Instruction Manual for Maternal and Perinatal Death Review

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Government of Nepal

Ministry of Health and Population

Department of Health Services

Family Welfare Division

Teku, Kathmandu

Foreword

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.

Several tools are developed by Family Welfare Division, Department of Health Services in order to record and report the details of the review of maternal and perinatal deaths in the hospitals as well as communities. This instruction manual has been revised in order to guide the staff to properly complete the information regarding maternal and perinatal mortalities at the hospitals. I hope the users of this manual comply with this manual in order to provide all requested information in the Maternal Death Review form and Perinatal Death Review form which will be important to review the deaths and develop proper action plans to prevent the deaths in the future.

Director General
Department of Health Services

Acknowledgement

Even though Nepal initiated to implement Maternal Death Review in the hospitals two decades back, the country lags behind in terms of proper documentation of the information regarding the process at various levels. The instruction manual for Maternal and Perinatal Death Review forms has been developed and revised to guide and support the health care providers working in hospitals to understand the steps of completing the Maternal Death Review form and Perinatal Death Review Form for each maternal and perinatal mortalities respectively in the hospitals. Completeness of the forms and quality of information collected is vital for improving the process of MPDSR at the hospital level.

The credit for the development and revision of this instruction manual for MPDSR goes to many contributors without whom this document could not have been completed. I am thankful to Dr. Punya Poudel and all the members of Family Welfare Division and contributors whose efforts have materialized. My special thanks to World Health Organisation (WHO) for technical and financial support. I would also like to thank our External Development Partners for supporting to develop this manual. All the direct and indirect contributors of the past and present deserve appreciation for their support to bring this guideline into shape.

I am sure this manual will provide comprehensive guidance to complete the forms for hospital staff and to further strengthen the MPDSR system.

Director
Family Welfare Division
Department of Health Services

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Acronyms

ANC	Antenatal Care
CDC	Centre for Disease Control and Prevention
DoHS	Department of Health service
EDP	External Development Partner
FWD	Family Welfare Division
GoN	Government of Nepal
ICD	International Classification of Diseases
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MDR	Maternal Death Review
MPDR	Maternal Perinatal Death Review
MPDSR	Maternal Perinatal Death Surveillance and Response
MMMS	Maternal Mortality and Morbidity Survey
MMR	Maternal Mortality Ratio
MoHP	Ministry of Health and Population
NDHS	Nepal Demographic Health Survey
NHSP	Nepal Health Sector Program
NHSSP	Nepal Health Sector Support Program
NMMMS	National Maternal Mortality and Morbidity Study
NMPDRC	National Maternal and Perinatal Death Review Committee
PDR	Perinatal Death Review
PHCC	Primary Health Care Center
RH	Reproductive Health
SSMP	Support to Safe Motherhood Programme
TBAs	Traditional Birth Attendants
UNFPA	United Nation Fund for Population activities
UNICEF	United Nations Children's Fund
VA	Verbal Autopsy
VERS	Vital Events Registration System
VR	Vital Registration
WHO	World Health Organization
WRA	Women of Reproductive Age

Instruction Manual for Maternal and Perinatal Death Review Forms

Introduction

Maternal mortality continues to be one of the major causes of death among women of reproductive age in many developing countries (WHO Factsheet 334 updated September 2013) (1). Globally, an estimated 303,000 women died from pregnancy and complications in 2015, 99% of them in developing countries (2,3), and approximately around 808 women die everyday due to pregnancy related complications (WHO, 2017). Reported maternal mortality underestimates the true magnitude by up to 30% worldwide and by as much as 70% in some countries (4,5). Most of these deaths could be avoided if preventive measures were taken and adequate care was available (UNICEF, 2012) (6).

In Nepal, the MMR decreased substantially from 539 per 100,000 live births in 1996 (NFHS) to 259 per 100,000 live births in 2016 (NDHS 2016). This trend actually shows pregnancy related mortality, which includes deaths of women during pregnancy, childbirth upto 42 days after termination pregnancy due to any cause. The MMR according to NDHS 2016 is 239 per 100,000 live births, which excludes deaths due to accidental and incidental causes. The under-five mortality declined from 139 in 1996 to 39 per 1000 live births in 2016. Infant mortality declined from 93 in 1996 to 32 per 1000 live births in 2016. Neonatal mortality declined from 58 in 1996 to 21 per 1000 live births in 2016, while the Perinatal Mortality Rate declined from 45 in 2006 to 37 per 1,000 pregnancies in 2016 (NDHS 2016).

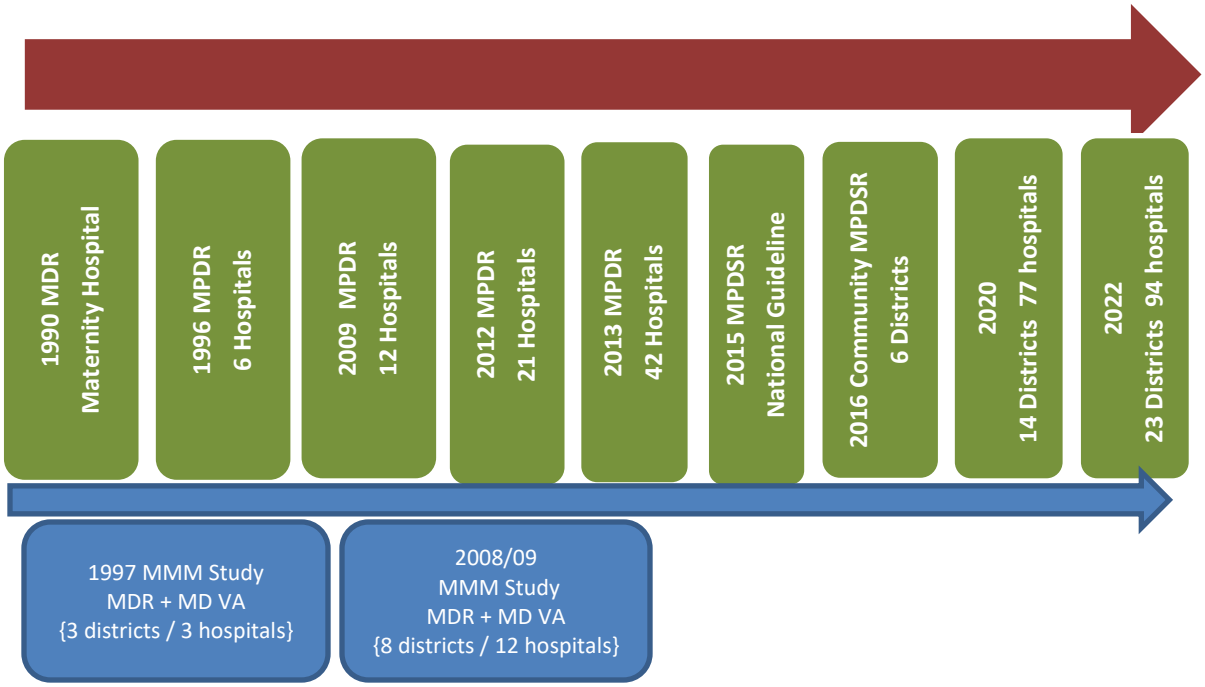
Improvement in maternal health services has been the key factor in reducing the country's MMR and has contributed to the improvement in infant and child survival as well. Due to continued government encouragement through free delivery services and financial incentives for transportation, the percentage of births taking place in health facilities has increased three folds in the past 10 years, from 18 percent in 2006 to 57 per cent in 2016 (NDHS 2016).

A large proportion of maternal and perinatal deaths are still occurring in the hospitals and communities. It is therefore important to get information to better understand what can be done to prevent maternal deaths in addition to having statistics on maternal mortality. Facility and community based maternal death reviews have been a source of information in the past. However, there is an urgent need to systematize the collection and generation of information in this area. These guidelines on maternal death surveillance and response will help to track the path of every woman who dies in a health facility and in community and identify avoidable factors that could improve the quality of care in future. This process will also help to identify key actions required for the health sector and community for improving clinical outcomes.

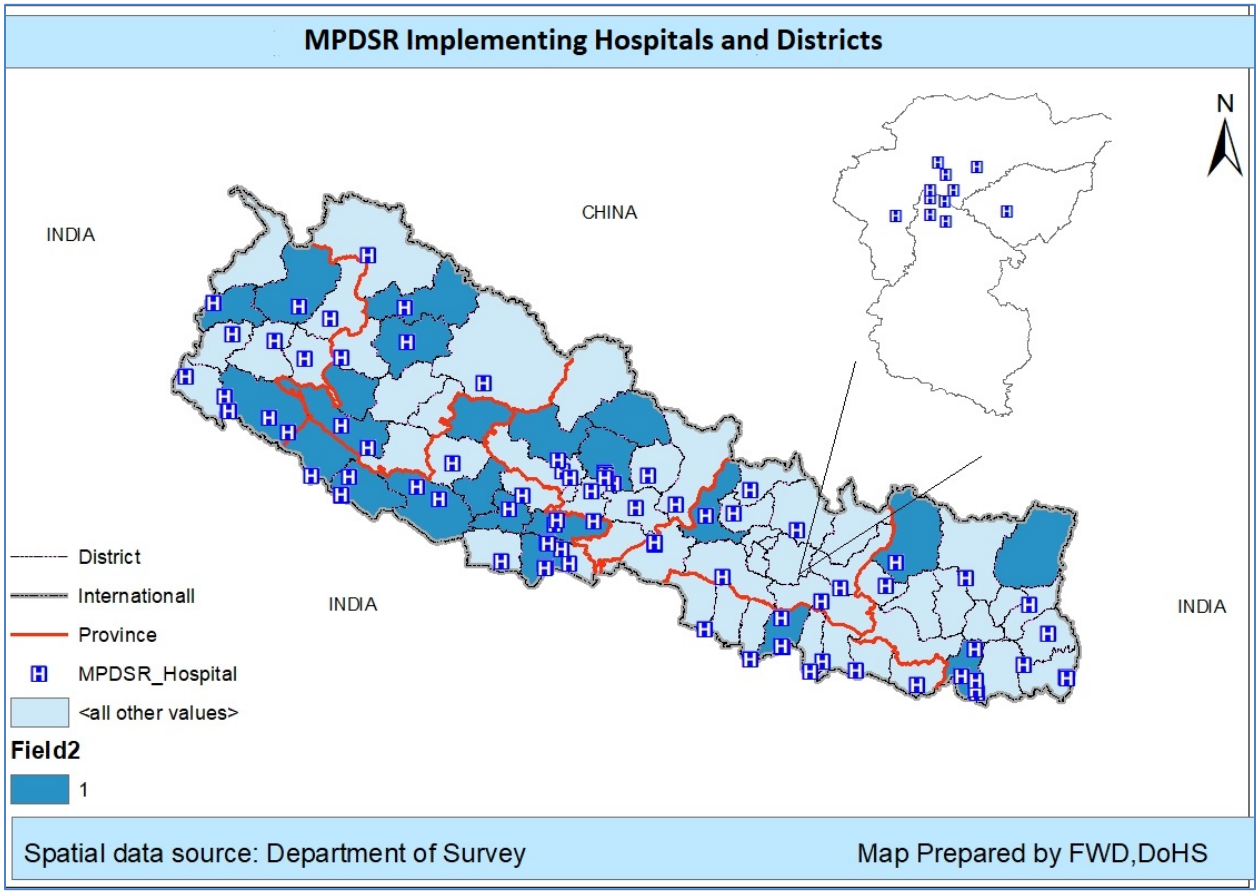
Past Efforts

There have been substantial efforts in the past to review maternal and perinatal deaths since the early 1990s. The figure below depicts the progress in the efforts for maternal and perinatal death review in Nepal.

Move from MDR to MPDSR Implementation



In 2015, with technical assistance from WHO, Government of Nepal (GoN) developed the guidelines for implementing Maternal and Perinatal Death Surveillance and Response (MPDSR) which includes review and response for maternal death in the health facilities and communities as well as perinatal death in the health facilities. As of 2022 MPDSR has been expanded to 94 hospitals and 23 districts.



Maternal Perinatal Death Surveillance and Response (MPDSR)

MPDSR is a form of continuous surveillance process that links health information system and quality improvement processes from local to national levels. It includes routine identification, notification, quantification and determination of causes and avoidance of all maternal and perinatal deaths, as well as the use of this information to respond with actions that will prevent future deaths. Surveillance is instrumental for planning, implementation and evaluation of public health practices. Reduction of preventable maternal mortality is the goal of MPDSR. MPDSR is being implemented by the Family Welfare Division from 2016.

The “R” of MPDSR focuses on the response, the action portion of surveillance. MPDSR underlines the critical need to respond to every maternal and perinatal death, so that the information obtained from that death might be acted upon to prevent future deaths. The notification of every maternal and perinatal death also permits the measurement of maternal mortality ratios and perinatal mortality and the real-time monitoring of trends that provide countries with evidence about the effectiveness of interventions.

MPDSR will build on the existing MDR and MPDR system and help to improve the quality and quantity of information as well as pave way for appropriate multi-sectoral actions. Therefore, implementation of MPDSR depends on the extent to which MDR and MPDR systems have been implemented and the quality of information that is being received from them.

Instruction Manual for Maternal Death Review (MDR) and Perinatal Death Review (PDR) forms

Different tools have been developed for conducting maternal and perinatal death review. MDR and PDR forms are used in the review of maternal and perinatal deaths respectively, in the health facilities. Family Welfare Division has developed this instruction manual, in cooperation with supporting partners for maternal and newborn health, to provide clarity surrounding each question asked in the Forms. This instruction manual has been finalised after consultation with the MPDSR Technical Working Group and is intended for health workers who are involved in the MPDSR process at the hospital-level ie. doctors and nurses. They need to be familiar with the tools to enable them to complete the MDR and PDR forms, and facilitate the review process within the hospital. The contents of this manual are consistent with the national MPDSR guideline. The process of MPDSR in hospital is provided in the annex.

1 Maternal Death Review

1.1 Definition

A ***Maternal death*** is defined as; 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.

Maternal deaths can be further classified into Direct or Indirect:

- **Direct maternal death**: 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.
- **Indirect maternal death**: 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.

A ***maternal death review*** is a qualitative in-depth investigation of the cause and circumstances surrounding maternal death occurring in a health facility. It is particularly concerned with identifying the combination of factors at the facility and in the community that contributed to the death and how deaths can be prevented in future.

The maternal death review must be conducted by the Hospital MPDSR Committee where the process is institutionalised and should be carried out continuously i.e. every time a maternal death occurs. It should be noted that each maternal death may be unique and provides useful lessons, therefore it is important to look for common and avoidable factors across several deaths. This may indicate a change in services or examine the problem in management. It can be used as a mechanism for assessing and improving the quality of care and promoting discussion about the

practice for identifying ways to improve the care at the hospital as well as in the community level.

Although the questionnaire on Maternal Death Review Form looks to be clear by the structure of the questionnaire itself, yet in order to have uniformity in filling the questionnaire, this simple instruction manual has been developed. The Maternal Death Review (MDR) form has ten sections that need to be completed by the responsible person of the hospital where the death occurred.

1.2 Aim

This part of the instruction manual has been prepared in order to guide the person completing the MDR form. It is hoped that this section is self-explanatory. If there is/are any issues in filling the MDR form, please contact Family Welfare Division (FWD), DoHS, Teku, Kathmandu, Nepal.

1.3 Who should complete the MDR form:

The service provider who attended the deceased woman at the time of her death must complete the Maternal Death Review (MDR) Form. The form should be completed by a doctor (preferably) or by a nurse involved in management of the case. The assigned person may be the doctor who provided service to the deceased woman at the time of death. If in case the doctor was not present at the time of death, then the nursing staff should fill the MDR form.

The MDR form **must be completed within 24 hours of occurrence of a maternal death** in a health facility. The person completing the form must participate in the **MPDSR review meeting which should be conducted within 72 hours following the woman's death**. If all information is not available in the hospital record of the woman, the family may also be contacted to get a detailed information required to complete the form.

1.4 General Instructions for filling the MDR form:

1. Choose only one answer unless multiple answers are indicated.
2. Use Nepali ***(Bikram Sambat)*** dates while filling the date column.
   Date of Review: Please note the day in two **"Day"** boxes, note the month in the two **"Month"** boxes and the year in the four **"Year"** boxes. For example, if the date is Bhadra 7, 2077, then the box should be filled as:

Day		Month		Year			
0	2	0	5	2	0	7	7

   This means that the year is 2077, month is 05 corresponding to the Nepali calendar month of Bhadra, and the day is 2nd day. Please note that the year is Bikram Sambat, Month is Nepali month, and the day is Nepali (BS) day.

3. The time should be completed in 12 hour format. For example: if the time is **04:15 pm** then the box should be filled as below and AM / PM should be selected:

Hours		Minutes	
0	4	1	5

AM / (PM)

4. If the digit is single, then "0" should be filled in the first box and the single digit in the next box.
5. Check the right option by circling the option clearly.
6. In case a mistake needs to be corrected, the mistake should be clearly cut with double line and the right option should be circled.

301	Did she receive any antenatal care during this pregnancy?	Yes	1
		No *(Skip to 303)*	2
		Don't know *(Skip to 303)*	98

7. Use block letters for writing any information.
8. In all the fields requiring codes, the codes need not be filled by the person filling the form, the codes should be filled by the Medical Recorder.

1.5 How to complete the Maternal Death Review Form correctly

Instructions: This section provides background on the completion of the form and the timing at which each section must be completed.

LOCALITY WHERE DEATH OCCURRED

The section requires name of the hospital and the district where the hospital is located.

District name: Write clearly the name of the District where the hospital is located. The district code is to be entered in the boxes given.

Local level: Write clearly the name of Local level where the hospital is located. The local level code is to be entered in the boxes given.

Name of facility: Write clearly the name of the hospital where maternal death occurred.

SECTION 1: DETAILS OF DECEASED WOMAN

This section asks for detail identification of the deceased woman including, her age, ethnicity and obstetric history. The section further seeks information about the date and time of death in terms of pregnancy and labour.

Q101 **Full Name:** Write clearly the full name and surname of the deceased woman in block letters.

Q101a Hospital ID: Write the deceased woman's hospital ID clearly.

Q102 Age at death (Completed years): Write the deceased woman's age in two digits in the two boxes. Age should be written in **completed** years. For example, if a woman is 35 years and 11 months, that means her age is 35 years completed and 36 years running, in this case the age of the woman should be 35 years i.e.

3	5

Q103 Current address: This question asks about the usual place of residence where the deceased woman was residing at the time of death. This refers to the place the deceased woman lived for at least six months in last one year before she died.

District: Write the name and code of District of residence of the deceased woman. It is the responsibility of the Medical Recorder to ensure that codes are entered.

Local level: Write the name and code of the Local level. It is the responsibility of the Medical Recorder to ensure that codes are entered.

Ward number: Enter the ward number. Eg: If ward no. 4 enter as follows

0	4

Contact number: Enter the contact number of the person / family member close to the deceased woman. If none of the family members have a contact number, contact number of neighbour can be noted**.**

Q104 Ethnicity: Write the Ethnicity of the deceased woman in the given space. List of ethnicities is provided in the annex for reference. '0' should be entered in the first box and the code in the last box. It is the responsibility of the Medical Recorder to ensure that codes are entered. If the ethnicity is not known, enter "98" in the given boxes.

Q105 Gravida: In this field, write the total number of pregnancies (including the current one) the woman has ever had, regardless of duration or outcome (i.e still birth, miscarriage, abortion etc.) of the pregnancies.

Q106 Parity: In this field, write the number of times a woman has given birth to a fetus, with a gestational age of 28 weeks or more **OR** weighing atleast 1000 gms or more, regardless of whether the child was born alive or was stillborn.

Q107 Date of death (Nepali date): Write the date at the time of death of the woman using Nepali calendar. Eg. If the woman died on 2nd Bhadra 2077 it should be recorded as:

0	2	0	5	2	0	7	7
Day		Month		Year			

Q108 Time of death (12 hour format): Write the time of death of the woman in 12 hour format. For example, if the woman died on the 2nd day of Bhadra, 2077, at 6:30 pm the time format should be 06 hours 30 minutes and AM / PM should be selected.

0	6	3	0
Hour		Minute	

AM (PM)

Q109 Period of Death: This question seeks to get information on the obstetric stage of the woman at the time of death. Please circle only **ONE** most of the six options that have been listed. If the woman was in Antenatal period - circle 1 and DO NOT ask section 4; for Intrapartum period – circle 2, Post-partum period upto 24 hours after delivery – circle 3, Post-partum period 24-48 hours after delivery – circle 4, Post-partum period after 48 hours of delivery – circle 5 and Abortion related (<28 weeks of pregnancy) – circle 6.

Q110 Brought dead: If the woman had already died at the time of arrival at the hospital (Yes-option 1), circle 1. For "Brought Dead" cases, try to get as much information as possible, eg: from where she was brought, her medical history, complications/ management done during pregnancy/ child birth/ postpartum period.

SECTION 2: ADMISSION RELATED INFORMATION

(AT INSTITUTION WHERE DEATH OCCURRED)

Section Two: This section seeks information on date and time of admission, the vital signs at the time of admission of the woman and the provisional diagnosis.

Q201 Date of admission to this facility (Nepali date): Enter the date the deceased woman was admitted in the hospital using Nepali calendar (B.S). For example, if a woman was admitted on the 2nd day of Bhadra, 2077, the recorded date would be

0	2	0	5	2	0	7	7
Day		Month		Year			

Q202 Time of admission (12 hour format): Mention the hour and minutes of the time of admission of the woman in the hospital, in the appropriate boxes in 12- hour format. For example, if a woman was admitted at 4:15am, this should be recorded as 04 hours 15 minutes and AM / PM should be selected.

0	4	1	5
Hour		Minute	

(AM) / PM

Q203 **Period on admission:** This field seeks information about the state of pregnancy at the time of admission of the deceased woman. One of the six options need to be circled based on the woman's obstetric state at the time of admission. Select the appropriate option.

Q203a **If the patient was referred, where was she referred from:** In case of referred cases, write the name of the health facility from where the patient was referred.

Q203b **Date of referral:** If the patient was a referred case, enter the NEPALI date she was referred from the referring health facility.

Eg. The patient could have been referred on Bhadra 1, 2077 but reached your facility only on Bhadra 3 2077. This will help to capture the delay.

Q203c **What time was she referred:** Mention the time **(in 12 hour format)** the deceased woman was referred from the referring facility mentioned in Q203a. Select whether it was AM / PM. This will also help to capture the delay.

Q204 **Condition/Vital Signs at admission:** This question seeks information on condition of the deceased woman at the time of admission. It requires to record the vital signs such as **Pulse** (beats per minute- bpm), **temperature** (degrees in Fahrenheit), Systolic **Blood pressure (**BP- sys**)** and Diastolic **(**BP- dias**)** recorded in separate boxes in millimetres of mercury (mm of Hg) and **Respiration rate** (breaths per minutes). Please record all the information in the allocated boxes.

Q205 **Diagnosis on admission (Provisional Diagnosis):** This question relates with the provisional diagnosis of the deceased woman at the time of admission at the hospital. Specify the provisional diagnosis clearly in BLOCK letters. If no provisional diagnosis was formed at the time of admission write "NONE" in the space provided.

SECTION 3: CURRENT PREGNANCY

This section describes the Antenatal care the woman had received and complications, if any, she had experienced during this pregnancy.

Q301 **Antenatal care during this pregnancy:** This section asks about the antenatal check-ups the deceased woman had during the current pregnancy. Select the correct option based on whether the woman had ANC visits and if she had ANC visits, select the number of visits and whether she had 8 visits as per national protocol.

Q302 **If she had ANC visits, when did she have her first ANC:** If the woman had antenatal check-ups, please enter the completed month **OR** weeks **(not both)** at which she had attended the first antenatal check-up in the boxes given. If the month or weeks is not known, circle "98".

Q302a When did she have her last ANC: If the woman had antenatal check-ups, ask when she had her last ANC visit. Please enter the completed month **OR** weeks **(not both)** at which she had her last ANC in the boxes given. If the month or weeks is not known, circle "98".

Q303 Any complications during this pregnancy: This question refers to the clinical history pertaining to the woman's present pregnancy. Specify if the deceased woman had any complication during this pregnancy, in BLOCK letters. There could be multiple complications, specify all the complications she had. If she did not have any complication, write "NONE" in the space provided.

SECTION 4: DELIVERY AND PUERPERIUM

This section collects information on delivery and puerperium, of the deceased woman. It mainly deals with the timing/onset and duration of labour, mode of delivery and place of delivery. Other questions relate to delivery complications and outcomes.

Q401 Date of delivery (Nepali Date): Enter the date the woman had delivered in the day, month, and year boxes given. All date fields must be recorded using Nepali calendar. For example, if the woman delivered on the 2nd day of Bhadra, 2077, the recorded date would be

0	2	0	5	2	0	7	7
Day		Month		Year			

Even if the deceased woman had delivered outside the hospital / other hospital, the date of delivery should be mentioned.

Q402 Time of delivery (12 hr format): Record the time the woman had delivered in 12-hour format. For example, if the woman delivered at 4:15pm, this should be recorded as 16 hours 15 minutes and AM / PM should be selected.

0	4	1	5
Hour		Minute	

AM (**PM**)

Even if the woman had delivered outside the hospital, the time of delivery should be mentioned as accurately as possible.

Q402a Gestational age at delivery: Write the number of weeks at which delivery occurred. If exact week is not known but there are documents available (early USG or ANC card) then provide the estimated weeks. If gestational age at delivery is not known, then enter "98".

Q403 Where did she deliver: This question seeks information about the place where the deceased woman had delivered her baby. If she had delivered in the facility where she died, select "This facility-1", if she had delivered at a facility other than the facility where

she had died, select "Other facility-2". If the woman had delivered on the way to health facility, ask whether she had delivered on the way from one health facility to another or from home to health facility and select the appropriate response (3 or 4).If she had delivered at her home/someone else's home, select "Home-5". For options "3, 4 and 5" go to question 405 skip questions (403a and 404).

If the woman had retained placenta and the placenta was delivered in another health facility, then the facility where the baby was delivered should be chosen.

If the woman had multiple pregnancies and delivered the babies in different sites then both the sites should be checked and this should be mentioned clearly in Section 6.

Q403a Type of facility: This question seeks information about the type of facility where the woman gave birth. Circle only **ONE** option.

Public Hospital: Option "1". Includes Government hospitals of all levels.
Private / NGO / Missionary Hospital: Option "2". Includes all private hospitals, nursing homes, NGOs, Missionary hospitals.
Medical college/Teaching hospital: Option "3": Includes Government as well as private medical colleges/teaching hospitals.
If she had given birth in any facility other than the ones mentioned above, select Option "96" and specify the facility (name of the facility also), and if the place of delivery is Not Known, select Option "98".

Q404 Is this facility BC / BEONC / CEONC: In this question, select whether the facility, where the deceased woman had given birth, was a Birthing centre, BEONC or CEONC.

Birthing centre: Health facility that has delivery facilities conducted by SBA.

BEONC: For a facility to be a BEONC site, it should provide the following services:

a. Conduct assisted (vacuum and forceps) delivery
b. Administration of IV Antibiotics
c. Administration of IV uterotonics
d. Administration of IV Anticonvulsants
e. Provide MVA services
f. Removal of retained product of conception
g. Manual removal of placenta

CEONC: For a facility to be a BEONC site, it should provide the following services:

All seven functions of BEONC (a-g), and
h. Provision of Blood transfusion
i. Provision of Caesarean Section

Q405 Who was the main delivery attendant: This question refers to the **main** person who assisted the woman's delivery. **DO NOT** include people who did not actually assist in the delivery process. Only **ONE** answer should be provided for this question, so although there may be more than one delivery attendant, **only the MAIN person** who attended the

delivery should be considered. If the delivery was attended by health care provider other than the ones listed select Options "3" and specify, and if the delivery was attended by other people, select "96" and specify the main attendant.

Doctor includes obstetrician/gynaecologists, MDGP, Medical Officers etc with or without SBA training.

Q406 Was **Partograph used during delivery:** If partograph was used during delivery Circle "Yes", code "1", and if partograph was not used circle "No", code "2". If it is not known whether partograph was used or not during delivery, circle code "98".

Q407 **Was the pregnancy single or multiple:** If the pregnancy was single select "1" and if multiple select "2".

Q408 **What was the total duration of labor:** This question asks about the total duration of labor, from onset till delivery. Circle the appropriate response from 1 to 4, and if duration of labor is not known, select "98". If caesarean section was performed and the deceased woman was not in labor, select the option "Not in labor-1".

Q409 **Presentation of fetus:** This question refers to the presentation of the baby. Circle option "1" if the presentation was **Cephalic** (including vertex, face and brow presentation). Circle option "2" if the presentation was **Breech** (including complete and incomplete/footling breech). Circle option "3" if the presentation was **Shoulder** (including hand presentation/prolapse). If the presentation was **Other** than the ones listed, circle option "96" and specify the presentation (this includes Cord prolapse).

Q410 **What was the mode of delivery:** Please circle the code corresponding to the mode of delivery. If the mode of delivery was '**Vaginal'** then circle 1 and go straight to Q413 (Skip Q 411 and Q 412), this includes vaginal delivery with induction / augmentation / episiotomy. If the mode of delivery was **Assisted vaginal** then circle 2, for **Instrumental delivery** circle 3, for **Caesarean section** circle 4 and for modes O**ther** than the ones listed circle 96 and specify (including **Destructive operation**s like: embryotomy, cleidotomy, craniotomy etc), then continue to Q411.

Q411 **What was the reason for Assisted / Instrumental / CS delivery:** This question is related to Q410 and seeks to know the cause/indication for deliveries other than 'Normal Vaginal Delivery' (Q410= 2 **OR** 3 **OR** 4 **OR** 5). If the reason for mode of delivery selected in Q410 was **'Maternal'** cause, circle 1, if it was '**Fetal'** cause then circle 2 and if the reason is not known, **'Don't know'** circle 98.

Q412 **Was the Caesarean section emergency or elective:** This question should be completed **ONLY** if the woman had undergone caesarean section in Q410 (Q410=4). If the indication for caesarean section was Emergency' circle '1', if it was an 'Elective' procedure, circle '2.' If the indication is not known, circle '98'.

Q413 Any apparent complications during labor or delivery: This question provides information about the occurrence of any complication during labour or delivery. All the complications suffered by the deceased woman should be mentioned clearly in BLOCK letters.

Q414 Outcome of this pregnancy: This question refers to the outcome of the current pregnancy. Circle the most appropriate option. Since MPDSR captures maternal death upto 42 days after delivery / termination of pregnancy, it can also capture infant deaths upto 42 days.

Q415 Any apparent complications after delivery: This question enquires about the occurrence of any complication/s after delivery. All the complications that had occurred should be mentioned clearly in BLOCK letters.

SECTION 5: INTERVENTIONS

This section covers the intervention/procedures the woman was provided before her death.

Q501 Emergency Interventions Administered: This question is related to the intervention(s) provided to the deceased woman in the hospital. For each obstetric period i.e. Antenatal, Intrapartum and Postpartum, nine possible interventions (Q501a – 501i) have been listed. **Each intervention must be answered** by selecting either of these three options: Yes-1, No-2 or DK-98 for each obstetric period **(Antenatal, Intrapartum and Postpartum). For example**: if a woman received Blood Transfusion (Q501a) during the Antenatal period, please circle '1' in Q501a under the column named 'Antenatal'. If the same woman then did not receive Blood Transfusion during the Intrapartum or Postpartum periods, then circle '2' under the columns labelled 'Intrapartum' and 'Postpartum.' If it is Not Known whether the woman received blood transfusion during any or all of the obstetric periods, circle '98' under the respective column. This logic should be applied to the remaining interventions listed in this question, remembering that each sub-question must be completed, and no column should be left blank. If interventions other than those listed here were provided / done, that needs to be specified in 'Others' under the specific obstetric period (Antenatal, Intrapartum and Postpartum)**.**

SECTION 6: Medical Cause of Death Assignment

This section is very important for the review. Write in brief, the details of what happened to the woman before, at and after the admission, including the interventions done and the sequence of events that finally led to death. Write in BLOCK letters.

Part I: Case narrative: [Gravida, Parity, ANC/Intra/PNC history, sequence of events, treatment, time line of events]. This section is further divided into two sub- headings.

Any complications/significant findings during pregnancy: A summary should be written giving the history of what happened PRIOR to (before) admission. Significant events/ complications from the onset on pregnancy should be highlighted and should be written in the sequence that occurred.

This should include the relevant history of the woman since before arriving to the health facility such as; if ANC was done or not, if done then how many times and where, what was prescribed to her, since when had she had a health problem, how long did it take for her to arrive to the health facility, what were the other co-existing conditions etc. so that it is possible to identify the first and second delays in seeking health services.

Reason for hospital admission: Mention the complaints/conditions/reason that led the deceased woman to visit the health facility and get admitted.

Part II: History of illness prior to death. This section is further divided into three sub-headings.

Findings during admission: A summary should be written giving the history of what happened DURING admission. Significant findings, vitals, clinical findings etc should be mentioned clearly.

Events during hospital stay: Significant events should be highlighted and written in the sequence they occurred. All the interventions, investigations and management done during the entire period of her stay in hospital should be mentioned in sequential order. and the interventions that were given to her before her death. It should also be recorded if she did not receive services such as oxygen, blood transfusion, or interventions such as timely decision for LSCS, and the reason why those services were not provided.

Events that occurred before death: All the events that occurred just before death and what all interventions/ management were done has to be mentioned clearly in sequential order.

Contributing factors (Delays): This section deals with factors responsible for the death of the woman, using the "Three Delays" Framework. Multiple response is possible.

First delay (Delay 1): This question asks about the Individual/ family level factors that led to the woman's death by causing a delay in seeking health care on time. List all the possible delays that occurred.

Delay 1: Delay in deciding to seek care	Unaware of the warning signs
	Lack of decision to go to health facility
	Did not know where to go to seek health care
	Reliant on traditional practice / medicine
	Had no one to take care of other children
	Financial constraints
	Others (Specify) _____

Second delay (Delay 2): This question asks about factors that led to the woman's death by causing a delay in reaching health care facility on time. List all the possible delays that occurred.

Delay 2: Delay in reaching health care facility	Unavailability of transport
	Transport too expensive
	No facility within reasonable distance
	Lack of road access
	Others (Specify) _____

Third delay (Delay 3): This question asks about factors relating to health facility/management/intervention that have contributed to death of the woman. This includes List all the possible delays that occurred.

Delay 3: Delay in receiving appropriate treatment / management	Delayed arrival from referring facility
	Delay in providing appropriate intervention
	Lack of appropriate intervention
	Lack of medicine, equipment and supplies
	Absence of trained human resource
	Lack of inter- department communication
	Poor documentation
	Others (Specify)_____
Factors relating to referral system	Lack of effective communication from referring facility
	Delayed transfer of patients to appropriate treatment centre
	Unable to refer due to:
	- Financial constraints
	- Lack of transportation
	- Patient party's denial for referral
	- Others (Specify)_____

<u>Cause of Death Assignment</u>

This section provides information on cause of death and seeks to find the Primary, Contributory and Final cause of death of the woman. Please note that there can be

<u>Only ONE Primary cause of death</u>

<u>MULTIPLE contributory causes of death</u>

<u>Only ONE Final cause of death</u>

Part I:

- **Final/ Immediate cause of death:** This question refers to the terminal disease or event before death and is classified as the **Immediate or Final cause of death**. Final cause is the disease or condition directly leading to death. There can be only **<u>One final cause of death</u>.** It should be noted that the final cause of death is to be provided by the attending doctor. In case there was no doctor attending the case, this should be done by the attending nurse with guidance from the MPDSR Committee at the hospital.

- **Antecedent causes:** Includes morbid conditions that lead to the final / immediate cause of death. Write the Primary / Underlying condition last (lower most part) then state the sequence of events leading to the final cause of death.
  Primary / Underlying cause of death: Primary or Underlying cause is the initiating condition that leads to the death of the woman. The Primary Cause of Death is defined as, "The disease or injury which initiated the train of events leading directly to death or the circumstances of the accident or violence which produces the fatal injury." There can only be **ONE primary cause of death**. This should be stated lowermost in the sequence of events leading to death

  It should be noted that the cause of death is to be provided by the attending doctor. In case there was no doctor attending the case, this should be done by the attending nurse with guidance from the MPDSR Committee at the hospital.

Part II:

- **Contributing factors:** This includes conditions that may have existed prior to development of the underlying cause of death or conditions that may have developed during the chain of events leading to death and which, by its nature, contributed to the death. These are conditions that may have contributed to or may be associated with death but should not to be reported as a sole condition selected as the underlying cause of death. Contributing causes may predispose women to death, either as a pre-existing condition or as a risk factor.

  There may also be contributory or antecedent factors that have contributed to the death but do not form part of the sequence of events leading to death of the woman. **There may not be a Contributory Cause of Death and there can also be multiple contributory causes of death.**

  Diseases that are present but are not linked to the chain of events that lead to the death are classified as contributory causes of death. It should be noted that the contributory cause of death is to be provided by the attending doctor. In case there was no doctor attending the case, this should be done by the attending nurse with guidance from the MPDSR Committee at the hospital.
  .

It is important to note that:

The ***Primary*** **(Underlying)** obstetric cause of death will help identify **HOW** a maternal death can be prevented.

The ***Final*** **and** ***Contributory*** cause of death will give us an **indication of the health system factors** that are required in terms of saving lives. They also indicate where management protocols and resources are lacking.

The following example of sequence of events illustrates the underlying, immediate and antecedent causes of death:

Antepartum haemorrhage
Caused by
Abruptio Placenta
Caused by

Pre-eclampsia
Also had
Diabetes

In this example the patient died of severe Antepartum haemorrhage caused by Abruptio placenta that was caused by Pre-eclampsia. Therefore,

Pre-eclampsia is the Primary / Underlying cause of death and

Abruptio placenta was the Antecedent cause and

Antepartum haemorrhage was the Final / Immediate cause of death.

As diabetes is not related to the chain of events that lead to the death, Diabetes is a Contributory cause of death

In the last part of section 6, there is a check question to select whether the deceases woman was;

- **Pregnant at the time of death**
- **Was in Labour at the time of death**
- **Has delivered within 42 days, at the time of death**
- **Has an abortion within 42 days, at the time of death**

Put a "√" mark in the appropriate option.

SECTION 7: ICD-MM CLASSIFICATION

(To be done/reviewed by the Hospital MPDSR Committee)

Based on the Primary / Underlying cause of death, the hospital MPDSR committee should discuss and classify every maternal death according to the International Classification of Diseases- Maternal Mortality Classification, based on which maternal mortality has been classified into eight categories, ICD-MM1 to ICD-MM 9. **Only ONE option** should be selected. Refer to ICD-MM job aid (Annex) to classify maternal deaths.
There are eight possible classifications under ICD-MM.

ICD-MM 1: Pregnancy with abortive complications: Abortion, Miscarriage, Missed abortion, Failed abortion, Ectopic pregnancy, Molar pregnancy, etc.

ICD-MM 2: Hypertensive disorders of pregnancy: Pre-existing HTN with superimposed proteinuria, Gestational Oedema / Proteinuria without HTN, Pregnancy Induced Hypertension, Pre-eclampsia, Eclampsia, HELLP syndrome, etc

ICD-MM 3: Obstetric Hemorrhage: APH, PPH, Placental disorders, Abruptio placenta, Uterine rupture, Cervical laceration, PPH, etc.

ICD-MM 4: Pregnancy related infections: Infections in pregnancy of Genitourinary tract / amniotic sac and membranes, Puerperal sepsis, Surgical wound infection, UTI following delivery, Infection of nipple/ breast abscess/ mastitis associated with childbirth.

ICD-MM 5: Other obstetric complications: Antenatal and postpartum suicide, Hyperemesis gravidarum with metabolic disturbance, Venous complications in pregnancy, Diabetes in pregnancy, Liver disorders in pregnancy, Obstetric injury to pelvic organs, Obstetric damage to pelvic joints and ligaments, Retained placenta and membranes without hemorrhage, Embolism, Complications of pregnancy labor and puerperium not included in ICD-MM 1 to ICD-MM 4.

ICD-MM 6: Unanticipated complications of management: Severe adverse effects and other unanticipated complications of medical and surgical care during pregnancy, childbirth or puerperium. Complications of anesthesia, etc.

ICD-MM 7: Non-Obstetric complications: Cardiac disease (including pre-existing hypertension), Pre-existing Diabetes mellitus, Endocrine conditions, GI tract conditions, CNS conditions, Respiratory conditions, Genitourinary conditions, Autoimmune disorders, Skeletal disorders, Psychiatric disorders, Neoplasms, Anemia Infection not directly due to pregnancy-parasitic diseases, TB, Syphilis, Viral and Protozoal infections, COVID-19, etc.

ICD-MM 8: Unknown, Undetermined cause: Underlying cause of death not known or not determined.

ICD-MM 9: Coincidental causes: Includes accidents, sake/insect bites, poisoning, homicide, etc.

Sections 8 and beyond is to be completed at the MPDSR Committee meeting for the particular maternal death within 72 hours of occurrence of death.

SECTION 8: RESPONSE PLAN IN THE HOSPITAL

(To be done by hospital MPDSR committee)

This section is to be filled by the MPDSR committee after the committee has reviewed the form filled till Section 7. This section requires the MPDSR committee to critically examine the care provision in the hospital. The MPDSR Committee should complete this part as freely and honestly as possible. In addition, the person completing this form must rest assured that no repercussions will occur from completing this form. Improvement in the maternal healthcare system can only come through by critically examining the care provided for each individual case.

Based on the findings the MPDSR Committee needs to identify the avoidable factors, missed opportunities and sub-standard care and develop Action Plan, consisting of Immediate, Mid-term, and Long-term actions, to prevent maternal deaths in future. The committee also must identify and designate a person responsible for implementing the 'Actions' formulated, the deadline (mention the date) till when the 'action should be completed, and who will monitor the

action. This Action Plan must then be shared with the Provincial health Directorate and Health Office. The request for necessary action at the community level or another facility must be sent formally through local level (health office).

Attendance in MPDSR Committee Meeting: The names of attendees of the MPDSR Committee meeting for this particular maternal death needs to be listed along with their designation, institution/department, contact number and signature.

The date (Nepali Date) of form filled by the attending staff must be entered in the Day/Month/Year format in the given boxes.

The date (Nepali Date) of review by facility MPDSR Committee must be entered in the Day/Month/Year format in the given boxes.

Staff who completed this review form: The full name, designation, phone number and signature of the staff who competed the form must be provided. This will help to follow-up if more information is required.

Once the form is complete with action plans, it should be entered into the web-based entry system as soon as possible for review and approval from the center.

Thank You!!!

Perinatal Death Review Form

Definition

Concepts and definition of perinatal death

Perinatal mortality in a hospital or in a country indicates the quality of services provided to the women in the antenatal period, at the time of birth, and after the child is born in the first seven days after delivery for preventable perinatal morbidities and mortalities. The Perinatal Mortality Rate (PMR) is obtained by summing all still births from 28 weeks (≥28 weeks) of gestation **OR** foetal weight of 1000 gms or more **AND** early neonatal deaths (ENND) till first seven days of life.

Perinatal Period

As per WHO recommendation, it is the period from 28 weeks of gestation (≥28 weeks) to first seven days of life. In other words, perinatal mortality includes a portion of infant mortality (first seven days).

Perinatal Death

Perinatal death is a death occurring in the perinatal period. It includes late foetal deaths and early neonatal deaths of those ≥28 weeks gestation **OR** weighing 1000grams and above (>=1000grams).

If the LMP or gestational week is confirmed, consider weeks of gestation.

If gestational age is not sure / known, consider the birth weight of the fetus, and

Iif birth weight is not known then consider length of the fetus to classify as perinatal death.

Still Birth

Still birth is defined as a baby born with no signs of life at the time of birth, with ≥28 weeks of gestation **OR** weighing atleast 1000 gms (≥ 1000 gms).

Early Neonatal Death

Early neonatal death is the death of an infant within first seven days of life.

Perinatal Mortality Rate (PMR)

Perinatal mortality rate reflects an adverse outcome for pregnancy of 28 weeks gestation and above. The perinatal mortality rate is derived by summing all still births from 28 weeks and above and deaths of newborns within the first 7 days of life and dividing by the sum of all births (still births and live births).

$$\frac{\text{Still births + Early neonatal deaths}}{\text{All still births + All live births}} = \frac{\text{Perinatal deaths}}{\text{Total births}}$$

Aim

The aim of this section is to help the person to complete the Perinatal Death Review (PDR) form. It is hoped that the following section is self-explanatory. If there is/are any problems in filling the PDR form, please contact Family Welfare Division (FWD).

PDR should be filled for all still births and early neonatal deaths that occur in a given month. Monthly Perinatal death review is to be conducted by the MPDSR committee. Before conducting the review meeting, PDR summary form should be filled by the Medical Recorder till No. 20: Avoidable factors according to three delay model. The committee should review the perinatal deaths and complete the PDR Summary form with action plans. **Only the PDR summary form needs to be entered in the web-based entry system.**

Although the questions on PDR Form are clear and self-explanatory, in order to have uniformity in filling the questionnaire, this simple instruction manual has been developed. The PDR form contains different sections which need to be completed by the assigned health service provider of the hospital where the death occurred.

Who should complete this form:

The service provider who attended the deceased baby and was involved in providing service to the deceased at the time of death should complete the PDR Form. If in case the doctor was not present at the time of death, then the attending nursing staff should fill the PDR form.

The PDR form must be completed **within 72 hours of occurrence of a perinatal death** occurring in a health facility. The person completing the form must participate in the **MPDSR review meeting which should be conducted every month.**

Note: The MPDSR committee meeting should be conducted atleast once every month even if there is no maternal or perinatal death.

General Instructions for filling the PDR form:

1. Choose only one answer for each question unless multiple answers are indicated.
2. Use Nepali (Bikram Sambat) dates while filling the date boxes.
   Date of Review: Please note the day in two **"Day"** boxes, note the month in the two **"Month"** boxes and the year in the four **"Year"** boxes. For example, if the date is Asoj 17, 2077, then the box should be filled as:

1	7	0	6	2	0	7	7
Day		Month		Year			

   This means that the year is 2077, month is 06 corresponding to the Nepali calendar month of Mangsir, and the day is 17th day.

3. The time should be completed in 12 hours format. For example, if the time is 04:15 am then the box should be filled as:

0	4	1	5
Hours		Minutes	

(AM) / PM

4. If the digit is single, then "0" should be filled in the first box and the single digit in the next box. AM / PM should be selected.
   Eg: If the date is 7 Mangsir 2077

0	7	0	8	2	0	7	7
Day		Month		Year			

5. Check the right option by circling the option clearly.
6. In case of need of correction, the mistake should be clearly cut with double line and the right option should be circled. (example to be added)
7. Use block letters for writing any information.

301	Did she receive any antenatal care during this pregnancy?	Yes	1
		No ***(Skip to 303)***	2
		Don't know ***(Skip to 303)***	98

8. In all the fields requiring codes, the codes need not be filled by the person filling the form, the codes should be filled by the Medical Recorder.

How to complete the Perinatal Death Review Form correctly

District name: Write clearly the name of the district where the hospital is located. The code of the district is to be entered by the Medical Recorder.

Local level: Write clearly the name of the Local level where the hospital is located

Name of facility: Write clearly the name of the hospital where the perinatal death occurred.

SECTION 1: DETAILS OF MOTHER OF THE DECEASED

Q101 Name of the mother: Write full name and surname of the deceased child's mother in the space provided.

Q101a Hospital ID: Hospital ID number of the mother (if the baby was delivered in this hospital) is to be provided in the boxes provided. If the mother was not admitted in the hospital and baby was admitted, write the baby's hospital ID and specify that it is baby's ID.

Q102 Current address: This question seeks information about the residential address of the mother of the deceased child. This refers to the usual place of residence (lived for at least 6 months in last one year) of the mother. In all the fields mentioned below, the codes need not be filled by the person filling the PDR form, the codes for every field should be filled by the Medical Recorder.

District: In this field, write the name of the District of usual place of residence (lived for at least 6 months in last one year). It is the responsibility of the Medical Recorder to ensure that codes are entered.

Local level: In this field, write the name of the Local level. It is the responsibility of the Medical Recorder to ensure that codes are entered.

Ward number: Write the ward number in the boxes provided.

Contact Number: Write the contact number of mother or father. If they do not have a mobile, then record the number of the person who can be contacted. This is essential for follow-up if more information is required.

Q103 Date of admission (Nepali date): Enter the date the mother was admitted in the hospital, if the baby was delivered in the particular hospital. If the baby was delivered elsewhere and admitted in the early neonatal period, enter the date of admission of the baby. Please complete the day, month, and year field using the boxes given. All dates must be recorded using Nepali calendar (B.S).

Q104 Time of admission (12 hour format): Mention the hour and minutes of the time of admission of the mother in the hospital, in the appropriate boxes, if the baby was delivered in the particular hospital. If the baby was delivered elsewhere and admitted in the early neonatal period, enter the time of admission of the baby. This must be recorded in 12- hour format and AM / PM should be selected.

Q105 Ethnicity: Specify the caste and ethnicity of the mother in the space provided. Refer to Annex for detailed ethnicity codes.

Q106 Maternal age in completed years: Write the age of the mother of the deceased child in two digits in the two code boxes provided. Age should be written in **completed** years. For example, if the mother is 35 years and 11 months, the age of the mother would be 35 years i.e.

3	5

Write '98' in the box if the age of the mother is not known.

Q107 Gravida: In this field, write the total number of pregnancies (including current) the mother has ever had, regardless of duration or outcome (i.e. still birth, miscarriage etc.). Write '98' in the box if the gravida is not known.

Q108 Parity: Parity is the number of times a woman has given birth to a foetus of gestational age 28 weeks or more OR weighing 1000 gms or more, regardless of whether the child was born alive or was stillborn. Write '98' in the box if the parity is not known.

Q109 & 110 Did she receive any ANC during this pregnancy. If yes, did she have her ANC as per National protocol: These two questions ask whether the mother of the deceased baby had received antenatal check-up for this pregnancy and whether it was as per the National protocol (New protocol recommends 8 ANC visits). Circle the appropriate responses.

Q111 & 112 Did she have any perinatal deaths during her previous pregnancies. If yes, specify the number of previous perinatal deaths: Question 111 asks about the perinatal deaths (Still birth or early neonatal deaths) the mother had during her previous pregnancies. If the response is "Yes-1" then specify the number of previous perinatal deaths (do not include the current one) in the boxes given in Q112.

Q113 Any co-existing maternal conditions: This question asks if the mother had any existing health conditions like: Diabetes, hypertension, heart disease, renal disease, etc. Circle the appropriate response and if the response is not listed circle "96" and specify the condition. If the mother did not have any co-existing condition or no such condition could be identified in mother, select "1".

Q114 Obstetric condition of mother at admission: This question asks about the obstetric stage of the mother at the time of admission. Five options have been listed: if she was not in labour circle 1, if in latent phase of labour circle 2, if in active phase of labour circle 3, if in third stage of labour circle 4 and if post-partum (till seven days after delivery) circle 5.

Q115 Provisional diagnosis of mother at the time of admission: This question relates to the provisional diagnosis of the mother of the deceased child at the time of admission Write the provisional diagnosis of the mother clearly in BLOCK LETTERS. If there was no provisional diagnosis write "NONE" in the space provided

Q116 Place of delivery: Mention the place, in BLOCK LETTERS, where the deceased baby was delivered. Eg: If delivered in this facility, write "This facility", if delivered elsewhere, write the name of the facility.

Q117 Mode of delivery: This question relates to **the mode of delivery** of the deceased child**.** Please circle the code corresponding to the mode of delivery. If it was 'Vaginal delivery' then circle '1' and go to Q119, this includes normal/spontaneous vaginal delivery as well as vaginal delivery in which labour was induced or augmented. If it was Vacuum delivery - circle '2', for Forceps delivery - circle '3', for Breech delivery - circle '4', and if it was 'Caesarean section' circle '5'. If 'Destructive operation' (this option includes destructive procedures such as craniotomy, embryotomy, cleidotomy etc) was done circle '6', or circle '96' and specify if the mode of delivery was 'Other' than the ones listed.

Q118 If other than vaginal delivery, specify the main reason: This question is related to Q117 and asks to specify the reason **in brief**, why a vaginal delivery was not possible.

Whether it was due to Maternal condition / fetal condition / elective. If the deceased was delivered via vaginal delivery, please write "NA" in block letters.

Q119 Condition of baby at birth: This question seeks to know the condition of the baby at birth. Was the baby normal at birth or asphyxiated or stillborn, Circle the appropriate response, and if the response is not listed circle '96' and specify the condition.

SECTION 2: DETAILS OF THE BABY

Q201 Gestational age: This question enquires about the gestational age of the baby in weeks and days at the time of delivery. Separate boxes are provided for the number of weeks and days. Write "98" in the weeks box if the gestational age is not known.

Q202 Birth weight: Please write the weight of the baby at birth in **GRAMS,** in the space provided. In case the birth weight is not known, then provide the weight at admission in grams and mention clearly that the weight at admission is provided.

Q203 Sex of the baby: This question enquires about the sex of the deceased baby. Please circle the correct response, '1' if male, '2' if female, and '3'if ambiguous (sex not determined).

Q204 Singleton or multiple birth: Please circle '1' if it was a singleton birth, or '2' if it was a multiple birth.

Baby number: If it was multiple birth, then please specify which number the deceased baby was. Eg: 2nd twin or 1st triplet, etc.

Q205 Date of delivery (Nepali date): Write the date the baby was delivered. Enter the day, month, and year field using the boxes given. All date fields must be recorded using

0	2	0	5	2	0	7	7
Day		Month		Year			

Nepali **(Bikram Sambat)** calendar. For example: if the baby was delivered on the 2nd day of Bhadra, 2077, the date should be recorded as follows:

Q206 Time of delivery (12 hour format): Write the time of delivery in hour and minutes in the appropriate boxes. This must be recorded using a 12-hour format and AM / PM should be selected. For example, if the baby was delivered at 1:15pm, this should be recorded as:

0	1	1	5
Hours		Minutes	

AM / (PM)

Q207 Type of death: This question differentiates whether the death of the baby was a Fetal or Neonatal death. Circle '1-Fetal' if the baby was born dead (still birth) and go to Q210.

Circle '2-Early neonatal' if the baby was born alive (showed ANY sign of life) and died within first seven days after birth, then go to the next question.

Q208 If Early neonatal death (ENND), Date of death: This is a follow-up question and must be completed **ONLY** if the response in Q207 was "2- Early neonatal death" (within first 7 days of life). Write the **Date of death** of the baby in the day, month, and year field in the boxes given. All date fields must be recorded using Nepali calendar. For example, if the baby died on the 2nd day of Bhadra, 2077, the recorded date would be

0	2	0	5	2	0	7	7
Day		Month		Year			

Q209 If Early neonatal death (ENND), Time of death: This question must be completed **ONLY** if the death was an Early NEONATAL death. The **Time of death** of the baby should be mentioned in hour and minutes in the appropriate boxes given, in 12-hour format. For example, if the baby died at 4:15am, this should be recorded as:

0	4	1	5
Hours		Minutes	

(AM) / PM

Q210 If Fetal death, type death: This is a follow-up question and must be completed **ONLY** if the response in Q207 was "1- Fetal' death. This question relates to the obstetric period at the time of Fetal death (still birth). Please circle '1' if the baby had died in the Antepartum period (macerated still birth) and circle '2' if the baby had died in the Intrapartum period (fresh still birth).

Q211 If Fetal death, was Fetal Heart Sound (FHS) present when mother was admitted: If it was a fetal death then mention whether fetal heart sound of the baby was present when the mother was admitted. If 'Yes' circle '1' and if 'No' circle '2'.

SECTION 3: CLINICAL INFORMATION OF DECEASED BABY

Q301 This section consists of a table with columns for date, time gestational/ postnatal age and events. It requires to record the summary of ***significant*** **events** right from admission to the death of the baby in chronological order. Provide detailed information of each significant event with information on complications, investigation, reports, diagnosis, procedures undertaken, iv therapy given, drugs given for example ICU admission, phototherapy, blood transfusions, antibiotics, ventilator support, oxygen inhalation etc. Detailed description of every significant event should be recorded according to Date (Nepali), Time (12 hrs format, specify whether AM / PM), the postnatal age at the time of occurrence of the event.

Q302-Q305 Delays: In this question, the three delays and the delay in referral have been segregated and numerous possible options have been provided. Select all the avoidable factors that had occurred, under each of the three delay and delay in referral categories.

SECTION 4: CAUSE OF DEATH

This section deals with information on the cause of death. This section requires the attending doctors/nurses etc. to discuss and review the death and classify according to the ICD-PM classification, the types and codes for which have been provided. For detailed information, refer to, "The WHO application of ICD-10 to deaths during the perinatal period: ICD-PM, 2016". **Select only one option for Q403a, Q403b, Q403c and Q403d.**

NOTE: For ONE perinatal death there should be only two conditions

i. ***4a OR 4b OR 4c (only one of these three conditions should be selected for one perinatal death), AND***
ii. ***4d (should be selected for all perinatal deaths)***

The cause of death should be as follows: 4a;4d , 4b;4d , 4c;4d

Q403a Antepartum deaths (A): In this question there are six possible causes of perinatal/fetal deaths, in the antepartum period, based on fetal cause. Select the most appropriate response. The possible conditions are listed in the table below.

	Antepartum Deaths (A)		Possible conditions
403a	Fetal condition main cause of Antepartum Death	Congenital malformations, Deformations and Chromosomal abnormalities **(A1)**	All congenital malformations, deformations and chromosomal abnormalities
		Infections (A2)	Congenital syphilis Congenital viral diseases Congenital infectious and parasitic diseases (TB, toxoplasmosis malaria etc) Other infections of perinatal period (intra-amniotic infection)
		Antepartum Hypoxia (A3)	Intrauterine hypoxia
		Other specified Antepartum disorder (A4)	fetal blood loss, intracranial non-traumatic hemorrhage of fetus & newborn, hemolytic disease/ DIC/perinatal hematological disorders, necrotising enterocolitis of fetus & newborn, congenital renal failure, complications of intrauterine procedure (not classified elsewhere)
		Disorders related to fetal growth (A5)	Light for gestational age, small for age, fetal malnutrition, growth retardation, large baby, heavy for age, post-term but not heavy for age,
		Antepartum death of Unspecified cause	Fetal death and Stillborn with cause of death not known

Q403b Intrapartum deaths (I): In this question there are six possible causes of perinatal/fetal deaths, in the intrapartum period, based on fetal cause. Select the most appropriate response. If the cause is not listed, circle I7 and specify the cause of perinatal/fetal death in the intrapartum period. The possible conditions are listed in the table below.

	Intrapartum Deaths (I)		Possible conditions
403b	Fetal condition main cause of Intrapartum Deaths	Congenital malformations, Deformations and Chromosomal abnormalities (I1)	All congenital malformations, deformations and chromosomal abnormalities
		Birth trauma (I2)	Intracranial laceration & hemorrhage due to birth trauma, birth injuries to CNS, birth injury to scalp, birth injury to skeleton,
		Acute Intrapartum event (I3)	Intrauterine hypoxia
		Infections (I4)	Congenital viral disease, congenital infectious & parasitic diseases (congenital TB, toxoplasmosis,malaria,etc), intra-amniotic infection of fetus
		Other specified Intrapartum disorder (I5)	fetal blood loss, intracranial non-traumatic hemorrhage of fetus & newborn, hemolytic disease/ DIC/perinatal hematological disorders, necrotising enterocolitis of fetus & newborn, congenital renal failure, complications of intrauterine procedure (not classified elsewhere), hydrops fetalis due tyo hemolytic disease,
		Disorders related to Fetal growth (I6)	Light for gestational age, small for age, fetal malnutrition, growth retardation, large baby, heavy for age, post-term but not heavy for age, extreme immaturity
		Intrapartum death of unspecified cause (I7)	Fetal death and Stillborn with cause of death not known

Q403c Neonatal deaths (N): In this question there are 11 possible causes of perinatal/fetal deaths, in the neonatal period, based on fetal cause. Select the most appropriate response. Neonatal deaths of unspecified cause (N11) includes conditions like: congenital renal failure, neonatal withdrawal symptoms from maternal use of drugs of addiction, withdrawal symptoms from therapeutic use of drugs in newborn, termination of pregnancy affecting fetus and newborn, etc. The possible conditions are listed in the table below.

	Neonatal Deaths (N)		Possible conditions
403c	Fetal death main cause – Neonatal Deaths	Congenital malformations, deformations and chromosomal abnormalities (N1)	Congenital malformations, deformations and chromosomal abnormalities
		Disorders related to fetal growth (N2)	Light for gestational age, small for age, fetal malnutrition, growth retardation, large baby, heavy for age, post-term but not heavy for age, extreme immaturity
		Birth trauma (N3)	Intracranial laceration & hemorrhage due to birth trauma, birth injuries to CNS, birth injury to scalp, birth injury to skeleton,
		Complications of intrapartum events (N4)	Intrauterine hypoxia, birth asphyxia,
		Convulsions and disorders of cerebral status (N5)	Convulsions of newborn, neonatal cerebral ischemia, neonatal coma,other disturbances of cerebral status of newborn

		Infections (N6)	Tetanus neonatorum, congenital syphilis, meningitis, encephalitis, myelitis and encephalomyelitis, intracranial and intraspinal abscess and granuloma, intracranial and intraspinal phlebitis and thrombophlebitis, congenital pneumonia, congenital viral disease, bacterial sepsis of newborn, other congenital infectious and parasitic diseases, other infections specific to perinatal period (neonatal infective mastitis/conjunctivitis/intraamniotic infection)
		Respiratory and cardiovascular disorders (N7)	Respiratory distress of newborn, neonatal aspiration syndromes, interstitial emphysema and related conditions, pulmonary hemorrhage originating in the perinatal period,Chronic respiratory disease originating in the perinatal period,other respiratory conditions originating in the perinatal period (atelectasis, sleep apnea, respiratory failure. Cardiovascular disorders originating in the perinatal period(cardiac failure/dysrhythmia/hypertension)
		Other neonatal conditions (N8)	Fetal blood loss, umbilical hemorrhage, intracranial non-traumatic hemorrhage, hemorrhagic disease, hemolytic disease, hydrops fetalis due to hemolytic disease, kernicterus, neonatal jaundica due to excessive hemolysis / other causes, DIC, intestinal obstruction, necrotizing enterocolitis, digestive system disorder, hypothermia, disturbance of temperature regulation, conditions of skin, feeding problems, reactions and intoxications, disorders of muscle tone
		Low birth weight and prematurity (N9)	Low birth weight and prematurity
		Miscellaneous (N10)	
		Neonatal death of unspecified cause (N11)	Congenital renal failure, withdrawal symptoms from maternal use of drugs/ therapeutic use of drugs, termination of pregnancy affecting fetus & newborn, complications of intrauterine procedures

Q403d Maternal condition (M): In this question there are five possible causes of perinatal/fetal deaths based on maternal conditions. Select the most appropriate response. The possible conditions are listed in the table below.

	Maternal Conditions (M)		**Possible conditions**
403d	Maternal Conditions associated with fetal death	Complications of placenta, cord and membranes (M1)	**Fetus and newborn affected by:** placenta praevia/abruptio placenta/ accidental hemorrhage/ APH/ damage to placenta/ maternal blood loss/ premature separation of placenta/ morphological and functional abnormalities of placenta/ prolapsed cord/ placental transfusion syndrome/ cord compression/ unspecified conditions of cord/ chorioamnionitis/ membrane abnormalities
		Maternal complications of	**Fetus and newborn affected by:** maternal

		pregnancy (M2)	complications of pregnancy (incompetent cervix/premature rupture of membrane/ oligohydramnios/ polyhydramnios/ ectopic pregnancy/ multiple pregnancy/ other maternal complications of pregnancy
		Other complications of labor and delivery (M3)	**Fetus and newborn affected by:** complications of labour & delivery (breech delivery & extraction/ malposition/ malpresentation/ forceps delivery/ caesareans ection/ abnormal uterine contraction/ other complications of labour & delivery
		Maternal medical and surgical conditions; Noxious influences (M4)	**Fetus and newborn affected by:** maternal conditions that may be unrelated to present pregnancy (maternal hypertension/ renal and urinary tract disease/ infectious & parasitic diseases/ circulatory & respiratory diseases/ medical procedures/ noxious influence transmitted via palcenta or breast milk/ maternal anesthesia & analgesia during labour & delivery/ medications/ tobacco use/ alcohol use/ use of drugs of addiction,
		No maternal condition identified (M5) (Healthy mother)	

Q404 ICD-PM classification of death: Write the final classification of death, which should include one of the three fetal conditions (4a OR 4b OR 4c) and maternal condition.

Eg: A3 ; M3: Antepartum hypoxia AND Other complications of labor and delivery
I4 ; M2: Infection AND Maternal complications of pregnancy
N9 ; M5: Low birth weight and prematurity AND Healthy mother

The date when the form was filled and the full name, designation and phone number of the staff who completed the form must be provided.

Thank you

PDR Summary Form

3.1 Aim

Before conducting the review meeting, PDR summary form should be filled by the Medical Recorder, upto the section of Avoidable factors according to three delay model. The MPDSR committee should review the perinatal deaths (deaths in the perinatal period from 28 weeks (≥28 weeks) of gestation upto 7 days after birth) and complete the PDR Summary form with action plans. Only the PDR summary form needs to be entered in the MPDSR web-based entry system.

3.2 How to complete the Perinatal Death Review Summary Form correctly

Name of Facility: Write clearly the name of the Hospital whose PDR summary form has been filled.

District: Write clearly the name of the District where the hospital is located.

Local level: Write clearly the name of the local level where the hospital is located.

Q1 **Report for:** In this question, write the month and year for which the summary form is prepared. Eg: if the PDR summary is for Bhadra 2076; Write 'Bhadra' in MM and '2077' in YY

MM	YY
Bhadra	2077

Q2 **Maternal Deaths:** Provide the number of maternal death/s, if any, that occurred during the reporting month. If there was no maternal death, then enter "0" (Zero).

ZERO REPORTING FOR MATERNAL DEATHS IS COMPULSORY.

Q3 **Total Deliveries:** Provide the number of deliveries that occurred in the hospital in the reporting month. This information can be obtained from maternity/Labour room/OT register.

Q4 **Total Live Births:** Provide the number of total live birth that occurred in the hospital during the reporting month. Live births should include early neonatal deaths. This number can be equal to, less than (in case of stillbirths) or more than (in case of multiple births: twins/triplets) the total deliveries. This information can be obtained from maternity/Labour room/OT register.

Q5 **Total Multiple Births:** Provide the total number of multiple births (twins, triplets, etc) that occurred in the hospital during the reporting month. This information an be obtained from maternity/Labour room/OT register.

Eg: if there were 3 twin deliveries in the reporting month, please write "3" in the box provided. Do not write the total number of babies born i.e 6 in this case

If there were 2 twin deliveries and 3 triplet deliveries, please write "5" in the box provided. Do not write the total number of babies born i.e Twins: 4 and Triplets:9, in this case.

Q6 **Still Births:** Provide the number of macerated SB, Fresh SB with FHS present when the mother was admitted and Fresh SB with FHS not present when the mother was admitted. In the last box write the total number of Still Births which is the total of Macerated SB, Fresh SB (FHS present when mother was admitted) and Fresh SB (FHS not present when mother was admitted). Includes all deaths from ≥28 weeks of pregnancy who do not show any signs of life at birth. This information can be obtained from maternity/Labour room/OT registers.

Eg: There were 15 still births, and out of them 3 were macerated and 12 were fresh. In 10 cases of fresh SB, FHS was present at the time mother was admitted and in 2 cases FHS was absent at the time of admission. Enter the information as follows:

Macerated SB	**Fresh SB**	
	FHS present when mother admitted	**FHS Absent when mother admitted**
3	10	2

Q7 **Early Neonatal Deaths:** Provide the number of ENNDs that occurred upto and at ONE day of birth and the number of ENNDs that occurred after ONE day of birth (after 24 hrs of birth) till 7 days of birth. In the last box write the total number of ENNDs that is the total of ENND ≤ 1 day and ENND >1 day. This information can be obtained from maternity/Labour room/OT/NICU/Nursery/Pediatrics ward registers.

Eg: If there were 10 ENND and out of those, 6 had died ≤ 1 day of birth and 4 had died >1 day of birth, enter as follows;

ENND ≤ 1 day	**ENND >1 day**
6	4

Q8 **Total perinatal deaths (SB + ENND):** This is the total of Still Births and ENND (Q6 + Q7).

Q9 **Birth Weight:** Five birth weight options have been provided in the boxes. In each box, enter the number of perinatal deaths **(still birth + Early Neonatal deaths)** that occurred corresponding to the given weight range. The perinatal deaths for which the birth weight is not known, enter their number in the box named "Unknown". The number should add up to the total number of perinatal deaths (Total SB in Q6 + Total ENND in Q7) for the reporting month.

Note: For this information refer to Q 202 in Perinatal Death Review (PDR) form.

Eg: If there were 5 perinatal deaths and the birth weights of the babies were as follows: 1200 gms, 2550 gms, 3450 gms, 4000 gms, 1250 gms, enter the information as follows:

<1000 gms	1000-1500 gms Grams	1501-2499 gms Grams	2500-4000 gms Grams	>4000 Gms	Unknown
	2		3		

Q10 **Gestational Age:** Five options of gestational age group in weeks have been provided in the boxes given. In each box enter the number of perinatal deaths **(still births + Early NNDs)** with respect to their gestational age during delivery. If the gestational age is not known for some deaths, enter the number in the box named "Unknown". The number should add up to the total number of perinatal deaths (Total SB in Q6 + Total in Q7) for the reporting month.

Note: For this information refer to Q 201 in Perinatal Death Review (PDR) form.

Eg: If there were 5 perinatal deaths and the gestational ages of the babies at the time of delivery were as follows: 28 wks, 32 wks, 34 wks, 40 wks, 32 wks, enter the information as follows:

<28 weeks	28-32 weeks	33-36 weeks	37-41 weeks	>=42 weeks	Unknown
	3	1	1		

Q11 **Delivered at:** In each box, enter the number of still births and early NNDs with respect to the place where they were delivered. Four options have been provided, and if the place of delivery is not known for some deaths, enter that number in the box named "Unknown". The number should add up to the total number of perinatal deaths (Total SB in Q6 + Total in Q7) for the reporting month.

Note: For this information refer to Q 116 in Perinatal Death Review (PDR) form.

Eg: If there were 5 perinatal deaths and the place of delivery were as follows: 3 were born in this facility, one was born in another facility and referred here and one was born on the way, enter the information as follows:

This facility	Other facility	Home	On the way	Unknown
3	1		1	

Q12 **Maternal Age:** In each box, write the number of still births and early NNDs with respect to the age of the mother. The number should add up to the total number of perinatal deaths (Total SB in Q6 + Total in Q7) for the reporting month.

Note: For this information refer to Q 106 in Perinatal Death Review (PDR) form.

Eg: If there were 5 perinatal deaths and the ages of the mothers were as follows: 28 yrs, 19 yrs, 20 yrs, 36 yrs, 32 yrs, enter the information as follows:

<20 yrs	20-35 yrs	>35 yrs	Unknown
1	4		

Q13 **Antenatal Care:** In each box, enter the number of still births and early NNDs with respect to the ANC visits done by their mother during the pregnancy. The number should add up to the total number of perinatal deaths (Total SB in Q6 + Total in Q7) for the reporting month.

Note: For this information refer to Q 109 and Q 110 in Perinatal Death Review (PDR) form.

Q14 **Pregnancy:** This field gives information on how many of the deceased babies were from singleton and multiple pregnancies. In each box, enter the total numbers of single and multiple pregnancies. The total number (single + multiple pregnancy) can be equal to or more (if multiple pregnancies) than the Total deliveries (Q3) for the reporting month.

Note: For this information refer to Q 204 in Perinatal Death Review (PDR) form.

Eg: If there were 5 perinatal deaths and the babies were the outcome of pregnancy as follows: 3 babies were from single pregnancies and 2 babies were from twin pregnancies, enter the information as follows:

Single	Multiple
3	2

Q15 **Co-existing Maternal Conditions:** Write the number of babies whose mothers had any co-existing conditions. Eg: Heart disease in mother, Diabetes in mother.

Note: For this information refer to Q 113 in Perinatal Death Review (PDR) form.

Q16 **Sex of Babies:** This field gives information on the sex of the deceased babies. Write the number of babies that were female, male or ambiguous in the respective boxes.

Note: For this information refer to Q 203 in Perinatal Death Review (PDR) form.

Q17 **Ethnicity:** Five ethnicity groups have been listed. Write the number of deaths belonging to each of the listed ethnic groups. For those deaths whose ethnicity was different from those listed, write the number in the box named “Others”.

Note: For this information refer to Q 105 in Perinatal Death Review (PDR) form.

Q18. ICD-PM classification of death: Write the number of various ICD-PM classifications as shown below:

Note: For this information refer to Q 404 in Perinatal Death Review (PDR) form.

Eg: If there were 7 perinatal deaths and the cause of death were as follows, A1;M2= 2 cases , I5;M5= 1 case, N3;M2=3 cases, I2;M1=1 case: enter the information as follows:

Maternal condition	Complications of placenta, cord and membranes (M1)	Maternal complications of pregnancy (M2)	Other complications of labor and delivery (M3)	Maternal medical and surgical conditions; Noxious influences (M4)	No maternal condition identified (Healthy mother) (M5)	Other	Total
Antepartum Death (A)							
Congenital malformations, Deformations and Chromosomal abnormalities **(A1)**		**2**					**2**
Infection **(A2)**							
Antepartum Hypoxia **(A3)**							
Other specified Antepartum disorder **(A4)**							
Disorders related to fetal growth **(A5)**							
Antepartum death of unspecified cause **(A6)**							
Intrapartum death (I)							
Congenital malformations, Deformations and Chromosomal abnormalities **(I1)**							
Birth trauma **(I2)**	**1**						**1**
Acute Intrapartum event **(I3)**							
Infections **(I4)**							
Other specified Intrapartum disorder **(I5)**					**1**		**1**
Disorders related to Fetal growth **(I6)**							
Intrapartum death of unspecified cause **(I7)**							
Neonatal death (N)							
Congenital malformations, deformations and chromosomal abnormalities **(N1)**							
Disorders related to fetal growth **(N2)**							

Birth trauma **(N3)**		**3**					**3**
Complications of intrapartum events **(N4)**							
Convulsions and disorders of cerebral status **(N5)**							
Infections **(N6)**							
Respiratory and cardiovascular disorders **(N7)**							
Other neonatal conditions **(N8)**							
Low birth weight and prematurity **(N9)**							
Miscellaneous **(N10)**							
Neonatal death of unspecified cause **(N11)**							
Total	**1**	**5**			**1**		**7**

Q19. **Avoidable factors according to three delay model:** Identify the delays that had occurred while seeking for or providing services for the mother or the baby by reviewing the PDR form and list in the table.

The Committee should discuss on avoidable factors for the particular case and analyse why the death occurred. The avoidable factors can be patient related (never initiated antenatal care, delay in seeking medical attention during labour, declines admission/treatment for personal/social reasons), Administrative problems (lack of transport-home to institution, lack of transport-institution to institution, inadequate resuscitation equipment, no accessible neonatal ICU bed with ventilator), medical personnel associated (medical personnel underestimated foetal size, no response to maternal hypertension, partograph not used, foetal distress not detected) and others (ANC card lost, file missing, insufficient notes).

Note: For this information refer to Q 302, 303, 304 and 305 in Perinatal Death Review (PDR) form.

Q20. **Action plan:** Based on the findings till Q20, the MPDSR Committee needs to develop actions plans for prevention of perinatal death in the future. Once the possible action plans are developed, the Committee needs to exercise on prioritization of the action plans and specify the person and organization/s, timeline (specify date in Day / Month / Year) and person responsible for monitoring of implementation of the action plan. Then the table in this question needs to be completed. The request for necessary action at the community level has to be sent formally through Health Office.

List of Participants: The names of attendees of the MPDSR Committee meeting for this PDR review meeting needs to be listed with designation, contact number and signature.

The date of review by facility MPDSR Committee must be filled with Nepali date in the DD / MM / YYYY format.

References:

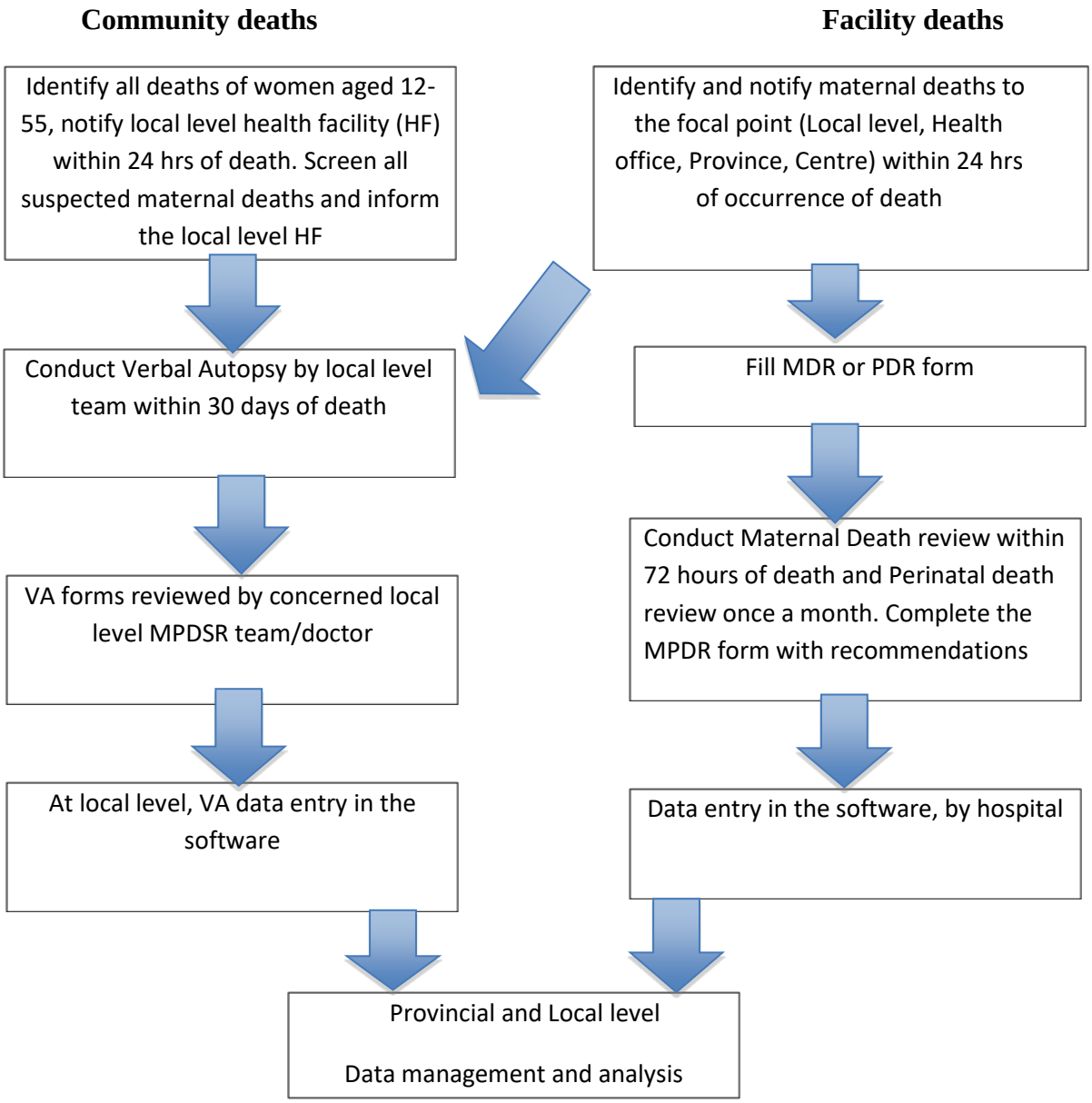
1. WHO Factsheet 334 updated September 2013.
2. WHO, UNICEF, UNFPA and the World Bank. Trends in maternal mortality: 1990-2008: Estimates developed by WHO, UNICEF, UNFPA and the World Bank. Geneva, World Health Organization, 2012.
3. WHO/UNICEF/UNFPA and the World Bank. Trends in maternal mortality; 1990-2010: Estimates developed by WHO, UNICEF, UNFPA and the World Bank. Geneva, World Health Organization, 2012.
4. Royston E, Armstrong S, Eds. Preventing maternal deaths. Geneva, World Health Organization, 1989.
5. Court, C. WHO claims maternal mortality has been underestimated. British Medical Journal, 1996, 312(7028): 398.
6. Committing to Child Survival: A Promise Renewed. Progress Report 2013 UNICEF.
7. WHO working document June 2020. Maternal and Perinatal Death Surveillance and Response: Materials to Support Implementation.
8. World Health Statistics 2017. Monitoring Health for the SDGs, WHO.

Single	Multiple

ANNEX 1:

Annex 1: Process of MPDSR

Flow diagram of MPDR and MPDSR



Annex 2: Evidence based medical interventions

Ref: MDSR Technical Guidance – Information for action to Prevent maternal death- FIGO, UKAID, Evidence for Action, UNFPA, CDC, WHO, International Configuration of Midwives)

Common causes of maternal death: evidence-based medical interventions at the referral/first level facility and in the community (*52,53*)

Cause	Referral/first level facility Interventions	Community Interventions
Prevention and management of postpartum haemorrhage	a) Prophylactic uterotonics to prevent postpartum haemorrhage b) Active management of third stage of labour to prevent postpartum haemorrhage c) Uterine Massage d) Uterotonics e) Manual removal of placenta f) Non-pneumatic anti-shock garment as a temporizing measure until substantive care is available[a]	a) Prophylactic uterotonics to prevent postpartum haemorrhage b) Uterine Massage c) Uterotonics
Prevention and management of hypertension in pregnancy	a) Calcium supplementation in pregnancy b) Low dose aspirin for the prevention of pre-eclampsia in high risk women c) Use of antihypertensive drugs for treating severe hypertension in pregnancy d) Prevention and treatment of eclampsia	Calcium supplementation in pregnancy
Prevention of and management of unintended pregnancy	a) Advice and provision of family planning: barrier methods, oral contraceptives, emergency contraceptives, hormonal methods, implants, intrauterine devices, and surgical contraception. b) Availability and provision of safe abortion c) Provision of post abortion care	Advice and provision of family planning: barrier methods, oral contraceptives, emergency contraceptives, hormonal methods.
Prevention and treatment of Sepsis	a) Antibiotics for management of preterm prelabourrupture of membranes b) Induction of labour for management of prelabour rupture of membranes at term[a] c) Prophylactic antibiotic for caesarean section d) Detection and management of postpartum sepsis[a]	
Obstructed labour (and associated complications, e.g., sepsis, haemorrhage)	Caesarean section[b] Antibiotic therapy[b] Blood transfusion[b]	
Indirect causes	a) Provide essential package antenatal care b) Prevention and management of sexually transmitted infections including HIV for prevention of Mother-to-Child Transmission (PMTCT) of HIV c) Prevention and management of malaria in pregnancy including prophylactic antimalarial and provision and promotion of Insecticide Treated Nets d) Treatment of simple malaria cases e) Treatment of complicated malaria cases[b] e) Social support during childbirth f) Screening for and management of signs/symptoms of domestic violence and sexual assault g) Prevent, measure, and treat maternal anaemia[b] h) Treatment of severe HIV infection.[b]	a) Prevention and management of sexually transmitted infections including HIV for prevention of Mother-to-Child Transmission (PMTCT) of HIV b) Prevention and management of malaria in pregnancy including prophylactic antimalarial and provision and promotion of Insecticide treated Nets

[a] WHO recommendations for the prevention and treatment of postpartum haemorrhage 2012. http://apps.who.int/iris/bitstream/10665/75411/1/9789241548502_eng.pdf

[b] Referral level facility only

Annex 3: MDR Form

MPDSR Tool 4

Government of Nepal

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

CONFIDENTIAL
This form will be kept confidential and used only for quality of care improvement and statistical purposes and not for medicolegal 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 pregnancy or its management, but not from accidental or incidental causes (WHO ICD-10). *However, MPDSR should include review of all pregnancy related deaths.*

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 utilizing 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 staff that had contact with the deceased. All available records related to the deceased should be reviewed. The death should be notified to local level / Health Office / Province / Centre (FWD) via phone, email, etc. within 24 hours of occurrence with name, age and current 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 review section 7 and complete Section 8. The completed forms should be made accessible to Family Welfare Division through web entry.

District: _____ ☐☐ Local level: _____ ☐☐☐

Name of facility: _____

SECTION 1: DETAILS OF DECEASED WOMAN

101	Full name:	101 a. Hospital ID: ☐☐☐☐☐☐☐☐☐☐
102	Age at death (Completed years)	☐☐ Years
103	**Current address:** District: _____ ☐☐ Local level: _____ ☐☐☐ Ward number: ☐☐ Contact number: ☐☐☐☐☐☐☐☐☐☐	
104	Ethnicity: _____ ☐ ***(Write '98' if 'Don't know')***	Code: ☐☐ ***(Refer to Annex for Ethnicity code)***
105	Gravida	☐☐
106	Parity	☐☐

107	Date of death (Nepali date)		Day Month Year
108	Time of death (12 hour form)		Hour : Minute AM / PM
109	Period of death	Antenatal period ***(Skip section 4)***	1
		Intrapartum period (during labor)	2
		Postpartum period upto 24 hours after delivery	3
		Postpartum period 24 to 48 hours after delivery	4
		Postpartum period after 48 hours of delivery	5
		Abortion related (< 28 weeks of pregnancy)	6
110	Was the patient BROUGHT DEAD to this facility	Yes	1
		No	2

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

201	Date of admission to this facility (Nepali date)		Day Month Year
202	Time of admission (12 hour format)		Hour : Minute AM / PM
203	Period on admission	Antepartum period	1
		Intrapartum period (during labor)	2
		Postpartum period upto 24 hours after delivery	3
		Postpartum period 24 to 48 hours after delivery	4
		Postpartum period after 48 hours of delivery	5
		Abortion related (< 28 weeks of pregnancy)	6
203a	If the patient was referred, where was she referred from?		Name of facility (Specify): _____
203b	Date of referral		Day Month Year
203c	What time was she referred? (12 hour format)		Hour : Minute AM / PM

204	Condition / Vital signs at admission	Pulse/min	Temp ^{0} F	BP (Syst)	BP (Dias)	Respiration/min
205	Provisional diagnosis at the time of admission ***(Specify in BLOCK LETTERS)***	_____				

SECTION 3: CURRENT PREGNANCY

301	Antenatal care visits during this pregnancy?	8 visits as per National protocol	8+	6-7	4-5	3	2	1	No visits	Don't know

302	If she had ANC visits, when did she have her first ANC? **(Specify weeks OR completed month of pregnancy)**	Weeks	☐☐
		Months	☐☐
		Don't know	98
302a	When did she have her last ANC? ***(Specify weeks OR completed month of pregnancy)***	Weeks	☐☐
		Months	☐☐
		Don't know	98
303	Any complications **DURING** this pregnancy? ***(Specify in BLOCK LETTERS)***	_____	

SECTION 4: DELIVERY AND PUERPERIUM

401	Date of delivery (Nepali date)	☐☐ Day ☐☐ Month ☐☐☐☐ Year	
402	Time of delivery (12 hour format)	☐☐ : ☐☐ **AM / PM** (Hour : Minute)	
402a	Gestational age at delivery	☐☐ weeks	
403	Where did she deliver? ***(Select only ONE response)***	This health facility	1
		Other health facility	2
		In transit from one health facility to another health facility	3
		In transit from home to health facility	4
		Home	5
403a	Type of facility ***(Select only ONE response)***	Public Hospital	1
		Private / NGO / Missionary Hospital	2
		Medical college / Teaching Hospital	3
		Others (Specify) _____	96
		Don't know	98

404	Is this facility BC/BEONC/CEONC? ***(Select only ONE response)***	Birthing Centre	BEONC	CEONC
		1	2	3

405	Who was the main delivery attendant?	Doctor	1
		Nurse / Midwife / ANM	2
		Other health workers (Specify)_____	3
		Others (specify)_____	96
406	Was partograph used during delivery?	Yes	1
		No	2
		Don't know	98
407	Was the pregnancy Single or Multiple?	Single	1
		Multiple	2

408	What was the **TOTAL** duration of labor?	Not in labor	<12 hrs	12-23 hrs	≥24 hrs	Don't know
		1	2	3	4	98

409	Presentation of fetus	Cephalic	1
		Breech	2
		Shoulder	3
		Others (Specify) _____	96
410	What was the mode of delivery?	Vaginal Delivery ***(Go to 413)***	1
		Assisted Vaginal Delivery (Breech, Multiple)	2
		Instrumental Delivery (Vacuum, Forceps)	3
		Caesarean Section	4
		Others (Specify)_____	96

411	What was the reason for Assisted/Instrumental delivery / LSCS ?	Maternal	Fetal	Don't Know
		1	2	98
412	Was the Caesarean Section emergency or elective? (ask only if Q410=4)	Emergency	Elective	Don't Know
		1	2	98

413	Any apparent complications **DURING LABOR or DELIVERY**? ***(Specify in BLOCK LETTERS)***	_____

414	Outcome of this pregnancy	Alive	Induced/ spontaneous abortion	Macerated Still Birth	Fresh Still Birth	Early NND (upto 7 days)	Late NND (7-28 days	Infant death (28-42 days)	Don't Know
		1	2	3	4	5	6	7	98

415	Any apparent complications **AFTER** delivery? ***(Specify in BLOCK LETTERS)***	_____

SECTION 5: INTERVENTIONS

501	Were any of the following emergency interventions administered? **(Select all that is appropriate)**									
		Antenatal			**Intrapartum**			**Postpartum**		
		Yes	**No**	**DK**	**Yes**	**No**	**DK**	**Yes**	**No**	**DK**
a	Blood transfusion	1	2	98	1	2	98	1	2	98
b	Hysterectomy / operative intervention	1	2	98	1	2	98	1	2	98
c	Exploration of uterus / MRP	1	2	98	1	2	98	1	2	98
d	Laparotomy	1	2	98	1	2	98	1	2	98
e	ICU/Advanced life support	1	2	98	1	2	98	1	2	98
F	MgSO4	1	2	98	1	2	98	1	2	98
G	Uterotonics (Specify) _____	1	2	98	1	2	98	1	2	98
H	Antibiotics	1	2	98	1	2	98	1	2	98
I	Treatment of thrombosis	1	2	98	1	2	98	1	2	98
J	Others (Specify)_____	1	2	98	1	2	98	1	2	98

SECTION 6: Medical Cause of Death Assignment

PART I: Case narrative: [Gravida, Parity, ANC/Intra/PNC history, sequence of events, treatment, time line of events] ***(WRITE IN BLOCK LETTERS)***
Please write a short history of what happened prior to admission ***Any complications/significant findings during pregnancy:*** ***Reason for hospital admission:***
PART II: History of illness prior to death
Findings during admission: ***Events during hospital stay*** ***Events that occurred before death:***

Contributing factors (Delays)	
First delay	
Second delay	
Third delay	

Cause of Death Assignment		
Part I		Approximate Interval Between Onset & Death
Disease or condition directly leading to the death* ***(Final / Immediate Cause of Death)***	a) _____ ***(due to or as a consequence of)***	
Antecedent causes		

(Morbid conditions, if any, giving rise to the above cause, <u>stating underlying condition last</u>) **Note: State the underlying condition in the last space and state the sequence of events as you move up, stating the final cause of death in the top-most space (a)**	***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) ***(Contributing factors)***	_____	
* This does **NOT** mean the mode of dying, e.g., heart failure, respiratory failure; it means the disease, injury or complication that caused death.		
The woman was: √ ☐ **pregnant at the time of death** ☐ **was in labour at the time if death** ☐ **had delivered within 42 days, at the time of death** ☐ **had an abortion within 42 days, at the time of death**		

Section 7: ICD-MM Classification (To be done by the Hospital MPDSR Committee)

a	Pregnancy with abortive complications (Direct Maternal Death)	ICD-MM 1
b	Hypertensive disorders of pregnancy (Direct Maternal Death)	ICD-MM 2
c	Obstetric Hemorrhage (Direct Maternal Death)	ICD-MM 3
d	Pregnancy related infections (Direct Maternal Death)	ICD-MM 4
e	Other obstetric complications (Direct Maternal Death)	ICD-MM 5
f	Unanticipated complications of management (Direct Maternal Death)	ICD-MM 6
g	Non-Obstetric complications (Indirect Maternal Death)	ICD-MM 7
h	Unknown, Undetermined cause (Indirect Maternal Death)	ICD-MM 8
i	Coincidental Cause	ICD-MM 9

SECTION 8: RESPONSE PLAN IN THE HOSPITAL (To be done by the Hospital MPDSR Committee)

Avoidable factors identified during review	Action to be taken for the avoidable factors	Responsible person/ Dept/ Org	Timeline for the action to be completed	To be monitored by	Remarks
			DD / MM / YYYY		
			DD / MM / YYYY		
			DD / MM / YYYY		
			DD / MM / YYYY		
			DD / MM / YYYY		
			DD / MM / YYYY		

Note: The request for necessary action at the community level has to be sent formally through Local level.

Attendance in MPDSR Committee Meeting

SN	Name	Designation	Institution/ Dept	Phone	Signature

Date of form filled by case attending staff (Nepali date)	☐☐ ☐☐ ☐☐☐☐ Day Month Year
Date of review by facility MPDSR committee (Nepali date)	☐☐ ☐☐ ☐☐☐☐ Day Month Year

Staff who completed this review form:

Name: _____ Designation:_____
Phone Number:_____ Signature: _____

Thank You

S.N	Ethnicity	Code		S.N	Ethnicity	Code
1	Dalit	01		4	Muslim	04
2	Janajati	02		5	Brahmin/Chhetri	05
3	Terai Madhesi Caste Group	03		6	Others	06

ICD-MM Reference Aid

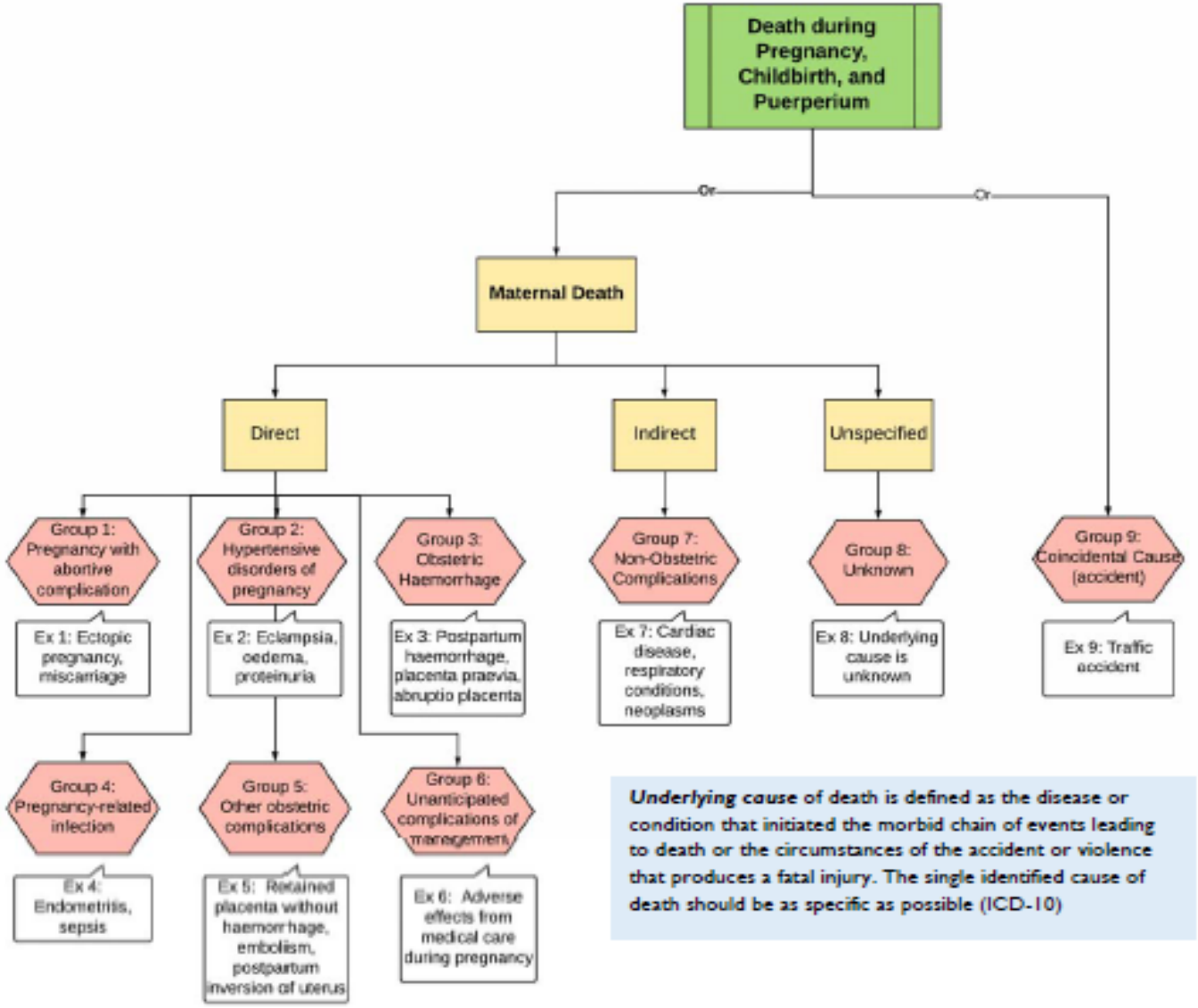
Groups of the Underlying Cause of Death during Pregnancy, Childbirth, and Puerperium

Definitions of deaths

Death occurring during pregnancy, childbirth and the puerperium is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.

Maternal death
A maternal death is 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 (irrespective of the duration and the site of the pregnancy).

Late maternal death
A late maternal death is the death of a woman from direct or indirect causes more than 42 days but less than one year after termination of pregnancy.



Underlying cause of death is defined as the disease or condition that initiated the morbid chain of events leading to death or the circumstances of the accident or violence that produces a fatal injury. The single identified cause of death should be as specific as possible (ICD-10)

Annex 4: PDR Form

MPDSR Tool 5

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

PERINATAL DEATH REVIEW FORM

CONFIDENTIAL
This form will be kept confidential and used only for quality of care improvement and collective statistical purposes and not for medicolegal purposes

Perinatal deaths include death of a baby from 28 weeks of gestation (or baby weighing at least 1000 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 program reform across the country.

Personal identifiable information in 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 doctors / nursing staff in consultation with other staff who had contact with the mother/infant. All available records related to the deceased should be reviewed.

PDR Summary form should be filled for monthly death review and action plan developed by the hospital MPDSR Committee. The completed PDR summary forms should be made accessible to Family Welfare Division through web-based data entry.

SECTION 1: DETAILS OF MOTHER OF THE DECEASED

101	Name of the mother: _____	101 a. Hospital ID: ☐☐☐☐☐☐☐☐ ***(Enter mother's ID, but If baby was admitted in this hospital, enter baby's ID)***	
102	**Current address:** District: _____ ☐☐ Local level: _____ ☐☐☐ Ward number: ☐☐ Contact number: ☐☐☐☐☐☐☐☐☐☐		
103	Date of admission (Nepali date) ***(If baby was delivered in this hospital)***	☐☐ Day ☐☐ Month ☐☐☐☐ Year	
104	Time of admission (12 hour format) ***(If baby was delivered in this hospital)***	☐☐ : ☐☐ **AM / PM** Hour Minute	
105	Ethnicity (Specify)_____	Code: ☐☐ ***(Refer to Annex for ethnicity codes)***	
106	Maternal age in completed years ***(Write '98' if Don't Know)***	Years: ☐☐	
107	Gravida: ☐☐ ***(Write '98' if Don't Know)***	108	Parity: ☐☐ ***(Write '98' if Don't Know)***
109	Did she receive any Antenatal care during this pregnancy?	Yes	**1**
		No ***(Go to 111)***	**2**
		Don't Know ***(Go to 111)***	**3**
110	If yes, did she have her ANC as per National protocol	Yes	**1**
		No	**2**
		Don't Know	**98**

111	Did she have any perinatal deaths during her previous pregnancies?	Yes	**1**
		No	**2**
		Don't Know	**98**
112	If yes, specify the number of previous perinatal deaths	☐☐	
113	Any co-existing maternal conditions	No maternal condition present / identified	1
		Diabetes	2
		Hypertension	3
		Hypo/Hyperthyroidism	4
		Severe anemia	5
		Other Chronic illness	6
		Others (Specify)_____	96
114	Obstetric condition of mother at admission	Not in labor	1
		Latent phase of labor	2
		Active phase of labor	3
		Third stage of labor	4
		Post-partum	5
115	Provisional diagnosis of mother at the time of admission **(Specify in BLOCK LETTERS)**	_____	
116	Place of delivery **(Specify in BLOCK LETTERS)**	_____	
117	Mode of delivery	Vaginal delivery ***(Go to 119)***	1
		Vacuum	2
		Forceps	3
		Breech	4
		Caesarean Section	5
		Destructive operation	6
		Others (Specify)_____	96
118	If other than vaginal delivery, specify the main reason **(Specify in BLOCK LETTERS)**	_____	
119	Condition of baby at birth	Normal	1
		Asphyxiated	2
		Stillborn	3
		Others (Specify)_____	96

SECTION 2: DETAILS OF THE BABY

201	Gestational age	Weeks: ☐☐	Days: ☐☐	
202	Birth weight (in grams)	☐☐☐☐ Grams		
203	Sex of the baby	Male	Female	Ambiguous
		1	2	3
204	Singleton or multiple birth	Singleton		1
		Multiple		2
		Baby number: _____		

205	Date of delivery ***(Nepali date)***	☐☐ Day ☐☐ Month ☐☐☐☐ Year	
206	Time of delivery ***(12 hour format)***	☐☐ : ☐☐ **AM / PM** Hour Minute	
207	Type of death	Fetal Death ***(Go to 210)***	1
		Early Neonatal Death (within first 7 days of birth)	2
208	If Early Neonatal Death (ENND), Date of death ***(Nepali date)***	☐☐ Day ☐☐ Month ☐☐☐☐ Year	
209	If Early Neonatal Death (ENND), Time of death ***(12 hour format) (Go to 301)***	☐☐ : ☐☐ **AM / PM** Hour Minute	
210	If Fetal death, type of death	Antepartum fetal death (Macerated)	Intrapartum fetal death (Fresh Still birth)
		1	2
211	If Fetal death, was Fetal Heart Sound (FHS) present when mother was admitted	Yes	1
		No	2

SECTION 3: CLINICAL INFORMATION OF DECEASED BABY

301	**Relevant events summary for fresh still birth and neonatal deaths *[please write about the complication, diagnosis, investigations, procedures, IV therapy and drugs]* (If delivered at this hospital, labor and newborn management; if new admission, condition and management on and after admission)**

Date	Time	Gestational / Postnatal age	Events

	Type of Delays	Avoidable factors	
302	Delay 1: Delay in deciding to seek care ***(Multiple Response)***	Unaware of the warning signs	1
		Lack of decision to go to health facility	2
		Did not know where to go to seek health care	3
		Reliant on traditional practice / medicine	4
		Had no one to take care of other children	5
		Financial constraints	6
		Others (Specify) _____	96
303	Delay 2: Delay in reaching health care facility ***(Multiple Response)***	Unavailability of transport	1
		Transport too expensive	2
		No facility within reasonable distance	3
		Lack of road access	4
		Others (Specify) _____	96
304	Delay 3: Delay in receiving appropriate treatment / management ***(Multiple Response)***	Delayed arrival from referring facility	1
		Delay in providing appropriate intervention	2
		Lack of appropriate intervention	3
		Lack of medicine, equipment and supplies	4
		Absence of trained human resource	5

		Lack of inter- department communication	6
		Poor documentation	7
		Others (Specify)_____	96
305	Factors relating to referral system ***(Multiple Response)***	Lack of effective communication from referring facility	1
		Delayed transfer of patients to appropriate treatment centre	2
		Unable to refer due to:	
		- Financial constraints	3
		- Lack of transportation	4
		- Patient party's denial for referral	5
		- Others (Specify)_____	96

SECTION 4: CAUSE OF DEATH

403	**ICD-PM Classification of death**		
403a	Fetal death main cause – Antepartum Death **(A- Antepartum Deaths)**	Congenital malformations, Deformation, Chromosomal abnormalities	A1
		Infection	A2
		Antepartum Hypoxia	A3
		Other specified Antepartum disorders	A4
		Disorders related to fetal growth	A5
		Antepartum death of unspecified cause	A6
403b	Fetal death main cause – Intrapartum Deaths **(I- Intrapartum Deaths)**	Congenital malformations, Deformation, Chromosomal abnormalities	I1
		Birth trauma	I2
		Acute Intrapartum event	I3
		Infections	I4
		Other specified Intrapartum disorders	I5
		Disorder related to Fetal growth	I6
		Intrapartum death of unspecified cause	I7
403c	Fetal death main cause – Neonatal Deaths **(N- Neonatal Deaths)**	Congenital malformations, Deformation, Chromosomal abnormalities	N1
		Disorder related to fetal growth	N2
		Birth trauma	N3
		Complications of intrapartum events	N4
		Convulsions and disorders of cerebral status	N5
		Infections	N6
		Respiratory and cardiovascular disorders	N7
		Other neonatal conditions	N8
		Low birth weight and prematurity	N9
		Miscellaneous	N10
		Neonatal death of unspecified cause	N11
403d	Maternal Conditions associated with fetal death **(M- Maternal Conditions)**	Complications of placenta, cord and membrane	M1
		Maternal complications of pregnancy	M2
		Other complications of labor and delivery	M3
		Maternal medical and surgical conditions; Noxious influences	M4
		No maternal condition identified (Healthy mother)	M5

404 ICD-PM Classification of death	_____

Date of form filled by case attending staff (Nepali date)	☐☐ ☐☐ ☐☐☐☐ Day Month Year

Staff who completed this review form:

Name:_____Designation:_____

Phone Number:_____

Thank You

SN	Ethnicity	Code		SN	Ethnicity	Code
1	Dalit	01		4	Muslim	04
2	Janajati	02		5	Brahmin/Chhetri	05
3	Terai Madhesi Caste group	03		6	Others	06

Annex 5: PDR Summary Form

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

MPDSR Tool 6

This form will be kept confidential and used only for quality of care improvement and statistical purposes and not for medicolegal purposes

Summary of Hospital Perinatal Death Review Form

Name of facility: _____ **District:** _____ **Local level:** _____

1. Report for:

MM	YY

2. Maternal Deaths: _____

3. Total Deliveries: _____ **4. Total live Births:** _____ **5. Total Multiple births:** _____

6. Still Births (SB):

Macerated SB	Fresh SB (FHS present when mother admitted)	Fresh SB (FHS absent when mother admitted)	Total Still Births

7. Early NND:

ENND ≤ 1 day	ENND > 1 day	Total ENND

8. Total perinatal Deaths (SB + ENND):

Total Perinatal Deaths

9. Birth Weight (Gms):

<1000 gms	1000-1500 gms	1501-2499 gms	2500-4000 gms	>4000 Gms	Unknown

10. Gestational Age (weeks):

<28 weeks	28-32 weeks	33-36 weeks	37-41 weeks	>=42 weeks	Unknown

11. Delivered at:

This facility	Other facility	Home	On the way	Unknown

12. Maternal age (Yrs):

<20 yrs	20-35 yrs	>35 yrs	Unknown

13. Antenatal care:

No ANC	ANC as per National Protocol	ANC NOT as per National Protocol	Unknown

14. Pregnancy:

Single	Multiple

15. Co-existing Maternal Condition:

Yes	No

16. Sex of Babies:

Male	Female	Ambiguous

17. Ethnicity:

Dalit	Disadvantaged	Terai Madhesi	Muslim/churoute	Relatively advantaged janajati	Upper caste (Brahmin /

18. ICD-PM classification of death

Maternal condition	Complications of placenta, cord and membranes (M1)	Maternal complications of pregnancy (M2)	Other complications of labor and delivery (M3)	Maternal medical and surgical conditions; Noxious influences (M4)	No maternal condition identified (Healthy mother) (M5)	Other	Total
Antepartum Death (A)							
Congenital malformations, Deformations and Chromosomal abnormalities **(A1)**							
Infection **(A2)**							
Antepartum Hypoxia **(A3)**							
Other specified Antepartum disorder **(A4)**							
Disorders related to fetal growth **(A5)**							
Antepartum death of unspecified cause **(A6)**							
Intrapartum death (I)							
Congenital malformations, Deformations and Chromosomal abnormalities **(I1)**							
Birth trauma **(I2)**							
Acute Intrapartum event **(I3)**							
Infections **(I4)**							
Other specified Intrapartum disorder **(I5)**							
Disorders related to Fetal growth **(I6)**							
Intrapartum death of unspecified cause **(I7)**							
Neonatal death (N)							
Congenital malformations, deformations and chromosomal abnormalities **(N1)**							
Disorders related to fetal growth **(N2)**							
Birth trauma **(N3)**							
Complications of intrapartum events **(N4)**							
Convulsions and disorders of cerebral status **(N5)**							
Infections **(N6)**							
Respiratory and cardiovascular disorders **(N7)**							
Other neonatal conditions **(N8)**							
Low birth weight and prematurity **(N9)**							
Miscellaneous **(N10)**							
Neonatal death of unspecified cause **(N11)**							

19. Avoidable factors according to three delay model

Delay 1: Delay in deciding to seek care ***(Multiple Response)***	Unaware of the warning signs	
	Lack of decision to go to health facility	
	Did not know where to go to seek health care	
	Reliant on traditional practice / medicine	
	Had no one to take care of other children	
	Financial constraints	
	Others (Specify) _____	
Delay 2: Delay in reaching health care facility ***(Multiple Response)***	Unavailability of transport	
	Transport too expensive	
	No facility within reasonable distance	
	Lack of road access	
	Others (Specify) _____	
Delay 3: Delay in receiving appropriate treatment / management ***(Multiple Response)***	Delayed arrival from referring facility	
	Delay in providing appropriate intervention	
	Lack of appropriate intervention	
	Lack of medicine, equipment and supplies	
	Absence of trained human resource	
	Lack of inter- department communication	
	Poor documentation	
	Others (Specify)_____	
Factors relating to referral system ***(Multiple Response)***	Lack of effective communication from referring facility	
	Delayed transfer of patients to appropriate treatment centre	
	Unable to refer due to:	
	Financial constraints	
	Lack of transportation	
	Patient party's denial for referral	
	Others (Specify)_____	

20. Action plan for reducing perinatal deaths:

Avoidable factors identified during review	**Action to be taken**	**Responsible person/dept/org**	**Timeline (Date)**	**To be monitored by**	**Remarks**
			_ _/_ _/_ _ _ _ **DD MM YYYY**		
			_ _/_ _/_ _ _ _ **DD MM YYYY**		

List of participants in monthly MPDSR review meeting:

SN	**Name**	**Position**	**Phone**	**Signature**

Date of review by facility MPDSR committee (Nepali date)	☐☐ ☐☐ ☐☐☐☐

Annex 6: HMIS Caste / Ethnicity Groups and Codes

कोड	समूह		
१	दलित	पहाड	१. बिश्वकर्मा (कामि, सुनार, ओड़, चुनँरा, पार्की, टमटा), २. परियार (दमाई, दर्जी, सुचिकार, नगर्ची, ढोली, हुडरके), ३. सार्की, (मिजार, चर्मकार, भुल), ४. गन्धर्व, ५. बादी.
		तराई	६. कलर, ७. ककैहिया, ८. कोरी, ९. खटिक, १०. खत्वे (मण्डल, खङ्ग), ११. चमार (राम, मोची, हरिजन, रविदास), १२. चिडिमार, १३. डोम (मरिक), १४. तत्मा (ताती, दास), १५. दुसाध (पासवान, हजरा), १६. धोबी (रजक, हिन्दु), १७. पत्थरकट्टा, १८. पासी, १९. वाँतर, २०. मुसहर, २१. मेस्तर (हलखोर), २२. सरभङ्ग (सरवरिया), २३. सोनार, २४. लोहार, २५. नटवा
२	पहुँच नभएका जनजाति	पहाड	१. शेर्पा, २. भोटे, ३. थकाली, ४. व्याँसी, ५. वालुङ, ६. छैरोतन, ७. डोल्पो, ८. ताङवे, ९. तिन्गाउँले थकाली, १०. तोप्केगेल, ११. बाह्रगाउँले थकाली, १२. मार्फाली थकाली, १३. मुगाली, १४. ल्होपा, १५. ल्होमी (शिङसावा), १६. सियार (चुम्बा), १७. थुदाम, १८. मगर, १९. तामाङ, २०. नेवार, २१. राई, २२. गुरुङ, २३. लिम्बु, २४. भुजेल, २५. सुनुवार, २६. चेपाङग, २७. थामी, २८. याख्खा, २९. पहरी, ३०. छन्त्याल, ३१. जिरेल, ३२. दुरा, ३३. लेप्चा, ३४. हायु, ३५. ह्योल्मो, ३६. कुश्बाडिया, ३७. कुशुण्डा, ३८. फ्री, ३९. वनकरिया, ४०. बारामो/बारामु, ४१. लार्के, ४२. सुरेल, ४३. कुमाल, ४४. माझी, ४५. दनुवार, ४६. दराई, ४७. बोटे, ४८. राजी, ४९. राउटे
		तराई	५०. थारु, ५१. धानुक, ५२. राजबंशी (कोच), ५३. सतार (सन्थाल), ५४. झाँगड, ५५. गनगाई, ५६. धिमाल, ५७. ताजपुरिया, ५८. मेछे (बोडो), ५९. किसान
३	तराई मधेशी		१. यादव, २. तेली, ३. कलयार, ४. सुढ़ी, ५. कोइरी, ६. कुर्मी, ७. कानु, ८. हलुवाई, ९. हजाम/ठाकुर, १०. बढही, ११. राजभर, १२. केयट, १३. मल्लाह, १४. नुनिया, १५. कुम्हार, १६. कहर, १७. लोध, १८. विड/ विण्डा, १९. गडेरी/ भेडीहयार, २०. माली, २१. कामर, २२. धुनिया, २३. वराय, २४. मुण्डा, २५. बडाइ, २६. पन्जावी, २७. बंगाली, २८. अमात, २९. कथावानीया, ३०. राज्धोब, ३१. कुशवाहा
४	मुस्लिम		१. मुस्लिम, २. चुरौटे
५	तुलनात्मक रुपले पहुँच भएका जनजाति		१. नेवार २. थकाली ३. गुरुङ
६	उपल्लो जातिय समूह		१. ब्राह्मण, २. क्षेत्री (पहाड) ३. ठकुरी ४. सन्यासी/दशनामी ५. तराई ब्राह्मण ६. राजपुत ७. कायस्थ ८. मारवाडी ९. जैन १०. बानिया ११. नुराङ १२. बंगाली

Maternal and Perinatal Death Surveillance and Response Activities at Hospitals

Name of Hospital: Address:

Date of supervision: MM / YYYY to MM / YYYY

SN	Requirements	Yes	No	Remarks
1.	MPDSR Committee			Number of meetings conducted:
2.	Data			
	Total deliveries			Number:
	Total live births			Number:
	Total maternal deaths			Number:
	Total still births			Number:
	Total early neonatal deaths (upto 7 days after birth)			Number:
3.	Maternal Death Review			
	MDR Form filled within 24 hours of all maternal deaths			Number:
	MPDSR Review committee meeting within 72 hours of each maternal death			Number:
	Action Plans developed after each maternal death review			Number:
	Action Plans implemented after each maternal death review			Number:
	Action plan followed up in next MPDSR review meeting			Number:
4.	Perinatal Death Review			
	PDR Form filled within 72 hours of all stillbirths and early neonatal deaths			Number:
	Monthly MPDSR Review committee meeting to review perinatal deaths			Number:
	Action Plans developed after each monthly perinatal death review			Number:
	Action Plans implemented after monthly perinatal death review			Number:
	Action plans followed up in next Monthly meeting			Number:
5.	Reporting			
	MDR forms entered in web-based system			Number:
	PDR Summary forms entered in web-based system			Number:
6.	Logistics			
	MPDSR Guideline			
	MDR form			
	PDR form			
	PDR summary form			

Indicators required:

a.
b.
c.
d.
e.

Issues identified:

a.
b.
c.
d.
e.

Actions advised:

a.
b.
c.
d.
e.

Lessons learned:

a.
b.
c.
d.
e.

Supervisor's Full name : **Position**:

Name of Health facility:

Maternal and Perinatal Death Surveillance and Response Activities at Local level

Name of facility: **Address** :

SN	Requirements	Yes	No	Remarks
1.	MPDSR Committees at Health Facility			
2.	FCHV orientation on MPDSR			
	Data (FY …. / … Shrawan to Asar)			
1.	Total deaths notified			Number:
2.	Total deaths screened			Number:
3.	Total pregnancy-related deaths identified			Number:
4.	Total VA conducted			Number:
5.	Cause of death identified from VA			Number:
6.	Cause of deaths			a. b. c. d. e.
7.	Local level MPDSR Committee meeting conducted			Number:
8.	Action plans developed after review meeting			Number:
9.	Action Plans implemented			Number:
10.	Action plans implemented:			
a				
b				
c				
d				
e				
	Reporting			
1	Notification forms entrered in MPDSR web-based system			Number:
2.	Screening forms entrered in MPDSR web-based system			Number:
3.	VA forms entered in MPDSR web-based system			Number:
	Logistics			
1.	MPDSR Guideline			
2.	Notification form			
3.	Screening form			
4.	VA form			

Issues identified:

a.
b.
c.
d.
e.

Lessons learned:

a.
b.
c.
d.
e.

Impact of implementing action plans:

a.
b.
c.
d.
e.

Supervisor's Full name : **Position**:

Name of Health facility: