

Maternal mortality estimates

The challenge: inaccurate maternal mortality estimates

Nigeria contributes substantially to the global burden of maternal mortality – success in reducing this is critical to achieving the 5th Millennium Development Goal (MDG 5). Reliable estimates of maternal mortality are essential for effective planning of resource allocation, and for monitoring the impact of maternal health interventions.

Although global maternal deaths reduced by 35% from 526,300 in 1980 to 342,900 in 2010, in Nigeria they actually increased from an estimated 473 deaths per 100,000 live births (95% confidence interval – CI: 306-703) in 1990 to 608 (95% CI: 372-946) in 2008¹. The wide confidence intervals reflect the lack of precision in the estimates; thus, the numbers should be interpreted as orders of magnitude rather than exact ratios.

Key messages: Maternal death related to pregnancy and childbirth is a sensitive indicator of a weak health system.

- 1** Obtaining accurate maternal mortality data is extremely difficult in countries with poor registration systems and contributes to a lack of appropriate targeting of essential resources.
- 2** PRRINN-MNCH used the 'sisterhood method' to estimate maternal mortality in selected Northern Nigerian states and identified a much higher maternal mortality and lifetime risk of maternal death than the national average.
- 3** Attaining the 5th Millennium Development Goal (MDG 5) will only be possible with accelerated efforts to improve the health system and ensure wider access to essential maternal health services.



numbers in the south-east and south-west regions were 13% for no antenatal care and two out of ten for home deliveries.

The response: the 'sisterhood method' survey

PRRINN-MNCH carried out an extensive survey in the programme states of Jigawa, Katsina, Yobe and Zamfara to define more appropriate estimates of the lifetime risk of maternal death and the associated maternal mortality ratio (MMR). The 'sisterhood method' was employed, where women of reproductive age were asked about any sisters who had died during pregnancy, labour or within 42 days after delivery.

This technique provides reasonable estimates if 3,000 sisters or more are studied. In this case, 3,080 respondents were interviewed between July and August 2011.

A further complication is the wide disparities in health-related data across Nigeria, with the north performing significantly worse than the south². For example, the Nigerian Demographic and Health Survey (NDHS) of 2008 indicated that in the northern region, 59% of pregnant women had no antenatal care and nine out of ten women delivered their babies at home. The corresponding





The results: reliable evidence

The respondents reported 7,731 sisters of which 593 were reported dead, 298 of them due to maternal-related causes. This results in a lifetime risk (LTR) of 9% or one in 11, and using the estimated total fertility rate of 7.3 from the NDHS 2008, gives an average MMR in the study area of 1,271 maternal deaths per 100,000 live births, with 95% confidence intervals of 1,152 to 1,445.

When disaggregated by 5-year age groups, the data also showed a common trend of high maternal mortality in the age groups 20-24, 25-29, and 30-34, in which at least 16% of the deaths reported was a maternal death. The MMR estimate based on respondents aged 30 years and below was very high at 1,751 maternal deaths per 100,000 live births.

Policy implications

The maternal mortality situation in Northern Nigeria is one of the worst in the world and is much worse than the national average statistics suggest.

This is largely due to poor health systems, low use of antenatal care – particularly by skilled health workers, and a preference for home deliveries³.

Programmes aimed at improving the infrastructure and access to health services in rural areas will probably have a great impact on maternal health outcomes.

Innovations such as those pioneered by PRRINN-MNCH on emergency transport schemes and improving quality of emergency obstetric care (EOC) services, especially in rural areas, will help to stem the high level of maternal mortality.

Creating demand by making the community aware of the benefits of antenatal care, as well as wider availability of emergency transport and EOC at nearby health facilities will increase the use of maternal and child health services.

Interventions that delay pregnancy in young married women could contribute significantly to minimising the LTR of maternal death.

Conclusion

The MMR in Northern Nigeria has been long speculated to be in excess of 1,000 maternal deaths per 100,000 live births. This study provides reliable evidence that this is indeed the case, with an estimated MMR of 1,271 (95% CI: 1,152–1,445).

Scaling up interventions to accelerate the reduction of maternal mortality, such as increasing the availability of skilled birth attendants, promotion of facility delivery, improving antenatal care attendance, implementation of emergency transport schemes in hard-to-reach rural areas and expanding family planning use will all help the attainment of MDG 5.



References:

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Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal Newborn and Child Health Initiative

The PRRINN-MNCH programme works with federal, state and local governments and local communities to improve the quality and availability of maternal, newborn and child health services.

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