



# Saving Mothers' Lives: Confidential Enquiry into Maternal Death

*First Report*

## POLICY BRIEF

### 1. Introduction

The first Confidential Enquiry into Maternal Death (CEMD) in Kenya was conducted between July 2015 and June 2016. It covered maternal deaths that occurred in 2014. The report was approved by the Kenya National MPDSR committee on the 12<sup>th</sup> of October 2016. A summary of the key findings, recommendations, lessons learnt and further research are presented below.

#### 1.1 Demographic and obstetric characteristics

- Six to eight thousand (6000-8000) women are estimated to die every year in Kenya. Only 945 were reported in District Health Information System 2 (DHIS 2). Fifty-one percent (484) of the 945 maternal deaths reported in the DHIS 2 for the year 2014 were assessed.
- The median age of women who died was 27.0 years. The youngest women who died was 14 years while the eldest was 47 years.
- Most women 205 (42.4%) who died were having their first or second pregnancy.
- 43 (8.9%) of the deaths assessed were young women aged below 20 years. Of the 43 adolescent mothers, most were having their first 27 (62.8%) or second 9 (20.9%) pregnancy.
- 242 (50%) of the women had been referred from other health facilities; referrals were mostly from Level 4 (sub-County hospitals).
- Majority of those who died from indirect causes were from Nyanza region 24 (25.0%) and Nairobi 23 (24.0%).

## 1.2 Antenatal care

- 41.3% (200) of records of women who died did not have documentation of antenatal care (ANC) attendance.
- 58.7% (284) maternal deaths records had information on ANC attendance; of which 81% (229) received ANC while 19% (55) did not receive ANC.
- Of the women whose records showed ANC attendance, only 15.7% (36) women received 4 or more ANC visits.
- Among the 229 women whose records showed ANC attendance, Rhesus test was reported to have been done for 176 (76.9%) women followed by Haemoglobin for 165 (72.1%) and VDRL 142 (62%). Urinalysis was performed for only 51 (22.3%) of the women.
- HIV status was not recorded in 219 (45.2%) of the deaths assessed. Of the 265 deaths in which the HIV status was recorded, 195 (73.6%) were HIV negative, 70 (26.4%) were HIV positive.

## 1.3 Labour and childbirth

- 77% (374) of women who died had given birth, 8% (40) had pregnancy with abortive outcome and 14% (70) were undelivered.
- Of the women who had given birth 88.8% (332) delivered in health facilities, 7.5% (28) delivered at home or en-route to hospital while for 3.7% (14) of the women, there was no documentation of the place of delivery.
- Of the 374 women who died after childbirth, 50.5% (189) had a live birth, 33.2% (124) had a stillbirth and the delivery outcome was unspecified for 16.3% (61) of the deaths.
- Of the 374 women who died after childbirth, the mode of delivery of 63.2% (236) was vaginal and 36.9% (138) had caesarean section.
- Of the 484 women, 179 (37%) received anaesthesia. Out of the 179 women who received anaesthesia, 112 (62.6%) received general anaesthesia, 45 (25.1%) received spinal anaesthesia, while the type of anaesthesia received by 22 (12.3%) of the women could not be determined from the case notes.

## 1.4 Factors associated with maternal deaths

- 376 (77.7%) women died due to direct causes while 96 (19.8%) died due to indirect causes.
- The common causes of maternal death were obstetric haemorrhage 192 (39.7%), non-obstetric complications/indirect maternal deaths 96 (19.8%) and hypertensive disorders associated with pregnancy 74 (15.3%).
- Complications related to pregnancies with abortive outcomes contributed to 40 (8.3%) maternal deaths.

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- 13 (2.7%) women died of other obstetric complications and nine women experienced unanticipated complications in management. The underlying cause of death could not be determined for 12 (2.5%) women.
- 37.4% (181) of the maternal deaths occurred during the post-partum period 301 (62.2%) and outside working hours 355 (73.3%) (5.00pm -8.00am on weekdays, weekends and public holidays).

## 1.5 Quality of care

- Most women were managed in level 4, 5 and 6 facilities expected specialised care, yet obstetricians were involved in the care of only 55 (11.4%) of cases.

- Of the 484 maternal deaths assessed, 447 (92.4%) did not receive the highest quality of care.

## 1.6 Contributory and associated factors

- Of the 484 maternal deaths assessed,
  - Health workforce related factors were identified in 365 (75.4%) of the maternal deaths.
  - Patient/family related factors were identified in 203(41.9%).
  - Administrative factors were identified in 169 (34.9%).
- There was no information to assess the presence or absence of community factors for most of the deaths (64.5%).

## 2. Recommendations

Several recommendations for different levels of health care administration and management, and the community are as follows:

### 2.1 Leadership

While tremendous investments have been made in maternal and newborn health in Kenya, related health indicators do not match the investments. This report illustrates a need for accountability for results in maternal and newborn health by the highest level of leadership from the National and County governments.

### 2.2 National level

1. Develop relevant policy and legislative backup for the confidential enquiry into maternal death process by anchoring the MPDSR process in legislation - MNCH Bill.
2. Strengthen the maternal death surveillance system to improve the notification of maternal deaths.
3. Integrate a qualitative enquiry in the confidential enquiry into maternal death surveillance and response process.
4. Standardize patient record documentation to improve quality of records at healthcare facility level.
5. Explore use of electronic medical records in maternal and newborn health.
6. Providers of maternity care should have regular and mandatory updates in emergency obstetric and newborn care.
7. Expand on diagnostic capacity including laboratory services and point of care tests in MNCH.
8. Embrace and scale up innovations that increase blood and blood products availability and safety e.g. delivering blood using drones.
9. Rationalise staffing norms and models for remuneration of specialists through output-based modalities such as fee for service, capitation, and mixed method payment.
10. Provide up-to-date treatment protocols in a user-friendly format including in electronic formats and applications for all maternity care providers.
11. Develop policy to expand access to post abortion care (PAC) services.
12. Strengthen adolescent sexual and reproductive health policies and implementation models to address teenage pregnancies.
13. Embrace and scale up the use of technology

to enhance access and availability of quality care in maternal and neonatal health (MNH).

14. Institute mechanisms for perinatal death reviews in all health facilities and produce a national report biannually.

## 2.3 County level

County governments through the Department of Health should:

1. Within a year, increase performance of facilities to above 70% with all signal functions in BEMONC and CEMONC facilities in each county; and, secure financial arrangements for county department of health especially MNH.
2. Embrace and scale up innovations that increase blood and blood products availability and safety e.g. delivering blood using drones.
3. Ensure capacity building and mentorship of healthcare workers at all levels of care and retention within the appropriate department for at least 2 years.
4. Ensure specialists are available- rationalise working hours, remuneration and incentives.
5. Improve data quality and use - stock taking of maternal and newborn health indicators against set targets.
6. Link MNH to critical care - using available resources to improve care for women.

## 2.4 Health Facility level

1. Enforce and supervise proper documentation of the care provided to mothers in all health facilities.

2. Maternity care providers should have regular (2 years) and mandatory updates in emergency obstetric and newborn care (including triage and referral), antenatal care (ANC) and postnatal care (PNC).
3. Embrace and scale up innovations that increase blood and blood products availability and safety.
4. Provide the minimum package of care in ANC and PNC to all clients at all levels of the health system (public and private).
5. Improved monitoring of women in ANC, labour and in the post-partum period.
6. Regular audit and feedback of care should be conducted to continuously improve the quality of care.
7. Reorganization of care to ensure that high risk pregnancies are managed by specialist teams supported by appropriate resources (test reagents/kits, drugs, equipment, intensive care unit etc.).
8. Training in the use of spinal anaesthesia and provision of resources needed is important especially at levels 3 and 4 hospitals.

## 2.5 Community level

1. Expand community level health services (level 1).
2. Preventive and promotive health services.
3. Data generation and use at community.
4. Strengthen linkages between the community and the health facility.
5. Referral of all women to the health facility.
6. Strengthen community reporting of maternal deaths.

## 3. Further research

The first CEMD conducted in Kenya contains limited information on perinatal deaths. Consultations should be made with relevant stakeholders to map the resources required to include perinatal deaths in future reports.

Further research into factors associated with post-partum death, caesarean section, quality of care for ANC and post-partum care is needed. Also further exploration of the factors associated with death occurring outside normal working hours is needed to inform staff time allocation.