**Short communication**

**Pocket Guide For Effective Maternal Death Audit**

**Abstract**

Maternal death audits are a key quality improvement strategy for reduction and prevention of maternal deaths. Every maternal death has to be audited according to the World Health Organisation. Many countries have adopted auditing every maternal death policy. Despite these audits ,maternal deaths continue to occur especially in low to middle income countries. This manual was developed in an effort to improve the quality of maternal death audits and ensure that they are effective as learning experiences not merely rituals performed after a maternal death. The development of the manual used mixed method of expert opinion from quality experts and literature review.

Key words: Maternal death, audit, effective, manual,

**Introduction**

“A maternal death, 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”[1]. “Decades after several concerted efforts were made to contain the scourge, maternal deaths continue to have a devastating effect in many developing countries”.[11] “The death of a mother is a tragedy that has an immense impact on the wellbeing of her family. The survival and development of her children, especially infants, may be adversely affected. Each mother’s death diminishes the society at large” [6].In majority of countries every maternal death must be audited through maternal death audit.

Maternal death audits are defines as a systematic process aimed at understanding the causes and circumstances surrounding a maternal death in order to improve the health system and prevent recurrence. It involves reviewing individual cases of maternal mortality, identifying gaps in care, and implementing corrective measures. The audit process typically includes data collection, analysis, and feedback to healthcare providers and policymakers.[2,3,4]

Maternal death audits can be conducted at various levels, such as community based, facility based, and inquiries into maternal deaths. The purpose of all these audits remain the same which is to investigate circumstances leading to the death of the woman. Common reported causes of deaths include delays in seeking care, in adequate health care services or systemic issues within the health care system. [2]These investigations form the basis if the improvement and maternal death prevention nature of the audits. For more detailed information, you can explore resources like the World Health Organization's guidelines or studies on maternal death audits in specific regions

**Steps to conducting effective maternal death audit**

It is crucial to note that maternal death audits are a key quality of care improvement strategy for reducing and prevention of maternal deaths. There must be conducted in a very objective and systematic manor. Below are the steps to be followed for effective educative maternal death audits. It is however important to note that they are not casting stone and maybe used in conjunction with other materials.

1 **Establishing Objectives of the audit**

The primary objective of a maternal death audit is to identify preventable factors contributing to maternal deaths. Secondary objectives may include improving healthcare policies, training healthcare providers, and raising awareness about maternal health issues.[4,6] The objective must be well crafted and also communicated with the audit team. The objectives must be developed before the meeting so that everyone who will attend the meeting knows and understands why they are being invited. This practice will prevent the attendees from feeling lost and as if it waste of time. Further reading can be found on science of people website.[5] In the case of maternal death audit the main objective is to investigate cause of death and classify them as first delay which is delay in seeking medical help. second delay delaying to get logistical means to get to the appropriate health facility and third delay that is to do with health system itself including quality of care.[4,6] “Without clear objectives the meeting will be a waste of time and that only 50% of the time spent in meetings is effective and engaging. Over**$**37 Billion is wasted on unproductive meetings each year”.[6] without apparent purpose, leadership, or organization, a lousy audit meeting can drag on forever.

However, genuinely effective meetings leave everyone feeling organized, motivated, and clear on what they need to get done in future to prevent deaths.

Take home message for this is step is the chairperson of the audit team must develop clear objective before the meeting.

**2. Forming an Audit Committee/team**

An audit committee should include healthcare professionals, policymakers, and community representatives. The committee is responsible for overseeing the audit process, analyzing data, and implementing recommendations. It is mandatory to have the team who managed the patient in the team.[7,8,9] This is supported by the world bank document on Maternal perinatal death surveillance and response[4]. Including the team which managed the patient helps by getting first-hand information on how the patient was managed. It is critical to remember that the purpose of the audit is the assess the medical journey of the patient and try find areas of improvement not fault finding, only the team who managed the patient knows exactly what transpired. Ideally every team member who was on duty must compulsorily attend. In many settings only nurses usually attend audits and doctors do not come. Other support staff like finance, administration, procurement, health information, health promotion, management, laboratory, pharmacy, and many more must attend because it’s a systems approach.

3 **Prepare an Agenda**

Share a detailed agenda with participants in advance. Include topics to be discussed, time allocations, and any required materials. The chairperson must sent out agenda to the intended attendees way before the meeting. This allows the team members allocated topics/tasks to research prepare required information like patient notes and also manage their professional diaries like to block other meetings or activities. One reason why attendance can be low is due to short notice agenda the required people would have made other commitments.[6] Best practice would be to ensure acknowledgement by all invited people. It is key for the chair person to stick to the agenda as this saves time and prevent wasting energy of less important things or to go off topic. Take home message is stick to agenda and objective of the audit.

**4 Choosing the meeting venue**

“Studies have shown thatthat over a third of workers are unhappy with the ambiance of their offices. Nobody wants to meet in one of those horrible, dimly lit, cold, dreary board rooms. Create a pleasant ambiance (such as open windows or a decorated room) or consider providing beverages to help people relax a bit more .Details like temperature, light, comfortable chairs, and even a few indoor plants can help create calmer, more effective meetings”.[5]

**5 Conducting the audit**

The audit process includes:Reviewing each maternal death case systematically.Identifying medical, social, and systemic factors contributing to the death.Categorizing deaths based on preventability. Once everyone is seated the chairperson starts the meeting preferably in the following manner:

* Welcome members who have responded to the notice, ac knowledge the presence of and welcome any special, in invited guest(s) or new attendees.
* Announce any apologies that may have been received.
* 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.

* Once the minutes have been read or taken as read, the chairperson will ask the meeting whether anyone present will move their formal adoption.
* Thereafter he/she will ask the meeting whether anyone is willing to second the motion for the adoption of the minutes.
* Once seconded he/she will sign them as a correct record. These minutes, together with statistics, are then sent to the Ministry Reproductive Health Head office.
* 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 action able 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’. PowerPoint. If these can be circulated 24 hours before the maternal and peri natal mortality meeting (MPMM )then participation in the discussion is greatly improved.
* 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.
* 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) is recommended. Provide those present with relevant photocopies of notes, and labour graphs . 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?
* 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 audit meeting.
* 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. Guidelines for Maternal and Perinatal Death Audits in Zimbabwe Chapter TWO Institutional Maternal and Perinatal Mortality Meetings

* 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.

* . 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.

It is very critical for the chairperson to ensure everyone is comfortable to speak with =out fear of victimisation, this is called psychological safety and it is very important. Effective audits are ones incorporating psychological safety.

Take home message is that all the responses and explanations from the team which managed the patient must be objective based on blame free culture and the minutes taken/recorded robustly. Most health workers are not trained in minute taking hence the need for training in minute taking or use technology for recording then replay later when writing report. At the end of the meeting the chairperson must thank the team and also promise as well as ensure confidentiality of views raised in meeting and safety of the team.

**5. Developing Recommendations**

Based on the findings, the committee should develop actionable recommendations. These may include improving access to healthcare, enhancing training for healthcare providers, and addressing systemic issues like resource allocation. Every department in the team which was given recommendation must ensure that they document their recommended action and ensure they act upon then. The recommendation must the linked to findings and gaps noted in the case. The recommendations must be of high quality and also follow the GRADE system. [10]

**6 Tracking Improvements post audit through Monitoring and Evaluation**

It is key for the chairperson to ensure the team members assigned action items are followed up and reminded of the tasks until they are complete and also check the effectiveness using the Plan Do Study Act (PDSA) cycles.

**Conclusion**

This manual must be used in conjunction with national guidelines on conducting maternal death audits. It is critical for the teams to develop high quality recommendations and also follow them up with action.

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Details of the AI usage are given below:

1.

2.

3.

**References**

1. https://www.who.int/news-room/fact-sheets/detail/[Maternal mortality](https://www.who.int/news-room/fact-sheets/detail/maternal-mortality)
2. <https://platform.who.int/docs/default-source/mca-documents/policy-documents/guideline/vnm-cc-55-01-guideline-2010-eng-maternal-mortality-audit.pdf?form=MG0AV3&form=MG0AV3>
3. <https://platform.who.int/docs/default-source/mca-documents/policy-documents/guideline/ZWE-MN-91-01-GUIDELINE-2013-eng-National-Guidelines-for-Conducting-Institutional-Maternal-and-Perinatal-Mortality-Audits.pdf?form=MG0AV3&form=MG0AV3>
4. <https://documents1.worldbank.org/curated/en/561651468331777774/pdf/777990BRI0Mate0ox0377317B000PUBLIC0.pdf?form=MG0AV3&form=MG0AV3>
5. <https://www.scienceofpeople.com/run-a-meeting/?form=MG0AV3&form=MG0AV3>
6. <https://iris.who.int/bitstream/handle/10665/87340/9789241506083_eng.pdf?sequence=1>
7. The World Health Organization's guidelines on maternal mortality audits
8. The National Guidelines for Conducting Maternal and Perinatal Mortality Audits in Zimbabwe.
9. The World Bank's insights on maternal death audits as a tool for reducing maternal mortality.
10. Guyatt, GH; Oxman, AD; Vist, GE; Kunz, R; Falck-Ytter, Y; Alonso-Coello, P; Schünemann, HJ (2008). "GRADE: an emerging consensus on rating quality of evidence and strength of recommendation". BMJ. 336 (7650): 924–26. doi:10.1136/bmj.39489.470347.ad. PMC 2335261. PMID 18436948.
11. Ikeako, L. C., H. U. Ezegwui, E. C. Azuike, T. C. Okeke, J. C. Umeobika, C. C. T. Ezenyeaku, and U. I. Ezebialu. 2017. “Maternal Deaths in a Tertiary Health Institution in Southeast Nigeria: Two Decades After Safe Motherhood Initiative”. *Journal of Advances in Medicine and Medical Research* 23 (9):1-8. <https://doi.org/10.9734/JAMMR/2017/35545>