

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

DISTRICT HEALTH PLANNING FEEDBACK BRIEFING NOTE: 01.10.2008

This briefing note describes a methodological adaptation of Verbal Autopsy.

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



Information from a Verbal Autopsy interview provides information for health planning

link with mortality, as well as collecting information that could be interpreted to quantify medical cause of death

The study was undertaken in January 2008, in the Serang and Pandeglang districts of Banten Province, West Java. Serang is a rural district with a population of 1.7 million. There is one district referral hospital and 36 health centres (10 with beds). Pandeglang is classified as remote and rural with a population of 1.1 million. It has one public hospital and 30 health centres (5 with beds) [Izati, 2005].

Methods

104 extended VA interviews were conducted with the family members of women who died during pregnancy, childbirth or within six weeks of a pregnancy ending in Serang and Pandeglang districts. All the cases were identified during a previous Impact survey in 2006 in the same districts. 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



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

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 Impact.

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. Otherwise, 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 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 70% of cases. The majority of delays were related to the costs of care and care-seeking. The main themes, arranged according to the three delays framework, were as follows:

- *Delays in the decision to seek care:* Delays in the decision to seek care were reported in 45% of cases. Financial costs of care were highly influential in decisions making for care. In many cases, health insurance had not been arranged in advance, despite the apparent eligibility of families for it. The health insurance process was complicated and took time to arrange in emergencies.

- *Delays in reaching care:* Delays in reaching care were reported in 66% of cases. Problems in reaching health facilities were mainly related to unavailable and unaffordable transport and the distance to facilities. At difficult times such as late at night, transport was generally unavailable. Even during the day and in good weather, transport could take hours to arrange and was often unsuitable and unsafe.

- *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 44% of cases. The admissions of women with health insurance, partially arranged health insurance or no health insurance and no ability to pay for care were complicated and time-consuming. The complicated and stigmatised health insurance system was seen to introduce a “bureaucratic burden”, seriously and negatively affecting access to life-saving healthcare and quality of services. Facilities were commonly not adequately staffed or equipped, often lacking in crucial supplies such as blood products. Many families had to embark on additional journeys (and pay associated costs) to locate and purchase medications and/or blood. Ambulances were often reported to be unstaffed and ill-equipped.

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 and 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 mortality

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 special 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

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