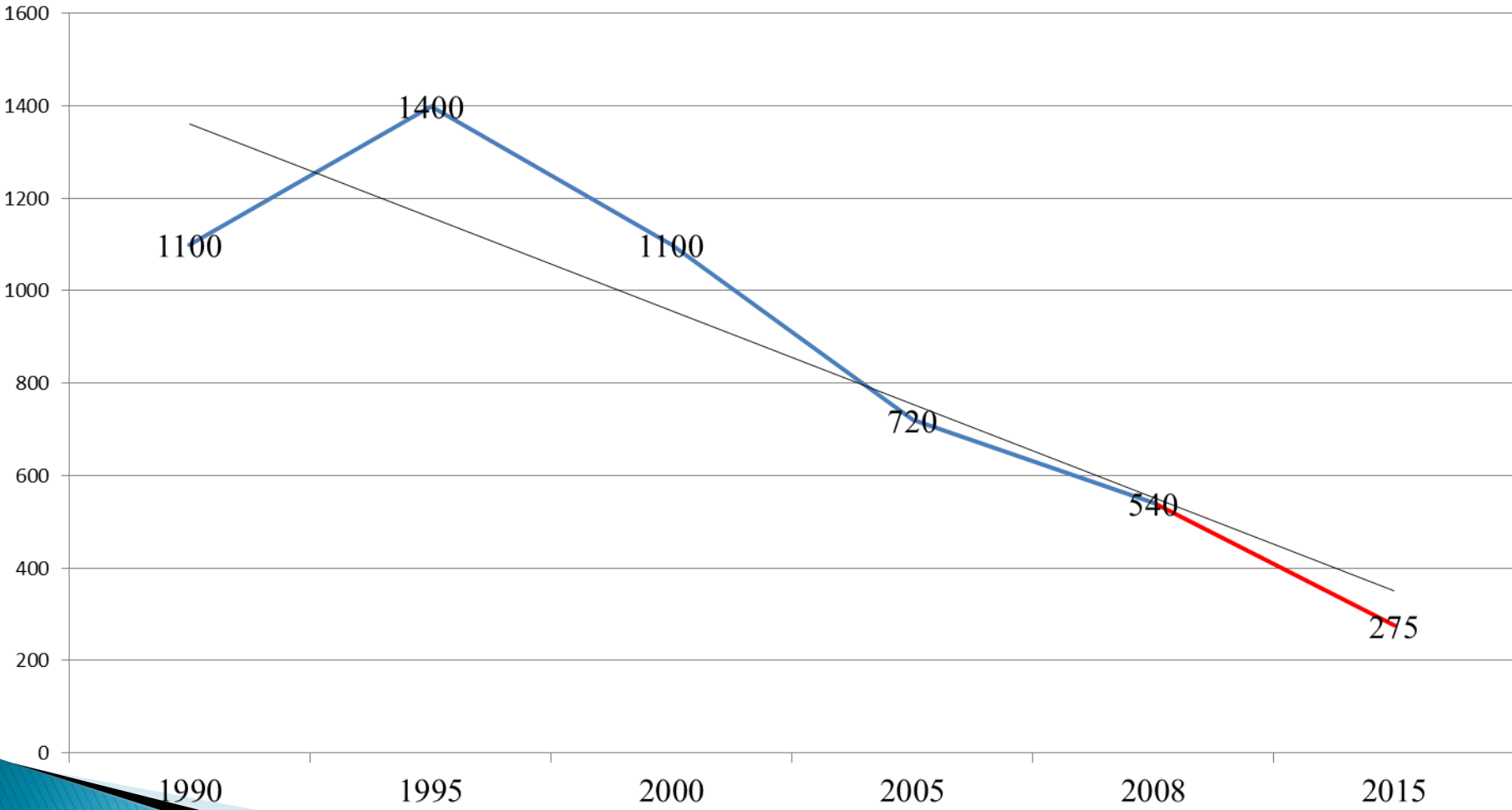


Every Death Counts: Use of Maternal Death Audit Data for Decision Making to Save the Lives of Mothers in Rwanda

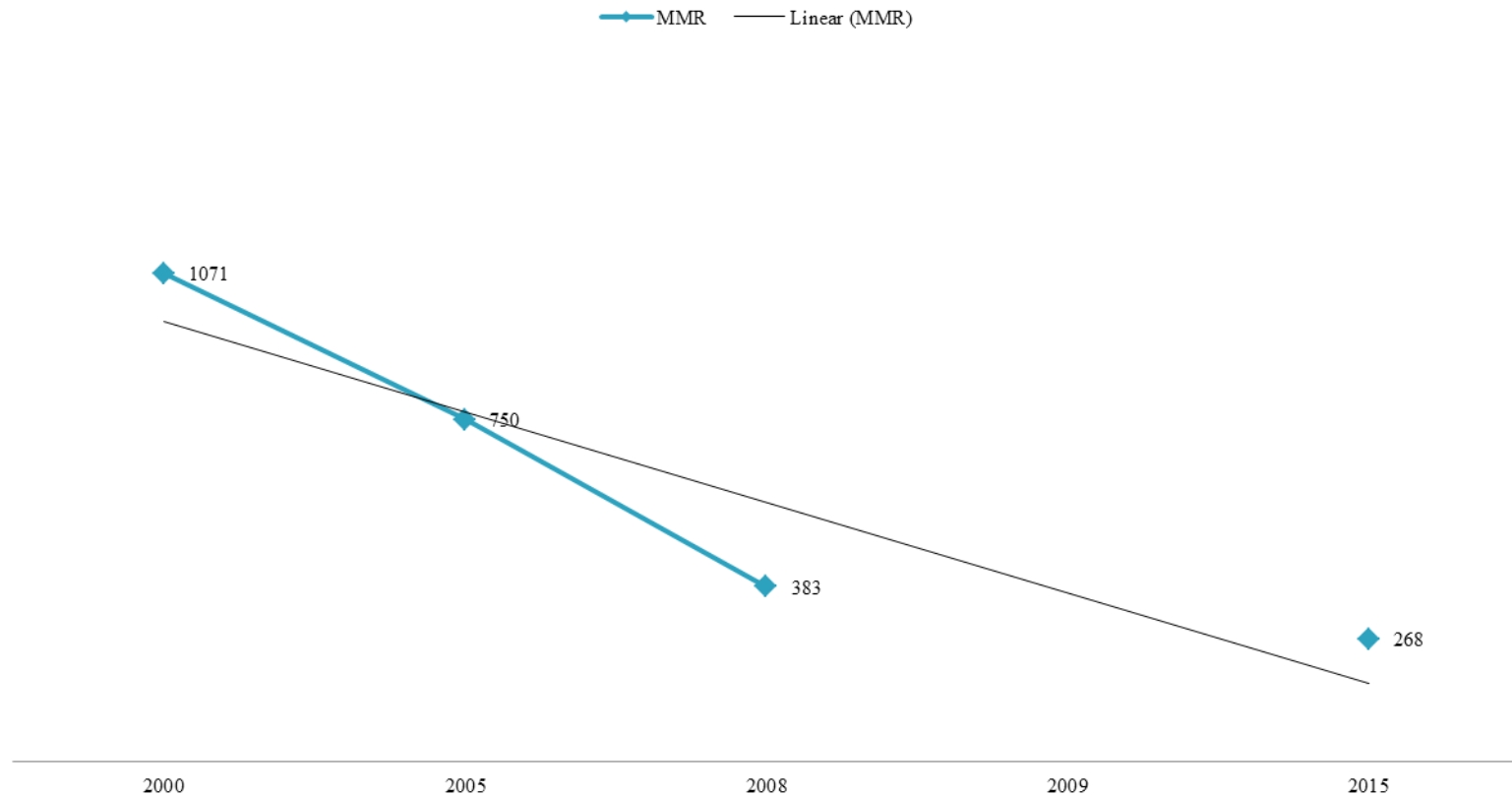
NGABO, Fidel, Robert Banamwana, Daphrose Nyirasafali, Felix Sayinzoga, Pamela Abbott

IPAR's Annual Research Conference 2011

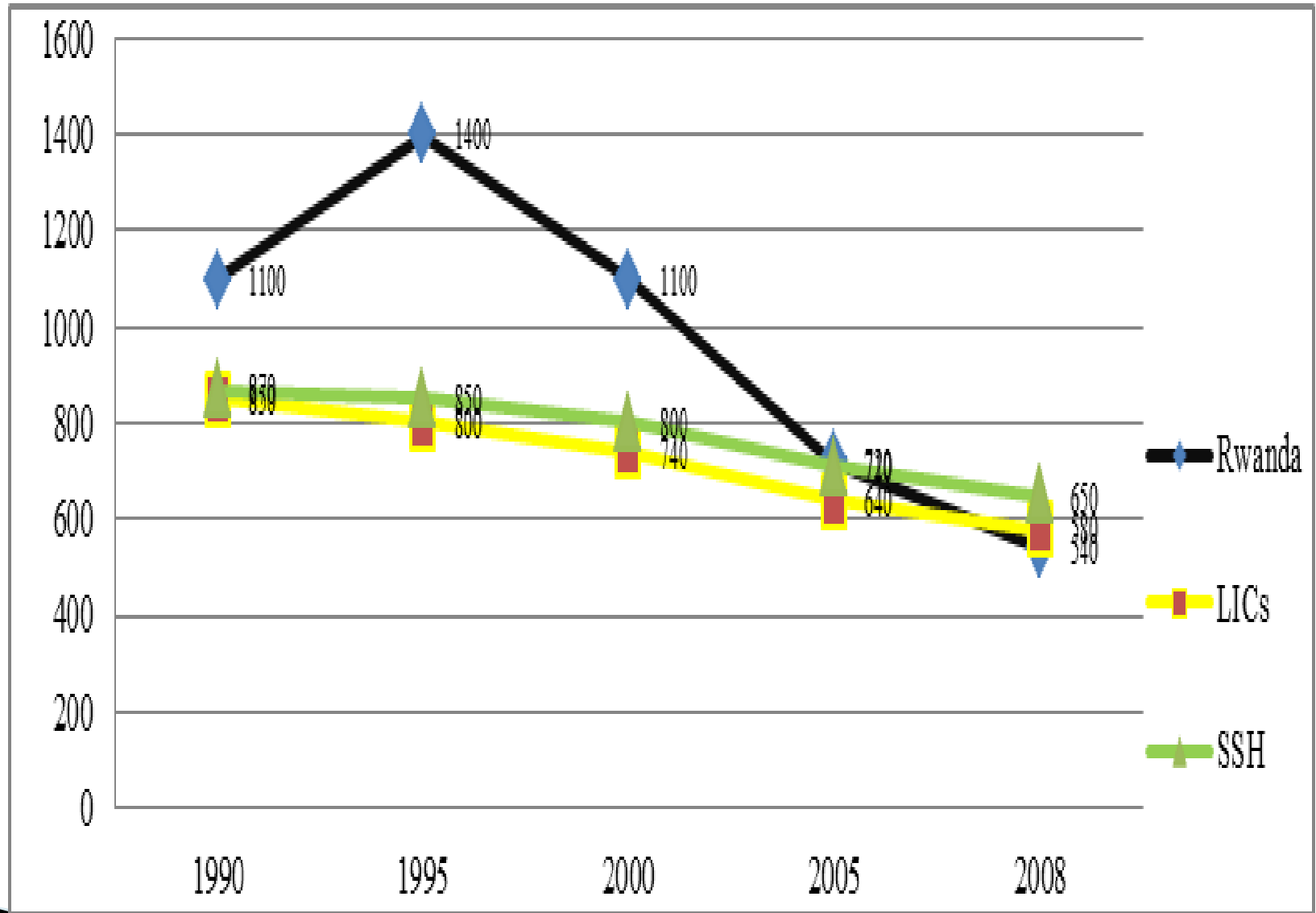
WHO Estimates of MMR 1990–2008 and Linear Progression to 2015 Rwanda



Maternal Mortality Rate DHS and HMIS and Linear Projection

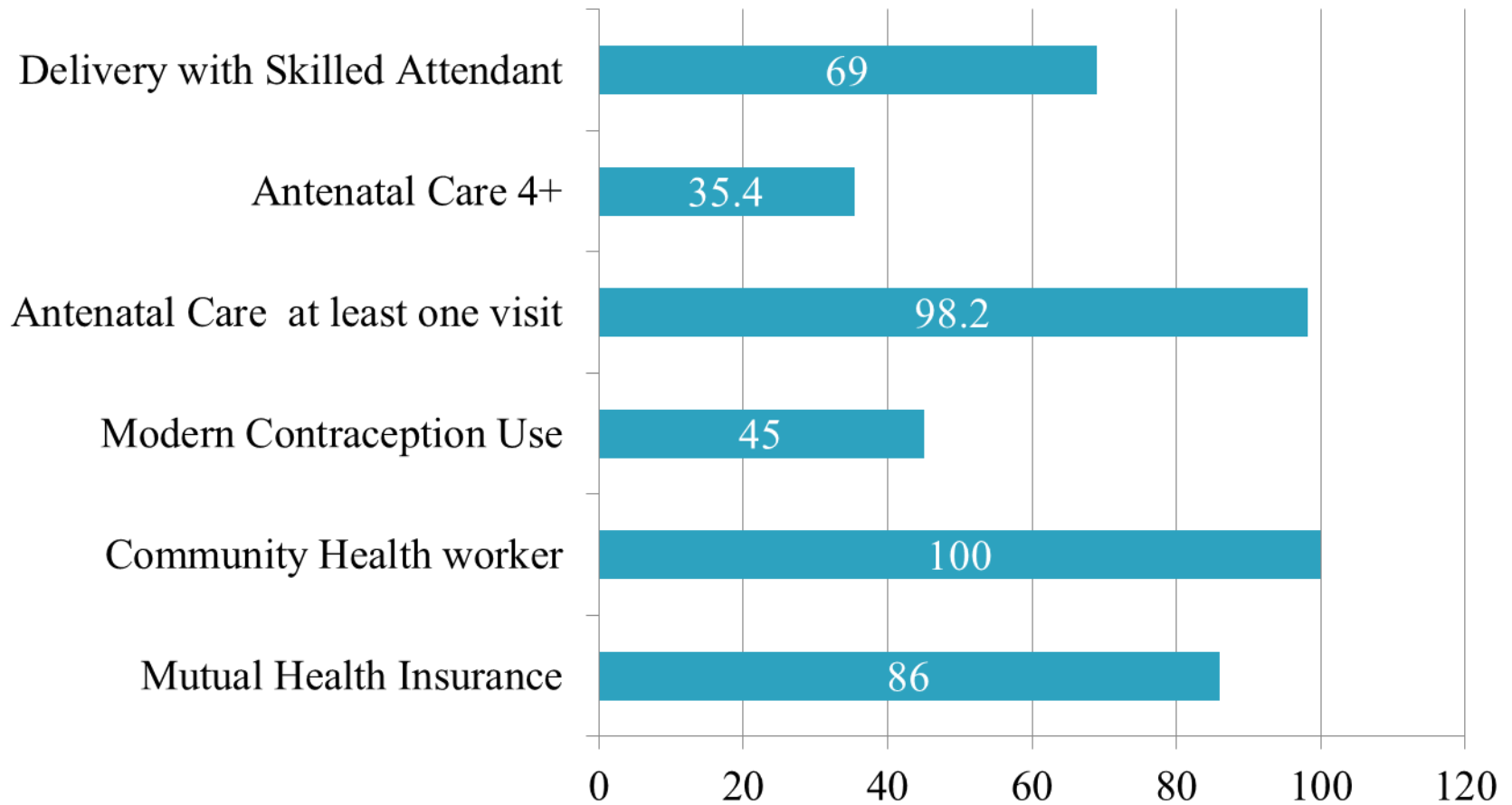


WHO Estimates of MMR, Rwanda, LICs and SSA, 1990-2008



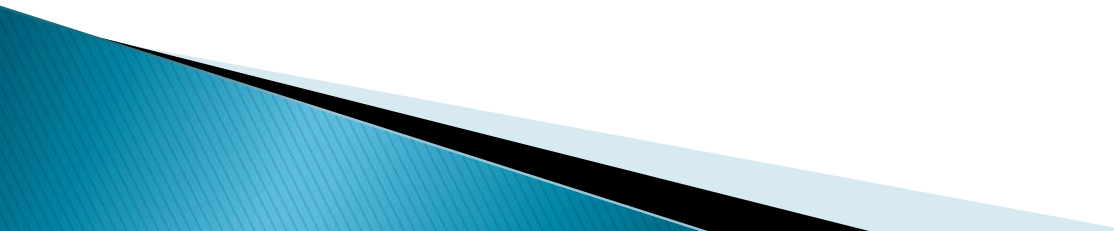
(Source: WHO 2010)

Continuity Maternal Health of Care

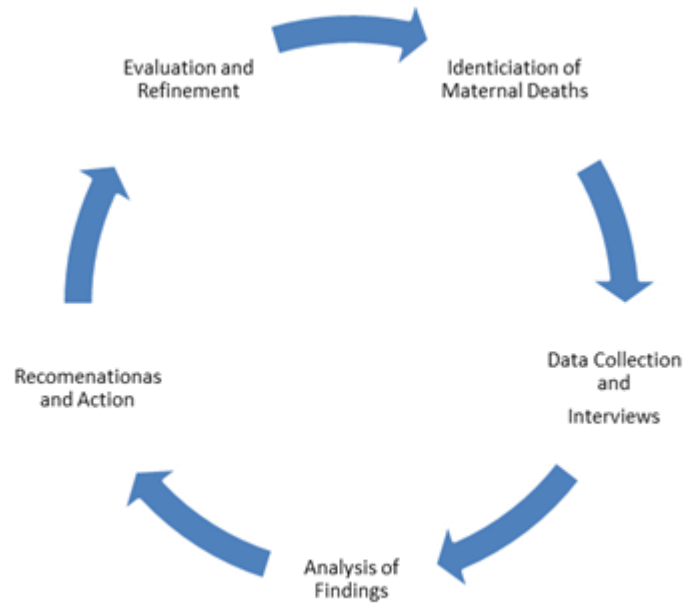


Maternal Death Audit

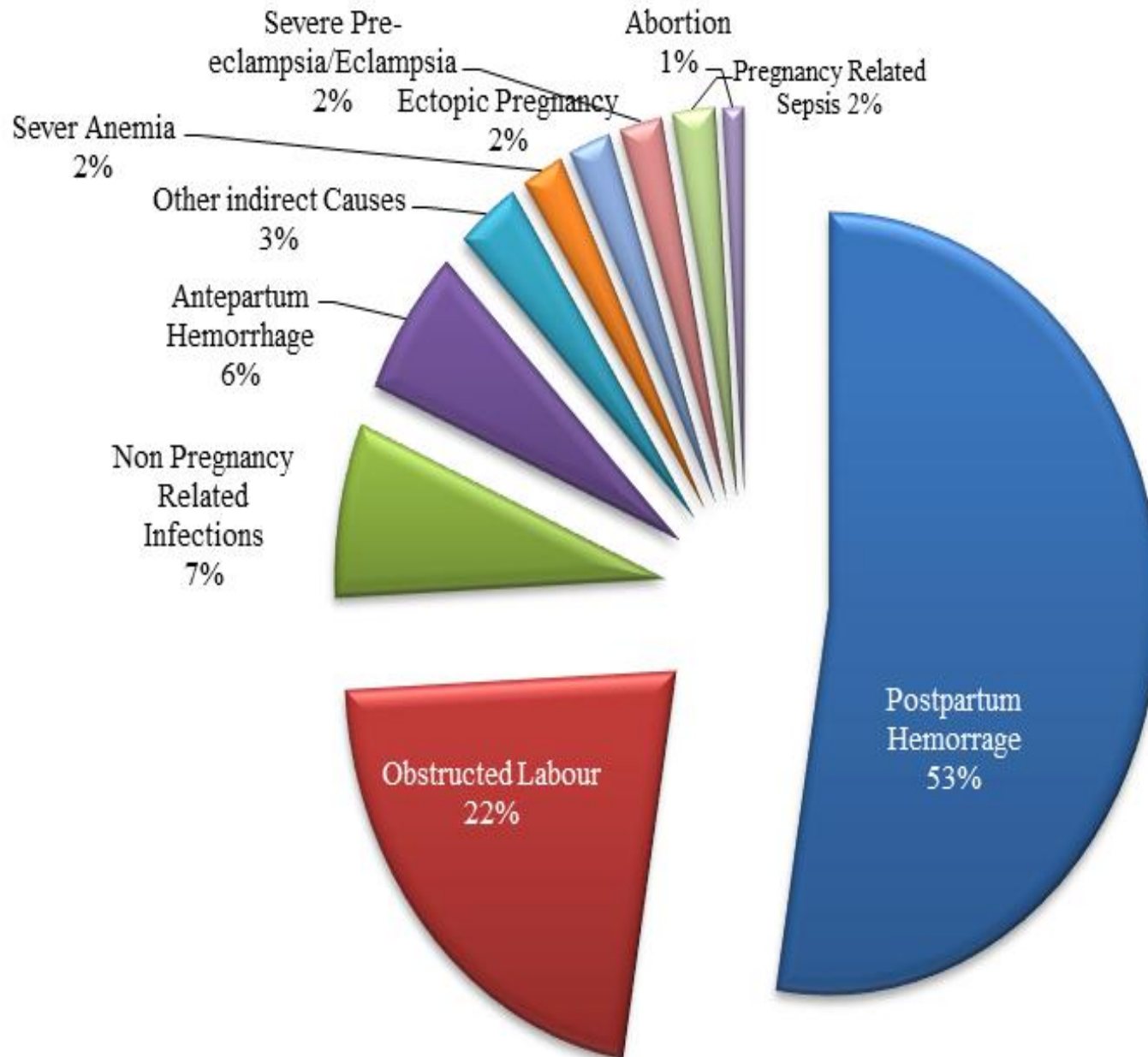
A Maternal Death Audit is a qualitative investigation into the causes of and circumstances surrounding maternal deaths. The main objective of Maternal Death audit is to reduce maternal deaths by:

- identifying all maternal deaths and recording the cause;
 - come to an understanding of why each death occurred;
 - determine how deaths from the same causes can be avoided in the future in order to save lives in the future;
 - identify gaps in the health care system;
 - improve the quality of maternal health care.
- 

Maternal Death Audit Cycle



Main Causes of Maternal Mortality in 2008



Factors contribution to Maternal Mortality Identified Through Maternal Death Audit

Community

- ✚ Delays in consulting a health facility
- ✚ Delay in recognising signs of complications
- ✚ Use of traditional medicine

Health Centre

- ✚ Delay in the ambulance reaching the health centre
- ✚ Delay in making correct diagnosis at the health centre
- ✚ In sufficient follow up of women during labour
- ✚ Inadequate pre-transfer treatment

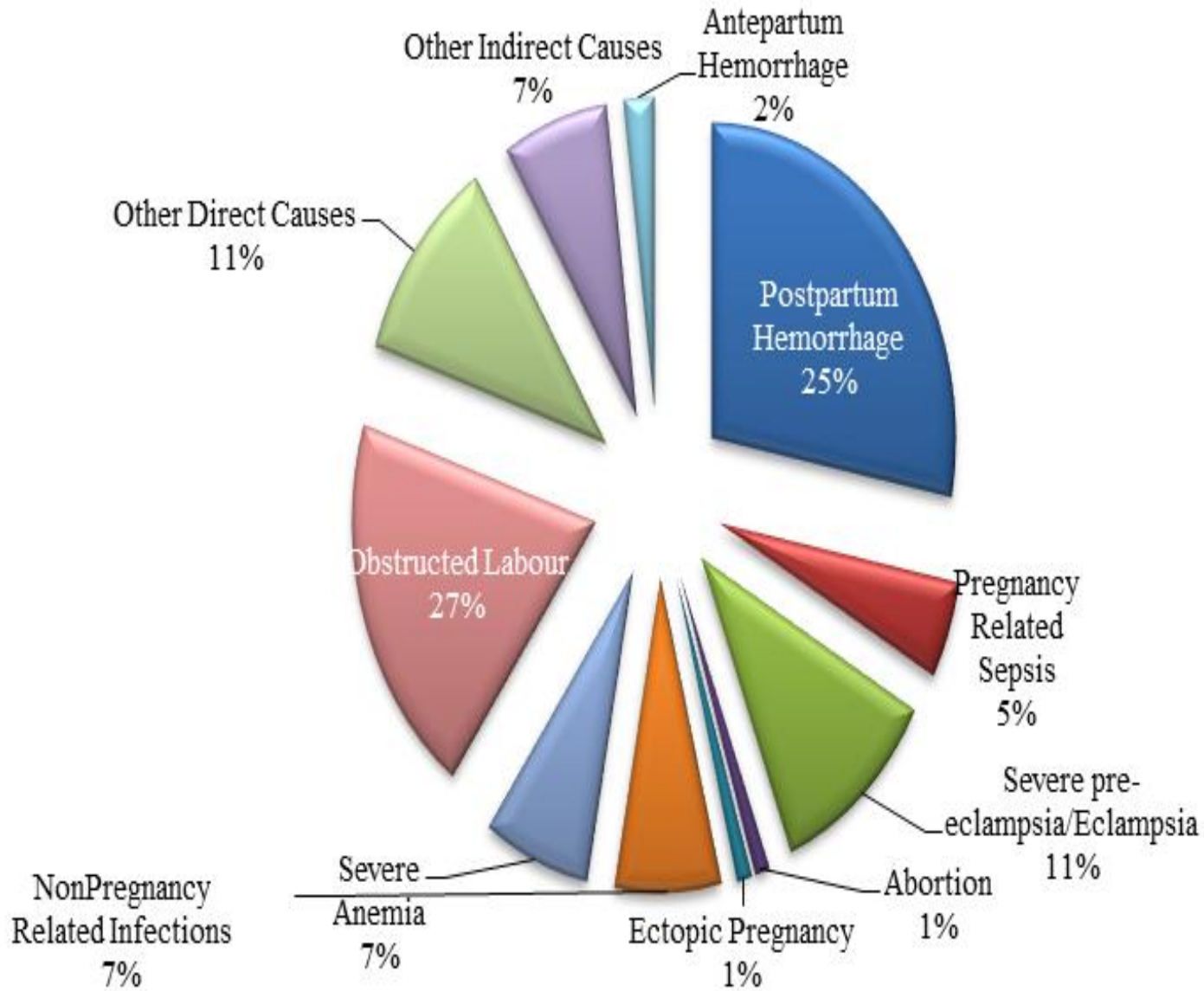
District Hospital

- ✚ Lack of resuscitation equipment in ambulances
- ✚ Too few nurses
- ✚ Delays in making a correct diagnosis
- ✚ Inadequate follow up of mothers especially postpartum, post-operative and of those in a critical condition
- ✚ Inadequate perioperative care given to mothers in a critical condition
- ✚ Lack of adequate communication between health centres and district hospitals
- ✚ Stock out of blood especially rhesus negative
- ✚ Delays in getting test results
- ✚ Safe Marcaine dose exceeded
- ✚ No operating room pulse oximetry


Impact of Maternal Death Audit

- ▶ The hospital based maternal mortality rate declined significantly between 2008 and 2010, from 400 per 100,000 live births to 217 in 2010 ($P < 0.001$).
- ▶ There was a significant decline in mortality from direct causes but no decline in those from indirect causes.
- ▶ The two causes for which there was a significant decline between 2008 and 2010 were post-partum haemorrhage fatality rate which declined from 5.2 per cent in 2008 to 2 per cent in 2010 (Chi Squared $P < 0.001$), and antepartum haemorrhage which declined from 2.5 per cent in 2008 to 0.9 per cent in 2010 (Chi Squared $P < 0.01$).
- ▶ By 2010 postpartum haemorrhage accounted for 25 per cent of deaths (compared to 53% in 2009), antepartum haemorrhage for two per cent (compared with 6%) in 2008)

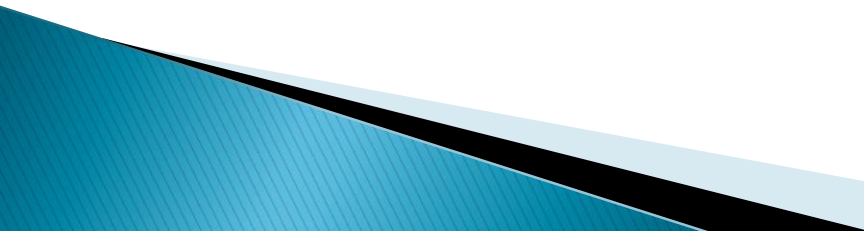
Main Causes of Maternal Mortality in 2010



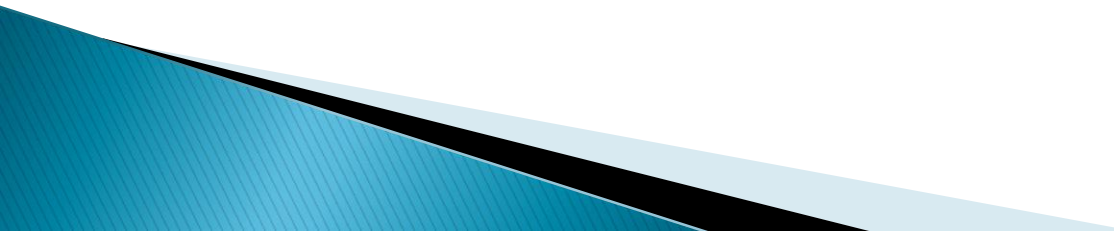
Recommendations – Training

- increase the number of health **providers** trained in EmONC;
 - provide in service training on caesarean section at KTH
 - reduce the risk of maternal mortality related to anaesthesia by providing regular in service refresher courses on obstetric anaesthesia, employing more nurses trained in anaesthetics and ensuring the availability of drugs and anaesthetic equipment;
 - ensure that there is an on-going programme of training in Maternal Death Audit for all those involved and that training is integrated into the pre-service medical and nursing curriculum;
- 

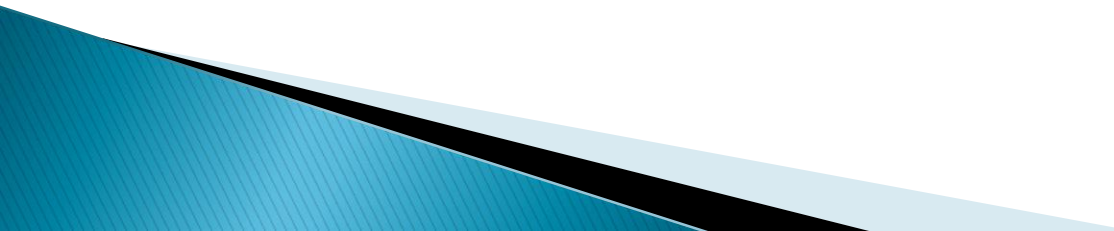
Recommendations Service Delivery

- strengthen the IEC for pregnant women for recognising signs of obstetric complications and consult on time;
 - strengthen the prevention and treatment of malaria in pregnant women;
 - prevent anaemia during pregnancy by supplementation of iron/folic acid;
 - increase post-operative surveillance;
 - make more equipment available for monitoring in delivery and in post-operative rooms;
 - prevent the stock out of blood;
 - make available the medicines necessary for the management of eclampsia;
 - strengthen the supervision of health centres.
- 

Recommendations – MDA National

- appoint a National Committee for Maternal Death Audit to coordinate implementation and M&E, ensure the dissemination of lessons learnt and standard procedures are used;
 - introduce Verbal Autopsy in the community;
 - Maternal Death Audit Committee in each district hospital that includes all the medical doctors and external advisors;
 - ensure that the system incorporates ‘no shame, no blame’ and ‘no name, no shame’ principles to ensure frank and honest reporting;
 - ensure that there are appropriate resources available nationally and at district level for the implementation of Maternal Death audit including for data analysis, implementation; recommendations, sharing of good practice and supportive supervision of implementation activities.
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Recommendations MDA – Facilities

- ▶ ensure that all those with relevant information are involved in the Maternal Death Audit;
 - ▶ ensure that all maternal related deaths are captured;
 - ▶ ensure that all recommendations from audits have a named person responsible for implementation, a timetable and that there is regular monitoring of implementation.
- 



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