

## COMMENTARY

### MAKING MATERNAL DEATH A NOTIFIABLE EVENT\*

Maternal mortality is an important global indicator of the functioning of health systems and one of the targets of the Millennium Development Goals (Goal 5: 75% reduction in maternal mortality between 1990 and 2015)<sup>1</sup>. The current magnitude of maternal mortality in Ghana, at national and sub-national levels, is not accurately known. This situation prevails in many developing countries, and presents a fundamental challenge to establishing the effectiveness of safe motherhood strategies and wider health systems development. For these reasons it is important that improvements are sought in the measurement of maternal mortality.

In Ghana, the official national estimate quoted is 214 maternal deaths per 100,000 live births. This is considerably lower than figures estimated by specific studies and by the WHO/UNICEF/UNFPA modelled figure for the year 2000 of 540<sup>2</sup>. The main source of data in Ghana on maternal death is the health information system based on routine returns from health institutions. Despite the implementation of maternal death audits in many health facilities, there is still scope for considerable under-reporting. Moreover, institutional maternal mortality rates and ratios are notoriously difficult to interpret, reflecting much higher levels than in the general population owing to the over-representation of high risk cases, or much lower levels owing to the omission of deaths occurring in the community.

#### WHY MAKE MATERNAL DEATH A NOTIFIABLE EVENT?

As a first step, it is important to identify the primary rationale for making maternal death a notifiable event as this will have implications for the design and implementation of a notification process. Possible stated reasons include to:

- Raise public awareness of maternal death
- Provide death cases for further investigation or audit
- Improve timeliness of death reporting
- Form an integral part of a Confidential Enquiry System
- Increase completeness of reporting
- Monitor levels and trends in the maternal mortality ratio.

The important distinction between these reasons is the completeness of the coverage of maternal deaths. For example, to raise public awareness or provide cases for auditing does not necessarily require notification of all deaths or even a representative sample. However, such a requirement does apply if the intention is to estimate the maternal mortality ratio. It is now widely acknowledged throughout developed and developing countries that there is no single data source or data capture method which can be relied upon to routinely capture all maternal deaths or a representative subset<sup>3</sup>. Rather, a system of multiple sources and methods are needed. Making maternal death a notifiable event should thus be regarded as just one component of an information system and will not meet every data requirement.

#### WHAT IS MEANT BY "NOTIFIABLE"?

It is useful to distinguish between two main types of notification:

- Members of the public are legally required to notify deaths occurring in the community to the authorities. This can involve active surveillance where there are personnel dedicated to pursuing deaths, or passive surveillance which relies on the public reporting deaths of their own volition.
- Health professionals are legally required to actively notify a central authority each time a death occurs, in an equivalent fashion to outbreak reporting of notifiable diseases.

This distinction also highlights the difference between deaths in the community versus deaths in health facilities, since these have different implications in terms of the implementation and enforcement of notification. In the case of deaths in the community, Ghana already has in place a vital registration system for births and deaths. This, however, relies on passive surveillance and thus is widely-regarded as seriously incomplete, particularly in rural areas. Shifting to active surveillance nationally has significant logistical and resource implications, but an alternative may be to consider sentinel sites where such intense data capture is instituted. Such an approach currently exists in the two demographic surveillance areas in Navrongo and Kintampo districts, but these clearly cannot provide a nationally representative picture.

Turning to maternal deaths in health facilities, these should be captured by the routine health information system. Moreover, the recent introduction by the Ghana Health Service of maternal death audits may also enhance reporting. However, complete capture of these deaths is unlikely owing to both the wider deficiencies in the routine health information system as well as to the peculiar problems of maternal deaths whereby misclassification and underreporting are the norm. For example, deaths in early pregnancy and those related to sensitive causes such as induced abortion are frequently missed and, similarly, maternal deaths owing to indirect (non-obstetric) causes which may happen on wards other than the maternity may be misclassified as non-maternal. The routine reporting system in Ghana is essentially passive surveillance, and one option that may be considered under the guise of "making maternal death a notifiable event" is to shift to active surveillance at health facilities. This has been adopted by a number of developing countries, such as Jamaica and South Africa<sup>4</sup>, often as part of a Confidential Enquiry system which utilises multiple sources of information.

#### LEGAL IMPLICATIONS

If notification is to have legal status in Ghana, then a number of issues need to be considered. Firstly, who will ensure notification is enforced, for example, the police or other civil authorities? Secondly, will enforcement be within the usual legal process or under a separate legislative system? Thirdly, how will non-compliance with notification be addressed? Will, for example, relatives of the deceased or the attending health professional be fined for failure to register a maternal death, or would formal prosecution be pursued? Finally, what sorts of positive reinforcements may be practical to offer to encourage notification, such as free burial or death certificates?

#### OTHER ISSUES TO BE CONSIDERED

Besides the question of the legal issues surrounding making maternal death a notifiable event, other factors which require consideration include:

- Sustainability – how will active or passive surveillance be sustained in the long term?
- Affordability – how and who will meet the costs (direct and indirect) of setting-up and maintaining the notification?
- Quality Assurance – how and whose responsibility will it be for ensuring the quality of data captured?
- Responsibility for implementing and maintaining – which government body and appointed individuals will take overall responsibility?

- Confidentiality – what will be the confidentiality status of the data, and how will this be maintained?
- Use of data – who will manage and analyse the data, and how will the findings be used to inform safe motherhood policies and programmes?

#### OTHER POSSIBLE WAYS FOR IMPROVING REPORTING

As indicated earlier, complete and informative reporting of maternal deaths requires a system comprising multiple sources and capture methods. Making maternal death a notifiable event, perhaps without legal sanction and with active rather than passive surveillance, could be helpful as part of such a system. Additional mechanisms for improving reporting include:

- Enhancing the overall vital registration system for births and deaths
- Reform of the death certificate in Ghana to include a pregnancy check box<sup>5</sup>, indicating the pregnancy status of all women dying aged 15-49
- Introduction of a formal Confidential Enquiry system or other multiple data source initiative
- Routinely reviewing death certificates, autopsy reports and medical records. In the context of Ghana, this would require the identification of maternal death assessors, probably at a regional level, who would actively contact or visit each major health institution to identify deaths to women aged 15-49, on say a three-monthly basis, and then identify those which should be classified as maternal deaths, probably using case-note reviews. In addition to this, each facility would be required to notify the assessor each time a maternal death occurred, rather than only reporting through the monthly institutional returns
- Use of improved verbal autopsy tools to ascertain causes for deaths in the community
- Application of new population-based approaches to estimating the level of maternal mortality
- Use of systematic facility-based approaches to detecting maternal deaths

It is recommended that any single or combined approach to improving maternal death reporting should, however, be piloted prior to national implementation.

#### REFERENCES

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