

Maternal and Perinatal Death Surveillance and Response (MPDSR)

Training Manual for Hospital 2016



**Ministry of Health
Department of Health Services
Family Health Division
Teku, Kathmandu**

DRAFT

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(MPDSR)**

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Foreword

Nepal has seen a significant reduction in maternal and newborn mortality, and there is evidence to show that the health status is improving. Despite efforts made by the health sector, maternal and neonatal mortality is still high, primarily due to pregnancy and childbirth related complications and associated delays. Methods to prevent and treat maternal and perinatal complications are known, and most deaths are preventable if these preventive and therapeutic methods are provided at the right place and time.

The Commission on Information and Accountability (CoIA) works to track the progress on resources and results in achieving the goals of the UN Secretary-General's Global Strategy on Women's and Children's Health. It emphasizes the three interconnected processes of monitoring, reviewing and taking action, which are aimed at learning and continuous improvement in life saving interventions. The concept of CoIA has been adapted in Nepal as Country Accountability Roadmap Nepal (CARN).

While Nepal has been exercising Maternal and Perinatal Death Review (MPDR) for a long time, sufficient progress has not been made. Following the CoIA and CARN, Government of Nepal has prioritized in strengthening and expanding hospital MPDR as well as implementing Maternal Death Surveillance and Response (MDSR) for community maternal deaths.

Maternal and Perinatal Death Surveillance and Response (MPDSR) is a new concept for Nepal. It is based on the principles of public health surveillance and is a form of continuous surveillance that promotes routine identification and notification of maternal and perinatal deaths. This helps in the quantification and determination of the causes and the respond to avoid maternal and perinatal deaths and thus provide better information for action.

This training manual has been developed by Family Health Division, Department of Health Services to facilitate in training service providers at hospitals implementing MPDSR. I would like to request all users to comply with this manual in order to conduct standard training packages which will ultimately support in strengthening the hospital MPDSR.

Director General
Department of Health Services

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Acknowledgements

Despite its consistent and regular progress in maternal and child health indicators, maternal and neonatal death continues to be a major public health problem in Nepal. It has been observed that most of these deaths were preventable if timely intervention had taken place. Thus, with the target of reducing maternal and perinatal mortality due to preventable causes, Government of Nepal has endorsed and implemented Maternal and Perinatal Death Surveillance and Response (MPDSR) building on the hospital-based Maternal and Perinatal Death Review (MPDR).

The MPDSR training manual for hospital has been developed to guide and support the health care providers working in hospitals to understand the process of MPDSR and to develop and implement response mechanism vital for improving the quality of care at the hospital level and prevent maternal and perinatal deaths.

The credit and gratitude for the development of this training manual for hospital-based MPDSR goes to numerous contributors without whom this document could not have been completed. My sincere thanks goes to Dr. Sharad Sharma (Senior Demographer, FHD) and his technical team whose tireless efforts made this upbringing a success. I am thankful to Dr. Punya Poudel, Mr. Ghanashyam Pokhrel, Mr. Hem Raj Pandey and all the members of Family Health Division and contributors whose efforts have materialized. My special thanks goes to Dr. Meera Upadhyay, Dr. Pooja Pradhan, Mr. Susheel Lekhak and WHO for technical and financial support under the Country Accountability Roadmap of Nepal (CARN) designed to achieve the targets set by Commission on Information and Accountability (CoIA) towards women and children. I would also like to thank Mr. Pradeep Poudel, NHSSP for supporting to develop this manual. All the direct and indirect contributors deserve appreciation for their support to bring this manual into shape.

I am sure that the manual will provide comprehensive guidance to conduct standard trainings for hospital staff on MPDSR and to establish a strengthened and functional MPDSR system.

Director
Family Health Division
Department of Health Services

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Acronyms

APH	Antepartum Hemorrhage
AIDS	Acquired Immunodeficiency Syndrome
ANM	Auxiliary Nurse Midwife
BEONC	Basic Emergency Obstetric and Newborn Care
BP	Blood Pressure
COIA	Commission On Information and Accountability
CARN	Country Accountability Roadmap – Nepal
CRVS	Civil Registration and Vital Statistics
DoHS	Department of Health Services
DIC	Disseminated Intravascular Coagulation
DPHO	District Public Health Office
EMOC	Emergency Obstetric Care
FHD	Family Health Division
FCHV	Female Community Health Volunteers
GoN	Government of Nepal
HA	Health Assistant
Hb	Hemoglobin
HIV	Human Immunodeficiency Virus
IMPAC	Integrated Management of Pregnancy and Childbirth
ICD	International Code of Death
ICD-MM	International Code of Death for Maternal Mortality
LB	Live Births
MDR	Maternal Death Review
MPDR	Maternal and Perinatal Death Review
MDSR	Maternal Death Surveillance and Response
MPDSR	Maternal and Perinatal Death Surveillance and Response
MMR	Maternal Mortality Ratio
MMMS	Maternal Mortality and Morbidity Study
MDVA	Maternal Death Verbal Autopsy
MoH	Ministry of Health
MoHP	Ministry of Health and Population
MDG	Millennium Development Goals
M&E	Monitoring and Evaluation
NMR	Neonatal Mortality Rate
NDHS	Nepal Demographic and Health Survey
NSMP	Nepal Safer Motherhood Project
NESOG	Nepal Society of Obstetricians and Gynecologists
OPD	Outpatient Department
PDR	Perinatal Death Review
PMR	Perinatal Mortality Rate
PPH	Post-partum Hemorrhage
PHCC	Primary Health Care Center
QoC	Quality of Care
SBA	Skilled Birth Attendant
SBR	Stillbirth Rate

TB	Tuberculosis
UN	United Nations
UNICEF	United Nations Children's Fund
VA	Verbal Autopsy
WRA	Women of Reproductive Age
WHO	World Health Organization

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Background

Globally there has been a significant reduction in maternal and infant mortality over the years of last decade. However, deaths remain unacceptably high and in 2015 there were 3,03,000 maternal deaths and 2.6 million stillbirths and neonatal deaths (WHO 2015). While progress has been made in increasing coverage of several key reproductive, maternal, newborn and child health interventions over the last two decades, there has been limited progress in improving maternal and newborn outcomes because of a major gap between coverage and quality of care provided in health facilities. Improving quality of facility-based health care services and making quality an integral component of scaling up interventions to improve health outcomes of mothers and newborns is of utmost importance. To achieve this, monitoring and surveillance of maternal and perinatal deaths need to be strengthened, hence cases can be identified and preventable causes of maternal and perinatal death can addressed. To measure existing and future progress, and to implement appropriate strategies to reduce preventable maternal and newborn deaths, there is need for accurate information on the number of maternal and neonatal deaths. It is very important these data are used for evidence-based planning. Moreover more important is to develop a system of responding to each review and implementing its recommendation.

Since the 1990s Nepal has initiated various mechanisms to improve maternal and newborn mortality registration with the support of the World Health Organization (WHO). In 1990 Maternal Death Review (MDR) was first implemented in Paropakar Maternity and Women's Hospital and in 2003 the Perinatal Death Review was introduced as a supplement to MDR. By 2006 Maternal and Perinatal Death Review (MPDR) had been implemented in 6 hospitals and by 2013 a total of 42 hospitals had adopted the MPDR process (MoHP 2014). MPDR is one of the tools used to monitor and improve quality of care at the facility level, this process is very important to improve the quality of services. However, the reviews have not achieved satisfactory results as expected and the commitment from the facilities and monitoring from higher authority is still weak.

Maternal Death Surveillance and Response (MDSR) is designed to measure and track all maternal deaths in real time, to understand the underlying factors

contributing to mortality and to provide guidance for how to respond to and prevent future deaths. The system builds on experiences from MDR, but also helps us understand the events surrounding maternal deaths. MDSR aims at linking the health information system and quality improvement processes from local to national level, and acts as a continuous surveillance

The primary goal of maternal and perinatal death surveillance and response (MPDSR) is reducing preventable maternal and perinatal mortality. MPDSR involves a continuous surveillance and action cycle of identification, quantification, notification and review of all maternal deaths. The interpretation of the aggregated information is used to recommend actions that will prevent future deaths.

The "S" in MPDSR emphasizes the importance of surveillance for a relatively rare but critical event such as maternal death. The "R" in MPDSR focuses on the response portion of the surveillance. MPDSR allows the stakeholders to link the health information system and the data on maternal deaths to quality of care improvement processes, at both local and national level.

mechanism. The surveillance cycle includes identification of cases, collection of information, analyzing findings, recommendations for action and evaluation and refining of the system. Particular focus is on identifying and addressing the avoidable factors and action part of the surveillance, so that the information obtained can be acted upon to prevent future deaths. MDSR can be expanded to include perinatal deaths and is hence referred to as Maternal Perinatal Death Surveillance and Response (MPDSR).

With the goal to eliminate preventable maternal and perinatal mortality by obtaining and using information on each maternal and perinatal death to guide public health actions and monitor their impact, Government of Nepal (GoN) is implementing MPDSR through Ministry of Health (MoH), Department of Health Services (DoHS), Family Health Division (FHD).

FHD has developed following training packages to expand and further build on the MPDR process and expand MPDR to MPDSR.

- I. MPDSR training for hospital staff and
- II. MPDSR training for:
 - i. District level stakeholders on introduction to MPDSR
 - ii. FCHVs on identification and notification of death
 - iii. ANMs/HA/Sr AHW on screening of pregnancy related deaths
 - iv. District VA team on conducting verbal autopsy of pregnancy related deaths
 - v. District MPDSR committee to review the VA forms and prepare an action plan

This training manual has been prepared to provide guidance to the trainers to conduct MPDSR training for hospital staff.

Goal

After the training, the participants will understand the rationale and process of hospital based MPDSR and be able to functionalize the MPDSR process effectively in the hospitals.

Objectives

After the training, the participants will be able to

- Describe the background, rationale and process of hospital based MPDSR,
- Complete the Maternal Death Review (MDR) and Perinatal Death Review (PDR) forms correctly,
- Review the MDR and PDR forms, identify the cause and avoidable factors of the maternal and perinatal deaths and
- Formulate, implement and monitor action plan for appropriate response.

Preparation for training

Participant selection criteria

The participants of the training will be the clinical staff at the hospitals where MPDSR will be or is being implemented. The following participants must participate in the training:

- Obstetricians/Gynecologists
- Pediatricians
- General Practitioners
- Medical Officers
- Nursing staff at maternity and neonatal wards
- Medical Recorders

Number of Participants: The training package is interactive and there will be practical exercises as well as sharing from the participants on the ongoing MPDR at the hospitals. Twenty to twenty-five participants is the ideal number of participants to manage the training properly.

Number of Trainers: Although presentations can be delivered by a single trainer, it is useful to have 3-4 facilitators to help during group works. Facilitators can rotate among groups to answer questions or help/lead them in the right direction.

Venue: The training requires a room large enough for all participants to fit in comfortably, with an unobstructed view of the PowerPoint projector for the presentation slides and video. Enough space is also required for small group discussions/exercises to sit together during the activities, ideally around a table, although chairs can be moved into circles throughout the room, if required.

Materials: Prior to starting the training, it is important to ensure there are enough copies of the National MPDSR Guidelines, pre- and post-test questionnaires, mock case files, the training manual, tools of MPDSR used in the hospitals. Flip charts, metacards and marker pens should also be available for group discussions and noting down issues/responses from the activities. There should also be enough reference materials like Beyond the Numbers, audio/visuals on MPDSR,

Equipment: A PowerPoint projector, screen and computer are critical for showing the presentations. Speakers should be separately available for the video show.

Duration of training: The training agenda provided for this training covers three days training, which should provide enough time for the presentation of scheduled content and completion of practical exercises.

Logistics/financial management to include these materials

Agenda of the training

Government of Nepal
Ministry of Health
Department of Health Services

AGENDA
Maternal and Perinatal Death Surveillance and Response (MPDSR)
Hospital-level Training

Venue:

Date:

TIME	ACTIVITIES	FACILITATOR
Day1		
30 minutes	Registration	
30 minutes	Opening Remarks, Welcome and objectives (D/PHO)	
30 minutes	Pre-test	
90 minutes	Rationale, Principle and Implementation status of MPDSR	
60 minutes	Refreshments	
90 minutes	MPDSR Process	
60 minutes	Key terminologies	
30 minutes	Cause of Death	
Day 2		
30 minutes	Review of day 1	
30 minutes	Introduction of Hospital-level MPDSR tools	
180 minutes	Discussion on MDR forms	
60 minutes	Refreshments	
120 minutes	Discussion on PDR forms	
Day3		
30 minutes	Review of day 2	

TIME	ACTIVITIES	FACILITATOR
60 minutes	Determinants of maternal death	
150 minutes	Preparing an action plan	
60 minutes	Refreshments	
60 minutes	Monitoring and Evaluation in MPDSR	
30 minutes	Post-test	
30 minutes	Closing	

Session Plan

Session outline for Hospital-based MPDSR Training	
Time	Objectives of the sessions
Day One	
60 minutes	Session 1: Registration and Opening Session Objectives: By the end of the session, the participants will be ▪ able to define the objectives of the program and ▪ familiarized with each other and the facilitators
30 minutes	Session 2: Pre-test Objective: By the end of the session, knowledge of the participants on MPDSR will be assessed.
90 minutes	Session 3: Introduction to MPDSR Objectives: By the end of the session, the participants will be able to ▪ describe the status of maternal and perinatal mortality in Nepal, ▪ describe the rationale, goal, objectives and components of MPDSR and ▪ share the implementation status of MPDSR in Nepal.
90 minutes	Session 4: MPDSR Process Objectives: By the end of session, the participants will be able to ▪ describe the process of MPDSR in the hospitals, ▪ identify the members of MPDSR Committee in the Hospital, District, Regional and National levels and ▪ identify the roles and responsibilities of individuals and MPDSR Committee in the Hospital level MPDSR process.
60 minutes	Session 5: Key terminologies Objective: By the end of session, the participants will be able to define different terms related to maternal and perinatal deaths.
30 minutes	Session 6: Causes of Death Objective: By the end of session, the participants will be able to identify the primary, contributory and final causes of maternal and perinatal deaths.

Session outline for Hospital-based MPDSR Training	
Time	Objectives of the sessions
Day Two	
30 minutes	Review of Day One Select one participant in Day One to review Day One using his/her own methodology involving other participants also.
30 minutes	Session Seven: Introduction to Hospital Level MPDSR Tools Objectives: By the end of session, the participants will be able to ▪ define the tools used in hospital level MPDSR and ▪ describe the basic techniques to fill up the MDR and PDR forms.
180 minutes	Session 8: MDR Forms Objectives: By the end of session, the participants will be able to ▪ describe the contents of MDR forms and ▪ fill up the MDR forms correctly and completely using medical records/case files/mock files of maternal mortality.
120 minutes	Session 9: PDR Forms Objectives: By the end of session, the participants will be able to ▪ describe the contents of PDR forms and ▪ fill up the PDR forms correctly and completely using medical records/case files/mock files of maternal mortality.
Day Three	
30 minutes	Review of Day Two Select one participant in Day Two to review Day Two using his/her own methodology involving other participants also.
60 minutes	Session 10: Determinants of Maternal Death Objectives: By the end of session, the participants will be able to ▪ identify the determinants of maternal death, ▪ differentiate between causes and determinants of maternal death and ▪ classify determinants using “Three Delays” model.

Session outline for Hospital-based MPDSR Training	
Time	Objectives of the sessions
150 minutes	Session 11: Identifying action plans Objectives: By the end of session, the participants will be able to ▪ describe evidence based actions and prioritization based on the information from the filled MDR and PDR forms for improving quality of care, ▪ formulate action plans based on filled MDR and PDR forms and ▪ describe how the action plan will be implemented.
60 minutes	Session 12: Monitoring and Evaluation in MPDSR Objectives: By the end of the session, the participants will be able to ▪ Describe importance of monitoring MPDSR process and using the data in improving quality of care ▪ Analyze & interpret maternal and perinatal death data ▪ Use MPDSR data/information to produce local solutions to the root causes of maternal and perinatal deaths ▪ Understand the role of monitoring of the process and the actions to ensure effective response to address the identified avoidable factor
30 minutes	Session 13: Post-test Objectives: By the end of the session knowledge of the participants on MPDSR after the program will be assessed.
30 minutes	Session 14: Closing session

Session contents

Day One

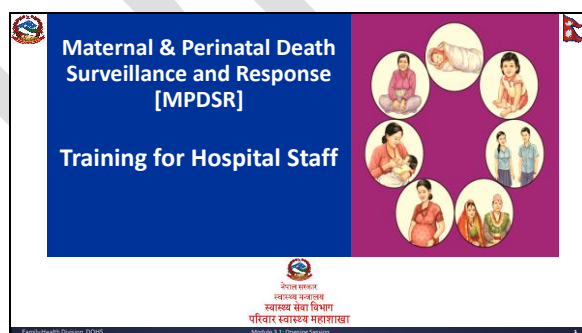
Session 1: Registration and Opening Session

Objectives: By the end of the session, the participants will be able to define the objectives of the program and familiarized with each other and the facilitators.

Time: 60 minutes

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
10 minutes	Registration		
10 minutes	Welcome and Objectives	Welcome by representative facilitators/trainers Share objectives and contents of the course	PowerPoint Slides
20 minutes	Introduction	Prepare pairs of metacards with relevant words from the training content. Distribute the metacards to participants and ask them to match the metacards with same term and form pairs. Ask the pairs to introduce each other with their name, designation and organization to all.	Metacards, marker pens
20 minutes	Opening remarks from guests		

Slide 1



Slide 2



Maternal and Perinatal Death Surveillance and Response [MPDSR]

-Objectives and Session Plan-





 केदार काका
 स्वास्थ्य सहायक
 स्वास्थ्य सेवा विभाग
 परिवार स्वास्थ्य महाराष्ट्र
 Family Health Division, DGH
 Module 3.1: Opening Session

Slide 3





Goal



After the training, the participants will understand the rationale and process of MPDSR and be able to functionalize the MPDSR process effectively in the hospitals.

Family Health Division, DGH

Slide 4





Objectives



- After the training, the participants will be able to
 - Describe the background, rationale and process of hospital based MPDSR,
 - Complete the Maternal Death Review (MDR) and Perinatal Death Review (PDR) forms correctly,
 - Review the MDR and PDR forms, identify the cause and avoidable factors of the maternal and perinatal deaths and
 - Formulate, implement and monitor action plan for appropriate response.

Family Health Division, DGH

Slide 5





Session Outline



Day One	Day Two	Day Three
Registration, Opening, Pre-test	Introduction to Hospital level MPDSR tools	Determinants of Maternal Death
Introduction to MPDSR	Discussion and practice on MDR form	Identifying Action Plan
MPDSR Process		Monitoring and Evaluation in MPDSR
Key Terminologies	Discussion and practice on PDR form	Post-test
Cause of Death		Closing

Family Health Division, DGH



Session 2: Pre-test

Objective: By the end of the session, knowledge of the participants on MPDSR will be assessed.

Time: 30 minutes

Distribute the Pre-test questionnaires to the participants and provide 20 minutes to complete the pre-test. Instruct the participants to mark circle one correct answer. After completion of the pre-test, collect the test papers for marking.

Pre and Post-Test Questionnaire for MPDSR Hospital Training Package

1. MPDSR stands for

- a. Maternal and Perinatal Death System and Response
- b. Maternal and Perinatal Death Surveillance and Review
- c. Maternal and Perinatal Death Surveillance and Response
- d. Maternal and Perinatal Death Systematic Register

Correct answer is c.

2. Which of these is **NOT** a pregnancy related death?

- a. A 45 year old woman collapsed and died suddenly. She had missed two periods.
- b. A woman with a 35 day old baby, had fever for 3 days before she died.
- c. A 16 year old girl died suddenly after taking some medicine two days after her first sexual intercourse because she thought she was pregnant. She had her period 12 days back.
- d. A woman, known to be HIV positive was 5 months pregnant and died of pneumonia.

Correct answer is c.

3. What is the **FIRST** step of the MPDSR process?

- a. Review of the MDR form
- b. Develop and implement response actions
- c. Analysis of the maternal death
- d. Identification of maternal death

Correct answer is d.

4. Who of the following is **NOT** the member of Hospital MPDSR Review Committee?

- a. Hospital Superintendent/Director
- b. Obstetrician/Gynecologist/Pediatrician/MDGP
- c. Matron/ Nursing Chief
- d. Accountant

Correct answer is d.

5. Which of the following statement is appropriate with regard to Quality of Care affecting maternal deaths?

- a. A previous bad experience at a health facility may discourage women from choosing to deliver with skilled birth attendants.
- b. Inadequate water supplies in labour wards can increase the risk of maternal death, even if the woman arrived in time
- c. The quality of referral systems, admission procedures, and care during recovery should all be considered during MPDSR data analysis
- d. All of the above

Correct answer is d.

6. Which of the following factor decreases the risk of maternal death?

- a. Not able to make decision to seek health care for herself
- b. Availability of adequate maternity services
- c. Unawareness on high risk conditions during pregnancy and delivery
- d. Not using contraceptive methods

Correct answer is b.

7. Which of the following statement is **NOT** true?

- a. The MDR form should be filled by a Doctor (preferably) or Nurse, who attend the case, within 24 hours of the maternal death.
- b. After reviewing the MDR and PDR forms, the MPDSR Committee needs to analyze the cause of death and develop action plan.
- c. Each maternal death should be reviewed within 120 hours after death.
- d. Perinatal deaths should be reviewed monthly.

Correct answer is c.

8. Which of the following statement is **CORRECT** regarding MPDSR Reporting and Data Flow?

- a. FCHVs identify, notify and inform directly to the DHO about the community deaths.
- b. For each facility maternal deaths, on duty doctor/nurse should fill the MDR form and Hospital MPDSR committee should review and develop action plan.
- c. For each perinatal mortality, the PDR form should be filled and reported to the MPDSR Committee within 24 hours of the death.
- d. All of the above statements are true

Correct answer is b.

9. Which of the following is appropriate action that might be taken by the Hospital MPDSR Committee?

- a. Close the maternity unit due to poor quality and refer pregnant patients elsewhere.
- b. Develop appropriate referral mechanism and orient/reorient the staff.
- c. Punish the doctor who was not present during the time of the death.
- d. All of the above.

Correct answer is b.

10. The hospital MPDSR committee is **NOT** responsible for which of the following?

- a. Conduct reviews of maternal and perinatal deaths occurring in hospital.
- b. Develop action plans following review of the MDR and PDR forms.
- c. Synthesize the findings and provide feedback to the hospital.
- d. Conduct review meeting for community-level maternal and perinatal deaths.

Correct answer is d.

11. Maternal death is defined as:

- a. Death of women from direct or indirect maternal causes, more than 42 days, but less than one year after the termination of pregnancy.
- b. The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of the death.
- c. Near miss-cases resulting from previously existing disease or aggravated by physiological effects of pregnancy.
- d. The death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Correct answer is d.

12. What is the evidence based actions for eclampsia?

- a. Diagnosis and treatment of high blood pressure
- b. Treatment with Magnesium Sulphate
- c. Timely delivery
- d. All of the above

Correct answer is d.

13. Fetus born dead after completed 22 weeks of gestation or child who is born alive but dies within the first 7 days of life is termed as

- a. Perinatal death
- b. Early neonatal death
- c. Neonatal death
- d. Late neonatal death

Correct answer is a.

14. According to NDHS 2011, early neonatal deaths cover part of all Neonatal deaths

- a. 2/3rd

- b. 1/2
- c. 3/4th
- d. 1/4th

Correct answer is a.

15. Which of the following statement is the determinant for maternal death?

- a. Socioeconomic and cultural factors
- b. Accessibility of health facility
- c. Quality of care
- d. All of the above

Correct answer is d.

16. Which of the following is **INCORRECT** statement in the case of maternal death review?

- a. Attending service provider should fill the MDR form within 24 hours of death.
- b. Maternal death review has to be done by the MPDSR committee within 72 hours of death.
- c. The name of staff attending the maternal death case should be published in hospital notice board.
- d. The hospital has to prioritize and implement the recommendations that are within the capacity of the hospital.

Correct answer is c.

17. A young primi gravida delivered in hospital two hours back followed by hemorrhage. She looked very pale (Hb was 5gm%) with un-recordable BP & pulse and she died suddenly. What could be the primary cause of death?

- a. Haemorrhage
- b. Obstructed labour
- c. Ruptured uterus
- d. Eclampsia

Correct answer is a.

18. Forms used for hospital level MPDSR process includes all **EXCEPT**:

- a. Maternal Death Review form
- b. Perinatal Death Review form
- c. Verbal Autopsy form
- d. Perinatal Death Summary form

Correct answer is c.

19. Completed MDR and PDR forms should be entered into the web-based reporting system by

- a. Family Health Division
- b. D(P)HO

- c. Respective hospital
- d. Regional Health Directorate

Correct answer is c.

20. A nine months pregnant woman was brought to the hospital in the evening unconscious with complains of seizures several times since morning. She did not have history of ANC. Her limbs were swollen and pupils mid-dilated with BP 180/120 mm of Hg. Upon admission she again had seizures. The attending staff at the emergency opened IV line, inserted catheter, sent blood for investigation. But Magnesium Sulphate (MgSO₄) was not given in the emergency as it was not available there. The on call doctor shifted her to ICU and gave MgSO₄. Blood and blood products were also arranged but the patient's condition deteriorated and the patient died after 2 hours.

What appropriate action can the hospital MPDSR committee implement to improve the quality of care in the hospital:

- a. Increase the number of staff in the emergency.
- b. Develop protocol to refer all patients coming with eclampsia.
- c. Ensure availability of MgSO₄ in the emergency.
- d. All of the above

Correct answer is c.

Session 3: Introduction to MPDSR

Objectives: By the end of the session, the participants will be able to describe the status of maternal and perinatal mortality in Nepal, describe the rationale, goal, objectives and components of MPDSR and share the implementation status of MPDSR in Nepal.

Time: 90 minutes

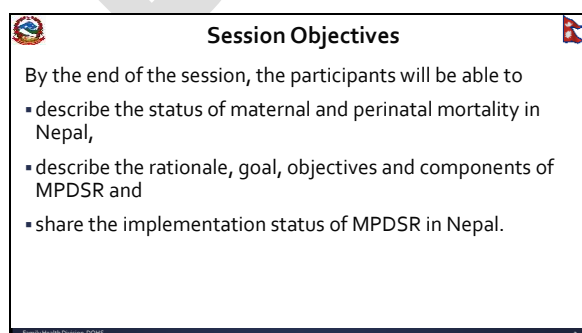
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides in Annex
10 minutes	Case Scenario of Maternal death	Brain storming with the participants on case scenario and questions related to maternal death using the PowerPoint slides.	PowerPoint Slides in Annex
30 minutes	Introduction to MPDSR ▪ Background : Status of Maternal and Perinatal deaths (Global, national, districts)	▪ Discuss on background, rationale, goal, objectives and components of MPDSR using PowerPoint slides. ▪ Brainstorm with participants on status of maternal and perinatal	PowerPoint Slides in Annex Metacards

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
	▪ Rationale of MPDSR linking to Quality of care ▪ What is MPDSR? (Goal, objectives and components)	death in Nepal using PowerPoint slides.	
5 minutes	Principles of MPDSR	Interactive Presentation using PowerPoint slides	PowerPoint Slides in Annex
5 minutes	Implementation Status of MPDSR	Interactive Presentation using PowerPoint slides	PowerPoint Slides in Annex
30 minutes	MDSR: Why did Mrs X die? Understanding Pathways to Maternal Death	▪ Video to stimulate discussion about how MDSRs can be effectively applied to the Nepali context. ▪ Share the important points to observe before showing the video using the PowerPoint slides.. ▪ Discussion based on the questions provided in the PowerPoint presentation slides	“Why did Mrs X die” video; Hand out of “Why Did Suntali Died” in Nepali language. Video player, speakers, projector.
5 minutes	Summarize the session emphasizing the importance of maternal death review correlating with Death of Mrs. X.		

Slide 1



Slide 2



Slide 3



Case Scenario

A 26-year old had her third baby at home. Her first baby died after a difficult delivery. Her second baby was premature and survived.

- During this pregnancy, she attended one antenatal care at the local health center on her fifth month.
- She started bleeding 1 hour after delivery of a healthy baby.
- The local skilled birth attendant (SBA) came within 1 hour. She found the woman very pale and collapsed and gave her oxytocin and misoprostol and referred her to the district hospital.

Family Health Division, QORD

Slide 4



Case Scenario contd..

- Her husband refused to take her to the hospital and it took 2 hours to convince her husband.
- She died on the way to hospital.
- Her family and the village grieved for her death.
- After three months, another maternal death occurred in the village due to similar cause of hemorrhage.

Family Health Division, QORD

Slide 5



Questions

- What was the cause of the first mother's death?
- Was her death preventable? How?
- What could have been done to prevent the second mother's death?

Family Health Division, QORD

Slide 6



"Maternal Mortality is a very sensitive indicator. All you need to look at is a country's maternal mortality rate. That is a surrogate for whether the country's health system is functioning. If it works for women, I am sure it will work for men."

-Margrate Chan, Director General, WHO

Family Health Division, QORD

Slide 7



Background

- Development of any country is reflected by the status of health of mothers and children
- There are approximately three lakh women dying each year globally due to obstetric causes and 99% of these are occurring in developing countries
- Around 1700 women die each year in Nepal due to obstetric causes
(WHO Estimates 2015)

Family Health Division, DOH

Death of a mother brings devastating results to the family and the society and most of these deaths are preventable

Slide 8



Background

- Even though maternal mortality is reduced considerably in Nepal following various safe motherhood initiatives, this is still unacceptably high.
- If each maternal death is reviewed, causes are identified and maternal deaths due to similar causes are prevented then there is high possibility of further reduction of maternal mortality.

Family Health Division, DOH

Slide 9



Maternal Mortality Ratio: Where does Nepal Stand?

Sierra Leone	3,360	Austria	4
Central African Republic	882	Belarus	4
Chad	856	Czech Republic	4
Nigeria	814	Italy	4
South Sudan	789	Kuwait	4
Somalia	732	Sweden	4
Liberia	725	Finland	3
Burundi	712	Greece	3
Gambia	706	Iceland	3
Congo	693	Poland	3

Nepal - 258/100,000 live births

Family Health Division, DOH

While comparing with the South African countries, MMR of Nepal is lower. But if the MMR of some developed countries are observed then there is huge gap which suggests that the targets achieved by these countries are achievable. This is only possible if each maternal death is reviewed and lessons learned from each death to prevent deaths.

Slide 10



Questions answered by Maternal Death Review

- Who are dying?
- Where are women dying?
- When (stage of pregnancy) are women dying?
- What is the main cause of death?

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Slide 11

Who: High MMR for women over 35 years ...

Age group	% of WRA maternal deaths	% of maternal deaths	MMR
< 20	13.1	14.4	297
20-24	22.0	23.1	119
25-29	24.4	23.8	191
30-34	19.8	14.4	323
35+	5.5	24.4	962
Total	10.7	100	229

Source: Nepal Maternal Mortality Morbidity Study 2008/09

MMR in the age group below 20 years and above 35 years is very high.

Slide 12

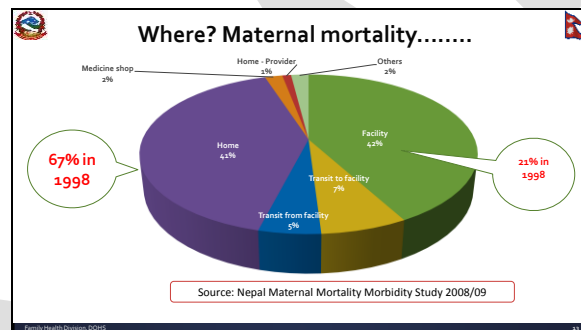
Who: Variation between ethnic groups ...

Ethnic groups	MMR
Muslim	318
Terai / Madhesi / Other Caste	307
Dalits	273
Janjati	207
Brahman / Chhetri	182
Newar	105

Source: Nepal Maternal Mortality Morbidity Study 2008/09

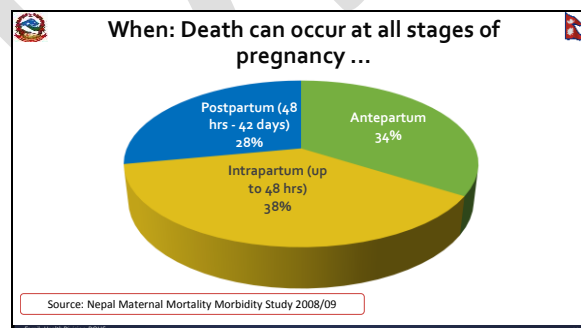
Some ethnic groups have lower accessibility and acceptability to health services due to various reasons such as religious norms, geographical situation which cause higher MMR.

Slide 13



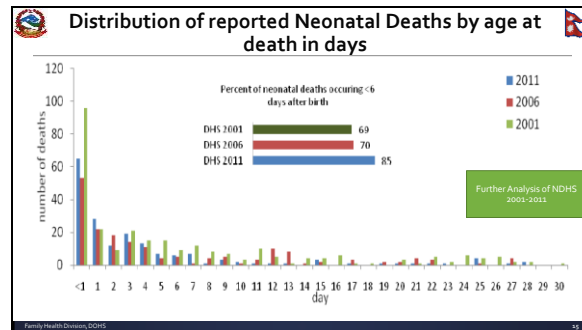
As compared to the MMMS study in 1998, maternal deaths at home has decreased from 67% to 41% and has increased at institutions from 21% to 42%. This indicates that home deliveries have decreased and institutional deliveries have increased but there is gap in quality of care at institutional level to prevent the maternal deaths.

Slide 14



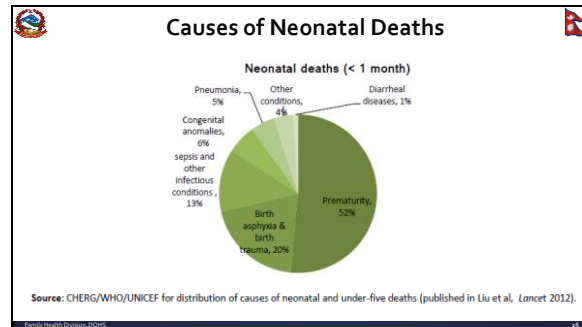
Deaths can occur during any stage of pregnancy. Therefore, all the periods of pregnancy should be equally monitored including postpartum period which is largely missed in Nepal.

Slide 15



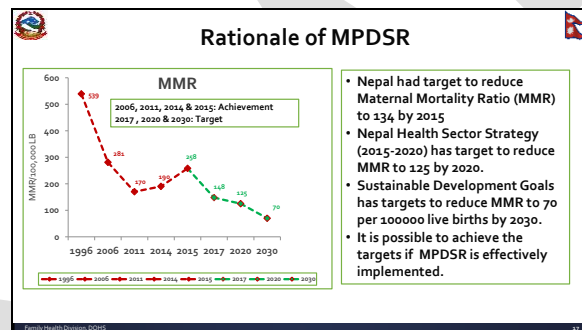
Considering the stagnant MMR, MPDSR has equal focus to review still births and early neonatal deaths in the hospitals as more than two thirds of the neonates die within first week of life.

Slide 16



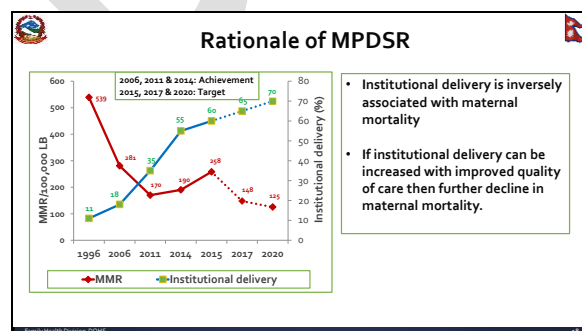
Prematurity, birth asphyxia and sepsis are the most common causes of death followed by congenital anomalies, pneumonia, diarrheal diseases among the neonates.

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Even though the MMR reduced considerably, Nepal could not achieve the MDG of 134 MMR by 2015. As per the WHO estimate, MMR was 258 in 2015. But the targets set by SDG for MMR is ambitious we need to have targeted intervention to reduce the MMR to 125 by 2020 and 70 by 2030. MPDSR is a strong proven system which can guide and assist in preventing maternal deaths and reduce MMR.

Slide 18



Slide 19




Rationale of MPDSR

- How death review improves QoC

Clinical audit's distinctive feature is that the very process of revealing that an **agreed level of care is not being met** also identifies the **specific changes needed in clinical practice to improve** the situation. Therefore, the emphasis in clinical audit is on directly improving the quality of care.

- Beyond the Numbers

Beyond the Numbers-Reviewing maternal deaths and complications to make pregnancy safer published by WHO presents approaches described to go beyond just counting deaths to developing an understanding of why the maternal and newborn deaths happened and how they can be averted. Deaths should not be counted only as numbers but should be reviewed in detail as to what happened and what could have been avoided. MPDSR includes this process and also leads to develop and implement action plan to prevent deaths in the future.

Slide 20

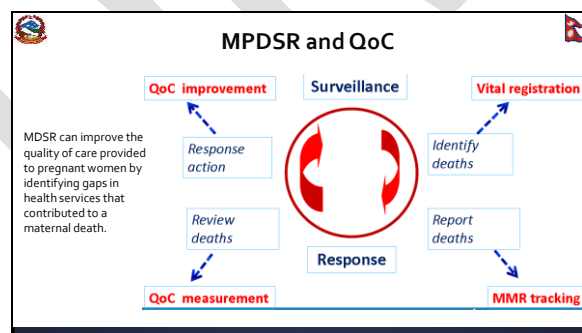



Rationale of MPDSR

- Taking actions and implementing recommendations from MDSR has proven to improve the quality of care and different levels
- Recommendations from community-based MDSR approaches such as verbal autopsy may lead to development of community interventions including education, health promotion
- Recommendations from facility-based MDSR approaches may lead to changes in clinical practice and reorganization of health facilities
- Recommendations from national-level enquiries have the capacity for change on a larger scale by acting at institutional, local and national levels

Family Health Division, QoC

Slide 21



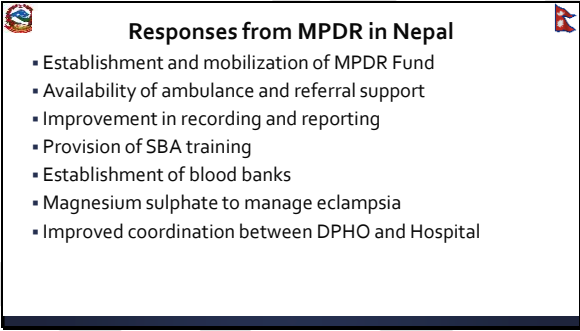
Implementing MPDSR also strengthens other processes in the health system. Identifying deaths can enhance vital registration, reporting maternal deaths in community and health facility helps in tracking of maternal mortality, reviewing the maternal and perinatal deaths can assist in reviewing the quality of care at different level and implementing the response improves the quality of care.

It complements the system of national systems for civil registration and vital statistics (CRVS) and health

management information systems (HMIS). The system will generate reliable data on the rate and causes of maternal mortality – and so act as a cornerstone for a national CRVS system.

It has been estimated that reported maternal mortality underestimates the true magnitude by up to 30% worldwide and by 70% in some countries. An effective MDSR system will produce more accurate and complete estimates of maternal mortality, providing robust and consistent data for a country's CRVS system.

Slide 22

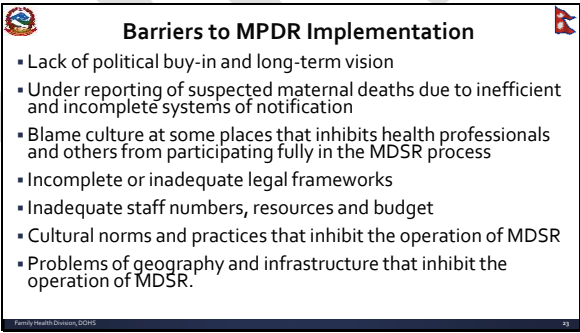


Responses from MPDR in Nepal

- Establishment and mobilization of MPDR Fund
- Availability of ambulance and referral support
- Improvement in recording and reporting
- Provision of SBA training
- Establishment of blood banks
- Magnesium sulphate to manage eclampsia
- Improved coordination between DPHO and Hospital

These are some actions taken during MPDR in hospitals after reviewing maternal deaths.

Slide 23



Barriers to MPDR Implementation

- Lack of political buy-in and long-term vision
- Under reporting of suspected maternal deaths due to inefficient and incomplete systems of notification
- Blame culture at some places that inhibits health professionals and others from participating fully in the MDSR process
- Incomplete or inadequate legal frameworks
- Inadequate staff numbers, resources and budget
- Cultural norms and practices that inhibit the operation of MDSR
- Problems of geography and infrastructure that inhibit the operation of MDSR.

Some barriers identified during implementation of MPDR in hospitals.

Slide 24



Rationale of MPDSR

- Nepal has committed to reduce maternal and perinatal mortality by implementing MPDSR at international forums.
- Following this commitment, Family Health Division, Department of Health Services has developed National Guidelines and tools and implementing MPDSR from FY 2072/73.

Family Health Division, DHSS

Slide 25



MPDSR: Definition

Continuous identification, notification, quantification and determination of causes and avoidability of all maternal and perinatal deaths, as well as the use of this information to respond with actions that will prevent future deaths

Family Health Division, DHSS

Slide 26



MPDSR: Goal

“To eliminate preventable maternal and perinatal mortality by obtaining and using information on each maternal and perinatal death to guide public health actions and monitor their impact”

Family Health Division, DHSS

MPDSR can contribute significantly to a country’s “culture of accountability” by connecting action with results.

Slide 27

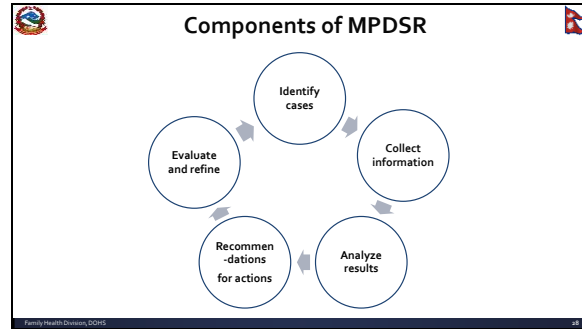


MPDSR: Objectives

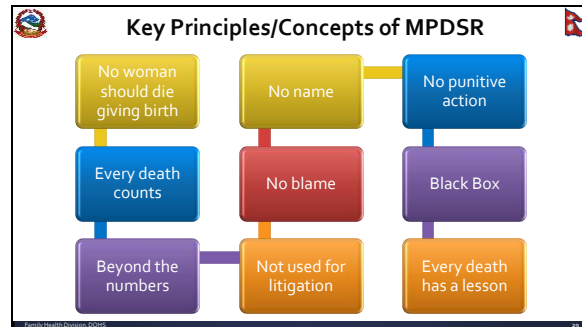
- To provide information that effectively guides immediate as well as long-term actions to reduce maternal mortality at health facilities and community and perinatal mortality at health facilities.
- To count every maternal and perinatal death, permitting an assessment of the true magnitude of maternal and perinatal mortality and the impact of actions to reduce it.

Family Health Division, DHSS

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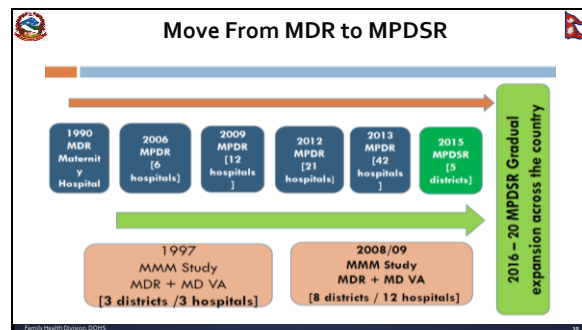
Slide 29



- Most of the maternal deaths are preventable. 99% of these deaths occur in less developed regions.
- Death of every mother causes enormous burden and sorrow to the family and society.
- Death should be reviewed not only in terms of quantity but importance must be given to review of quality of service the woman received at different levels.
- The review process is not to disclose name of any person.
- The review process is not to blame any person. MPDSR requires an enabling environment – one of collaboration rather than blame.
- The documents and process is not to be used for any legal process.
- The review process is not to be used to punish anyone.
- From television shows we learn how experts go into great depth to find the exact cause of each airplane crash and near-crash. They do so to make flying even safer in the future. It is the same line of thinking that is behind the concept of Maternal Death Surveillance and Response.
- Even though there can be similar causes of maternal deaths, each

death is unique and the social determinants of each death will be different with unique lessons for the program managers. So each death should be reviewed and responded.

Slide 30



1990 MDR designed by the Demography Section, FHD with technical support from WHO and implemented the MDR in Paropakar Maternity Hospital.

1996/97 MDR as part of Nepal MMM study was implemented in Kailali, Okhaldhunga and Rupandehi.

2002/03 Doctors and nurses in public hospitals, supported by the NSMP, UNICEF and NESOG, trained for MDR.

2003 MDR revised, PDR introduced and instruction manual prepared by the Demography Section, FHD with support from WHO.

2006 NMPDRC implemented MPDR in 6 hospitals.

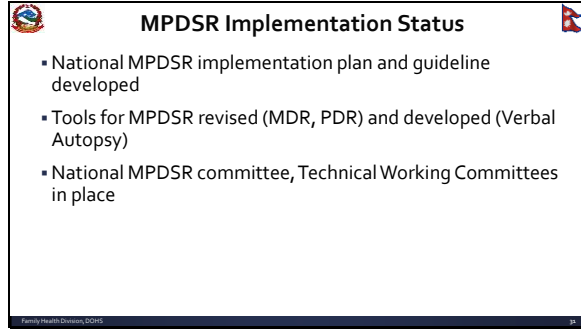
2008/09 MDR tool modified as part of second MMM study with technical support from SSMP.

2011/12 MPDR expanded to 5 more hospitals by FHD, reaching to 21 hospitals.

2013 MPDR process adopted by 42 hospitals; FHD revised the MDR and PDR tools.

2015/16 Developed guideline for MPDSR and implemented in 5 districts for community maternal mortalities.

Slide 31

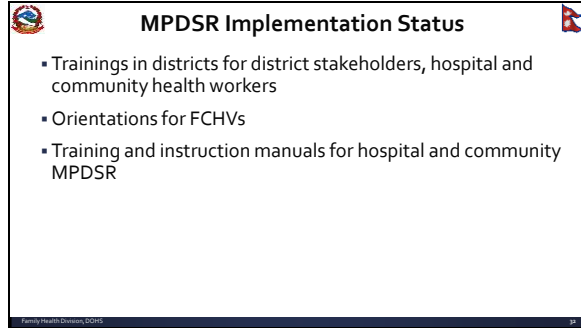


MPDSR Implementation Status

- National MPDSR implementation plan and guideline developed
- Tools for MPDSR revised (MDR, PDR) and developed (Verbal Autopsy)
- National MPDSR committee, Technical Working Committees in place

Family Health Division, GOI

Slide 32

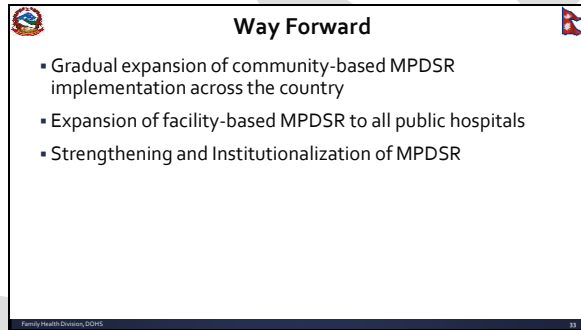


MPDSR Implementation Status

- Trainings in districts for district stakeholders, hospital and community health workers
- Orientations for FCHVs
- Training and instruction manuals for hospital and community MPDSR

Family Health Division, GOI

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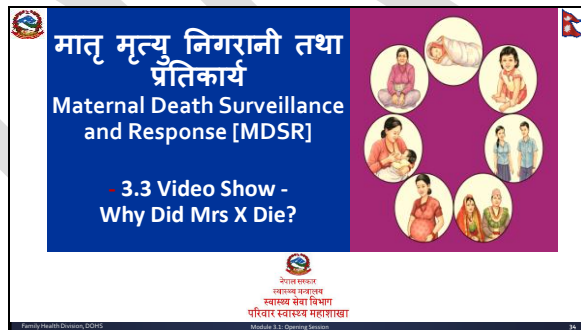


Way Forward

- Gradual expansion of community-based MPDSR implementation across the country
- Expansion of facility-based MPDSR to all public hospitals
- Strengthening and Institutionalization of MPDSR

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Slide 34



मातृ मृत्यु निगरानी तथा प्रतिकार्य
Maternal Death Surveillance and Response [MDSR]

3.3 Video Show - Why Did Mrs X Die?

स्वास्थ्य विभाग
परिवार स्वास्थ्य महाराष्ट्र

Provide brief overview of the video to the participants and ask them to concentrate on different factors which lead to the death of Mrs. X.

Slide 35

The Story

- This is a story of one case of maternal death. For the sake of anonymity, let us call the unfortunate woman, **Mrs X**.
- **Mrs X** died during labor in a hospital. It was a case of antepartum haemorrhage due to placenta praevia.
- The doctor was satisfied with the diagnosis, entered the appropriate ICD10 Code; and closed the file of **Mrs X**.
- Later the file was re-opened and the causes analyzed.
- The analysis identified the 'avoidable factors' in facility and community.
- An action plan was made and acted upon to prevent similar deaths



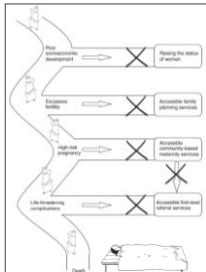
Family Health Discussion Guide

Placenta praevia, means that the placenta, or what we call the “afterbirth”, was situated too low down in the uterus. A woman with this condition will inevitably develop bleeding in the latter part of pregnancy or before delivery

Slide 36

Let's See What Led to Mrs X's Death

- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility



Family Health Discussion Guide

Ask participants to remember what the factors were in this case.

Slide 37

Watch the Video

https://www.youtube.com/watch?v=gS7fCvCle1k&ebc=ANyPxKpbsEGR1Et8qf77_graO6GZKLEdbSuf04xbNtlPhLwFQW6H0wxYeoDEGfjLyfDsygRgEogcAgr1hPutzwjalAWd83bL2g

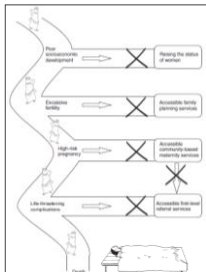
- [EXT_mrsXretoldOCT2012.wmv](#)
- And discuss ...

Family Health Discussion Guide

Slide 38

What led to Mrs's X death?

- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility



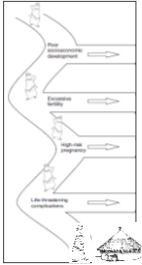
Family Health Discussion Guide

Now ask the participants what the factors were which lead to Mrs. X's death with examples.

Slide 39

How can we save Mrs. Y?

- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility




Family Health Division, DCHD

Discuss and guide the participants on how we can improve the factors responsible for Mrs. X's death and how we can respond to the factors and prevent death of another mother (Mrs. Y) due to the same cause in the same place. Discussions should be guided by the fact that the causes of maternal deaths are more than only health problems. Social determinants of health as discussed for Mrs. X are important factors. Therefore coordination response from multiple sectors is important to improve the system. Sectors such as health, education, infrastructure, women development etc must work together to improve the system.

Slide 40

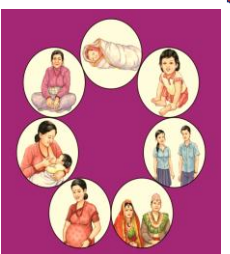
Any feedback?

Family Health Division, DCHD

Slide 41



नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा



Family Health Division, DCHD

Session 4: MPDSR Process

Objectives: By the end of session, the participants will be able to describe the process of MPDSR in the hospitals, identify the members of MPDSR Committee in the Hospital, District, Regional and National levels and identify the roles and responsibilities of individuals and MPDSR Committee in the Hospital level MPDSR process.

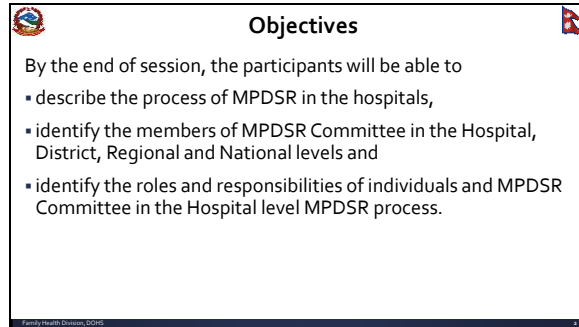
Time: 90 minutes

Session plan for Hospital-based MPDSR training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides in Annex
45 minutes	MPDSR Process	- Experience Sharing: Ask one participant each from two MPDR implementing hospitals to share on the process of maternal and perinatal death review process in their hospitals respectively - Interactive presentation on process of MPDSR using PowerPoint slides	PowerPoint Slides in Annex Flip Chart/Markers
20 minutes	MPDSR Committees composition and their roles	Interactive presentation on composition of MPDSR committees and their roles using PowerPoint slides	PowerPoint Slides in Annex
15 minutes	Role of individual participants	Role Identification game: Provide Metacards with individual or committee names responsible for implementing MPDSR in the hospital to each participant. Ask participants to imagine that they are the person or members of the committee provided in their Metacard. Display roles of individuals/committee one by one from PowerPoint and ask participants to raise hand if the displayed role is to be performed by them based on the Metacard provided to them.	PowerPoint Slides in Annex Metacards
5 minutes	Summarize the session		

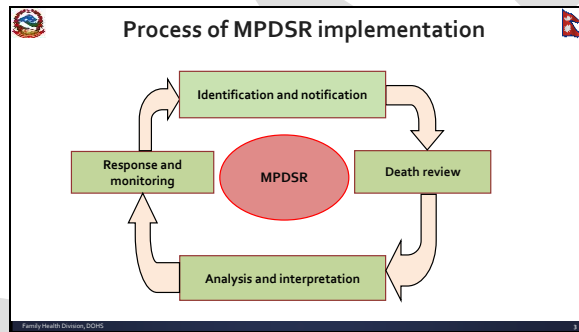
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Slide 2

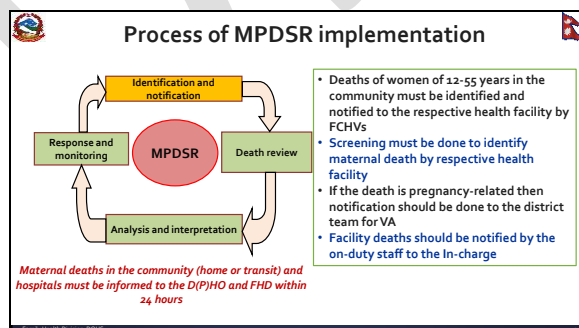


Slide 3



The process of MPDSR includes review of each maternal death that occurred in the health facility and community as well as each perinatal death that occurred in the health facility. It should start with identification of the death. The basic process of review and response are similar for facility and community deaths.

Slide 4



Screening questions to find out if the death is pregnancy-related.

Was she pregnant at the time of death?

Did the death occur while she was in labor?

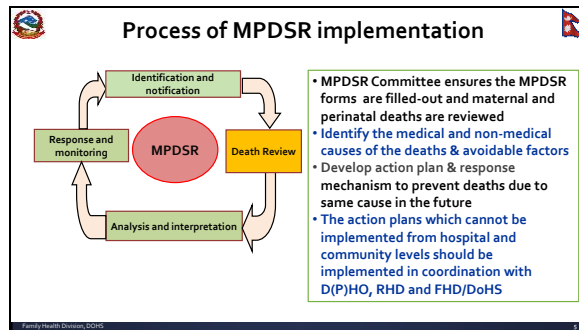
Did the death occur within 42 days after delivery?

Did the death occur within 42 days after spontaneous and induced abortion?

If the answer is yes for any one of the

above questions then the death might be maternal death. Screening and notification forms have been develop

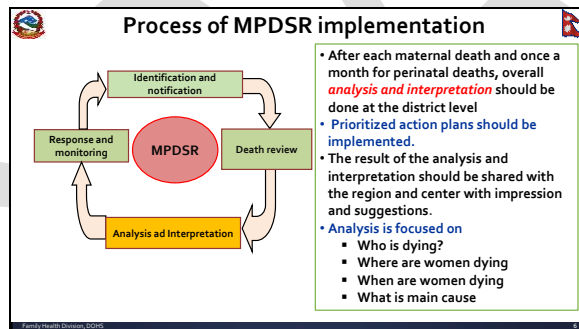
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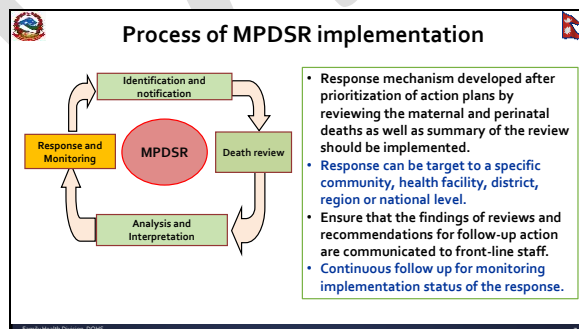
For community deaths: District team fill VA form, cause of death is assigned by Medical Doctor in District MPDSR Committee, review done by District MPDSR Committee, Action plan developed

For Facility deaths: On-duty staff fills MDR/PDR forms, facility-MPDSR committee review the forms and prepares action plan.

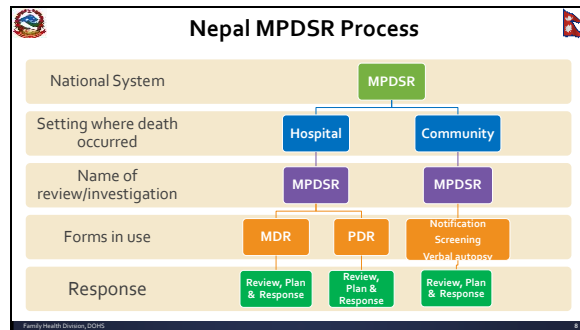
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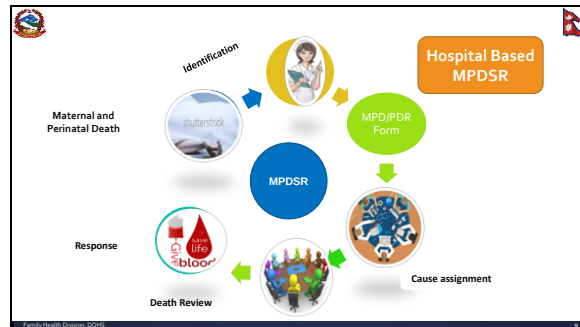
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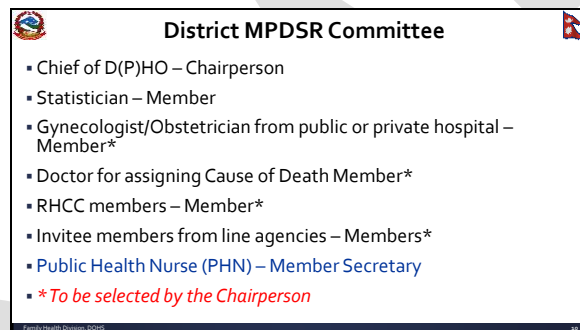
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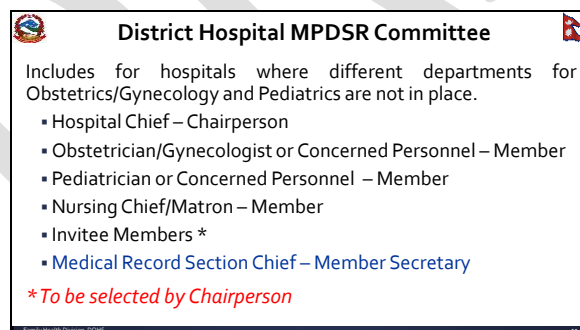
Slide 9



Slide 10



Slide 11



The concerned personnel at the District Hospitals might be MDGP or Medical Officers providing services at the hospitals.

Slide 12

Hospital MPDSR Committee

Includes for hospitals at: Central, Regional, Sub-Regional, Zonal, Private, NGOs, Missionary run, Community and Specialized hospitals where different departments for Obstetrics/Gynecology and Pediatrics are in place.

- Chief of Facility – Chairperson
- Head of Department of Obstetrics/Gynecology – Vice Chairperson
- Head of Department of Pediatrics – Vice Chairperson
- Nursing Chief/Matron – Member
- Invitee Members*
- Medical Record Section Chief – Member Secretary

*** To be selected by Chairperson**

Slide 13

Responsibilities of Hospital MPDSR Committee

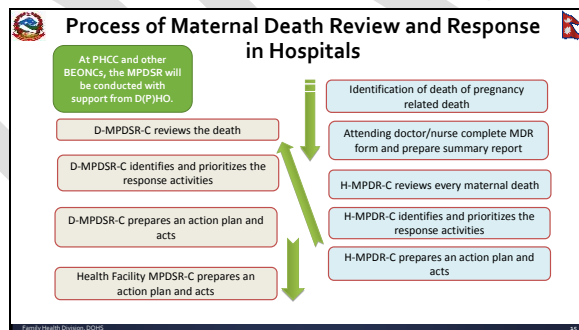
- Conduct reviews of maternal and perinatal deaths occurring in the hospital.
- Ensure that maternal deaths are notified and reviews are conducted properly and adequately
- Ensure data management
- Synthesize the findings and provide feedback to the hospital team
- Recommend actions to district MPDSR committees based on MPDR findings.

Slide 14

Responsibilities of Hospital MPDSR Committee

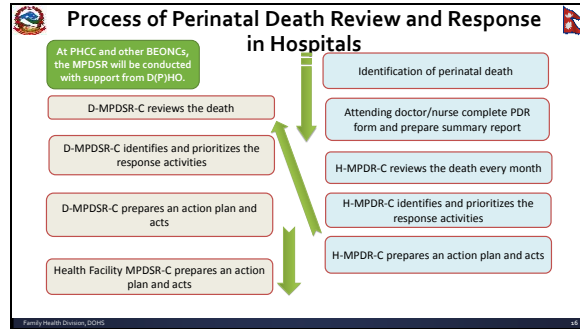
- Mobilize resources to implement recommended actions.
- Follow up to ensure that recommended actions are being implemented.
- Disseminate the review findings and recommendations to district, region and center.
- Co-ordinate with stakeholders for quality of care improvement

Slide 15



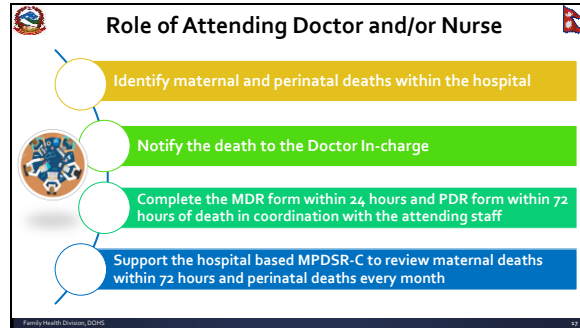
In the PHCCs and other BEONCs, the MPDSR committee will conduct MPDSR with support from D/PHO. The DPHO should send medical doctor with sufficient knowledge on MPDR as and when requested by health facilities.

Slide 16

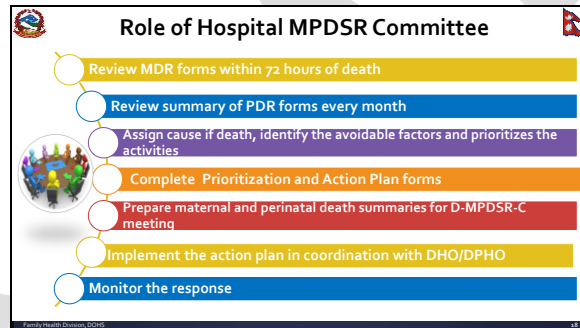


In the PHCCs and other BEONCs, the MDSR committee will conduct MPDR with support from D/PHO. The DPHO should send medical doctor with sufficient knowledge on MPDR as and when requested by health facilities.

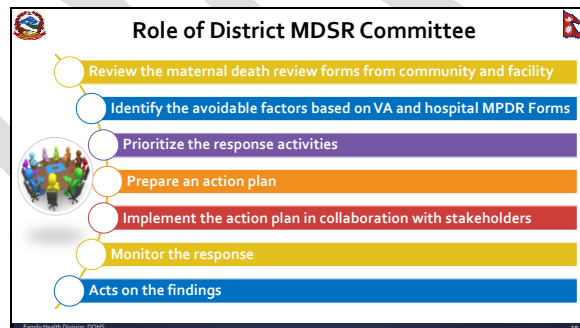
Slide 17



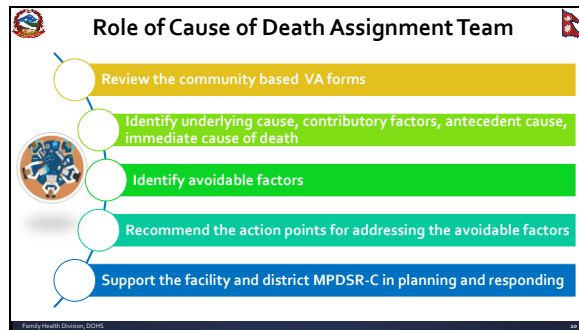
Slide 18



Slide 19



Slide 20



Slide 21

Who are you?

- Metacard with Doctor/Nurse or Hospital MPDSR Committee or District MPDSR Committee or Cause Assignment Team or Medical Recorder.
- Raise hand upon identifying who is responsible for the displayed action.
- Respond according to the metacard provided to you.

Provide Metacards with individual or committee names responsible for implementing MPDSR in the hospital to each participant. Ask participants to imagine that they are the person or members of the committee provided in their Metacard. Display roles of individuals/committee one by one from PowerPoint and ask participants to raise hand if the displayed role is to be performed by them based on the Metacard provided to them.

Slide 22

Roles of individuals and MPDSR Committee

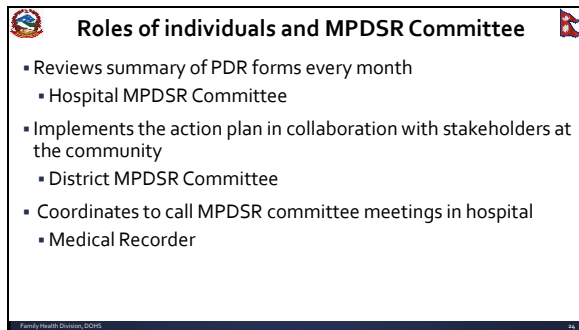
- Identifies maternal and perinatal deaths within the hospital
 - Doctor/Nurse
- Identifies the final cause of death and contributory factors for community maternal deaths
 - Cause Assignment Team
- Completes the MDR form **within 24 hours** of maternal death
 - Doctor/Nurse
- Enters information in the web-based system
 - Medical Recorder

Slide 23

Roles of individuals and MPDSR Committee

- Prepares an action plan
 - Hospital and District MPDSR Committee
- Reviews the maternal death review and verbal autopsy forms from community and facility
 - District MPDSR Committee
- Monitors the action plan implementation in hospital
 - Hospital MPDSR Committee

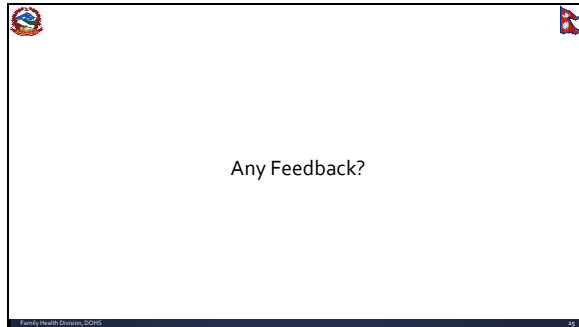
Slide 24



Roles of individuals and MPDSR Committee

- Reviews summary of PDR forms every month
 - Hospital MPDSR Committee
- Implements the action plan in collaboration with stakeholders at the community
 - District MPDSR Committee
- Coordinates to call MPDSR committee meetings in hospital
 - Medical Recorder

Slide 25



Any Feedback?

Slide 26



मातृ मृत्यु निगरानी तथा प्रतिकार्य

नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा

Session 5: Key terminologies

Objective: By the end of session, the participants will be able to define different terms related to maternal and perinatal deaths.

Time: 60 minutes

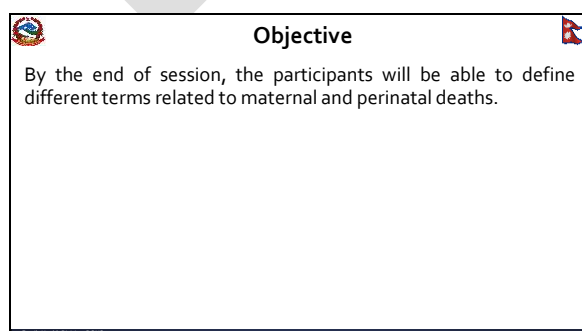
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides in Annex
50 minutes	Key terminologies	Quiz contest and discussion - Divide participants into four groups. - Ask the groups to select team leaders. - Share ground rules from	Questions in PowerPoint Slides in Annex/News prints or White board/Markers

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		PowerPoint slides. - Ask the questions as provided in the PowerPoint presentation. - If correct answer does not come then provide the answer from the PowerPoint. While answering and even on getting right answer from the participants/audiences, provide detail explanation about the terms used. This is because the objective of this session is to make them understand the concept rather than testing their knowledge. The Quiz is just a method/tool to do this. - The group which attains highest number is the winner. After the quiz, interactive presentation on key terminologies using the PowerPoint slides.	
5 minutes	Session summarization		

Slide 1



Slide 2



Slide 3



Quiz Contest

- Divide into four groups
- Select team leaders for each group
- Ground rules



Family Health Division, CDC

Slide 4



Quiz Contest

- Ground rules
 - There are 15 questions
 - Ten marks for answering the question first asked
 - If the group is not able to answer then the question is transferred to next group
 - Five marks for answering the transferred question
 - If correct answer does not come from contestants, facilitator will answer
 - 15 seconds for questions first asked and 10 seconds for transferred question
 - Group which attains highest number will be the winner
 - Decision made by the facilitator will be the final decision



Family Health Division, CDC

Slide 5



Question no. 1

- What is the full form of MMR in MPDSR?
- Maternal Mortality Ratio



Family Health Division, CDC

Slide 6



Question no. 2

- What is the denominator of MMR?
- Total live births



Family Health Division, CDC

Slide 7

 **Question no. 3** 

- What is the multiplier of MMR?
- 1,00,000

Family Health Division, GDHS

MMR refers to the number of maternal deaths during a given time period per 100 000 live births during the same time period.

The WHO estimate for MMR in Nepal in 2015 was 258 deaths per 100 000 live births

Slide 8

 **Question no. 4** 

- According to WHO estimate in 2015, what is the MMR of Nepal?
- 258 per 1,00,000 live births

Family Health Division, GDHS

Slide 9

 **Question no. 5** 

- If a woman died during pregnancy or within 42 days of termination of pregnancy due to pregnancy related causes or condition aggravated by pregnancy or its management, what is this known as?
- Maternal death

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Pregnancy-related death

The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.

Maternal death

The death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, irrespective of the duration and site of the pregnancy, but not from accidental or incidental causes.

Late maternal death

The death of a woman from direct or indirect obstetric causes, more than 42 days, but less than one year after termination of

pregnancy.
(ICD-10)

Slide 10



Question no. 6

- Which period is referred as perinatal period?
- From 22 weeks of pregnancy to 7 days after termination of pregnancy/delivery

Family Health Division, CDC

Slide 11



Question no. 7

- Expulsion of a dead fetus weighing 500 gm or after 22 weeks of gestation is expelled is known as?
- Still birth

Family Health Division, CDC

Slide 12



Question no. 8

- Death of women while pregnant or within 42 days of termination of pregnancy irrespective of cause of death is known as
- Pregnancy related death

Family Health Division, CDC

Slide 13



Question no. 9

- Death of pregnant women after 42 days of termination of pregnancy within one year is known as
- Late Maternal Death

Family Health Division, DGHS

Slide 14



Question no. 10

- Death of a woman resulting from obstetric complications of the pregnant state (i.e. pregnancy, delivery and postpartum), interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above is known as
- Direct Maternal Death

Family Health Division, DGHS

Slide 15



Question no. 11

- Process of identifying cause of death using oral interview of relatives and/or friends is known as
- Verbal Autopsy

Family Health Division, DGHS

Slide 16



Question no. 12

- Death of fetus after 22 weeks of pregnancy or weighing more than 500 gm up to 7 days following birth is known as
- Perinatal Death

Family Health Division, DGHS

Slide 17



Question no. 13

- Death of neonate within 7 days of delivery is known as
- Early Neonatal Death

Family Health Division, DGHS

17

Slide 18



Question no. 14

- Obstetric condition that initiates the chain of events leading to women's death are known as
- Primary Cause of Death

Family Health Division, DGHS

18

Slide 19



Question no. 15

- Death of a woman due to previous existing condition/disease aggravated by pregnancy is known as
- Indirect Maternal Death

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19

Slide 20



Tie Brake Questions

Family Health Division, DGHS

20

Slide 21

 **Question no. 16** 

- A pregnant woman, referred from another hospital, was brought dead in emergency department. The referral slip had documented high BP, albumin in urine and seizure. What could be the primary cause of death?
- Eclampsia

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Slide 22

 **Question no. 17** 

- A young primi gravida delivered in hospital two hours back followed by hemorrhage. She looked very pale (Hb was 5gm%) with un-recordable BP & pulse and she died suddenly. What could be the direct cause of death?
- Haemorrhage

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Slide 23

 **Question no. 18** 

- What is the contributory factor leading to the maternal death in question number 17?
- Anaemia

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Slide 24

 **Question no. 19** 

- A 36 year pregnant woman who had been complaining a shortness of breath with simple house hold work and occasionally chest pain and palpitation was brought to ER in labour. Immediately after delivery her shortness of breath worsened and B/L crepitation was noted on auscultation. Suddenly she started gasping and collapsed. **What is the primary cause of death?**
- Heart Disease

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Slide 25



Question no. 20

- What is the type of death in question number 19?
- Indirect Maternal Death

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Slide 26



Definitions

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Slide 27



Death of woman of reproductive age (WRA)

- Death of woman in reproductive years, usually 15–49 years
- Differs by country and by investigation
- For MPDSR-Nepal, WRA = 12–55 years

(ICD-10)

Family Health Division, DGHS

Slide 28



Maternal death

- The death of a woman while pregnant or within 42 days of termination of pregnancy,
- from any cause related to or aggravated by the pregnancy or its management, irrespective of the duration and site of the pregnancy,
- but not from accidental or incidental causes.

(ICD-10)

Family Health Division, DGHS

Please refer to ICD-MM for more details.

Slide 29

Definitions contd..

- Maternal deaths can be further classified into Direct or Indirect
- **Direct maternal death** (75%): those resulting from obstetric complications of the pregnant state (i.e. pregnancy, delivery and postpartum), interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above.

For example, deaths due to obstetric haemorrhage or hypertensive disorders in pregnancy, or those due to complications of anaesthesia or caesarean section.

Slide 30

Definitions contd..

- **Indirect maternal death** (25%): those resulting from previously existing diseases, or from diseases that developed during pregnancy and that were not due to direct obstetric causes but aggravated by physiological effects of pregnancy.

For example, deaths due to aggravation of an existing cardiac or renal disease

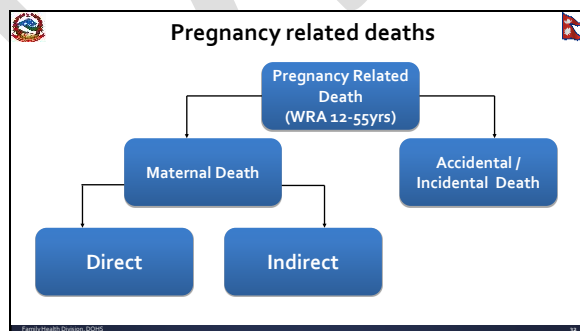
Slide 31

Definitions contd..

- **Pregnancy-related death**
 - The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.
- **Late maternal death**
 - The death of a woman from direct or indirect obstetric causes, more than 42 days, but less than one year after termination of pregnancy.

(ICD-10)

Slide 32



Slide 33



Maternal Mortality Ratio (MMR)

- The number of maternal deaths during a given time period per 100 000 live births during the same time period.
- The WHO estimate for MMR in Nepal in 2015 was 258 deaths per 100 000 live births

Family Health Division, DOH

Slide 34



Example 1:

A 24 year old woman delivered a large healthy baby at home. Two hours after delivery she was bleeding heavily with a fast pulse and low blood pressure. She died four hours after delivery.

Q1. Is this a maternal death?
Yes

Q2. If yes, can it be classified as Direct / Indirect
Direct (Haemorrhage)

Q3. Should it be reported to MPDSR committee?
Yes

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There may be some disagreements or ambiguities – not all cases are easy to classify!

Remember that the purpose is to assess whether the death is *likely* to be a maternal death and thus require a verbal autopsy. Participants should NOT try to diagnose the condition described or assign a cause of death.

Try to prevent participants' getting too preoccupied with specific examples or asking about scenarios that are likely to be extremely rare. As long as standardized classification are applied to most deaths, the system will function.

Slide 35



Example 2:

A 36 year old woman is known to be about 6 months pregnant with her 5th pregnancy. She experiences dizziness and night sweats, shortness of breath and has been coughing blood stained sputum. The Doctor diagnosed tuberculosis and found she was HIV positive. She died at 7 months pregnancy of pneumonia.

Q1. Is this a maternal death?
Yes

Q2. If yes, can it be classified as Direct / Indirect
Indirect (HIV/TB are affected physiologically by pregnancy)

Q3. Should it be reported to MPDSR committee?
Yes, it should be reported

Family Health Division, DOH

Slide 36



Example 3:

A 31 year old woman is 38 weeks pregnant with her 4th child. She is on her way to the local town walking along the main road with her children when a bus knocks her down. She is unconscious and dies 4 hours after the accident.

Q1. Is this a maternal death?

No, it is not a maternal death, as the death occurred from **incidental** causes

Q3. Should it be reported to MPDSR committee?

Yes

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Slide 37



Perinatal Death

- Differ according to country
- The death of a fetus or newborn in the period between 28 weeks of pregnancy and 7 days after birth (WHO).
- The death of a baby from 22 weeks of gestation (or weighing at least 500 grams) to first 7 days of life (early neonatal period) (ICD-10). (This is the definition used in PDR-Nepal)

Family Health Division, DGHS

Slide 38



Definitions

- **Stillbirth**
 - A baby born with no signs of life at the time of birth, weighing more than 500g or with more than 22 completed weeks of gestation (ICD10)
- **Neonatal Death**
 - The death of a child who is born alive but dies within the first 28 days of life
- **Early neonatal death**
 - An early neonatal death is a death occurring in an infant during the first week of life (7 days).

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Slide 39



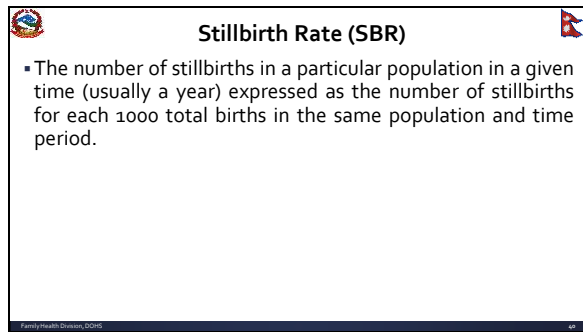
Perinatal Mortality Rate (PMR)

- The number of perinatal deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1000 births in the same population and time period.

Family Health Division, DGHS

Perinatal Mortality Ratio: The number of perinatal deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1000 **live** births in the same population and time period.

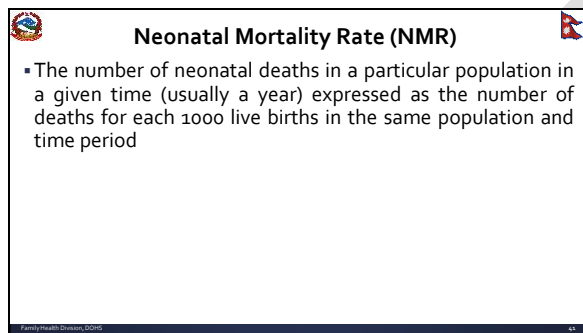
Slide 40



Stillbirth Rate (SBR)

- The number of stillbirths in a particular population in a given time (usually a year) expressed as the number of stillbirths for each 1000 total births in the same population and time period.

Slide 41



Neonatal Mortality Rate (NMR)

- The number of neonatal deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1000 live births in the same population and time period

Slide 42



मातृ मृत्यु निगरानी तथा प्रतिकार्य

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Session 6: Causes of Death

Objective: By the end of session, the participants will be able to identify the primary, contributory and final causes of maternal and perinatal deaths.

Time: 30 minutes

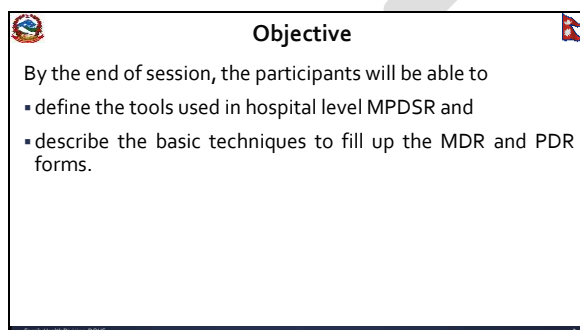
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
20 minutes	Causes of Death for Maternal and	Interactive presentation	PowerPoint Slides

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
	Perinatal Mortality		
5 minutes	Session summarization		

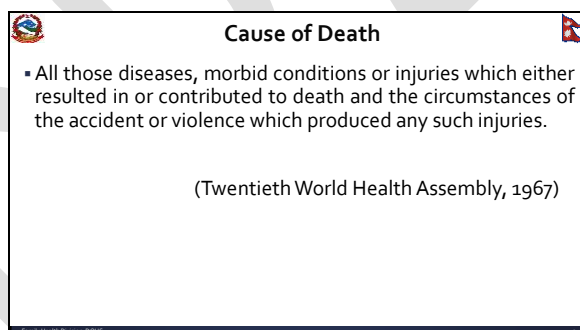
Slide 1



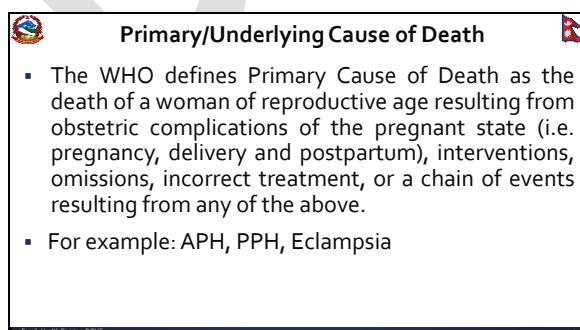
Slide 2



Slide 3

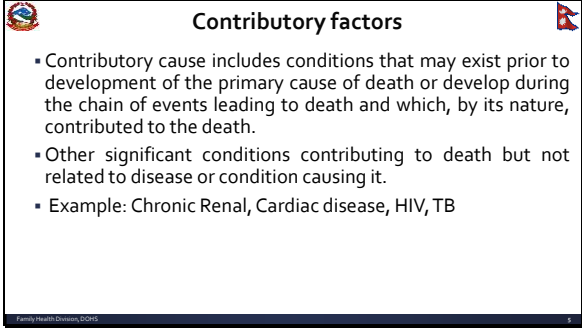


Slide 4



It is the disease or injury that initiated the chain of morbid events that led directly and inevitably to death.

Slide 5



Contributory factors

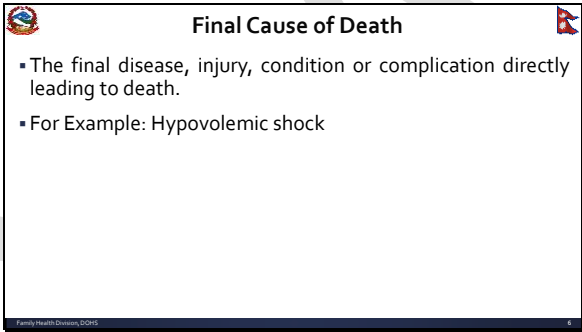
- Contributory cause includes conditions that may exist prior to development of the primary cause of death or develop during the chain of events leading to death and which, by its nature, contributed to the death.
- Other significant conditions contributing to death but not related to disease or condition causing it.
- Example: Chronic Renal, Cardiac disease, HIV, TB

Family Health Officers, GCHS

These are conditions that may have contributed to or may be associated with, but should not to be reported as sole condition selected as the underlying cause of death. Contributing causes may predispose women to death, as either a pre-existing condition or a risk factor.

The classification is oriented towards the organ system that failed and leads to the death and will indicate what resources are required to prevent the death. There may not be a Contributory Cause of Death. **There can be multiple contributory causes of death.**

Slide 6

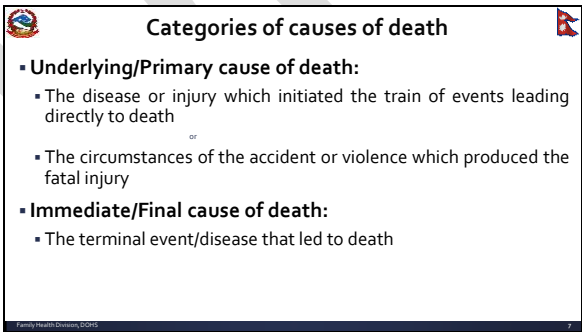


Final Cause of Death

- The final disease, injury, condition or complication directly leading to death.
- For Example: Hypovolemic shock

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Slide 7



Categories of causes of death

- **Underlying/Primary cause of death:**
 - The disease or injury which initiated the train of events leading directly to death
 - or
 - The circumstances of the accident or violence which produced the fatal injury
- **Immediate/Final cause of death:**
 - The terminal event/disease that led to death

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Slide 8

Categories of causes of death

- **Antecedent cause of death**
 - All events/diseases between the immediate cause of death and the underlying cause of death
- **Contributory cause of death**
 - Diseases that are independent of the causal chain of events/diseases leading to death

Slide 9

An example of causal chain of diseases

Massive Upper Gastro intestinal haemorrhage
Caused by
Bleeding oesophageal varices
Caused by
Cirrhosis of liver
Caused by
Chronic Hepatitis
Also had
Diabetes

Primary Cause of Death: Chronic hepatitis
Antecedent Cause of Death: Cirrhosis of Liver
Antecedent Cause of Death: Bleeding Oesophageal varices
Final cause of Death: Massive upper GI haemorrhage
Contributory Cause of Death: Diabetes

Slide 10

An example of causal chain of events/diseases leading to maternal death

Antepartum haemorrhage
Caused by
Abruptio placenta
Caused by
Pre-eclampsia
Also had
Diabetes

Primary Cause of Death: Pre-eclampsia
Antecedent Cause of Death: Abruptio Placenta
Final cause of Death: APH
Contributory Cause of Death: Diabetes

Slide 11

Cause of Death Assignment

- On duty staff will provide the primary, contributory and final cause of death for hospital Maternal Death which will be finalized by the MPDSR committee at the hospital.

Slide 12

Cause of Death Assignment

- Medical Doctor in the District Verbal Autopsy Team trained on Cause of Death Assignment will be responsible to assign cause of death for maternal deaths in the communities after reviewing the completed Verbal Autopsy form.

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Slide 13

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Maternal Death Surveillance and Response [MDSR]
 - Cause of Death Assignment Form-

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Slide 14

**Government of Nepal
Ministry of Health and Population** MPDSR Tool 4

MATERNAL DEATH VERBAL AUTOPSY CAUSE OF DEATH ASSIGNMENT FORM

A. Case Summary			
District		Case Number	
Name of the deceased		Age (G. ...)	
Case narrative: [Gravida, Parity, ANC/Intra/PNC history, sequence of events, treatment, time line of events]			
History of illness prior to death			
Positive symptoms			
Contributing factors (delays)			
First delay	Second delay	Third delay	

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Slide 15

Cause of Death Assignment

Part I	Approximate Interval Between Onset & Death	VA Code
Disease or condition directly leading to the death*		
a) (due to or as a consequence of)		
Antecedent causes (Morbid conditions, if any, giving rise to the above cause, stating underlying condition last)		
b) (due to or as a consequence of)		
c) (due to or as a consequence of)		
d) (due to or as a consequence of)		

Part II
 Other significant conditions (morbid conditions contributing to death, but not related to the disease or conditions causing it)
 * This does NOT mean the mode of dying, e.g., heart failure, respiratory failure; it means the disease, injury or complication that caused death.

Information about cause of death assignment

Certainty of Diagnosis	1 [High]	2 [Medium]	3 [Low]	4 [Insufficient to Code]
------------------------	----------	------------	---------	--------------------------

Insufficient information: What other information should have been gathered?

Reviewer name: _____ Code: _____
 Date of review: _____ Start time: _____ Finish time: _____

Family Health Division, DGHS



Day Two

Review of Day One

Select one participant to review Day One using his/her own methodology involving other participants also.

Time: 30 minutes

Session Seven: Introduction to Hospital Level MPDSR Tools

Objectives: By the end of session, the participants will be able to define the tools used in hospital level MPDSR and describe the basic techniques to fill up the MDR and PDR forms.

Time: 30 minutes

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
20 minutes	Types and general instruction to fill up the forms used in hospital level MPDSR	Interactive Presentation using the PowerPoint slides and MPDSR forms used in the hospitals	MPDSR forms (MDR form, MDR summary form, PDR form, PDR Summary form) in annex PowerPoint Slides Instruction manual for MDR and PDR Forms
5 minutes	Session summarization		

Slide 1

Maternal Death Surveillance and Response [MDSR]

- Introduction to Hospital level MPDSR tools -

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परिवार स्वास्थ्य महाशाखा

Family Health Division, DGH

Slide 2

Objective

By the end of session, the participants will be able to

- define the tools used in hospital level MPDSR and
- describe the basic techniques to fill up the MDR and PDR forms.

Family Health Division, DGH

Slide 3

Tools used in MPDSR

Family Health Division has developed 12 tools to be used in the process of MPDSR.

MPDSR Tools
Tool 1: Notification form ©
Tool 2: Screening form ©
Tool 3: Community Verbal Autopsy form ©
Tool 4: Community Cause of Death Assignment form ©
Tool 5: Community VA summary form ©
Tool 6: Hospital Maternal Death Review form (H)

Family Health Division, DGH

Inform that there will be separate session where the participants will be provided with detailed information on tools used in hospital.

©: Tools used for review and response to community maternal deaths

(H): Tools used for review and response to hospital maternal and perinatal deaths

Slide 4

Tools used in MPDSR

MPDSR Tools
Tool 7: Hospital Perinatal Death Review form (H)
Tool 8: Maternal Death Review summary form (H)
Tool 9: Perinatal Death Review summary form (H)
Tool 10: District MPDSR Committee Maternal Death Review form ©
Tool 11: District MPDSR Committee Community Maternal Death Action Plan form ©
Tool 12: District MPDSR Committee Hospital Maternal Death Action Plan form (H)

Family Health Division, DGH

Tools 6, 7, 8 and 9 will be used only in hospital Maternal and Perinatal Death Review.

Slide 5

Community Maternal Death Notification Form

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स्वास्थ्य सेवा विभाग
जिल्ला जनस्वास्थ्य कार्यालय,
..... प्राथमिक स्वास्थ्य केन्द्र/स्वास्थ्य चौकी

मातृ मृत्यु निगरानी तथा प्रतिकार्य सम्बन्धी
१२ देखि ५५ वर्ष सम्मका महिलाको मृत्यु सूचना फारम
[महिला स्वास्थ्य स्वयंसेविकाहरूले मृत्यु भएको थाहा पाएको २४ घण्टाभित्र सम्बन्धित स्वास्थ्य संस्थामा सूचित गर्ने
प्रयोजनका लागि]

MPDSR Tool: 1
गोप्य
यो सूचनामातृ मृत्युको निगरानी र
प्रतिकार्य तथा सामुहिक रूपमा
तथ्याङ्कीय प्रयोजनका लागि
नेपाल सरकारका स्वास्थ्य
विभागहरूले मात्र प्रयोग गर्नेछन्।

Used by Female Community Health Volunteers (FCHVs) to inform about death of any woman of 12-55 years age within the community. The information should be notified to the local health facility within 24 hours of identifying about the death.

Slide 6

Community Maternal Death Screening Form

नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
जिल्ला जनस्वास्थ्य कार्यालय,
..... प्राथमिक स्वास्थ्य केन्द्र/स्वास्थ्य चौकी

मातृ मृत्यु निगरानी तथा प्रतिकार्य प्रयोजनका लागि
मातृ मृत्युको प्रारम्भिक पहिचान फारम
[स्वास्थ्यकर्मीको प्रयोगको लागि]
[महिला स्वास्थ्य स्वयंसेविका वा अन्य सूचक मार्फत १२ वर्षदेखि ५५ वर्षसम्मका महिलाको मृत्यु भएको सूचना प्राप्त
भएपछि सो मातृ मृत्यु हो वा होइन भनी प्रारम्भिक चर्कीव गर्न यो फारम भर्नु पर्दछ।]

MPDSR Tool: 2
गोप्य
यो सूचनामातृ मृत्युको निगरानी र
प्रतिकार्य तथा सामुहिक रूपमा
तथ्याङ्कीय प्रयोजनका लागि
नेपाल सरकारका स्वास्थ्य
विभागहरूले मात्र प्रयोग गर्नेछन्।

Used by the ANMs/HAs at the local health facility to confirm if the death of the woman identified and notified by the FCHV is pregnancy-related. Screening should be done within 24 hours from notification by FCHV and informed to the DPHO

Slide 7

Community Maternal Death Verbal Autopsy Form

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा
ठेकु, काठमाडौं

मातृ मृत्यु निगरानी तथा प्रतिकार्य, २०७२
मातृ मृत्यु प्रश्नावली

१. परिचयात्मक विवरण

क्र.सं.	मृत्यु भएको महिलाको विवरण	कारणीय प्रयोजनको लागि (कोट)
१.	सम्बन्धी/सम्बन्धीन	
२.	मृत्यु भएको महिलाको शरीरको वय	
३.	मृत्यु भएको महिलाको सम्बन्धीको वय	
४.	मृत्युको वय	

MPDSR Tool 3

Once identified by the local health facility as a pregnancy-related death and informed to the DPHO, the Verbal Autopsy (VA) team from the DPHO will come and conduct VA within 21 days of death.

Slide 8

**Government of Nepal
Ministry of Health and Population**

MATERNAL DEATH VERBAL AUTOPSY CAUSE OF DEATH ASSIGNMENT FORM

A. Case Summary

District	Case Number
Name of the deceased	Age (D. ...)
Case narrative: [Gonads, Parity, ANC/Intra/PNC history, sequence of events, treatment, time line of events]	

History of illness prior to death

Positive symptoms

Contributing factors (delays)

First delay	Second delay	Third delay

MPDSR Tool 4

The medical doctor in the district MPDSR committee who is trained in Cause of Death Assignment will be responsible for assigning the cause of death from the information obtained from the filled VA form.

Slide 9

The VA summary form is to be prepared after review from doctor trained on cause of death assignment. This form is to be presented to the District MPDSR Committee for review and response.

Slide 10

MDR form is to be filled for maternal deaths within health facilities/hospitals

Slide 11

PDR form is to be filled for perinatal deaths within health facilities/hospitals

Slide 12

The summary form is to be prepared for each maternal death based on the MDR form and presented to the hospital MPDSR committee.

Slide 13

Government of Nepal
Ministry of Health and Population

MPDSR Tool 9

Summary of Hospital Perinatal Death Review Form

[CONFIDENTIAL]

Name of Hospital: _____

Identification:

dd	mm	yyyy
----	----	------

1. Date of report:

<24 hours	24+ hours
-----------	-----------

2. Age at death:

<1000	1000-2500	2500+
-------	-----------	-------

3. Birth Weight: (In Gram)

The summary form is to be prepared once a month for all the perinatal deaths within the hospital during that month and presented to the hospital MPDSR Committee for monthly review meeting

Slide 14

District MPDSR Committee Maternal Death Review Form

MPDSR Tool 10

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
सामाजिक कल्याण विभाग
निर्वाहक निदेशक/सहायक निदेशक
मातृत्व रोग निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

To be filled after MDR and VA of a maternal death and presented to the district MPDSR Committee for review of the death.

Slide 15

District MPDSR Committee Community Maternal Death Action Plan form

MPDSR Tool 11

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
सामाजिक कल्याण विभाग
निर्वाहक निदेशक/सहायक निदेशक
मातृत्व रोग निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

To be filled after VA and presented to the District MPDSR Review Committee to complete the form by identifying the delays and preparing action plan.

Slide 16

District MPDSR Committee Hospital Maternal Death Action Plan Form

MPDSR Tool 12

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
सामाजिक कल्याण विभाग
निर्वाहक निदेशक/सहायक निदेशक
मातृत्व रोग निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

मातृ मृत्यु निवेदन समिति/महानिदेशक (District MPDSR Committee)

To be filled and presented to the District MPDSR Committee to review the maternal death in the hospital, identify delays and prepare action plan.

Slide 17




General Instructions to complete the forms

Family Health Division, DOTS

Slide 18




General Instructions to complete the forms

- Choose only one answer unless multiple answers are indicated.
- Use Nepali (Bikram Sambat) dates while filling the date column.
- **Date of Review:** Please note the day in two dd boxes, note the month in the mm boxes and the year in the yy boxes. For example, if the date is Mangshir 17, 2073, then the box should be filled as:

d	d	m	m	y	y	y	y
1	7	0	8	2	0	7	3

Family Health Division, DOTS

Slide 19




General Instructions Contd...

- The time should be completed in 24 hours format. For example if the time is 04:15 **pm** then the box should be filled as:

1	6	1	5
---	---	---	---

- If the digit is single then "0" should be filled in the first box and the single digit in the next box. For example if the time is 04:15 **am** then the box should be filled as:

0	4	1	5
---	---	---	---

Family Health Division, DOTS

Slide 20

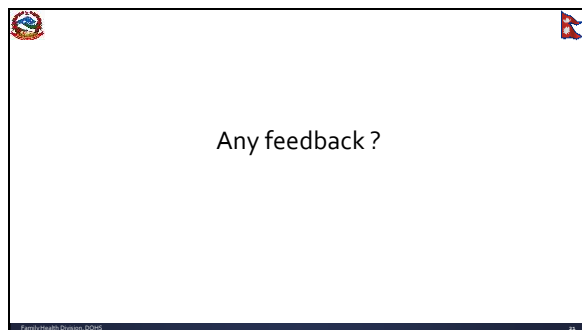



General Instructions Contd...

- Check the correct option by circling the number clearly.
- In case of need of correction, the mistake should be clearly cut with double line and the right option should be circled.
- Use block letters for writing any information.

Family Health Division, DOTS

Slide 21



Slide 22



Session 8: MDR Forms

Objectives: By the end of session, the participants will be able to describe the contents of MDR forms and fill up the MDR forms correctly and completely using medical records/case files/mock files of maternal mortality.

Time: 180 minutes

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
60 minutes	Detail instruction to fill up the MDR form	- Distribute MDR form to each participants - Discuss each question of each section providing examples as much as possible. - Inform the participants that the detail instruction for completing the form can also be accessed in the Instruction Manual for MDR and PDR	PowerPoint Slides MDR forms Instruction Manual for MDR and PDR form

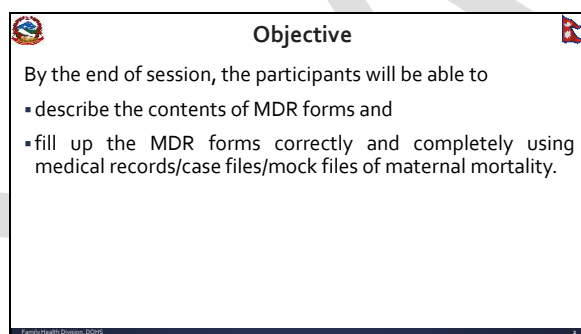
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		forms. ▪ Highlight the general instructions discussed in previous session.	
110 minutes	Practice to fill up the form up to section seven using given case studies	Group Work and Presentation ▪ Divide participants into five group (4-6 members in each) ▪ Allocate 45 minutes for groups to fill up the forms ▪ Allocate 50 minutes for presentation (10 minutes for each group) ▪ Provide feedback on the filled forms in 15 minutes For the group work: Provide a hospital maternal death case file for each group. The case files can be real files brought by the participants. If there are no maternal deaths case files then provide copy of mock files of maternal deaths provided in the annex of this training package. The participants should be instructed to fill up the MDR form till Section 7. Move around the groups to ascertain all the group members are equally involved and participating in the work. Explain for any confusion during the process. After the groups have filled up the forms, ask to present briefly on the case and the MDR form from each group, 5 minutes for presentation and 5 minute for discussion from each group. While the presentations are ongoing, one facilitator to check	MDR Forms/ Instruction Manual/ Case files brought by the participants/Mock files in Annex.

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		all the filled forms and provide feedback at the end to wrap the session. Note: The filled forms need to be kept safely for further work next day.	
5 minutes	Session summarization		

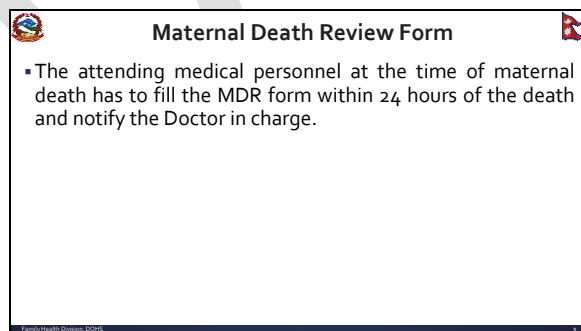
Slide 1



Slide 2



Slide 3



Slide 4

Government of Nepal
Ministry of Health and Population
Department of Health Services
Family Health Division
Teku, Kathmandu

MPDR Tool 6
CONFIDENTIAL
This form will be kept confidential and used only for quality of care improvement and collective statistical purposes

MATERNAL DEATH REVIEW FORM

Maternal death includes death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (WHO ICD-10).

The maternal death review process is an in-depth investigation of the causes of and circumstances surrounding maternal deaths occurring at health facilities with the objective of identifying avoidable factors and utilising the information for improving quality of care at the facility, and policy and programme reform.

Sections 1-7 should be completed within 24 hours of a maternal death by the attending medical officer/nursing staff in consultation with other staff that had contact with the deceased. All available records related to the deceased should be reviewed. The death should be notified to Family Health Division within 24 hours of occurrence with name, age and permanent address of the deceased.

Sections 1-7 should be reviewed within 72 hours by a hospital maternal death review committee. After discussion, the committee should complete Section 8 and 9. The completed forms should be made accessible to Family Health Division through web entry.

MDR form contains ten sections and background information, all sections need to be completed

Discuss on each question of each section with the participants providing examples as much as possible. Inform that the detail instruction for completing the form can also be accessed in the instruction manual for MDR and PDR.

Slide 5

Background Information

District:

Name of facility:

Highlight the general instructions discussed in previous session also.

Slide 6

Section1: Demographic Detail of Deceased Woman

101	Full Name:			
102	Age at death (Completed years)			
103	Address			
	District:	VDC/Municipality:	Ward No.	
104	Ethnicity/Caste (Specify):			(Don't know: 998) [Note: Please see Annex for the code]
105	Gravida			
106	Parity			
107	Date of Death	Day	Month	Year
108	Time of Death (24 hour format)	Hour	Minute	
109	Period of death			
	Antenatal period (skip section 4)	1		
	Intrapartum period	2		
	Postpartum period up to 48 hours after delivery	3		
	Postpartum period after 48 hours of delivery	4		

Slide 7

Section2: Admission Related Information

201	Date of admission to this facility (Nepali date)	Day	Month	Year
202	Time of admission (24 hour Time Format)	Hour	Minute	
203	Period on admission			
	Antepartum	1		
	Intrapartum (in labour)	2		
	Postpartum (up to 48 hours after delivery)	3		
	Postpartum (between 2-42 days after delivery)	4		
204	Condition on admission	Pulse	Temperature	BP
		/min	°C	mmHg
205	Diagnosis on admission (Provisional Diagnosis)	Yes	No	Unknown
a	Ante partum haemorrhage	1	2	98
b	Postpartum haemorrhage	1	2	98
c	Ectopic pregnancy	1	2	98
d	Prolonged/obstructed labour	1	2	98
e	Ruptured uterus	1	2	98
f	Pre-eclampsia	1	2	98
g	Eclampsia	1	2	98
h	Retained placenta	1	2	98
i	Puerperal sepsis	1	2	98
j	Abortion related complications	1	2	98
k	Pregnancy induced hypertension	1	2	98
l	Other (Specify):	1	2	98
m	No diagnosis given	98		

Slide 8

Section3: Information About Pregnancy				
301	Did she receive any antenatal care?	Yes	No (skip to 303)	Don't know 98
302	If yes, when did she had first ANC? (Specify month of pregnancy)	Don't know 98		
303	Did she suffer from any of the following complication during this pregnancy and child birth? (Clinical history of this pregnancy)	Yes	No	DK
a.	Ante partum haemorrhage	1	2	98
b.	Postpartum haemorrhage	1	2	98
c.	Ectopic pregnancy	1	2	98
d.	Multiple pregnancy	1	2	98
e.	Prolonged/obstructed labour	1	2	98
f.	Ruptured uterus	1	2	98
g.	Pre-eclampsia/eclampsia	1	2	98
h.	Retained placenta	1	2	98
i.	Puerperal sepsis	1	2	98
j.	Complications related to induced abortion	1	2	98
k.	Pregnancy induced hypertension	1	2	98
l.	Anaemia	1	2	98
m.	Malaria	1	2	98
n.	Hepatitis / Jaundice	1	2	98
o.	Heart disease	1	2	98
p.	Diabetes	1	2	98
q.	HIV/AIDS	1	2	98
r.	Others (Specify)	1	2	98

Slide 9

Section4: Information About Delivery & Puerperium				
401	Date of delivery (Nepali date)	Day	Month	Year
402	Time of delivery (24 hour format)	Hour	Minute	
403	Where did she deliver?	This facility		
		PHCC/UP/SBP		
		Government hospital		
		Private/NGO/Missionary facility		
		Home / someone else's home		
		In transit to health facility		
		Other (Specify)		
		Don't know		
404	What type of facility was that?	CEONC		
		BEONC		
		Birthing centre		
		Others (Specify)		
		Don't know		
405	Who was the main delivery attendant?	Doctor		
		Nurse/ANM/SBA		
		Other health workers (Specify)		
		FCUJ / Friend / Relative		
		Self		
		Other (Specify)		

Slide 10

Section4: Information About Delivery & Puerperium Contd.				
406	Was a Partograph used?	Yes	No	Don't know
407	If a partograph was used please write relevant information based on partograph:	Yes	No	DK
	Half hourly foetal heart rate monitored	1	2	98
	Half hourly uterine contraction monitored	1	2	98
	Four hourly PV examination done	1	2	98
408	What was the duration of labour?	< 12 hours	12-23 hours	>=24 hours
409	Presentation of foetus	1	2	3
		Cephalic	Breech	Shoulder
		Other (Specify)		
410	What was the mode of delivery?	Normal	(Skip 411 and 412)	
		Vaginal	Caesarean section	Destructive Operation (Embryotomy)
		Others (Specify)		
411	What was the reason for vacuum/forceps/CS/destructive operation?	Maternal	Foetal	Don't know
		Describe the reason:		
412	Was the caesarean section emergency or elective?	Emergency	Elective	Don't know
		1	2	98

Slide 11

Section4: Information About Delivery & Puerperium Contd.				
413	Did she suffer from any of the following complications during labor or delivery?	Yes	No	Don't know
a.	Haemorrhage	1	2	98
b.	Shock	1	2	98
c.	Eclampsia	1	2	98
d.	Pre-eclampsia	1	2	98
e.	Anaesthetic complication	1	2	98
f.	Major genital tract injury	1	2	98
g.	Obstructed labour	1	2	98
h.	Prolonged labour	1	2	98
i.	Seizures / Unconsciousness	1	2	98
j.	Retained placenta	1	2	98
k.	Hand prolapsed	1	2	98
l.	Cord prolapsed	1	2	98
m.	Other (Specify)	1	2	98
414	Was it a multiple pregnancy?	Yes	No	
415	Outcome of this pregnancy	Alive	Macerated still birth	Fresh still birth
		Early neonatal death (up to 7 days)	Late neonatal death (7 - 28 days)	Induced/spontaneous abortion
		1	2	3
		4	5	6
		7	8	98

Slide 12

Section4: Information About Delivery & Puerperium Contd.

416	Did she suffer from any of the following complications after delivery?	Yes	No	Don't know
a.	Postpartum haemorrhage	1	2	98
b.	Puerperal sepsis	1	2	98
c.	Complications of operative delivery	1	2	98
d.	Thrombosis	1	2	98
e.	Eclampsia	1	2	98
f.	Anaemia	1	2	98
g.	Maternal depression	1	2	98
h.	Pulmonary embolism	1	2	98
i.	Heart disease	1	2	98
j.	Gastroenteritis	1	2	98
k.	Pneumonia	1	2	98
l.	Hepatitis	1	2	98
m.	Other (specify).....	1	2	98

Slide 13

Section5: Information About Interventions

501	Were any of the following interventions administered during ANC, Delivery and postpartum period?	Antenatal			Intrapartum			Postpartum		
	Interventions	Yes	No	DK	Yes	No	DK	Yes	No	DK
a.	Blood transfusion	1	2	98	1	2	98	1	2	98
b.	External cephalic version	1	2	98	1	2	98	1	2	98
c.	Hysterectomy	1	2	98	1	2	98	1	2	98
d.	Exploration of uterus / MRP	1	2	98	1	2	98	1	2	98
e.	Laparotomy	1	2	98	1	2	98	1	2	98
f.	ICU (Advanced life support)	1	2	98	1	2	98	1	2	98
g.	Treatment for malaria	1	2	98	1	2	98	1	2	98
h.	Treatment of anaemia (Specify).....	1	2	98	1	2	98	1	2	98

Slide 14

Section6: Causes of Death (Primary, Contributory, Final)

601	What was the primary cause of death? (Select one)	
a.	Ante partum haemorrhage	1
b.	Postpartum haemorrhage	2
c.	Eclampsia	3
d.	Induced Abortion	4
e.	Spontaneous Abortion	5
f.	Obstructed labour	6
g.	Puerperal sepsis	7
h.	Retained placenta without haemorrhage	8
i.	Ruptured uterus	9
j.	Inversion uterus	10
k.	Pulmonary embolism	11
l.	Agents primarily affecting blood constituents (blood transfusion reaction)	12
m.	Others (Specify).....	96

Slide 15

Section6: Causes of Death (Primary, Contributory, Final) Contd.

602	What were the contributory factors leading to the death (multiple response) ?	
a.	Ante partum haemorrhage	1
b.	Postpartum haemorrhage	2
c.	Eclampsia	3
d.	Induced Abortion	4
e.	Spontaneous Abortion	5
f.	Obstructed labour	6
g.	Puerperal sepsis	7
h.	Retained placenta without haemorrhage	8
i.	Ruptured uterus	9
j.	Inversion uterus	10
k.	Pulmonary embolism	11
l.	Agents primarily affecting blood constituents (blood transfusion reaction)	12
m.	Others (Specify).....	96

Slide 16

Section6: Causes of Death (Primary, Contributory, Final) Contd.

603	What was the final cause of death ? (Select one)	
a.	Cardiac failure	1
b.	Respiratory failure	2
c.	Hypovolemic shock	3
d.	Septic shock	4
e.	Acute cardiopulmonary failure	5
f.	Renal failure	7
g.	Disseminated intravascular coagulation	8
h.	Liver failure	9
i.	Multi-organ failure	10
j.	Cerebral complications	11
k.	Unknown	12
l.	Other (Specify) _____	96

Slide 17

Section7: Case Summary

Please write a short summary describing the circumstances surrounding her death. It is important to understand underlying social, as well as medical, problems which led to her death, in addition to trying to understand the prox and contributory clinical causes of death. Please write a description of everything that happened, even if this means repeating some of the information you have already provided.

701	Please write a short history of what happened prior to admission (Write in block letter)
702	Please write a short history of what happened after admission (Write in block letter)

Slide 18

Section8: Finding of MPDSR Committee Review

Complete this form based on review of and discussion on the information in sections 1-7 and available records.

801	Factors relating to the woman/her family/social situation that have contributed to death of the woman	Delay to seek health care	1
		Delay to reach the health facility	2
802	Factors relating to health facility that have contributed to death of the woman (Multiple Response)	Delay in providing appropriate intervention	1
		Absence of critical human resource	2
		Lack of resuscitation equipment	3
		Lack of supplies and drugs	4
		Lack of blood and blood products	5
		Lack of inter-department communication	6
		Lack of intra-department communication	7
		Poor documentation e.g. Partograph, Case note etc	8
		Mis-diagnosis	9
		Others (Specify) _____	96

Slide 19

Section8: Finding of MPDSR Committee Review Contd.

803	Factors relating to referral system (Multiple Response)	Lack of effective communication from referring facility	1
		Unable to refer due to	
		a) financial constraints	2
		b) lack of transportation	3
		c) patient party's denial	4
		d) other (specify) _____	5

Slide 20

Section9: Critical Examination of Care in Hospital					
901	Do you think the mother could have been saved?	Yes 1	Possibly 2	Probably No 3	Never 4
902	If yes or possibly, how do you think the mother could have been saved?				
903	Please write a list of lessons learned from this case.				
904	Has a similar situation happened before at this facility that resulted in a maternal death or a near miss?	Yes	No		
		1	2		
905	If yes, discuss why this situation has occurred again? If the necessary steps had been put in place at this facility could this death have been prevented?				

Slide 21

Section10: MPDSR Committees Recommendation and Plan of Action		
Actions	To be performed by Hospital	To be performed by/through DPHO
Immediate Actions		
Responsible for implementation		
Time line (less than a month)		
Monitoring to be done by		
(Mid Term Actions)		
Responsible for implementation		
Time line (less than six months)		
Monitoring to be done by		
(Long Term Actions)		
Responsible for implementation		
Time line (less than a year)		
Monitoring to be done by		

The request for necessary action at the community level has to be sent formally through District Public Health Office

Slide 22

Section10: MPDSR Committees Recommendation and Plan of Action Contd.					
SN	Name	Designation	Institution/Dept	Phone	Signature

Slide 23

Section10: MPDSR Committees Recommendation and Plan of Action Contd.	
Date of review by case attending staff (Nepali date)	dd mm yy
Date of review by facility MPDR committee (Nepali date)	dd mm yy
Staff who completed this review form:	
Name: _____	Designation: _____
Phone Number: _____	Date/month/year: _____
Signatures: _____	

Slide 24



Group Work

- Divide into five group (4-6 members in each).
- Fill up the MDR form with provided case file/mock file of maternal mortality up to Section 7.
- 45 minutes for group work to fill up the form.
- Presentation from each group after group work.

Family Health Division, DOH

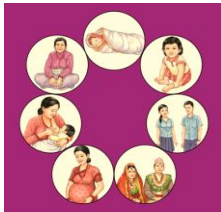
Slide 25



मातृ मृत्यु निगरानी तथा प्रतिकार्य



नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा



Family Health Division, DOH

Session 9: PDR Forms

Objectives: By the end of session, the participants will be able to describe the contents of PDR forms and fill up the PDR forms correctly and completely using medical records/case files/mock files of maternal mortality.

Time: 120 minutes

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
30 minutes	Detail instruction to fill up the PDR form	▪ Distribute PDR form to each participants ▪ Discuss each question of each section providing examples as much as possible. ▪ Inform the participants that the detail instruction for completing the form can also be accessed in the Instruction Manual for MDR and PDR forms.	PowerPoint Slides PDR forms Instruction Manual for MDR and PDR form

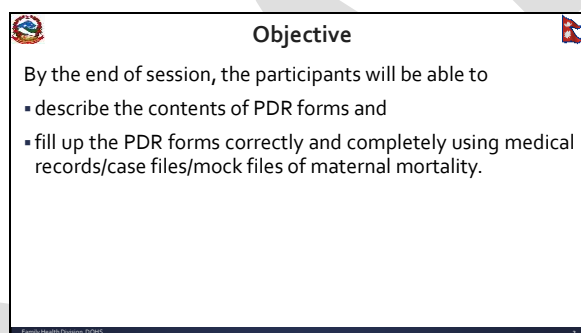
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		Highlight the general instructions discussed in previous session.	
80 minutes	Practice to fill up the form up to section four using given case studies	Group Work and Presentation - Divide participants into five group (4-6 members in each) - Allocate 30 minutes for groups to fill up the forms - Allocate 35 minutes for presentation from the groups - Provide feedback on the filled forms in 15 minutes For the group work: Provide a hospital stillbirth or early neonatal death case file for each group. The case files can be real files brought by the participants. If there are no case files then provide copy of mock files of stillbirth or early neonatal deaths provided in the annex of this training package. The participants should be instructed to fill up the PDR form till Section 4. Move around the groups to ascertain all the group members are equally involved and participating in the work. Explain for any confusion during the process. After the groups have filled up the forms, ask to present from each group, 4 minutes for presentation and 3 minute for discussion from each group. While the presentations are ongoing, one facilitator to check all the filled forms and provide feedback at the end to wrap the session.	PDR Forms/ Instruction Manual/ Case files brought by the participants/Mock files in Annex.

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		Note: The filled forms need to be kept safely for further work next day.	
5 minutes	Session summarization		

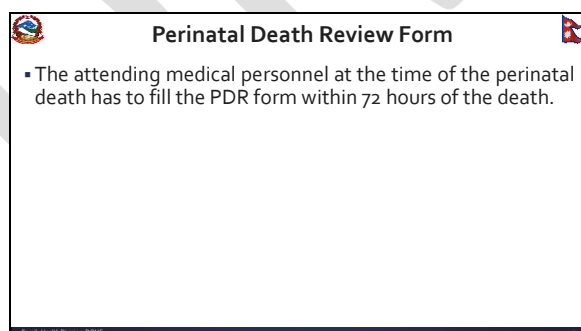
Slide 1



Slide 2



Slide 3



Slide 4

**Government of Nepal
Ministry of Health and Population
Department of Health Services
Family Health Division
Yulu, Kathmandu**

PERINATAL DEATH REVIEW FORM

MPDR Form 7
CONFIDENTIAL
This form will be kept confidential and used only for quality of care improvement and collective statistical purposes

Perinatal deaths include death of a baby from 22 weeks of gestation (or baby weighing at least 500 grams) to first 7 days of life (early neonatal period).

The perinatal death review process is an in-depth investigation of the causes of and circumstances surrounding late fetal and early neonatal deaths occurring at health facilities with the objective of identifying available factors and utilizing the information for improving quality of care at the facility, and policy and programme reform across the country.

Personally identifiable information on this form will be kept confidential, and will be grouped and non-identifiable. Information and discussion arising from this review form cannot be used in legal proceedings.

Sections 1-4 should be completed within 72 hours of the perinatal death by the attending medical officer/nursing staff in consultation with other staff that had contact with the mother/infant. All available records related to the deceased should be reviewed.

Sections 1-4 should then be reviewed each month by the hospital MPDR committee and Section 5 should be completed after discussion. The completed forms should be made accessible to Family Health Division and DRWD through web-based data entry.

PDR form contains six sections and background information, all sections need to be completed

Discuss on each question of each section with the participants providing examples as much as possible.

Slide 5

Background Information

District:

Name of health facility:

Family Health Division, DHQS

Slide 6

Section 1: Demographic Details of Mother of Deceased

101 Name of the Mother: Hospital ID Number:

102 Address:

District: VDC/Municipality: Ward No.:

103 Ethnicity/Caste (Specify): Caste: Ethnicity:

[Note: Coding to be done during data entry]

104 Maternal age (in completed years)

105 Gravidity

106 Parity

Family Health Division, DHQS

Slide 7

Section 1: Demographic Details of Mother Contd.

107	Did she receive any antenatal care during this pregnancy?	Yes ☐ 1 No (do to 108) ☐ 2 Don't know (do to 108) ☐ 3
108	If ANC received, how many times?	Specify
109	Gestetric condition of mother at admission	Not in labour ☐ 1 Latent phase of labour ☐ 2 Active phase of labour ☐ 3 Third stage of labour ☐ 4 Post partum ☐ 5
110	Provisional diagnosis of mother at the time of admission	Specify
111	Place of delivery	Specify 1
112	Mode of delivery	Normal (do to 224) ☐ 1 Vacuum ☐ 2 CS ☐ 3 Embryotomy ☐ 4 Other (Specify) 5
113	If other than normal delivery, specify main reason for this	
114	Relevant maternal event summary	

Family Health Division, DHQS

Slide 8

Section2: Details of the Deceased Baby

201	Gestational age	Weeks Days	
203	Birth weight	Grams	
204	Sex of the baby	☐ Male ☐ Female ☐ Ambiguous	1 2 3
205	Singleton or multiple birth	☐ Singleton ☐ Multiple Baby number:	1 2
206	Date of delivery: (Nepali date)	dd mm YY	
207	Time of delivery (24 hours clock)	Hours	
209	Type of death	☐ Fetal (Go to 212) ☐ Early Neonatal	1 2
210	If early neonatal death, date of death: (Nepali date)	dd mm YY	
211	If early neonatal death, time of death (Skip to Q.301)	Hours (24 hours clock)	
212	If fetal death, type of death	☐ Antepartum fetal death (macerated) ☐ Intrapartum fetal death (fresh)	1 2

Family Health Division, DOTS

Slide 9

Section3: Clinical Information of Deceased Baby

301 Relevant neonatal events summary [please write about the complication, diagnosis, investigations, procedures, IV therapy and drugs]

Date	Time	Postnatal age	Event

Family Health Division, DOTS

Slide 10

Section4: Cause of Death of Baby (3)

401	What was the primary (underlying) cause of death?	☐ Spontaneous preterm labour ☐ Intrapartum hypoxia ☐ Antepartum haemorrhage ☐ Hypertensive disorder ☐ Infections ☐ Congenital anomalies ☐ Intrauterine growth retardation ☐ Trauma ☐ Unexplained intra-uterine cause ☐ Maternal disease (Specify) ☐ Others (Specify)	1 2 3 4 5 6 7 8 9 10 11 96
402	What was the final cause of death?	☐ Birth asphyxia ☐ Sepsis ☐ Pneumonia ☐ Tetanus ☐ Hypothermia ☐ Complications of prematurity ☐ Congenital anomalies ☐ Birth trauma ☐ Others (Specify)	1 2 3 4 5 6 7 8 9 96
403	Wigglesworth classification of death	☐ Normally formed macerated stillbirth ☐ Lethal congenital malformation ☐ Conditions associated with immaturity ☐ Asphyxial conditions (includes fresh still births) ☐ Other specific conditions	1 2 3 4 5

Family Health Division, DOTS

Slide 11

Section5: Finding of Review by MPDR Committee.

Critically analyze the situation, circumstances and record how it could have been saved (avoidable factors)

Q	Type of Avoidable Factors	Avoidable Factors	Code
501	Patient related		
502	Administrative problems		
503	Medical personnel associated		
504	Other		

Family Health Division, DOTS

Slide 12

Section5: MPDR Committee Recommendation & Action Taken

Actions	To be performed by Hospital	To be performed by/through EPMD
Immediate Actions		
Responsible for implementation		
Time line (less than a month)		
Monitoring to be done by		
(Mid Term Actions)		
Responsible for implementation		
Time line (less than six month)		
Monitoring to be done by		
(Long Term Actions)		
Responsible for implementation		
Time line (less than a year)		
Monitoring to be done by		

The request for necessary action at the community level has to be sent formally through District Public Health Office.

Family Health Division, DGHS

Slide 13

Section6: Date of Review & Person Completing Form

Date of review by case attending staff (Nepali date)	dd mm yy
Date of review by facility MPDR committee (Nepali date)	dd mm yy

Staff who completed this review form:

Name: _____ Designation: _____

Phone Number: _____ Date/month/year: _____ Signature: _____

Family Health Division, DGHS

Slide 14

Summary of Hospital PDR Form

Family Health Division, DGHS

Slide 15

**Government of Nepal
Ministry of Health and Population**

MPDR Tool 9

Summary of Hospital Perinatal Death Review Form

[CONFIDENTIAL]

Name of Hospital: _____

Identification: _____

1. Date of report: dd mm yyyy

2. Age at death: <24 hours 24+ hours

3. Birth Weight: <1000 1000-2500 2500+
(In Gram)

Family Health Division, DGHS

This summary form is to be filled for each month and presented during monthly Perinatal Death Review meeting.

Slide 16

4. Gestational Age: in Week	22 - 27	28 - 36	37 - 41	≥ 42	Not known
5. Delivered at:	This Facility	Other Facility	Home	Unknown	
6. Maternal age:	<20	20-35	>35		
7. Antenatal care:	No	1-3	≥ 4		
8. Condition at birth	Born Alive	Still Born: Fetus Alive on Admission	Fresh Stillborn	Macerated Stillborn	
9. Pregnancy status	Single Pregnancy		Multiple Pregnancy		
10. Primary Cause Of Deaths	Cause of Death				Number

Family Health Division, DGHS

Slide 17

11. Number of preventable deaths	Preventable	Not Preventable
12. If the deaths are preventable write the avoidable factors according to three delay model		
Type of delays	Avoidable factors	
1 Delay in decision to seek care		
2 Delay in reaching at right facility		
3 Delay in receiving care at facility		

Family Health Division, DGHS

Slide 18

13. Action plan for reducing preinatal deaths						
Delay Type	Avoidable factors	Action to be taken	Responsibility	Timeline	Date action completed	Remarks
Delay1						
Delay2						
Delay3						
14. List of participates						
SN	Name	Position	Address	Phone	Signature	

Family Health Division, DGHS

Slide 19

 Group Work 	
▪ Divide into five group (4-6 members in each). ▪ Group work to fill up the PDR form with provided case file/mock file of maternal mortality up to Section 4. ▪ 30 minutes for group work to fill up the forms. ▪ Presentation from each group after group work.	

Family Health Division, DGHS



Day Three

Review of Day Two

Select one participant to review Day Two using his/her own methodology involving other participants also.

Time: 30 minutes

Session 10: Determinants of Maternal Death

Objectives: By the end of session, the participants will be able to identify the determinants of maternal death, differentiate between causes and determinants of maternal death and classify determinants using “Three Delays” model.

Time: 60 minutes

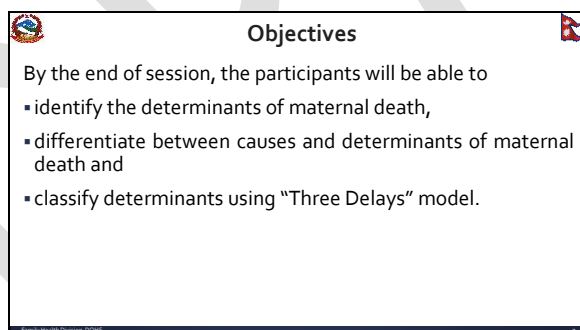
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
20 minutes	Causes and determinants of maternal deaths	Brain Storming with participants on cause of maternal deaths Interactive presentation using PowerPoint slides	PowerPoint Slides
30 minutes	List of causes, related determinants and ways to address the determinants using “Three Delays” model.	Small group work and sharing - Prepare a list of five causes of maternal deaths with inputs from participants. - Divide participants into five groups - Provide one cause to each group - Ask them to identify the determinants of maternal deaths based on given cause	Metacard, Flip Chart /News print/Markers.

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		- Ask them to group the determinants into health related and non-health related determinants - Ask them to classify the determinants in “Three Delays” model - Ask to list ways in which the delays can be addressed - Provide 15 minutes for group work and 2 minutes for sharing from each group	
5 minutes	Session summarization		

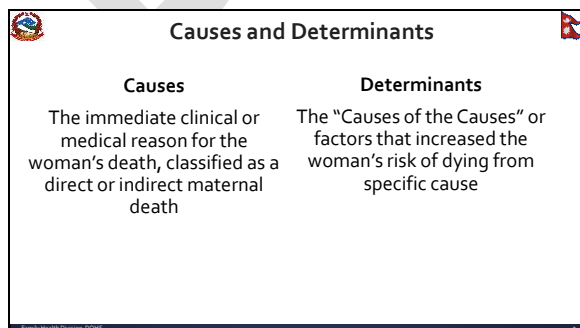
Slide 1



Slide 2



Slide 3



Slide 4

Possible determinants	
Possible causes of death	Contributing social factors
Hemorrhage	Poor nutritional status
Ruptured uterus/Obstructed labor	Insufficient access to family planning; Too many closely spaced pregnancies; early marriage
Sepsis	Lack of clean delivery; Lack of clean water in health facilities; Unwanted pregnancy (followed by induced abortion)

Slide 5

Common Determinants of Maternal Deaths

- Poor access to family planning and safe abortion
- Insufficient use of antenatal services
- No skilled attendance at delivery
- Difficulties in obtaining transport
- Insufficient supplies or staff
- Low status of women

These are very different factors, operating at different levels of social influence

Slide 6

The "3 Delays" Model

- Generally refers to events that are associated with obstetric emergency
- Related to seeking and obtaining clinical care
- Divides the process of accessing care into 3 phases:
 - Recognizing an emergency & need for treatment
 - Reaching a health facility where care is available
 - Receiving the care that is needed

Slide 7

Delay 1

Delay in deciding to seek care:

- Rapid recognition of a problem can be critical for saving a mother's life (esp. for excessive bleeding)
- Delay 1 measured as length of time from onset of a complication to decision to seek care

Slide 8



Delay 1

Causes for delay in deciding to seek care:

- Education, socio-economic status and women's autonomy also affect in seeking care
- Determinants include:
 - Inadequate knowledge
 - Reliance on family members who are not present
 - Lack of familiarity with or trust in services
 - Costs related to accompanying woman or paying fees/ expenses related to services

Family Health Division, DCHS

Slide 9



Delay 2

Delay in reaching care:

- Once decision to seek care is made, there can be delays in reaching it
- Determinants include:
 - Unavailable or affordable transport
 - Long distances to facilities
 - Inadequate referral systems between facilities
 - High cost of transportation.
- Inequitable or insufficient distribution of BEOC/CEOC services increase type 2 delays

Family Health Division, DCHS

Slide 10



Delay 3

Delay in receiving care:

- Delays 1 & 2 can lead to a women never reaching a facility or arriving in critical condition
- Delays within a facility also contribute to maternal deaths or "near misses"
- Determinants include:
 - Shortages of staff, equipment or blood products
 - Time lag between arrival and initiation of treatment/surgery
 - Poor technical competence

Family Health Division, DCHS

Slide 11



Addressing Community Level Determinants

- Delay 1 relates mainly to individual and family determinants
- Delay 2 relates to Community determinants
- Delay 3 relates to Health System determinants
- All delays reflect background factors, such as:
 - Women's autonomy & education
 - Availability and accessibility of reproductive health services
 - Quality of care at health facilities

Family Health Division, DCHS

Slide 12

Delay	Contributory Factors	Strategies to Address
Delay in seeking care	Poor awareness Insufficient fund No trust on facility	Awareness on emergency sign Community transportation scheme Awareness of quality improvement Adaptation to cultural preference
Delay in seeking care	Distance to reach facility Poor referral system Inability to pay fee	Birth preparedness (moving client close to facility at time of birth) Assign staff to link between facility Social security scheme

Slide 13

Delay	Contributory Factors	Strategies to Address
Delay in obtaining care	No staff on duty in weekend Inadequate supply Poor follow-up (after delivery)	Improve staff availability Improve logistic supply system Establish recovery room & monitoring Timely referral

Some of the evidence based actions are also provided after the slides for more explanation and discussion.

Slide 14

Group work

- List 5 leading causes of maternal deaths
- Divide in to 5 groups
- One cause of maternal death for each group
- Identify the determinants of maternal deaths based on given cause.
- Group the determinants into health related and non-health related determinants
- Classify the determinants in "Three Delays" model

Slide 15

Summary Points

- Social determinants are the "causes of the causes" of maternal deaths, and depend on many social levels
- Addressing maternal deaths thus requires action at every level, not just medical or health services
- Because many women die at home, in transit or soon after arrival at a facility, understanding the delays in receiving care helps analyze patterns of deaths

Slide 16



Summary Points

- MPDSR identifies determinants related to the 3-Delays from the onset of obstetric complications
- At higher levels (national, regional), social determinants beyond 3-delays should be considered (culture, gender)

Family Health Division, DOH

Slide 17



मातृ मृत्यु निगरानी तथा प्रतिकार्य



नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा



Family Health Division, DOH

Session 11: Identifying action plans

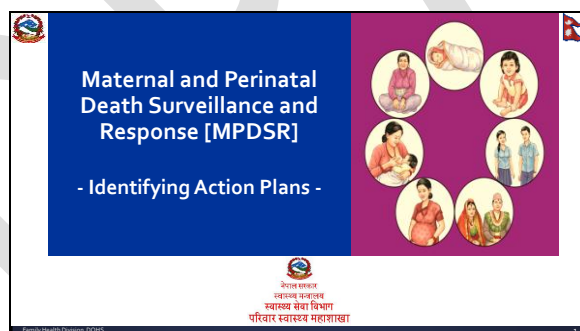
Objectives: By the end of session, the participants will be able to describe evidence based actions and prioritization based on the information from the filled MDR and PDR forms for improving quality of care, formulate action plans based on filled MDR and PDR forms and describe how the action plan will be implemented.

Time: 150 minutes

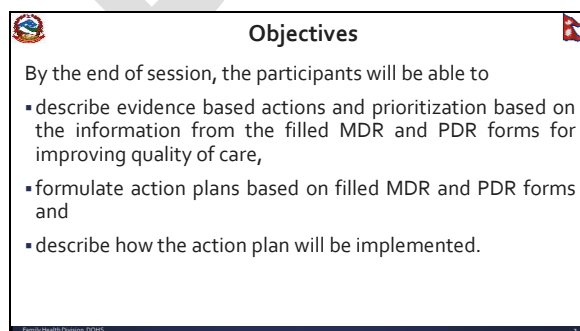
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	PowerPoint Presentation	PowerPoint Slides
20 minutes	Response Mechanism and Evidence-Based Actions	Interactive presentation using Case Scenarios in PowerPoint slides	PowerPoint Slides with Case Scenarios
20 minutes	Prioritizing actions	Discussion using Prioritization table in PowerPoint slides	PowerPoint Slides /white board/news print/marker
90 minutes	Developing Action plan	Group work and presentation - Divide participants in to five groups - Provide each group one MDR and one PDR form they had	MDR and PDR forms filled in Day Two/ Prioritization table

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		filled partially in the previous day. - Now ask them to discuss on the possible actions for the respective cases of maternal and perinatal death. - Ask them to prioritize the actions using the prioritization table and develop the action plan for both cases of maternal and perinatal deaths. - Ask one representative from each group to present on the possible actions, prioritization and final action plans for each case of maternal and perinatal deaths. - Provide 60 minutes for group work and 30 minutes for presentation	
10 minutes	Implementation of action plan	Interactive presentation using PowerPoint slides	PowerPoint Slides
5 minutes	Session summarization		

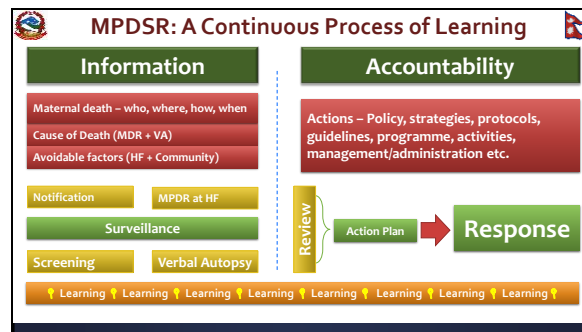
Slide 1



Slide 2



Slide 3



It is important to explain that MPDSR is a continuous process of learning. Each case of maternal and perinatal death has different story to tell and different lessons to learn from. Therefore no case on maternal death at the community and hospital and perinatal death at hospital should be missed. Information should be collected and shared as much as possible regarding who, how, when, where, cause of death should be determined accurately and avoidable factors should be identified. This will assist in developing action plans for improving the system. It is most important to have accountability from local to national level to implement the response mechanism.

Slide 4

Response Mechanism

- Taking action to reduce avoidable maternal deaths is the reason for conducting MPDSR
- Different people will raise different perspectives towards response
- There is no definite right answer while selecting actions
- Need to prioritize the actions which are simple, practical/doable, evidence based and cost effective
- Link the response with quality

Family Health Division, GOCD

Slide 5

Response Actions

- Response should be culturally appropriate and should be able to address the problems
- The confidentiality of the deceased and their care providers should be maintained.
- Type of action will depend on the level at which decisions are made, findings of review and involvement of stakeholders.

Family Health Division, GOCD

Slide 6



Points to Consider While Selecting Responses

- Start with avoidable factors identified during review process
- Use evidence-based approaches
- Prioritize
- Estimate a timeline
- Decide how to monitor progress, effectiveness and impact
- Integrate recommendations within annual health plans and health-system packages
- Monitor to ensure that recommendations are being implemented

Family Health Division, QCHD

Slide 7



What are Evidence Based Actions

- Actions for which there is enough evidence that maternal mortality and morbidity will be prevented if they are followed
 - ✓ Usually refer to clinical actions, based on trials, researches & standard guideline
 - ✓ Individual cases should be assessed to see if “best practices” were carried out or not
 - ✓ If not, appropriate action should be taken to ensure these are implemented to prevent further deaths

Family Health Division, QCHD

The WHO Integrated Management of Pregnancy and Childbirth (IMPAC) guidelines can be adapted for this purpose, particularly in resource-poor countries.

Slide 8



Evidence Based Actions for Eclampsia

- Diagnosis and treatment of high blood pressure
- Magnesium Sulphate
- Timely delivery

Family Health Division, QCHD

Slide 9



Evidence Based Actions for Haemorrhage

- Active management for 3rd stage labour
- Misoprostol
- Blood transfusion (depend on environment)

Family Health Division, QCHD

Slide 10



Evidence Based Actions for Sepsis

- Clean delivery
- Antibiotics to mother for prolonged (> 18 hours) rupture of membrane
- Antibiotics for C/S
- Avoid prolonged labour

Family Health Division, QCHD



Slide 11



Evidenced Based Actions for Obstructed Labour

- Facility delivery after 12 hours of labour
- Use of Partograph
- Availability of C/S

Family Health Division, QCHD



Slide 12



Community-based actions

- Changing health seeking behavior
- Addressing transportation
- Reducing cost of accessing care
- Raise awareness on safe motherhood programs
- Mobilize "AAMA Samuha" to raise awareness and implement preventive programs

Family Health Division, QCHD



Slide 13



Community-based actions

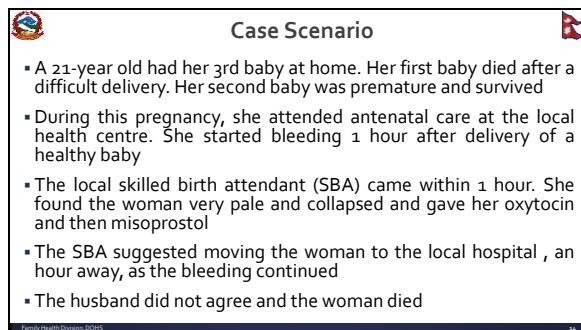
- Health education to women, men, families, communities on SRH, self-care, family planning, consequences of unsafe abortion and violence, birth preparedness
- Social support during childbirth
- Identification and prompt referral
- Support for care for rest of the family

The actions are likely to be successful if they are innovative and come from community participation

Family Health Division, QCHD



Slide 14

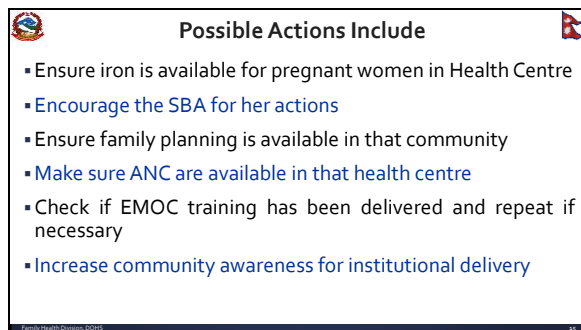


Case Scenario

- A 21-year old had her 3rd baby at home. Her first baby died after a difficult delivery. Her second baby was premature and survived
- During this pregnancy, she attended antenatal care at the local health centre. She started bleeding 1 hour after delivery of a healthy baby
- The local skilled birth attendant (SBA) came within 1 hour. She found the woman very pale and collapsed and gave her oxytocin and then misoprostol
- The SBA suggested moving the woman to the local hospital, an hour away, as the bleeding continued
- The husband did not agree and the woman died

Family Health Division, QCD

Slide 15



Possible Actions Include

- Ensure iron is available for pregnant women in Health Centre
- Encourage the SBA for her actions
- Ensure family planning is available in that community
- Make sure ANC are available in that health centre
- Check if EMOC training has been delivered and repeat if necessary
- Increase community awareness for institutional delivery

Family Health Division, QCD

Examples of immediate actions at community levels:

Sharing the issues on maternal death in appropriate forums especially at mother's group meetings.

Quality assurance of ANC/ Natal/ Postnatal care including lab investigations.

Utilization of funds (for example FCHV fund, EOC fund, Referral fund and other fund if available) for emergencies.

Strengthening the referral system.

Community awareness on risk factors

Deciding the health facility opening hours and duty adjustments

Ensuring sufficiency of essential drug and other logistics

Infection prevention and compliance to other service standards

Examples of Periodic response at community level:

Review and sharing of findings/ results in FCHV bi-monthly review meeting and raising awareness.

Sharing of information and discussion during Ilaka meetings and preparation of appropriate action plan.

Implementation of the feedback provided by higher authorities.

Strengthening health promotion activities like training, street drama,

local cultural programs in local language.

Examples of Annual response at community level:

Sharing the findings and discussion with Nagarik Wada Manch, VDC members and those who can make a difference.

Advocacy and annual planning in VDC council to prevent maternal deaths.

Examples of Immediate response at hospital level:

Sharing the issues on maternal death and perinatal deaths in MPDR committee and hospital staff meetings.

Quality assurance of health care

Utilization of funds available in the hospitals or creation of funds for emergencies.

Increased preparedness for in-referrals and timely out-referrals with life saving arrangements

Staff awareness on risk factors

Health facility opening hours and duty adjustments

Ensuring sufficiency of essential drug and other logistics

Infection prevention and compliance to other service standards

Other specific arrangements and quality of care improvement

Examples of Periodic response at hospital level:

Review and sharing of findings/ results in periodic meetings.

Sharing of information and discussion during stakeholder/partners meetings

Implementation of the feedback

provided by DPHO and other government agencies.

Incorporating maternal and perinatal death prevention and curative actions into work plan

Other specific actions

Examples of Annual response at hospital level:

Sharing the findings and discussion with GoN and partners during meetings.

Advocacy to prevent maternal deaths.

Presentation of data, issues and action taken/to be taken in health review meetings

Other innovations

Examples of Immediate response at district level:

Implement recommendations and feedback made by MPDSR committees

Organization and sharing of information in MPDSR and RHCC meetings

Preparation of strategy to prevent the three delays

Coordination with stakeholders for technical and financial/logistic support

Provision of feedback to respective MDSR committees below districts

Support hospital MPDR committees and prompt budget disbursement

Provision of flexible fund in DHO/DPHO

Improved information management including HMIS

Other district specific innovations

Examples of Periodic response at district level:

Sharing the information in different forums like RHCC meeting, review

meeting etc.

Monitoring and supervision of Health Facilities/ Birthing Centres

Sharing of information and discussion at Ilaka meetings and making appropriate plans

Implementation of feedback provided by higher authorities

Incorporating maternal and perinatal death prevention action plan in periodic plans

Strengthening health promotion activities like training, street drama, local cultural programs based on local language

Examples of Annual response at district level:

Sharing the information/ issues at district and regional review meetings

Need-based program planning with DDC and other stakeholders

Other district specific innovations

Examples of Actions at Regional level:

Implement recommendations and feedbacks made by MPDSR committees
MPDSR focused monitoring and supervision

Respond, provide feedback/guidance on district reporting

Sharing the issues in regional forums and national reviews

Coordination between districts and centres for programs to reduce maternal deaths

Providing technical support to hospitals and D/PHOs

Incorporating maternal and perinatal death prevention action plan in periodic

plans

Examples of actions at Central level

Implementation of recommendations made by MPDSR committees

Review on Policy and program alignment in view of equity and access

Advocacy, acquisition and continuity of resources (Human resources, finance, logistic, institutional development etc.)

National review and response with focus on appropriate innovations and technologies

Coordination with relevant ministries and stakeholders

Incorporating maternal and perinatal death prevention plan in plan documents

Make arrangements to comply with national and global commitments

Make regular contacts with authorities directly or indirectly involved in maternal and child health improvement

Research activities in the subject area and co-ordination with agencies.

Slide 16

**Possible Actions Should Not Include**

- Increase the number of SBAs
- Punish the husband/family
- Make sure blood is accessible in that community

Family Health Division, DOTS48

Slide 17

Prioritizing Actions

- When there are many options, how do you pick from among them?
 - Not all problems can be tackled simultaneously
 - Prevalence – how common is the problem?
 - Feasibility of carrying out the action
 - are there extra staff available? Is it technologically and financially possible?
 - What is the potential impact of the action?
 - If successfully implemented how many women would be reached and how many lives saved?

Family Health Division, QCD

Slide 18

Prioritization Table

Action	Addresses most prevalent problem	Most feasible	Delivers maximum impact
Ensure availability of Iron			
Empower SBA			
Ensure availability of Family Planning Services			
Ensure availability of ANC guidelines			
Raise awareness for institutional delivery			
EMOC training for PPH management			

Family Health Division, QCD

Slide 19

Exercise for Prioritization: Individual Activity

- Write the actions in row and criteria in column
- Use + to indicate your score for each criteria (minimum + ; maximum +++)
- For each possible action, put a score against the criteria
- List the top 3 actions you would take according to your personal scoring

Family Health Division, QCD

Slide 20

Group work

- Let us form MPDSR Review Committee
 - Review:
 - Maternal death review form
 - Perinatal death review form
 - The forms filled in Day 2 to be used
 - Develop possible actions for problems with prioritization
 - Presentation followed by discussion

Slide 21



Group work

- Divide into the groups with same participants as in MDR form group work
- Each group to discuss on the MDR and PDR form filled partially in the previous day.
- Discuss on the possible actions for the respective cases of maternal and perinatal death.
- Prioritize the actions using the prioritization table and develop the action plan using for both cases of maternal and perinatal deaths.
- Group work followed by presentations

Family Health Division, QCD

Slide 22



Implementation of Action Plan

- Recommendations made by the different levels MPDSR committees should be carried out at each level of health care provision. This will ultimately lead to actions, which in turn will be responsible for improvement in patient care as well as improvement in health care at the community.
- The response at different level may be diverse due to authority, resources, capacity of the committees, socio-economic conditions of the community and population coverage.

Family Health Division, QCD

Slide 23



Implementation of Action Plan

- Action plans developed after reviewing of each maternal death should be finalized and shared with the concerned authorities within 1 week.
- Responsible authority
- Supportive authority
- DPHO
- RHD
- FHD

Family Health Division, QCD

Slide 24



Implementation of Action Plan

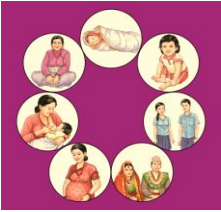
- Responsible authority needs to coordinate and initiate the process of the action plan.
- Any support needed for implementation of the action plan should be timely communicated.
- The status of the action plan should be discussed and reported monthly to DPHO, RHD and FHD.
- Challenges while implementing action plans should be documented and communicated.
- Reporting should also include completed action plans.

Family Health Division, QCD

Slide 25

मातृ मृत्यु निगरानी तथा प्रतिकार्य

नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा



Family Health Division, DOH

Slide 26

Example of Final Cause of Maternal Death

- **HYPOVOLAEMIC SHOCK**
 - ✓ Hypovolaemic shock following postpartum haemorrhage
 - ✓ Hypovolaemic shock following antepartum haemorrhage
 - ✓ Hypovolaemic shock following ectopic pregnancy
- **SEPTIC SHOCK**
 - ✓ Septic shock following an abortion
 - ✓ Septic shock following a viable pregnancy
 - ✓ Septic shock following an incidental infection

Family Health Division, DOH

Slide 27

Example of Final Cause of Maternal Death

- **RESPIRATORY FAILURE**
 - ✓ Adult respiratory distress syndrome
 - ✓ Pneumonia (including Tuberculosis)
 - ✓ Acute respiratory failure
- **CARDIAC FAILURE**
 - ✓ Pulmonary oedema
 - ✓ Cardiac arrest
- **RENAL FAILURE**
 - ✓ Acute tubular necrosis
 - ✓ Acute medullary necrosis

Family Health Division, DOH

Slide 28

Example of Final Cause of Maternal Death

- **LIVER FAILURE**
 - ✓ Pneumonia (including Tuberculosis)
 - ✓ Liver failure following drug overdose
- **CEREBRAL COMPLICATIONS**
 - ✓ Intracerebral haemorrhage
 - ✓ Cerebral oedema resulting in coning
 - ✓ Meningitis / infection (including Malaria)
 - ✓ Cerebral emboli
- **METABOLIC**
 - ✓ Maternal ketoacidosis
 - ✓ Thyroid crisis

Family Health Division, DOH

Slide 29



Example of Final Cause of Maternal Death



- DISSEMINATED INTRAVASCULAR COAGULATION
 - ✓ Disseminated intravascular coagulation
 - ✓ Liver failure following drug overdose
- MULTI-ORGAN FAILURE
 - ✓ Multi-organ failure
- IMMUNE SYSTEM FAILURE
 - ✓ HIV / AIDS
- UNKNOWN
 - ✓ Home death
- Other

Family Health Division, QCHD

Slide 30



Example of Final Cause of Neonatal Death



- IMMATURITY RELATED
 - ✓ Extreme multi-organ immaturity
 - ✓ Hyaline membrane disease
 - ✓ Necrotizing enterocolitis
 - ✓ Pulmonary haemorrhage
 - ✓ Intraventricular haemorrhage
 - ✓ Other
- HYPOXIA
 - ✓ Hypoxic ischaemic encephalopathy
 - ✓ Meconium aspiration
 - ✓ Persistent fetal circulation

Family Health Division, QCHD

Slide 31



Example of Final Cause of Neonatal Death



- INFECTION
 - ✓ Septicaemia
 - ✓ Pneumonia
 - ✓ Congenital syphilis
 - ✓ HIV infection
 - ✓ Congenital infection
 - ✓ Group B streptococcal infection
 - ✓ Meningitis
 - ✓ Nosocomial infection
 - ✓ Tetanus
 - ✓ Other

Family Health Division, QCHD

Slide 32



Example of Final Cause of Neonatal Death



- CONGENITAL ABNORMALITIES
 - ✓ Central nervous system
 - ✓ Cardiovascular system
 - ✓ Renal system
 - ✓ Congenital infection
 - ✓ Alimentary (excl. diaphragmatic hernia)
 - ✓ Chromosomal abnormality
 - ✓ Biochemical abnormality
 - ✓ Respiratory (incl. diaphragmatic hernia)
 - ✓ Other (incl. multiple & skeletal)

Family Health Division, QCHD

Slide 33



Example of Final Cause of Neonatal Death

- CONGENITAL ABNORMALITIES
 - ✓ Central nervous system
 - ✓ Cardiovascular system
 - ✓ Renal system
 - ✓ Congenital infection
 - ✓ Alimentary (excl. diaphragmatic hernia)
 - ✓ Chromosomal abnormality
 - ✓ Biochemical abnormality
 - ✓ Respiratory (incl. diaphragmatic hernia)
 - ✓ Other (incl. multiple & skeletal)

Family Health Division, QCDHS



Slide 34



Example of Final Cause of Neonatal Death

- TRAUMA
 - ✓ Subaponeurotic haemorrhage
- OTHER
 - ✓ Isoimmunisation
 - ✓ Hydrops - non-immune
 - ✓ Sudden Infant Death Syndrome (SIDS)
 - ✓ Haemorrhagic disease of the newborn
- Other
 - ✓ Aspiration pneumonia
 - ✓ Hypovolaemic shock
 - ✓ Hypothermia
- UNKNOWN CAUSE OF DEATH
- INTRAUTERINE DEATH

Family Health Division, QCDHS



Slide 35



Example of Avoidable Factors

- PATIENT ASSOCIATED
 - ✓ Never initiated antenatal care
 - ✓ Infrequent visits to antenatal clinic
 - ✓ Inappropriate response to rupture of membranes
 - ✓ Inappropriate response to antepartum haemorrhage
 - ✓ Inappropriate response to poor fetal movements
 - ✓ Delay in seeking medical attention during labour
 - ✓ Attempted termination of pregnancy
 - ✓ Failed to return on prescribed date
 - ✓ Declines admission/treatment for personal/social reasons
 - ✓ Partner/Family decline admission/treatment
 - ✓ Assault
 - ✓ Alcohol abuse

Family Health Division, QCDHS



Slide 36



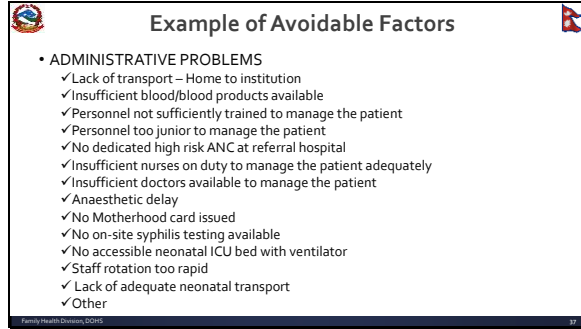
Example of Avoidable Factors

- PATIENT ASSOCIATED
 - ✓ Smoking
 - ✓ Delay in seeking help when baby ill
 - ✓ Infanticide
 - ✓ Abandoned baby
- ADMINISTRATIVE PROBLEMS
 - ✓ Lack of transport – Home to institution
 - ✓ Lack of transport – Institution to institution
 - ✓ No syphilis screening performed at hospital/clinic
 - ✓ Result of syphilis screening not returned to hospital/clinic
 - ✓ Inadequate facilities/equipment in neonatal unit/nursery
 - ✓ Inadequate theatre facilities
 - ✓ Inadequate resuscitation equipment

Family Health Division, QCDHS



Slide 37

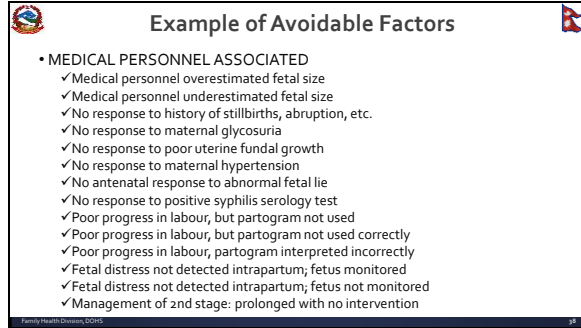


Example of Avoidable Factors

- **ADMINISTRATIVE PROBLEMS**
 - ✓ Lack of transport – Home to institution
 - ✓ Insufficient blood/blood products available
 - ✓ Personnel not sufficiently trained to manage the patient
 - ✓ Personnel too junior to manage the patient
 - ✓ No dedicated high risk ANC at referral hospital
 - ✓ Insufficient nurses on duty to manage the patient adequately
 - ✓ Insufficient doctors available to manage the patient
 - ✓ Anaesthetic delay
 - ✓ No Motherhood card issued
 - ✓ No on-site syphilis testing available
 - ✓ No accessible neonatal ICU bed with ventilator
 - ✓ Staff rotation too rapid
 - ✓ Lack of adequate neonatal transport
 - ✓ Other

Family Health Division, QCHS 87

Slide 38

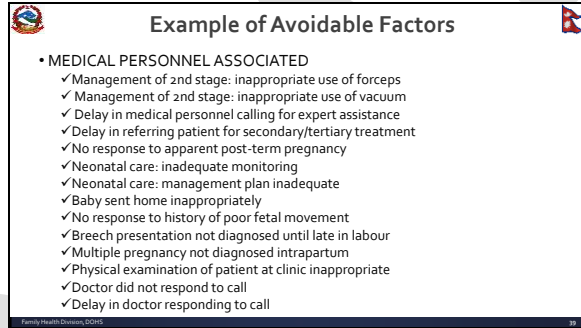


Example of Avoidable Factors

- **MEDICAL PERSONNEL ASSOCIATED**
 - ✓ Medical personnel overestimated fetal size
 - ✓ Medical personnel underestimated fetal size
 - ✓ No response to history of stillbirths, abruption, etc.
 - ✓ No response to maternal glycosuria
 - ✓ No response to poor uterine fundal growth
 - ✓ No response to maternal hypertension
 - ✓ No antenatal response to abnormal fetal lie
 - ✓ No response to positive syphilis serology test
 - ✓ Poor progress in labour, but partogram not used
 - ✓ Poor progress in labour, but partogram not used correctly
 - ✓ Poor progress in labour, partogram interpreted incorrectly
 - ✓ Fetal distress not detected intrapartum; fetus monitored
 - ✓ Fetal distress not detected intrapartum; fetus not monitored
 - ✓ Management of 2nd stage: prolonged with no intervention

Family Health Division, QCHS 88

Slide 39

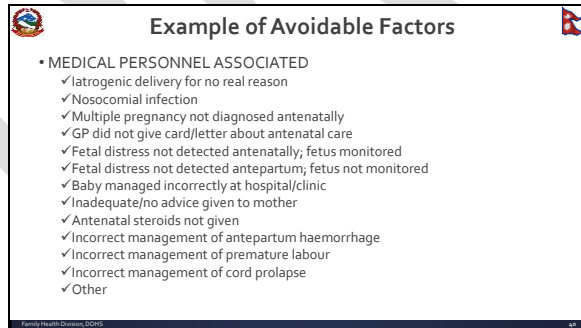


Example of Avoidable Factors

- **MEDICAL PERSONNEL ASSOCIATED**
 - ✓ Management of 2nd stage: inappropriate use of forceps
 - ✓ Management of 2nd stage: inappropriate use of vacuum
 - ✓ Delay in medical personnel calling for expert assistance
 - ✓ Delay in referring patient for secondary/tertiary treatment
 - ✓ No response to apparent post-term pregnancy
 - ✓ Neonatal care: inadequate monitoring
 - ✓ Neonatal care: management plan inadequate
 - ✓ Baby sent home inappropriately
 - ✓ No response to history of poor fetal movement
 - ✓ Breech presentation not diagnosed until late in labour
 - ✓ Multiple pregnancy not diagnosed intrapartum
 - ✓ Physical examination of patient at clinic inappropriate
 - ✓ Doctor did not respond to call
 - ✓ Delay in doctor responding to call

Family Health Division, QCHS 89

Slide 40

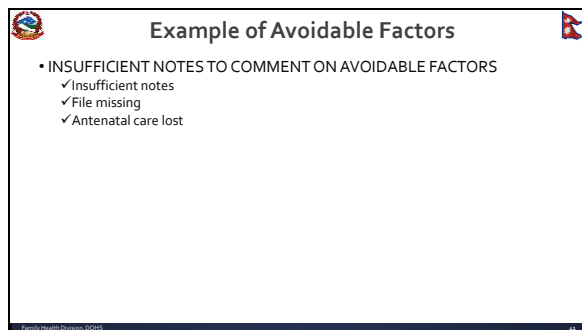


Example of Avoidable Factors

- **MEDICAL PERSONNEL ASSOCIATED**
 - ✓ Iatrogenic delivery for no real reason
 - ✓ Nosocomial infection
 - ✓ Multiple pregnancy not diagnosed antenatally
 - ✓ GP did not give card/letter about antenatal care
 - ✓ Fetal distress not detected antenatally; fetus monitored
 - ✓ Fetal distress not detected antepartum; fetus not monitored
 - ✓ Baby managed incorrectly at hospital/clinic
 - ✓ Inadequate/no advice given to mother
 - ✓ Antenatal steroids not given
 - ✓ Incorrect management of antepartum haemorrhage
 - ✓ Incorrect management of premature labour
 - ✓ Incorrect management of cord prolapse
 - ✓ Other

Family Health Division, QCHS 90

Slide 41



Example of Avoidable Factors

- INSUFFICIENT NOTES TO COMMENT ON AVOIDABLE FACTORS
 - ✓ Insufficient notes
 - ✓ File missing
 - ✓ Antenatal care lost

Slide 42



मातृ मृत्यु निगरानी तथा प्रतिकार्य

नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
परिवार स्वास्थ्य महाशाखा

Session 12: Monitoring and Evaluation in MPDSR

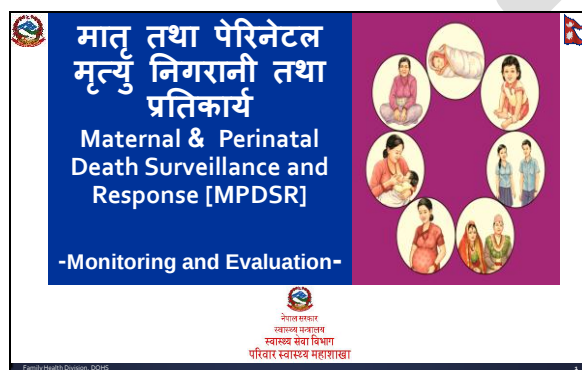
Objectives: By the end of the session, the participants will be able to describe importance of monitoring MPDSR process and using the data in improving quality of care, analyze & interpret maternal and perinatal death data, use MPDSR data/information to produce local solutions to the root causes of maternal and perinatal deaths and understand the role of monitoring of the process and the actions to ensure effective response to address the identified avoidable factor.

Time: 60 minutes

Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
5 minutes	Describe objectives of the session	Explain the importance of monitoring of effectiveness of MPDSR at the local and central level linking this with improving quality of care at point of service delivery and at the system as a whole using PowerPoint slides.	PowerPoint Slides
50 minutes	MPDSR process M&E and indicators	▪ Explain the indicators at each level and discuss their importance; the milestones and the targets ▪ Explain the indicators that need to be monitored at the	PowerPoint Slides

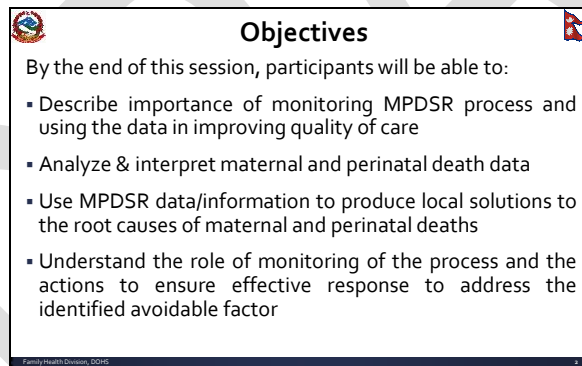
Session outline for Hospital-based MPDSR Training			
Time	Activities	Training/Learning Methods	Resources/Materials
		hospital level and at central level; with the source of information and the monitoring frequency Explain the data flow in MPDSR for recording and reporting including web-based system.	
5 minutes	Session summarization		

Slide 1

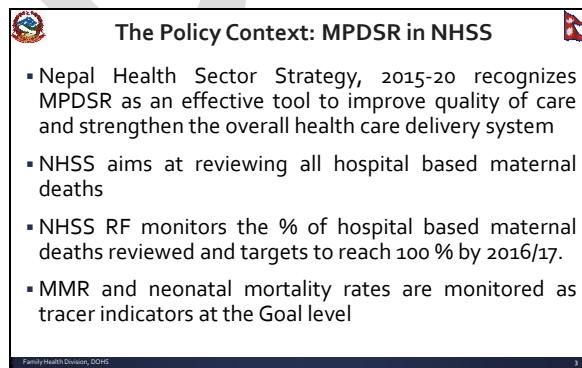


This session deals with importance of monitoring and evaluation in effective implementation of MPDSR system and use of the data in improving quality of care and strengthening the health care delivery system

Slide 2



Slide 3



A maternal death is not merely a result of treatment failure; rather it is the final outcome of a complex interplay between a myriad of social, cultural and economic factors. Maternal mortality is widely recognized as key human rights issue and gross social injustice to women. Most of the maternal and perinatal deaths are preventable if appropriate interventions are taken on

time. Therefore, maternal mortality ration (MMR), which measures the risk of death at each pregnancy, is considered as the most sensitive indicator of not just the women's status in the society but also the overall development of the country.

Slide 4

MDSR monitoring at HP and PHCC level		
Time period: From to		
Indicator	No.	Remarks
Number of deaths of women of 12-55 years reported by FCHVs		
Number of deaths of women of 12-55 years screened for pregnancy related deaths		
Number of verbal autopsy done		
Number of maternal deaths reviewed		
Number of response activities planned		
Number of response activities implemented		

The sections below describe the monitoring framework at different levels: from HP/PHCC to central level. At community - HP/PHCC (VDC/Municipality) level only maternal deaths are reviewed. So HPs and PHCCs are expected to monitor deaths of all women of age 12 to 55 years to ensure that no maternal deaths are left out. It is in line with the basic principle of MPDSR: Every death counts and no women should die giving birth; every death has a lesson to learn that can be used to prevent another mother dying from similar cause and reasons.

Slide 5

MPDSR monitoring at hospital level: Maternal deaths		
Time period: From to		
Indicator	No.	Remarks
Number of maternal deaths		
Number of MDR forms completed		
Number of maternal deaths reviewed		
Number of response activities planned		
Number of response activities implemented		
Number of maternal death review forms entered into the server		

Hospitals are expected to review all institution based maternal deaths. It is in line with the basic principle of MPDSR: Every death counts and no women should die giving birth; every death has a lesson to learn that can be used to prevent another mother dying from similar cause and reasons. Timely and effective response is the key for successful

MPDSR so it is very important to monitor the actions identified and their implementation status.

Slide 6

MPDSR monitoring at hospital level: Maternal deaths		
Time period: From to		
Indicator	No.	Remarks
No. of maternal deaths by causes of death		
No. of maternal deaths by age of mother		
No. of maternal deaths by education of mother		
No. of maternal deaths by ethnicity		
No. of maternal deaths by wealth quintile		
No. of maternal deaths by pregnancy stage (ante, intra and post partum)		
Maternal mortality ratio per 100,000 live births		

A maternal death is not merely a result of treatment failure; rather it is the final outcome of a complex interplay between a myriad of social, cultural and economic factors. So it is important to analyze maternal deaths from different perspectives, by causes, age, education, ethnicity, wealth, pregnancy stage, etc.

Slide 7

MPDSR monitoring at hospital: Perinatal deaths		
Time period: From to		
Indicator	No.	Remarks
Number of perinatal deaths		
Number of PDR forms completed		
Number of deaths reviewed		
Number of response activities planned		
Number of response activities implemented		
Number of perinatal death review forms entered into the server		
Perinatal mortality ratio		
Neonatal mortality rate		

Slide 8

MPDSR monitoring at DHO/DPHO level: Community based maternal deaths		
Time period: From to		
Indicator	No.	Remarks
Number of deaths of women of 12-55 years reported by FCHVs		
Number of deaths of women of 12-55 years screened for pregnancy related deaths		
Number of verbal autopsy done		
Number of maternal deaths reviewed		
Number of response activities planned		
Number of response activities implemented		
Number of maternal death review forms entered into the server		

District Health Offices/District Public Health Offices are responsible to facilitate all staff and facilities engaged in MPDSR process at all levels. They need to ensure effective review of all community and institution based maternal deaths. It is in line with the basic principle of MPDSR: Every death counts and no woman should die giving birth; every death has a lesson to learn that can

be used to prevent another mother dying from similar cause and reasons. Timely and effective response is the key for successful MPDSR so it is very important to monitor the actions identified and their implementation status.

Slide 9

 MPDSR monitoring at DHO/DPHO level: hospital based maternal deaths 		
Time period: From to		
Indicator	No.	Remarks
Number of maternal deaths		
Number of MDR forms completed		
Number of maternal deaths reviewed		
Number of response activities planned		
Number of response activities implemented		

Family Health Division, CDHS

Slide 10

 MPDSR monitoring at district level: Maternal deaths 		
Time period: From to		
Indicator	No.	Remarks
No. of maternal deaths by causes of death		
No. of maternal deaths by age of mother		
No. of maternal deaths by education of mother		
No. of maternal deaths by ethnicity		
No. of maternal deaths by wealth quintile		
No. of maternal deaths by pregnancy stage (ante, intra and post partum)		

Family Health Division, CDHS

Slide 11

 MPDSR monitoring at DHO/DPHO level: Perinatal deaths 		
Time period: From to		
Indicator	No.	Remarks
Number of perinatal deaths		
Number of PDR forms completed		
Number of deaths reviewed		
Number of response activities planned		
Number of response activities implemented		
Number of perinatal death review forms entered into the server		

Family Health Division, CDHS

Slide 12

MPDSR monitoring at central level: Community based maternal deaths		
Time period: From to		
Indicator	No.	Remarks
Number of deaths of women of 12-55 years reported by FCHVs		
Number of deaths of women of 12-55 years screened for pregnancy related deaths		
Number of verbal autopsies done		
Number of maternal deaths reviewed		

Family Health Division, DGHS

Slide 13

MPDSR monitoring at central level: community based maternal deaths ...		
Time period: From to		
Indicator	%	Remarks
% of community based maternal deaths reported within 24 hours		
% of WRA deaths that are screened within 72 hours		
% of verbal autopsies conducted for pregnancy related deaths within 21 days		
% of maternal death reviews that include Action Plan		

Family Health Division, DGHS

Slide 14

MPDSR monitoring at central level: hospital based maternal deaths		
Time period: From to		
Indicator	No.	Remarks
Number of maternal deaths reported		
Number of MDR forms completed		
Number of maternal deaths reviewed		
Number of response activities planned		
Number of response activities implemented		

Family Health Division, DGHS

Slide 15

MPDSR monitoring at central level: hospital based maternal deaths ...		
Time period: From to		
Indicator	%	Remarks
% of hospital maternal deaths reported within 24 hours		
% of maternal deaths reviewed within 72 hours		
% of maternal death reviews that include Action Plans		
% of facilities with zero reporting of maternal deaths		

Family Health Division, DGHS

Slide 16

**MPDSR monitoring at central level:
Perinatal deaths**

Time period: From to

Indicator	No.	Remarks
Number of perinatal deaths reported		
Number of PDR forms completed		
Number of deaths reviewed		
Number of response activities planned		
Number of response activities implemented		

Family Health Division, DCHS

Slide 17

**MPDSR monitoring at central level:
Perinatal deaths ...**

Time period: From to

Indicator	%	Remarks
% perinatal deaths notified within 72 hours		
% of perinatal deaths reviewed		
% of perinatal death reviews that include Action Plan		
% of pregnancy related deaths screened correctly (1 % sample verification)		

Family Health Division, DCHS

Slide 18

MPDSR monitoring at central level

Time period: From to

Indicator	%	Remarks
% of maternal deaths by causes of death		
% of maternal deaths by age of mother		
% of maternal deaths by education of mother		
% of maternal deaths by ethnicity		
% of maternal deaths by wealth quintile		
% of maternal deaths by pregnancy stage (ante, intra and post partum)		
% of maternal deaths by place of death		
% of maternal deaths by ANC visits		
% of maternal deaths by referral status		

Family Health Division, DCHS

Slide 19

MPDSR monitoring at central level

Time period: From to

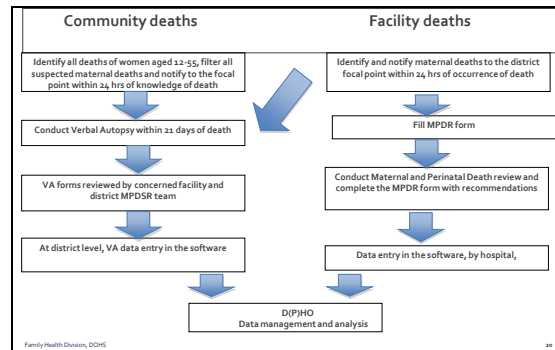
Indicator	No.	Remarks
Maternal mortality ratio per 100,000 live births		
Perinatal mortality ratio		
Neonatal mortality ratio		
Hospitals implementing MPDSR		
Districts implementing MPDSR		
Districts implementing community based MDSR		

Family Health Division, DCHS

The population based goal level indicators are best monitored by surveys like NDHS, Census, and MMMS. The surveys are expensive compared to the routine surveillance system so the government puts more efforts in strengthening the routine surveillance systems. The country should be able to generate national level quality data for monitoring MMR and NMR, otherwise the country has

to rely on the global estimates basically drawn from the data of similar neighboring countries. For this, Nepal has to strengthen the MPDSR and the Civil Registration and Vital Statistics (CRVS) system.

Slide 20



Slide 21

Web-based reporting System for MPDSR

- Levels:
 1. National
 2. District
 3. Hospitals

Username and password created for D(P)HOs and hospitals

Web-based MPDSR System

The system is developed in three layers, center, district and hospitals.

Central level:

Family Health Division has access to all the data entered into the system from the districts and hospitals and is responsible for reviewing, providing feedback and approving the forms submitted.

District level:

The D(P)HOs of MPDSR implementing district need to enter the data related to maternal deaths in the community. The forms needed to enter include notification, screening, verbal autopsy and cause of death assignment forms. The forms should be entered as soon as possible. The D(P)HOs have access to view data entered by hospitals within the respective districts also.

Hospital level:

Each hospital needs to enter the Maternal Death Review (MDR), MDR summary, Perinatal Death Review (PDR), and PDR summary forms as soon as possible after the review and completion of the forms.

Slide 22

Log in pathway

- Website: www.fhd.gov.np
- Click MPDSR box in the home page of FHD
- Insert username and password provided for individual district and hospital

Process of entry:

Internet connection must be available while entering the data.

Slide 23

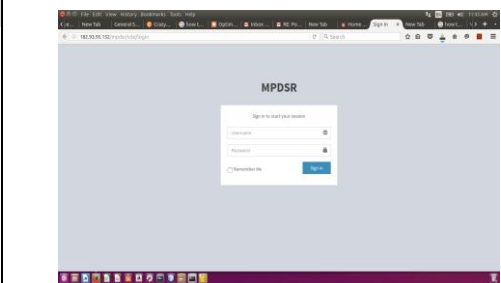
FHD Homepage



Once the FHD page is opened, click in the blue box with MPDSR in the bottom of the page.

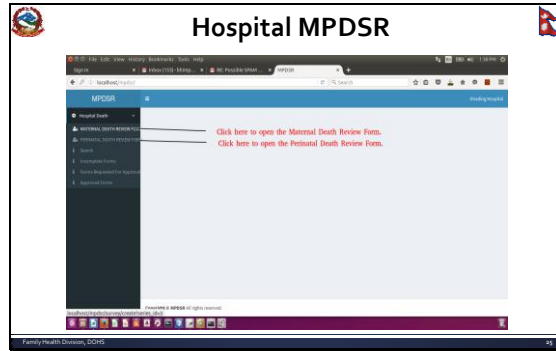
Slide 24

MPDSR Webpage



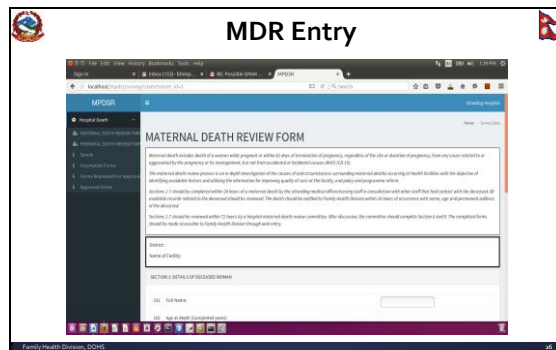
Now the page asks for username and password. Enter the username and password provided to individual hospital.

Slide 25



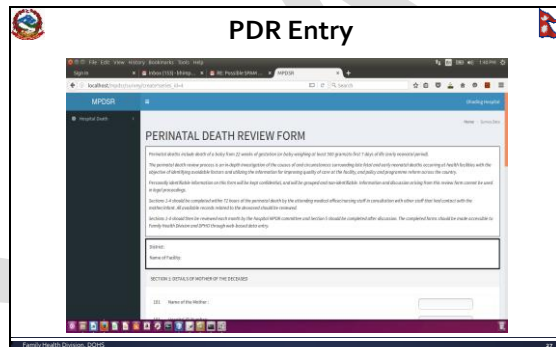
This page appears after entering the username and password.

Slide 26

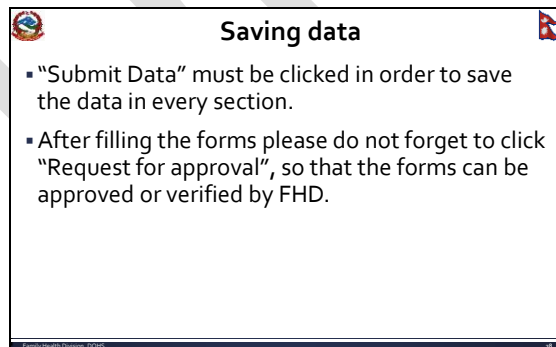


Click Maternal Death Review Form to fill in new maternal death case.

Slide 27



Slide 28



Slide 29

The screenshot shows a web application interface titled 'Navigation to different sections'. It features a sidebar on the left with a tree view containing 'Home', 'Incomplete Forms', 'Forms Requested for Approval', and 'Approved Forms'. The main content area displays a form with several sections, each with a title and a description. The sections are: '1.01. Maternal conditions of mother at admission', '1.02. Prevalence of diagnosis of mother at admission', '1.03. Place of delivery', '1.04. Mode of delivery', '1.05. If other than normal delivery, specify main reason for this', and '1.06. Relevant maternal event summary'. Each section has a corresponding input field or a 'Select Option' dropdown. At the bottom right, there is a 'Save' button. A red text box at the bottom left contains the instruction: 'Click here to navigate through sections. Whenever, if you have filled data in the form, do not click here before clicking Submit data, or data will not be saved.' Another red text box at the bottom right contains the instruction: 'Click here, to save the filled data, this will take you to next section if the data saved successfully.'

Slide 30

The screenshot shows the 'Steps of approval' slide. The sidebar on the left is the same as in Slide 29. The main content area is titled 'Incomplete Forms' and contains three red text boxes with instructions: 'Click here to view incomplete forms, the filled forms should be completed and requested for approval. Make sure there are no listings in this section.', 'Click here to view the forms which are sent for approval to FHD. You can preview the forms here.', and 'Click here to view the forms which are approved by FHD. You can preview the forms here.'

Incomplete Forms: This shows the list of forms which are not complete from the hospital, these can be updated by clicking on update link, it opens the same form to input data.

Forms Requested For Approval: These are the forms which contains all the forms which are requested for approval.

Approved Forms: These are the list of forms which are approved by the FHD

Slide 31

The screenshot shows a slide titled 'Any comments / feedback?'. It features a large text input field for users to provide feedback. The sidebar on the left is the same as in the previous slides. The bottom of the slide contains the text 'Family Health Division, DDCS'.



Session 13: Post-test

Objectives: By the end of the session knowledge of the participants on MPDSR after the program will be assessed.

Time: 30 minutes

Distribute the post-test questionnaires to the participants and give them 20 minutes to complete the post-test. Instruct the participants to circle one correct answer. The questionnaire is the same as the pre-test questionnaire which will assist in comparing the knowledge of the participants before and after the training.

Session 14: Closing session

Time: 30 minutes

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ANNEXURE

Annex 1: Pre and Post-test Questionnaire

Pre and Post-Test Questionnaire for MPDSR Hospital Training Package

For each question, please circle the correct answer:

1. MPDSR stands for
 - a. Maternal and Perinatal Death System and Response
 - b. Maternal and Perinatal Death Surveillance and Review
 - c. Maternal and Perinatal Death Surveillance and Response
 - d. Maternal and Perinatal Death Systematic Register
2. Which of these is **NOT** a pregnancy related death?
 - a. A 45 year old woman collapsed and died suddenly. She had missed two periods.
 - b. A woman with a 35 day old baby, had fever for 3 days before she died.
 - c. A 16 year old girl died suddenly after taking some medicine two days after her first sexual intercourse because she thought she was pregnant. She had her period 12 days back.
 - d. A woman, known to be HIV positive was 5 months pregnant and died of pneumonia.
3. What is the **FIRST** step of the MPDSR process?
 - a. Review of the MDR form
 - b. Develop and implement response actions
 - c. Analysis of the maternal death
 - d. Identification of maternal death
4. Who of the following is **NOT** the member of Hospital MPDSR Review Committee?
 - a. Hospital Superintendent/Director
 - b. Obstetrician/Gynecologist/Pediatrician/MDGP
 - c. Matron/ Nursing Chief
 - d. Accountant
5. Which of the following statement is appropriate with regard to Quality of Care affecting maternal deaths?
 - a. A previous bad experience at a health facility may discourage women from choosing to deliver with skilled birth attendants.
 - b. Inadequate water supplies in labour wards can increase the risk of maternal death, even if the woman arrived in time
 - c. The quality of referral systems, admission procedures, and care during recovery should all be considered during MPDSR data analysis
 - d. All of the above
6. Which of the following factor decreases the risk of maternal death?
 - a. Not able to make decision to seek health care for herself
 - b. Availability of adequate maternity services

- c. Unawareness on high risk conditions during pregnancy and delivery
 - d. Not using contraceptive methods
7. Which of the following statement is **NOT** true?
- a. The MDR form should be filled by a Doctor (preferably) or Nurse, who attend the case, within 24 hours of the maternal death.
 - b. After reviewing the MDR and PDR forms, the MPDSR Committee needs to analyze the cause of death and develop action plan.
 - c. Each maternal death should be reviewed within 120 hours after death.
 - d. Perinatal deaths should be reviewed monthly.
8. Which of the following statement is **CORRECT** regarding MPDSR Reporting and Data Flow?
- a. FCHVs identify, notify and inform directly to the DHO about the community deaths.
 - b. For each facility maternal deaths, on duty doctor/nurse should fill the MDR form and Hospital MPDSR committee should review and develop action plan.
 - c. For each perinatal mortality, the PDR form should be filled and reported to the MPDSR Committee within 24 hours of the death.
 - d. All of the above statements are true
9. Which of the following is appropriate action that might be taken by the Hospital MPDSR Committee?
- a. Close the maternity unit due to poor quality and refer pregnant patients elsewhere.
 - b. Develop appropriate referral mechanism and orient/reorient the staff.
 - c. Punish the doctor who was not present during the time of the death.
 - d. All of the above.
10. The hospital MPDSR committee is **NOT** responsible for which of the following?
- a. Conduct reviews of maternal and perinatal deaths occurring in hospital.
 - b. Develop action plans following review of the MDR and PDR forms.
 - c. Synthesize the findings and provide feedback to the hospital.
 - d. Conduct review meeting for community-level maternal and perinatal deaths.
11. Maternal death is defined as:
- a. Death of women from direct or indirect maternal causes, more than 42 days, but less than one year after the termination of pregnancy.
 - b. The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of the death.
 - c. Near miss-cases resulting from previously existing disease or aggravated by physiological effects of pregnancy.
 - d. The death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
12. What is the evidence based actions for eclampsia?
- a. Diagnosis and treatment of high blood pressure

- b. Treatment with Magnesium Sulphate
- c. Timely delivery
- d. All of the above

13. Fetus born dead after completed 22 weeks of gestation or child who is born alive but dies within the first 7 days of life is termed as

- a. Perinatal death
- b. Early neonatal death
- c. Neonatal death
- d. Late neonatal death

14. According to NDHS 2011, early neonatal deaths cover part of all Neonatal deaths

- a. 2/3rd
- b. 1/2
- c. 3/4th
- d. 1/4th

15. Which of the following statement is the determinant for maternal death?

- a. Socioeconomic and cultural factors
- b. Accessibility of health facility
- c. Quality of care
- d. All of the above

16. Which of the following is **INCORRECT** statement in the case of maternal death review?

- a. Attending service provider should fill the MDR form within 24 hours of death.
- b. Maternal death review has to be done by the MPDSR committee within 72 hours of death.
- c. The name of staff attending the maternal death case should be published in hospital notice board.
- d. The hospital has to prioritize and implement the recommendations that are within the capacity of the hospital.

17. A young primi gravida delivered in hospital two hours back followed by hemorrhage. She looked very pale (Hb was 5gm%) with un-recordable BP & pulse and she died suddenly. What could be the primary cause of death?

- e. Haemorrhage
- f. Obstructed labour
- g. Ruptured uterus
- h. Eclampsia

18. Forms used for hospital level MPDSR process includes all **EXCEPT**:

- e. Maternal Death Review form

- f. Perinatal Death Review form
- g. Verbal Autopsy form
- h. Perinatal Death Summary form

19. Completed MDR and PDR forms should be entered into the web-based reporting system by

- e. Family Health Division
- f. D(P)HO
- g. Respective hospital
- h. Regional Health Directorate

20. A nine months pregnant woman was brought to the hospital in the evening unconscious with complains of seizures several times since morning. She did not have history of ANC. Her limbs were swollen and pupils mid-dilated with BP 180/120 mm of Hg. Upon admission she again had seizures. The attending staff at the emergency opened IV line, inserted catheter, sent blood for investigation. But Magnesium Sulphate (MgSO₄) was not given in the emergency as it was not available there. The on call doctor came, shifted her to ICU and gave MgSO₄. Blood and blood products were also arranged but the patient's condition deteriorated and the patient died after 2 hours.

What appropriate action can the hospital MPDSR committee implement to improve the quality of care in the hospital:

- e. Increase the number of staff in the emergency.
- f. Develop protocol to refer all patients coming with eclampsia.
- g. Ensure availability of MgSO₄ in the emergency also.
- h. All of the above

Annex 2: MDR Form



Government of Nepal
Ministry of Health
Department of Health Services
Family Health Division
Teku, Kathmandu

MPDSR Tool 6

CONFIDENTIAL

This form will be kept confidential and used only for quality of care improvement and collective statistical purposes

MATERNAL DEATH REVIEW FORM

Maternal death includes death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (WHO ICD-10).

The maternal death review process is an in-depth investigation of the causes of and circumstances surrounding maternal deaths occurring at health facilities with the objective of identifying avoidable factors and utilising the information for improving quality of care at the facility, and policy and programme reform.

Sections 1-7 should be completed within 24 hours of a maternal death by the attending medical officer/nursing staff in consultation with other staff that had contact with the deceased. All available records related to the deceased should be reviewed. The death should be notified to Family Health Division within 24 hours of occurrence with name, age and permanent address of the deceased.

Sections 1-7 should be reviewed within 72 hours by a hospital maternal death review committee. After discussion, the committee should complete Section 8 and 9. The completed forms should be made accessible to Family Health Division through web entry.

District: _____

Name of facility: _____

SECTION 1: DETAILS OF DECEASED WOMAN

101	Full Name:	
102	Age at death (Completed years)	
103	Address	
	District: _____ VDC/Municipality: _____ Ward No. _____	
104	Ethnicity/Caste (Specify): Caste: _____ (Don't know: 998) [Note: Please see Annex for the code]	
105	Gravida	

106	Parity				
107	Date of Death	Day	Month	Year	
108	Time of Death (24 hour format)	Hour	Minute		
109	<u>Period of death</u>	Antenatal period (<i>skip section 4</i>)			1
		Intrapartum period			2
		Postpartum period up to 48 hours after delivery			3
		Postpartum period after 48 hours of delivery			4

SECTION 2: ADMISSION RELATED INFORMATION (AT INSTITUTION WHERE DEATH OCCURRED)

201	Date of admission to this facility (<i>Nepali date</i>)	Day	Month	Year
202	Time of admission (24 hour Time Format)	Hour	Minute	
203	Period on admission	Antepartum		1
		Intrapartum (in labour)		2
		Postpartum (up to 48 hours after delivery)		3
		Postpartum (between 2- 42 days after delivery)		4
204	Condition on admission	Pulse	Temperat	BP (S)
205	Diagnosis on admission (Provisional Diagnosis)	Yes	No	Unknown
a	Ante partum haemorrhage	1	2	98
b	Postpartum haemorrhage	1	2	98
c	Ectopic pregnancy	1	2	98
d	Prolonged/obstructed labour	1	2	98
e	Ruptured uterus	1	2	98
f	Pre-eclampsia	1	2	98
g	Eclampsia	1	2	98
h	Retained placenta	1	2	98
i	Puerperal sepsis	1	2	98
j	Abortion related complications	1	2	98
k	Pregnancy induced hypertension	1	2	98
l	Other (Specify).....	1	2	98
m	No diagnosis given	98		

SECTION3: PREGNANCY

301	Did she receive any antenatal care?	Yes	1
		No (skip to 303)	2
		Don't know 98 (skip to 303)	98

302	If yes, when did she had first ANC ? (Specify month of pregnancy)	Don't Know 98		
303	Did she suffer from any of the following complication during this pregnancy and child birth? (Clinical history of this pregnancy)	Yes	No	DK
a.	Ante partum haemorrhage	1	2	98
b.	Postpartum haemorrhage	1	2	98
c.	Ectopic pregnancy	1	2	98
d.	Multiple pregnancy	1	2	98
e.	Prolonged/obstructed labour	1	2	98
f.	Ruptured uterus	1	2	98
g.	Pre-eclampsia/eclampsia	1	2	98
h.	Retained placenta	1	2	98
i.	Puerperal sepsis	1	2	98
j.	Complications related to induced abortion	1	2	98
k.	Pregnancy induced hypertension	1	2	98
l.	Anaemia	1	2	98
m.	Malaria	1	2	98
n.	Hepatitis / Jaundice	1	2	98
o.	Heart disease	1	2	98
p.	Diabetes	1	2	98
q.	HIV/AIDS	1	2	98
r.	Others (Specify)			

SECTION 4: DELIVERY AND PUERPERIUM

401	Date of delivery (Nepali date)	Day	Month	Year
402	Time of delivery (24 hour format)	Hour	Minute	
403	Where did she deliver?	This facility	1	
		PHCC/HP/SHP	2	
		Government hospital	3	
		Private/NGO/Missionary facility	4	
		Home / someone else's home	5	
		In transit to health facility	6	
		Other (Specify)	96	
		Don't know	98	
404	What type of facility was that?	CEONC	1	
		BEONC	2	
		Birthing centre	3	
		Others (Specify)	96	
		Don't know	98	
405	Who was the main delivery attendant?	Doctor	1	
		Nurse/ANM/SBA	2	
		Other health workers (Specify)	3	
		FCHV/ Friend /Relative	4	
		Self	5	
		Other (Specify)	96	

406	Was a Partograph used?					Yes	No	Don't know	
						1	2	98	
407	If a partograph was used please write relevant information based on partograph:					Yes	No	DK	
	Half hourly foetal heart rate monitored					1	2	98	
	Half hourly uterine contraction monitored					1	2	98	
	Four hourly PV examination done					1	2	98	
408	What was the duration of labour?		< 12 hours	12-23 hours	>=24 hours	Don't know			
			1	2	3	98			
409	Presentation of foetus		Cephalic			1			
			Breech			2			
			Shoulder			3			
			Other (specify)			4			
410	What was the mode of delivery?		Normal (Skip 411 and 412)			1			
			Vacuum			2			
			Caesarean section			3			
			Destructive Operation (Embroyotomy)			4			
			Others (specify)			5			
411	What was the reason for vacuum/forceps/ CS/destructive operation?		Maternal			1			
			Foetal			2			
			Don't know			98			
			Describe the reason:						
412	Was the caesarean section emergency or elective?					Emergency	Elective	Don't know	
						1	2	98	
413	Did she suffer from any of the following complications during labor or delivery?					Yes	No	Don't know	
a.	Haemorrhage					1	2	98	
b.	Shock					1	2	98	
c.	Eclampsia					1	2	98	
d.	Pre-eclampsia					1	2	98	
e.	Anaesthetic complication					1	2	98	
f.	Major genital tract injury					1	2	98	
g.	Obstructed labour					1	2	98	
h.	Prolonged labour					1	2	98	
i.	Seizures / Unconsciousness					1	2	98	
j.	Retained placenta					1	2	98	
k.	Hand prolapsed					1	2	98	
l.	Cord prolapsed					1	2	98	
k.	Other (Specify)					1	2	98	
414	Was it a multiple pregnancy?					Yes		No	
						1		2	
415	Outcome of this pregnancy	Alive	Macerated still birth	Fresh still birth	Early neonatal death (up to 7 days)	Late neonatal death (7 - 28 days)	Induced/ spontaneous abortion	Don't know	

		1	2	3	4	5	6	98
416	Did she suffer from any of the following complications after delivery?					Yes	No	Don't know
a.	Postpartum haemorrhage					1	2	98
b.	Puerperal sepsis					1	2	98
c.	Complications of operative delivery					1	2	98
d.	Thrombosis					1	2	98
e.	Eclampsia					1	2	98
f.	Anaemia					1	2	98
g.	Maternal depression					1	2	98
h.	Pulmonary embolism					1	2	98
i.	Heart disease					1	2	98
j.	Gastroenteritis					1	2	98
k.	Pneumonia					1	2	98
l.	Hepatitis					1	2	98
m.	Other (specify).....					1	2	98

SECTION 5: INTERVENTIONS

501	Were any of the following interventions administered during ANC, Delivery and postpartum period?	Antenatal			Intrapartum			Postpartum		
	Interventions	Yes	No	DK	Yes	No	DK	Yes	No	DK
a.	Blood transfusion	1	2	98	1	2	98	1	2	98
b.	External cephalic version	1	2	98	1	2	98	1	2	98
c.	Hysterectomy	1	2	98	1	2	98	1	2	98
d.	Exploration of uterus / MRP	1	2	98	1	2	98	1	2	98
e.	Laparotomy	1	2	98	1	2	98	1	2	98
f.	ICU (Advanced life support)	1	2	98	1	2	98	1	2	98
g.	Treatment for malaria	1	2	98	1	2	98	1	2	98
h.	Treatment of anaemia (Specify).....	1	2	98	1	2	98	1	2	98

SECTION 6: CAUSES SURROUNDING THE DEATH

601	What was the primary cause of death? <i>(Select one)</i>	
a.	Ante partum haemorrhage	1
b.	Postpartum haemorrhage	2
c.	Eclampsia	3
d.	Induced Abortion	4
e.	Spontaneous Abortion	5
f.	Obstructed labour	6
g.	Puerperal sepsis	7
h.	Retained placenta without haemorrhage	8
i.	Ruptured uterus	9
j.	Inversion uterus	10

K	Pulmonary embolism	11
L	Agents primarily affecting blood constituents (blood transfusion reaction)	12
m.	Others (Specify):.....	96
602	What were the contributory factors leading to the death (multiple response) ?	
a.	Ante partum haemorrhage	1
b.	Postpartum haemorrhage	2
c.	Eclampsia	3
d.	Induced Abortion	4
e.	Spontaneous Abortion	5
f.	Obstructed labour	6
g.	Puerperal sepsis	7
h.	Retained placenta without haemorrhage	8
i.	Ruptured uterus	9
J	Inversion uterus	10
K	Pulmonary embolism	11
L	Agents primarily affecting blood constituents (blood transfusion reaction)	12
m.	Others (Specify):.....	96

603	What was the final cause of death ? (Select one)	
a.	Cardiac failure	1
b.	Respiratory failure	2
c.	Hypovolemic shock	3
d.	Septic shock	4
e.	Acute cardiopulmonary failure	5
f.	Renal failure	7
g.	Disseminated intravascular coagulation	8
h.	Liver failure	9
i.	Multi-organ failure	10
j.	Cerebral complications	11
k.	Unknown	12
l.	Other (Specify) _____	96

SECTION 7: CASE SUMMARY

Please write a short summary describing the circumstances surrounding her death. It is important to understand the underlying social, as well as medical, problems which led to her death, in addition to trying to understand the primary and contributory clinical causes of death. Please write a description of everything that happened, even if this means repeating some of the information you have already provided.

701	Please write a short history of what happened prior to admission (Write in block letter)
-----	---

702	Please write a short history of what happened after admission (Write in block letter)

SECTION 8: REVIEW BY MPDR COMMITTEE

Complete this form based on review of and discussion on the information in sections 1-7 and available records.

801	Factors relating to the woman/her family/social situation that have contributed to death of the woman	Delay to seek health care	1
		Delay to reach the health facility	2
802	Factors relating to health facility that have contributed to death of the woman <i>(Multiple Response)</i>	Delay in providing appropriate intervention	1
		Absence of critical human resource	2
		Lack of resuscitation equipment	3
		Lack of supplies and drugs	4
		Lack of blood and blood products	5
		Lack of inter-department communication	6
		Lack of intra-department communication	7
		Poor documentatione.g. Partograph, Case note etc	8
		Mis-diagnosis	9

		Others (Specify).....	96
803	Factors relating to referral system (Multiple Response)	Lack of effective communication from referring facility	1
		Unable to refer due to	
		a) financial constraints	2
		b) lack of transportation	3
		c) patient party's denial	4
		d)	5
		other(specify).....	

SECTION 9: CRITICAL EXAMINATION OF CARE IN THE HOSPITAL

901	Do you think the mother could have been saved?	Yes 1	Possibly 2	Probably No 3	Never 4
902	If yes or possibly, how do you think the mother could have been saved?				
903	Please write a list of <i>lessons learned</i> from this case				
904	Has a similar situation happened before at this facility that resulted in a maternal death or a near miss?	Yes 1	No 2		
905	If yes, discuss: why this situation has occurred again? If the necessary steps had been put in place at this facility could this death have been prevented?				

SECTION 10: MPDR COMMITTEE'S RECOMMENDATIONS AND ACTION TAKEN

Actions	To be performed by Hospital	To be performed by/through DPHO
Immediate Actions		
<i>Responsible for implementation</i>		
<i>Time line (less than a month)</i>		
<i>Monitoring to be done by</i>		
(Mid Term Actions)		
<i>Responsible for implementation</i>		
<i>Time line (less than six month)</i>		
<i>Monitoring to be done by</i>		
(Long Term Actions)		
<i>Responsible for implementation</i>		
<i>Time line (less than a year)</i>		
<i>Monitoring to be done by</i>		

The request for necessary action at the community level has to be sent formally through District Public Health Office.

Attendance

SN	Name	Designation	Institution/Dept	Phone	Signature

Date of review by case attending staff (Nepali date)	dd mm yy
Date of review by facility MPDR committee (Nepali date)	dd mm yy

Staff who completed this review form:

Name: _____

Designation: _____

Phone Number: _____

Date/month/year: _____

Signature: _____

Thank You

Government of Nepal

MPDSR Tool 8

Ministry of Health

.....

.....

Summary of Hospital Maternal Death Review Form

[CONFIDENTIAL]

Name of Hospital: _____

Identification:

1. Date of Death:

dd	mm	yyyy

2. Death Occurred

During:

(Check one)

Pregnancy	Intrapartum	Postpartum	Not known
1	2	3	5

3. Maternal age:

	Unknown
--	---------

4. Antenatal care:

(Check one)

Yes	No	Unknown
1	2	3

5. Cause of Death

Cause of Death		Code
Primary Cause of Death		
Contributory Cause of Death		
Final Cause of Death		

6. Is this death preventable?

Yes	No

7. If the death is preventable write the avoidable factors according to three delay model

Type of delays		Avoidable factors
1	Delay in decision to seek care	
2	Delay in reaching at right facility	
3	Delay in receiving care at facility	

8. Action plan for reducing similar maternal deaths

Delay Type	Avoidable factors	Action to be taken	Responsibility	Timeline	Date action completed	Rearks
Delay1						
Delay2						
Delay3						

14. List of participates

SN	Name	Position	Address	Phone	Signature

Annex 4: PDR Form



Government of Nepal
Ministry of Health
Department of Health Services
Family Health Division
Teku, Kathmandu

MPDSR Tool 7

CONFIDENTIAL

This form will be kept confidential and used only for quality of care improvement and collective statistical purposes

PERINATAL DEATH REVIEW FORM

Perinatal deaths include death of a baby from 22 weeks of gestation (or baby weighing at least 500 grams) to first 7 days of life (early neonatal period).

The perinatal death review process is an in-depth investigation of the causes of and circumstances surrounding late fetal and early neonatal deaths occurring at health facilities with the objective of identifying avoidable factors and utilizing the information for improving quality of care at the facility, and policy and programme reform across the country.

Personally identifiable information on this form will be kept confidential, and will be grouped and non-identifiable. Information and discussion arising from this review form cannot be used in legal proceedings.

Sections 1-4 should be completed within 72 hours of the perinatal death by the attending medical officer/nursing staff in consultation with other staff that had contact with the mother/infant. All available records related to the deceased should be reviewed.

Sections 1-4 should then be reviewed each month by the hospital MPDR committee and Section 5 should be completed after discussion. The completed forms should be made accessible to Family Health Division and DPHO through web-based data entry.

District: _____

Name of health facility: _____

SECTION 1: DETAILS OF MOTHER OF THE DECEASED

10 1	Name of the Mother : _____	Hospital ID Number: _____
10	Address : _____	

2	District: _____ VDC/Municipality: _____ Ward No.:		
103	Ethnicity/Caste (Specify): Caste: _____ Ethnicity: _____ <i>[Note: Coding to be done during data entry]</i>		
104	Maternal age (in completed years) <i>[Write 98, if Don't know]</i>		
105	Gravida <i>[Write 98, if Don't know]</i>		
106	Parity <i>[Write 98, if Don't know]</i>		
107	Did she receive any antenatal care during this pregnancy?	Yes	1
		No (Go to 109)	2
		Don't Know (Go to 109)	3
108	If ANC received, how many times?	Specify _____	
109	Obstetric condition of mother at admission	Not in labour	1
		Latent phase of labour	2
		Active phase of labour	3
		Third stage of labour	4
		Post partum	5
110	Provisional diagnosis of mother at the time of admission	Specify	
111	Place of delivery	Specify	1
112	Mode of delivery	Normal (Go to 114)	1
		Vacuum	2
		CS	3
		Embryotomy	4
		Other (Specify) _____	5
113	If other than normal delivery, specify main reason for this		
114	Relevant maternal event summary		

SECTION 2: DETAILS OF THE BABY

201	Gestational age	Weeks	Days
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203	Birth weight	Grams	
204	Sex of the baby	Male	1
		Female	2
		Ambiguous	3
205	Singleton or multiple birth	Singleton	1
		Multiple	2
		Baby number: _____	
206	Date of delivery: (Nepali date)	 dd mm yy	
207	Time of delivery (24 hours clock)	. Hours	
209	Type of death	Fetal (<i>Go to 212</i>)	1
		Early Neonatal	2
210	If early neonatal death, date of death: (Nepali date)	 dd mm yy	
211	If early neonatal death, time of death <i>[Skip to Q 301]</i>	. Hours (24 hours clock)	
212	If fetal death, type of death	Antepartum fetal death (macerated)	1
		Intrapartum fetal death (fresh)	2

SECTION 3: CLINICAL INFORMATION OF DECEASED BABY

301	Relevant neonatal events summary <i>[please write about the complication, diagnosis, investigations, procedures, IV therapy and drugs]</i>		
	<u>Date</u>	<u>Time</u>	<u>Postnatal age</u>
			<u>Event</u>

SECTION 4: CAUSE OF DEATH

401	What was the primary (<i>underlying</i>)	Spontaneous preterm labour	1
		Intrapartum hypoxia	2

	cause of death?	Antepartum haemorrhage	3
		Hypertensive disorder	4
		Infections	5
		Congenital anomalies	6
		Intrauterine growth retardation	7
		Trauma	9
		Unexplained intra-uterine cause	10
		Maternal disease (Specify)	11
		Others (Specify)	96
402	What was the final cause of death?	Birth asphyxia	1
		Septicemia	2
		Pneumonia	3
		Tetanus	4
		Hypothermia	5
		Complications of prematurity	6
		Congenital anomalies	7
		Birth trauma	9
		Others (Specify)	96
403	Wigglesworth classification of death	Normally formed macerated stillbirth	1
		Lethal congenital malformation	2
		Conditions associated with immaturity	3
		Asphyxial conditions (includes fresh still birth)	4
		Other specific conditions	5

SECTION 5: REVIEW BY MPDR COMMITTEE

Critically analyze the situation, circumstances and record how it could have been saved (avoidable factors)

Q	Type of Avoidable Factors	Avoidable Factors	Code
501	Patient related		
502	Administrative problems		
503	Medical personnel associated		
504	Other		

SECTION 6 : MPDR COMMITTEE'S RECOMMENDATIONS AND ACTION TAKEN

Actions	To be performed by Hospital	To be performed by/through DPHO
Immediate Actions		
<i>Responsible for implementation</i>		
<i>Time line (less than a month)</i>		
<i>Monitoring to be done by</i>		
(Mid Term Actions)		
<i>Responsible for implementation</i>		
<i>Time line (less than six month)</i>		
<i>Monitoring to be done by</i>		
(Long Term Actions)		
<i>Responsible for implementation</i>		
<i>Time line (less than a year)</i>		
<i>Monitoring to be done by</i>		

The request for necessary action at the community level has to be sent formally through District Public Health Office.

Date of review by case attending staff (Nepali date)	dd mm yy
Date of review by facility MPDR committee (Nepali date)	dd mm yy

Staff who completed this review form:	
Name: _____	Designation: _____
Phone Number: _____ Date/month/year: _____ Signature: _____	

Thank You

Annex 5: PDR Summary Form



Government of Nepal Ministry of Health

MPDSR Tool 9

Summary of Hospital Perinatal Death Review Form

[CONFIDENTIAL]

Name of Hospital: _____

Identification:

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1. Date of report:

dd	mm	yyyy

2. Age at death:

<24 hours	24+ hours

3. Birth Weight:

(In Gram)

<1000	1000-2500	2500+

4. Gestational Age:

in Week

22 - 27	28 - 36	37 - 41	≥ 42	Not known

5. Delivered at:

This Facility	Other Facility	Home	Unknown

6. Maternal age:

<20	20-35	>35

7. Antenatal care:

No	1-3	≥ 4

8. Condition at birth

Born Alive	Still Born: Fetus Alive on Admission	Fresh Stillborn	Macerated Stillborn

9. Pregnancy status

Single Pregnancy	Multiple Pregnancy

10. Primary Cause

Of Deaths

Cause of Death	Number

11. Number of preventable deaths

Preventable	Not Preventable

12. If the deaths are preventable write the avoidable factors according to three delay model

Type of delays		Avoidable factors
1	Delay in decision to seek care	
2	Delay in reaching at right facility	
3	Delay in receiving care at facility	

13. Action plan for reducing perinatal deaths

Delay Type	Avoidable factors	Action to be taken	Responsibility	Timeline	Date action completed	Remarks
Delay1						
Delay2						

Delay3						
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14. List of participates

SN	Name	Position	Address	Phone	Signature

Annex 6: Maternal Death Mock Cases

Mock Case file – Maternal Mortality Tertiary Hospital

Patient Details:

Full Name: Mrs. Rita Thapa

Age: 22 years

Address: Sindhupalchowk District, VDC/Municipality: Tatipani, Ward number: 4

Married: Yes

Education: Secondary

Occupation: Housewife

Husband's name: Ram Thapa

Husband's Occupation: Driver

Date of Admission: 2072/03/10

Time of admission: 2 pm

Date of Death: 2072/03/11

Time of Death: 4 am

Total hospital stay: 14 hours

Admission number: 265494

Chief Complains:

Amenorrhea for 8 months

Heavy per vaginal (PV) bleeding since 4 days

Menstrual history: LMP Kartik 3, 2071, 4-5/28 days

Marital History: Married for 2 years

Obstetric History: G3P0+2

History of present illness:

Rita gave history of amenorrhea for 8 months with PV bleeding for 4 days. The bleeding was not associated with pain. The bleeding was heavy and she had to change 6-7 home made pads every day associated with clots about size of fist. She perceived fetal movements on and off. So she came in the hospital today with her in-laws as her husband was away from home since 1 week.

She had three ante-natal check-up (ANC) visits at local health post and had received two doses of Inj. Tetanus Toxoid but had not done any blood investigations as well as ultrasonography. She was given Iron tablets but she didn't take it regularly. Her antenatal period was uneventful till 4 days back.

She also had history of abortions twice, both of which were induced through Comprehensive Abortion Care (CAC).

On Examination:

General Condition: Poor

Pallor: ++

Icterus: Nil

Edema: Mild (Pedal)

Pulse: 120/min

BP: 90/60 mm of Hg

Chest: Clear

Cardio-Vascular System: S1+S2, Tachycardia

P/A:

Uterus 34 weeks size,

Lie longitudinal,

Cephalic 5/5th,

FHS 150/min,

Non-tender,

Contraction nil

P/V: Active bleeding ++, Pettikot soaked with blood

Investigations:

Hemoglobin: 5 gm/dl

Blood Group: AB negative

All other blood and urine investigations were normal

USG:

Single alive fetus,

Cephalic, Weight: 1800gms,

34 weeks gestation,

Type IV Placenta Previa,

Liquor - 10 cm Amniotic Fluid Index (AFI)

Plan:

- NPO
- Inf. Ringer's Lactate 6 hourly
- Prepare six pints of whole blood and 2 pints of Fresh Frozen Plasma and cross match
- Prepare for Emergency LSCS: Indication: G3P0+2 35 weeks pregnancy with central placenta previa with severe anaemia
- Foley's catheterization

- Oxygen inhalation
- Inj Ampicillin 2 gms stat IV and 1 gm 6 hourly
- Shift to ICU

At 4 pm:

Patient party could not bring blood, AB –ve blood not available at hospital blood bank.

On examination:

GC: Poor

Pallor: +++

BP: 80/50 mm of Hg

Pulse: 120/minutes

P/A:

Uterus 34 weeks size,

Lie longitudinal,

Cephalic 5/5th,

FHS 150/min,

Non-tender,

Contraction nil

P/V: Active bleeding continued

Plan: Emergency LSCS not done due to unavailability of blood.

At 6 pm:

GC: Poor

Pulse: feeble

BP: Unrecordable

P/A: FHS not heard

P/V: Bleeding started profusely

Plan:

Resuscitation with Ringers Lactate, Heamacceal, Normal Saline from two IV lines

Oxygen inhalation continued

Patient party brought two pints blood. Patient party counselled and patient shifted to Operation Theatre for Emergency LSCS after high risk consent and counseling but patient's husband does not give consent for Emergency LSCS.

At 8 pm:

Patient's condition deteriorated. After re-counseling, the patient party gave consent for Emergency LSCS. Emergency LSCS performed at 8:30pm and dead female baby 1.9 kg was delivered. There was difficulty in delivering the placenta as the placenta was morbidly adherent to the uterus. She started bleeding from the placental bed. Placenta was removed in peace meal and utero-tonic was given. But bleeding was not controlled. So compression suture was applied.

Uterine artery ligation was done. Patient's condition was deteriorating. Blood transfusion was given from both hands. Bleeding was not controlled. Total Abdominal Hysterectomy (TAH) was planned but patient collapsed with unrecordable Pulse and BP. Resuscitation was continued. After resuscitation, her Systolic BP came to be 90 mm of Hg and Diastolic BP 60 mm of Hg. So TAH done and abdomen was closed. Total blood loss was two liters. Two more pints of blood was brought and transfused. After the blood transfusion, BP and Pulse was recordable and ventilator support was continued. Patient transferred to ICU with ventilator support. Patient was on ventilator and spontaneous respiration and BP was not improving. Patient party counselled about the critical condition of the patient.

At 12 am

Patient goes into asystole. Cardio-pulmonary Resuscitation (CPR) was done for half an hour. Heart beat revived and ventilation was continued. Patient's condition slightly improved.

At 2 am

Patient again went into asystole. Vigorous resuscitation was done but her condition was deteriorating.

At 3 am

Pulse and BP was not recordable and pupil was dilated. CPR done but she did not revive.

At 4 am

Patient was declared dead.

Total blood loss in the hospital: 1 liter before operation and 2 liters during operation, total 3 liters.

Cause of Death: Hypovolemic Shock caused by Post-Partum Hemorrhage and Ante-Partum Hemorrhage caused by Placenta Previa with Severe Anemia.

Mock Case File – Maternal Mortality II
District Hospital

Patient Details:

Name: Mrs. Mina Sunar
Age: 19 years
Address: Ward No. 4 VDC: Jamlung District: Dhading
Marital Status: Married
Religion: Hindu
Husband's name: Mr. Bir Bahadur Sunar
Ethnicity: Dalit
Education status: Illiterate
Date of admission: 13 Baisakh 2073
Time of admission: 7:45 pm
Admission number: 2683934

Chief Complaints:

Patient was unconscious since 2 am in the morning

History of present illness:

(History taken from mother in law as her husband was abroad) She was at 8 months of pregnancy. She had two Ante-Natal check-ups in the local health post, her last visit was on the previous day. The health service provider told her she had high blood pressure and was advised to visit a hospital. But the same evening, she vomited twice at her home. She then complained of headache and difficulty to focus the vision, followed by loss of consciousness with jerky movement of the body, rolling of eyes. In the early morning, she was treated by local healer (Dhami). As she was frequently having convulsion, the relatives decided to bring patient to the hospital. Due to the lack of availability of any kind of transportation, patient was carried in a doko, up to the highway, where they got a local bus.

Obstetric history:

LMP: 10 Bhadra;

EDD: 17 Jestha

Gravida: G1P0+0

Married for 1 year

Menstrual history: Menarche 16years, cycle regular

Past medical and surgical history: Nothing significant

On Examination:

Patient unconscious

Both pupils dilated, reacting to light

Pulse: 130 beats per minute; feeble

Respiration: Shallow, 30 per minute

O₂: 80%

BP: 200/140 mmHg

Oedema; +++

Pallor: +

Temperature: 100° F

Knee jerk exaggerated

CVS: S1+S2, tachycardia

Chest: Bilateral crepitation

Abdominal examination:

Fundal height: 34 weeks size;

Uterus contraction ++;

FHS absent

Pelvic examination:

Cervix 8 cm dilated,

Head at 0 station

Membrane absent;

Hot vagina; foul smelly liquor;

Pelvis: adequate

Provisional diagnosis:

Primigravida at 36 weeks of pregnancy with eclampsia in active phase of labour; with ? Acute Respiratory Distress Syndrome (ARDS).

During initial examination patient developed convulsion

Management:

- IV cannula inserted and blood samples were taken for blood group and RH, CBC, RFT, LFT, LDH, PT
- Foley's catheter inserted and a urine sample sent for routine examination
- Oxygen inhalation given
- IV antibiotic- Ampicillin 2gm IV stat

Patient's family explained the serious situation and explained about need for higher site referral but they refused. High risk consent taken.

At 8:45 pm

Patient was still unconscious.

Oxygen saturation: 80%;

BP: 180/100 mmHg;

Pulse: 140 beats per minute; feeble;

Temperature: 101°F

Patient she delivered vaginally, fresh still birth, female baby of 3 kg,

Inj. Syntocinon 10 IU intra muscular

Placenta delivered spontaneously

Misoprostrol 600 µgm

No urine draining

Inj. Magnesium sulphate loading dose- 4gm; I/V given slowly, followed by Inj. Magnesium sulphate, 5gm I/M each buttock with 1 ml with 1% lignocaine.

At 9:50 pm

Investigation report received

Hb: 14gm/dl

Total count: 16,000; N: 90%; L: 10%; M: 0% and E: 0%

Platelets: 80,000/ cmm ;

RBS: 110 mg %

Urine RE: RBC plenty, epithelial cells: 20 PHF, albumin +++

Arranged two units of fresh whole blood

At 10:15 pm

Patient still unconscious,

BP: 70/50 mmHg,

Pulse: 140 beats per minute,

Respiration: 40 per minute,

O2 saturation: 70%.

No urine output

Patient's relatives were counseled regarding her deteriorating condition.

At 11:25 pm

Two units of fresh blood transfused

BP: 60/40 mmHg,

Pulse: 160 beats per minute

Pupils: Dilated, fixed, not reacting to light

At 12:30 am

ECG showing flat graph

Cardiac massage started
Inj Adrenaline 1 ample, IV
Repeat dose of Adrenaline given
Cardiac massage continued.
Inspite of resuscitation, patient did not revive.
Death declared

Cause of death:

Eclampsia with HELLP syndrome

DRAFT

Mock Case File – Maternal Mortality III
Teaching Hospital

Patient Details:

Full Name: Mrs. Thuli Maya Tamang

Age: 32 years

Address: Baglung District, VDC/Municipality: Bartibang, Ward number: 3

Married: Yes

Education: Illiterate

Occupation: Housewife

Husband's name: Ram Thapa

Husband's Occupation: Labourer

Date of Admission: 2071/06/23

Time of admission: 4 am

Admission number: 2649836

Chief Complaints:

Amenorrhea for 10 months

Labor pain for 5 days

Something came out of vagina

Menstrual history: LMP Poush 16, 2070, 4-5/28 days

Marital History: Married for 10 years

Obstetric History: G4P3+0, all were full term normal/uncomplicated vaginal delivery at home,
Last Child Birth: One and a half year, lactating till few months ago

Menstrual history:

MK 13 years. Cycles regular. 4 days flow occurring every 30 days.

LMP: 16 Poush 2070

EDD: 23 Ashwin 2071

History of present illness:

Patient gave history of amenorrhea for 10 months with pain abdomen for 5 days and PV leaking for 4 days. She perceived fetal movement on and off. She had good contraction at home. So, a TBA was called by mother-in-law for the delivery. The TBA tried to deliver the baby for the whole day, but could not do so and was told to go to the district hospital. On the way to the hospital, something came out from vagina. Then onwards, she did not feel fetal movement but continued to have strong contraction. She did not have any antenatal check-up.

History of past illness: No known medical and surgical history

On Examination:

GC: Poor;
Pallor: ++
Icterus: Nil
Dehydration: ++
Edema: Mild (Pedal)
Temperature: 101 °F
Pulse: 120/min
BP: 90/60 mm of Hg
Chest: B/S vesicular, no added sound
CVS: Tachycardia, no murmur

Abdominal examination:

Uterus 34 weeks size
Lie transverse,
FHS absent,
Contraction ++,
Generalized abdominal tenderness present

Pelvic examination:

Cervix fully dilated,
Cervical effacement: 100%,
Membrane absent,
Hot vagina, foul smelly liquor and hand with cord was felt coming out through cervical os

Provisional diagnosis:

G4P3+0 Term pregnancy with obstructed labor with hand prolapse with sepsis

Investigation:

Blood group and Rh type, CBC, RBS peripheral blood picture, RFT, LFT, high vaginal swab for C/S; urine routine and microscopic and C/S (after Foley's catheter inserted)

Management:

IV line opened;
Blood sample sent for blood group, Rh type, CBC, RBS.
Four units of whole blood cross match.
High vaginal swab sent for culture and sensitivity
Inj. Ampicillin 2 gm and Inj. Gentamycin 100 mg IV stat given.

At 5:30 am**Investigation reports:**

Hb: 5 gm%

Blood Group: A +

WBC: 18,000 cu. mm, DC: normal and peripheral blood picture showed microcytic hypochromic LFT: normal,

RFT: Urea 60mg%, Creatinine 2mg%, Sodium: 143 meq/l and Potassium: 5.0meq/l

Report of urine and high vaginal swab C/S waiting

High risk consent was taken from relatives and patient is prepared for Emergency LSCS.

At 6:30 am

Patient was transferred to operation theatre

Laparotomy done under General Anaesthesia

Findings: Lower segment was thinned out with Bandl's ring noted, liquor foul smelly, scanty, meconium stained, baby delivered by breech: macerated still birth, male; weight: 3.8kg. Placenta delivered, membranes were adherent, removed in piece meal. Intra operative blood loss: 800 ml. Intra operative injection Syntocinon IV 10 units, Inj. Methergin IM given.

At 10 am

Patient was transferred to MICU post operatively for continuing ventilator support

At 10:30 am

Patient unconscious

Rashes over the abdomen

Temperature 104°F

Pulse: 160 beats per minute

Respiration: 30 breaths per minute

Respiration shallow

BP: 70/50 mmHg

Oxygen saturation: with O₂ 84%

Chest crepitation B/L

CVS: Tachycardia

P/A: Uterus was contracted, distended abdomen, B/S absent

P/V: Heavy lochia, urinary catheter: urine output is 100 ml for last 6 hours, blood stained urine.

CVP line inserted

Patient's relatives counseled.

At 4:30 pm

Repeat investigation sent

WBC: 28,000 cu. mm, Neutrophil: 98%, lymphocyte: 8%, Platelets: 40,000 cu. mm

No urine in urobag

Higher antibiotic started. Inj. Monocef 1gm, 8 hourly, Inj. Ornidazole IV given

In spite of all treatment, patient's condition deteriorating

Patient flushed

BP and pulse was not recordable

Respiration deep and shallow

At 6:00 pm

Patient still unconscious, extremities cold and clammy

BP and pulse not recordable

Inj. Dopamine IV 5mcg/kg/minute started

Two pints of fresh whole blood cross matched and transfused.

Ventilator support continued through-out the post-operative period.

At 9:00 pm

Patient was still unconscious. BP, pulse not recordable, ECG monitored was flat. Inj. Adrenaline IV was given along with Cardio-Pulmonary Resuscitation (CPR).

In spite of all efforts, patient was declared dead at 10:30 pm

Cause of Death:

Obstructed labor with hand prolapse with Septic Shock

Annex 7: Perinatal Death Mock Cases

Mock Case File - Perinatal Mortality Medical College Kathmandu

Patient Details:

Hospital: Kathmandu Medical College, Sinamangal, Kathmandu

Name: Baby of Rashmi Dahal

Age: 14 hours of life

Sex: Male

Date of Admission: 2070 /2/14 at 2:00 PM

Date of Death: 2070 /2 /15 at 6:45 PM

Address: Dhading, Salyantar VDC, Ward no. 5

Admission number: 67493

Chief Complains:

1. Unable to cry after birth
2. Lethargy

History of Present Illness:

Baby was born by vaginal delivery at Salyantar PHC on 2070/2/13 at 11:30 PM. History from mother suggests that this was her 1st pregnancy and she had labor pain for 3 days. She delivered 10 hrs after admission at PHC and SBA delivered the baby. The baby did not cry after birth and the attending staff try to help the baby breath with tube (oxygen) and put mask on the face. She received the baby after 1 hr of birth and baby was breathing with difficulty and was not still not crying. Baby looked pale and lethargic and not able to suck breast milk. The health staff of PHC asked them to take the baby to higher centre for further management.

On Examination:

Appearance: Lethargic, Dusky

Weight: 3.6 kg

Head Circumference: 36cm

Length: 48 cm

Respiratory rate: 82 /min

Heart Rate: 170/min

Grunting: +

Moro's reflex: Absent

Sucking reflex: Absent

CFT: > 4 sec

Chest: Crackles bilateral

CVS: Tachycardia

P/A: Liver just palpable

Pupil: Reacting to light B/L

SPO₂: 72% in room air

Gestation: 38 weeks

During examination in emergency room; baby developed seizure in the form of boxing and cycling movements with lip smacking followed by vacant stare. Seizure was controlled by Injection Phenobarbitone 65 mg I/V stat given. Inj Normal Saline 60 ml I/V bolus. Oxygen was given and IV infusion continued. Inj Vitamin K 1 mg IV stat. Baby transferred to NICU for observational care.

Blood investigation reports:

Blood TC 12,000/mm³; DC: N 25 %, L 72%, E: 2%, B: 1%, M: 1%

CRP: Negative

Micro – ESR: 5 mm in 1st hr

ABG report traced:

pH: 7.1

pCO₂ : 56 mm Hg

pO₂ : 70 mmHg

HCO₃ : 12 mmHg

At 4:00 pm

Baby was kept in NICU under infant warmer. IV drip 10% continued and Ampicillin 360 mg and Gentamycin 15 mg IV given. Baby was electively intubated and kept under mechanical ventilation. Input output charting strictly.

Mechanical Ventilator Parameter in SIMV mode.

PIP: 20 cm of H₂O

PEEP: 5 cm of H₂O

FIO₂ : 0.10

Rate: 35/min

Tidal volume: 25 ml

SPO₂ under ventilation: 90%

Vitals

Heart rate: 162/min

SPO₂ under ventilation: 90%

CFT < 3 sec

At 6:00 pm

The baby passed 10 ml of urine

Glomerular Filtration Rate is 20 ml/1.73 m².

Capillary Refill Time > 4 sec

Urine Specific gravity: 1002

Pupil is unequal sluggish reacting to light

Injection Gentamycin on hold

Inj NS 30 ml IV bolus given

Baby developed seizure in the form of boxing and cycling movement. Seizure controlled by reloading of Phenobarbitone 65 mg IV stat. Baby condition deteriorated as the heart rate dropped to 60/min after seizure and irregular heart rate. SpO₂ also dropped to 30 %. Cardio-Pulmonary Resuscitation (CPR) started. Baby disconnected from mechanical ventilation and tube and mask followed by chest compression done. Inj Adrenaline 0.3 ml IV given. CPR continued, but the heart rate did not improve.

CFT was prolonged.

At 6:30 pm

No Heart rate

Pupil fixed and dilated

No activity of baby noticed

Baby declared dead at 6: 45 pm on 2070/2/15

Cause of Death:

Respiratory Acidosis with Respiratory failure due to Hypoxic Ischemic Encephalopathy III

**Mock Case File - Perinatal Mortality
Tertiary Hospital**

Patient Details:

Name: Baby of Rani Tharu

Age: 30 minutes of life

Sex: Male

Date of Admission: 2073 /5/09 at 6:00 PM

Date of Death: 2073 /5 /10 at 00:45 AM

Address: Parwatipur, Samshergunj VDC, Ward no. 8, Banke

Admission number: 88992

Chief Complains:

Unable to cry after birth

Prematurity

History of Present Illness:

Baby was born by vaginal delivery at Nepalgunj Medical College Teaching Hospital on 2073/5/09 at 5:30 PM. The mother was 7 and half months pregnancy and came to the hospital on the same day in active phase of labor. This was her sixth pregnancy with five children at home. She had 2 sons and 3 daughters at home. Her last child was 15 months old. She was breast feeding till 5 months back. She had visited local health-post twice for ante-natal check-up but did not take any medications. She has delivered this baby at 5:30 pm in this hospital.

On Examination:

Appearance: Limp, cyanosed

Weight: 1.2 kg

Head Circumference: 28 cm

Length: 38 cm

Respiratory rate: 88 /min

Heart Rate: 96/min

Moro's reflex: Absent

Sucking reflex: Absent

Chest: Crackles bilateral

CVS: Tachycardia

P/A: Liver just palpable

Pupil: Reacting to light B/L

SPO2: 72% in room air

Gestation: 30 weeks

The baby was intubated, IV line opened, Inj. Epinephrine given and transferred to NICU.

At 8:00 pm

Baby was kept in NICU in ventilator. Baby Developed bradycardia with desaturation (SPO2 - 65%). Three cycles of Cardio-Pulmonary Resuscitation (CPR) was done with two doses of Epinephrine. Baby revived and ventilator support continued.

At 10:00 pm

The baby passed 10 ml of urine and developed seizures. Inj. Phenobarbitone given to control the seizures. Ventilator continued.

At 11:45 pm

Baby again developed seizures, pupil size unequal sluggish reacting to light, heart rate dropped to 70/min, SPO2 50%. Inj. Epinephrine was given but the heart rate further decreased. CPR done, baby disconnected from ventilation and tube and mask followed by chest compression done. Inj Adrenaline 0.3 ml IV given. CPR continued, but the heart rate did not improve.

At 00:45 am

No Heart rate

Pupil fixed and dilated

No activity of baby noticed

Baby declared dead at 00:45 am

Cause of Death:

Respiratory failure due to Prematurity followed by Hypoxic Ischemic Encephalopathy III