GUIDELINES FOR COMPLETING THE

MATERNAL DEATH NOTIFICATION FORM

(Second Edition, 1999)

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INTRODUCTION

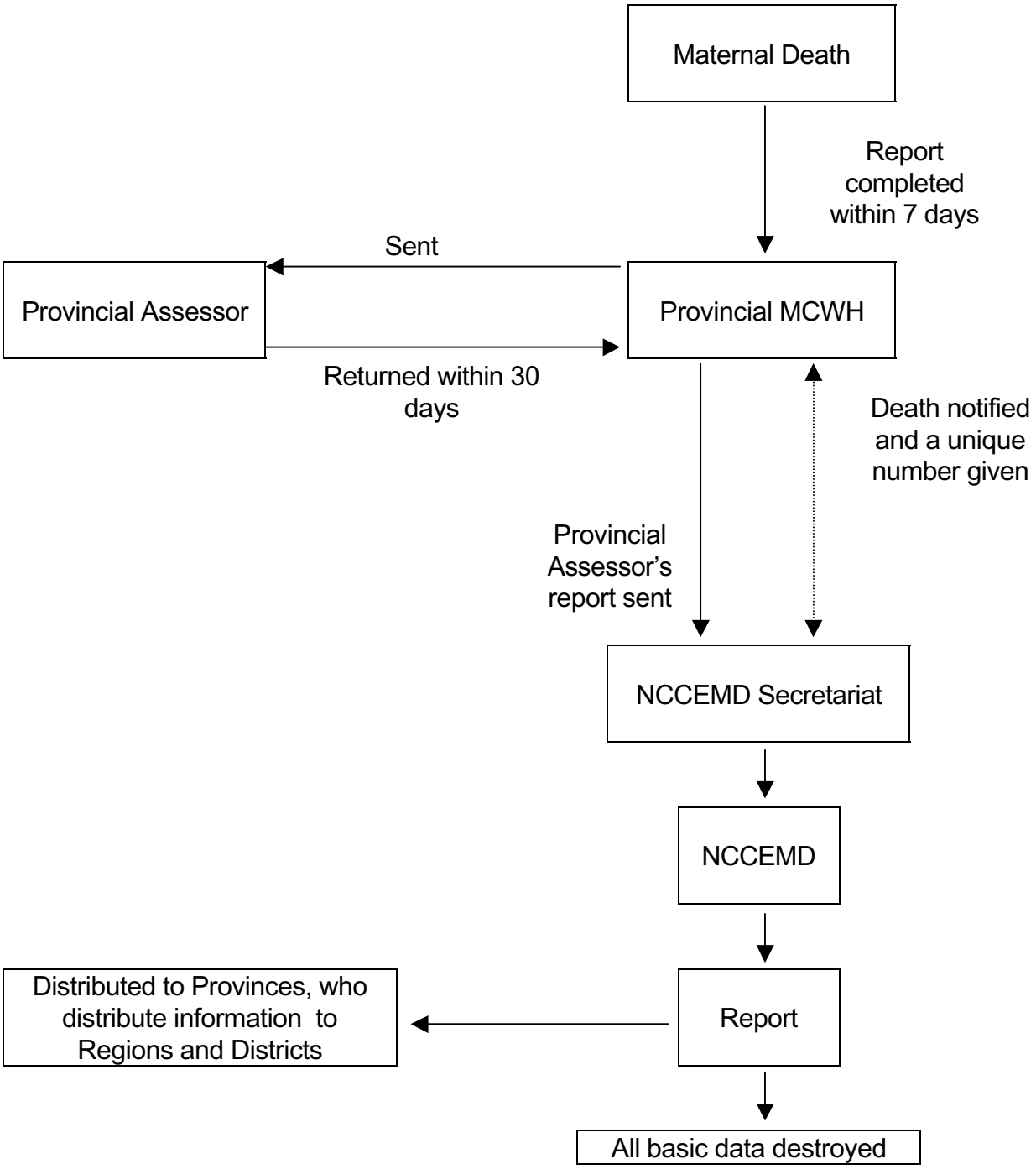
Maternal deaths are a major concern of the Department of Health. One of its objectives is to halve the number of maternal deaths by the year 2000. To help achieve this goal, the Department has made maternal deaths notifiable medical condition in terms of the Health Act, 1977 (Act No. 63 of 1977). This was published in the Government Gazette (Government Notice No. 1307) on the 3rd October, 1997. It has also created a National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD) to study all maternal deaths. The NCCEMD is tasked with making recommendations, based on the confidential study of maternal deaths, to the Department of Health 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 NCCEMD, have been appointed in their individual capacity and none of the members will be involved in any medico-legal case involving a maternal death.

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

1. Completion of the Maternal Death Notification Form within 7 days by the members of the institution where the death occurred.
2. Sending the completed form, plus a copy of the patients file, to the Provincial Maternal Child and Women's Health units (or designated person) within 7 days of the event.
3. The Provincial Maternal Child and Women's Health units (or designated person) will send the form, with the copy of the file, to a Provincial Assessor **and** notify the NCCEMD secretariat that a death has occurred. This should also be completed in 7 days. A unique file number will be issued for the case by the NCCEMD secretariat. This number will ensure that no death is entered twice.
4. The Provincial Assessor will study the form and the case notes, and complete an assessor's form and return all documentation to the Provincial Maternal Child and Women's Health units (or designated person) within one month of receiving the case.
5. The Provincial Maternal Child and Women's Health units (or designated person), will forward all documentation to the NCCEMD secretariat. If the NCCEMD secretariat has not received the Maternal Death Notification Form and a copy of the case notes within 30 days, the secretariat will contact the Provincial Maternal Child and Women's Health units (or designated person) and find out what has happened to the information.
6. The NCCEMD secretariat will send the cases to the committee for collation and analysis

7. The NCCEMD will produce regular reports on maternal deaths occurring in the country with specific recommendations to the Minister of Health and also make the report available to the public.
8. Once the report is completed, all documentation relating to the report will be destroyed.
9. It is the responsibility of the NCCEMD, the Provincial Assessor's, and the Provincial Maternal Child and Women's Health units (or designated person) to maintain confidentiality.

The process is summarised by the diagram below:



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 analysed by the NCCEMD. After analysis we will know:

1. The size 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.

Without information, there can be no action!

By defining the problem using the above four features, the Minister of Health, the Provinces, Regions and Districts will be able to act on the problem. Where diseases 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. The process used is called the ICA Solution audit system. This system has been successfully used to bring down the perinatal mortality in various regions in South Africa, and is incorporated in the Perinatal Problem Identification Programme (PPIP).

The process of the Confidential Inquiry is dynamic, and a system is in place in your area from which you will get regular feedback via the Maternal Child and Women's Health units in each Province. This feedback will occur at every level, from Country, Province, Region, District and District Hospitals and Health Centres. The report of the NCCEMD will also be available to you.

OUTLINE 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, puerperium and neonatal information
6. Interventions
7. Cause of death
8. Other contributing factors
9. Autopsy
10. Case summary

Sections 1-3 give us the demographic details of the patient, 4-7 the medical conditions that resulted in the death, 8 whether there were other circumstances surrounding the death not related directly to the medical condition e.g. transport problems, and 10 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 will 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 also see 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 and 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.

It is the task of the NCCEMD to bring information about all the deaths together and to analyse the data. With the information the NCCEMD 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 problems 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 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 of maternal deaths decrease, the number of women who just escaped death will also decrease. These interventions automatically imply that quality of care has improved. 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 the confidential enquiry into all maternal deaths.

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).

DEPARTMENT OF HEALTH
CONFIDENTIAL

MATERNAL DEATH NOTIFICATION FORM

For office use only: Department of Health Office case number								

NOTE:

1. ***This form must be completed for all deaths, including abortions and ectopic gestation related deaths, in pregnant women or within 42 days after termination of pregnancy irrespective of duration or site of pregnancy***
2. ***Mark with an (X) where applicable (? means unknown)***
3. ***Attach a copy of the case records to this form***
4. ***Complete the form in duplicate within 7 days of a maternal death. The original remains at the institution where the death occurred and the copy is sent to the person responsible for maternal health in the province***

Address of contact person (Person responsible for Maternal Health in the Province)

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 abortions, ectopic pregnancies and gestational trophoblastic disease. It also includes deaths non-related to pregnancy such as motor vehicle accidents, other trauma and suicide.

Note: 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. The form with a copy of the folders must be sent to the person responsible for Maternal health in the Province. The address is given in the space provided so that there can be no confusion as to where the form must be sent. This person will ensure the document remains confidential and is passed on to the Provincial Assessor and the National Committee.

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.

1. LOCALITY WHERE DEATH OCCURRED

Province _____ Health District _____

Institution	Locality	CHC Clinic	Level 1 Hospital	Level 2 Hospital	Level 3 Hospital	Private Hospital	Other - Specify

Classification of institutions.

1. CHC – Community Health Centre, Clinic.
2. Level 1 Hospital - hospitals staffed by doctors generally with or without visiting obstetric and gynaecology specialists
3. Level 2 Hospital - the hospital has obstetric and gynaecology specialists that are always available
4. Level 3 Hospital - the hospital has sub-specialists and full intensive care facilities
5. Private - A private hospital or clinic

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.

2. DETAILS OF DECEASED

Name _____ Inpatient No. _____

Address _____

Age (yr) ☐☐ Race ☐☐ AF = African; CO = Coloured; In = Indian; WH = White; OT=Other

At time of death

Gravida ☐☐ Para ☐☐ Gestation (weeks) (or at delivery) ☐☐ Days since delivery/abortion (if not applicable enter 99) ☐☐

Definitions

Gravida: The number of times the woman was pregnant

Parity: Number of times the woman delivered a baby of 22 weeks/500g or more, whether alive or dead

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

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

Date of admission: (d d m m y y)		Time of admission (24h min)		
Date of death: (d d m m y y)		Time of death (24h min)		
On admission:	Aborting/ectopic	Antenatal	Intrapartum	Postpartum
Condition on admission:	Stable	Critically ill	Dead on arrival	Other - specify
Diagnosis at moment of death:	Abortion	Ectopic pregnancy	Not in labour	In labour / Postpartum
Reason for admission:				
Referral from another centre?	Y / N	If "Y" from		

Information regarding the condition of the woman on admission will help in identifying any problems in transport. It will also indicate 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 in the first place.

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 records from all the health services that the woman entered.

B. MEDICAL CONDITION

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.

4. ANTENATAL CARE

Did she receive antenatal care?	Y	N	?

If "Y", at what locality?	?	Primary	Secondary	Tertiary	Private	Other

Antenatal care provider	Specialist	Med.Off/ GP	Adv. Midwife	Midwife/ Reg. nurse	Other - Specify	Total Number of visits	

Antenatal Risk Factors	Risk	Y	N	?	
	History				Specify:
	Hypertension				
	Proteinuria				Other - Specify
	Glycosuria				
	Anaemia				
	Abnormal lie				
	Previous C/Section				HIV Status + - ?

Comments on antenatal care - List any medication

Definitions of antenatal care provider/s:

1. Specialist - A person who is registered as such with the Health Professions Council
2. General Practitioner - A person registered with the Health Professions Council. It includes medical officers
3. Advanced midwife - A person registered as such with the Nursing Council as an advanced midwife
4. Midwife - A person registered with the Nursing Council as a midwife
5. Nurse - A person registered with the Nursing Council as a nurse

Note: More than one block can be ticked.

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 related to perinatal deaths (deaths of the babies) are not included. By going through the risk factors one can see whether if the risk factor was there the appropriate action was taken.

The importance of the antenatal risk factors given are explained below.

1. History - history of heart disease. It is important to see whether a history of any medical condition was recorded. For example, rheumatic heart disease is an important cause of death in pregnancy.
2. BP (Blood Pressure) - hypertension. Was the blood pressure recorded?
3. Proteinuria - This indicates the possibility of kidney disease or if in combination with hypertension it indicates that preeclampsia/eclampsia might have been present. In South Africa as far as we know, preeclampsia/eclampsia is one of the most common causes of maternal deaths.
4. Glycosuria - This could indicate the presence of diabetes mellitus. Diabetes mellitus predisposes a women 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, that indicates 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 can lead to ruptured uteri.
7. Previous caesarean section - This is a risk factor for rupture of the uterus.

Fill in the HIV status if is known. This information will help in determining the effects of the disease on maternal mortality.

Add any comment on the antenatal care in the box provided. Especially record any medication the woman was on and how the antenatal care was performed, that is was it at a clinic alone, or in combination with a clinic and hospital.

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	?	Duration of labour (hours:min)	?	Latent phase	Active phase	Second stage	Third stage

Delivery (Tick appropriate box)	Undelivered	Vaginal (unassisted)	Vaginal Vacuum/forceps	Caesarean section

Baby	Birthweight (g)		5 min Apgar		Outcome	Stillborn	Neonatal death	Alive

Comments on labour delivery and puerperium

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 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.

6. Interventions

6. INTERVENTIONS (Tick appropriate box)

Early pregnancy		Antenatal		Intrapartum		Postpartum		Other	
Evacuation		Transfusion		Instrumental del.		Evacuation		Anaesthesia - GA	
Laparotomy		Version		Symphysiotomy		Laparotomy		Epidural	
Hysterectomy				Caesarean section		Hysterectomy		Spinal	
Transfusion				Hysterectomy		Transfusion		Local	
				Transfusion		Manual removal		Invasive monitoring	
Other - specify								ICU ventilation	

Comments on 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 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. Laporotomy - This is where the abdomen is opened surgically.
3. Hysterectomy - This is where the uterus is removed.
4. Transfusion - In this case it is used to mean whether blood or blood products were given to the woman
5. Version - In this case it means was the baby 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.
11. Epidural anaesthesia - Where a local anaesthetic agent is injected into the epidural space to provide pain relief during a procedure.
12. Spinal anaesthesia - Where the local anaesthetic is injected into the cerebrospinal fluid (CSF).
13. Local anaesthesia – Where local infiltration of each tissue layer was performed
14. Invasive monitoring - Was a central venous pressure (CVP), Swan-Ganz catheter or invasive blood pressure monitoring used?
15. Prolonged ventilation - Did the woman require ventilation other than during an operation? This is usually in an intensive care situation.

7. 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 South Africa, and 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 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.

7. CAUSE OF DEATH (See Guidelines)

	Codes (Office use only)		
Primary (underlying) cause of death: Specify:			
Final cause of death: Specify:			
Contributory (antecedent) cause/s: Specify:			

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 orientated 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 orientated 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 a autopsy is available, please give the findings.

C. HEALTH SYSTEM PROBLEMS

8. Other contributing factors

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 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 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 NCCEMD and the Provincial Assessor's use the same 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 one's efforts must be concentrated.

8. IN YOUR OPINION WERE ANY OF THESE FACTORS PRESENT?

System	Example	Y	N	?	Specify
Personal/Family	Delay in woman seeking help				
	Refusal of treatment or admission				
Logistical systems	Lack of transport from home to health care facility				
	Lack of transport between health care facilities				
	Health service - Health service communication breakdown				
Facilities	Lack of facilities, equipment and consumables				
Health personnel problems	Lack of Human Resources (e.g. lack of availability of staff)				
	Lack of expertise, training and education				

Comments on potential avoidable factors, missed opportunities or substandard care

For ease of analysing 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 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. To assess problems in management of women, standard texts such as the ***Perinatal Education Programme's Maternal Manual*** should be used to assess the standard of care expected of midwives and registered nurses. Texts like ***Obstetrics in Peripheral Hospitals: a South African manual for doctors and midwives*** and ***Obstetrics in Southern Africa*** should be used to assess the standard of care expected of medical officers and general practitioners. For specialists, the standard of care expected of specialists should be used.

Note: The Perinatal Education Programme can be ordered from The Editor-in-Chief, Perinatal Education Programme, H 46:57, Old Main Building, Groote Schuur Hospital, Observatory 7925, South Africa Obstetrics in Peripheral Hospitals: a South African manual for doctors and midwives by Jon Larsen can be ordered from DEPAM, Department of Paediatrics, University of Natal, Durban.

9. Autopsy

Indicate whether an autopsy has been performed. If one was performed give the findings. Send the report if one is available. Unfortunately, it usually takes much longer than 7 days to get the full autopsy report. This report should be sent later to the person responsible for maternal health in the province. They will forward the report to the NCCEMD secretariat. 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.

10. 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.

11.Officer completing this form:

11. THIS FORM COMPLETED BY:

Name (print)		Rank	
Telephone		Fax	

Date | | | | | | | (d d m m y y) 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 following a meeting where the death is discussed with all the people involved in managing the case. Usually in smaller institutions the superintendent or chief nursing officer will ensure the form is filled in and lead the discussion around the death. In larger institutions the superintendent can delegate the authority to ensure the form is filled in 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 accompany this form.

8/12/98 RC Pattinson

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Appendix 1

Classification of the primary (underlying) cause of maternal death

Primary (Underlying) Cause
❖ **No obstetrical cause** ➢ Motor vehicle accident ➢ Assault ➢ Trauma ➢ Suicide ➢ Herbal medicine ➢ Other – specify
❖ **Pre-existing maternal disease** ➢ Cardiac disease • Undiagnosed • Mixed mitral valve disease • Other rheumatic heart disease • Artificial valve complications • Congenital heart disease • Arrythmias • Other ➢ Endocrine ▪ Diabetes mellitus ▪ Thyroid disease ➢ Gastrointestinal Tract ▪ Liver disease ▪ Intestine ➢ Central Nervous System ▪ Cerebrovascular accident ▪ Epilepsy ➢ Respiratory ➢ Haematological ➢ Genito-urinary ▪ Renal ▪ Genital ➢ Immune ▪ Collagen disease ➢ Skeletal
❖ **Non-pregnancy-related infections and AIDS** ➢ Pneumonia ➢ Acquired Immune Deficiency Syndrome (AIDS) ➢ Tuberculosis ➢ Bacterial endocarditis ➢ Pyelonephritis, urinary tract infection ➢ Appendicitis ➢ Malaria ➢ Meningitis ➢ Other – specify

- **Ectopic pregnancy**
  - Pregnancy less than 20 weeks
  - Extrauterine pregnancy (more than 20 weeks)
- **Abortion**
  - Septic abortion
  - Uterine trauma
  - Trophoblastic disease
- **Pregnancy-related sepsis**
  - Amniotic fluid infection with ruptured membranes
  - Amniotic fluid infection with intact membranes
  - Puerperal sepsis following normal delivery
  - Puerperal sepsis following caesarean section
  - Puerperal sepsis following vaginal delivery after obstructed labour
  - Puerperal sepsis following caesarean section after obstructed labour
  - Other – specify
- **Antepartum haemorrhage**
  - Abruptio placentae
  - Abruptio placentae with hypertension
  - Placenta praevia
  - Other – specify
- **Postpartum haemorrhage**
  - Retained placenta; placenta accreta, increta or percreta
  - Uterine atony - due to uterine over distension (multiple pregnancy, polyhydramnios)
  - Uterine atony due to prolonged labour
  - Ruptured uterus - with previous caesarean section
  - Ruptured uterus - without previous caesarean section
  - Inverted uterus
  - Other uterine trauma - specify
- **Hypertensive disorders of pregnancy**
  - Chronic hypertension
  - Proteinuric hypertension
  - Eclampsia
  - HELLP syndrome
  - Rupture of the liver

❖ **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

APPENDIX 2

Classification of the final and contributory (or antecedent) cause/s of death for mothers

Organ System
❖ **Hypovolaemic shock** ➢ Following postpartum haemorrhage ➢ Following antepartum haemorrhage ➢ Following ectopic pregnancy
❖ **Septic shock** ➢ Following an abortion ➢ Following a viable pregnancy ➢ Following an incidental infection
❖ **Respiratory failure** ➢ Adult respiratory distress syndrome ➢ Pneumonia (including TB, or any other type) ➢ Acute respiratory failure
❖ **Cardiac failure** ➢ Pulmonary oedema
❖ **Renal failure** ➢ Acute tubular necrosis ➢ Acute medullary necrosis
❖ **Liver failure** ➢ Following HELLP syndrome ➢ Following drug overdose
❖ **Cerebral complications** ➢ Intracerebral haemorrhage ➢ Cerebral oedema resulting in coning ➢ Meningitis/infection (including malaria) ➢ Cerebral emboli
❖ **Metabolic** ➢ Maternal ketoacidosis
❖ **Disseminated intravascular coagulopathy** ➢ Disseminated intravascular coagulopathy
❖ **Multi-organ failure** ➢ Multi-organ failure
❖ **Immune system failure** ➢ AIDS
❖ **Unknown** ➢ Home death
❖ **Other – specify** ➢ Other – specify
If a post-mortem is available, please give the findings.