Options

EVIDENCE BRIEF

Retracing the last journey of mothers through the health system

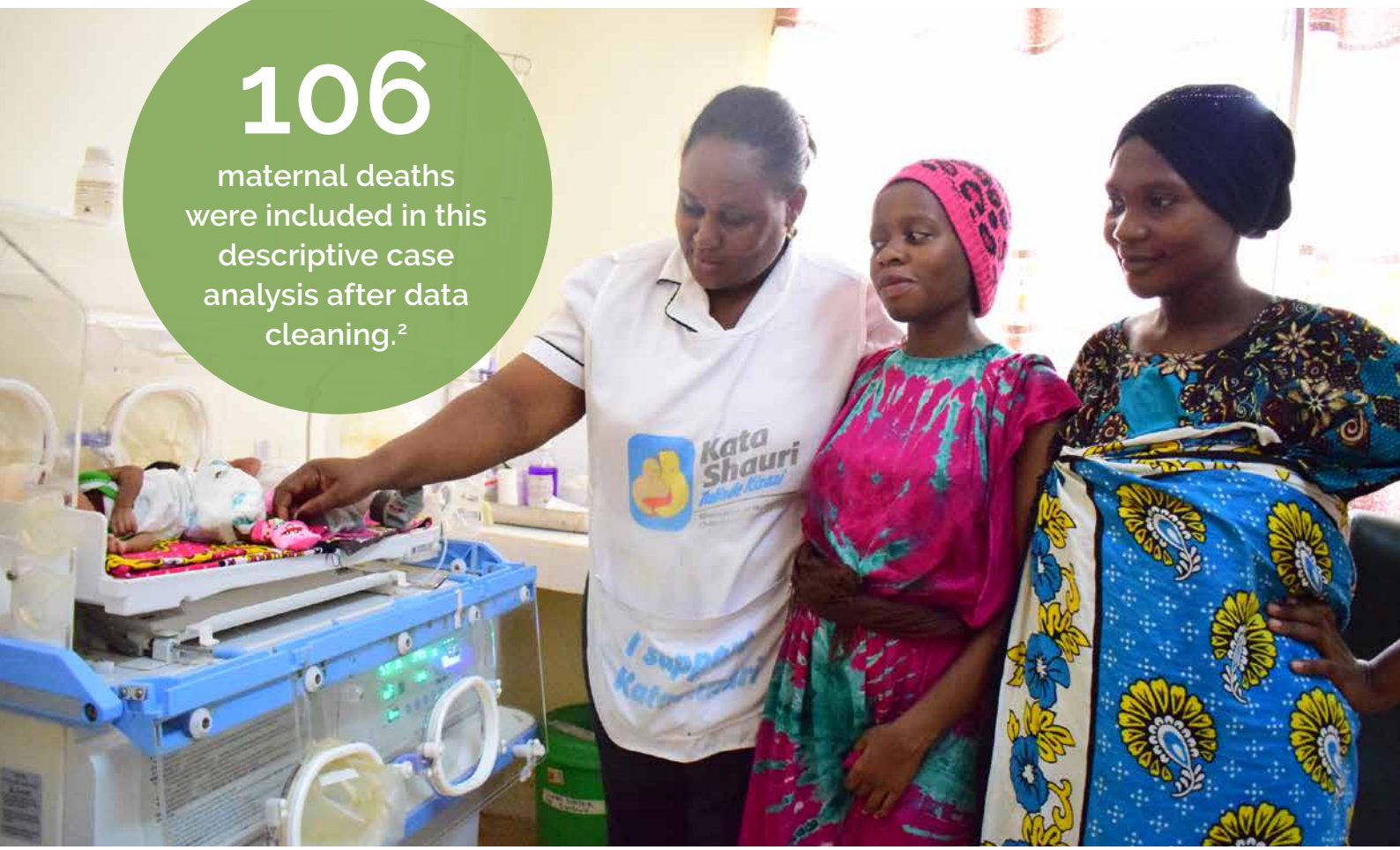
maniQC Quality of Care

A review of maternal deaths from January 2019 to January 2020 in Mombasa, Kwale, Nandi and Kericho counties

The Maternal and Newborn Health Improvement – Quality of Care (MANI-QC) project has supported four county health management teams (Kericho, Nandi, Kwale and Mombasa) to analyse information on maternal deaths that occurred, reviewed and uploaded between January 2019 to January 2020 to the Kenya Health Information System (KHIS)[1]. The objective of the analysis was to trace the last step of mothers journeys through the health system to understand the circumstances around the deaths and identify gaps in the quality of healthcare provided to mothers.

106

maternal deaths were included in this descriptive case analysis after data cleaning.[2]



1 Note that the date of entry to the KHIS is usually different to the date of the death; further, not all deaths reported are reviewed and uploaded.

2 134 maternal deaths were uploaded in KHIS.

Table 1: Number (%) of live births and maternal deaths reviewed and uploaded to KHIS per county January 2019 – January 2020

Region and county	Total number of maternal death reviews uploaded to KHIS (%)	Share of maternal deaths reported in this analysis
Rift		
Kericho	4 (4%)	
Nandi	14 (13%)	
Coast		
Kwale	9 (8%)	
Mombasa	79 (75%)	
All counties	106 (100%)	(100%)

The majority – two thirds – of the reviewed and uploaded cases were from Mombasa county. The median age of women who died among these cases from the four counties was 29 years (similar to the national findings from the 2017 confidential enquiries to Maternal Deaths (CEMD)[2]. The level of education was recorded in almost all (93%; 99) cases; 15% of the women had no education; 42% (44) of women had attended primary education and 36% (39) of women had attended secondary or tertiary education, information was missing among 7%; (7) cases.

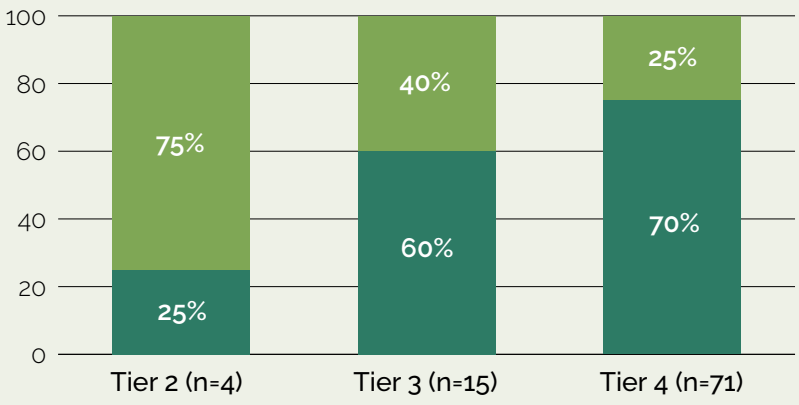
Findings

Level of care of referring facilities, condition of women on admission and place of death

Among the 106 cases, 80% (85) of the maternal deaths reported had occurred in higher tertiary hospitals (tier 4)[3], 15% in tier 3 and 5% in tier 2. Almost half of them (48%; 51) had been referred from a lower level facility. Where information was available (among 90 cases), 70% (63) of the women were admitted in a critical condition. Tier 4 facilities saw three times as many women who were admitted in critical condition (see figure 1).

These referral findings put a limelight on the need to ensure that sub-county hospitals have adequate capacity to manage obstetrics emergencies and to strengthen the capacity among health providers in tiers 2 and 3 to identify and manage risk factors and emergencies at the earliest moment to either manage cases before they become critical or to refer early.

Figure 1: Condition of women on admission by level of facility in which their death occurred (among 90 women)



2 Kenya National MPDSR Secretariat (2017). Saving Mothers' Lives: Confidential Inquiry into Maternal Deaths in Kenya. First Report

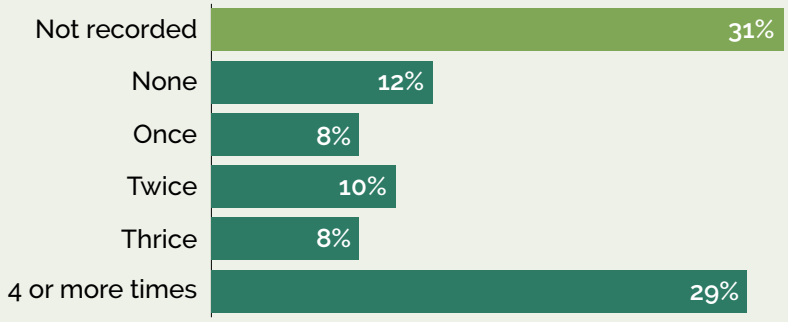
3 The Kenya Health Policy 2014-2030 policy defines the four tiers of the health system as community – tier 1, primary care- tier 2, primary referral tier 3 and tertiary referral services tier 4.

Antenatal care visits

The majority of the women (73%, 69) had attended at least one antenatal care visit and a third (29%; 31) over four. Antenatal care visits was not recorded among 31% (33) of the women.

This raises the issue that ANC coverage does not always guarantee that risk factors will be identified during antenatal care visits and that the their quality needs to be improved.

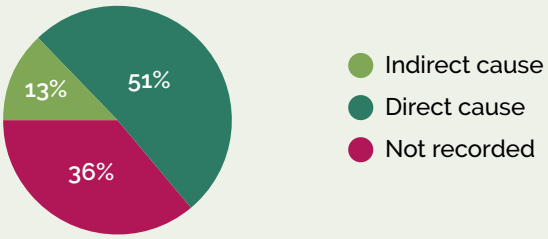
Figure 2: Number of antenatal care visits recorded as % of all maternal death cases (total: 106)



Underlying causes of death and contributing factors

Over half (51%; 54) of the mothers died due to a direct cause of death, which follow pregnancy and childbirth related complications and are caused by any interventions, omissions, incorrect treatment or events that result from these complications. Among these women, this included, for example, obstetric haemorrhage (19), eclampsia (4), sepsis (1) or ruptured uterus (2). Details were not available to determine the cause of death among 36% (38) of the women.

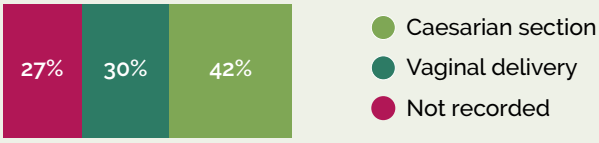
Figure 3: Proportion of maternal deaths by direct or indirect causes (among 106 women)



Mode of delivery

A large proportion of the women died (42%; 45 of women) in spite of an emergency caesarean section.. Among these 45 women, 54% (24) of them had been in a critically ill condition upon admission.

Figure 4: Proportion of maternal deaths by mode of delivery (among 106 women)

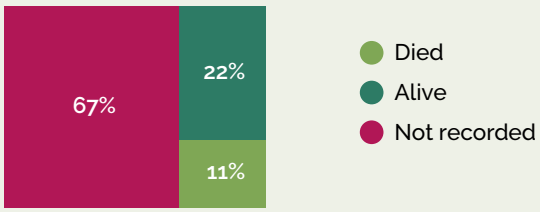


Perinatal outcomes

In total, 22% (23) had a live birth and 11% of babies were stillborn. The outcome of babies was not recorded for the remaining 67% (71) of mothers. Further, the outcomes of babies born alive are not known.

These findings support assertions that the babies of mothers who die are at risk of dying too, which underlines the need to improve the reporting of perinatal deaths too.

Figure 5: Perinatal outcome among 106 maternal deaths



Key recommendations

- **Improve availability and quality data**: facility MPDSR committees should be supported to increase the number of completed of medical records to more in-depth understanding of the circumstances leading up to maternal deaths and help identify specific actions are needed to improve the quality of care for pregnant women and babies, including better documentation and quality of antenatal care visits.
- **Advance understanding of the underlying causes of death**: in addition to completeness, identify barriers to identifying and classifying the causes of death to determine actions needed.
- **Strengthen obstetric emergency preparedness and management of complications** for health workers at tertiary facilities and those working in periphery facilities and sub-county hospitals to reduce referrals to tertiary hospitals and improve outcomes of emergency obstetric cases.

For more information, contact: Gladys Ngeno, Team Lead for MANI-QC: G.Ngeno@options.co.uk

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