QI-MP/F/09/028-0

GUIDELINES FOR COMPLETING THE MATERNAL DEATH NOTIFICATION FORM

Maternal and Perinatal Morbidity and Mortality Review Committee

Ministry of Health and Family

Maldives

March 2010

INTRODUCTION

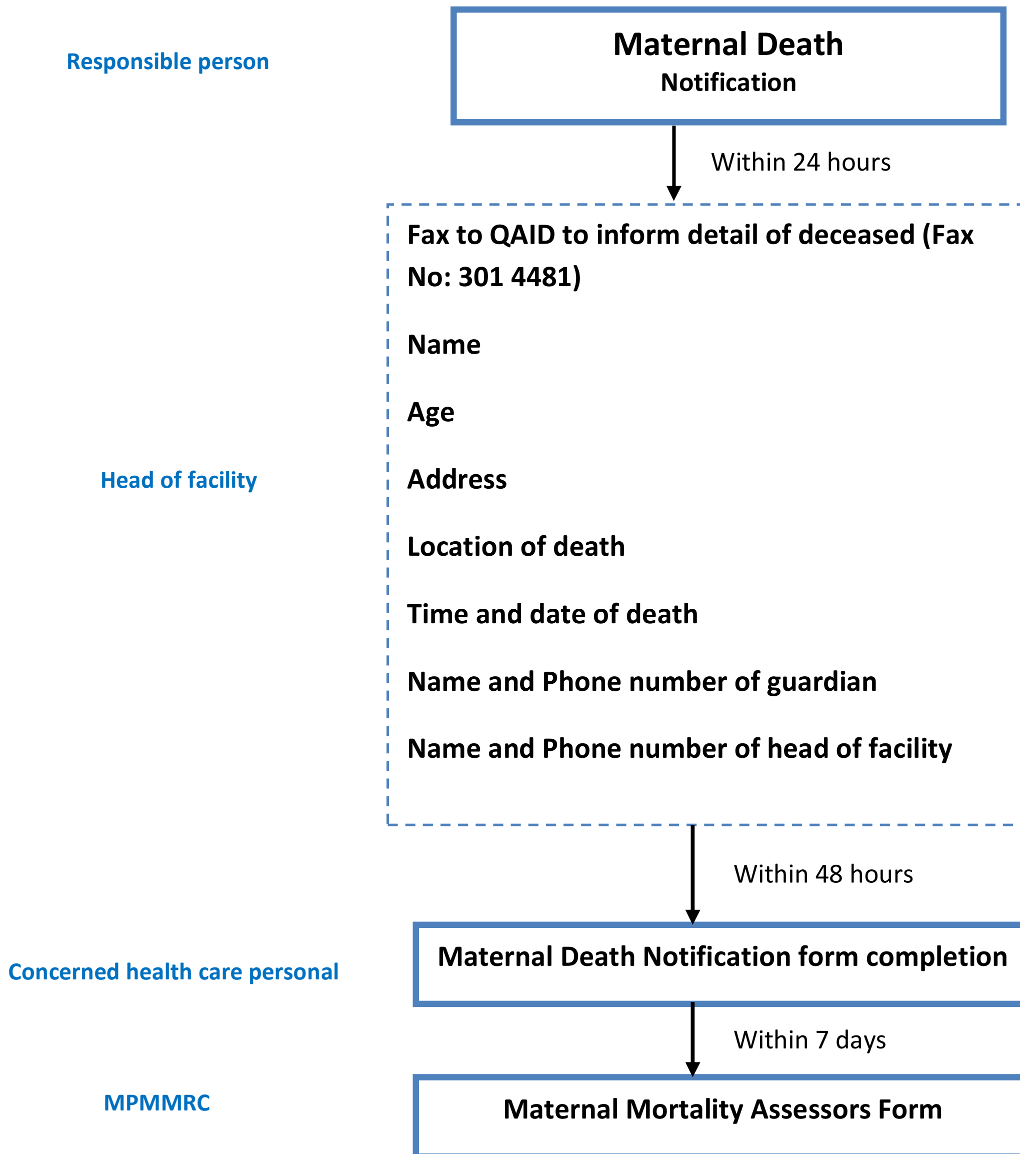
Maternal deaths are a major concern of the Ministry of Health and Family. One of its objectives is to reduce maternal mortality by three quarters by the year 2015, as recommended in the MDG-5, fifth goal of Millennium Development. To help achieve this goal, the Ministry has made maternal death a notifiable medical condition. It has also created a Maternal and Perinatal Morbidity and Mortality Review Committee (MPMMRC) to study all maternal deaths. The MPMMRC is tasked with making recommendations, based on confidential study of maternal deaths, to the MOHF, such that the implementation of the recommendations will result in a decrease in maternal deaths. The inquiry is confidential and information regarding the identity of the patient or health personnel will not be available to anyone. The members appointed to the MPMMRC, have been appointed in their individual capacity and none of the members will be involved in any medico-legal case involving a maternal death.

It is important to identify all maternal deaths that occur in an institution. (For Definition of maternal death see page 10).

After any maternal death, the process to be followed is:

1. Once a maternal death occurs the information should be communicated to QAID/MOHF within 24 hours.
2. Completion of the Maternal death Notification Form (MDNF) within 7 days by the members of the institution where the death occurred. It is advised that the preliminary discussion occurs at the institution within 24 hours of the death to make sure that all information is available. It is the responsibility of the head of the institution, or the person officially designated the task by the head, to ensure the form is filled in. Non notification of a maternal death is regarded as professional misconduct.
3. Send the completed form, plus a copy of the patients file, to QAID within 2 days of the event. The copy of the patient's file must include all records e.g. medical and nursing notes including antenatal records, anesthetic forms, prescription forms, laboratory results and monitoring charts.
4. The MPMMRC (a team of experienced obstetrician /doctors and midwives) will study the form and the case notes, and complete an assessor's form.
5. The MPMMRC will produce regular reports on maternal deaths occurring in the country with specific recommendations to the MoHF .
6. Once the report is completed, all documentation relating to the report will be destroyed.
7. It is the responsibility of the MPMMRC, to maintain confidentiality.

Maternal Death Notification / Evaluation Flow Chart



The aim of this form is to collect information on a maternal death. It is designed so that the story of what happened can be accurately recorded. These guidelines are designed to help you fill in the form and also to discuss the death with the health personnel in your area. It should be seen as a document that will take you systematically through the death of a woman so that an understanding of what happened is reached. This guideline should be read while filling in the Maternal Death Notification Form.

All forms will be analyzed by the MPMMRC. After analysis we will know:

- The size of the problem
- The geographical areas where the major problem occur.
- The pattern of disease that results in deaths of mothers.
- Where the health system can be improved.

Without information, there can be no action!

By defining the problem using the above four features, the Ministry of Health and Family will be able to act on the problem, where disease cannot be prevented, research energies can be driven in that direction to try and solve the problem. Where problems in the health system are identified, these can be rectified.

OUTLINES AND PHILOSOPHY OF THE DESIGN OF THE FORM

The form has 10 sections as shown below:

1. Institution where death occurred
2. Details of deceased
3. Admission at institution where death occurred or from where it was reported
4. Antenatal care
5. Delivery, puperium and neonatal information
6. Interventions
7. Case summary
8. Cause of death
9. Local assessment of avoidable factors
10. Suggested initiates to prevent recurrence of deaths of a similar nature.

Section A (Questions 1-3) give us the demographic details of the patient. Section B (Questions 4-8) describes the medical history and the sequence of events that resulted in the death. Section C (Question 8) gives us the suggested cause of death. Section D (Question 9-10) includes a local assessment of possible avoidable factors considering all circumstances (e.g. community problems, transport problems, health system problems), and suggestions for medical actions where appropriate.

Information that a pregnant women 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 will be seen.

Section B and C on the **medical history / sequence of events and cause of death** will enable us to determine the most common problems, and also see whether the common cause of death vary from one area to another.

Maternal deaths are uncommon events. Most women survive severe illness that occur in pregnancy; however some pregnant women unfortunately do die. The objectives are to determine why the women died in a particular case. Commonly there has been a breakdown in various levels of the health system. If these breakdowns are identified, action can be taken so that the deaths can be prevented. This bit of detective work is captured in the D section. Perhaps this is one of the most and 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 and at the same time you will be able to analyze the death for yourself. The case summary in Question 8 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.

It is the task of the MPMMRC to bring information about all the deaths together and to analyze the data. With the information the MPMMRC will be able to report how many maternal deaths there are per defined geographical area, what the medical conditions are that are causing most of the deaths and where there are problems with the health system. Once this information is available, solutions to the problem identified can be sought. Finally recommendations, based on sound information, can be made to the Minister. Implementation of the recommendations should lead to a decrease in the number of maternal deaths and also improve the quality of care of our pregnant women.

A maternal death is a disaster. 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, if 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 f 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 all pregnant women. Studying maternal deaths, determining the problems and rectifying them is a direct, effective way of improving the quality of care for all pregnant women. This is the essential motivation for enquiry into all maternal deaths.

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

FILLING IN THE MATERNAL DEATH NOTIFICATION FORM

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

MINISTRY OF HEALTH AND FAMILY

CONFIDENTIAL

MATERNAL DEATH NOTIFICATION FORM

For office use only: Ministry of Health and Family case										

1. Once a maternal death occurs the information should be communicated to QAID/MOHF within 24 hour.
2. This form must be completed for all deaths in pregnant women or within 42 days after termination of pregnancy, including abortions, ectopic gestations, motor vehicle accidents, and suicide related deaths irrespective of duration or site of pregnancy.
3. Mark with an (X) where applicable (? Means unknown)
4. Attach a copy of complete case records and anesthetic forms to this form
5. Complete the form within 2 days of a maternal death. The completed form is sent to QAID
6. All maternal deaths must be discussed in an institutional mortality meeting. Such meetings will assist in the completion of sessions 8, 9 and 10 of this form.

Address of contact person: Head of Health Facility

Case discussed at institutional mortality Yes ☐ No ☐ IF YES: DATE ☐

Definition- a maternal death is 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. This includes all abortion, ectopic pregnancies, gestational trophoblastic disease and deaths from suicide. Deaths not related to the pregnancy such as motor vehicle accidents, and other trauma, are called coincidental deaths and should also be notified

Note: the form must be filled in within 2 days of the death. This is to ensure the events leading up to the death are still fresh in everyone's mind. It is very important that the death is discussed amongst relevant role players at an institutional mortality meeting; such meetings will assist in completion of section 8, 9 and 10 of the form. The form with a copy of the folders must be sent to QAID through the management.

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.

1. LOCALITY WHERE DEATH OCCURRED

Atoll [ ] Island [ ]

Institution [ ] In transit

Plane	Dhoani	Ambulance	Car / Pick-up	Others

2. Details of deceased

This information is necessary so that tracing the route of the patient in the health service is possible.

2. DETAILS OF THE DECEASED

Name………………………………………………………… Inpatient No…………………………………………………

Address…………………………………………………………………

Age (yrs)…………………………………………… marital status…………………………………………………

At the time of death

Gravida [ ][ ] Para [ ][ ] **Gestation (weeks) (or at delivery)** [ ][ ] **Days since delivery / miscarriage (if not applicable enter 99)** [ ][ ]

- Gravida: the number of times the women was pregnant
- Parity: number of times the women delivered a baby of 22/500g or more, whether alive or dead. Please report the parity as if the woman was still pregnant. This is to ensure uniformity of reporting.

3. ADMISSION AT INSTITUTION WHERE DEATH OCCURRED OR FROM WHERE IT WAS REPORTED

	d	d	m	m	y	y		24h	min
Date of admission							Time of admission		
Date of death							Time of death		

On admission	Miscarriage / Ectopic		Antenatal		Intrapartum		Postpartum
Condition on admission	Stable		Critically ill		Dead on arrival		Other- specify

Diagnosis at moment of death	Miscarriage	Ectopic pregnancy	Not in labour	In labour	Postpartum

Reason for admission

Referral from another centre? | Y | N |

Information regarding the condition of the women on admission will help in identifying any delays in presentation and problems in transport. It will also indicate at what stage the pregnancy she was: antenatal, intrapartum, or postpartum.

A miscarriage is defined as a pregnancy loss where the fetus weighs less than 500grms.(this is roughly equivalent to 22 weeks gestation).

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

It is important to trace the route the women took from home and through the health services as well as the time it took from each place. Therefore, we need records from all the health services that the women entered.

B. MEDICAL HISTORY AND SEQUENCE OF EVENTS

4. Antenatal Care

The effective use of 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. The quality of antenatal care is indicated by gestational age at booking and the numbers of visits.

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

4. ANTENATAL CARE

Did she receive antenatal care?	Y	N	?	If "Y" at what locality	?	Primary	Secondary	Tertiary Private Other

How many visits

Antenatal care provider	Specialist	Med. Off/ GP	Midwife / Reg. nurse	other- Specify

	Y	N
Was the gestational age at booking <20wks?		
Total number visits		

Antenatal Risk Factors

Risk			
Past Medical History	Specify:		
Hypertension			
Proteinuria			
Glycosuria			
Anaemia			
Abnormal lie			
Previous / C/Section			

Other- Specify

Comments on antenatal complications and management- List any medication (if bloc insufficient, use an extra sheet or paper

Definitions of antenatal care provider / s:

1. Specialist (Obs / gynae)- a person who is registered as a specialist with the Maldivian Medical Council.
2. General Practitioner – a person registered with the Maldivian Medical Council, it includes medical officers.
3. Registered Nurse Midwife – a person registered as such with the Nursing Council as a Registered Nurse midwife
4. Enrolled Nurse Midwife - a person registered with the Nursing Council as an Enrolled Nurse Midwife
5. Others – e.g, community health worker, TBA.

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.

5. Delivery, puerperium and neonatal information

5. DELIVERY, PUERPERIUM AND NEONATAL INFORMATION

Did labour occur?	Y	N	If "Y" was a partogram used	Y	N	?	Labour	Short	Normal	Prolonge	CPD present

Delivery (Tick appropriate box)	Undelivered	vaginal (unassisted)	vaginal vacuum / forceps	Caesarean section

Baby	Birth Weight (g)					5 min Apgar			Outcome	Stillbirth	Neonatal death	Alive

Comments on labour delivery and puerperium (if bloc insufficient uses an extra sheet of paper)

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 hemorrhage, or to puerperal infection. Both of these can result in a death. Prolonged labour, if obstructed, can lead to a ruptured uterus.

The information regarding the baby helps in recording the size of the social problem that a maternal death leaves behind. Fill in the box with any other information, especially what happened to the mother once the baby was born.

Definitions for length of labour categories are as follows:

1. Short labour –less than 4 hours active phase
2. Normal labour – 4 to 10 hours in active phase
3. Prolonged labour – more than 10 hours in the active phase or a total duration of >18 hours.
4. CPD present – this box should be marked when labour is prolonged and / or there is evidence of cephalopelvic disproportion.

6. Interventions

6. NTERVENTIONS (tick appropriate box)				
Early pregnancy	Antenatal	Intrapartum	Postpartum	Others
Evacuation	Transfusion	Instrumental delivery	Evacuation	Anaesthesia GA
Laparotomy		Caesarean section	Laparotomy	Epidural
Hysterectomy		Hysterectomy	Hysterectomy	Spinal
Transfusion		Transfusion	Transfusion	Local
			Manual removal of placenta	Invasive monitoring
				ICU ventilation
Others- Specify				

Comments on intervention (if bloc insufficient, use an extra sheet of paper)

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. anesthesia. It is useful to list all the interventions and 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. Laparatomy - this is where the abdomen is opened surgically.
3. Hysterectomy – this is where the uterus is removed.
4. Transfusion – in this case it means whether blood or blood products were given.
5. Instrumental delivery- was a forceps or vacuum used to assist in delivering the baby
6. Caesarean section – the baby is born abdominally through a cut in the abdomen and uterus and not vaginally.
7. Manual removal of placenta- this is where the placenta is removed from the uterus using a hand or curette after a baby has been born.
8. Anesthesia – general anesthesia is where the woman is put to sleep while a procedure is carried out.
9. Epidural anesthesia – where local anesthetic agent is injected into the epidural space to provide pain relief during a procedure.

10. Spinal anesthesia – where the local anesthetic is injected into the cerebrospinal fluid (CSF).
11. Local anesthesia – where local infiltration of each tissue layer was performed.
12. Invasive monitoring – was a central venous pressure (CVP), Swan – Ganz catheter or invasive blood pressure monitoring used.
13. Prolonged ventilation – did the women require ventilation other than during an operation. This is usually in an invasive situation.

7. Case Summary

A short summary should 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. It is important to give dates and exact times so any delays can be reflected. If information is available from relatives about events that occurred before entry to a health facility, this should also be included.

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 the Maldives are. 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 region and thus intervention may have to be tailored to specific areas. Fortunately, this information will be available because the place where the women died has already been recorded.

Cause of death: specify disease entity:

Final cause and other complication: Specify organ systems that failed: (There can be more than one) Please mark contributory conditions below

Was there prolonged / obstructed labour?	Y	N	N/A				
Was there previous caesarean section?	Y	N	?	Was the woman anaemic during pregnancy?			

Medical conditions involved

The classification system adherers as closely as possible to the ICD10 system and has two aims:

1. To identify the initiating condition or disease entity that led to the death of the woman. This is called the **cause of death** in the above table. There can be only one cause specified. Appendix1 describes the classification of causes / disease entities.

Causes can be grouped into larger categories to simplify analysis and interpretation of data. For example: obstetric hemorrhage is an example of a larger category which includes subcategories which are the actual causes. Where known the exact cause should be specified, e.g. ruptured uterus or postpartum uterine atony. Where unknown the border category such as postpartum hemorrhage can be cited. This classification is oriented towards prevention.

2. To identify what event finally resulted in the death of the women. This is called the final cause of death. There can be only one final cause of death. However, in some cases there may be **other complications** that lead to the final cause of death. These complications have the same classification as the final cause. See appendix 2. The classification is oriented towards the organ systems that failed and lead to death or developed complications, 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, consider a woman who developed eclampsia, and as a complication of this had a brain bleed and a cardiac arrest. The initiating condition or disease entity **(cause of death)** would be classified as eclampsia, the final cause of death being the cerebral hemorrhage and the mode of dying was the cardiac arrest.

It is necessary to identify the initiating condition or disease entity **(cause of death)** because this will indicate areas where programmes based on **preventing** maternal deaths can be concentrated.

The final cause and other complications 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 obstetric cause of death was a septic abortion and the final cause was pneumonia with the complications being acute tubular necrosis, 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 women 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, referring to the appendices at the end of these guidelines.

Following the boxes for allocating the cause of death, final cause and complications, there are 4 smaller boxes which reflect the presence or absence of important **contributory** (or underlying) factors. These must be completed. For many maternal deaths, there are important background features contributing significantly to the initiating condition or disease entity. For example: prolonged, obstructed labour may be the process that leads to

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

a death from postpartum hemorrhage, or from puerperal sepsis. Previous caesarean section is an important contributory factor resulting in hemorrhagic deaths due to uterine rupture. Anemia also will make women more vulnerable to deaths from hemorrhage and sepsis.

Definitions:

1. Prolonged labour: Total duration of labour >18hrs (WHO, 1994), or active phase labour >10 hours.
2. Obstructed labour : Prolonged labour with mechanical disproportion between presenting part and maternal pelvis
3. Anaemia: Hemoglobin <10gms/dl. The lowest hemoglobin result obtained during the antenatal period should be recorded.

D. LOCAL ASSESMENT OF AVOIDABLE FACTORS AND SUGGESTIONS FOR REMEDIAL ACTION

10. Could the death have been prevented?

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 women 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 women. Another example would be a woman who delivered at a health centre, and developed a massive postpartum hemorrhage. 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 women 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.

“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 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 anesthetic, radiological and pathology services. It is used in preference to the term “avoidable factors” which was used previously in England and Wales Report until 1979 and has 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 the context of the report means that the care that the patient received, or care that was made available to her, fell below the standard which the authors considered should have been offered to her in this triennium."

The MPMMRC uses definition of "substandard" care. The information obtained by looking for substandard care is vital in pinpointing where the health system can be improved, and indicates immediately where ones' efforts must be concentrated.

11. IN YOUR OPINION DID ANY OF THE FOLLWING FACTORS CONTRIBUTR TO THE DEATH OF THIS PATIENT?

System	Example	Y	N	?	Specify
Personal / Family	Delay in women seeking help				
	Declined treatment or admission				
	Other; specify				
Logistical systems	Lack of transport from home to health care facility				
	Lack of transport between health care facilities				
	Health services- Health service communication breakdown				
Facilities	Lack of facilities, equipment or consumables (drug, infusion sets, blood, fluids etc)				
Health personnel problems	Lack of human resources				
	Lack of expertise, training or education				
	Delays in referral				
	Delays in appropriate action				

Comments on potential avoidable factors, missed opportunities and substandard care

Please note that substandard care includes inadequate monitoring as well as substandard management

In many cases there may be "missed opportunities" which occurred before the patient accessed the health care facility; for example, delay in presenting with a puerperal fever could reflect lack of transport or lack of social support at home to care for existing children. Case records do not usually reflect these details. However, some information can be obtained by relatives who brought the patient to hospital. It is important that this exercise is not seen as "patient blaming" but refers a real attempt to understand the factors operating outside the health sector which were constraints to the patient seeking care.

For ease of analyzing a maternal death the possible areas of substandard care have been grouped into four areas; personal / family problems, logistical systems problems, facilities problems and health personnel problems. Personal / family oriented problems are those related to the woman or her family in utilizing the health services, or poor communication between the health service and women or her family etc. Logistical systems problems relate to problems such as lack of transport, or lack of means of communication due to absence of telephones etc. Facilities problems relate to lack of facilities such as intensive care beds, equipment such as ventilators and consumables such as drugs. Health personnel problems relate to the staffing at health facilities (lack of human resource) and the management of patients.

12. Completing the Audit Cycle; Learning and Recommending Actions where (Applicable) to remedy. Identified substandard care.

12. WHAT HAS YOUR INSTITUTION LEARNT FROM THIS CASE AND WHAT ACTIONS DO YOU ENVISAGE FROM THIS LEARNING PROCESS? *(If applicable)*

This is very important section and should reflect local discussions about recommended actions or changes which require implementation in order to prevent similar problems in the future.

For some deaths, no avoidable factors or substandard care can be identified; then this section is non applicable (Mark N/A in the box).

For others, definite actions should be implemented. For example: if lack of available emergency blood at a level one hospital is identified as substandard care for a death from hemorrhage, then the recommended action would be "liaise with the nearest available Blood Transfusion Service to secure a supply of emergency blood". If a women dying from puerperal sepsis following Caesarean section had not had pre-operative antibiotics, the action would be "implementation and auditing of protocol for routine preoperative intravenous antibodies".

FORM COMPLETED BY:

This form is completed by:

Name(print)…………………………………………………. Rank………………………………………………

Telephone……………………………………………………. Fax…………………………………………………

Date................. (d)…………………. (m)…………….(y)

Health Facility………………………………………………… 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 department where the death occurred must ensure that the form is filled in. Ideally, the form should be filled in following a meeting where the death is discussed with all the people involved in managing the case. Usually in smaller institutions the manager will ensure the form is filled in and lead the discussion around the death. In larger institutions the Head of Facility delegate the authority to ensure the form is filled by the head of the department of Obstetric and Gynecology Department. The head of department will obviously lead the discussion around the death.

Note: Copies of all the case notes must accompany this form. This must include medical notes, nursing notes, observation and monitoring charts and anesthetic forms.

APPENDIX ONE

Classification of the Disease Entity causing maternal death cause / Disease Entity

- **No obstetrical cause**

Motor vehicle accident
Assault
Assault with rape
Trauma
herbal medicine
Other – Specify

- **Medical and Surgical disorders**

cardiac disease
  - Undiagnosed
  - Mitral valve disease
  - Other rhematic heart disease
  - Artificial valve complication
  - Congenital heart disease
  - Arrhythmias
  - Cardiomyopathy
  - Other

Endocrine
  - Diabetes mellitus
  - Thyroid
  - Other

Gastrointestinal Tract
  - Liver disease
  - Intestine
  - Pancreatitis
  - Other

Central Nervous System
  - Cerebrovascular accident
  - Epilepsy
  - Other

Respiratory
  - Asthma
  - Other

Haematological
  - Anaemia
  - Leukaemia
  - Other

Genito-urinary
  - Renal
  - Genital
  - Other

Auto-immune

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

- Systemic Lupus Erythematous
- Other

Skeletal

- Kyphoscoliosis
- Dwarfism
- Other

Psychiatric

- Puerperal psychosis
- Postpartum depression
- Suicide
- Other

Neoplasm

- Breast
- Oesophageal
- Stomach
- Cervical
- Other- Specify

Non Pregnancy- related infections

Pneumococcus Carini Pneumonia

Other pneumonia

Tuberculosis

Bacterial endocarditis

Pyelonephritis, urinary tract infection

Appendicitis

Malaria

Cryptococcal meningitis

Other meningitis

Kaposi's sarcoma

Cholera

Hepatitis

Gestroenteritis

Wasting syndrome

Compkications of anti- retroviral therapy

Other- Specify

Ectopic Pregnancy

Other- Specify

Other- Specify

Miscarriage

Septic miscarriage

Haemorrahge (non traumatic)

Uterine trauma

Gestational Trophoblastic disease
Complication of legal termination of pregnancy (TOP)
Hypermesis gravidarum

Pregnancy- related sepsis
Chorioamnionitis / Amniotic fluid infection with ruptured membranes
Chorioamnianitis / Amniotic fluid infection with intact membrances
Puerperal sepsis following normal delivery
Puerperal sepsis following caesarean section
Puerperal sepsis after bowel injury at Caesarean section
Other- Specify

Obstetric hemorrhage
Abruptio Placentae
Abruptio placentae with hypertension
plecenta praevia
Other- APH- specify
Ruptured uterus- with previous caesarean section
Ruptured uterus- without previous caesarean section
Retained Plecenta
Morbidly adherent placenta
uterine atony
Vaginal trauma
Cervical trauma
Haemorrhage during Caesarean section
PPH after caesarean section
Other- PPH- specify

Hypertensive disorders of pregnancy
Chronic hypertension
Proteinuric hypertension
Eclampsia
HELLP syndrome
Ruptured of the liver
Acute fatty liver
Other- Specify

Anaesthetic complications
Complications general anesthesia
Complications epidural block
Complications spinal block

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

Embolism

Pulmonary embolus

Amniotic fluid embolus

Acute collapse- cause unknown

Unknown

Death at home / outside health service

No primary cause found

Inadequate information to assign cause

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care

APPENDIX TWO

Classification of the final cause of maternal death and other complications

Organ System
Hypovolaemic shock
Septic shock
Respiratory failure
Cardiac failure Pulmonary oedema Cardiac arrest
Acute cardiopulmonary failure due to embolism
Renal failure
Liver failure
Cerebral complication Intracranicak haemorrhage Cerebral oedema resulting in corning meningitis / infection (including malaria) Cerebral emboli Brain death following hypoxic event Unspecified
Metabolic Maternal ketoacidosis Electrolyte imbalance Thyroid crisis Lacticacidosis Other
Haematological Disseminated intravascular coagulation Severe Anaemia
Immune system failure
Unknown Home death Unknown (not home death)
Other- Specify

Last updated on 15th March 2010

The information contained in this form is ONLY for the use of MPMMRC and is SOLEY intended to be used to prevent maternal and perinatal deaths to improve the service related to maternal and neonatal care