that VA surveys investigate deaths that occur outside health facilities, VA provides an opportunity to gather information on the socio-economic and health systems environments that may exclude people from access to healthcare, as well as to collect information on medical causes of death.

The aim of the study was to investigate the value of extending a verbal autopsy survey to gather additional information on social, economic and health systems factors that may have a causal link with mortality, as well as collecting information that could be interpreted to quantify medical cause of death.

The study was undertaken in November 2007 in Ouargaye district in south eastern Burkina Faso. Ouargaye is a remote and rural district with limited electricity, water and transport infrastructure. Family Care International (FCI) implemented the Skilled Care Imitative (SCI) in Burkina Faso from 2002 to 2004. In Ouargaye the SCI aimed to improve the district hospital and 13 health centres by improving equipment, drugs and training for healthcare providers. Community activities of health education and promotion were also conducted across the district [Hounton *et al*, 2008].

Information from a Verbal Autopsy interview provides information for health planning

Methods

70 extended VA interviews were conducted with the family members of women who died during pregnancy, childbirth or within six weeks of a pregnancy ending. All the cases were identified during a previous Immpact census survey in 2006 in the same district. In the earlier survey, only information on medical causes of death was collected.

The interview collected information on medical signs and symptoms prior to death. Additional non-medical information was collected according to the "three delays" conceptual framework of maternal mortality [Thaddeus and Maine, 1995]. Responses

were elicited according to whether delays had occurred in a) the decision to seek care; b) reaching care (once a decision to seek care had been made); and/or c) in the provision of good quality care (once care had been reached). The full interview guide and study protocol are available from Immpact.

IMPORTANT NOTE: The cases were not selected randomly and the results are not intended to be representative of maternal mortality in the population. We present the results to illustrate the different types of information that can be collected with an extended verbal autopsy and their utility for health policy and planning.

Results

Infectious diseases and haemorrhage accounted for over 50% of deaths

The leading causes of death were: pregnancy-related sepsis, accounting for 28% of the deaths. This category includes conditions such as genital tract sepsis and indirect infectious causes e.g. typhoid. Haemorrhage accounted for 13% of the deaths; malaria (8%); cardiovascular disease (6%); and diabetes (6%). Of the other direct causes, 4% were attributed to pregnancy-induced hypertension; complications of unsafe abortion (2%); and obstructed labour (2%). Despite the possibility that the cases investigated were not representative of the wider population, the apparent burden of infectious disease (of obstetric and non-obstetric cause including HIV (2%), malaria (8%), TB (5%) and pregnancy-related sepsis (28%) is considerable, accounting for over 40% of the deaths

Delays in seeking, reaching and receiving care occurred in over 70% of cases. Costs were a major deterrent to people, especially the poor, using services.

The extended VA interview revealed that delays in seeking, reaching and receiving care occurred in 73% of cases. The majority of delays were related to the costs of care and care-seeking. The main themes were as follows:

- *Delays in the decision to seek care:* Delays in the decision to seek care were reported in 57% of cases. The financial costs of transport and care were often unaffordable for families and so concerns over costs of care were highly influential in decision making. Means of transport were also commonly predicted to be unavailable and so affected decision-making to seek care.
- *Delays in reaching care:* Delays in reaching care were reported in 63% of cases. Problems in reaching health facilities were mainly related to unaffordable services, transport and the distance to facilities. Many respondents described transport that took hours to arrange and that was often unsuitable (e.g. motorcycle, bicycle, cart track by donkey).
- *Delays in receiving good quality facility-based care:* Delays in receiving good quality care in a facility (defined as accessible, acceptable and affordable, with adequate staff, equipment and supplies) were reported in 63% of cases. Again, unaffordable care was a major barrier to it being accessed when a facility had been reached. Health facilities were also often not adequately staffed or equipped, often lacking in crucial supplies.

Conclusions

Our results suggest that the social production and political economy of health are highly influential to health outcomes. Interventions to reduce maternal mortality should recognise the social determinants of health, or barriers to access of essential health care services, as well as focussing on treatment of complications that occur during the intrapartum period.

Recommendations

The survey investigated a methodological adaptation to the traditional VA technique. The recommendations are therefore related to using VA for health planning.

Information on medical <u>and</u> social cause of death is critical for health planning

People who die outside health facilities are likely to be poor, marginalised and excluded from access to healthcare. Without information on their situations, circumstances and needs, the barriers they face cannot be identified or addressed. Information on medical and social cause of death should be routinely collected and used in health planning.

Extended VA is suitable to examine medical and social determinants of maternal morality

The extended VA technique provides an approach to both quantify burden of disease and assess important social and structural factors that may have a causal influence on outcomes. Quantification of burdens of disease at population level is important for evidence-based health planning and resource allocation. However, in settings where social and

economic circumstances dictate health behaviours and states, information on 'social cause of death' is also important.

Extended VA has a unique utility for equitable health planning

In settings where the poor and vulnerable are excluded from, and invisible to, health services, information on all the factors that lead to death are required for health service organisation and delivery. This information has the potential to inform health planning, in terms of the relative prioritisation of interventions that improve technical aspects of life-saving services with those that improve the broader conditions that underlie health.

References

D'Ambruoso L, Byass P, Qomariyah SN, Ouedraogo M. A lost cause? Extending verbal autopsy to investigate social and medical causes of maternal death and implications for policy and planning. Presented at "Loss in Childbearing in Sub-Saharan Africa and South Asia Conference, September 4-6 2008, University of Edinburgh.

Hounton S, Sombié I, Meda N, Bassane B, Byass P, Stanton C, De Brouwere V. Methods for evaluating effectiveness and cost-effectiveness of a Skilled Care Initiative in rural Burkina Faso. Tropical Medicine and International Health 2008, 13(Suppl. 1):14-24.

Thaddeus S, Maine D. Too far to walk: Maternal mortality in context. Social Science & Medicine 1994, 38:1091-110.

For more information please contact:

Moctar OUEDRAOGO,
Sociologist/Demographer,
Head Research & Evaluation,
GREFSaD,
01 BP 298 Bobo-Dioulasso 01,
Burkina Faso,

Tel/Fax: (226) 2098 6368
Email: mouedraogo.muraz@fasonet.bf
Web: www.interva.net

Lucia D'AMBRUOSO
Research Fellow
Immpact
University of Aberdeen
Health Sciences Building
Foresterhill,
Aberdeen, AB25 2ZD
United Kingdom

Tel: +44 (0)1224 559736
Fax: +44 (0)1224 555704
Email: l.dambruoso@abdn.ac.uk
Web: www.immpact-international.org