Guidelines for Maternal and Perinatal Death Audits in Zimbabwe

Reproductive Health Unit
Ministry of Health and Child Welfare

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Empowering Service Providers to Improve Maternal and Newborn Health

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Acknowledgements

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Foreword

Since the start of the last decade, Zimbabwe has witnessed an unparalleled decline in key maternal and newborn health status indicators. The country is not likely to achieve most of its health targets including MDGs 4 and 5. Evidence from the Zimbabwe Demographic and Health Survey (ZDHS) show that neonatal mortality rate increased from 24 deaths (in 1994) to 31 deaths per 1000 live births and Maternal Mortality Ratio (MMR) rose sharply from 350 deaths per 100 000 live births (in 1999) to the recently published 960 per 100 000 live births (in 2010/11). Based on recent estimates from the ZDHS, an estimated 10 women die every day and 300 every month from pregnancy related complications. Findings from the Zimbabwe Maternal and Perinatal Mortality Study (2007) established the following as the major causes of maternal morbidity and mortality: eclampsia, post-partum haemorrhage and sepsis. The most common causes of neonatal morbidity and mortality were found to be birth asphyxia, prematurity and infections.

Notwithstanding the decline in key maternal and newborn health indicators, the Ministry of Health and Child Welfare with support from partners has come up with a number of evidence based strategies and frameworks aimed at strengthening the health delivery system and to put the country back on track to achieving the MDGs. In 2007, the Ministry developed a costed National Maternal and Neonatal Health (MNH) Roadmap: 2007 – 2015, aimed at providing the basis for an increased and long term investment to reduce the current levels of maternal and neonatal mortality and morbidity. In 2010, the Ministry also launched an African Union initiated Campaign for Accelerated Reduction of Maternal Mortality in Africa (CARMMA) and also the National Adolescent Sexual and Reproductive Health (ASRH) Strategy: 2010-2015. In 2011 a national five year Health Transition Fund (HTF) was also launched to improve access to quality maternal and newborn health care for the population. Several strategic documents including policies, guidelines and manuals have been developed to improve the provision of maternal, adolescent and newborn health in the country.

This guideline is one such document designed to empower health service providers to understand and take steps to improve maternal and newborn health. The guideline provides guidance to clinicians and other health service providers in the conduct of high quality audit of maternal and perinatal deaths to determine the cause of death and other issues surrounding the death. The guideline is also aimed at improving the quality of clinical practice, reaffirming the need for every maternal death to be notified and audited and to improve the quality of data available for monitoring and research activities aimed at reducing maternal and perinatal mortality. This is imperative in the strengthening and standardization of maternal and perinatal mortality audits and will assist in generating evidence for determining interventions and the provision of data needed to compute maternal mortality ratio and perinatal morality rate.

I therefore urge you all to use this guideline diligently as we endeavour to achieve MDGs 4 and 5.

Brigadier General (Dr) G. Gwinji
Secretary for Health and Child Welfare
June 2013

Acronyms

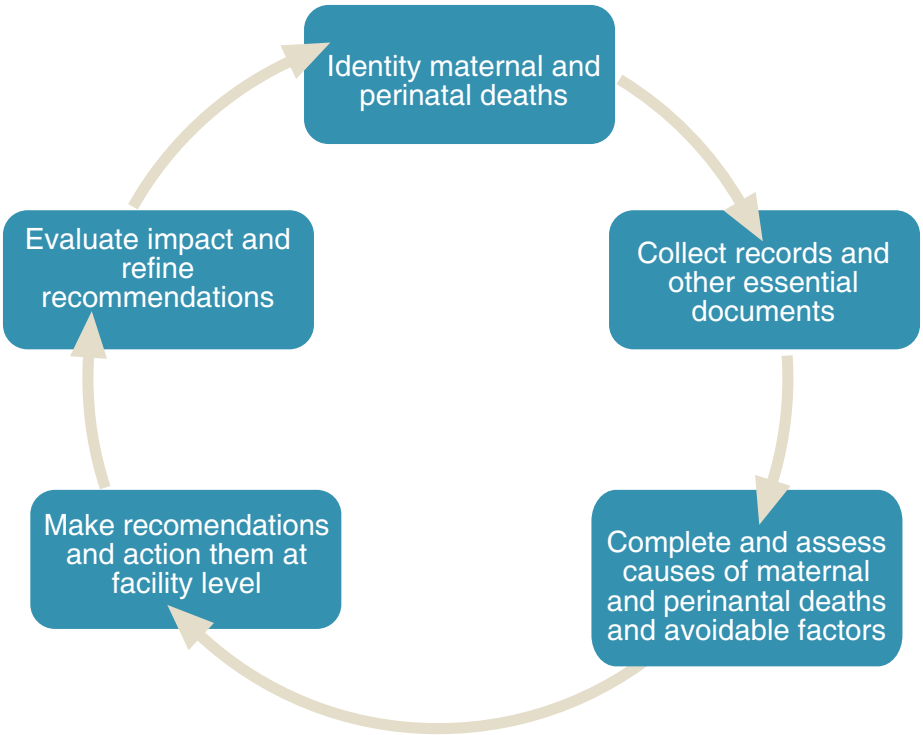
MDGs	Millennium Development Goals
MoHCW	Ministry of Health and Child Welfare
PNO	Provincial Nursing Officer

1 Introduction

1.1. Background

One of the most effective and strategic interventions to reduce maternal and perinatal mortality is improving the quality of care in existing health institutions. Each maternal and perinatal death has a story to tell, and this story can only be made clear by a frank and systematic interrogation of each case as it occurs. The information gathered is used to identify gaps in the health delivery system and to implement corrective action to improve future maternal and perinatal outcomes. This is not done for punitive action against anyone who was in the process of caring for both mother and/or baby.

The World Health Organization (WHO) has recommended surveillance of maternal and perinatal deaths using an audit cycle whose generic structure is shown in the diagram below:



The cycle starts with identification of cases of deaths, followed by collection of the data. An important step is analysis of findings and recommendation and action. There should then be evaluation of the impact of any changes and refinement of interventions, practices and policies etc.

The objectives of an institutional maternal and perinatal death audit are to:

1. Review all maternal deaths;
2. Review perinatal deaths;
3. Review the maternal and perinatal statistics periodically;
4. Determine corrective action and evaluate its impact;
5. Advance the education and learning of health workers by reviewing illustrative perinatal deaths in detail; and
6. Demonstrate accountability to our clients.

Chapter ONE Introduction

Millennium Development Goals 4 (to reduce by two thirds, between 1990 and 2015, the under-five mortality rate), and 5 (to reduce by three quarters, between 1990 and 2015, the maternal mortality ratio) are far from being achieved. Like many other developing nations, Zimbabwe is currently off track in achieving MDGs 4 and 5. Evidence from the Zimbabwe Demographic and Health Survey (ZDHS) show that skilled attendance at birth fell from 73% in 1999 to 66% in 2010/11; institutional delivery also went down from 72% in 1999 to 65% in 2010/11 and antenatal care coverage declined from 94% in 2005/06 to the current 89%. Contraceptive Prevalence Rate also dropped by a percentage point from 60% in 2005/6 to 59% in 2010/11 and Adolescent Birth Rate rose sharply from 99 to 115 births per 1000 adolescents. Unmet need for family planning has remained stagnant at 13% since the year 1999. Neonatal mortality rate has increased from 24 deaths (in 1994) to 31 deaths per 1000 live births in 2010/11 and Maternal Mortality Ratio (MMR) has risen sharply from 350 deaths per 100 000 live births (in 1999) to the recently published 960 per 100 000 live births (in 2010/11). Poor performance of the above mentioned indicators is largely attributed to the severe socio-economic challenges that the country experienced in the last decade.

The country has also been facing challenges with strengthening the national Vital Registration System and the national Health Management Information System for the provision of timely, reliable and accessible Sexual and Reproductive Health (SRH), including maternal and perinatal mortality information. For instance, while information gathering tools such as case notes, delivery registers, incidents reports, maternal and perinatal death notification forms are available in health facilities, evidence shows that there is no regular analysis of cases to see why women and newborn babies are dying.

Evidence also shows that not all institutions are carrying out maternal and perinatal death audits and the few that do, there is no standardized way of conducting the audits, collecting relevant information, interpreting and reporting the findings. Generally, there are challenges with timely collating and analysis of maternal and perinatal mortality data and feed back mechanisms at all levels.

The Ministry of Health and Child Welfare with support from partners has therefore developed this national guideline to standardize the conduct of high quality maternal and perinatal death audits and to strengthen tracking, monitoring and reporting of maternal and perinatal mortality indicators at all levels. The primary goal of the guideline is to contribute to the reduction of maternal and perinatal mortality in the country. The guideline builds on ongoing efforts to provide information that can be used in the development of programmes and interventions to reduce maternal and perinatal mortality and morbidity, and improve access to and quality of maternal and newborn health care.

Aim of the Guideline:

The main aim of this guideline is to provide recommendations to health professionals in the conduct of audit of maternal and perinatal deaths at health institutions, provincial and national levels and to generate data and evidence that can be used to improve maternal and perinatal care.

For whom is the Guideline intended?

This guideline is intended for all health professionals involved directly and/or indirectly in the care of pregnant women and their babies. It particularly focuses on institution based and province – wide maternal and perinatal audits.

What does the Guideline include?

This guideline covers such issues as composition of an audit committee, timing of an audit, data collection, conduct of the meeting and recommendations to keep the meeting focused and effective. The guideline also provides highlights on the standardized data collection tools for monthly statistics,

assessing maternal deaths and analysis of perinatal deaths. In this guideline, the audit meeting shall be referred to as the Maternal and Perinatal Mortality Meeting (MPMM).

This document provides in simple terms a step-by-step guide on how to:

- Collect maternal and perinatal mortality data
- Analyse the data
- Conduct an audit meeting
- Guide fruitful audit discussions
- Follow up on recommendations
- Feedback/feed forward to stakeholders

1.2. Definitions

Maternal death:

A maternal death, as defined by the ninth and tenth revisions of the International Statistical Classification of Diseases and Related Health Problems (ICD), is 'the death of a woman while pregnant or within 42 days of the end of the 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.'

Stillbirth:

A stillbirth occurs when a fetus has died in the uterus. The WHO defines a stillbirth as fetal death late in pregnancy where the fetus died prior to complete expulsion or extraction from its mother. The death is indicated by the fact that after such separation, the fetus does not have a heart beat, pulsation of the umbilical cord; ultrasound, if available, will have shown no activity of the heart before the birth of the baby.

The WHO allows each country to define the gestational age at which a fetal death is considered a stillbirth for reporting purposes. For the purposes of this guideline, a gestational age of 28 weeks or more, or a birth weight of 1000 grams or more shall be used.

Neonatal death:

This is the death of a live born baby within 28 days of delivery (of 28 or more completed weeks of gestation). Early neonatal death occurs up to 7 days of delivery and late occurs between 7 and 28 days of delivery.

1.3 Hierarchy of the Health System in Zimbabwe

a. Referral/Functional Hierarchy

For maternal and perinatal health, Zimbabwe has two levels of referral. There is the Basic Emergency Obstetric and Neonatal Care (BEmONC) unit and the Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) unit. Most pregnant women present first to a BEmONC unit which can be one of the following:

- Rural health centre/clinic
- Local authority clinics (urban and rural)
- Private clinics
- Mission clinics

This is the first point of contact between a mother and the health delivery system and it is usually run by nurses and midwives. This centre should ideally offer seven signal BEmONC functions which are:

- parenteral antibiotics
- parenteral anticonvulsants
- parenteral oxytocics
- manual removal of placenta
- manual vacuum aspiration
- assisted vaginal delivery (however this is not done by facilities at the first level of care in Zimbabwe)
- neonatal resuscitation with bag and mask.

The second level of referral is the CEmONC which offers in addition to the above seven signal functions:

- Caesarean section
- Blood transfusion
- Advanced neonatal resuscitation including intubation

The CEmONC unit is represented by:

- District hospital
- Provincial hospital
- Central hospital
- Major private hospitals

Any mission hospital which offers the 10 signal functions of CEmONC is classified as a district hospital.

At this level there is a doctor or at the minimum, a clinical officer who can do a caesarean section and provide blood products. Additionally, at a central and major private hospital there is a specialist obstetrician. It is at these two levels (the BEmONC and CEmONC) that this guideline is mainly intended for.

b. Administrative Flow of Reproductive Health Information

From a rural health centre, reproductive health information goes to the district medical officer (DMO) then to the provincial medical director (PMD) and finally to head office in Harare. For example when a maternal death occurs at a district hospital, a maternal death notification form (MDNF) is completed within seven days of the maternal death and together with photocopied notes of the deceased, this is sent to the PMD within 14 days. The PMD notifies the head office within 30 days by forwarding a copy of the maternal death notification form.

In the case of a perinatal death, a perinatal death notification form (PDNF) is also completed within seven days, sent to the PMD within 28 days and should reach the head office within 60 days of the perinatal death. The diagram below shows the flow of maternal mortality information from the source of a maternal death to the Reproductive Health Unit and back.

Deaths will be collated by district of origin in the case of referrals. For instance, deaths of women referred from outside the district should be repatriated to the district of origin and this is done by the Reproductive Health Focal Person (RHFP) at the province or tertiary hospital.

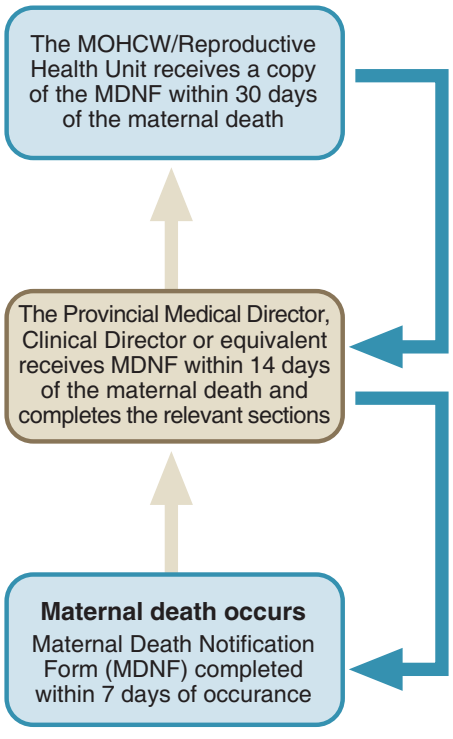
At the district monthly MPMM, the case is discussed using the maternal death assessment form (MDAF). Findings and recommendations for action are recorded for the district healthworkers and authorities. Minutes of the meeting and a copy of the MDAF are sent to the PMD, who adds comments and feed back to the district. The minutes, comments and MDAF are forwarded to head office.

At the quarterly provincial MPMM, data collected from all the districts is collected and analysed; selected maternal and perinatal deaths are discussed and recommendations are fed back to the districts. A summary is sent to the national head office.

From a municipality clinic, information flows to the director of health services and then to head office. Because there are few maternal deaths occurring at these clinics, their meetings are almost always held together with the central hospitals to which they refer.

At the central hospital information flows from the department of obstetrics and gynaecology to the chief executive officer (CEO) then to the national head office. When a maternal death occurs, the head of department is notified. A preliminary assessment is done and a MDNF is filled. This together with the case notes is sent to the clinical director. At the monthly MPMM the case is reviewed with the aid of a MDAF. Minutes are sent to the clinical director, who will forward them to head office together with the MDNF.

The current flow of the maternal death notification form (MDNF)



1.4 Audit Meetings at Different Levels of Care

Level One: Hospital/ Institution Level

- In Zimbabwe the audit meeting should take place at a district, mission, provincial, central and private hospital. This is a facility based maternal and perinatal death audit which is defined as "qualitative in-depth investigation of the causes of, and circumstances surrounding, maternal and perinatal deaths which occur in health facilities".
- It is concerned with tracing the road to maternal or perinatal death through the health care system and within the facility, to identify any avoidable factors which could be changed to improve maternal and perinatal care. This is the level at which changes can be made with the greatest impact.
- Although the focus is deaths, those institutions that have very few maternal deaths, for example private hospitals, need to audit severe morbidity cases. Generally, the causes of severe morbidity are the same as the causes of maternal deaths. Reviewing deaths will still generate the same information; and deaths are easier to identify because they are easily remembered.
- Monthly meetings are held to review each case of maternal death.

Level Two: Provincial level

- Every month, data from the districts is collated and analysed. However, it is not likely that there will be sufficient maternal and perinatal deaths to allow comments on trends on a monthly basis. The trend is best determined quarterly through a provincial or city level meeting.
- The information can either be analysed or presented in tables and graphs using pen and paper, or suing a computer.

Level Three: National level

- In some countries such as the United Kingdom and South Africa, the national level audit takes the form of a confidential inquiry. The national audit meeting in this guideline is not a confidential inquiry; it is an epidemiological analysis of maternal and perinatal deaths utilizing information from institutional and provincial meetings, maternal death notifications, and provincial reproductive health mentors.
- It is recommended that the meeting be held annually. Data from institutions including private clinics and hospitals is collated and analysed. Recommendations that can influence allocation of resources, change in policies, training and community wide interventions are given.
- Activities at this level can form the foundation for a confidential enquiry in the future.

2 Institutional Maternal and Perinatal Mortality Meetings

2.1 Advantages and disadvantages of conducting maternal and perinatal death reviews:

Advantages

The advantages of institution based maternal and perinatal death reviews are that they:

1. Generate evidence for determining interventions.
2. Provide the data needed to feed into the national registration system.
3. Build team work.
4. Identify areas needing further learning, education and research.
5. Assist in standardizing management, improving the rational use of limited resources and decreasing case fatality rates.
6. Identify areas that can lead to change in policy and protocols at various levels.
7. Demand accountability for all health workers and management to live up to their respective mandates.
8. Enable conscientious effort in maintaining correct practices.

Disadvantages

The following are the disadvantages of institutional maternal and perinatal audit:

1. Lack of population-based data thus MMR cannot be estimated from audit data alone. Community deaths are not usually included in the audit.
2. Community factors leading up to death of the woman or baby are difficult to ascertain.
3. Audit meetings which are not properly facilitated can create disunity and low morale.
4. Their success may depend on the skills and leadership qualities of an individual (the chairperson).
5. The woman or baby who has had a bad outcome may not benefit.
6. Their sustainability depends on the implementation of recommendations and provision of the necessary material and human resources.

2.2 The institutional audit committee

Functions of the audit committee should include:

- Review of all maternal and perinatal deaths.
- Evaluation of circumstances surrounding the deaths including a consideration of contributing factors.
- Development of recommendations for improving care.
- Implementation of recommendations given.
- Ensuring feedback to health workers.
- Provision of minutes of meetings and case summaries to relevant authorities.

Membership of the audit committee:

The committee should be multidisciplinary, involving those in the front line and those behind the scenes in caring for pregnant women and their babies. The following are possible members of the audit committee at district or provincial hospitals:

- District Medical Officer (Chairperson)
- Government Medical Officer/s
- Provincial nursing officer
- Matron
- Midwives from hospital
- Tutors and students (provincial)
- Midwives/nurses from clinics/outlying clinics
- District nursing officer
- Community sister
- Clinical officers
- Laboratory scientist
- Transport officer

Note: For the sake of efficiency, the audit committee should not be large and need not contain all types or grades of cadres. The Chairperson should not necessarily chair every monthly meeting; this task should be rotated to improve inclusivity.

At Central /Private Hospitals, the following are possible members of the audit committee:

- Obstetricians (Chairperson)
- Paediatricians
- Anaesthetists
- Registrars
- Junior doctors
- Maternity Matron
- Principal nursing officer
- Tutor/s
- Midwives
- Laboratory scientist
- Representative from administration
- Representative from the municipal health departments

Note: The Chairperson may, from time to time, invite special guests to the audit meeting.

2.3 Practical issues in conducting maternal and perinatal death reviews

Crucial role players:

a. The Chairperson

The effectiveness of a MPMM and therefore its sustainability is dependent on the skill and experience of the chairperson. For this reason, when a MPMM is being held for the first time, it is a good idea where possible, to have an experienced outsider to offer to chair the first meeting. The chairperson will:

- Ensure that members stick to the business at hand;
- Tactfully restrain talkative speakers;
- Ensure proceedings do not become unnecessarily protracted; and
- Stimulate participation by asking appropriate questions and prompting where necessary

The Chairperson should be a team builder. Now and then, at the beginning of the meeting, the chairperson needs to express appreciation of the attendees for their crucial role irrespective of their level in the institution's hierarchy. He/she needs to emphasize that the meeting is not for apportioning blame, but genuinely seeks to improve maternal and perinatal health care.

b. The Medical Officer of Health/ Maternal and Child Health (MoH/MCH); Reproductive Health Focal Person (RHFP) or Senior Midwife

A Reproductive Health Focal Person is a midwife available at each central hospital and at every provincial office. Together with the MoH/MCH also available at every provincial office, he/she is responsible for gathering and collating all data on maternal and perinatal deaths. At a district, mission or private hospital, this duty is assigned to a senior midwife. At a central hospital, preparation of monthly statistics and cases is done in conjunction with a registrar in training.

c. The Attendees: How to attract them

The chairperson has to make it clear that:

- Attendance and participation are not options but professional responsibilities of all health workers involved in

maternity services

- All contributions are welcomed and valued.
- No witch hunting or apportioning of blame takes place
- Probing discussion has to be based on an acceptance of each other's integrity and best intentions.
- Successes should be discussed, no matter how minor
- The MPMM is an educational experience
- Tasks arising from a MPMM will be rotated among the staff
- Reassurance is given that meeting is held in confidence and information and discussion arising from the audit will not be used in disciplinary action.

Time:

- The MPMM should be held once a month on a set day, with duration of about 1 hour.
- The hospital management should support the drawing up of a schedule of meetings for the year and stick to it. Reminders together with minutes of previous meetings should be sent in time.
- However when a maternal death occurs a preliminary assessment has to be done within 24 hours, certainly well before the MPMM. Senior members of the audit committee (usually the chairperson and senior midwife) must be in attendance.

Preparing for the monthly meeting:

a. Notice of the meeting

A notice should be issued in reasonable time especially if people need to travel to a venue outside their station. For a monthly meeting, the date of the next meeting can be announced at the end of a current one and reminder notices sent together with minutes of previous meeting at least 14 working days before the next meeting. For quarterly meetings, reminders need to be sent at least 21 working days before date of meeting.

b. Content of the notice

- Date, time and venue of meeting.
- Agenda
  - Verification of minutes from the previous meeting
  - Discussion of matters arising
  - Presentation of previous month's maternal and perinatal statistics
  - Discussion of individual/selected cases
  - Any other business

c. Venue

Venue should be convenient for members, easy to find, preferably have a power point projector or green board, have enough room, accessible ablutions, well aerated and away from distraction.

d. Gathering information

When a maternal death occurs, a preliminary review is carried out within 24 hours and the MDNF is completed once post-mortem results are available where possible. This preliminary assessment is carried out by the Medical Superintendent, District Medical Officer, Government Medical Officer, or Obstetrician in conjunction with the MoH/MCH or RHFP or senior midwife. The main objective is to ensure accurate and complete record of information while details are still fresh in the memories of all involved. The sources of information for this assessment are:

- Case notes
- Critical incident reports
- Interviews with those who cared for the deceased
- Referral letter and documents of previous care, if any
- Accompanying relatives if available

To ensure completeness of data collection, they make use of the maternal death preliminary assessment form (MDPAF) in appendix A. The primary cause of death, the final cause of death and preventable factors are identified. The MDNF is then completed and copies send to relevant offices within 24 hours.

Maternal and perinatal mortality statistics for the previous month are prepared by the midwife or MoH/MCH or RHFP or any individual assigned to do so by the chairperson of the MPMM using a monthly statistics data sheet (appendix B). Sources of data for this task are:

- Delivery register
- Stillbirth and early neonatal death register
- Death notification book
- Photocopied case notes and incidents reports
- Post-mortem register

All the maternal and perinatal deaths for discussion are summarized, and together with the statistics are typed and enough copies printed for all who will attend the MPMM. Case notes are photocopied and together with incidents reports, copy of the MDNF, MDPAF and any interview notes, are filed by the MoH/MCH or RHFP or departmental secretary for the monthly review meeting.

Note: Photocopying the patient's case notes is very crucial as the original notes have to pass through several administration offices for several reasons and might get lost or some pages may go missing by the time of the MPMM.

e. Preparatory meeting for the monthly review meeting

There is insufficient time at a MPMM to carry out review of the outcomes of all the pregnancies in one month. Therefore a preparatory review meeting needs to be carried out and a summary prepared for presentation at the MPMM. This is basically a meeting between the midwife or MoH/MCH collecting the data and the chairperson of the audit committee. The meeting is held a few days before the scheduled MPMM. The aim of this preparatory meeting is to:

i. Review statistics for the month and identify trends that need to be highlighted during the MPMM;
ii. Select cases for discussion;

Because these meetings last 60 minutes, not all cases of maternal and perinatal deaths can be discussed, especially at a provincial or central hospital. So two or three cases need to be selected using the following criteria:

- The case has preventable or actionable factors;
- The causes of death have not been discussed recently;
- The case has immense educational value;
- There are some new insights into management of such cases; and
- The case can be used for advocating for particular resources

iii. Identify learning points that need to be emphasized;
iv. Confirm venue and any other accessories for the meeting;
v. Ensure the following documents are available for the meeting:

- Notes to be discussed;
- A Maternal Death Assessment Form (MDAF) for each case to be discussed; and
- Copies of the month's statistics for each participant in the meeting

Note: The quality of this preparatory review is critical to the level of accountability and to the value of the subsequent MPMM.

2.4 Step by step guide to conducting an institution based MPMM

Once everyone is seated the chairperson starts the meeting preferably in the following manner:

a. Welcome members who have responded to the notice, acknowledge the presence of and welcome any special, invited guest(s) or new attendees.
b. Announce any apologies that may have been received.
c. If minutes of previous meeting have been circulated, the chairperson will ask the meeting whether they 'may be taken as read'. If not circulated to everyone then he/she will ask the secretary to read them aloud to the meeting, in order that the meeting may confirm that they are an accurate record of the proceedings at

the previous meeting. These minutes should be a summary of the proceedings of the last meeting, rather than a verbatim record. They should not be longer than one A4 page using size 12 text.

d. Once the minutes have been read or taken as read, the chairperson will ask the meeting whether anyone present will move their formal adoption.

e. Thereafter he/she will ask the meeting whether anyone is willing to second the motion for the adoption of the minutes.

f. Once seconded he/she will sign them as a correct record. These minutes, together with statistics, are then sent to the MOHCW Reproductive Health Unit in Harare.

g. The chairperson will then turn to the agenda and introduce the first item. This is usually a discussion of matters arising from the last meeting. It is best to assign someone for example a senior midwife, maternity matron or middle level doctor to lead this discussion. The discussion is usually on actionable matters that were assigned to members. Check whether decisions taken at previous meetings as recorded in the minutes, have been carried out. For example, 'Obstetrician to discuss with pharmacist about keeping nevirapine in labour ward'.

h. The second item is usually presentation of the previous month's statistics. This again is assigned to a member of the team preferably the one who prepared the statistics. The chairperson initiates discussion by inviting comments on the statistics.

i. A presentation of selected maternal and perinatal deaths then follows. It is recommended that maternal death cases should be reviewed on a time-line format. This means the case should be followed based on what happened hour per hour. This also applies to perinatal deaths, as management of pregnancy and labour may have direct impact on the perinatal outcome. This is particularly important in reviewing the partograph.

No individual involved in the management of the case must be identified by name. Persons should be referred to as "the midwife who took over management", "the doctor who assessed the deceased", "the ambulance driver on this particular day" or "the team that managed her thereafter", etc. Even if the responsible person may volunteer her/his identity, this must be actively discouraged.

To ensure completeness of the discussion and uniformity, use of the maternal death assessment form (MDAF) Appendix C is recommended. Provide those present with relevant photocopies of notes, and labour graphs on MS powerpoint. If these can be circulated 24 hours before the MPMM then participation in the discussion is greatly improved. Take time to discuss the lessons that arise from the cases. The chairperson may invite contributions by asking questions such as:

- Do you think the history was adequate?
- Can anyone comment on the partograph?
- What about the resuscitation?
- Could we have prevented this outcome?
- Does the documentation indicate accurate findings and decisions?
- What interpretations can we make about the primary and final cause of death? (the 3 delays)
- What decisions need to be made about future practice?

j. Provision of up to date information on one selected topic preferably similar to one presented is done; otherwise someone should be chosen to do a presentation on the subject at the next MPMM.

k. After discussion of selected cases, the next agenda item is the actionable items with specific time frames or those needing further research, and their assignment to individuals for report back.

l. This is followed by any other business. This may include announcements of events, or follow-up of some issues that were discussed previously. It also is the opportunity to announce the date of the next audit/review meeting.

m. After the last agenda item, the chairperson will thank all those present for their attendance, and declare the meeting ended.

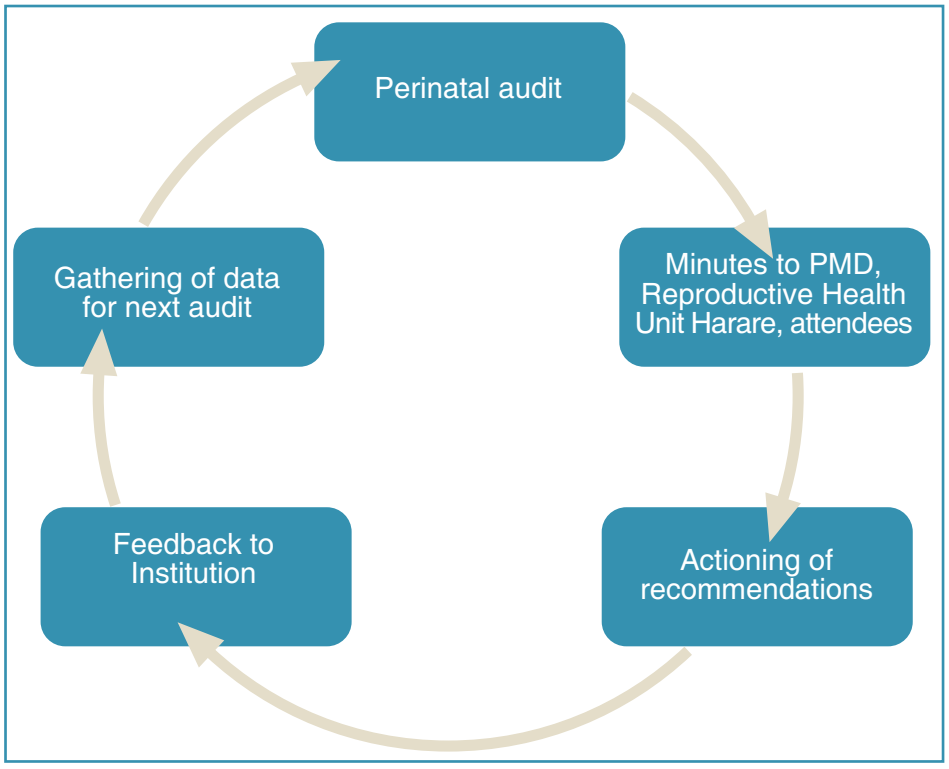
Minutes of the proceedings are then put together by the secretary within 3 days of the meeting, sent to the chairperson, signed and circulated to members for reading, correction and as a reminder to assigned tasks.

Completing the audit cycle

An audit is not a one off event. It is a continuous cycle with ongoing feedback, implementation and adjustments.

Attendees can suffer low morale if recommendations are not implemented and evaluated. Enthusiasm wanes and what started out as an important, meaningful and challenging undertaking, becomes unfulfilling and meaningless. Attendance at meetings starts falling and ultimately the mother and baby suffer as accountability disappears.

It is therefore important that the tasks agreed upon are carried out and there is feedback to the members of the health team. Time frames should also be set.



3 Provincial and National Maternal and Perinatal Mortality Meetings

3.1 Provincial quarterly meetings

Province-wide, maternal and perinatal death reviews are conducted across several district hospitals within the province. The provincial quarterly audit meeting is held every quarter, where the overall provincial statistics are presented and an epidemiological analysis done. Trends are identified, major causes of maternal and perinatal death discussed, and two to three maternal deaths from the identified major causes of death are reviewed.

Tools:

- Monthly statistics from all districts in the province
- Maternal death assessment forms from all districts
- Copies of case notes of maternal deaths
- Maternal death notification forms

Attendees:

Audit members to attend are:

- Provincial Medical Director
- Medical Officer of Health/Maternal and Child Health
- Provincial Epidemiology Officer
- Provincial Nursing Officer
- Reproductive Health Focal Person
- District Medical Officers
- Medical Superintendents from Mission Hospitals
- District Nursing Officers
- Tutors
- Provincial Health Information Officer
- Medical Superintendent of Provincial Hospital
- Provincial Administrator or Representative

Conducting the Meeting:

The meeting may be chaired by any one of the following professionals: the PMD, MoH/MCH, the provincial epidemiology officer, provincial obstetrician, PNO or any appropriate senior person. After the welcome, review and adoption of minutes of the previous meeting, new business of the meeting starts with presentation of the province wide statistics (a composite summary of statistics from the districts). These would have been prepared from the monthly returns sent by the districts from their monthly meetings. Trends and hot spots are identified and the chairperson prompts discussion on the presentation. Presentations of specific maternal and perinatal deaths from two to three chosen districts are made, followed by a discussion (not all districts need to present). The rest of the meeting follows the same structure as explained before.

Venue:

This meeting is best held at a central venue preferably a hotel where those from outside can be accommodated. It may last one whole day.

3.2 National audit meetings

This is led by a national level committee with a mandate and opportunity to influence change among those caring for pregnant mothers and their children, and those who allocate funds and resources for maternal and perinatal care. It is the steering committee for the whole process.

The Committee members:

- Deputy Director Reproductive Health (Chairperson)
- Provincial Medical Directors (2)
- Director Nursing Services
- Obstetrician from the University of Zimbabwe Medical School
- Obstetrician(s) from Bulawayo, Mutare or Gweru
- Anaesthetist from one of the central hospitals
- Representative from private hospitals
- Tutor from schools of midwifery (1)
- District Medical Officer
- District Nursing Officer
- Provincial Nursing Officer
- City Health Officer or local authority representative
- Paediatrician/Neonatologist
- Pathologist
- Health Information Officer
- Representative of a women's civic organization

Roles of the committee:

- Introduce and support a uniform system of conducting audits by all institutions and the timely notification of all maternal deaths.
- Collect and synthesize data from institutions, districts, provinces and central and private hospitals.
- Review minutes of meetings and recommendations made from districts and provinces.
- Identify the main causes of maternal and perinatal deaths.
- Select and discuss signal maternal and perinatal deaths from health institutions (representing the top causes of maternal and perinatal deaths).
- Appoint a reproductive health mentor (RHEM) for each province. This is an obstetrician who assists the province to implement reproductive health interventions, assist in institutional audits, and acts as a mentor for the health workers.
- Prepare reports at regular intervals, with robust data that can be used as a basis for policy formulation and advocacy for increased funding.
- Plan the dissemination of the reports to the community, health workers, civil society organisations, parliamentarians; obtain feedback and utilize the findings.
- Make recommendations with affordable, practical, relevant, evidence based and implementable solutions.

The Reproductive Health Mentor (RHEM)

A reproductive health mentor (RHEM) is a clinician with expertise in reproductive health issues, usually a specialist obstetrician and gynaecologist who can:

- Provide ongoing mentoring to providers of reproductive health services.
- Support and monitor the implementation of reproductive health protocols at provincial and district levels.
- Attend and guide discussions at institutional and provincial maternal and perinatal audit meetings.
- Identify and address knowledge and skills gaps in the provision of reproductive health services.
- Monitor and evaluate reproductive health services.
- Provide constant feedback to mentees, their supervisors, and MOHCW national audit committee.
- Do in depth investigation of certain maternal deaths as and when required by the national audit committee.

Due to shortage of manpower and financial resources, the RHEMs can initially be limited to the provinces which are implementing the MPMM audits.

Time and Venue:

The meeting should be held

annually at the MoHCW national head office and it may be of one or two days duration.

Format of the Annual Report:

- The report should ideally have an executive summary where all major findings are stipulated as well as the recommendations. The recommendations should be limited to those that are potentially achievable.
- The main report should be made into chapters according to the major causes of maternal and perinatal mortality. Each section/chapter should have separate recommendations relating to the prevention of maternal deaths from that condition.
- The report should consider identifying deficiencies in the care of the woman and/or the foetus in the (a) community/ family/personal, (b) health system, (c) health care provider(s).

Dissemination of the report:

- The report should be sent through to all facilities, district and provincial offices, as well as political and administrative principals.
- Since the appointment of the audit committee is the responsibility of the Minister, it is important that the findings of these audits should be submitted to the Minister.
- Provincial and institutional report-back workshops may be used to disseminate the report.

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APPENDIX A Maternal Death Preliminary Assessment Form (MDPAF)

A.Personal Information (deceased woman)

Name: _____

Age: _____Parity: _____ Marital status: _____

Date of admission: _____ Date of death: _____

Booking status: _____Gestation on admission: _____

B.Condition on admission

Diagnosis on admission: _____

Clinical condition on admission: _____

Risk factors identified at/after admission: _____

Pre-existing conditions: _____

Pregnancy related conditions: _____

Interventions: _____

C.Delivery information (circle the appropriate where applicable)

Type of labour: 1.Spontaneous; 2.Augmented; 3.Induced; 4.No labour; 5.Not specified

Type of delivery: _____

Number of previous Caesarean sections: _____

Baby outcome (if applicable): 1.Livebirth; 2.Stillbirth; 3.Neonatal death: Birth weight: …… (gms)

Birth attendant (if applicable: 1.Obstetrician; 2.Registrar; 3.SRMO; 4.Midwife; 5. Anaesthetist; 6.Other_____

D.Anaesthesia: (related to terminal event): Circle the appropriate

Anaesthesia: 1.Yes; 2.No; 3.Dont know

If yes, type of anaesthesia: 1.General; 2.Spinal; 3.Epidural; 4.Other_____

Comment_____

E. Cause of death (circle the appropriate where applicable)

Primary (underlying) cause of death: _____

Contributing (antecedent) causes of death: _____

Terminal event (description):_____

Classification of death: 1.Direct; 2.Indirect; 3.Incidental

Post-mortem conducted: 1.Yes; 2.No

If yes final cause of death_____

Avoidable factors: 1.Yes; 2.No. If yes explain in terms of the three delays:

First delay_____

Second delay_____

Third delay _____

Name of person completing form: _____

Signature_____

APPENDIX B Monthly Statistics Data Sheet

1. Total number of maternity admissions (>28weeks) _____ _____
2. Total number of post-delivery admissions (within 42 days of delivery) _____
3. Total number of early pregnancy admissions (<28wks)_____
4. **Total admissions**_____
5. Ectopic pregnancies _____ _____
6. Miscarriages _____
7. **Total number of deliveries** _____ _____

    a. Normal vertex deliveries _____

    b. Breech deliveries _____

    c. Twins _____

    d. Caesarean sections _____

    e. Vacuum extractions _____

    f. Forceps deliveries _____

    g Destructive operations _____

    h. Babies <2500 grams _____

    i. Babies >2500 grams _____

    j. Babies >4000grams _____

8. Total number of stillbirths _____

    a. Fresh stillbirths _____

    b. Macerated stillbirths _____

9. Early Neonatal deaths _____

10. Late neonatal deaths _____

11. Maternal deaths _____

12. Total number of HIV positive mothers admitted into maternity_____

APPENDIX C Maternal Death Assessment Form (MDAF)

This tool should be used in the discussion of every maternal death be it due to early or late pregnancy related causes or medical/surgical causes.

PART I: MATERNAL INFORMATION

Section A. Background Information (complete for all maternal deaths)

Name: _____ _____

Address: _____

Hospital number_____

Date of birth: _____Age: _____

Date of admission: _____Time of admission: _____

Date of death: _____Time of death: _____

Time between admission and death_____

Date of delivery, abortion, or treatment of ectopic: _____

Place of death if applicable: _____

Was this the patient's first level of care: 1.Yes; 2.No

Autopsy: 1.Yes; 2.No

Apparent cause of death: _____

1. Death occurred at < 28 completed weeks GA (where the appropriate)

    1. still pregnant
    2. miscarriage, termination of pregnancy, molar pregnancy
    3. ectopic

or

Death occurred at > 28 completed weeks GA (where the appropriate)

1. antepartum
2. intrapartum
3. postpartum < 42 days post delivery

2. If patient was pregnant, gestational age: _____completed weeks

Section B. Time line of events

Time of arrival at first health centre _____

Time attended to_____

Time of referral_____

Time of arrival/admission at referral centre_____

Time of definitive management (vaginal delivery, CS, laparotomy, Evacuation, resuscitation)_____

Time of death_____

Total time from arrival at first health centre to death_____

Describe any delay_____

Maternal Death Assessment Form (MDAF)

Section C. Reproductive and Medical History (circulate the appropriate where possible)

3. Obstetrical history

Parity___ ___ Alive____ Booked: 1.Yes; 2.No

4. Details of previous pregnancies (**pleased add other rows if necessary**):

Year	Mode of delivery	Weight	Place of delivery	Complications

5. Coexisting medical disorder complicating pregnancy? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

6. Did this condition arise in pregnancy? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

7. Was there consultation or special care related to the condition during pregnancy? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

8. Relevant past surgical history? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

9. Relevant personal/social circumstances? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

PART II THE ANTENATAL PERIOD

10. Were the following minimum initial assessments done?

History taking	1. Yes;	2.No
Head to toe examination	1. Yes;	2.No
Taking blood pressure	1. Yes;	2.No
Urinalysis	1. Yes;	2.No
RPR/TPHA	1. Yes;	2.No
FBC	1. Yes;	2.No
HIV test	1. Yes;	2.No

Describe any abnormalities_____

Maternal Death Assessment Form (MDAF)

11. Did the mother have any antenatal risk factors that could have predicted this outcome?

Preeclampsia	1. Yes;	2.No
Diabetes Mellitus	1. Yes;	2.No
Cardiac disease	1. Yes;	2.No
TB	1. Yes;	2.No
Grand multiparity	1. Yes;	2.No
Anaemia	1. Yes;	2.No
AIDS	1. Yes;	2.No
APH	1. Yes;	2.No
Other	1. Yes;	2.No

If yes describe_____

If yes, were the risk factors recognized and planned for? 1. Yes; 2.No; 3.Unknown; 4.N/A

If planned for describe_____

12. Where the following interventions given/done?

Iron/folate	1. Yes;	2.No
IPT	1. Yes;	2.No
ATT	1. Yes;	2.No
PMTCT	1. Yes;	2.No
ARVs	1. Yes;	2.No
USS	1. Yes;	2.No

13. If there was a deviation from the standard of care, can it be explained? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

PART III LABOUR AND DELIVERY

(a) Labour

14. Was this patient a transfer from a first level of care: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe reason for transfer:_____ _____

15. Was a qualified attendant present during labour? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, who was the **primary attendant?**

1. SRMO
2. GMO
3. Registrar
4. Obstetrician
5. Midwife
6. Nurse(RGN or PCN)
7. Other

Maternal Death Assessment Form (MDAF)

15. Where the following minimum standards of care done?

Use of partogram	1. Yes; 2.No; 3.Unknown; 4.N/A
Fetal heart monitoring	1. Yes; 2.No; 3.Unknown; 4.N/A
Pulse and Blood pressure	1. Yes; 2.No; 3.Unknown; 4.N/A
Listening to the patient's concerns	1. Yes; 2.No; 3.Unknown; 4.N/A

If there was a deviation could it be explained?_____

16. Where the following risk factors present?

Obstructed labour	1. Yes; 2.No; 3.Unknown; 4.N/A
Uterine rupture	1. Yes; 2.No; 3.Unknown; 4.N/A
Severe Preeclampsia/Eclampsia	1. Yes; 2.No; 3.Unknown; 4.N/A
Previous caesarean section	1. Yes; 2.No; 3.Unknown; 4.N/A
APH	1. Yes; 2.No; 3.Unknown; 4.N/A
Significant sepsis	1. Yes; 2.No; 3.Unknown; 4.N/A

If yes were they picked up?_____

If yes was appropriate action taken?_____

17. Duration of labour: 1. Known; 2.Unknown

If known please indicate:

Total:_____

First stage (length):_____

Second stage:_____

Third stage:_____

18. Was labour induced? 1. Yes; 2.No; 3.Unknown; 4.N/A

19. If labour was induced, the primary method was:

1. Artificial rupture of membranes
2. Prostaglandin
3. Oxytocin
4. Misoprostol
5. Balloon catheter

17. Was labour monitored by partograph? 1. Yes; 2.No; 3.Unknown; 4.N/A

18. If yes describe the partograph_____

Maternal Death Assessment Form (MDAF)

(b) Delivery

19. Was a qualified attendant present during delivery? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, **primary attendant** was

1. SRMO
2. GMO
3. Registrar
4. Obstetrician
5. Midwife
6. Nurse(RGN or PCN)

20. Method of delivery:

spontaneous vaginal

forceps assisted indication: _____

vacuum assisted indication: _____

Caesarean section – elective indication: _____

Caesarean section – emergency indication: _____

(d) Infant Outcome

21. Birthweight of infant: _____ gm

22. Infant was/

1. Live born
2. stillborn; if stillborn, death occurred:
    1. during labour
    2. before labour

Apgars: _____ 1 minute; _____5 minutes; _____10 minutes

23. Was there an adverse infant outcome? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

PART IV THE POSTPARTUM PERIOD

24. Time between delivery and death if death occurred in postpartum period (hours/days as applicable): _____

Maternal Death Assessment Form (MDAF)

25. Where the following risk factors/complications present?

Eclampsia 1. Yes; 2.No

Puerperal sepsis 1. Yes; 2.No

DVT/Pulmonary embolism 1. Yes; 2.No

If yes was appropriate management done 1. Yes; 2.No

If not please explain_____

26. Was PPH present? 1. Yes; 2.No

If yes was the cause of PPH identified: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes what was the cause?

1. Uterine atony
2. Perineal tears
3. Cervical tear
4. Uterine rupture
5. Placenta praevia
6. Retained placenta
7. Abruptio
8. Bleeding disorder

If yes was the cause of the PPH managed appropriately: 1. Yes; 2.No; 3.Unknown; 4.N/A

If Not please explain_____

27. Placental delivery:

1. spontaneous
2. assisted (active management of the third stage)
3. manual removal

28. Oxytocic drugs in third stage: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, Specify, with dose _____

29. Blood transfusion during labour, delivery or puerperium? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes give details of blood products transfused and number of units

1. Packed RBC:_____
2. Platelets:_____
3. Cryoprecipitate:_____
4. Fresh frozen plasma:_____
5. Other:_____

30. ICU admission at any time during labour, delivery or puerperium? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please describe: _____

Maternal Death Assessment Form (MDAF)

31. Readmission to hospital? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, indication: _____

PART V: RESUSCITATION

32 Was there an opportunity to resuscitate the patient: 1.Yes; 2.No; 3.Uknown; 4.N/A

If yes describe this opportunity_____

33. Where the following available for resuscitation

Skilled personnel	1.Yes; 2.No
Oxygen	1.Yes; 2.No
Fluids (Ringers lactate and normal saline)	1.Yes; 2.No
Large bore intravenous catheters	1.Yes; 2.No
Blood	1.Yes; 2.No
Endotracheal tubes	1.Yes; 2.No
Laryngoscopes	1.Yes; 2.No
Oral airways	1.Yes; 2.No
Suction device and accessories	1.Yes; 2.No

34. Was resuscitation done? 1.Yes; 2.No; 3.Unknown; 4.N/A

If not done what was the possible reason?_____

Was resuscitation done in logical sequence?

Airway	1.Yes; 2.No
Breathing	1.Yes; 2.No
Circulation	1.Yes; 2.No
Definitive management	1.Yes; 2.No

If done was it adequate and/or appropriate_____

PART VI: PATHOLOGICAL /AUTOPSY FINDINGS

35. Was an autopsy done? 1.Yes; 3.No

If yes what is the cause of death from the autopsy report?_____

36. Does the history fit the autopsy results? 1. Yes; 2.No; 3.Unknown

If no, please describe: _____

Maternal Death Assessment Form (MDAF)

37. Does the autopsy report shed additional light on the cause of death? 1. Yes; 2.No; 3.Uknown

If yes, please describe: _____

PART VII: DOCUMENTATION

38. Where the case notes available? 1.Yes; 2.No

39. Where the case notes legible? 1.Yes; 2.No

40.Where the case notes complete? 1.Yes; 2.No

If not what was missing

Front sheet	1.Yes;	2.No
Doctor's comments	1.Yes;	2.No
Results of Investigations	1.Yes;	2.No
Anaesthetist' record	1.Yes;	2.No
Operation notes	1.Yes;	2.No
Drug chart	1.Yes;	2.No
Observation chart	1.Yes;	2.No
Antenatal card	1.Yes;	2.No
Fluid input/output chart	1.Yes;	2.No

Any other comments_____

PART VIII: CONCLUSIONS

41. Was this a direct obstetric death? 1. Yes; 2.No

If yes was the cause of death due to one of the three delays? 1. Yes; 2.No

If yes which one/s and describe_____

42. Was this an indirect maternal death? 1. Yes; 2.No

If yes describe_____

43. Was this an incidental death? 1. Yes; 2.No

If yes describe_____

44. Avoidability of maternal death

Not avoidable 1.Yes; 2.No

All standards of care were met, interventions were available, accessible, appropriate and timely, and circumstances surrounding the death were not avoidable.

Maternal Death Assessment Form (MDAF)

Possibly avoidable 1.Yes; 2.No

One or more standards of care was not met, or interventions were inappropriate, inadequate or untimely. Explain_____

Avoidable 1.Yes; 2.No

Standards of care were not met. There was ample opportunity to intervene.

Explain_____

45. **Practice improvement recommendations:**

Were any areas identified for practice improvement: 1.Yes; 2.No; 3.Uknown; 4.N/A

If yes, please complete below.

Recommendation1:_____

Action required:_____

Action to be reviewed by (date):____/____/ ____

Person responsible: _____

Recommendation2:_____

Action required:_____

Action to be reviewed by (date): _____ /____/ _____

Person responsible: _____

46. Additional Comments: _____

Chairman of audit committee: _____

Print Signature Date_____

APPENDIX D Stillbirths and Early Neonatal Death Assessment Form

1. Cause of Death

Cause of death as recorded in notes

a. Main disease or condition in fetus or infant: .....

b. Other diseases or conditions in fetus or infant: .....

c. Main maternal disease or condition affecting fetus or infant: .....

d. Other maternal diseases or conditions affecting fetus or infant: .....

2. Obstetric History (circulated appropriately where possible)

Mother's age……

Booking status 1. Booked; 2.Unbooked

If unbooked reasons for failure……

Parity……

Place of delivery: 1.Home; 2. Clinic; 3. Hospital; 4. Other ……..

Maternal risk factors……

Maternal HIV Status: 1. HIV positive; 0. HIV Negative

PMTCT interventions……

3. Delivery history

Mode of delivery: 1.NVD; 2.Assisted Vaginal Delivery; 3.Emergency caesarean section

Indication Emergency caesarean section……

Elective Caesarean section and indication……

Intrapartum factors: 1.Delayed 1st stage; 2.Delayed 2nd stage; 3.Fetal distress; 4.No fetal heart heard before delivery

4. Condition of fetus

Early Neonatal death……Apgar score: 1minute:……..; 5 minute……

Any resuscitation done: 1.Yes; 2.No

If yes what was done: 1.Bag and oxygen; 2.Intubation; 3.Cardiac massage; 3. Drugs; 4.ICU admission

Time between birth and death……..

Stillbirth: 1. Fresh; 2. Macerated Stillbirth

Estimated gestation: 1.Term; 2. Preterm

Birth weight: 1. <1000gm; 2.1000-1500gm; 3.1500-2000gm; 4.2000-2500gm; 5. 2500-4000gm; 6.>4000gm…….

Stillbirths and Early Neonatal Death Assessment Form

5. Foetal / Neonatal infection

Did infection contribute to the death?: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes is the organism known?: 1. Yes; 2.No; 3.Unknown; 4.N/A

What antibiotics were given……..

6. Birth asphyxia

Did birth Asphyxia contribute to the death?: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes what was the probable cause/contributing factor……..

7. Congenital abnormality

Was congenital abnormality present?: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please state abnormality: .....

If yes, were any tests done?: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes what were the results.....

8. Factors relating to care

(i) ***Potentially contributing factors***:

Were any potentially contributing factors relating to care access or provision thought to be present? 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please complete below:

Factor Timing

(a) Factors relating to the woman/ family/ social situation: 1. Yes; 2.No; 3.Unknown; 4.N/A

(b) Antenatal: 1.Yes; 2.No. Intrapartum: 1.Yes; 2.No. Postnatal: 1.Yes; 2.No.

Factor1 : .....

Factor 2: .....

(b) Factors relating to access to care: 1. Yes; 2.No; 3.Unknown; 4.N/A

Factor 1: .....

Factor 2: .....

(c) Factors relating to professional care: 1. Yes; 2.No; 3.Unknown; 4.N/A

Factor 1: .....

Factor 2: .....

(ii) ***Other factors*** *(e.g. counselling, communication, investigation)*

Were any other factors present relating to care?: 1. Yes; 2.No; 3.Unknown; 4.N/A

If Yes, please state factors: .....

Stillbirths and Early Neonatal Death Assessment Form

5. Practice improvement recommendations:

Were any areas identified for practice improvement: 1. Yes; 2.No; 3.Unknown; 4.N/A

If yes, please complete below.

Recommendation 1: ……

Action required: .....

Action to be reviewed by (date): ..... / ..... / ……

Person responsible: .....

Recommendation 2: .....

Action required: .....

Action to be reviewed by (date): ..... / ..... / ……

Person responsible: .....

Other discussion relevant to practice improvement or educational aspects

.....

.....

.....

Chairman of audit committee: _____

Print Signature Date_____