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Differential Maternal Mortality in Kenya: the need to prioritize Interventions

Maternal mortality[1] is one of the indicators of reproductive health status of the population. However, the level of maternal mortality at sub national levels in Kenya has not been known because of absence of reliable data. As a result, health administrators, programme managers, and researchers working in safe motherhood programmes at sub-national levels are often unable to set specific objectives or monitor progress towards reducing maternal mortality at sub-national levels. It is important to note that sub-national estimates are also essential for setting priorities, allocating resources and targeting areas where maternal mortality is high. This policy brief presents crucial information for each county that will help the various players in maternal health to prioritize and target interventions aimed at reducing maternal deaths.

Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

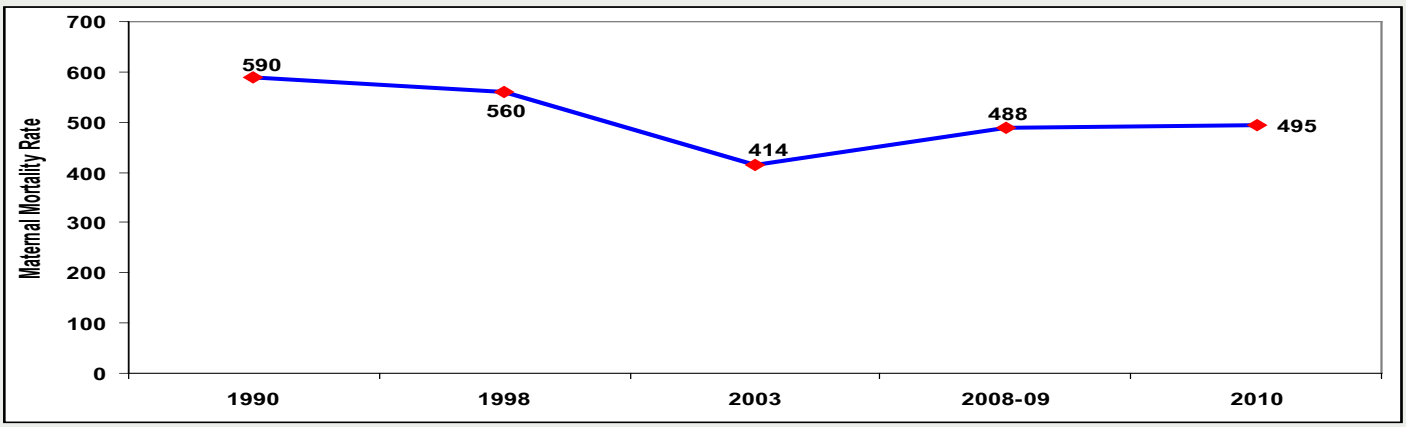
Background

Efforts to reduce maternal deaths have for decades been a focal point of international agreements and a priority for women's rights and health groups throughout the world because a maternal death is one of life's most tragic outcomes. The irony of this cruel death is that almost all is entirely preventable given proper medical surveillance and intervention. According to a Kenya Medical Association (KMA) report of 2004, the major causes of maternal mortality are haemorrhage, infections associated with delivery, hypertension induced by pregnancy, obstructed labour due to poorly-monitored labour or delayed action against such, and abortion that is procured unsafely and/or by untrained providers. However, health administrators and programme managers, researchers working on safe motherhood programmes at sub-national levels are often unable to set specific objectives or monitor progress towards reducing maternal mortality at sub-national levels because data is lacking. In the absence of civil registration and administrative data, suggestions have been proposed to collect maternal mortality data as part of the decennial census to estimate maternal mortality at the sub-national level.

Levels and Differentials in maternal Mortality

According to estimates from 2008-09 Kenya Demographic and Health Survey, maternal deaths represent about 15 percent of all deaths to women aged 15-49 in Kenya. Slightly over 6,000 women die every year due to pregnancy related conditions. Trend data shows that maternal mortality as measured by maternal mortality ratio (MMR) has almost remained at the same level since 1990 when it was estimated at 590 deaths for every 100,000 live births(see Figure 1).

Figure 1: Trends in Maternal Mortality Ratio, Kenya, 1990-2010



Sources: WHO/UNICEF/UNFPA/World Bank, 2012; Kenya Demographic and health surveys; 2009 Kenya Census Analytical Report on Mortality.

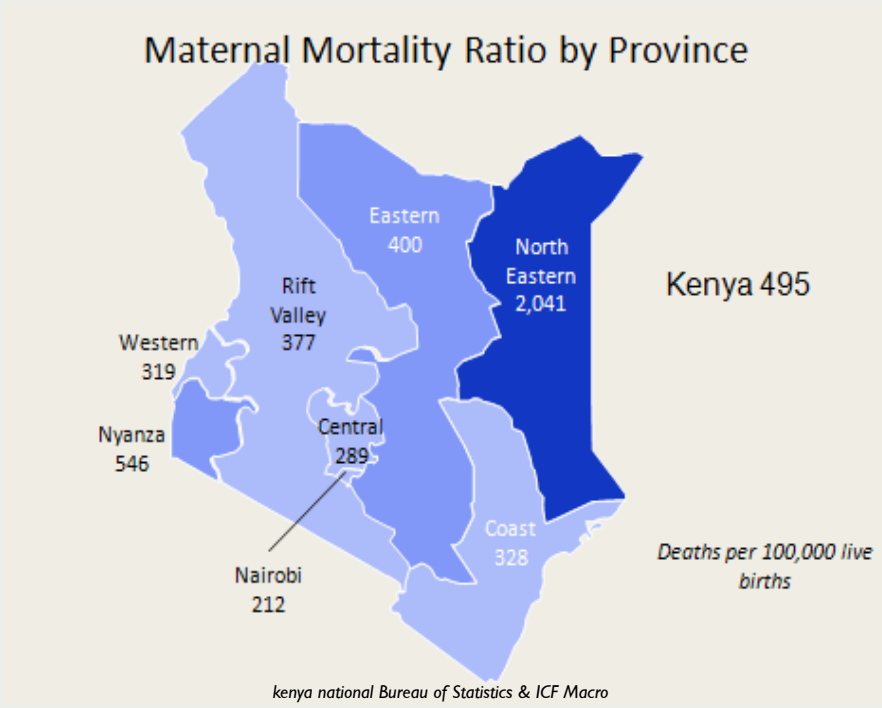


Figure 2: Maternal Mortality Ratio by Province

In the 2010 round of censuses, the United Nations Statistical Division (UNSD) encouraged many developing countries to include questions on pregnancy related deaths as a way of helping improve on the quantity and quality of data needed in estimation of maternal mortality in the world. The data presented was obtained from the Kenya 2009 Population and Housing census to generate pregnancy related deaths at sub regional level.

However, a notable feature of the unchanging levels of pregnancy related deaths is the wide regional differentials. According to Figure 2, North Eastern region has the highest MMR of about 2,000 deaths for every 100,000 live births followed by Nyanza (546), Eastern (400), and Rift Valley (377). Nairobi (212) and Central (289) have the lowest MMR in the country. The national average of 495 maternal deaths for every 100,000 live births tends to mask regional the differentials. The continued high levels and wide regional differentials indicate that the country will be unable to achieve the goal of reducing maternal mortality by three-quarters of the 1990 level, and more importantly, many families will be unable to achieve their reproductive health rights.

Figure 3 shows that 13 out of the country's 47 counties have an MMR that is above the national average of 495deaths for every 100,000 live births. Mandera County has the most alarming level at about 3,800 deaths per 100,000 live births followed by Wajir (1,683), Turukana (1,594) and Marsabit (1,127). The other counties with an MMR above the national average are mainly from Coast and Nyanza regions. Nairobi County, which is Kenya's capital city, has the fourth lowest MMR of 212 deaths for every 100,000 live births after Elgeyo Marakwet (187), Narok (191) and Tharaka (191). Mombasa County, which is the country's second largest city, has the sixth highest MMR after Laikipia (221).

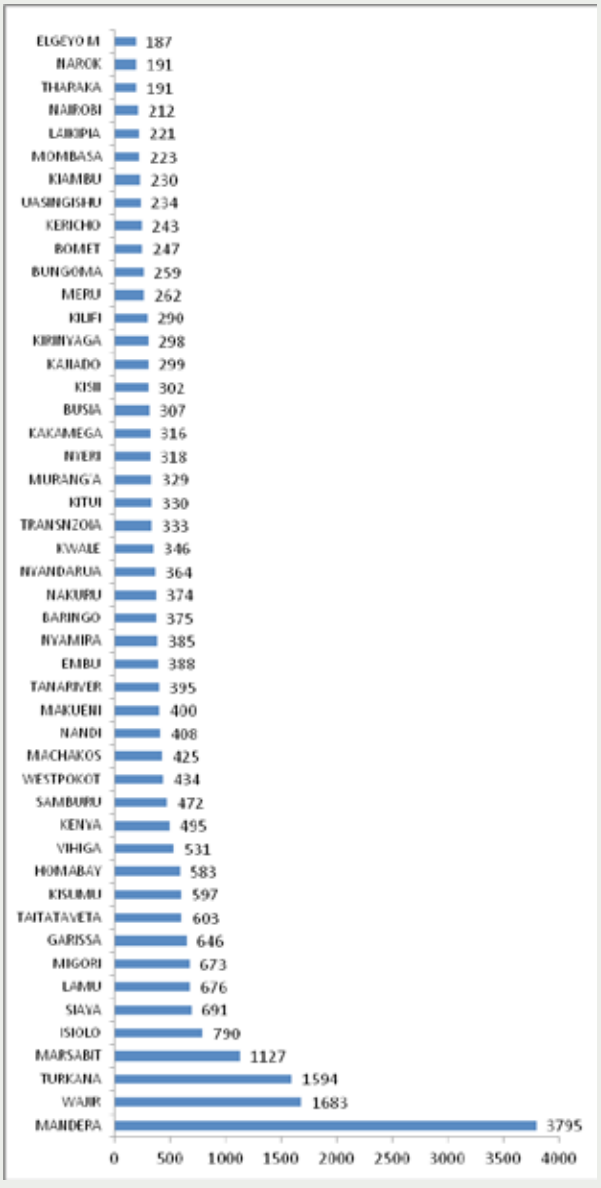


Figure 3: Maternal Mortality Ratios by County

Policy implications

The Government launched a Maternal and Newborn Health (MNH) Road Map in August 2010, which outlines the strategies, priority actions and broad activities for improving the reproductive health status of the population. To reduce the high maternal mortality, the government has to address several challenges including the need to ensure availability of adequate maternity health care services and skilled personnel to attend to complications caused by unsafe/induced abortion, malaria, and HIV/AIDS, among others. The Government used the Economic Stimulus Programme (ESP) to expand pre- and in-service training of health workers, and to employ and deploy 20 nurses in each constituency. Under ESP, model health centres were to be built in 200 constituencies, with 300 ambulances purchased and distributed to all health centres in the country.
To save the life of every woman calls for the scale-up of high-impact interventions. But this is only possible when health administrators, programme managers, and researchers working on safe motherhood programmes at sub-national levels are able to set specific objectives and monitor region specific levels of maternal mortality. The existence of estimates at county level can now help policy planners to identify high-risk areas, efficiently allocate resources and prioritize targets. The wide regional differences also indicate factors determining maternal mortality may differ by region and Interventions should be targeted. It is therefore imperative that this county level data on MMR be utilized in the short run to identify regional specific interventions that will contribute effectively to lowering the maternal mortalities in each county, and consequently at the national level. For this to happen in the near future, then this information needs to be disseminated urgently to all actors involved in maternal health country-wide.

The high-level Commission on Information and Accountability for Women's and Children's Health included among its 10 recommendations one that is specific to improving measurement of maternal (and child) deaths. This recommendation requires that "by 2015, all countries have taken significant steps to establish a system for registration of births, deaths and causes of death, and have well-functioning health information systems that combine data from facilities, administrative sources and surveys. For Kenya to put in place the recommended registration system, collaborative efforts among several government departments and ministries that deal with health information will be required. Such as system will be beneficial to the country because it will enable timely monitoring of maternal mortality situation. However, if the country fails to put in place this registration system, then the planning and implementation of high impact maternal health programmes will be impeded to the detriment of women's health in Kenya.

Recommendations

In order for Kenya to make quick strides in reducing maternal deaths, the following recommendations will need to be implemented;

- Disseminate the county specific data on maternal mortality with a view of enabling policy makers and programme implementers to prioritize and focus attention on regions that have high mortality levels. NCPD, KNBS, and PSRI will be responsible for this dissemination which should be completed in 2014 pending more detailed studies on the main causes of maternal deaths in each county. The high priority on pregnancy related deaths require that resources and efforts should be made according to high risk areas.
- The National Council for Population and Development, in partnership with the Ministry of Health, the Population Studies and Research Institute, and other stakeholders should commission studies to investigate determinants of maternal mortality in high risk areas. These studies need to be conducted between 2014 and 2016 to inform both policy and programmes.

- In the long run, establish a system for registration of births, deaths and causes of death, and have well-functioning health information systems that combine data from facilities, administrative sources and surveys to comply with the recommendations of the high-level Commission on Information and Accountability for Women's and Children's Health. The setting up of this system should be undertaken by Ministry of Health, the department of Civil Registration, and Kenya National Bureau of Statistics in conjunction with stakeholders. Efforts to implement this system should start in 2014 with a timeline of 10 years to have the system up and running.

The implementation of the above recommendations will enhance the country's efforts to improve the wellbeing of its citizens by addressing the causes of maternal deaths.

Conclusion:

For the last two decades, Kenya has maintained unacceptably high levels of maternal deaths. Efforts to curb these deaths have not made a big difference so far. However, with the availability of county specific data on maternal deaths, it is envisaged that these efforts will now be more focused and priority will be given to counties that have the highest MMR. This in turn will contribute to the lowering of the national MMR.

NCPD is a semi-autonomous government agency that formulates and promotes population policy and coordinates related activities for sustainable development in Kenya.

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vi WHO and UNICEF (2012). Countdown to 2015. *Maternal, Newborn and Child Survival*

(Endnotes)

I **Principal definitions and measures of maternal mortality:**

Pregnancy-related death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death. This is a time-of-death definition.

Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. This definition requires cause-of-death information in order to exclude incidental causes.

Maternal mortality ratio (MMR): number of maternal deaths during a given time period per 100,000 **live births** during the same time period.

Maternal mortality rate: number of maternal deaths in a given time period per 100,000 women of reproductive age, or woman-years of risk exposure, in the same time period.

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