MATERNAL AND PERINATAL DEATH REVIEW GUIDELINES

Third edition
March 2010

Produced by:
Reproductive Health Division,
Ministry of Health
Acknowledgments

Adapted from the World Health Organisation Guide: “BEYOND THE NUMBERS” which has been commissioned by the “Making Pregnancy Safer department” of World Health Organisation. This guide has been adapted through a number of consultations both at the national and district level.

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Special thanks go to the following people who worked tirelessly to refine the different editions of the guidelines and harmonise them with other MPDR documents.

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Ministry recognises the contribution of Rogers Kalyesubula who re-typed and typeset the various versions.

Thank you all.

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<td>Maternal and Perinatal death review</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of health</td>
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<tr>
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GLOSSARY OF TERMS

The Maternal and perinatal death review (MPDR) is a qualitative, in-depth investigation of the causes and circumstances surrounding a small number of maternal deaths occurring at selected health facilities and communities.

What is the definition of a maternal death?

The International Classification of Diseases (ICD-9 and 10) defines a maternal death as:

“The death of a woman while pregnant or within 42 days of termination of 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”

A woman must therefore be pregnant or recently pregnant, and have experienced some complication, before her death can be defined as a maternal death. This definition may seem clear but numerous studies have found misclassification of causes and underreporting of maternal deaths in official statistics.

Maternal deaths are subdivided into two groups

Direct obstetric deaths: Direct obstetrics deaths are those resulting from obstetric complications of the pregnancy state (pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above.

Indirect obstetric deaths: Indirect obstetric deaths are those resulting from previous existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiologic effects of pregnancy.

What is the definition of a perinatal death?

- Perinatal death: A death that occurred around the time of birth. Includes both still births and early neonatal deaths.

- The perinatal period: This commences at 28 completed weeks of gestation and ends seven completed days after birth.

- Early neonatal deaths: These are deaths occurring during the first seven days of life.

- Stillbirth: This is death prior to the complete expulsion or extraction from its mother of a fetus/baby of 1000 grams or 28 weeks gestation; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such...
as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles

Near Miss
Refers to mothers and/or babies who have had complications but narrowly escape death

Live birth is the complete expulsion or extraction from its mother of a fetus/baby of 1000 grams or 28 weeks gestation, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each fetus/baby of such a birth is considered live born. The legal requirements for notification of perinatal deaths vary between and even within countries. WHO recommends that, if possible, all fetuses and infants weighing at least 500 gm at birth, whether alive or dead, should be included in the statistics. The inclusion in national statistics of fetuses and infants weighing between 500 gm and 1000 gm is recommended both because of its inherent value and because it improves the coverage of reporting at 1000 gm and over. For international comparison, 1000 gm and/or 28 weeks gestation is recommended.

Confidential Inquiry
In Confidential inquiry, the review is carried out by a group of appointed Independent assessors who will use the same audit guidelines to review selected maternal and perinatal deaths (even if these have already been reviewed by the Facility audit team).

N.B : The terms Audit and Review are used inter-changeably
MATERNAL AND PERINATAL DEATH NOTIFICATION AND AUDIT

BACKGROUND AND JUSTIFICATION
Maternal and newborn deaths are a major concern in Uganda. One of the objectives of the Ministry of Health (MOH) is to improve the quality of care of mothers and newborns in order to achieve Millenium development Goal (MDG) 4 and 5 which aim to reduce child mortality and to improve maternal health respectively by 2015. To help achieve these goals, the MOH has since 2000 put in place mechanisms for maternal death audits/reviews and of recent maternal death notification. In 2008, the Ministry decided to incorporate perinatal death auditing owing to its close linkage with maternal deaths.

Maternal deaths in relation to births are few, but each one has enormous consequences for the family and for the immediate and greater society. Many more women with the same medical conditions escape death. In fact, maternal deaths are regarded as the visible tip of the iceberg, many more cases where death was prevented occur just below the water, and go undetected. If by various interventions the number of maternal deaths decrease, the number of women who just escaped death will also decrease. Thus, by achieving a decrease in the maternal mortality rate, one automatically has improved the quality of care of pregnant women. Studying maternal deaths, determining the problems and rectifying them is a direct, effective way of improving the quality of care for pregnant women. This is the essential motivation for the confidential enquiry into all maternal deaths.

MOH made notification and audit of all maternal deaths mandatory. A National Committee on Maternal and Perinatal Death Reviews was established in 2008 to study maternal and perinatal deaths in the country. This committee is tasked with making recommendations to improve maternal and child health, based on the reports of maternal & perinatal death reviews and confidential inquiries at district, regional and national level. The implementation of the recommendations from the reviews should result in a decrease in maternal and newborn deaths.

The maternal and perinatal deaths review and inquiry process is based on confidentiality as a key guiding principle and therefore information regarding the identity of the deceased mother or baby or health personnel who handled the case will not be available to anyone except the review team. The auditing takes place at two levels; the facility where the death occurred (maternal/perinatal death Audit) and at a regional or national level where confidential inquiry may be done. Maternal and perinatal death Audits are conducted by the service providers involved in the care of the dead mother or newborn while Confidential Inquiry is
conducted by appointed independent assessors. The Independent assessors and the members of the National MPDR Committee are appointed in their individual capacity and none of them should be involved in any medico-legal case involving a maternal or newborn death. Likewise, information generated from the audits shall not be used in any medico-legal issues. In order to get a complete picture of the circumstances relating to the death of the mother or baby, community verbal autopsies (interviews regarding deaths) may be conducted with relatives and community members who looked after the deceased at the time or and near the time of death. Village Health Teams (VHTs) will be a significant part of this process.

The aim of auditing/reviewing is to collect information on a maternal or perinatal death. It is designed so that the story of what happened can be accurately recorded and analysed. It should be seen as a process that will take you systematically through the death of a woman or newborn so as to reach an understanding of what happened and learn from the incident. Maternal and Perinatal Death Auditing will help health workers at all levels (health facility, district and national) to define:

1. The magnitude of the problem.
2. The geographical areas where the major problems occur.
3. The pattern of disease that results in deaths of mothers.
4. Where the health system can be improved.

By defining the problem using the above four features, the health facility, HSD, Districts Health teams, Regional hospitals and Ministry of Health, will be able to act on the problem. Where problems in the health system are identified, they will be rectified.

**Figure 1 AUDIT (Surveillance) CYCLE**
The process of the maternal and perinatal death reviews and Confidential Inquiry is dynamic as shown above in the Audit cycle. A system for regular feedback should be put in place. This feedback will occur at every level; national, regional, district and Health Sub-district, hospitals and health centres.

**Why Maternal and Perinatal Death Reviews (MDPR)?**

- To raise awareness among health professionals, administrators, programme managers, policy makers and community members about those factors in the facilities and the community, which, if they had been avoided, the death may not have occurred; these are called the avoidable factors.
- To stimulate actions to address these avoidable factors and so prevent further maternal and perinatal deaths.
1.0 INTRODUCTION

1.1 What is the aim of this module?

The purpose of this module is to provide guidance on how to conduct Maternal and Perinatal Death Reviews (MPDR) in the health units and the community. This guide will assist the national, district and health facility level to introduce and implement maternal and perinatal death audit. It is designed to assist health workers fill in the notification and audit forms and discuss the deaths with other service providers who participated in the care of the deceased. The Guideline should be used while filling in the Maternal and the Perinatal Death Audit Forms and during the death review process.

The review process described in this guideline is a mixture of two approaches of reviewing maternal and perinatal deaths:

- **Facility based death reviews /audits (Learning from deaths in health facilities)** is an in-depth investigation of the causes and circumstances surrounding maternal and perinatal deaths occurring in health facilities, which tends to focus on what happens in health facilities.

- **The Verbal Autopsy** uses information from individuals in the community who looked after the deceased at the time or near the time of death to build-up a picture of events. Interviews are held with community members and relatives who looked after the deceased at or/ and near the time of death to come out with a complete picture of the circumstances relating to the death of the mother or baby. It usually brings out social cultural issues that might have contributed to these deaths. Actions to address these problems can reduce on the burden of mortality and morbidity

When used in combination Facility based reviews and verbal autopsy reconstruct the whole story surrounding the woman or newborn’s “road to death”. The above two processes can be done independently.

1.2. STEPS IN CONDUCTING MATERNAL AND PERINATAL DEATH REVIEWS

Conducting a review involves seven major steps, as indicated in table 1 below. The details given are meant as guidelines rather than instructions.
### TABLE 1: SUMMARY OF THE 7 STEPS OF A MPDR

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Establish a MPDR committee</td>
</tr>
<tr>
<td>2</td>
<td>Sensitize / orient Committee members on roles and responsibilities and plan for MPDR</td>
</tr>
<tr>
<td></td>
<td>Map the health facilities eligible for MPDR and feasibility of reviewing maternal deaths</td>
</tr>
<tr>
<td>3</td>
<td>Implementation of maternal and perinatal death reviews</td>
</tr>
<tr>
<td></td>
<td>i. Train health workers and introduce MPDR in the health facilities - <em>determine the facility readiness</em></td>
</tr>
<tr>
<td></td>
<td>ii. Identify facility focal persons and data collectors (district, HSD and facility level)</td>
</tr>
<tr>
<td></td>
<td>iii. Identify sources of data</td>
</tr>
<tr>
<td></td>
<td>iv. Collect data (within the health facility and in the community)</td>
</tr>
<tr>
<td></td>
<td>v. Synthesise the data for each maternal and perinatal death in the facilities and determine corrective measures</td>
</tr>
<tr>
<td>4</td>
<td>Meetings for MPDR committee (district &amp; HSD) to discuss how to utilise the findings for action. (Bi-annual for district &amp; quarterly for HSD)</td>
</tr>
<tr>
<td>5</td>
<td>Implement recommended actions to improve maternal and newborn health</td>
</tr>
<tr>
<td>6</td>
<td>Conduct Confidential Inquiries for maternal and perinatal deaths</td>
</tr>
<tr>
<td>7</td>
<td>Follow up and technical support supervision</td>
</tr>
</tbody>
</table>

Every maternal and perinatal death should be reviewed. There are three levels at which these different steps are conducted:

- National – the first two and last steps (4-7)
- District, HSD and health facility - all steps (1-7) will apply

Maternal Death Review or a Perinatal Death Review may also be conducted as a stand-alone assessment at a particular health facility.
SECTION A

CONDUCTING MATERNAL AND PERINATAL DEATH REVIEWS

STEP 1: ESTABLISH A MPDR SUB-COMMITTEE AT NATIONAL, DISTRICT & HSD LEVEL

At the National level, the MPDR committee will consist of members from relevant MOH departments (Planning, Quality Assurance, Clinical Services, Reproductive health, Child Health, Resource centre, Surveillance) Association of obstetrics, Association of paediatrics, Blood Bank, Nursing and Midwifery council, Private midwives, and Regional Representatives.

MPDR at the District HSD & Facility level

At the district level and HSD levels, the following people shall form the MPDR Committee: DDHS, Medical Superintendent, Medical Officer in charge of maternity, Principal Nursing Officer of hospital, hospital administrators, Pharmacist/ dispenser, store keeper, Secretary for Health and in charges of the Health Sub-districts.

At the facility level, members of MPDR committee may be drawn from the following: Obstetrician, District or HSD representative, In charge Health Facility, RH trainer, Midwife, Facility administrator, Trainee doctor, Public health nurse, Health Promotion officer, Pharmacist/ dispenser, Anaesthetic officer, laboratory technician, Store Keeper, Local Women’s group member.

All health facilities shall conduct maternal and perinatal death reviews and keep their reports safely but accessible to appointed Independent assessors when required.

STEP 2: SENSITIZE MPDR COMMITTES

All districts, hospitals and health centre IVs shall be included in the review therefore the various committee members should be sensitized on the aims of MPDR as well as their roles and responsibilities. Sensitisation should also include community representatives, partners and health workers.

The main tasks of the MPDR committees are to:

- Ensure that maternal deaths are notified and maternal and perinatal death reviews are institutionalized done.
- Synthesise the findings and feed these back to the health facility teams, community and higher MPDR committees.
• Recommend actions that are indicated on the basis of the MPDR.
• Mobilize resources to implement recommended actions
• Follow up to ensure that recommended actions are implemented

The national level will have the added responsibilities of standardizing the review process across districts and facilities, establishing and facilitating Confidential inquiry teams, disseminating the MPDR outcomes and progress. In addition the national level is responsible for developing the Standards of care and ensuring that MPDR is included into the basic training of health professionals.

The MPDR committees should be oriented on the process of MPDR using the guide. During the orientation the following should be emphasized

✓ Establishing how deaths can be identified (for example, discharge register, ward registers, routine returns)
✓ Assessing whether written medical records exist and if so, can they be located?
✓ Inspecting the records for, say, two recent deaths – are they legible and reasonably complete for key items (such as the woman’s address, age, date of admission, gestation, and diagnosis on admission or death?)
✓ Tracing the home addresses of two recent deaths – can they be found and are possible respondents, such as relatives, still living there?
✓ Securing appropriate permissions and co-operation from facility personnel.
✓

This step is closely linked to the step of training in MPDR (3. i). It has been found useful to combine the two steps. However, sensitization is likely to involve a bigger number of people than training.

STEP 3: IMPLEMENTATION OF MPDR
3.i. Train health workers and introduce MPDR in the facilities- Determine facility readiness
The objectives of the training are:

To highlight the policies regarding clinical audits
To highlight the extent of maternal and perinatal death, and the need to review each maternal and perinatal death uniquely

To share experiences about Maternal and perinatal death audits / confidential inquiries in their areas of work
To train health workers in the use of the maternal death audit form, and perinatal death audit form, as formal tools for the audit process and how to use the audit findings.
To train participants on the recommended reporting for MPDR
Participants should include people working in maternity and paediatric wards, blood bank, Theatre, Lab, dispensary, stores as well as administrators and records officers. The participants should be requested to bring along some recent files of deceased mothers and or newborns to be used for practice.
During the training, the facilitators should endeavour to address the concerns and fears of health workers regarding maternal and perinatal auditing.
If time allows the training in MPDR can include Continuing Medical Education on management of one or two common causes of death of mothers and newborns.
At the end of training the trainees should come up with plans of how to scale up maternal a perinatal death review in their facilities

STEP 3 ii: IDENTIFY FACILITY FOCAL PERSONS AND DATA COLLECTORS:

Within each facility, the next step is to identify at least two individuals who are willing and able to become involved in the review process. These individuals will liaise with the MPDR sub-committee and they should be interested and committed to investigating maternal deaths.

The MPDR will be a learning process for all those involved. It will therefore be useful to include professionals whose everyday practice may be informed by the experience. Midwives and junior doctors, for example, may be enlightened on the barriers facing women before they arrive at the facility, or a community development worker may come to appreciate the constraints of equipment and expertise in the health services.
In many facilities it may be practical and preferable for a member of the MPDR team to also undertake data collection, or for one data collector to gather information across several facilities in the same district. However, where the data collector was also the main care provider for a particular maternal death, it is important that another person takes over that particular case review.

<table>
<thead>
<tr>
<th>TABLE 4: PREFERABLE CHARACTERISTICS OF DATA COLLECTORS</th>
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<tr>
<td>Characteristics</td>
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<tr>
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</tr>
<tr>
<td>Literacy</td>
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<tr>
<td>Native language speaker (in case of verbal autopsy)</td>
</tr>
<tr>
<td>Non-judgemental attitude</td>
</tr>
<tr>
<td>Motivation</td>
</tr>
<tr>
<td>Sensitivity</td>
</tr>
<tr>
<td>Experience of team work</td>
</tr>
<tr>
<td>Interviewing experience /skills</td>
</tr>
<tr>
<td>Data collecting experience/ skills</td>
</tr>
</tbody>
</table>
If individuals outside of the facility-specific MPDR team are needed for data collection, it is important to involve them at an early stage so they feel commitment and ownership of the tasks ahead. This will help to ensure high quality work as well as to reduce staff turn-over. Continuity of personnel is important in the review process, preferably with the person tracing records at the facility also undertaking data collection in the community.

Whoever is assigned the task of data collection, they will need support from the rest of the facility-specific team, with regular meetings to check progress, resolve difficulties and plan the way forward. Time will be needed for them to understand the tasks required and to feel confident about the supervision and guidance they will receive.

**IDENTIFYING CASES OF MATERNAL AND PERINATAL DEATHS AND SOURCES OF DATA**

Deaths may have been noted, for example, in a centralised discharge register, or in the logbook for each hospital ward. It is important that deaths are not missed and so a full-proof method for detection should be established. The number of maternal deaths at the facility needs to be double-checked.

Several studies have noted that maternal deaths which occur outside the obstetric or gynaecology wards, such as in the medical ward, are often missed. One way to avoid this is to list all deaths at the facility among women aged 15 – 49 years and then eliminate those which are not maternal deaths after inspection of the medical records. The definition has been given in the glossary.

A facility list of maternal deaths needs to be compiled, simply noting the woman’s name and facility/unit number, and the date of death and ward of death. The size of the list will obviously be affected by the type of facility (deaths will be more frequent at, say, a large referral hospital than a district health centre IV) and by the period of time considered.

Generally speaking, the number of deaths will relate to the number of deliveries at that institution. Table 2 gives a rough guide on what can be expected on this basis. However, even one death at, say, a health centre with only a small number of deliveries can still yield valuable information on avoidable factors.

The MPDR seeks in-depth information on a ‘small’ number of maternal deaths occurring in health facilities which, at a national level, translates into somewhere between 20-40 deaths.

So, for example, the MPDR sub-committee may distribute its target of 30 deaths up to 20 in district hospitals and 10 in health centres.
### TABLE 5: EXPECTED NUMBER OF MATERNAL DEATHS AT A HEALTH FACILITY

<table>
<thead>
<tr>
<th>Deliveries</th>
<th>Expected number of deaths at given maternal mortality ratio (per 100,000 live births)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per week</td>
</tr>
<tr>
<td>3</td>
<td>156</td>
</tr>
<tr>
<td>5</td>
<td>260</td>
</tr>
<tr>
<td>7</td>
<td>364</td>
</tr>
<tr>
<td>10</td>
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<tr>
<td>15</td>
<td>780</td>
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<td>75</td>
<td>3900</td>
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<td>100</td>
<td>5200</td>
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</table>

*Calculated as Expected number = (maternal mortality ratio) x (no. of deliveries per year)

At any health facility, the number of perinatal deaths will be much higher than the maternal deaths. Depending on the staffing and work load at the facility it may be prudent for the MPDR committee to start by reviewing a fraction of the perinatal deaths to reduce the length of MPDR meetings.

3. iii, IDENTIFY SOURCES OF DATA

Armed with the facility list of maternal and perinatal deaths the next step is to pin point the various sources of information and decide the order in which they will be tapped.

There will generally be two main sources:
- written (i.e. ward registers, hospital records, women’s hand-held records)
- verbal (interviews with staff and relatives or attendants of the deceased women)

These sources are likely to be both complementary and contradictory and it is important that the data collectors recognise this potential problem. The cause of death, for instance in the discharge register may be ‘ruptured uterus’ while in the medical records it may be ‘haemorrhage’. Similarly, the facility staff may say that the woman was attended immediately she arrived at the hospital and the relatives may report there was a delay of several hours.
Contradictory information is not necessarily negative and should be taken at face value. Although it is not the task of the data collector to reconcile such discrepancies, it is important that they are highlighted at the stage of synthesising the findings across all case reviews.

Generally speaking, the sources of data exist at two levels:
- in the facility
- in the community.

Usually data collection will commence at the facility and may move onto the community. A summary data sheet can be used for each death, the process in gathering the data and to ensure that all key items are collected. (see Maternal and perinatal Audit forms).

3. iv, DATA COLLECTION

The facility team need to make the crucial decision on who will gather the data on each maternal and perinatal death. This will need to be driven by a combination of two sets of factors:
- practical (who is available), and
- preferable (who has the desired skills – see Table 5

This step is more likely to be supported if all facility staff are given good information early on about the purpose of conducting a review of maternal deaths. A sensitive approach will assist staff to trust the data collectors. Service shortcomings and individual professional responsibilities will be explored but the main spirit to convey from the outset is the search for ways to improve care rather than to simply apportion blame. These are sensitive matters and confidentiality should be strictly observed. The experience of all members of the facility-specific team should be called upon to ease the way of the data collector.

Within the facility, the two main sources of information will be the medical records and interviews with staff.

I. Medical records:
Using the details on the facility list of maternal deaths, the data collector will first aim to find the medical records. This may involve great patience and ingenuity as many health facilities lack efficient systems for storing and retrieving records. Delays may occur and there may come a point when the team has to accept that the records cannot be found. In these situations, the decision may be made to replace that death with a ‘reserve’ on the list.
However, the reasons why the records cannot be found may be related to the circumstances of the death, and if the event was relatively recent, say in the last 3 months, it may still be possible to include the case and proceed straight to interviewing the staff on the ward.

If the medical records are found, the data collector can extract details onto a summary form. Owing to the sensitivity of all case-notes reviews, where the practice of staff is seen to be under scrutiny, it is important to devise a means for protecting staff identity.

To find out how many professionals were involved in a particular case and who were the main care-givers, the data-collector can count the signatures after each record entry. Confidential codes can be given to each staff member as shown in Table 5. The table of staff codes must be kept in a secure place, with access only by the MPDR team.

### TABLE 6: EXAMPLES OF ASSIGNING CODES TO FACILITY STAFF

<table>
<thead>
<tr>
<th>Staff name in medical record</th>
<th>Signature count</th>
<th>Assigned confidential code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grace Akello</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Mary Mukisa</td>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>Opio John</td>
<td>1</td>
<td>C</td>
</tr>
</tbody>
</table>

Having assigned the staff codes, the data collector can extract details from the records. The aim is to pull out information, which helps to build-up a picture of the sequence of events from the time of admission to the time of death.

Generally speaking, the longer ago the event, the poorer the quality of the information likely to be gathered from interviews with the health staff and with relatives.
II. Staff interviews:

Inspection of the medical records should have revealed the main care-provider for the woman, both at the time of admission and close to the time of death. The Maternal death notification form may provide additional information.

In the facility where quality of care is discussed openly or where staff may feel threatened by individual interviews, a group forum may be a suitable alternative. Group Interviews can take longer to set-up, owing to duty rotas, and require a skilled data collector to facilitate open discussion. A basic awareness of usual working relations within the facility and of the lines of authority are both important preparations. For instance, open discussion be inhibited where junior staff are interviewed together with more senior members.

The aim should be to have groups of no more than six individuals and, if possible, of similar authority within the facility but not necessarily the same professional background. In small facilities this may not be feasible and individual interviews have to take place.

If the group members are reasonably familiar with each other, it will be possible to proceed immediately to discussing specific maternal/perinatal deaths. Where on the other hand there are clear tensions from the outset, some preparation is essential. An ‘ice-breaker’ discussion, such as sharing memories of “Near misses” at the facility, can be used. Here each person is invited to talk about any feelings of loss or grief from these varied cases, and having acknowledged these feelings, it should then be possible to move onto death cases.

Regardless of whether individual or group interviews are held, the aim is to involve the main care-providers for each maternal death under review. Interviews should be held at a time convenient to the interviewee and in an environment in which privacy can be guaranteed, and preferably also free from interruptions.

The data collector needs to start by introducing themselves and then re-emphasise the purpose of the interview and the review. An explanation should be given that the interview will be recorded by written notes, together with reassurance that staff confidentiality will be maintained. In group interviews, ground rules also need to be set and agreed upon regarding the strict confidentiality of the discussion.

As a resource of data, the interview aims to build upon the picture of events surrounding the death which emerged from the medical records. The data collector will already have
formulated a picture but it is important that this does not dominate the interview. Instead, it
should highlight those issues needing further elaboration.

For example, the records may say that the relatives of a woman refused her being
given a blood transfusion, and the interview may then help to throw light on the
reasons for this, such as religious objections or lack of blood.

The interview is also the opportunity for staff to express their views, and the data collector
should allow the discussion to be directed by them as far as is possible. A balance needs to be
maintained between this freedom of expression and the need to cover key topics. A checklist
of these topics can assist the data collector, and an example is given as Form D in Appendix
II together with sample questions. To help the data collector keep track of the coverage of
key items, they can underline these as they crop-up in the discussion.

Again a balance is needed between facilitating the interview and recording the discussion.
Verbatim recording of the conversation by hand is not feasible, rather the data collector
should aim to note the flow of topics in the discussion and key phrases which illuminate
controversial points or strong views expressed y the interviewee(s).

The checklist of topics does not have to follow any particular order, although usually a
chronological approach helps recall. For example, the discussion may begin with the
woman’s admission, proceed with her deterioration and end with the death.

Staff appreciation of relevant factors before the woman/ baby arrived at the facility should
also be sought. The interview may conclude with the interviewee’s opinion of avoidable
factors – that is circumstances or actions which if avoided would or could have averted the
death. For example, availability of antibiotics is likely to have avoided a death owing to post
delivery infection (puerperal sepsis).

Avoidable factors can be grouped in a variety of ways, as shown in Form D. Appendix II.
The categorisation should be based on the interviewee’s opinion, without direction from the
data collector. The pooling of all interviewee’s responses, together with findings from the
interviews in the community (step 9) and the medical record extract, will be used by the
MPDR team at each facility to arrive at an overall judgement on avoidable factors for each
case, as discussed later (step 10).
COLLECTING DATA IN THE COMMUNITY (Verbal Autopsy)

Having finished gathering data at the health facility, the data collector may proceed to trace back the woman’s / newborns ‘road to death’. This can be a particularly challenging phase of the review and requires considerable detective skills and sensitivity. It is important that the data collector is fully aware from the outset of the extreme care and diplomacy needed in discussing maternal/ newborn deaths and still births in the community, especially with close relatives.

As with the interviews at the facility, the aim is to speak to those individuals who are most knowledgeable about the death, and particularly the events before the woman/ baby arrived at the facility. Who these individuals are will vary case by case. Sometimes for example, it may be the woman’s mother, husband or babies’ mother; other times it may be the Traditional Birth Attendant. The data collector will need to make a judgement separately for each death, and seek out the two or three most informed persons.

Identifying these people may start at the facility by, for example, the information on the medical records indicating who accompanied the woman/ baby and who the next of kin is. An open mind, however, should be kept on the final interviewees and a visit to the woman’s former home may reveal the ‘best’ informants.

In some settings, permissions and approvals from, for example a community leader or village headman, must be secured before any interviewing can take place. These authority figures may also help find the address of the respondent being sought – a task which can be time-consuming and problematic in some settings such as large towns or scattered rural communities. The family may, for example, have moved dwellings since the death or there may be no formal address as such, and in both cases, key local figures are often the only way to trace relatives.

In some cases, the situation may be impossible and no relative or other knowledgeable person can be located; here the story cannot be completed, although usually the information from the health facility may still be useful.

Where relatives can be found, it may be appropriate to forewarn them of the case-review and secure their co-operation. Setting appointments for interviews may be feasible and will help to avoid wasted visits. However, if the death involves, for instance unpaid fees or illegal induced abortion, it may be wiser not to give advance warning.
Group discussions may also be possible in the community, and here the same guidelines on how to set these up can be followed from step 8. In terms of interview schedules, it is recommended that a checklist approach is again used, and an example can be seen as Form D in Appendix.

To enable the respondent influence the discussions from the beginning, it is suggested that the first question is broad and open, such as:

“Can you tell me what happened before (name) died?’

or

What do you think caused her death?’

The data collector should be sensitised to terms which capture the respondent’s feelings, rather than trying to record all that is said. Examples of the sorts of questions the data collector may ask under each checklist topic can be seen on Form E.

Avoidable factors can be used here as a way to conclude the interview. The aim is to find out the respondent’s personal opinion on the major factors contributing to the death which could have been avoided. Research studies have suggested that discussing types of delays in the woman receiving appropriate care can help focus the discussion. Form D shows how these delays can be categorised.

Where there is uncertainty about aspects of the woman’s care, the data collector may ask whether the woman held her own pregnancy record and, if so, is it available. In some countries, hand or woman-held records (ANC cards) are in common use and these can yield information on topics such as the number of antenatal care visits or whether tetanus toxoid immunisation was given. Form E in the Appendix indicates the types of data, which may be extracted as a back up to the medical record and the interviews.

The data collector may encounter a number of barriers during the community interviews:

- Relatives, for example, may accept the death as ‘God’s will’ and be reluctant to talk about it in any other terms, particularly if there is superstition about discussing death.
- There could be an unwillingness to talk about abortion-related deaths, especially if abortion is illegal or prohibited for religious reasons.
- Some respondents may feel particularly responsible for the tragedy, such as the Traditional Birth Attendant who delayed referring the woman, or the husband who could not afford to pay for transport.

In all these situations, the skills of the data collector will be tested. Both the initial selection of these individuals and their subsequent training or supervision, should take into account the real challenges of conducting MPDR.
STEP 3(v) SYNTHESISE THE DATA FOR EACH MATERNAL / PERINATAL DEATH

The data collection process for each maternal death will have generated detailed information using some or all of the following forms:

Form A: Maternal Death Notification Form
Form B: Maternal Death Review Form
Form C: Perinatal Death Review Form
Form D: Facility Staff Interview Record
Form E: Community Interview Record
Form F: Woman-held Record Extraction Form –ANC card

The next step is to bring the elements together to create as complete and clear a picture as much as possible of the events surrounding the death. This should involve all three members of the facility-specific team and not just the data collector. Dedicated and regular time should be put aside for the team to meet at this stage.

In preparation for this meeting, the data collector should prepare a short written summary for each death of the events as they see them, incorporating all sources of data – from the facility and community, if available (see last parts of either maternal or perinatal death review forms.

The summary should highlight:

- Key points from the checklists- When death occurred, What condition and why death occurred
- Avoidable factors and details of their classification
- Delays in seeking and receiving care
- Significant quotations from interviews
- Inconsistencies between the various data sources.

The facility-specific team should use this summary as a starting point for their discussions, but also consult the other sources. The end-point for each maternal or perinatal death reviewed is a consensus statement on avoidable factors. This can be arrived at by asking each team member to individually rank factors which they feel were significant, for these rankings to be shared, and then final agreement reached by the team.
In many instances, specific areas for improvement within the facility will emerge from the review process. The team needs to agree on appropriate mechanisms to feed this information back to the senior staff and to stimulate actions. Some of this feedback may also be reinforced through the synthesis at the district and national levels undertaken by the relevant MPDR sub-committee (see step 2). One action, for instance, which may follow-on, is the setting up of procedures to routinely review all maternal deaths at the facility or conducting regular drills in resuscitation of newborns or improving legibility of clinical notes and record keeping.

**Step 4: Regular meetings for MPDR committees (facility, HSD, district & national) to discuss MPDR and how to utilise the findings for action.**

This step is closely linked to the synthesis of data since this is one of the tasks of the MPDR committee. The MPDR meetings offer an opportunity to acknowledge good care and promote accountability and improved care. The different MPDR committees will meet regularly (at least once every three months) to synthesize findings across facilities, HSDs and districts to get a complete picture of the magnitude of maternal and perinatal deaths, the geographical areas where the major problems occur, the pattern of disease and circumstances that result into deaths and where the health system can be improved.

N.B: *Some facilities have found it useful to hold MPDR meetings every time there is a maternal and/or perinatal death.*

The MPDR committees need to agree on appropriate recommendations and mechanisms to feed these back to the districts, communities and key stakeholders to stimulate actions. For purposes of follow up, the meetings should be minuted, clearly stating recommendations, which is responsible for different actions and the time frame.

At quarterly intervals, the MPDR committees will prepare reports for the higher levels i.e. Health facility to HSD; HSD to district and district to national level. The reports should indicate the total numbers of deaths, the numbers of deaths audited, audit findings, recommended actions, where action was taken- results of action and where action was not taken reasons for not taking action.
Step 5 - Implement recommended actions to improve maternal and newborn health

Flagging (identifying) common avoidable problems and possible solutions is not an end in itself. The MPDR sub-committee need to agree on a strategy for disseminating the findings and stimulating action. Dissemination will need to occur at several levels and to several different audiences. The MPDR sub-committee should target the key messages they wish to make to each audience.

At least four main groups should receive the overall findings:
- The local communities from which the cases originated
- The staff at the facilities where the deaths took place
- The SMNA and programme core team
- The decision-makers and authorities at district and national levels. This will provide data for an annual maternal mortality review report.

Feedback at the first two levels should also include appropriate acknowledgements to co-operation and the views of local communities may also be sought on how they would like to hear of the results.

At the level of specific facilities, the sub-committee may also identify specific actions, such as changes in duty rotas or in-service training in obstetric life saving skills. Here the relevant district representative, who also participated in the MPDR team at the facility, should undertake to raise these points with the appropriate authorities. Feedback should aim to be constructive rather than destructive, with an emphasis on ways to improve services for the future. Staff at the facility should be given an opportunity to comment on the findings and to offer suggestions on how any future case-reviews could be enhanced.

Recommendations made by the committees should be carried out at each level. This is the most important step and will lead to improvements in patient care. At each meeting the previous recommendations should be reviewed and note taken of what actions were supposed to happen and what has actually happened.

Step 6 - Conduct Confidential inquiries for maternal and perinatal deaths

Confidential inquiries (CI) should be done by independent assessors preferably drawn from different professions and backgrounds, although this will ultimately depend on local circumstances. The aim is to put together a team with complementary skills. The Assessors must be people who appreciate the educational value of CI and are themselves agents of change. It is essential that at least one team member has obstetric or midwifery knowledge and skills and another member is a paediatrician. The Independent Assessors will work
closely with the members of the MPDR committee at the appropriate level (district, HSD and facility level)

The final decision on whether to include a particular facility in CI depends on two practical matters:

The availability of usable medical records on maternal deaths

One practical way to do this is to divide the deaths so that at least one case of the four major maternal complications (haemorrhage, pre-eclampsia/eclampsia, infection, obstructed labour) or the common causes of perinatal mortality. Where more than four deaths will be reviewed, these complication categories could be further broken down according to, for example:

- Woman’s residence more than or less than 10 kilometres from the facility
- Referred or not referred
- Primigravida or multigravida (1st pregnancies or those with many children)
- Ante-, intra- or postpartum deaths (pregnancy during and after delivery)

**Step 6: Confidential Inquiry by Independent assessors**

The Independent assessors should preferably be drawn from different professions and backgrounds, although this will ultimately depend on local circumstances. The aim is to put together a team with complementary skills. The team should appreciate the educational value of confidential inquiries and should be agents of change. The Independent Assessors will work closely with the members of the MPDR committee at district, HSD and facility level. It is essential that at least one team member has obstetric or midwifery knowledge and skills and another member is a paediatrician. The independent assessors can come from the national level or another region to reduce bias in case the members of the local regional independent assessment team were involved in the care of the deceased.

The final decision on whether to include a particular facility depends on two practical matters:

The availability of usable medical records on maternal deaths

One practical way to do this is to divide the deaths so that at least one case of the four major maternal complications (haemorrhage, pre-eclampsia/eclampsia, infection, obstructed labour) is included. Where more than four deaths will be reviewed, these complication categories could be further broken down according to, for example:
• Woman’s residence more than or less than 10 kilometres from the facility
• Referred or not referred
• Primigravida or multigravida (1st pregnancies or those with many children)

Ante-, intra- or postpartum deaths (pregnancy during and after delivery)

    Perinatal / newborn deaths can be categorized into macerated still, fresh still birth and early neonatal deaths. Further categorization could be according to common causes of death

**Step 7: Follow up and Technical support supervision at all levels**

Follow up and technical supervision is most likely to be done by the higher level. During training, the health facility teams would have come up with MPDR plans. These should be followed up to ensure that MPDR is institutionalized. Supervision will ensure that the process is done correctly and that recommendations are followed up.
SECTION B

Following either a maternal or perinatal death, the process to be followed is as given below:

- The forms will be filled in - quadruplets (Notification) and duplicates (Audit)
- 4 Copies of the Maternal death notification forms will be filled within 24 hrs. Original will be retained at the health unit and the copies forwarded to HSD, DHO and surveillance department in MOH which receives weekly reports on notifiable diseases. The higher levels will follow up to ensure that the maternal deaths are audited by the facility teams
- 2 Copies of death audit form will be filled within 7 days at health facility. These will be retained at the facility for use by the facility audit team and independent assessors who may take one of the copies.
- The forms will be filled by staff involved in the care and constituting the Facility Audit Committee
- In case of confidential enquiries, copies of case files and audit forms shall be availed to the assessors. Identification numbers shall be assigned by Ministry of Health to the Audited Deaths and suggested format is as follows: District/Facility name/Serial number of death/year e.g. Kampala/Mulago/20/08
- At quarterly intervals, the MPDR committee will forward a report on MPDR activities which should include
  - The deaths that occurred
  - Audited deaths/ causes of deaths/ and avoidable factors identified
  - Recommended actions and responsible persons
  - Actions taken and results of action
FILLING IN THE MATERNAL DEATH REVIEW AND NOTIFICATION FORMS

Section 1
Please read these guidelines with the Maternal Death Review and Notification Forms next to you. The blocked areas below correspond to the same area on the form –

Maternal Death Notification Form

| For Official use only: Ministry of Health National Case Number |

Instructions:

1. This form is filled by the health worker on duty at the time of death
2. Complete the Maternal Death Notification form in quadruplicate within 24 hours (One for the unit, one for the health sub-district, one for the DHO and one for MoH).
3. Handover the form to the In-charge of the unit
4. Perform the audit within 7 days.

Name of reporting facility ……………………………… Level……….. District ………………………………………

Names of deceased…………………………………..Inpatient Number……………………

Village of residence (LC 1) ………………Sub-county (LC 11) …………………..District ……………………………

Age of deceased………yrs       Next of kin …………………………………………………………………………………

Gestational Age (wks) …………. Duration of stay at facility before death: …….days……hrs………

Date of Death: ……….dd…….mm ……………….yr.

Possible cause(s) of death: ……………………………………………………………………………………………

Date of filling form ………………………………………………..Date of dispatching form ………………………

Delivered by (Name) …………………………………………………………………………………………………

Received by (Name) …………………………………………………………………………………………………

MATERNAL DEATH AUDIT FORM

OUTLINE AND PHILOSOPHY OF THE DESIGN OF THE FORM

The form has 12 sections as shown below:

Section 1: Locality where death occurred
Section 2: Details of deceased

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Section 3: Admission at health facility where death occurred or from where it was reported

Section 4: Antenatal care
Section 5: Delivery, and puerperium information
Section 6: Interventions
Section 7: HIV Status
Section 8: Cause of Death
Section 9: Avoidable factors
Section 10: Autopsy/Post mortem
Section 11: Case Summary
Section 12: Recommendations
Section 13: This form was completed by

Sections 1-3 give us the demographic details of the patient, 4-7 the medical conditions that resulted in the death, 8 gives the cause of death, 9 shows whether there were other circumstances surrounding the death not related directly to the medical condition e.g. transport problems, and 11 an own word summary of the story of what happened in the case.

Information that a pregnant woman died, where she died, her age, parity and so on is important in obtaining maternal mortality figures, in identifying geographical problem areas and determining some general risk factors. This information is grouped together to form the demographic information. From this information the size of the problem will be determined and over time any decrease in the number of deaths may be seen.

The second section on the medical condition which led to the death of the woman, will enable us to determine the most common problems, and determine whether the common causes of death vary from one area to another. This information will also enable one to concentrate teaching, research and if necessary resources to combat the problem.

Maternal deaths are uncommon events. Most women survive severe illnesses that occur in pregnancy, however some pregnant women unfortunately do die. The objective is to determine why the woman died in a particular case. Commonly there has been a breakdown in various levels in the health system. If these breakdowns are identified, and occur repeatedly, action can be taken so that the deaths can be prevented. This bit of detective work is captured in the third
section. Perhaps this is one of the most important parts of the form as it can lead to rapid intervention and subsequent prevention of loss of life.

The form has been designed in this way so that information about the case can be obtained in a usable format. If the form is filled in systematically, the important facts will be obtained. At the same time you will be able to analyse the death for yourself. The case summary at the end serves to focus your mind. After going through the facts of the death, the story of what happened should be clear. If opportunities for preventing the death occurred they will be identified and can be reported. Solutions can be looked for locally.

The information gathered should be utilised by the health facility administration/managers to address factors leading to death that have been identified in order to reduce future maternal deaths. Where applicable they should identify system issues that require to be addressed by higher levels and include them in the report. This report should be compiled and submitted to the next level which will aggregate and report to the national MPDR committee.

It is the task of the National MPDR Committee to bring information about all the deaths together and to analyse the data. With this information, the National MPDR committee will be able to plan for improving the health services. Implementation of the recommendations from MPDR should lead to a decrease in the number of maternal deaths and also improve the quality of care of pregnant women.
FILLING IN THE MATERNAL DEATH AUDIT FORM

Please read these guidelines with the Maternal Death Audit Form next to you. The blocked areas below correspond to the same area on the form).

THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH
CONFIDENTIAL
MATERNAL DEATH AUDIT FORM

For Official use only: Ministry of Health National Case number

NOTE:
1. Before filling this form ensure a Maternal Death Notification form was filled within 24 hours of the death.
2. The Maternal Death Audit form must be completed for all maternal deaths
3. Mark with a tick (✓) where applicable;
4. Where information is not available from the records please interview mother or next-of-kin if available. Add an asterisk (*) where information was obtained by interview.
5. Complete the form in duplicate within 7 days of a maternal death. The original remains at the institute where the death occurred. The copy will be for regional confidential inquiry purposes.

The form must be filled in within 7 days of the death. This is to ensure the events leading up to the death are still fresh in everyone’s mind. A copy of the case notes must be attached to the filled audit form.

Note: form

A. DEMOGRAPHIC INFORMATION

1. Locality where death occurred

This information is important. Geographical patterns of maternal deaths can be determined with it. A picture of the pattern of maternal deaths throughout the whole country can then be obtained. We would like to include all maternal deaths, even those occurring at home but this is not feasible at present and we will concentrate on collecting all deaths that occur in the health services, including those women that die in ambulances.

Section 1: LOCALITY WHERE DEATH OCCURRED:

1.1 District
1.2 Health sub-District
1.3 Facility name
1.4 Type of facility:

|-------------------------------|-------------------------------|--------------------|--------|---------|-----------------|

1.5 Ownership: a) Gov  b) Private  c) PNFP
Classification of institutions.

1. National referral hospital – Specialist services and also has intensive care unit
2. Regional Hospitals - the hospitals with obstetricians and gynaecologists but no intensive care facilities
3. General Hospitals staffed by general doctors (non specialists) generally with or without visiting obstetric and gynaecology specialists
4. HC IV – Health center with theatre facilities

The facility may be Govt, Private or Private Not For Profit (PNFP)

2. Details of Deceased

This information is necessary so that tracing the route of the patient in the health service is possible. The names will be removed once the form has been certified by the committee as being complete.

<table>
<thead>
<tr>
<th>Section 2: DETAILS OF THE DECEASED:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Surname ............................................Other names .................................................................</td>
</tr>
<tr>
<td>2.2 Inpatient number □ □ □ □ □ □ □</td>
</tr>
<tr>
<td>2.3 Residence address:  a. Village (LCI): .................................................................</td>
</tr>
<tr>
<td>.................................b. Parish (LCII): .................................................................</td>
</tr>
<tr>
<td>c. Sub-county (LCIII): .................................................................</td>
</tr>
<tr>
<td>d. District</td>
</tr>
<tr>
<td>2.4 Age (years): □ □ yrs</td>
</tr>
<tr>
<td>2.5 Next of kin .................................................................(relationship) ................................</td>
</tr>
<tr>
<td>2.5 1. Marital status (1. MR= Married □; 2. SI= Single never married □; 3. S= Separated □; 4. W = Widowed □; 5. NK= Not known □)</td>
</tr>
<tr>
<td>At time of admission:</td>
</tr>
<tr>
<td>i) Gravida □ □ Para □ □ □ □ □ □ □ i) Gestation (weeks) □ □</td>
</tr>
<tr>
<td>ii) Gestation (weeks)</td>
</tr>
<tr>
<td>2.6.2 At time of death:</td>
</tr>
<tr>
<td>i) Gravida □ □ Para □ □ + □ □ i) Gestation (weeks)</td>
</tr>
<tr>
<td>ii) Gestation (weeks)</td>
</tr>
<tr>
<td>2.7 Days since delivery/ abortion (if not applicable enter 99) □ □</td>
</tr>
</tbody>
</table>

Parity: Number of times the woman delivered a baby of 28 weeks or more, whether alive or dead
After the plus (+) fill in the total number of pregnancies that ended before the 28th week of gestation (abortions) Gestation refers to completed weeks of amenorrhoea since the last normal menstrual period

3. Admission at health facility where death occurred or from where it was reported

Information regarding the condition of the woman on admission will help in indicating at what stage of the pregnancy she was, antenatal, intrapartum or postpartum.

The reason for admission asks why the woman was admitted to the hospital/clinic where she died.

It is important to trace the route the woman took through the health services as well as the time it took from each place. Therefore, we need all available records from all the health services that the woman entered.
Effective antenatal care is associated with a decreased maternal mortality. The information gathered here will help in establishing whether/where there are problems in access to antenatal care.

Record where the antenatal care was performed, that is, was it at a clinic alone, or in combination with a clinic and hospital. And by who

A list of antenatal risk factors has been included in the form to help in assessing the quality of the antenatal care given. Only the risk factors that are known to have a direct bearing on maternal deaths have been included. Those

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related to perinatal deaths (deaths of the babies) are handled under the section on perinatal death audit. By going through the risk factors one can determine whether there was a risk factor and whether appropriate action was taken. The importances of the antenatal risk factors given are explained below:

1. History - history of heart disease. Was history of any medical condition recorded. For example, rheumatic heart disease is an important cause of death in pregnancy.
2. BP (Blood Pressure). Was the blood pressure recorded? Hypertension in pregnancy is common cause of death
3. Proteinuria - This indicates the possibility of kidney disease or if in combination with hypertension it indicates that pre-eclampsia/eclampsia might have been present. In Uganda, pre-eclampsia/eclampsia is one of the most common causes of maternal deaths.
4. Glycosuria (sugar in Urine)- This could indicate the presence of diabetes mellitus. Diabetes mellitus predisposes a woman to infection and if the diabetes gets out of control can lead to death on its own.
5. Anaemia - Screening for anaemia at antenatal clinics is very important because if the woman has a low haemoglobin, she will have very little reserve if bleeding occurs. It is a risk factor that can be easily detected and treated.
6. Abnormal Lie - A transverse or oblique lie can lead to ruptured uteri if unattended.
7. Previous caesarean section - This is a risk factor for rupture of the uterus.

4.6. Add any comment on the antenatal care in the box provided. Especially record any medication the woman was on and e.g. IPT, TT, HAART, NIVERAPINE, ANTICOAGULANTS, HYPERTENSIVE, DIABETIC THERAPY)
5. Labour, delivery and puerperium.

In this section the information filled is on progress of labour, outcome of delivery and puerperium. Also noted are; mode and place of delivery and core staff that conducted the delivery. Complications encountered that could have contributed to the death are also highlighted. The information gathered will be used to assess quality of care provided during these stages.

Information regarding the labour is important as it can explain why some complications occurred. For example, if the labour was very prolonged, this can lead to postpartum haemorrhage, or to puerperal infection. Both these can result in a death. Prolonged labour in itself can lead to a ruptured uterus.

The information regarding the baby combined with information in section 1-3 helps in recording the size of the social problem that a maternal death leaves behind.

Fill in the 5.10 with any other information, especially what happened to the mother once the baby was born.
SECTION 5: DELIVERY AND PUERPERIUM INFORMATION

5.1 Did labour occur?  1. Yes  2. No  3. Unknown  
If No go to section 6

5.2 Was a partogram filled?  1. Yes  2. No

5.3 If "Y", was a partogram correctly used?  1. Yes  2. No

5.4 Duration of labour. Tick appropriate answers in the table below:

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<tr>
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<tbody>
<tr>
<td>Not known</td>
<td>Not known</td>
<td>Not known</td>
<td>Not known</td>
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<tr>
<td>&lt; or = 8 hours</td>
<td>&lt; 4 hours</td>
<td>&lt; 5 minutes</td>
<td>&lt; 5 minutes</td>
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<td>&gt; 8 hours</td>
<td>4 – 6 hours</td>
<td>5 – 30 minutes</td>
<td>6 – 30 minutes</td>
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<td>&gt; 7 hours</td>
<td>31 – 60 minutes</td>
<td>&gt; 30 minutes</td>
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<td></td>
<td>&gt; 1 hour</td>
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</tbody>
</table>

5.5 Mode of delivery (tick appropriate box)  
1. Vaginal (spontaneous vertex)  
2. Vaginal assisted (breech, shoulder dystocia)  
3. Instrumental vaginal (vacuum/forceps)  
4. Caesarean Section  
5. Destructive operations  
6. Laparotomy  
7. Not delivered

5.6 Main Assistant at delivery (tick appropriate box):  
1. Nursing assistant  
2. Midwife  
3. TBA  
4. Member of the family  
5. Self  
6. Doctor  
7. Other, specify .......................................................... .......................................................... .......................................................... .......................................................... ..........................................................

5.7 Place of delivery ………………………………………………………………………………………………………

1. National referral hospital  
2. Regional referral hospital  
3. General hospital  
4. HC IVs, HC III  
5. Other, specify: ……………………………………………………………………………………………………….

5.8 Ownership  
1. Govt  
2. Private  
3. PNFP

5.9 Puerperal conditions (tick all applicable):  
1. PPH  
2. Sepsis

3. Eclampsia  
4. Ruptured uterus

5. Shock/sudden collapse  
6. Other, specify: ………………………………………………………………………………………………………

5.10 Comments on labour, delivery and puerperium ………………………………………………………………………

6. Interventions
Many women who die in pregnancy have had multiple procedures. Some are as a result of the medical condition causing the problem, but in some the intervention directly results in the death of the woman, e.g. anaesthesia. It is useful to list all the interventions from early pregnancy through ANC, intra-partum and post partum. In the comments section state whether the intervention was due to the complication or resulted in the complication. The interventions have been grouped in the stages of pregnancy to help with the analysis later.

Some definitions:

1. **Evacuation** - The uterus is emptied by using a curette or MVA (manual vacuum aspirator).
2. **Laparotomy** - This is where the abdomen is opened surgically.
3. **Hysterectomy** - This is where the uterus is removed.
4. **Transfusion** - used to mean whether blood or blood products were given to the woman
5. **Version** - means the baby was turned in the uterus either by manipulating the fetus abdominally or from inside the uterus.
6. **Instrumental del.** - Was a forceps or vacuum used to assist in delivering the baby
7. **Symphysiotomy** - This is where the ligament holding the symphysis together are cut so that the size of the pelvis is enlarged.
8. **Caesarean section** - The baby is born abdominally through a cut in the abdomen and uterus and not vaginally
9. **Manual removal** - This is where the placenta is removed using a hand or curette after a baby has been born.
10. **Anaesthesia** –
    - General anaesthesia is where the woman is put to sleep while a procedure is carried out.
    - Epidural anaesthesia - Where a local anaesthetic agent is injected into the epidural space to provide pain relief during a procedure.
    - Spinal anaesthesia - Where the local anaesthetic is injected into the cerebrospinal fluid (CSF).
    - Local anaesthesia – Where local infiltration of each tissue layer was performed
11. **Invasive monitoring** - Was a central venous pressure (CVP), Swan-Ganz catheter or invasive blood pressure monitoring used?
12. **Prolonged ventilation** - Did the woman require ventilation other than during an operation? This is usually in an intensive care situation.
13. **Others**: e.g C/S before 28 weeks
14. **Comments**: Summary of appropriateness of interventions
SECTION 6 INTERVENTIONS
6.1 Tick all applicable

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<tbody>
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<td></td>
<td>6. Anticonvulsants</td>
<td>6. Anticonvulsants</td>
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<td></td>
<td>7. Uterotonics (oxytocics)</td>
<td>7. Uterotonics (oxytocics)</td>
<td></td>
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</tbody>
</table>

6.2 Comments on interventions
........................................................................................................................................

SECTION 7: HIV STATUS

7.1 HIV status:

7.2 If HIV Positive, CD4 count .................................................................

7.3 HIV/AIDS status
1. HIV test during present pregnancy: ☐ Yes ☐ No
2. HIV test results: ☐ positive ☐ Negative ☐ Unknown
3. If HIV positive:
   i) No ARV prophylaxis taken
   ii) ARV (Nevirapine/Combivar taken
   iii) On HAART
   iv) Others, specify .................................................................

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8. Cause of death

This is one of the most important sections of the form. Analysis of this information will tell us what are the common causes of death in Uganda or in specific localities in the country. Once this has been clearly established, interventions around these causes can be planned and implemented. The causes of death may not be the same for each district or locality and thus interventions may have to be tailored to specific areas. Fortunately, this information will be available because the place where the woman died has already been recorded. See Appendix 1 & 2

Section 8. CAUSE OF DEATH (See appendix 1)
(Note AIDS is NOT a primary cause of death – if a woman has AIDS please give the condition which killed her, e.g. TB, pneumonia, meningitis, malaria, abortion, puerperal sepsis, etc.)

8.1 Primary (underlying) cause of death: Specify

8.2 Final and contributory cause of death: Specify (refer to appendix 1):

Medical conditions involved
The classification system used here has two aims:
1. To identify the initiating condition or disease that led to the death of the woman. This called the primary (or underlying) obstetric cause. There can be only one primary obstetric cause. This classification is oriented towards prevention.
2. To identify what event finally resulted in death of the woman. This is called the final cause of death. There can be only one final cause of death. However, in some cases there may be contributory (or antecedent) factors that lead to the final cause of death. The contributory factors have the same classification as the final cause. The classification is oriented towards the organ systems that fail and lead to death, and will indicate what resources are required to prevent the death. It is important to differentiate between the final cause of death and the mode of dying. Everyone ultimately dies when the heart stops beating thus a cardiac arrest is the mode of dying. The event that led to the cardiac arrest is the final cause of death.

For example, a woman who developed eclampsia, and as a complication of this had a brain bleed and a cardiac arrest. The primary (underlying) obstetric cause would be classified as eclampsia, the final cause of death being the cerebral haemorrhage and the mode of death was the cardiac arrest.
It is necessary to identify the primary (underlying) obstetric cause, because this will indicate areas where programmes based on preventing maternal deaths can be concentrated.

The final cause and contributory causes indicate the resources that the health system requires in terms of saving lives. They also indicate where management protocols and resources may be lacking. For example, if the primary (underlying) obstetric cause of death was a septic abortion and the final cause was pneumonia with the contributory causes being acute tubular necrosis, a disseminated intravascular coagulopathy and septic shock, the resources required to save the woman’s life would have been mechanical ventilation, probably some renal dialysis and transfusion of blood products like fresh frozen plasma and platelets. The health system would have to indicate where these resources are available and how the critically ill woman could gain access to them.

After discussing the case with all the relevant health personnel, fill in the most appropriate cause in the applicable block. The classification of causes is given in the appendices at the end of these guidelines. If an autopsy is available, please give the findings.

9. Avoidable factors / missed opportunities/ substandard care

HEALTH SYSTEM PROBLEMS

Use the list below to guide the discussion or thinking about the death. After discussing the case with the health personnel, try and answer the following questions. What, if any, were the “missed opportunities”, “avoidable factors” or “substandard care” and where, if anywhere, did the health system breakdown. If any block is ticked, please specify what you mean.

A “missed opportunity” is an event where an act that might have helped prevent the death was omitted or where an act resulted, directly or indirectly, in the death. For example, the death of a woman who was detected as having severe hypertension at a health centre, and was not appropriately managed or referred to the appropriate institution and subsequently developed eclampsia and died, could be considered as a preventable death. The “missed opportunity” lay in not referring the woman. Another example would be a woman who delivered at a health centre, and developed a massive postpartum haemorrhage. The health personnel tried to resuscitate her and transfer her to a hospital, but no transport was available and because of delays in getting an ambulance, the woman died. Here the health system broke down due to lack of provision of transport. This is a health system problem, which has to be solved by management.

The United Kingdom has had a well-established confidential enquiry into maternal deaths for many years. They had a system of analysing their maternal deaths and looking for “avoidable factors” and “missed opportunities” but have recently clarified their definitions and now talk about “substandard care”. To quote from the Report on Confidential Enquiries into Maternal Deaths in the United Kingdom 1985-87, page xiv:

“Substandard care”

The term substandard care has been used in this report to take into account not only failure in clinical care, but also some of the underlying factors which may have produced a low standard of care for the patient. This includes

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situations produced by the action of the woman herself, or her relatives, which may be outside the control of the clinicians. It also takes into account shortage of resources for staffing facilities; and administrative failure in the maternity services and the back-up facilities such as anaesthetic, radiological and pathology services. It is used in preference to the term “avoidable factors” which was used previously in the England and Wales Reports until 1979 and has also been used in the Scottish and Northern Ireland reports. This was sometimes misinterpreted in the past, and taken to mean that avoiding these factors would necessarily have prevented the death. “Substandard” in our context is lumped together with avoidable factors and missed opportunities and refers to the fact that the care that the patient received, or care that was made available to her, fell below the Ugandan standard as prescribed in MOH policy, guidelines and standard protocols.

The information obtained by looking for substandard care is vital in pinpointing where the health system can be improved, and indicates immediately where one’s efforts must be concentrated.

For ease of analysing a maternal death the possible areas of avoidable factors / missed opportunities / substandard care have been grouped into four areas; personal/family problems, logistical systems problems, facilities problems and health personnel problems. Personal/Family orientated problems are those related to the woman or her family in utilising the health services, of poor communication between the health service and woman or her family. Logistical systems problems relate to things like transport, the mechanics of the communications for example are there telephones available and so on. Facilities problems relate to lack of facilities like intensive care beds, equipment like ventilators and consumables like drugs. Health personnel problems relate to the staffing at health facilities (lack of human resources) and the management of patients.

Ministry of health guidelines, Life saving Skills manuals, IMPAC (Managing Complications in Pregnancy and Childbirth-A guide for midwives & doctors, “Obstetrics & Gynaecology Internship Package” and “ALARM International “ should be used to assess the standard of care expected of midwives, doctors, specialists in managing maternal complications. For other health care providers such as Laboratory assistants/technicians and anaesthetists, relevant MOH guidelines or professional associations guidelines should be used.
SECTION 9: Avoidable factors/ Missed opportunities/ Substandard Care
using information derived from the interviews and review of the case notes, were any of these factors present? (Tick all applicable)

<table>
<thead>
<tr>
<th>System</th>
<th>Example</th>
<th>1.Y</th>
<th>2. N</th>
<th>3. Unknown</th>
<th>If yes please specify: (additional space below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Personal/ Family/ Woman factors</td>
<td>Delay of the woman seeking help</td>
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<td></td>
<td>Lack of partner support</td>
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<td></td>
<td>Refusal of treatment or admission</td>
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<td>Herbal medication</td>
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<td></td>
<td>Refused transfer to higher facility</td>
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<td></td>
<td>Others, specify:</td>
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<tr>
<td>B. Logistical systems</td>
<td>Lack of transport from home to health facilities</td>
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<tr>
<td></td>
<td>Lack of transport between health facilities</td>
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<td></td>
<td>Other, specify:</td>
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<tr>
<td>C. Health service</td>
<td>Health service communication breakdown</td>
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<td></td>
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<tr>
<td></td>
<td>Lack of facilities, equipment or consumables</td>
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<tr>
<td></td>
<td>Other, specify:</td>
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<tr>
<td>D. Health personnel problems</td>
<td>Absence of critical human resource</td>
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<td></td>
<td>Inadequate numbers of staff</td>
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<td></td>
<td>Staff misguided action</td>
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<td></td>
<td>Staff over-sight</td>
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<td></td>
<td>Staff non-action</td>
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<tr>
<td></td>
<td>Staff lack of expertise, training or education</td>
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<tr>
<td></td>
<td>Other, specify:</td>
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<tr>
<td>Others, specify:</td>
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</tbody>
</table>

9.2 Comments on potential avoidable factors, missed opportunities and sub-standard care.

9.3 Quality of medical records

<table>
<thead>
<tr>
<th>Comment on the key data elements missing from the patient's file</th>
<th>1. Good</th>
<th>2. Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legibility (Circle appropriate response)</td>
<td></td>
<td></td>
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</tbody>
</table>

10 Autopsy

This process should involve the regional pathologist and may require partnering with the legal department for pathological reasons.
Indicate whether an autopsy has been performed. If one was performed give the findings. Unfortunately, it usually takes much longer than 7 days to get the full autopsy report. This report should be attached to the Maternal death report.
An autopsy is very important in confirming the cause of death and should be asked for at every opportunity. Remember a medico-legal autopsy needs to be performed when the death thought to be due to an unnatural cause (e.g. any anaesthetic related death, any death related to local anaesthesia). In all other cases an autopsy can only be performed with consent of the next-of-kin.

11. Case summary
A short summary should now be written, giving the story of what happened and why. The main events should be highlighted. Remember it is a story and the events should be placed in the sequence that they occurred.

12. Recommendations
These should also form part of the minutes of the MPDR meeting and the Quarterly MPDR report

SECTION 12: RECOMMENDATIONS (Please supply a short summary of the recommendations and follow-up actions to address audit findings)

12. Confirmation Details

Section 12. THIS FORM WAS COMPLETED BY:

Name (print) ____________________________ Job title ____________________________
Telephone ____________________________ Fax ____________________________
E-mail ____________________________

Date:  □ dd □ mm □ yyyy

Signature: .................................................................
The officer completing the form must be the health professional in charge of the patient at the time of her death. The head of the institution where the death occurred must ensure that the form is filled in. Ideally, the form should be filled in before the meeting where the death is discussed. However, some of the data pieces may only be available during the meeting with all the people involved in managing the case. Usually in smaller institutions the superintendent or nursing officer in charge will ensure the form is filled in and lead the discussion around the death. In larger institutions the superintendent can delegate the authority to the head of the Obstetrics and Gynaecology Department. The head of department will obviously lead the discussion around the death.

Note: Copies of all the case notes must be kept with this form.
SECTION C

FILLING IN PERINATAL DEATH AUDIT FORM

Introduction
The aim of this form is to collect information on a perinatal death. It is designed so that the story of what happened can be accurately recorded.

When should the form be filled?
The form must be completed as early as possible and not later than 7 days after the death of the baby. This is to ensure the events leading up to the death are still fresh in everyone’s mind.

Who should complete this form?
The form should be completed by the audit committee of the health facility or the unit in a hospital. Information to fill this form should be obtained from case records of the baby; interviews of the health workers who last attended to the patient; and the mother or care-givers.

How to complete the form
1. SECTION ONE: Identification
Record details of the place of death. Even those who arrive dead at the facility will be recorded as dead on arrival. This information is important as it details the facility where the baby died or the facility where the death was recorded.

Date of Audit……………………………………….

1. SECTION ONE: Identification
1.1 IPNO. (Mother): ………………… 1.1.2 IPNo. (Newborn)…………………………

1.2 Name of the Health Facility: ……………………………………………………………

1.3 Type of Health Facility (tick)
- National Referral Hospital
- Regional Referral Hospital
- General Hospital
- HC IV
- HC III
- Others (specify)

1.4 District…………………………………………………………………………………………

1.5 Mother’s initials ……… 1.5.2 Age: …….. (yrs) 1.5.3 Address:…………………………

1.6 Referred? 1. Yes 2. No

1.7 If Yes; from? 1. Home 2. HC 3. TBA 4. Hospital

5. Others (specify)

1.8 If referred from health facility, give name of the facility ……………………………

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SECTION TWO: Pregnancy progress and Care:
Under this section provide information on care received during pregnancy including investigations done; treatment done and preventive measures given. The investigations are the minimum required to identify and put in place preventive measures against the major causes of perinatal deaths during the pregnancy period. Parity refers here to the number of times the woman delivered a baby of 28 weeks or more, whether alive or dead.

In addition, provide details of medical and obstetric conditions that were present during the pregnancy under this section. Indicate whether the mother received ARVS/HAART drugs. If the mother had a major infection during pregnancy which is not listed under this section then state the infection in the space provided. Add any comment on the antenatal care in the space provided. Record how the antenatal care was performed; that is was it at a clinic alone, or in combination with a clinic and hospital. Also record any medication the woman was on, (e.g ANTICOAGULANTS,HYPERTENSIVE, DIABETIC THERAPY)

SECTION TWO: Pregnancy progress and Care
2.1 Mother’s Parity + 2.1.2 No. of mother’s living children
2.2 Type of pregnancy 1. Singleton 2. Twin
2.3 Attendance of Antenatal care: 1. Yes 2. No
2.4 If yes how many times
2.5 Core ANC Interventions (tick appropriately)
2.5.1 Malaria prophylaxis: 1. IPT 2. IPT1 3. IPT2 4. IPT3
2.5.2 Tetanus Toxoid: 1. TT1 2. TT2 3. TT3
2.5.2 HIV test; 1. Yes 2. No
If HIV positive: No ARV prophylaxis taken ARVs (NVP) Combivir HAART
Others (specify)........................................................................................................
2.5.3 Syphilis test; 1. Yes 2. No

2.6 Medical conditions or infections in present pregnancy (tick all applicable)
4. Diabetes 5. Pre-labour rupture of membranes 6. UTI
10. Others (specify):

........................................................................................................

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3. SECTION THREE: Labour and Birth

Information regarding the labour is important as it can explain why some complications occurred. For example, if the labour was prolonged, this can lead to asphyxia of the baby, or to sepsis of the newborn. Both these can result in a death. Proper assessment and examination of newborns at birth assists in identifying newborns that may need resuscitation and or extra care in order to reduce perinatal deaths.

Try and answer the following questions using information obtained from the interviews and review of the case notes. What and where in the course of managing the deceased did any of the following occur; “missed opportunities”; “avoidable factors”; and or “substandard care”. If any block is ticked, please specify what you mean.

Provable cause of death: Direct and Underlying

This is one of the most important sections of the form. Analysis of this information will tell us what are the common causes of death in Uganda, and once this has been clearly established, interventions around these causes can be planned and implemented. The causes of death may vary for each district or locality and thus interventions may have to be tailored to specific areas.

N.B: Complications of pre-maturity and fetal growth retardation includes. multi organ immaturity, respiratory distress syndrome, necrotizing entero-colitis, pulmonary haemorrhage.)

The classification system used here has two aims:

1. To identify what event finally resulted in death of the baby. This is called the final cause of death. There can be only one final cause of death. However, in some cases there may be contributory (or antecedent) factors that lead to the final cause of death. It is important to differentiate between the final cause of death and the mode (immediate cause of death) of dying. Everyone ultimately dies when the heart stops beating thus a cardiac arrest is the mode of dying. The event that led to the cardiac arrest is the final cause of death.

Indicating the immediate cause of death helps in identifying the critical supportive interventions that will be required to ensure survival of the critically ill newborn. E.g. the need to institute measures to reduce brain oedema in babies with asphyxia.

The final cause and contributory causes indicate the resources that the health system requires in terms of saving lives. They also indicate where management protocols and resources may be lacking. The health system would have to indicate where these resources are available and how the critically ill newborn could gain access to them.

2. To identify the initiating condition or disease that led to the death of the baby. This is called the underlying cause. There can be only one underlying cause. This classification is oriented
towards prevention. It is necessary to identify the underlying cause, because this will indicate areas where programmes based on preventing perinatal deaths can be concentrated.

After discussing the case with all the relevant health personnel, tick the most appropriate cause in the applicable block. If an autopsy is available, please give the findings.

A “missed opportunity” is an event where an act that might have helped prevent the death was omitted or where an act resulted, directly or indirectly, in the death. For example, the death of a baby from tetanus, whose mother attended ANC at three times but never got immunised with the tetanus toxoid vaccine. The “missed opportunity” lay in not immunising the mother during her ANC visits. Avoidable factors are those events which if were not present the death may not have occurred. For example a mother with obstructed labour delaying to seek care from a health facility; OR lack of available equipment to carry out resuscitation for asphyxiated babies.

Substandard care refers to poor care which may have resulted in the baby’s death. For example failing to follow standard protocols for postpartum care for the newborn.

3. SECTION THREE: Labour and Birth
3.1 Weeks of amenorrhea at delivery 3.1.2 Date of delivery
3.2 Place of delivery 1. Home 2. TBA 3. Health facility (specify name of H/F)…………………
3.3 On admission, were there fetal sounds present? 1. Yes 2. No 3. Not assessed
3.4 Was partograph used? 1. Yes 2. No 3. Unknown
If ‘Yes’ was partograph used correctly? 1. Yes 2. No ,If No mention error
3.5 Mode of Delivery: 1. Normal Delivery 2. Caesarean Section 3. Vacuum or Forceps
5. Others specify: ………………………………………………………………………………………………………………………………………………………………
3.5.2 Indication for Instrumental /or Caesarean section: …………………………………………………
3.6 Time between decisions for Cesarean section /instrumental and actual delivery of the baby:
      1. Less than 30 minutes 2. 30 minutes to one hour 3. Greater than one hour
3.7 Condition of the Baby

3.7.1 Apgar score at 1 min □ At 5min □ At 10min □ Do not know □

3.7.2 Resuscitation done: 1. Yes □ 2. No □
If ‘Yes’ what was done? 1. Stimulation □ 2. Suction □ 3. Oxygen given □
4. Bag and Mask □

4. Others (specify): ………………………………………

3.7.4 Weight of the baby: □ kgs Sex: 1. Male □ 2. Female □

3.8 Type of Perinatal Death


If neonatal death, Problems after birth up to day 6 (Tick all applicable)
1. Difficult feeding (baby) □ 2. Difficult feeding (mother) □ 3. Jaundice □
4. Anaemia □
Other conditions: …………………………………………………………………………………

3.9 Probable cause of death:
e) Others (specify) …………………………………………………
4). Congenital anomalies

3.10 Other Underlying factors in labour

1. Complications of cord (prolapse, cord around neck etc) □
2. Complication of labour and delivery (Breech and vacuum extraction, obstructed labour, forceps delivery, Caesarean section, precipitated labour) □
3. Others (may refer to 4.5):

……………………………………………………………………………………………………

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3.11 Avoidable factors/missed opportunities/substandard care. Using the information derived from the interview and review of case notes were any of these factors present?

1. Delay to seek health care  
2. Delay to reach the health facility  
3. Delay to providing appropriate intervention at the health facility  
4. Avoidable factors:  
   1. Absence of critical human resources  
   2. Lack of resuscitation equipment  
   3. Lack of supplies and drugs including blood  
   4. Health communication breakdown  
   5. Poor documentation  
   6. Misdiagnosis  
   7. others (specify):  

Comments on avoidable factors and missed opportunities:

Actions taken to address the avoidable problems

CONFIRMATION OF DETAILS

*The form was completed by: Name: ________________________________Tel: _______  
Email: ___________________ Date: _________________________Signature: _______

Note: Copies of all the case notes must accompany this form.

Notes:

- Premature: Born after 28 weeks but before 37 weeks of gestation  
- If multiple pregnancy, indicate birth order of the newborn. N.B. Fill separate form for each perinatal death
discussed with all the people involved in managing the case. Usually in smaller institutions the Officer in charge of the health unit will ensure the form is filled in and lead the discussion around the death. He or she can delegate this authority to the in-charge of the delivery and postnatal ward if the death occurred there or the in-charge of the paediatric ward if the death occurred on the paediatric ward. In larger institutions the superintendent can delegate the authority to the head of the Labour suite and in hospitals where a neonatal unit is established the head of the neonatal unit will ensure that the form is filled in for all perinatal deaths that occur in perinatal unit.

Definitions

A live baby is an infant weighing 1000g or more than 28 weeks or more gestational age and shows signs of life which include any of the following breathing, heart beat, cord pulsation and voluntary muscle movement

A Fresh Still birth is an infant weighing 1000 g or more or 28 weeks or more gestational age born but with no signs of life

A macerated still birth: Any infant weighing 1000g or more or 28 weeks or more gestational age born dead 12 hours or more before birth, dead before labour onset, has discoulour and peeling of skin; soft skull; umbilical cord dark red or black and with dark amnionic fluid.

Under this section please provide the following details;
If baby was born alive, provide details of Apgar score at 1 and 5 minutes. This is because APGAR score is a quick assessment to identify those that may have birth asphyxia. If the details of the APGAR score is not known then tick “Don't Know”. This is to cater for
newborns admitted in a health unit, but may be delivered elsewhere where Apgar was not recorded e.g TBA.

Indicate whether baby cried at birth or not by ticking appropriate box. Indicate status of baby’s breathing at birth. Option for spontaneous normal breathing should be ticked if chest movements were observed at a rate of about 60 breaths per minute. If baby had irregular breathing with signs of chest in-drawing then tick option of gasping

Also indicate whether the baby had any congenital abnormalities at the time of birth. If baby died some time after birth describe the conditions he/she had before deaths.

**Difficult feeding**: Indicate whether this was as a result of factors associated with the mother or baby.

Baby may be unable to breastfeed after birth due to following conditions:

- prematurity,
- Abnormality such as cleft palate and lip,
- being ill with an infection or any other condition.
- Separated from mother e.g. Referred to another hospital
- Not breast feeding effectively due to poor attachment and positioning

Mother unable to breast-feed due to:

Having flat or inverted nipples, mother too ill, Sore cracked nipples or an abscess, mother separated from her baby, or mother on medication not recommended for lactating mothers

- [Jaundice refers to Yellow skin](#)

- **Anaemia**
  - Pale body particularly the palms, soles of baby
  - Haemoglobin less than 12 g/dl

**Difficulty breathing refers to any of the following**

- Respiratory rate more than 60 breaths per min
- Grunting
- Chest in-drawing
- Apnoeic attacks

**Hypoglycaemia** (Low blood glucose less than 40mg/dl)

May manifest as

- Lethargy
- Apnoea
- Weak or high pitched cry
- Seizures, coma
- Poor feeding, vomiting
- Tremors, jitteriness or irritability
**Bleeding (Cord, circumcision)**
Bleeding from umbilical cord or circumcision site due to poor ligation of cord or arteries respectively

**Sepsis**
Major cause of mortality and morbidity in newborns and may show the following symptoms:
- Lethargy, Vomiting/regurgitation,
- Rash,
- fever,
- Poor or no weight gain

**Hypothermia**
This is a condition where baby's temperature falls below 36.5°C

**Bleeding disorder**
- Bleeding due to deficiencies such as Vitamin k dependent factors

**Fever**
- Temperature above 37.5 °C

**Convulsions**
This a condition characterized by abnormal movements secondary to electrical discharge from the neurons in the brain. Abnormal Movements include:
- abnormal jerking of the body
- Twitches,
- Repetitive blinking of the eyes,

**SELECTED FURTHER READING:**


Beyond the numbers: Reviewing maternal deaths and complications to make pregnancy safer, 2004
Appendix 1

Classification of the primary (underlying) cause of maternal death

<table>
<thead>
<tr>
<th>Primary (Underlying) Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No obstetrical cause</strong></td>
</tr>
<tr>
<td>➢ Motor vehicle accident</td>
</tr>
<tr>
<td>➢ Assault</td>
</tr>
<tr>
<td>➢ Trauma</td>
</tr>
<tr>
<td>➢ Suicide</td>
</tr>
<tr>
<td>➢ Herbal medicine</td>
</tr>
<tr>
<td>➢ Other – specify</td>
</tr>
<tr>
<td><strong>Pre-existing maternal disease</strong></td>
</tr>
<tr>
<td>➢ Cardiac disease</td>
</tr>
<tr>
<td>• Undiagnosed</td>
</tr>
<tr>
<td>• Mixed mitral valve disease</td>
</tr>
<tr>
<td>• Other rheumatic heart disease</td>
</tr>
<tr>
<td>• Artificial valve complications</td>
</tr>
<tr>
<td>• Congenital heart disease</td>
</tr>
<tr>
<td>• Arrhythmias</td>
</tr>
<tr>
<td>• Other</td>
</tr>
<tr>
<td>➢ Endocrine</td>
</tr>
<tr>
<td>• Diabetes mellitus</td>
</tr>
<tr>
<td>• Thyroid disease</td>
</tr>
<tr>
<td>➢ Gastrointestinal Tract</td>
</tr>
<tr>
<td>• Liver disease</td>
</tr>
<tr>
<td>• Intestine</td>
</tr>
<tr>
<td>➢ Central Nervous System</td>
</tr>
<tr>
<td>• Cerebrovascular accident</td>
</tr>
<tr>
<td>• Epilepsy</td>
</tr>
<tr>
<td>➢ Respiratory</td>
</tr>
<tr>
<td>➢ Haematological</td>
</tr>
<tr>
<td>➢ Genito-urinary</td>
</tr>
<tr>
<td>• Renal</td>
</tr>
<tr>
<td>• Genital</td>
</tr>
<tr>
<td>➢ Immune</td>
</tr>
<tr>
<td>• Collagen disease</td>
</tr>
<tr>
<td>➢ Skeletal</td>
</tr>
<tr>
<td><strong>Non-pregnancy-related infections and AIDS</strong></td>
</tr>
<tr>
<td>➢ Pneumonia</td>
</tr>
<tr>
<td>➢ Acquired Immune Deficiency Syndrome (AIDS)</td>
</tr>
<tr>
<td>➢ Tuberculosis</td>
</tr>
<tr>
<td>➢ Bacterial endocarditis</td>
</tr>
<tr>
<td>➢ Pyelonephritis, urinary tract infection</td>
</tr>
<tr>
<td>➢ Appendicitis</td>
</tr>
<tr>
<td>➢ Malaria</td>
</tr>
<tr>
<td>➢ Meningitis</td>
</tr>
<tr>
<td>➢ Other – specify</td>
</tr>
<tr>
<td>Category</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Ectopic pregnancy</td>
</tr>
<tr>
<td>Abortion</td>
</tr>
<tr>
<td>Pregnancy-related sepsis</td>
</tr>
<tr>
<td>Antepartum haemorrhage</td>
</tr>
<tr>
<td>Postpartum haemorrhage</td>
</tr>
<tr>
<td>Hypertensive disorders of pregnancy</td>
</tr>
</tbody>
</table>
- Anaesthetic complications
  - Complications general anaesthesia
  - Complications epidural block
  - Complications spinal block

- Embolism
  - Pulmonary embolus
  - Amniotic fluid embolus

- Acute collapse – cause unknown

- Unknown
  - Death at home/outside health service
  - No primary cause found
Classification of the final and contributory (or antecedent) cause/s of death for mothers

<table>
<thead>
<tr>
<th>Organ System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypovolaemic shock</td>
</tr>
<tr>
<td>➢ Following postpartum haemorrhage</td>
</tr>
<tr>
<td>➢ Following antepartum haemorrhage</td>
</tr>
<tr>
<td>➢ Following ectopic pregnancy</td>
</tr>
<tr>
<td>Septic shock</td>
</tr>
<tr>
<td>➢ Following an abortion</td>
</tr>
<tr>
<td>➢ Following a viable pregnancy</td>
</tr>
<tr>
<td>➢ Following an incidental infection</td>
</tr>
<tr>
<td>Respiratory failure</td>
</tr>
<tr>
<td>➢ Adult respiratory distress syndrome</td>
</tr>
<tr>
<td>➢ Pneumonia (including TB, or any other type)</td>
</tr>
<tr>
<td>➢ Acute respiratory failure</td>
</tr>
<tr>
<td>Cardiac failure</td>
</tr>
<tr>
<td>➢ Pulmonary oedema</td>
</tr>
<tr>
<td>Renal failure</td>
</tr>
<tr>
<td>➢ Acute tubular necrosis</td>
</tr>
<tr>
<td>➢ Acute medullary necrosis</td>
</tr>
<tr>
<td>Liver failure</td>
</tr>
<tr>
<td>➢ Following HELLP syndrome</td>
</tr>
<tr>
<td>➢ Following drug overdose</td>
</tr>
<tr>
<td>Cerebral complications</td>
</tr>
<tr>
<td>➢ Intracerebral haemorrhage</td>
</tr>
<tr>
<td>➢ Cerebral oedema resulting in coning</td>
</tr>
<tr>
<td>➢ Meningitis/infection (including malaria)</td>
</tr>
<tr>
<td>➢ Cerebral emboli</td>
</tr>
<tr>
<td>Metabolic</td>
</tr>
<tr>
<td>➢ Maternal ketoacidosis</td>
</tr>
<tr>
<td>Disseminated intravascular coagulopathy</td>
</tr>
<tr>
<td>➢ Disseminated intravascular coagulopathy</td>
</tr>
<tr>
<td>Multi-organ failure</td>
</tr>
<tr>
<td>➢ Multi-organ failure</td>
</tr>
<tr>
<td>Immune system failure</td>
</tr>
<tr>
<td>➢ AIDS</td>
</tr>
<tr>
<td>Unknown</td>
</tr>
<tr>
<td>➢ Home death+</td>
</tr>
<tr>
<td>Other – specify</td>
</tr>
<tr>
<td>➢ Other – specify</td>
</tr>
</tbody>
</table>

If a post-mortem is available, please give the findings.
APPENDIX 3: Sample Data Collection Forms

FORM A: Maternal Death Notification Form

FORM B: Maternal Death Review Form

FORM C: Perinatal Death Review Form

FORM D: Facility Staff Interview Record
FORM E: Community Interview Record

FORM F: Woman-held Record Extraction Form – ANC card
Maternal Death Notification Form

For Official use only: Ministry of Health National Case Number

Instructions:

1. This form is filled by the health worker on duty at the time of death
2. Complete the Maternal Death Notification form in quadruplicate within 24 hours (One for the unit, one for the health sub-district, one for the DHO and one for MoH).
3. Handover the form to the In-charge of the unit
4. Perform the audit within 7 days.

Name of reporting facility ........................................... Level........ District ..................................................

Names of deceased........................................................................................................Inpatient Number..............

Village of residence ( LC 1) ...............Sub-county (LC 111) .........................District ..................

Age of deceased ..........yrs       Next of kin ..........................................................

Gestational Age (wks) ............. Duration of stay at facility before death: .........days......hrs ..... mins

Date of Death: ..........dd..........mm ..............yr.

Possible cause(s) of death: ..................................................................................................................

Date of filling form .................................................................Date of dispatching form ..........................

Delivered by ( Name) .......................................................... Date ................. ...

Received by ( Name) .......................................................... Date .................

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NOTE:
5. Ensure a Maternal Death Notification form was filled within 24 hours.
6. The Maternal Death Audit form must be completed for all maternal deaths
7. Mark with a tick (✓) where applicable;
8. Where information is not available from the records please interview mother or next-of-kin if available. Add an asterisk (*) where information was obtained by interview.
9. Complete the form in duplicate within 7 days of a maternal death. The original remains at the institute where the death occurred. The copy will be for regional confidential inquiry purposes.

SECTION 1: LOCALITY WHERE DEATH OCCURRED:

1.1 District .................................................................
1.2 Health sub-District ....................................................
1.3 Facility name ............................................................
1.4 Type of facility:

<table>
<thead>
<tr>
<th></th>
<th>National referral hospital</th>
<th>Regional referral hospital</th>
<th>General hospital</th>
<th>HCIV</th>
<th>HCIII</th>
<th>Others (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>3</td>
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<td>4</td>
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<td>5</td>
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<tr>
<td>6</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

1.5 Ownership: a) Gov □ b) Private □ c) PNFP □

SECTION 2: DETAILS OF THE DECEASED:

2.1 Surname .......................................................... Other names ......................................................
2.2 Inpatient number .............................................................
2.3 Residence address: a. Village (LCI): ..........................................................
       b. Parish (LCII): ..........................................................
       c. Sub-county (LCIII): ..........................................................
       d. District ..........................................................
2.4 Age (years): □□ yrs
2.5 Next of kin ................................................................. (relationship) ..................
2.5 1. Marital status (1. MR= Married □; 2. SI= Single never married □; 3. S= Separated □;
       4. W = Widowed □; 5. NK= Not known □)

2.6 1. At time of admission:
       i) Gravida □□ Para □□+ □□ ii) Gestation (weeks) □□

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2.6.2 At time of death:
   i) Gravida □□ Para □□ + □□
   ii) Gestation (weeks)

2.7 Days since delivery/ abortion (if not applicable enter 99) □□
SECTION 3: ADMISSION AT HEALTH FACILITY WHERE DEATH OCCURRED OR FROM WHERE IT WAS REPORTED

3.1 Date of admission: \[ dd \] \[ mm \] \[ yyyy \]
3.2 Time of admission (12hrs): \[ am \] \[ pm \]
3.3 Date of death: \[ dd \] \[ mm \] \[ yyyy \]
3.4 Time of death 12hrs: \[ am \] \[ pm \]
3.5 Duration of stay in facility before death: \[ days \] \[ hrs \] \[ mins \]
3.6 Referred: 1. Yes \[ ] 2. No \[ ]
3.7 a) If Yes from:
   1. Home \[ ]
   2. TBA \[ ]
   3. Health Centre \[ ]
   4. Hospital \[ ]
   5. Others \[ ]
   b) Specify name: ............................................................................................................

3.8 Condition on admission (Tick appropriate response):

<table>
<thead>
<tr>
<th>Category</th>
<th>Conditions</th>
</tr>
</thead>
</table>
| 1. Abortion   | *i) Stable (normal vital signs) \[ ]
               | *ii) Critically ill \[ ]
               | iii) Dead on arrival \[ ]
               | iv) Other – specify \[ ] |
| 2. Ectopic pregnancy | i) Stable (normal vital signs) \[ ]
                     | *ii) Critically ill \[ ]
                     | iii) Dead on arrival \[ ]
                     | iv) Other – specify \[ ] |
| 3. Antenatal  | i) Stable (normal vital signs) \[ ]
               | *ii) Critically ill \[ ]
               | iii) Dead on arrival \[ ]
               | iv) Other – specify \[ ] |
| 4. Intrapartum| i) Stable (normal vital signs) \[ ]
                | *ii) Critically ill \[ ]
                | iii) Dead on arrival \[ ]
                | iv) Other – specify \[ ] |
| 5. Postpartum | i) Stable (normal vital signs) \[ ]
                | *ii) Critically ill \[ ]
                | iii) Dead on arrival \[ ]
                | iv) Other – specify \[ ] |

3.8 Reason for admission (complaints):


3.9 Diagnosis on admission:

---

2 To affix a definition as appendix: to guide the assessors and teach the users
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3.10 Status of pregnancy at the time of death:

**SECTION 4: ANTENATAL CARE**

4.1 Did she receive antenatal care? 1. Yes □  2. No □
4.2 If “Yes”, total number of ANC visits □
4.3 Type of health facility *(tick all applicable)*:
1. National Referral Hospital □
2. Regional Referral Hospital □
3. General hospital □
4. HC IV □
5. HC III □
6. Other, specify: ..........................................................................................................

4.4 Antenatal risk factors *(tick all applicable)*

<table>
<thead>
<tr>
<th>Risk history</th>
<th>1. Yes</th>
<th>2. No</th>
<th>3. Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hypertension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Bleeding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Proteinuria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Glycosuria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Anaemia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Abnormal lie</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Previous Caesarean section</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Other, specify</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.5 Comments on ANC – List any medication
............................................................................................................................
............................................................................................................................
............................................................................................................................

**SECTION 5: DELIVERY AND Puerperium INFORMATION**

5.1 Did labour occur? 1. Yes □  2. No □  3. Unknown □

*If No go to section 6*

5.2 Was a partogram filled? 1. Yes □  2. No □

5.3 If “Y”, was a partogram correctly used? Yes □  2. No □

5.4 Duration of labour. *Tick appropriate answers in the table below:*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not known</td>
<td>Not known</td>
<td>Not known</td>
<td>Not known</td>
</tr>
<tr>
<td>&lt; or = 8 hours</td>
<td>&lt; 4 hours</td>
<td>&lt; 5 minutes</td>
<td>&lt; 5 minutes</td>
</tr>
<tr>
<td>&gt; 8 hours</td>
<td>4 – 6 hours</td>
<td>5 – 30 minutes</td>
<td>6 – 30 minutes</td>
</tr>
<tr>
<td>&gt; 7 hours</td>
<td>31 – 60 minutes</td>
<td>&gt; 30 minutes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 1 hour</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.5 Mode of delivery (tick appropriate box)
1. Undelivered
2. Vaginal (spontaneous vertex)
3. Vaginal assisted (breech, shoulder dystocia)
4. Instrumental vaginal (vacuum/forceps)
5. Caesarean Section
6. Destructive operations

5.6 Main Assistant at delivery (tick appropriate box):
1. Nursing assistant
2. Midwife
3. Trained TBA
4. Untrained TBA
5. Member of the family
6. Self
7. Doctor
8. Other, specify ..............................................................................................................

5.7 Place of delivery
5.8. Ownership
1. National referral hospital
2. Regional referral hospital
3. General hospital
4. HC IVs, HC III
5. Other, specify: ..........................................................................................................

5.9 Puerperal conditions (tick all applicable):
1. PPH
2. Sepsis
3. Eclampsia
4. Ruptured uterus
5. Shock/sudden collapse
6. Other, specify: ..........................................................................................................

5.10 Comments on labour, delivery and puerperium
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SECTION 6: INTERVENTIONS

6.1 Tick all applicable

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Uterotonics (oxytocics)</td>
<td>7. Uterotonics (oxytocics)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.2 Comments on interventions

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.........................................................................................................................................................
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SECTION 7: HIV STATUS

7.1 HIV status:
1. Positive
2. Negative
3. Declined to give information
4. Status unknown

7.2 If HIV Positive, CD4 count
.........................................................................................................................................................

7.3 HIV/AIDS status
1. HIV test during present pregnancy: Yes No
2. HIV test results: positive Negative Unknown
3. If HIV positive:
   i) No ARV prophylaxis taken
   ii) ARV (Nevirapine/Combivar taken
   iii) On HAART

- 69 -
iv) Others, specify ……………………………………………………………………………………………

SECTION 8: CAUSE OF DEATH (See guidelines)

(Note AIDS is NOT a primary cause of death – if a woman has AIDS please give the condition which killed her, e.g. TB, pneumonia, meningitis, malaria, abortion, puerperal sepsis, etc.)

8.1 Primary (underlying) cause of death: Specify

..........................................................................................................................................................................................
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8.2 Final and contributory (or antecedent) cause of death: Specify (refer to guide):

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..........................................................................................................................................................................................
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SECTION 9: USING INFORMATION DERIVED FROM THE INTERVIEWS AND REVIEW OF THE CASE NOTES, WERE ANY OF THESE FACTORS PRESENT?

9.1

<table>
<thead>
<tr>
<th>System</th>
<th>Example</th>
<th>1.Y</th>
<th>2.N</th>
<th>3. Unknown</th>
<th>If yes please specify: (additional space below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Personal/ Family/ Woman factors</td>
<td>1. Delay of the woman seeking help</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Lack of partner support</td>
<td></td>
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<tr>
<td></td>
<td>3. Refusal of treatment or admission</td>
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<td></td>
<td>4. Herbal medication</td>
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<td></td>
<td>5. Refused transfer to higher facility</td>
<td></td>
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<td></td>
<td>6. Others, specify:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Logistical systems</td>
<td>1. Lack of transport from home to health facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Lack of transport between health facilities</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>3. Other, specify:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Health service</td>
<td>1. Health service communication breakdown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Lack of blood products ,supplies &amp;consumables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Other, specify:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Health personnel problems</td>
<td>1. Absence of critical human resource</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Inadequate numbers of staff</td>
<td></td>
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<tr>
<td></td>
<td>3. Staff misguided action</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>4. Staff over-sight</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>5. Staff non-action</td>
<td></td>
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<tr>
<td></td>
<td>6. Staff lack of expertise</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
9.2 Comments on potential avoidable factors, missed opportunities and sub-standard care.

9.3 Quality of medical records:

9.3.1 Comment on the key data elements missing from the patient’s file.

9.3.2 Legibility: 1. Good 2. Poor

SECTION 10:  AUTOPSY/ POST MORTEM:


10.2 If performed please report the gross findings

SECTION 11:  CASE SUMMARY  (Please supply a short summary of the events surrounding the death)

SECTION 12:  RECOMMENDATIONS  (Please supply a short summary of the recommendations and follow-up actions to address audit findings)
SECTION 13:

THIS FORM WAS COMPLETED BY:

<table>
<thead>
<tr>
<th>Name (print)</th>
<th>Other Team Members:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>E-mail</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date:       [   ] dd  [   ] mm  [   ] yyyy

Signature:  ........................................................................................................................................
THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH
CONFIDENTIAL
NEWBORN DEATH AUDIT FORM

Date of Audit………………………………………

1. SECTION ONE: Identification

1.1 IPNO. (Mother): …………………… 1.1.2 IPNo. (Newborn)…………………………

1.2 Name of the Health Facility: ……………………………………………………………

1.3 Type of Health Facility (tick)

<table>
<thead>
<tr>
<th>National Referral Hospital</th>
<th>Regional Referral Hospital</th>
<th>General Hospital</th>
<th>HC IV</th>
<th>HC III</th>
<th>Others (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.4 District……………………………………………………………………………………

1.5 Mother’s initials ……..1.5.2 Age: …….. (yrs) 1.5.3 Address:…………………………

1.6 Referred? 1. Yes 2. No

1.7 If Yes; from? 1. Home 2. HC 3. TBA 4. Hospital

5. Others (specify)

1.8 If referred from health facility, give name of the facility ……………………………

2. SECTION TWO: Pregnancy progress and Care

2.1 Mother’s Parity + 2.1.2 No. of mother’s living children

2.2 Type of pregnancy 1. Singleton 2. Twin

2.3 Attendance of Antenatal care: 1. Yes 2. No

2.4 If yes how many times

2.5 Core ANC Interventions (tick appropriately)

2.5.1 Malaria prophylaxis: 1. IPT 2. IPT1 3. IPT2 4. IPT3

2.5.2 Tetanus Toxoid: 1. TT1 2. TT2 3. TT3

2.5.2 HIV test; 1. Yes 2. No

If HIV positive: No ARV prophylaxis taken ARVs (NVP) Combivir HAART

Others (specify)……………………………………………………………………………………

-----------------------------------Reproductive Health Division, Department of Community Health-----------------------------------
-73-
2.5.3 Syphilis test; 1. Yes ☐ 2. No ☐

2.6 Medical conditions or infections in present pregnancy (tick all applicable)
4. Diabetes ☐ 5. Pre-labour rupture of membranes ☐ 6. UTI ☐
10. Others (specify):

3. SECTION THREE: Labour and Birth

3.1 Weeks of amenorrhea at delivery ☐ 3.1.2 Date of delivery ☐ ☐ ☐ ☐
3.2 Place of delivery 1. Home ☐ 2. TBA ☐ 3. Health facility ☐ (specify name of H/F) ☐
3.3 On admission, were there fetal sounds present? 1. Yes ☐ 2. No ☐ 3. Not assessed ☐
3.4 Was partograph used? 1. Yes ☐ 2. No ☐ 3. Unknown ☐
If ‘Yes’ was partograph used correctly? 1. Yes ☐ 2. No ☐
If No mention error
3.5 Mode of Delivery: 1. Normal Delivery ☐ 2. Caesarean Section ☐ 3. Vacuum or Forceps ☐
5. Others specify: ............................................................................................................................
3.5.2 Indication for Instrumental /or Caesarean section:

3.6 Time between decisions for Cesarean section /instrumental and actual delivery of the baby:
1. Less than 30 minutes ☐ 2. 30 minutes to one hour ☐ 3. Greater than one hour ☐

3.7 Condition of the Baby

3.7.1 Apgar score at 1 min ☐ At 5min ☐ At 10min ☐
Donot know ☐
3.7.2 Resuscitation done: 1. Yes ☐ 2. No ☐
3.7.4 Weight of the baby:  kgs  Sex:  1. Male  2. Female  

3.8 Type of Perinatal Death
If neonatal death, Problems after birth up to day 6 (Tick all applicable)
Other conditions: ..............................................................................................................

3.9 Probable cause of death:
e)Others (specify) .................................................................
4). Congenital anomalies

3.10 Other Underlying factors in labour
1. Complications of cord (prolapse, cord around neck etc)  
2. Complication of labour and delivery (Breech and vacuum extraction, obstructed labour, forceps delivery, Caesarean section, precipitated labour)  
3. Others (may refer to 4.5): .................................................................

3.11 Avoidable factors/missed opportunities/substandard care. Using the information derived from the interview and review of case notes were any of these factors present?
1. Delay to seek health care  2. Delay to reach the health facility  
3. Delay to providing appropriate intervention at the health facility  
4. Avoidable factors: 1. Absence of critical human resources  

--------------------------------------------------Reproductive Health Division, Department of Community Health ----------------------------------- 
- 75 -
2. Lack of resuscitation equipment
3. Lack of supplies and drugs including blood
4. Health communication breakdown
5. Poor documentation
6. Misdiagnosis
7. Others (specify):

Comments on avoidable factors and missed opportunities:

Actions taken to address the avoidable problems

CONFIRMATION OF DETAILS

The form was completed by: Name: __________________________Tel: ________________

Email: __________________________ Date: __________________________Signature: ________________

Notes:

- Premature: Born after 28 weeks but before 37 weeks of gestation
- If multiple pregnancy, indicate birth order of the newborn. N.B. Fill separate form for each perinatal death

NOTES:

Premature – born after 28 weeks but before 37 weeks of gestation.

Poor Obstetric History – two or more previous miscarriages, a previous stillborn baby, early neonatal death and previous difficult deliveries resulting in neonatal morbidity, especially those affecting the central nervous system.
FORM D   FACILITY STAFF INTERVIEW RECORD

Introduce yourself and thank the respondent/s for helping the MPDR Committee by agreeing to be interviewed. Offer to answer any questions about the purpose and methods of the MPDR before beginning. Use the codes assigned on Form B to note person-giving response. If there are staff present that would not have written in the notes (e.g. orderlies) but who cared for the woman, give them a code too, and add it later to Form B.

The checklist is to be used as memory prompt; the sample questions given here are illustrative and should be adapted for local use.

Name of the woman who died…………………………………………………………

<table>
<thead>
<tr>
<th>CHECKLIST</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbatim report (Report according to what you are told by word of mouth)</strong></td>
<td></td>
</tr>
<tr>
<td>‘Can you tell me what happened from the time (name) arrived at (name of facility) until she died?’</td>
<td></td>
</tr>
<tr>
<td><strong>Respondents knowledge:</strong></td>
<td></td>
</tr>
<tr>
<td>‘Were you with (name) when she died?’ If no, how long before her death did you see her?’</td>
<td></td>
</tr>
<tr>
<td>‘Who told you about her death?’</td>
<td></td>
</tr>
<tr>
<td>‘Was this person with (name) when she died?’</td>
<td></td>
</tr>
<tr>
<td>‘About how long after her death, did you hear about it?’</td>
<td></td>
</tr>
<tr>
<td>CHECKLIST</td>
<td>DETAILS</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Treatment at the facility:</strong></td>
<td></td>
</tr>
<tr>
<td>‘Who (level of staff) admitted (name)?’ or ‘who was looking after (name) when her death occurred?’</td>
<td></td>
</tr>
<tr>
<td>‘What did you make of her condition when you first commenced her care?’</td>
<td></td>
</tr>
<tr>
<td>‘What was your diagnosis?’</td>
<td></td>
</tr>
<tr>
<td>‘What was your plan for further action, (including referral)?’</td>
<td></td>
</tr>
<tr>
<td>‘How did you care for (name)?’</td>
<td></td>
</tr>
<tr>
<td>‘Were there any obstacles to/delays in implementing your plan?’</td>
<td></td>
</tr>
<tr>
<td>‘What were these?’</td>
<td></td>
</tr>
<tr>
<td>‘Were you able to monitor (name) regularly?’</td>
<td></td>
</tr>
<tr>
<td>‘If not, why not, and did anyone (to do that)?’</td>
<td></td>
</tr>
<tr>
<td><strong>Action taken:</strong></td>
<td></td>
</tr>
<tr>
<td>‘About how long after you felt something was seriously wrong did you decide to act?’</td>
<td></td>
</tr>
<tr>
<td>‘What equipment/drugs did you need to manage the patient? Were the equipment/drugs you needed available? If not, do you know why they were not available? ’</td>
<td></td>
</tr>
<tr>
<td>‘What then did you do (including referral to a higher level facility)?’</td>
<td></td>
</tr>
<tr>
<td>‘Did you have enough support (including referral)?’</td>
<td></td>
</tr>
<tr>
<td>CHECKLIST</td>
<td>DETAILS</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Symptoms before death:</td>
<td></td>
</tr>
<tr>
<td>‘Close to the time of death, did (name) have any of the following problems:</td>
<td></td>
</tr>
<tr>
<td> Convulsions/fits</td>
<td></td>
</tr>
<tr>
<td> Bleeding from any site</td>
<td></td>
</tr>
<tr>
<td> High fever</td>
<td></td>
</tr>
<tr>
<td> Yellow skin or eyes</td>
<td></td>
</tr>
<tr>
<td> Distended abdomen</td>
<td></td>
</tr>
<tr>
<td> Abnormal breathing</td>
<td></td>
</tr>
<tr>
<td> Extremely short of breath</td>
<td></td>
</tr>
<tr>
<td> Vomiting</td>
<td></td>
</tr>
<tr>
<td> Other symptoms (please specify)</td>
<td></td>
</tr>
<tr>
<td>Relevant factors before arrival at facility:</td>
<td></td>
</tr>
<tr>
<td>‘Were there any factors before arrival at the facility which affected the woman’s condition?’</td>
<td></td>
</tr>
<tr>
<td> Treatment from TBA/traditional healer</td>
<td></td>
</tr>
<tr>
<td> Mode of transport</td>
<td></td>
</tr>
<tr>
<td> Other</td>
<td></td>
</tr>
<tr>
<td>Antenatal care:</td>
<td></td>
</tr>
<tr>
<td>‘Did (name) ever go for antenatal care during her last pregnancy?’</td>
<td></td>
</tr>
<tr>
<td>‘How many times did she attend?’</td>
<td></td>
</tr>
<tr>
<td>‘Where did she go for ANC?’</td>
<td></td>
</tr>
<tr>
<td>General health:</td>
<td></td>
</tr>
<tr>
<td>Did she have any long-standing medical problems?</td>
<td></td>
</tr>
</tbody>
</table>
If yes which ones?

**Avoidable factors:**

Do you think anything could have been done to avoid her death?

- Availability of equipment (e.g. vacuum aspirator)
- Availability of supplies (e.g. blood, medicine)
- Prompt and appropriate care at facility
- Availability of transport to go to the facility
- Contributing circumstances and events in the community (e.g. untrained TBA attended delivery)
- Prompt referral by TBAs
- Non use of herbs
- Woman’s characteristics (e.g. previous obstetric history).
- Improving woman’s knowledge about risk factors
- Early detention of poor obstetric history
- Early decision to seek health care.

If more space is required, use another Form C and attach forms together.

**Name of data collector:**

**Date of completion:**
FORM E COMMUNITY INTERVIEW RECORD

The interviewer should follow the woman backwards down ‘the long road to maternal death’ starting with details of events immediately surrounding the time of death. The process of gathering the information is likely to be very upsetting to the relatives of the deceased woman. The approach of the data collector must be acutely sensitive to this. An introduction is required which tells the interviewee(s) the purpose of the interview, recognises that it is difficult for them and that their co-operation will help other women not to suffer the same fate.

The checklist is to be used as memory prompt; the sample questions given are illustrative and should be adapted for local use.

**Name of mother** .......................... Age:......... Next-of-kin:..........................

No. Of Deliveries: .......... **Details of Address:** Village:................................. Sub-county: .........................District.........................

<table>
<thead>
<tr>
<th>CHECKLIST</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report according to what you are told by word of mouth.</td>
<td></td>
</tr>
<tr>
<td><strong>Socio-demographic factors:</strong></td>
<td></td>
</tr>
<tr>
<td>Was (name) married?</td>
<td></td>
</tr>
<tr>
<td>How old was name) when she married?</td>
<td></td>
</tr>
<tr>
<td>What was her occupation; did she have some money independent of her husband/family?</td>
<td></td>
</tr>
<tr>
<td>What was her husband’s occupation?</td>
<td></td>
</tr>
<tr>
<td>What were her level of education and her husband’s level of education? (no. of years at school)</td>
<td></td>
</tr>
<tr>
<td>How are you related to (name)? Can you tell me what happened before (name) died and what you think the cause of her death was?</td>
<td></td>
</tr>
<tr>
<td>CHECKLIST</td>
<td>DETAILS</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Respondents knowledge:</td>
<td></td>
</tr>
<tr>
<td>‘Were you present with (name) when she died?’ If no, how long before her death did you see her?’</td>
<td></td>
</tr>
<tr>
<td>‘Who told you about her death?’</td>
<td></td>
</tr>
<tr>
<td>‘Was this person with (name) when she died?’</td>
<td></td>
</tr>
<tr>
<td>‘About how long after her death, did you hear about it?’</td>
<td></td>
</tr>
<tr>
<td>General health during pregnancy:</td>
<td></td>
</tr>
<tr>
<td>Before (name) was pregnant for the last time, was she generally well?</td>
<td></td>
</tr>
<tr>
<td>Antenatal care:</td>
<td></td>
</tr>
<tr>
<td>‘Did (name) ever go for antenatal care during her last pregnancy?’</td>
<td></td>
</tr>
<tr>
<td>‘If yes, where did she go?’</td>
<td></td>
</tr>
<tr>
<td>Whom did she see for antenatal care?</td>
<td></td>
</tr>
<tr>
<td>How many times did she go for antenatal care?</td>
<td></td>
</tr>
<tr>
<td>CHECKLIST</td>
<td>DETAILS</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Symptoms before arriving at facility:</strong>&lt;br&gt;‘Before arriving at facility did (name) have any of the following problems:**</td>
<td></td>
</tr>
<tr>
<td>• Convulsions/fits</td>
<td></td>
</tr>
<tr>
<td>• Bleeding from any site</td>
<td></td>
</tr>
<tr>
<td>• High fever</td>
<td></td>
</tr>
<tr>
<td>• Yellow skin or eyes</td>
<td></td>
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<td>• Distended abdomen</td>
<td></td>
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<tr>
<td>• Abnormal breathing</td>
<td></td>
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<tr>
<td>• Extremely short of breath</td>
<td></td>
</tr>
<tr>
<td>• Vomiting</td>
<td></td>
</tr>
<tr>
<td>• Other symptoms (please specify)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Did she live in her own household or with relatives?</td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>
| **Action taken before taking to health facility:**<br>Did you seek any help for the problem? From whom did you seek treatment and where? If no, what were the reasons for not seeking treatment?<br>This may include help summoned (get a description of the type of help and what was done, measures taken to access care for the woman (modern medical care) e.g. money found for transport, transport arranged. Why no treatment was sought may be a sensitive question. It may be that the cause of death was sudden and unpredictable (e.g. eclamptic fit in
<table>
<thead>
<tr>
<th>CHECKLIST</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second stage of labour); that the attendants did not notice anything was wrong (see next question); or that there was no money (or money offered) for transport or another ‘social’ reason which may be difficult to elicit.</td>
<td></td>
</tr>
</tbody>
</table>

**Warning signs/danger signs:**
Did something happen to make you realise that something was going wrong?’ What was that? Did anyone recommend that (name) be referred? If yes, who? Did the deceased take any native medicine?

**Avoidable factors:**
About how long after you felt something was wrong did you decide to get (name) to the facility?  
About how long did it take to get to the facility?  
Once you arrived at the facility, how long was it before a nurse/midwife/doctor came to examine (name)?  
If there was delay, what do you think would have been needed to prevent the delay?  
In your opinion, what could have been done to save (name) life?

**Treatment at the facility:**
What treatment did (name) get at the facility (if present) or, what explanation of treatment was given to you by the staff at the facility (if any).  
What do you think the cause of death was?
### FORM E (Cont.)

<table>
<thead>
<tr>
<th>Summary of avoidable factors</th>
<th>Importance of factor (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definitely would have avoided death</td>
</tr>
<tr>
<td>Staff oversight</td>
<td></td>
</tr>
<tr>
<td>Staff misguided action/non-action</td>
<td></td>
</tr>
<tr>
<td>Staff incompetence</td>
<td></td>
</tr>
<tr>
<td>Service inadequacy</td>
<td></td>
</tr>
<tr>
<td>Events and circumstances in the community</td>
<td></td>
</tr>
<tr>
<td>Woman factors</td>
<td></td>
</tr>
</tbody>
</table>

**Name/s of data collector/s:**

**Date of completion:**
**FORM E: WOMAN-HELD ANTENATAL RECORD**

<table>
<thead>
<tr>
<th>DATA ITEM</th>
<th>SIGNIFICANT FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care attendance (Yes/No)</td>
<td></td>
</tr>
<tr>
<td>Number of visits</td>
<td></td>
</tr>
<tr>
<td>Tetanus toxoid received</td>
<td></td>
</tr>
<tr>
<td>Iron supplementation given</td>
<td></td>
</tr>
<tr>
<td>Was the blood pressure taken at each ANC visit?</td>
<td></td>
</tr>
<tr>
<td>Recommended place of delivery</td>
<td></td>
</tr>
<tr>
<td>Relevant past medical history</td>
<td></td>
</tr>
<tr>
<td>Past obstetric (pregnancy) history</td>
<td></td>
</tr>
<tr>
<td>Complications (e.g. raised blood pressure, proteinuria, antepartum haemorrhage, malpresentation)</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Length of time since last delivery</td>
<td></td>
</tr>
<tr>
<td>Was IPT given?</td>
<td></td>
</tr>
</tbody>
</table>

**Name of data collector:**

**Date of completion:**