Maternal and Neonatal Death Review System

A Manual for Health Workers in Eastern Visayas

March 2012

DOH/JICA/ IC Net Limited/HANDS

TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric and Neonatal Care
BHS	Barangay Health Station
BHWs	Barangay Health Workers
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CHO	City Health Office
CHT	Community Health Team
CHW	Community Health Workers
CMMNC	Community Managed Maternal and Newborn Care
C/P	Counterpart
CR	Civil Registry
CRT	City Review Team
DHC	District Health Center
DHO	District Health Officer
DOH	Department of Health
DOH-CHD EV	Center for Health Development Eastern Visayas Office
EC (ExeCom)	Executive Committee
EmONC	Emergency Obstetric and Neonatal Care
EVRMC	Eastern Visayas Regional Medical Center
FHSIS	Field Health Service Information System
FHC	Family Health Cluster (in DOH-CHD EV)
GRP	Government of the Republic of the Philippines
HBMR	Home-based Mother's Record (Pink Card)
ILHZ	Inter-local Health Zone
ILHZ-TMC	Inter-local Health Zone Technical Management Committee
IMR	Infant Mortality Rate
JICA	Japan International Cooperation Agency
LGU	Local Government Unit
LHSD	Local Health Support Division
MC Book	Mother and Child Book
MCH	Maternal and Child Health
MCP	Maternity Care Package
MD	Maternal Death
MDGs	Millennium Development Goals
MDR	Maternal Death Review
MNDR	Maternal and Neonatal Death Review
MHO	Municipal Health Office
MMR	Maternal Mortality Ratio
MNCHN	Maternal, Newborn and Child Health and Nutrition (Policy)
MOP	Manual of Operations (of MNCHN)
ND	Neonatal Death
NDR	Neonatal Death Review
NDHS	National Demographic Health Survey
NMR	Neonatal Mortality Rate
PHO	Provincial Health Office
PNC	Postnatal Care
PhP	Philippine Peso
PRT	Provincial Review Team
RHU	Rural Health Unit

RMC	Regional Management Committee
SHP	Skilled Health Professional
SMACHS-EV	Project for Strengthening Maternal and Child Health Services in Eastern Visayas
SSV	Supportive SuperVision
TBA	Traditional Birth Attendant
TWG	Technical Working Group
USAID	United States Agency for International Development
WHSMP2	The Second Women's Health and Safe Motherhood Project

FOREWORD

In the Philippines, more than half the pregnancies are reportedly at risk due to such causes as women experiencing more than four pregnancies or closely spaced pregnancies, i.e., less than three years' interval between pregnancies. Although the Maternal Mortality Ratio (MMR), which was 162 per 100,000 live births in 2006, is decreasing, it is still far from the national Millennium Development Goals (MDG) of 52 per 100,000 live births by 2015. Therefore, the Government of the Republic of the Philippines (GRP) needs to reduce the MMR at a faster rate to achieve the national MDGs. However, the outlook for achieving them in five years is not promising. Meanwhile, the under-five mortality rate and the Infant Mortality Rate (IMR) have constantly decreased over the last 15 years. Thus, the Department of Health (DOH) predicts that it will achieve the national MDG 4 (reduction of child mortality) of 27 neonatal deaths per 1,000 live births in five years. Moreover, the DOH gives priority to a maternal and child health program and has issued the Maternal, Neonatal and Child Health and Nutrition (MNCHN) policy that focuses on improving the quality of services and delivery care. The GRP promotes enhancement of Maternal and Child Health (MCH) activities based on the MNCHN policy and its manual of operations (MOP).

A systematic review of maternal and neonatal death (MNDR) at the institutional and regional levels is a key instrument to improve the quality of maternal and neonatal health care services by identifying the causes of deaths and what could have been done to avoid each death. It enables the identification of major contributing categories, facilitates analysis, and allows consideration of possible interventions and strategies for prevention. In Leyte Province, an institutionalized Maternal Death Review (MDR) started in 2010 according to the procedures of the National MDR Guideline. MDR is now conducted quarterly as part of the quarterly ILHZ meeting. [1] However, the Neonatal Death Review (NDR) has yet to start, as the national guideline on NDR is not released. The number of neonatal deaths is more than maternal deaths, and seems underreported. It is urgent to start NDR to identify the status and causes of neonatal deaths.

From July 2010 to July 2014, the Japan International Cooperation Agency (JICA) conducts a Maternal and Child Health (MCH) project named Strengthening Maternal and Child Health Services in Eastern Visayas (SMACHS EV, or the "Project") in Leyte Province and Ormoc City. The Project aims to introduce the Basic Emergency Obstetric and Neonatal Care (BEmONC) system and improve the quality of MCH services according to the MNCHN policy. One of the project activities is to strengthen the capacity of health workers on the Maternal and Neonatal Death Review System.

In light of the state of NDR in Eastern Visayas, the Project and DOH-CHD EV agreed on the urgency to develop a Regional MNDR Guideline to integrate NDR into MDR. This MNDR Manual was developed in January 2012 in cooperation with DOH-CHD EV, the Leyte Province Health Office, and the Ormoc City Health Office.

We hope this manual will help health workers conduct effective MNDR to prevent maternal and neonatal deaths.

Director Edgardo Gonzaga
DOH-CHD EV

[1] *Maternal Death Reporting and Review System: A Guide for LGU Users* 2007. Department of Health, Philippines.

INTRODUCTION

Maternal Death Reporting and Review System: A Guide for LGU Users was released by DOH in 2007. However, NDR has not started, as there is no national guideline to integrate NDR into MDR. Both MDR and NDR are important to identify the causes of maternal and neonatal mortality and tackle them.

DOH-CHD EV developed this manual in cooperation with Strengthening Maternal and Child Health Services in Eastern Visayas (SMACHS EV), a JICA project, to start integrated Maternal and Neonatal Death Review (MNDR) in Leyte Province and Ormoc City. This manual was finalized after consultation with the Central Office of the Department of Health and incorporating the suggestion. It targets health workers who are involved in the MNDR system such as staff of DOH CHD EV, PHO/CHO, RHUs/DHCs, hospitals and midwives of BHS. They need to be familiar with the standardized procedures and tools so that they can integrate NDR into the existing MDR system and conduct the MNDR.

The contents of the manual are consistent with the national MDR guideline. Some contents are quote from the World Bank's "Maternal Death Audit as a Tool Reducing Maternal Mortality, HMP Note" and the World Health Organization's "Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer."

Procedures and stakeholders are described according to the structure and systems of Leyte Province and Ormoc City, the project target areas. Some materials such as Neonatal Death Reporting Forms have been newly developed and added.

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I. About Maternal and Neonatal Death Review

1. Objectives of MNDR[2]

The MNDR system seeks to achieve the following objectives:

- ***Generate accurate and timely maternal and neonatal mortality data.***

Reporting as soon as an event occurs helps guarantee that the report is accurate and timely. In conducting maternal and neonatal death reporting and review, it is important to determine the factors that lead to death. Thus, it is essential that the maternal and neonatal death report be made soon enough to ensure that the primary sources of such information (e.g., relatives and health workers) have not forgotten the events surrounding the death.

The use of simple and concise reporting and review tools by frontline health workers encourages the timely and comprehensive reporting of maternal and neonatal deaths. User-friendly data collection tools facilitate the reporting task and help ensure its early completion. Well thought out review tools, on the other hand, allow the Review Team to study each death more closely and analyze the events that led to it in a manner that is not threatening to health workers and relatives of the deceased.

- ***Identify major medical and non-medical causes of maternal and neonatal mortality.***

Reporting systems are usually successful in identifying the medical causes of death, but sometimes fall short in ascertaining the non-medical causes, which are just as important in preventing death. Prominent non-medical causes are usually attributable to delays in either taking action or making decisions crucial to the life-saving process.

- ***Formulate appropriate interventions to address these causes.***

A successful reporting system thrives on the actions and decisions that it stimulates. Frontline workers would be encouraged to render timely and accurate reports if they were certain that their reports would be useful to prevent further maternal deaths. It is therefore important to put in place a reporting system that leads to concrete interventions and programmatic improvements and then feeds the information on such results back into the system to make frontline workers aware of what their reports have managed to accomplish.

- ***Institute improvements in the health delivery system.***

In the analysis of the reporting and review data, it is important to take consideration of a systems-wide view. This helps ensure that the health delivery system is always consider with a critical eye to make it more responsive to the evolving health needs of the community.

[2] Taken from "Maternal death; reporting and review system, A guide for LGU users", DOH 2007

2. Definition of Maternal Death and Neonatal Death

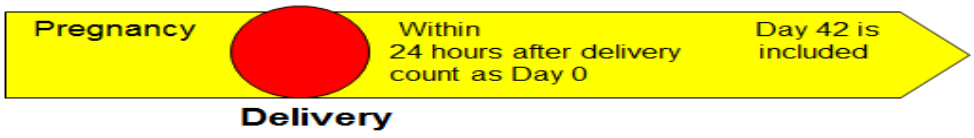
1) Definition of Maternal Death

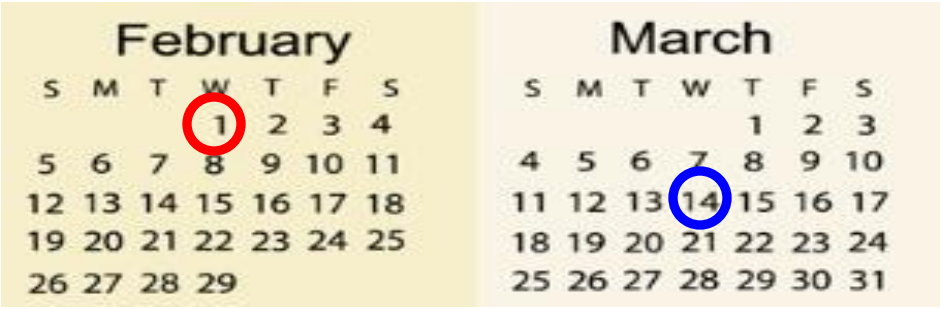
Maternal death is defined as follows:
The death of a woman while pregnant or within 42 days of the end of the pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

- This definition requires an absolute link between pregnancy and death. The woman who died could have been pregnant at the time – she died before giving birth, or she had a pregnancy that ended in a live or stillbirth, a spontaneous or induced abortion or an ectopic pregnancy within the previous six weeks. The pregnancy could have been of any gestational duration.

- The Philippine Maternal Death Reporting System will consider only the **direct causes of death. Maternal death shall define as follows**: **"Deaths resulting from obstetric complications of the pregnant state** (pregnancy, labor and puerperium), **from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of these."** (*Beyond the Numbers,* Department of Reproductive Health and Research, World Health Organization) See attachment G for your reference.

- The definition stated is consistent with the definition of maternal mortality used by the Philippine National Statistics Office (NSO) in its task of generating maternal mortality statistics as part of the NDHS: "proportion of women dying due to causes related to pregnancy, labor and puerperium for every 100,000 live births."



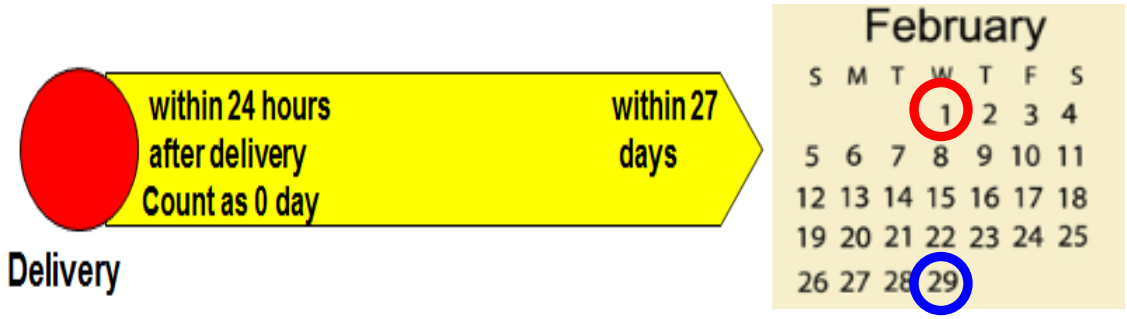


E.g. Delivered at 8 am on 1st February, 2012. (Count as Day 0)
If she dies until 7:59 am on 14th March, 2012, it is considered as maternal death.

2) Definition of Neonatal Death

Neonatal death is defined as follows:

Deaths during the first 28 completed days of life. Neonatal deaths may subdivide into early neonatal deaths, occurring during the first seven days of life, and late neonatal deaths, occurring after the seventh day but before the 28 completed days of life.



E.g. Born at 8 am on 1st February, 2012. (Count as Day 0)
If baby dies until 7:59 am on 29th February, 2012, it is considered as neonatal death.

3. Definition of Maternal Death Review (MDR) and Five Approaches MDR

Maternal Death Review is also called Maternal Death Audit. *Maternal Death Audit as a Tool Reducing Maternal Mortality*[3] provides the following definition: "A maternal death audit is an in-depth systematic review of maternal deaths to delineate their underlying health, social, and other contributory factors, and the lessons learned from such an audit are used in making recommendations to prevent similar future deaths. It is not a process for apportioning blame or shame but exists to identify and learn lessons from the remediable factors that might save the lives of more mothers in future."

There are five approaches for reviewing maternal deaths.[4]

1) *Facility-based maternal death review*
2) *Community-based maternal death review (Verbal Autopsy)*
3) *Clinical audit (Local, national, etc.)*
4) *Confidential enquiries into maternal deaths*
5) *Survey of severe morbidity (near misses)*

1) Facility-Based Maternal Death Review

A facility-based MDR is a "***qualitative, in-depth investigation of the causes of, and circumstances surrounding maternal deaths, which occur in health care facilities, especially those designated BEmONC and CEmONC facilities."*** It is particularly concerned with the identification of any factors which can be avoided and remedied and that can be changed to improve maternal care service delivery.

[3] *Maternal Death Audit as a Tool Reducing Maternal Mortality*, *HMP Note*, World Bank, March 2011
[4] *Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*. Geneva, WHO, 2004.

The facility-based review can be adequately supplemented by data from the community-based review. In general, only a small portion of maternal deaths occurs in health facilities.

The conduct of the facility-based maternal death review is primarily an educational process for skilled attendants providing care to pregnant women or women who have recently given birth. Below are details on the facility-based review.

- In-depth investigation of the causes of death and associated factors in maternal deaths that occur in health facilities.
- Entails interviews of the health personnel who attended to the deceased and family members who accompanied the deceased.
- The review is nonjudgmental to encourage the cooperation of the health workers involved.
- The purpose of the review is to provide information to improve obstetric care.

2) Community-Based Maternal Death Review (Called **Verbal Autopsy**)

A community-based maternal death review, also known as a verbal autopsy, may be conducted to review deaths at home. This may conducted as part of the facility review process to augment the information gathered from medical records and facility staff interviews. Verbal Autopsy is defined as:
"A method of finding out the medical causes of death and ascertaining the personal, family or community factors that may have contributed to the death of women outside of a facility."

- In-depth nonjudgmental investigation of the causes of death and the associated factors of maternal deaths that occur outside health facilities.
- Entails interviews to the family members who took care the deceased. This requires a community informant to let local authorities know whenever there is a death of a reproductive-age female in the community.
- The interviewer should be sensitive when probing the circumstances leading to the death. In some cultures, the interview is conducted after the mourning period.
- A CHT will report the interview to midwives of BHS. The midwives take notes of the necessary information to determine the cause of maternal death.
- Both information gathered through this review and with the facility-based review will gives a more complete picture of maternal death.

3) Clinical Audit[5]

This entails a systematic review or audit of the obstetric care provided to pregnant women against established protocols or criteria aimed at improving the quality of care.

- Protocols for the management of obstetric complications have to establish beforehand in order to ascertain whether cases are properly manage at health

[5] *Maternal Death Audit as a Tool Reducing Maternal Mortality, HMP Note,* World Bank, March 2011

facilities.
- If well implemented, it leads to standardized and improved care across health facilities.

4) **Confidential Inquiries into Maternal Deaths**[6]

A national or sub-national multidisciplinary committee meets periodically to systematically investigate a representative sample of (or all) maternal deaths to identify the causes and associated factors; the committee then gives written guidelines to health personnel and administrators on how to prevent similar deaths in the future.

- The investigation is carry out in a confidential manner ("No blame, no shame").
- This requires a complete and functioning civil registration or health management information system.
- A sub-national or district-level panel might be more appropriate in countries with high mortality, so that the guidelines issued can be tailored to local situations.

5) **Survey of Severe Morbidity (Near Misses)**[7]

A near-miss event refers to one in which a woman has nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy.

- In-depth investigation of the factors that led to the near miss, what worked well in the treatment of the life-threatening complications, and the lessons learned.
- Unlike the other approaches, in this case, the pregnant woman herself will also interviewed, creating the opportunity to obtain more insight into the circumstances.
- This survey is less threatening to health personnel than the other approaches, since the women have survived.

How to select the right approach

To decide which approach is appropriate, consider which level is appropriate for the review and what kind of case will be studied. Table 1 shows appropriate approaches by level and case. Facility-Based Maternal Review for health facilities and Community-Based Maternal Death review for communities are mainly practice in the RHU/DHC level of MNDR. Local Clinic Audit is practice in CEmONC hospitals such as EVRMC and DH/PH.

[6] Ibid.
[7] Ibid.

Table 1[8]: Matrix on MNDR

Outcome / Level	**Maternal deaths**	**Severe complications**	**Clinical practice**
Community	**Verbal autopsy**	No	No
Facility	**Facility-based death review**	Case review of near-misses	**Local clinic audit**
National/Regional/ District	Confidential inquiries into maternal deaths	Confidential inquiries into near-misses	National clinical audit

4. Cycle of MDR

The MDR cycle consists of the following five components: identification of maternal death cases; data collection; analysis of findings; plan of action; and evaluation and refinement.

"Identification of maternal death cases" and "data collection" can be done during case identification and reporting which details is explained in Chapter II. "Analysis of findings" and "plan of action" can be done during MNDR which details are explained in "Chapter III: Evaluation and refinement." "Evaluation and refinement" can be done during regular supportive supervision and MDR before reviewing new death cases.

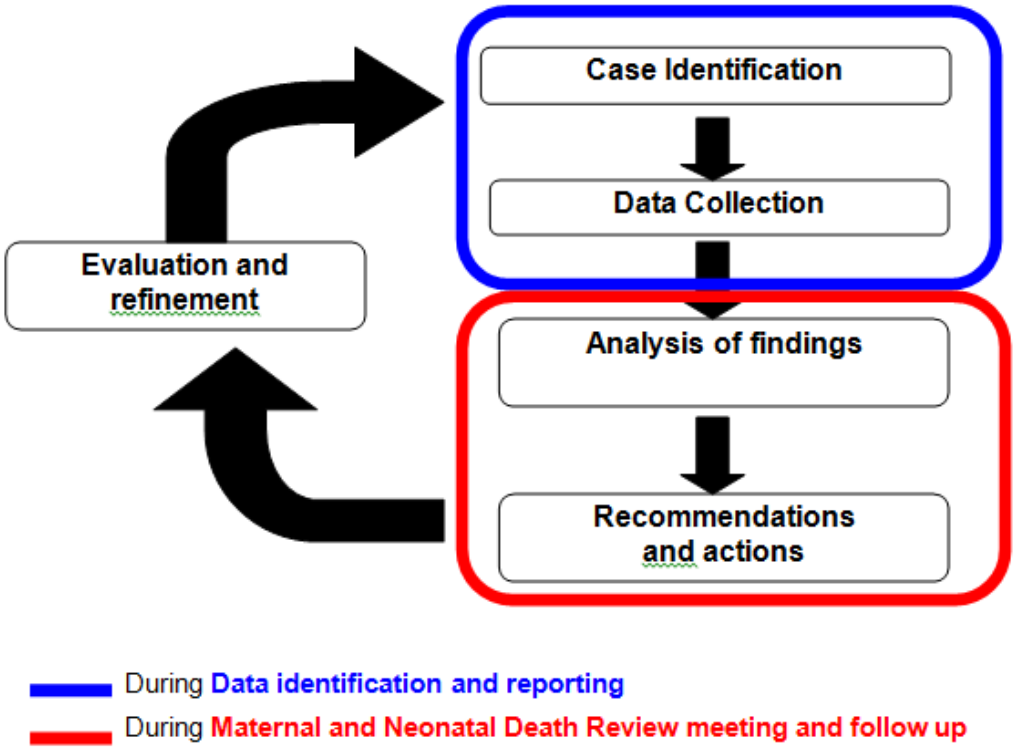
Some concerns are presented in the following table. The most important points are that some actions will be taken to decrease death cases according to plan, and that the plan is modified appropriately if necessary. All are continuous steps and compose one cycle.

	Steps	Concerns
a	Identification of maternal deaths	This can be difficult where many deaths take place outside health facilities. Even in health facilities, maternal deaths in other wards other than the maternity ward can be missed.
B	Data collection	Data can be collected from many sources such as hospital registers, case notes, referral letters and interviews with family members and relatives.
C	Analysis of findings	Data is analyzed to identify the causes of maternal deaths and avoidable factors.

[8] *Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*. Geneva, WHO, 2004.

D	Recommendations and actions	Recommendations are made to implement changes that will prevent the occurrence of similar deaths in the future. Plan of concrete actions and feedback of the result of MNDR are still weak.
e	Evaluation and refinement	The implementation of recommendations is followed up and evaluated and refined, if necessary.

Figure 1: MDR Cycle [9]



5. Integration of NDR into MDR

MDR had been institutionalized in Leyte Province since 2010 and been conducted to review all maternal death cases. However, NDR has not started.

NDR can be integrated into MDR as MNDR because the process of NDR is essentially the same with the MDR. These can be done upon solving some problems in starting and integrating that includes the following:

- Neonatal death cases seem underreported.
- The number of neonatal deaths is higher than that of maternal ones. Therefore, it is too time consuming and unrealistic to review all neonatal deaths.

[9] *Beyond Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*. Geneva, WHO, 2004

Therefore, the following are the recommendations:

- Strengthen CHT's capacity to track pregnant women to decrease underreported cases.
- Select several neonatal cases and start presenting them in the existing MDR. Selection of cases for presentation can be done through consultation with the Province/City Review Teams.

How to select neonatal death cases for presentation?

- Neonatal death that occurred together with a maternal death
- Neonatal death that occurred due to the failure to follow up on a high-risk pregnancy
- Neonatal death that occurred due to tetanus
- Neonatal death that occurred due to avoidable factors. (e.g.Sepsis, birth asphyxia, respiratory distress syndrome, severe birth injury etc.)

6. Presentation of "Near misses" cases (Future lessons)

According to the World Health Organization, if a woman has any of the conditions below during pregnancy, childbirth or within 42 days of termination of pregnancy and survives, she is considered as a maternal near miss case.
Several advantages of investigating near miss events over events with fatal outcome

- More common than maternal deaths'
- Useful information on the same pathways that lead to severe morbidity and death,
- Investigation is less threatening to providers as the woman survived.
- Direct interview is possible on the care they received.
- Review of near miss cases are also good opportunities for learning.
- Useful to get the whole picture of maternal disability.

Identification criteria

According to the World Health Organization, if a woman has any of the conditions below during pregnancy, childbirth or within 42 days of termination of pregnancy and survives, she is considered as a maternal near miss case.

Cardiovascular dysfunction

a) Shock
b) Cardiac Arrest
c) Severe hypoperfusion (lactate >5 mmol/L or >45 mg/dL)
d) Severe acidosis (pH<7.1)
e) Use of continuous vasoactive drugs
f) Cardio-pulmonary resuscitation

Respiratory dysfunction

g) Acute cyanosis
h) Gasping
i) Severe tachypnea (respiratory rate>40 breaths per minute)
j) Severe bradypnea (respiratory rate<6 breaths per minute)
k) Severe hypoxemia (O2 saturation <90% for ≥60min or PAO2/FiO2<200)
l) Intubation and ventilation not related to anaesthesia

Renal dysfunction

m) Oliguria non responsive to fluids or diuretics

n) Severe acute azotemia (creatinine >300umol/ml or >3.5 mg/dL)
o) Dialysis for acute renal failure

Coagulation dysfunction

p) Failure to form clots
q) Severe acute thrombocytopenia (<50,000 platelets/ml)
r) Massive transfusion of blood or red cells (≥ 5 units)

Hepatic dysfunction

s) Jaundice in the presence of pre-eclampsia
t) Severe acute hyperbilirubinemia (bilirubin>100umol/L or >6.0 mg/dL)

Neurologic dysfunction

u) Prolonged unconsciousness or coma (lasting >12 hours)
v) Stroke
w) Uncontrollable fit / status epilepticus
x) Global paralysis

Uterine dysfunction

y) Hysterectomy due to uterine infection or haemorrhage

Neonatal near miss:
In neonatal cases, these include severe hyperbilirubinemia, traumatic birth injuries, falls in health facilities and severe milk allergies etc.

7. Ethical considerations[10]

The following ethical issues need to be considered when investigating maternal and neonatal deaths.

1) Autonomy
   - Women and the family should be fully informed about the purpose of the investigation.
   - Their participation is voluntary.
   - They can end an interview at any time.

2) Privacy
   - Relatives and health workers must be assured that their privacy will be maintained.
   - The identities of women and babies including information of their families whose deaths will be investigated must be kept confidential.
   - Data collection forms such as Death Reporting Forms should contain identifiable personal information. However, materials that are shared in MNDR must not contain any identifiable personal information such as name or address.
   - The names of the attending health personnel and the facility must not be identified during the case presentation.

[10] *Beyond Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*. Geneva, WHO, 2004

II. Roles and Responsibilities of stakeholders in the MNDR System

Doctors and midwives of BHSs, RHUs, DHCs and hospitals play the main roles on site in the MNDR system, especially in reporting and review meetings. PHO and CHO function as the secretariat of the MNDR Team that will organize and facilitate many aspects of the system including MND data management. CHT is also involved in the system as the first reporter of death.
This chapter describes the roles and responsibilities of doctors and midwives of BHS, RHUs, DHCs and hospitals, as well as the procedures of reporting and review meetings. It also clarifies the roles of PRT/CRT and CHT.

1. Roles and Responsibilities of CHD

The Local Health Support Division, especially the Family Health Cluster of the Center for Health Development (CHD) takes the role of overall technical advisors. They interpret and disseminate government policies in the region.

- Maintain and share the regional maternal and neonatal database in the region.
- Provide technical assistance to PRT/CRT in the conduct of MNDR and analysis of data
- Conduct regional MNDR regularly

2. Roles and Responsibilities of Review Teams

a) PRT/CRT

The Provincial Review Team (PRT)/City Review Team (CRT) are organized to conduct a periodic review of maternal and neonatal deaths in the province/city. The review leads ultimately to an evidence–based programming and budgeting process that will help develop more responsive women's health and safe motherhood program.

Members:

- PHO /CHO-Team Leader
- Technical Secretariat (MNCHN Coordinator of PHO/CHO)
- Center for Health Development (CHD) Representative
- Province/City DOH Representative
- Private Practitioners (preferably an obstetrician-gynecologist)
- CEmONC doctors (OB, pediatrician, neonatologist)
- BEmONC doctors
- One representative from each Inter-Local Health Zone (ILHZ)

<u>Roles and Responsibilities</u>

- Review on a quarterly basis maternal and neonatal death reports compiled by the Technical Secretariat.
- Ascertain the accuracy of the CHT/Facility Maternal/Neonatal Death Reports, particularly the medical and non-medical causes of death.

- Formulate a work plan, which lays out review activities within the review time frame and the deployment of the PRT members across these activities.
- Facilitate the conduct of MNDR at the ILHZs/city.
- Provide baseline information for the review
- Identify possible improvements in the health delivery system that could be undertaken to reduce maternal and neonatal morbidity and mortality.
- Help ensure the implementation of the actionable items and follow through.
- Guide subsequent review efforts by providing a historical account of implementation results.

b) PHO/CHO

Roles and Responsibilities

The PHO/CHO plays key roles in the management of reports and data, and conducts regular monitoring and evaluation of the MNDR plan. As they are the team leaders of PRT/CRT, the main roles of PHO/CHO are the same as the PRT/CRT. The following are additional roles:

- Ascertain the accuracy of reports and data through review of the reports.
- File original death reports and updating of database.
- Conduct data processing to find out trends of maternal and neonatal deaths

c) ILHZ

Roles and Responsibilities

- Organize and conduct ILHZ-based MNDR quarterly. The ILHZ TMC will select cases for review, and call and facilitate meetings.
- Receive Maternal/Neonatal Death Reporting Forms from the member RHUs/Hospitals and send them to PHO. Furnish copy to RHUs/DHCs to share information within ILHZ TMC members. Keep a copy of the forms at the ILHZ for MNDR.
- Circulates minutes of MNDR every after the review.
- Summarize and share experiences of RHUs/Hospitals during the Provincial MNDR.
- Request EVRMC in sharing needed information on maternal and neonatal deaths.
- Develop and implement ILHZ action plan.

3. Roles and Responsibilities of the Facilities

a) EVRMC (Regional Hospital)

Roles and Responsibilities

Doctors and nurses at EVRMC play key roles in giving technical advice in the conduct of MNDR, reporting of deaths in the regional hospital, and sharing information of the deaths to other health facilities and organizations upon request.

- Write a report by using Facility Maternal/Neonatal Death Reporting Form and submit it to the Tacloban City Health Office.
- Issue and give the Death Certificate to the relatives and advise them to register the death.
- Share information on maternal and neonatal deaths (MND) with other health facilities.
- Provide feedback on MND cases to the referring facilities.
- Participate in regional/provincial/ILHZ/City MNDR (Obstetrician/Gynecologist, pediatrician, neonatologist) to give technical inputs.
- Present death cases in MNDR. In case of a referral, work with referring facilities to present cases.
- Develop and implement the action plan at EVRMC.
- Conduct monthly clinical audit in EVRMC.

b) Provincial /District Hospital

Roles and responsibilities

Doctors, nurses, and midwives of Provincial/District Hospitals are responsible for in reporting deaths in the facilities, facilitating MNDR, and providing technical advice.

- Write a report using the Facility Maternal and Neonatal Death Reporting Form for deaths in the hospitals.
- Issue and give Death Certificate to relatives and advise them to register the death.
- Report to the ILHZ chairperson all maternal and neonatal deaths.
- Facilitate regular ILHZ-based MNDRs (Chief of Provincial/District Hospitals).
- Present death cases in the MNDR. For case referrals, collaborate with referring facilities to present cases.
- Give technical inputs during MNDR.
- Develop and implement recommended interventions in the hospitals.
- Conduct monthly Clinical Audit in the hospitals.

c) RHUs/DHCs and Municipal/Community Hospitals

Roles and responsibilities

Doctors, nurses, and midwives of RHUs/DHCs and MHs/CHs are responsible for reporting deaths in the facilities.

- When a death occurs in a facility, make a report using Facility Maternal/ Neonatal Death Reporting Form.
- When a death occurs in the community, consolidate and validate the accuracy of the CHT Maternal/Neonatal Death Report from the BHS. (RHUs/DHCs only)
- Death Certificate:
  RHU/ DHC- Complete data and sign death certificate issued by Local Civil Registry and advice relatives to bring it back to Local Civil Registry.
  CH/MH- Issue Death Certificate and give them to relatives and advice to register death.

The facility must keep a copy of the Death Certificate.

- Report to ILHZ chairperson all maternal and neonatal deaths by using the Death Reporting Form.
- Present cases for review in the MNDR.
- Develop and implement action plan.
- Monitor implementation of recommended interventions in the BHS and other stakeholders.

d) Private Hospitals

Roles and responsibilities

Doctors, nurses, and midwives of private hospitals/clinics are responsible for reporting deaths in their facilities, conducting clinical audits, and participating in MNDR.

- Write a report using Facility Maternal/Neonatal Death Reporting Form for deaths in the facilities.
- Issue and give Death Certificate to relatives and advise them to register the death.
- Report maternal and neonatal deaths to PHO/CHO.or ILHZ
- Participate in regular ILHZ-based MNDR and Provincial/City MNDR.
- Present cases of deaths in the MNDR. For referral cases, collaborate with referring facilities to present a case.
- Give technical inputs during the MNDR.
- Implement action plan at the facilities.
- Conduct clinical audits.

4. Roles of the Midwife at the BHS and the CHTs

a) Midwife

Roles and responsibilities

Midwives at the BHS are responsible for reporting deaths in the community and deaths in the BHS.

- Write a report using the Community Maternal/Neonatal Death Reporting Form on deaths in the community according to the verbal reports of the CHTs.
- When a death occurs in the BHS, write a report using the Facility Maternal and Neonatal Death Form.
- Report any maternal and neonatal death to the MHO/DHO using the Death Reporting Form.
- Develop and implement an action plan.
- Monitor the implementation of the action plans of CHTs at the community level.

b) Community Health Team (CHT)

Roles and responsibilities

Community-based CHTs are composed of a midwife—who functions as the team leader—barangay health workers (BHWs), traditional birth attendants (TBAs), and others. The Municipal Health Officer (MHO) and PHN are the supervisors of the CHTs. CHTs are responsible for tracking every pregnancy within their catchment area and reporting the outcome. The CHT's main role is identifying and verbally reporting maternal and neonatal deaths to the midwife. A CHT's base of operation in a community is the Barangay Health Station (BHS).

5. Roles and Responsibilities of local officials

Local officials include Local Chief Executives, Sangguniang Panlalawigan/Bayan members and Barangay Officials. Their role is to support hospitals, RHUs/DHCs and BHSs on MNDR activities such as providing financial support, policies and implementation of recommendations which are identified during MNDR.

III. Case identification and reporting of maternal and neonatal deaths

In case identification process, reporting maternal deaths through interviews and records review within a reasonable period after death has occurred is the first step. The reporting form indicates the necessary data to be included. This section explains the flow of reporting and the person in charge of each step.

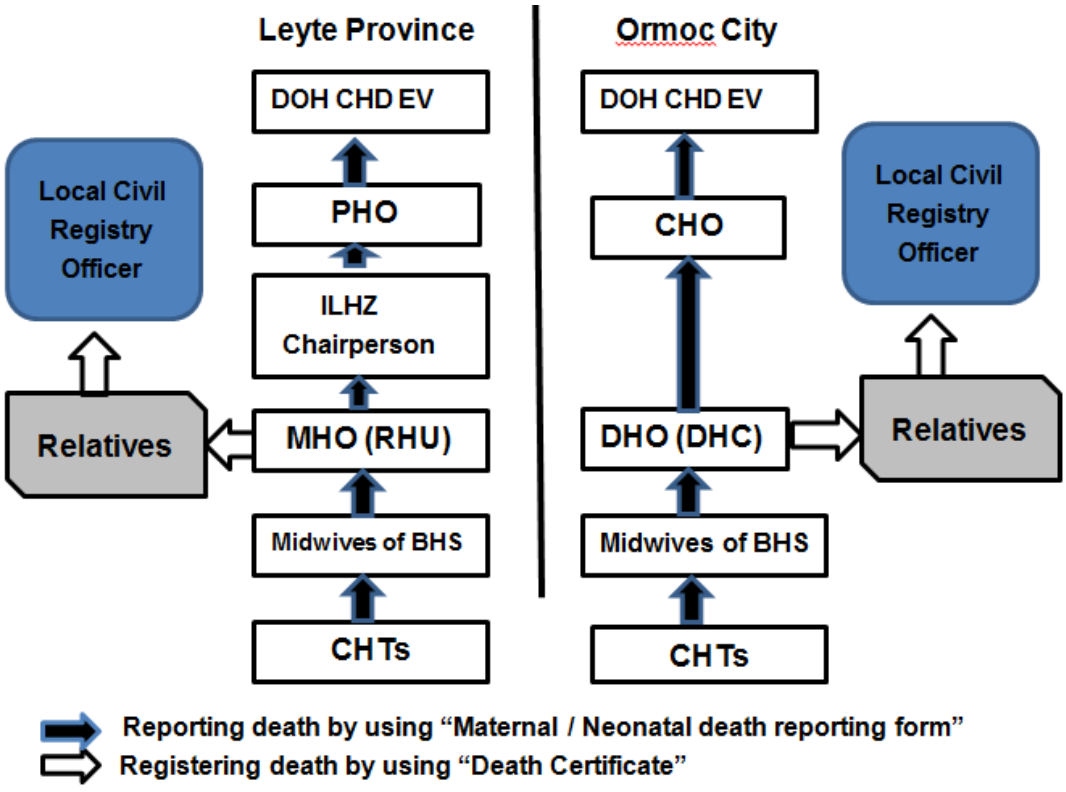
The strategy for reporting maternal and neonatal deaths involves the network of Community Health Teams (CHTs). CHTs are primarily responsible for reporting maternal and neonatal deaths in the community, and health facility staffs are responsible for reporting deaths within their facility.

There are two procedural flows according to the place of a death: one for deaths in the community, such as at home or at a TBA's place, and the other is for deaths in health facilities such as RHUs, DHCs, and hospitals. The roles and responsibilities of health workers at each level are described in the following procedures.

1. Reporting Maternal and Neonatal Deaths in the Community

If maternal and neonatal deaths occur in the community, they should be reported according to the following procedural flow.

Figure 2: Flow of Reporting and Stakeholders for Death in Community

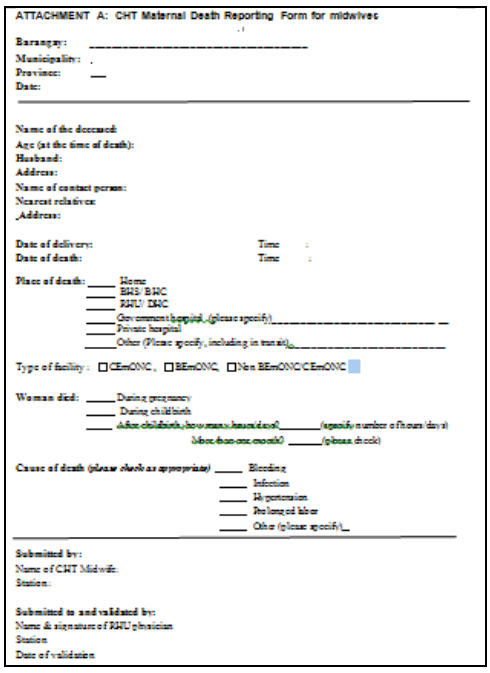


(1) Reporting forms

Two formats are used for reporting death. The Maternal Death Reporting Form (see Attachment A) is for maternal death, while the Neonatal Death Reporting Form (see Attachment C) is used for neonatal death. If both types of death occur at the same time, the appropriate form should be used for each death.

		When?	Who will complete the form?	Who will approve and sign?
1	**CHT Maternal Death Reporting form** **(See Attachment A)**	**When a maternal death occurs in the community**	**Midwives of BHS**	**MHO (Province) DHO (City)**
2	**CHT Neonatal Death Reporting Form** **(See Attachment C)**	**When a neonatal death occurs in the community**	**Midwives of BHS**	**MHO (Province) DHO (City)**
3	**Death Certificate**	**When an MHO or DHO receives a Death Reporting Form from a BHS midwife**	**Officer of the Local Civil Registry**	**MHO (Province) DHO (City)**

Figure 3: Maternal and Neonatal Death Reporting Format (Death in Community)



ATTACHMENT A: CHT Maternal Death Reporting Form for midwives

Barangay: _____
Municipality:
Province:
Date:

Name of the deceased:
Age (at the time of death):
Husband:
Address:
Name of contact person:
Nearest relatives:
Address:

Date of delivery: Time :
Date of death: Time :

Place of death: ____ Home
____ BHS/ BHC
____ RHU/ DHC
____ Government hospital- (please specify) _____
____ Private hospital
____ Other (Please specify, including in transit)_____

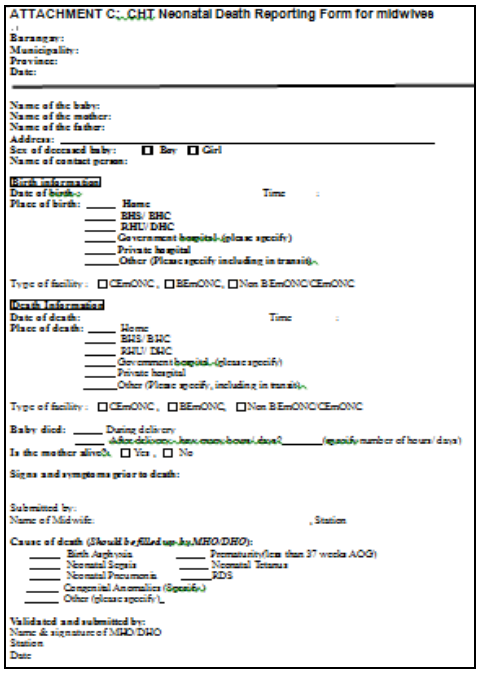
Type of facility : ☐ CEmONC , ☐ BEmONC, ☐ Non BEmONC/CEmONC

Woman died: ____ During pregnancy
____ During childbirth
____ After childbirth, how many hours/days? _____(specify number of hours/days)
More than one month? _____(please check)

Cause of death (*please check as appropriate*) ____ Bleeding
____ Infection
____ Hypertension
____ Prolonged labor
____ Other (please specify)_____

Submitted by:
Name of CHT Midwife:
Station:

Submitted to and validated by:
Name & signature of RHU physician
Station
Date of validation



ATTACHMENT C: CHT Neonatal Death Reporting Form for midwives

Barangay:
Municipality:
Province:
Date:

Name of the baby:
Name of the mother:
Name of the father:
Address: _____
Sex of deceased baby: ☐ Boy ☐ Girl
Name of contact person:

Birth information
Date of birth: Time :
Place of birth: ____ Home
____ BHS/ BHC
____ RHU/ DHC
____ Government hospital- (please specify)
____ Private hospital
____ Other (Please specify, including in transit)

Type of facility : ☐ CEmONC , ☐ BEmONC, ☐ Non BEmONC/CEmONC

Death Information
Date of death: Time :
Place of death: ____ Home
____ BHS/ BHC
____ RHU/ DHC
____ Government hospital- (please specify)
____ Private hospital
____ Other (Please specify, including in transit)

Type of facility : ☐ CEmONC , ☐ BEmONC, ☐ Non BEmONC/CEmONC

Baby died: ____ During delivery
____ After delivery, how many hours/days? _____(specify number of hours/days)
Is the mother alive? ☐ Yes , ☐ No

Signs and symptoms prior to death:

Submitted by:
Name of Midwife: , Station

Cause of death (*Should be filled up by MHO/DHO*):
____ Birth Asphyxia ____ Prematurity (less than 37 weeks AOG)
____ Neonatal Sepsis ____ Neonatal Tetanus
____ Neonatal Pneumonia ____ RDS
____ Congenital Anomalies (Specify)
____ Other (please specify)_____

Validated and submitted by:
Name & signature of MHO/DHO
Station
Date

1. CHT Maternal Death Reporting Form

2. CHT Neonatal Death Reporting Form

(2) Data source

Maternal death reporting is a routine activity of the CHTs. CHT contacts include family members, relatives, and neighbors, and their addresses and contact numbers should be obtained.

(3) Procedures

Maternal and neonatal deaths in the community should be reported according to the following procedures. **CHTs are responsible for the preliminary collection and reporting of information in the community;** the midwives of BHS will complete the appropriate form according to the report they receive.

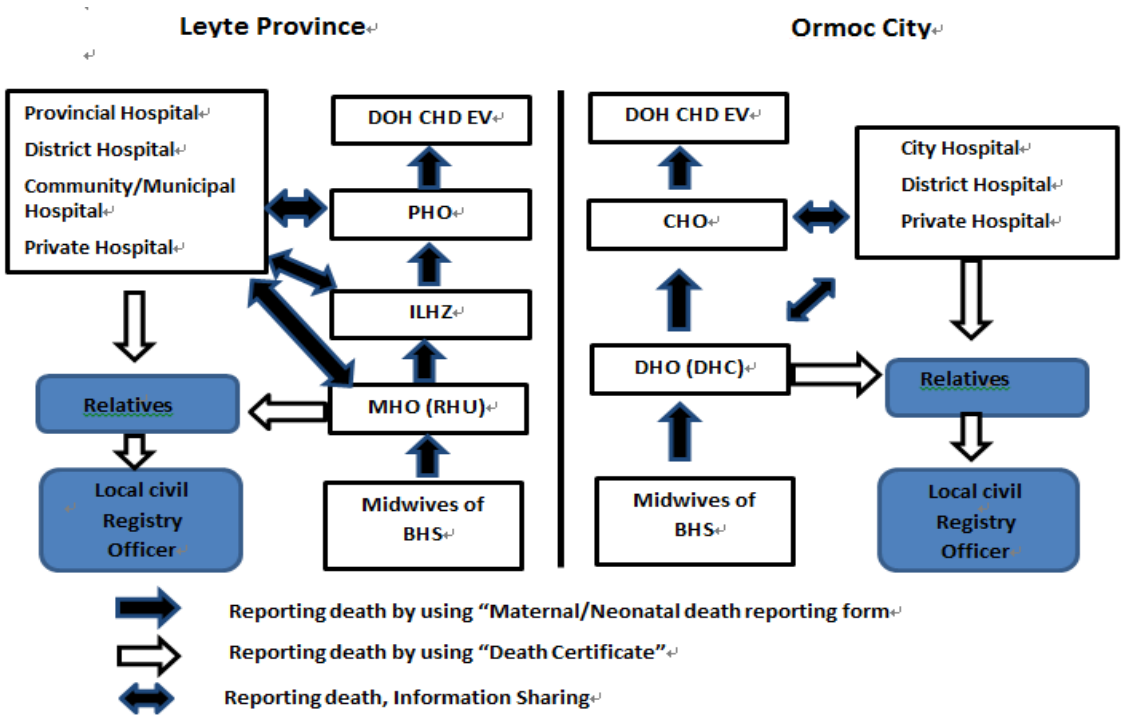
	Procedures	Person in charge
1	Interview relatives and witnesses and consult the pregnancy tracking record when maternal and/or neonatal death occurs.	CHT
2	Report maternal/neonatal death verbally to a Midwife of BHS.	
3	Review and complete the CHT MD/ND reporting Form and submit it to the MHO or DHO.	Midwives of BHS
4	Consolidate the reports.	PHN
5	Validate the CHT MD/ND reporting Form and add information if necessary. Approve and sign the form and make a copy to be filed at their facility.	MHO/DHO
6	Complete a Death Certificate, make a copy, give the original copy to the relatives of the deceased, and instruct them to bring it to the Local Civil Registry office.	
7	Submit the original CHT MD/ND Reporting Form to the ILHZ Chairperson/CHO.	
8	Examine the CHT MD/ND report. If information is inadequate, they will instruct the CRT for further review.	CHO
9	Consolidate data from the DHO, create a database, and submit quarterly reports to the DOH-CHD EV.	
10	Make a database for annual MNDR and submit a report to DOH-CHD-EV.	
11	Make a copy of the CHT MD/ND Reporting Form and submit the original to the PHO. The ILHZ Chairperson will file copies for selection of cases for MNDR.	ILHZ Chairperson
12	Consolidate data from the MHO, create a database, and submit quarterly reports to the PHO	
13	Review the CHT MND report. If the information is inadequate Instruct the PRT to commence further review.	PHO
14	Submit the ILHZ-consolidated database as part of their quarterly report to the DOH-CHD EV.	

15	Organize data from the ILHZs, create a database for annual MNDR, and submit a report to the DOH-CHD EV.	PHO

2. Reporting Maternal and Neonatal Death in Health Facilities

If maternal and neonatal deaths occur in health facilities, they should be reported according to the following flow.

Figure 4: Flow of Reporting and Stakeholders for Death in Health Facility



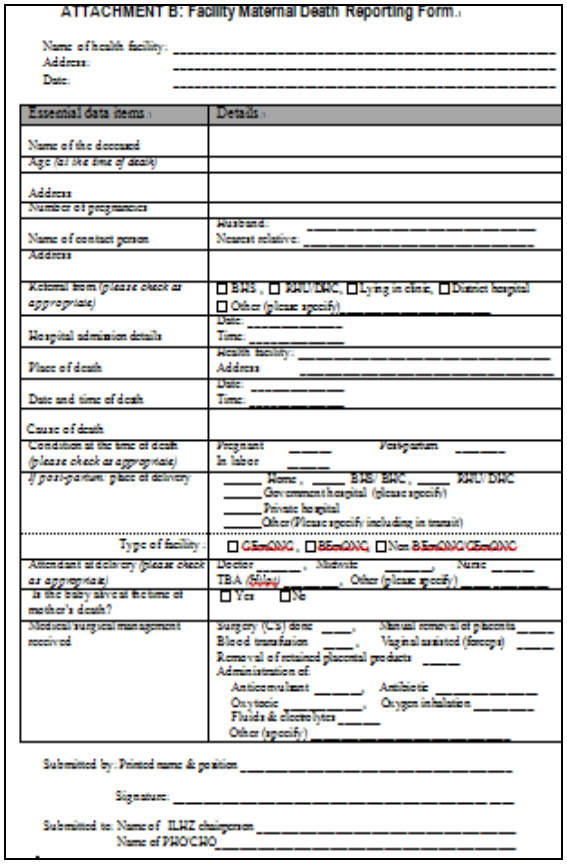
(1) Reporting forms

Two formats shown in Figure 5 below are used for reporting maternal and neonatal deaths in facilities. Facilities include CEmONC hospitals such as Regional, Provincial, and District hospitals; BEmONC facilities such as Rural Health Units (RHUs), District Health Centers (DHCs) and Barangay Health Stations (BHSs). Private hospitals and clinics should also use these formats.

		When?	Who will complete the form?	Who will approve and sign?
1	**Facility Maternal Death Reporting form (See Attachment B)**	**When a maternal death occurs in a facility**	**Nurse on duty**	**Doctor on duty**

2	**Facility Neonatal Death Reporting Form** **(See Attachment D)**	**When a neonatal death occurs in a facility**	**Nurse on duty**	**Doctor on duty**
3	**Death Certificate**	• **When a death occurs at a hospital** • **When a death occurs at a RHU or DHC**	**Doctor in charge**	**Doctor in charge**
		• **When a death occurs at a BHS and a MHO or DHO receives a Death Reporting Form from a BHS midwife.**	**MHO (Province), DHO (City)**	**MHO (Province) DHO (City)**

Figure 5: Maternal and Neonatal Death Reporting Format (Death in Facility)



ATTACHMENT B: Facility Maternal Death Reporting Form

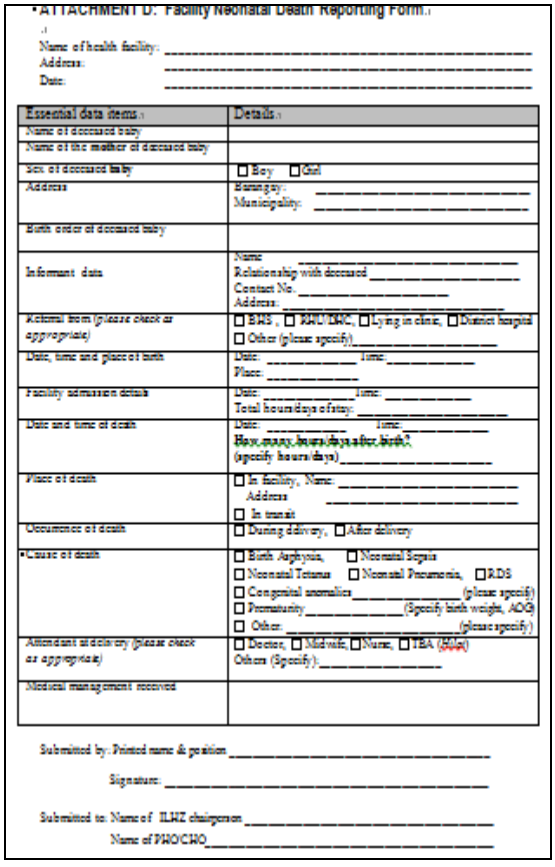
Name of health facility: _____
Address: _____
Date: _____

Essential data items	Details
Name of the deceased	
Age (at the time of death)	
Address	
Number of pregnancies	
Name of contact person	Husband: _____ Nearest relative: _____
Address	
Referral from (please check as appropriate)	☐ BHS, ☐ RHU/DHC, ☐ Lying in clinic, ☐ District hospital ☐ Other (please specify) _____
Hospital admission details	Date: _____ Time: _____
Place of death	Health facility: _____ Address _____
Date and time of death	Date: _____ Time: _____
Cause of death	
Condition at the time of death (please check as appropriate)	Pregnant _____ Postpartum _____ In labor _____
If post-partum: place of delivery	_____ Home, _____ BHS/ BMC, _____ RHU/ DHC _____ Government hospital (please specify) _____ Private hospital _____ Other (Please specify including in transit)
Type of facility:	☐ ~~CEmONC~~, ☐ ~~BEmONC~~ ☐ Non ~~BEmONC/CEmONC~~
Attendant at delivery (please check as appropriate)	Doctor _____, Midwife _____, Nurse _____ TBA ~~(Hilot)~~ _____, Other (please specify) _____
Is the baby alive at the time of mother's death?	☐ Yes ☐ No
Medical/surgical management received	Surgery (CS) done ____, Manual removal of placenta _____ Blood transfusion ____, Vaginal sutured (forceps) _____ Removal of retained placental products _____ Administration of: Anticonvulsant _____, Antibiotic _____ Oxytocic _____, Oxygen inhalation _____ Fluids & electrolytes _____ Other (specify) _____

Submitted by: Printed name & position _____

Signature: _____

Submitted to: Name of ILHZ chairperson _____
Name of PHO/CHO _____



ATTACHMENT D: Facility Neonatal Death Reporting Form

Name of health facility: _____
Address: _____
Date: _____

Essential data items	Details
Name of deceased baby	
Name of the mother of deceased baby	
Sex of deceased baby	☐ Boy ☐ Girl
Address	Barangay: _____ Municipality: _____
Birth order of deceased baby	
Informant data	Name _____ Relationship with deceased _____ Contact No. _____ Address: _____
Referral from (please check as appropriate)	☐ BHS, ☐ RHU/DHC, ☐ Lying in clinic, ☐ District hospital ☐ Other (please specify) _____
Date, time and place of birth	Date: _____ Time: _____ Place: _____
Facility admission details	Date: _____ Time: _____ Total hours/days of stay: _____
Date and time of death	Date: _____ Time: _____ ~~How many hours/days after birth?~~ (specify hours/days) _____
Place of death	☐ In facility, Name: _____ Address _____ ☐ In transit
Occurrence of death	☐ During delivery, ☐ After delivery
•Cause of death	☐ Birth Asphyxia, ☐ Neonatal Sepsis ☐ Neonatal Tetanus ☐ Neonatal Pneumonia, ☐ RDS ☐ Congenital anomalies _____ (please specify) ☐ Prematurity _____ (Specify birth weight, AOG) ☐ Other _____ (please specify)
Attendant at delivery (please check as appropriate)	☐ Doctor, ☐ Midwife, ☐ Nurse, ☐ TBA ~~(Hilot)~~ Others (Specify): _____
Medical management received	

Submitted by: Printed name & position _____

Signature: _____

Submitted to: Name of ILHZ chairperson _____
Name of PHO/CHO _____

1. Facility Maternal Death Reporting Form

2. Facility Neonatal Death Reporting Form

(2) Data Source

Typical sources of information include the following: the patient's records, emergency room registry, records from the operating and delivery rooms, discharge summary, and so on. Selected hospital staff may be interviewed to supplement data in the patient's records using the MND Questionnaires (Form 2). The interviews are to be conducted in a non-judgmental way and with the assurance that information will be handled with confidentiality and will not be used to assign blame.

(3) Procedures

Maternal and neonatal deaths in health facilities should be reported according to the following procedures. **The doctors and midwives who handled the case will be the preliminary person who will collect information through records and interviews and complete the facility death report.**

	Procedures	Person in charge
1	If a death occurs in a BHS, the midwife in charge of the case will perform an investigation using records and interviews. They will complete the Facility MND Reporting Form.	Midwives of BHS
2	Make a copy of the Facility MND Reporting Form and submit the original to the MHO or DHO.	
3	Consolidate the Facility Death Reports from BHSs.	PHN
4	Review the accuracy of the Facility MND Reporting Form and add information if necessary. Approve it and sign the form.	MHO/DHO
5	Complete the Facility MND Reporting Form for deaths in RHUs/DHCs/hospitals Make a copy for filing at their facility	MHO/DHO/ Doctor or Nurse of a hospital
6	Complete the Death Certificate, make a copy and submit the original copy to the relatives of the deceased, and instruct them to bring it to the Local Civil Registry office.	
7	Submit an original copy of the Facility Death Reporting Form to the ILHZ Chairperson or the CHO.	
8	Review the report. If information is not adequate, they will instruct the CRT to conduct further review.	CHO
9	Consolidate data from the DHO, create a database, and submit a quarterly report to the DOH-CHD-EV.	
10	Make a database for annual MNDR and submit a report to the DOH-CHD-EV.	
11	Make a copy of the Facility Death Reporting Form and submit the original to the PHO. File copies for selection of cases for MNDR.	ILHZ Chairperson

12	Consolidate data from the MHO, create a database, and submit a quarterly report to the PHO.	
13	Review the report. If the information is not adequate, they will instruct the PRT to conduct further review. Use the Medical Record Review (Attachment E/F, Form 1) and Facility Staff Interview (Attachment E/F, Form 2) if necessary.	PHO
14	Submit the ILHZ-consolidated database as part of their quarterly report to the DOH-CHD EV.	
15	Organize the data from the ILHZ, create a database for annual MNDR, and submit a report to the DOH-CHD EV.	

Death On Arrival (DOA) and Died In Transit (DIT)

Currently, ILHZs have different policies on the signing of the death certificate of the DOA and DIT case. However, DOH-CHD EV recommends the following:

If a patient dies during transfer or patient is dead on arrival:

- If patient transferred directly from the community to the health facility, the MHO/DHO where the deceased come from will complete the CHT MND Reporting Form & Death Certificate.
- If patient transferred from the BHS/RHU/DHC/hospital to a higher-level health facility, the doctor of the referring health facility will complete the Facility MND Reporting Form & Death Certificate.

Usually, DOA cases occur due to transfer delays and other avoidable factors. The causes should be fully reviewed by the MHO/DHO.

IV. Conduct of Maternal and Neonatal Death Review

1. Structure of MNDR by level

MNDR is conducted at various levels for different purposes.

Regional level

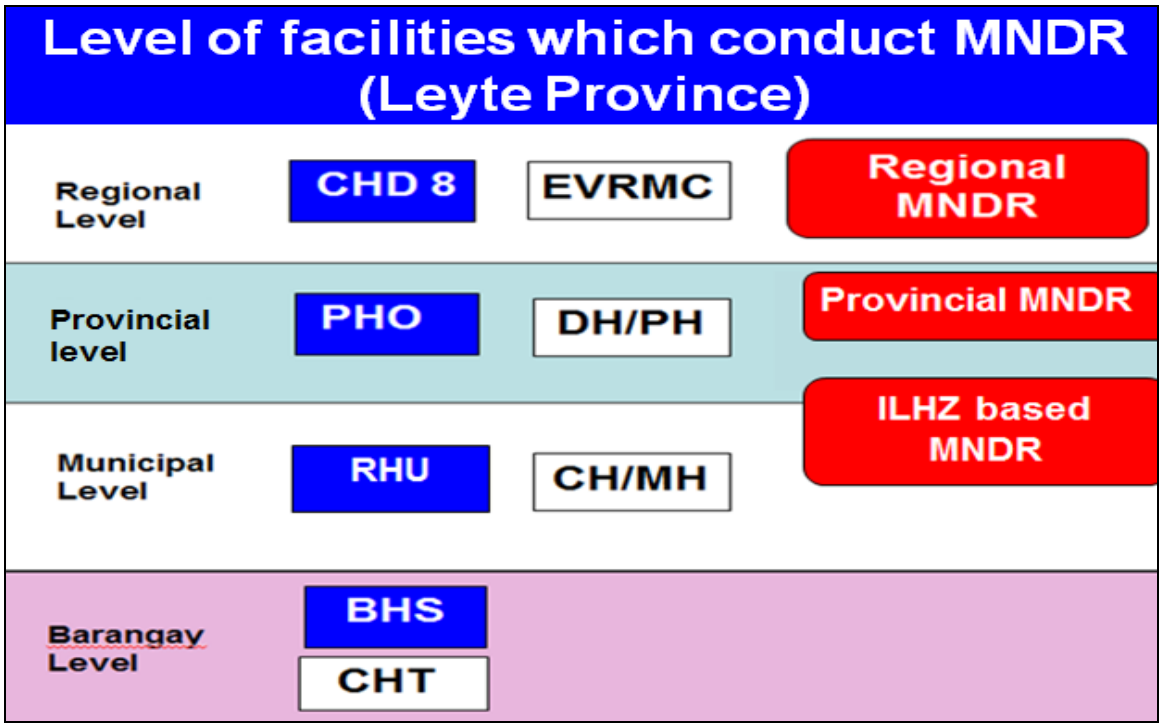
- Regional MNDR: The highest level of MNDR is regional MNDR. The purpose of a regional MNDR is to identify approaches and strategies to reduce maternal, and child mortality and to develop the network of facilities in the region.

Provincial/ILHZ level

- ILHZ-based MNDR: The primary level of MNDR is conducted in each ILHZ. The purpose of this review is to examine all cases of maternal and neonatal deaths to address those problems that cause the deaths.

- Provincial MNDR: The secondary level of MNDR is conducted in the province. The purpose of provincial MNDR is to identify variations between ILHZs and RHUs, to discuss provincial strategy, and to improve the referral network between CEmONC and BEmONC facilities.

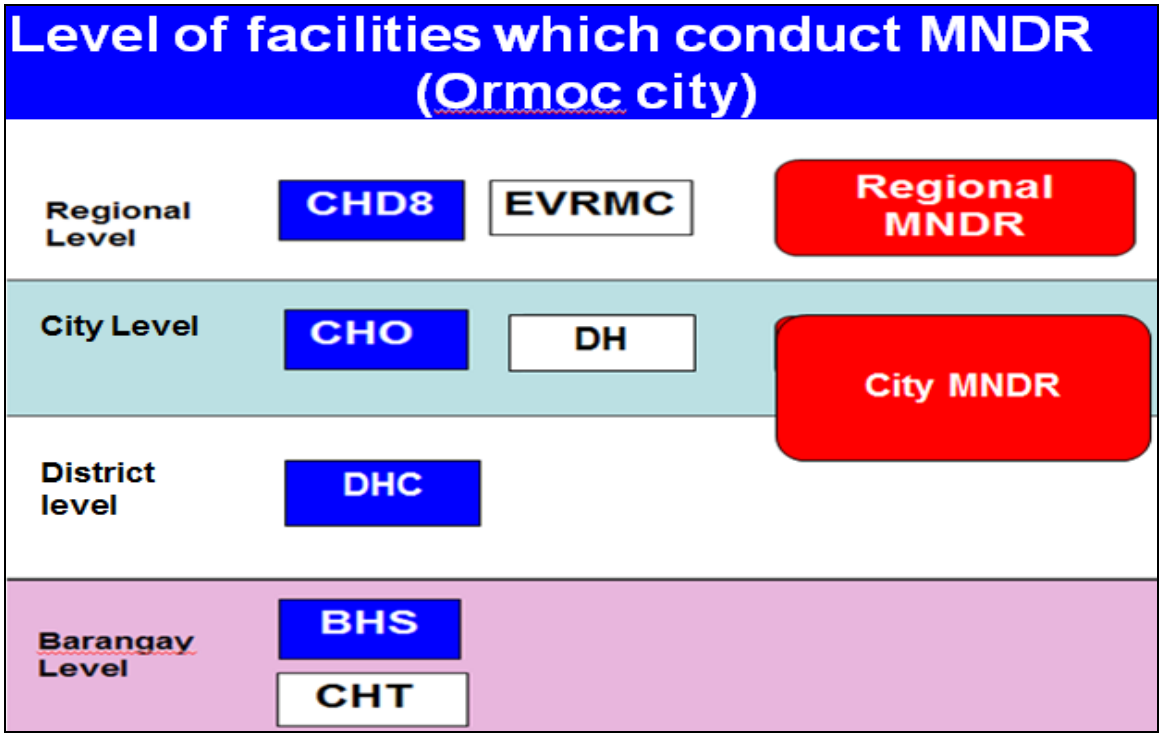
Figure 6: Provincial/ ILHZ MNDRs



City level

- City MNDR: The primary level of MNDR in Ormoc City is City MNDR, because maternal deaths do not occur there frequently. This process reviews all maternal and neonatal deaths and works to address the problems that cause deaths, to identify variations among DHCs, to discuss city strategy, and to develop the referral network between CEmONC and BEmONC facilities

Figure 8: City MNDR



2. MNDR meetings by level

The following table outlines the MNDR process at different levels.

Table 2: MNDR by level

Name	Facilitator	Frequency	Participants
ILHZ-based MNDR	PHO ILHZ TMC chairperson	Quarterly	• Doctors/Nurses/Midwives of PH/DH/CH/MH. Private Hospitals *, Lying in clinics • ILHZ TMC members • PHN/Midwives of RHUs/BHSs • PHO, Provincial MNCHN coordinator
Provincial MNDR	PHO	Annually	• Obstetrician , Pediatrician, Neonatologist of Regional Medical Center

			• Regional MNCHN coordinator • PHO, Provincial MNCHN Coordinator • ILHZ TMC chairperson & members (COHs, MHOs) • Doctors of core private hospitals • DOH Representative
City MNDR	CHO	Annually	• Obstetrician , Pediatrician, Neonatologist of Regional Medical Center • Regional MNCHN coordinator CHO, City MNCHN Coordinator • DHOs, PHNs and Midwives of DHCs • Doctors of core private hospitals • DOH Representative
Regional MNDR	DOH-CHD EV, Family Health Cluster	Annually	• Obstetrician , Pediatrician, Neonatologist of Regional Medical Center • Regional MNCHN coordinator & team • PHOs, Provincial MNCHN Coordinators • CHOs, City MNCHN Coordinators • Doctors of core private hospitals • ILHZ TMC chairperson & members (COHs, MHOs) • DHOs of DHCs • DOH Representatives

*Hospitals usually send medical doctors who attended to the patient such as obstetricians, pediatricians, surgeons, and midwives.

The purpose, procedures and feedback of the meetings are discussed in the following section.

1) ILHZ-based MNDR meeting

ILHZ chairpersons organize meetings with the support of the Provincial Review Team (PRT) to conduct a periodic review of maternal and neonatal deaths in each ILHZ.

As this is the closest level to the community, the review leads to the identification of medical and non-medical causes of death such as community support, emergency transport, and so on. Information from doctors and midwives involved with CEmONC and BEmONC hospitals is essential to understanding the details of each case.

Purpose of meeting
• To review maternal and neonatal deaths • To improve communication between the CEmONC and BEmONC referral network • To identify and examine medical causes of death and discuss ways for improvement • To identify and examine non-medical causes of death and provide feedback to stakeholders.
Procedures for conducting meetings
• The ILHZ chairperson will prepare the budget for quarterly MNDR. (MNDR can coincide with the quarterly ILHZ TMC meeting.*[11])
• The ILHZ chairperson will handle the administrative aspects of the meeting. For example, they will send invitations to participants and arrange for the venue and meals.
• The ILHZ chairperson will check the number of maternal neonatal deaths and consult with doctors to select cases for the reviews.
• The ILHZ chairperson will prepare the program and instruct BEmONC and CEmONC doctors how to prepare for any presentation.
• Health facilities where maternal deaths occurred will prepare presentations and materials*[12]. For referred cases, both referring facility and the higher-level facility should coordinate and present the case together.
• The ILHZ chairperson will facilitate the MNDR session and appoint someone to record the minutes.
• Discussion should be conducted in a blame-free and should be done in constructive manner.
• The ILHZ chairperson will conclude the meeting and arrange for the next MNDR.
Feedback on ILHZ based MNDR
• The ILHZ chairperson and the PHO will record all presentations. The PHO should confirm the number of maternal and neonatal deaths.
• The ILHZ chairperson will provide a copy of the minutes of the meeting to attendees.
• The PHO will file presentations and update the MNDR database after each meeting. If any interventions are needed, they will initiate the appropriate actions immediately.
• If any issues need to be discussed or shared at provincial or regional MNDRs, these should be recorded and taken up during MNDR by ILHZ chairperson.
Tips
• Involve obstetricians, pediatricians and midwives of core private hospitals/lying in clinics in the meetings. • Referred cases should be presented by both referring and referral health facilities.

[11] In Leyte Province, it is recommended that the ILHZ hold their quarterly ILHZ TMC meeting in the morning and hold the MNDR in the afternoon.

[12] See a template of the presentation (attachment XX).

2) Provincial MNDR

At the provincial level, the PHO will organize a periodic review of maternal deaths in the province. The review is conducted based on the summary of the ILHZ-based MNDR. The PHO will facilitate the meeting, and other PRT members will give technical support to the PHO. During MNDR, participants should share information and develop their provincial strategy to address the causes of maternal and neonatal deaths.

An MNDR at the provincial level might be held after all ILHZ-based MNDRs for the previous year have been completed. This time period generally occurs early in the year (i.e., February or March).

Purpose of meeting
• To review trends and the status of maternal and neonatal deaths in the province • To review the status of the referral network between referring facility and referral facilities • To discuss countermeasures against causes of neonatal and maternal death and to discuss provincial strategies • To share information
Procedure for conducting a meeting
• The PHO will prepare an annual budget for the Provincial MNDR. (Province MNDR can be conducted together with Annual ILHZ TMC meeting.*[13])
• The PHO will make administrative arrangements such as sending invitations to participants, securing a venue, and coordinating the catering.
• The PHO will prepare statistical data on maternal and neonatal deaths. The PHO will also prepare a presentation of the summary/data of ILHZ-based MNDR.
• The PHO will prepare the meeting program and notify doctors of facilities if there is a presentation on a specific case.
• The PHO will facilitate the MNDR session and solicit technical input from regional hospitals and DOH-CHD EV. • The PHO will encourage advice from the private sector if necessary.
• The discussion should cover specific issues and common problems and should be done in a constructive manner.
• The PHO will conclude the meeting and plan the venue and timing of the next MNDR.
Feedback on provincial MNDR
• The PHO should check the number of maternal and neonatal deaths and make sure that they are immediately reflected in the database.
• The PHO will provide a copy of the minutes of a meeting to attendees.
• If any interventions are needed, immediate action must be taken.
• If there are any issues to be discussed or shared at the regional MNDR, these should be recorded and taken up during MNDR by the PHO.
Tips
• Involve obstetricians, pediatricians and midwives of core private hospitals/lying in clinics in the meetings. • Annual data on maternal and neonatal deaths should be presented by the PHO at the meeting.

[13] Provincial MNDR can be combined with annual ILHZ TMC meetings as a two day program.

3) City MNDR

At the city level, the CHO will organize a periodic review of maternal and neonatal deaths in the city. A City MNDR can be conducted quarterly with one annual meeting. The CHO will facilitate the meeting and the DOH-CHD EV and regional hospital will give technical support to the CHO. City MNDR should be used to develop a strategy for addressing the causes of maternal and neonatal deaths.
In a sample City MNDR meeting schedule, participants can meet in March, June, September, and December; and March meeting can be used to summarize the data of the previous year.

Purpose of meeting
• To review cases of maternal and neonatal deaths • To review trends and the status of maternal and neonatal deaths in the city • To review the status of the referral network between CEmONC and BEmONC facilities • To discuss countermeasures against the causes of neonatal and maternal death and discuss city strategies • To share information
Procedure to conduct meeting
• The CHO will prepare a budget for the quarterly City MNDR.
• The CHO will make any administrative arrangements such as sending invitations to participants, securing a venue, and coordinating the catering.
• The CHO will check the number of maternal and neonatal deaths and consult with doctors from the DHCs about which cases should be presented.
• The CHO will prepare the meeting program and notify doctors of BEmONC and CEmONC facilities if there is a presentation on a specific case.
• The CHO will prepare statistical data on maternal and neonatal deaths. The CHO will also prepare a presentation of the summary/data of City MNDR.
• The CHO will facilitate the MNDR session and solicit technical input from regional hospitals and DOH-CHD EV. • The CHO will encourage advice from private sector if necessary.
• The discussion should cover specific issues and common problems and should be done in a constructive manner.
• The CHO will conclude the meeting and plan the venue and timing of the next MNDR.
Feedback on City MNDR
• The CHO should check the number of maternal and neonatal deaths and make sure they are immediately reflected in the database.
• The CHO will provide copies of the minutes of the meeting to attendees.
• If any interventions are needed, immediate action must be taken.
• If any issues need to be discussed or shared at regional MNDR, they should be recorded and taken up during MNDR.
Tips
• Involve obstetricians, pediatricians and midwives of core private hospitals/lying in clinics in the meetings. • Annual data on maternal and neonatal deaths should be presented by the CHO at the meeting.

4) Regional MNDR

At the regional level, the MNCHN Coordinator of DOH-CHD EV will organize a periodic review of the maternal deaths in the region. The review should be conducted based on the summary of the data from the provincial and city MNDR. The MNCHN Coordinator of DOH-CHD EV will facilitate the meeting. The regional MNDR should identify gaps among the different areas and develop a regional strategy to address the causes of maternal and neonatal deaths.

A regional MNDR might be held after the Provincial/City MNDRs to reflect the discussions that occurred there.

Purpose of meeting
• To identify problems that cause maternal and neonatal death in the region • To identify service delivery gaps in provinces and cities • To develop a regional strategy and plan joint activities to address maternal and neonatal deaths
Procedure for conducting a meeting
• The MNCHN team of DOH-CHD EV will prepare an annual budget for Regional MNDR.
• The MNCHN team of DOH-CHD EV will make administrative arrangements such as sending invitations to participants, securing a venue, and coordinating the catering.
• The MNCHN team of DOH-CHD EV will prepare the program and make any arrangements for the presentations.
• The MNCHN team of DOH-CHD EV will prepare statistical data on maternal and neonatal deaths. The MNCHN team of DOH-CHD EV will also prepare a presentation of the summary/data of the provincial/city MNDRs.
• The MNCHN team of DOH-CHD EV will facilitate the MNDR session. They will also encourage advice from the private sector if necessary.
• The discussion should address specific issues and common problems in a constructive manner.
• The MNCHN team of DOH-CHD EV will conclude the meeting and plan the venue and timing of the next MNDR.
Feedback on regional MNDR
• The MNCHN team of DOH-CHD EV should check the statistical data on maternal and neonatal deaths and make sure they are immediately reflected in the database.
• The MNCHN team of DOH-CHD EV will provide copies of the minutes of the meeting to attendees.
• If any interventions are needed, immediate action must be taken.
• If there are any issues to be raised or shared with other members of DOH-CHD EV, they should be recorded and discussed with them.

3. How to present cases in MNDR

The ultimate goal of MNDR is to identify factors that could have prevented deaths if these had been avoided. Standardized orders and presentation content should help people compare cases easily and avoid gaps in information sharing. See the attached template in the Microsoft® PowerPoint® presentation (Attachment H).

If a case is a referral from one health facility to another, referring facilities will make the presentation which includes non-medical profiles. Referral health facilities will present medical information that is recorded from the patient's arrival to their death. The two presentations are complementary are introduced in the following section.

1) Slide Content for MDR Presentation

The following two tables show the content of MDR presentations for referring and referral facilities, respectively.

a) Presentation for a referring facility

Presentation for a referring Facility	
Information should consist of **non-medical information** such as socioeconomic situation and family status. ANC status, such as pregnancy tracking, should be included.	
Basic patient information	Age, education level, marital status, insurance coverage, and poverty level
Medical history	History of chronic illness, allergies, asthma, and hypertension History of operations and hospitalizations
Obstetric history	No. of pregnancies, births, abortions, and miscarriages History of complications during pregnancy/labour/ delivery History of caesarian section Place of delivery of past pregnancies
Status of current pregnancy	Last menstrual period (LMP), expected date of confinement (EDC), age of gestation (AOG) Weight, fundal height, and fetal heart rate Presentation Ferrous sulfate with folic acid and supplements received Advised ultrasound Warning signs (HPN, spotting, infection) Birth plan, immunization status, and ANC Medication history
Chronology of events	Begin with the initial complaint and record until death • Condition (hemorrhage, vital signs, etc.) • Action taken (treatment, medicines, etc.) • Place of death, date of death, and cause of death

Analysis and findings	Classification of factors (medical, non-medical, and contributory factors) Avoidable factors (three delays, etc.) Other factors
Possible Interventions and action plan	Interventions according to analysis Action plan according to level (DOH-CHD EV, PHO/CHO, MHO, BHS, LGUs, CHTs or community)

b) Presentation for a referral facility

This example is for referred cases. If it is not a referred case and the patient is transferred directly to a referral facility, non-medical information should be included in the presentation.

Presentation for a referral Facility	
➢ For referred cases, information should consist of **complete medical information** concerning treatment and medications. ➢ For non-referred cases, non-medical information should be added.	
Situation of referral	Reason for referral Means and timing of referral Actions taken during transfer
Condition upon arrival	Condition upon arrival (vital signs, fetal heart beat , internal examination etc.)
Chronology of events	Begin with condition /findings on admission and record until death • Condition (hemorrhage, vital signs etc.) • Action taken (treatment, medicines, etc.) • Place of death, date of death, and cause of death • Result of laboratory examination
Analysis and findings	Classification of factors (medical, non-medical, and contributory factors) Avoidable factors (three delays etc.) Other factors
Possible interventions and action plan	Interventions according to analysis Action plan according to level (DOH-CHD EV, PHO/CHO, MHO, BHS, LGUs, CHTs or community)

2) Slide contents for <u>NDR</u> presentation

The following two tables show the content of NDR presentations for referring and referral facilities, respectively.

a) Presentation for a referring facility

Presentation for a referring Facility	
Information should consist of **non-medical information** such as socio economic situation and family status. ANC status, such as pregnancy tracking, should be included.	
Basic information of mother /father	Age, Means of livelihood, education level, marital status, insurance coverage, and poverty level/social class
Medical history of mother	History of chronic illness, allergies, asthma, and hypertension History of operation/hospitalization Medicines or supplements being taken (incl.herbal prep.)
Obstetric history of mother	No. of pregnancy, births ,abortion, and miscarriage History of facility delivery (facility vs non-institutional) History of complications during pregnancy/labor/delivery History of caesarian section Immunization status, ANC, intrapartum care, and PNC
Prenatal history	Number of PNC visits, Symptoms and findings, assessment and services/management provided.
Condition of baby during/after delivery	Apgar score Complications at delivery (breech delivery, etc.) Warning signs
Condition of mother during/after delivery	Vital signs, chief complaint of mother on admission PE findings/internal examination Course of labor up until delivery Actions taken according to BEmONC protocol
Chronology of events	Begin with initial complaint and record until death • Baby and mother's condition • Actions taken (treatment, medicines) • Place of death, date of death, and cause of death
Analysis and findings	Classification of factors (medical, non-medical, and contributory factors) Avoidable factors (three delays, etc.) Other factors
Possible interventions and action plan	Interventions according to analysis Action plan according to level (DOH-CHD EV, PHO/CHO, MHO, BHS, LGUs, CHTs, or community)

c) Presentation for a referral facility

Presentation for a referral Facility	
➢ For referred cases, information should consist of **complete medical information** concerning treatment and medications ➢ For non-referred cases, non-medical information should be added.	
Situation of referral	Reason and situation of referral (e.g. means and timing) Actions taken during transfer

Condition upon arrival	Condition upon arrival (vital signs, fetal heart beat, internal examination etc.) Medications and treatment
Chronology of events	Begin with condition/findings on admission and record until death • Baby and mother's condition • Actions taken (treatment and medicines) • CEmONC interventions done • Place of death, date of death, and cause of death
Analysis and findings	Classification of factors (medical, non-medical, and contributory factors) Avoidable factors (three delays etc.) Other factors
Possible interventions and action plan	Interventions according to analysis Action plan according to level (DOH-CHD EV, PHO/CHO, MHO, BHS, LGUs, CHTs or community)

V. Analysis and action plan for MNDR

1. Analysis of cases

Each case should be assessed for factors that led to maternal and neonatal deaths and those that could have been prevented or avoided.

- Analyze life style, belief in or access to ANC, intrapartum care, and PNC.
  - Was the patient unaware of the need for care or unaware of warning signs?
  - Were services inaccessible? Why were they inaccessible?
- Analyze the actions of the health care workers who cared for the mother and baby.
  - Are mothers/babies dying because the care and services they receive are inadequate or inappropriate?
- Determine what lessons can be drawn from the available information.

The following section describes several approaches and techniques for analysis.

1) Use of a combination of quantitative and qualitative analysis

A combination of quantitative and qualitative analysis will provide insight into the causes of maternal and neonatal deaths. Therefore, case presentation should include both types of data.

- Quantitative analysis:
  Quantitative analysis enables the identification and comparison of patterns and trends concerning mothers and babies based on a variety of characteristics.
  Examples of quantitative data are as follows: age, ethnicity, socioeconomic status, education, community, parity and gravity, pregnancy outcome, age of gestation, ANC, type and place of delivery, PNC, cause of death, and time of death.
  ,
- Qualitative analysis:
  Qualitative analysis enables the identification of factors that may have led to a specific woman's death.
  Examples of qualitative data are as follows: access to care and services, availability of resources (e.g. trained health workers, well-equipped facilities, availability of operating room and blood transfusion), and adequacy of treatment.

2) Classification of causes

Classification of causes into Medical and Non-Medical causes and Contributory factors can clarify the appropriate interventions needed to address the three delays (see Table 3).

Table 3: Classification of factors

1. Factors on Maternal Death		
Medical Causes	**Non-Medical Causes**	**Contributory Factors**

• Medical conditions
• Hemorrhage (amount)
• Toxemias
• Infection
• Prolonged labor
• Appropriateness of action from time of admission
• Treatment received at the facility
	• Obstetric history:
	  ○ Place of delivery
	  ○ Attendant at birth
	  ○ Delay in transporting client to facility
	  ○ Cost of hospital delivery
		• Frequency of prenatal visits
		• Frequency of pregnancy and spacing between births
		• Type of delivery
		• History of pregnancy outcomes
		• Appropriateness and timeliness of referral
		• Health condition during pregnancy
		• Inaccurate entries in the doctor's or nurse's notes

2. Factors on Neonatal Death		
Medical Causes	**Non-Medical Causes**	**Contributory Factors**
• Neonatal sepsis, tetanus, pneumonia • Birth asphyxia • Respiratory distress syndrome • Extreme prematurity • Very low birth weight • Traumatic birth injury • Metabolic endocrine diseases • Multiple congenital anomalies • Complex heart diseases	• Place of birth/delivery • Transport to facility • Attendant at birth • Cost of hospital care	• Frequency of prenatal visits • Frequency of pregnancy and spacing between births • Type of delivery • Appropriateness and timeliness of referral • Non-administration of dexamethasone or betamethasone to the mother during preterm labor • Non-administration of antibiotocs to the mother during premature/early rapture of membranes

3) Identification of avoidable factors

Avoidable factors that contributed to maternal and neonatal deaths, need to be identified and prioritized. The *three delays* framework is a useful guide for identifying and analyzing avoidable factors.

Three delays framework

1. Delay in the decision to seek care
2. Delay in the arrival at health facility
3. Delay in the provision of adequate care

2. Translating findings into actions and interventions

1) Recommendations

Recommendations for action will be discussed during MNDR. Recommendations must be evidence based, arising from analysis, and findings from collected data. After a recommendation is made, the appropriate actions will be discussed.

2) Making an action plan

Taking action is the most important part of MNDR. Which actions are taken may depend on the approach and the responsible person(s)/level(s). Actions must deal with causative factors that are identified during analysis. Action plan should be detailed, implementable and consider the following:

- The ability/capacity of the people who are to take action.
- Clarify who, when, where, how to take action.
- Make realistic and concrete actions whenever possible.
- Consider monitoring issues. The action plan must also discuss how to monitor the progress of actions.
- Record the action plan and share it with stakeholders.

Examples of community actions are as follows: health promotion, strengthening health education, improvement of the provision of health services etc.
Examples of actions that can be taken in health facilities are as follows: improvement of clinical practices, modification of protocols and improvement in the availability of resources.

3. Share the findings and action plan among stakeholders

It is important to share key findings and recommendations with MNDR members and stakeholders involved. This section explains how to disseminate information with others.

The range of stakeholders with whom findings should be shared includes the following:

- CHT leaders
- BEmONC & CEmONC team members
- MHOs & DHOs
- Chiefs of Hospitals

- PHOs & Provincial MNCHN coordinators
- CHOs & City MNCHN coordinators
- DOH representatives
- ILHZ TMC & board members
- Community leaders
- Regional MNCHN team

1) Record the minutes of MNDRs and circulate them among members.
   Minutes are short summaries of key findings and recommendations that are discussed during MNDR meetings. Depending on the level of the MNDR, the PHOs/CHOs/ILHZ chairperson will record and provide a copy of the minutes to the attendees.

2) Share findings with other stakeholders.
   Key findings can be presented to other levels of MNDR to share information.

3) Share good practices during a Dissemination Forum or Scientific Conference.
   Use any opportunity to share good practices with LGUs, DOH-CHD, and other stakeholders who are not involved with MNDR. DOH-CHD EV and donors might hold a Dissemination Forum. The chairperson of the MNDR can present any important findings or good practices. Scientific conferences are good opportunities to perform in-depth discussions.

4) Share findings with the supportive supervision team.
   Findings should be shared with the Supportive Supervision Team (PHO/CHO/ Referral Hospitals) who should make a follow up during the supportive supervision visit .

5) Publish good practices of MNDR
   Good practices can be published in a newsletter and presented during MNDR meetings and MNCHN forums.

VI. Evaluation and refinement

The overall purpose of evaluation is to ensure an efficient and effective approach to instituting beneficial practices. In the MNDR cycle, especially concerning short-term processes, evaluation can be done by looking for improvements in the community, health care system, or society.

Indicators and goals should be identified during the development of an action plan for evaluation. After the evaluation, processes and actions can be refined according to the findings of the evaluation.

VII. Data management

The data generated by the reporting and review system provide important information on how the health system could be improved to respond to the maternal and neonatal mortality situation at different levels of local governance. It is important that the analysis be carried out at the systems level where causative factors can be viewed against a comprehensive layout of the health delivery system and the impact of a coordinated effort across municipalities can be better studied.

As the Geographic Information System (GIS) is covered in the national MDR manual[14], we will not discuss it in detail. This manual emphasizes the procedures, processes, and presentation of data for those such as DOH-CHD EV and PHOs/CHOs who manage maternal and neonatal death statistics. Review meetings examine cases to analyze qualitative data, and data management examines quantitative data. Therefore, PHOs/CHOs should have a systematic approach to organize, process, and present data.

1. Procedures

PHOs and CHOs are in charge of updating databases according to the reports that are submitted by MHOs, DHOs, and hospitals.

Product	
• Microsoft® PowerPoint® presentation • Database • Analysis report • Other materials if necessary	
Members	
• PHO/CHO • MNCHN Coordinator	
Procedure	**Responsible person**
• Prepare an Excel® database. • Regularly update the data.	Provincial/City MNCHN coordinator
• Summarize data regularly (monthly, quarterly, or annually)	Provincial/City MNCHN coordinator
• Process data according to factors. Develop tables and figures.	Provincial/City MNCHN coordinator
• Summarize findings through the processing of data (e.g., trends according to factors, the number of deaths by causes/area/ages etc).	Provincial/City MNCHN coordinator
• Examine and discuss the result.	PHO/CHO Provincial/City MNCHN

[14] Maternal Death Reporting and Review System, A guide for LGU users, 2007

	coordinator
• Prepare materials according to the type of dissemination (see below) such as a presentation or handout.	Provincial/City MNCHN coordinator PHO/CHO
Dissemination	
• Present during MNDR meeting (Provincial, City, Regional)	
• Present during ILHZ board/TMC meeting	
• Present during PHO, CHO, DOH-CHD EV Meeting	
• Present during dissemination forum	

2. Data Processing & Presentation

1) Database

PHOs and CHOs will develop one master database (preferably using Excel®) and update it regularly. It is important that the person updating the database avoid any duplication or omission of data. Additionally, they must keep all original data such as CHT/Facility Death Reporting Forms in case the database is unavailable. Furthermore, it is important to print out the database regularly to avoid issues caused by data loss.

The database will consist of the contents of CHT Death Reporting Form.

Database of Maternal Deaths

- Age: age of deceased mother
- Address: name of barangay, RHU/DHC, municipality, ILHZ
- Place of delivery: home or facility; name of BHS/RHU/DHC/hospital
- Place of death: home or facility; name of BHS/RHU/DHC/hospital
- Duration after delivery: time elapsed after delivery until death occurred
- Cause of death according to the classification in the Death Report: eclampsia, bleeding, infection, prolonged labor, other (please specify)
- Remarks:

Database of Neonatal Deaths

- Address: address of mother, name of barangay, RHU/DHC, municipality, ILHZ
- Age of deceased baby: Amount of time alive after delivery
- Gender for neonate: male or female
- Place of delivery: home or facility; name of BHS/RHU/DHC/hospital
- Date and time of delivery
- Place of death: home or facility; name of BHS/RHU/DHC/hospital
- Date and time of death
- Referral: yes or no
- Cause of death according to the classification in the Death Report: prematurity, congenital anomaly, pneumonia etc.
- Remarks

Figure 8: Sample Database

List of Maternal Death in 2010 (XX provinces)

No	Month	Age	Area	Delivery veue	Daeth venue	Duration Delivery-death(days)	cause of death	Remarks
1	1	33	kananga	OSPA	OSPA	ND	Bleeding	Placenta Previa
2	1	24	Tabango	Home	Tabango CH	ND	PP bleeding	Post partum
3	5	26	Ipil, palompon	Home	Hospital	ND	Sepsis	CHF, Anemia
4	6	24	Palompon	Hospital	Home	19	Severe Anemia, Postpartum	
5	6	18	Villaba	Home	Home	10	Sepsis	post partum
6	6	35	Baybay	Home	Home	0	Blood Loss, Retained Placenta	
7	6	24	Baybay	Home	Home	0	Eclampsia	
8	7	33	Capoocan	Home	Transit	0	PP Hemoorrhage, Uterine Atony	
9	9	21	Albuera	Not applicable	Hospital (DH)	ND	Ruptured Ectopic Pregnancy (Referral from OSPA Farmers Medical Center)	
10	9	25	Villaba	Home	DH MVM	1	Retained Placenta, Pulmonary Embolism,	
11	9	26	Baybay	Punta Birthing unit	Baybay Doctors Hospita	11	Cardio – Respiratory Arrest	
12	10	41	Hindang	DH Hilongos	DH Hilongos	0	Eclampsia	No delivered, died during pregnancy
13	10	42	Barugo	EVRMC	EVRMC	2	Eclampsia	
14	11	32	Alangalang,	PH Leyte	PH Leyte	6	Pre-eclampsia Severe	
15	11	23	Tunga	DH Carigara	EVRMC	0	Uterine Inversion, Adherent Placenta	
16	11	39	Javier	Home	Home	0	PP Hemorrhage 2ndary to Uterine Atony	
17	11	36	Hilongos	DH Hilongos	DH Hilongos	5	Bleeding, Uterine Atony	
18	11	35	Mahaplag	Private Birth facility	DH Western Leyte	0	Bleeding, Placental Retention	
19	12	34	San Isidro	DH	DH	3	Severe Anemia 2o to Blood Loss 2o to Placenta Previa Totalis	
20	12	35	Villaba	Home	Home	4	Cardio Respiratory Arrest secondary sepsis	
21	12	25	San Isidro, Kananga	Home	Home	4	ND	
22	12	38	Kananga	DH	DH	1	ND	
23	12	39	Carigara	ND	EVRMC	ND	ND	

List of Maternal Death in 2010 (XX City)

No	Month	Age	Area	Delivery veue	Daeth venue	Duration Delivery-death(days)	cause of death	Remarks
1	5	24	Ipil	ND	Private hospital	ND	Eclampsia	
2	10	31	Cogon	DH Ormoc	DH Ormoc	0	Amniotic Fluid Embolism Seizure disorder	
3	10	21	Alubuera	ND	DH Ormoc	ND	Hypovolemic Shock, severe blood loss Secondary Ectopic pregnancy,	

2) Data Processing

Data can be processed according to specific purposes. Therefore, PHOs and CHOs must decide what kind of data is needed. Typically, they should choose a factor that might influence maternal mortality and show the result. If the number of maternal deaths is not statically adequate or if we do not have enough data, we cannot make any statistically accurate inferences. However, we can use such data to observe some trends concerning death.

The following is a list of factors that can be analyzed:

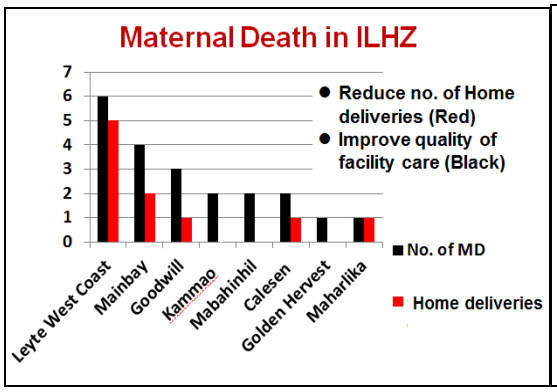
- ILHZ zone: differences by area
- Place of delivery: differences by place of delivery

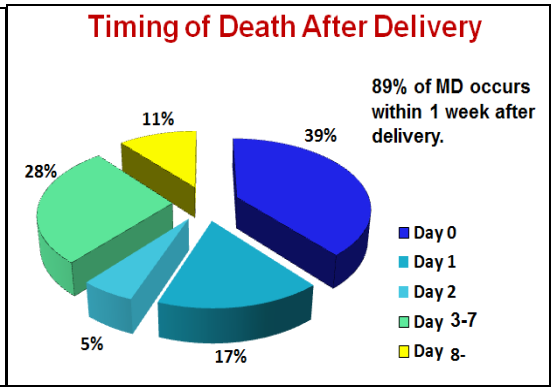
- Place of death: differences by place of death
- Age: differences by age
- Cause: number of deaths according to specific causes
- Time of death after delivery, especially for neonatal deaths: 0–7 days and 8-28 days

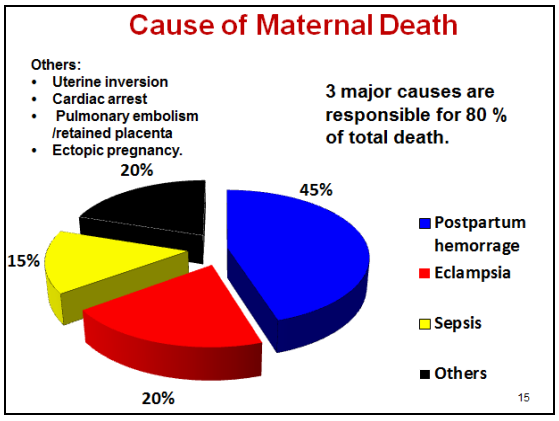
3) Presentation

Develop your presentation according to the audience who will be viewing it. Use graphs and tables effectively. If you wish to emphasize data by comparison, use a bar graph. For proportions, use a pie chart. Figure 9 provides some samples.

Figure 9: Sample Graphs







ATTACHMENT A: CHT Maternal Death Reporting Form for Midwives

Barangay: _____
Municipality: _____
Province/City: _____
Date: _____

Name of the deceased: _____
Age (at the time of death): _____
Address: _____
Name of informant: _____
Relationship to the deceased: _____
Address: _____
Contact number of informant: _____

Birth Information

Date of birth : _____Time_____:_____ Attendant during delivery _____
Place of birth: _____ Home
_____ BHS/ BHC
_____ RHU/ DHC
_____ Government hospital (please specify)_____
_____ Private hospital
_____Other (Please specify including in transit)_____

Type of facility : ☐CEmONC , ☐BEmONC, ☐Non BEmONC/CEmONC

Death Information

Date of death: _____Time_____:_____
Place of death: _____ Home
_____ BHS/ BHC
_____ RHU/ DHC
_____ Government hospital (please specify)_____ __
_____ Private hospital
_____Other (Please specify, including in transit)_____

Type of facility : ☐CEmONC , ☐BEmONC, ☐Non BEmONC/CEmONC

Woman died: _____ During pregnancy
_____ During childbirth
_____ After childbirth; how many hours/days?_____(specify number of hours/days)
More than one month? _____(please check)

Cause of death (*please check as appropriate)* _____ Bleeding
_____ Infection
_____ Hypertension
_____ Prolonged labor
_____ Other (please specify)_____

Submitted by:
Name & signature of CHT Midwife: _____
Station: _____

Submitted to and validated by:
Name & signature of RHU/DHC physician _____
Station _____
Date of validation _____

ATTACHMENT B: Facility Maternal Death Reporting Form

Name of health facility: _____
Address: _____
Date: _____

Essential data items	Details
Name of the deceased	
Age *(at the time of death)*	
Address	
Number of pregnancies	
Informant	Name: _____ Relationship to the deceased:
Address and contact number	
Referral from (*please check as appropriate)*	☐BHS , ☐ RHU/DHC, ☐Lying in clinic, ☐District hospital ☐Other (please specify)_____
Hospital admission details	Date: _____Time: _____:_____
If post-partum: place of delivery	_____ Home , _____ BHS/ BHC , _____ RHU/ DHC _____ Government hospital (please specify)_____ _____ Private hospital _____Other (Please specify including in transit)_____
Type of facility :	☐CEmONC , ☐BEmONC, ☐Non BEmONC/CEmONC
Date and time of delivery	Date: _____Time: _____:_____
Attendant at delivery *(please check as appropriate)*	Doctor _____ , Midwife _____, Nurse _____ TBA *(Hilot)* _____, Other (please specify) _____ _____
Place of death	Health facility: _____ Address _____
Date and time of death	Date: _____Time: _____:_____
Cause of death	
Condition at the time of death *(please check as appropriate)*	Pregnant _____ Post-partum _____ In labor _____
Is the baby alive at the time of mother's death?	☐Yes ☐No
Medical/surgical management received	Surgery (CS) done _____, Manual removal of placenta _____ Blood transfusion _____ , Vaginal assisted (forceps) _____ Removal of retained placental products _____ Administration of: Anticonvulsant _____, Antibiotic _____ Oxytocic _____, Oxygen inhalation _____ Fluids & electrolytes _____ Other (specify) _____

Submitted by: Printed name & position _____

Signature: _____ ____

Submitted to: Name of ILHZ chairperson _____
Name of PHO/CHO_____

ATTACHMENT C: CHT Neonatal Death Reporting Form for midwives

Barangay: _____ **Municipality:** _____
Province/City: _____ **Date:** _____

Name of the baby: _____
Name of the mother: _____
Address: _____
Sex of deceased baby: ☐ **Boy** ☐ **Girl**
Name of informant: _____**Relationship to deceased:**_____ ___
Address and contact number_____

Birth information
Date of birth : _____**Time_____:_____ Attendant at birth :_____**
Place of birth: _____ Home
_____ BHS/ BHC
_____ RHU/ DHC
_____ Government hospital (please specify)_____
_____ Private hospital
_____Other (Please specify including in transit)_____

Type of facility: ☐CEmONC , ☐BEmONC, ☐Non BEmONC/CEmONC

Death Information
Date of death: _____Time _____:_____
Place of death: _____ Home
_____ BHS/ BHC
_____ RHU/ DHC
_____ Government hospital (please specify)_____ _____
_____ Private hospital
_____Other (Please specify, including in transit)_____

Type of facility: ☐CEmONC , ☐BEmONC, ☐Non BEmONC/CEmONC

Baby died: _____ During delivery
_____ After delivery: how many hours/ days?_____(specify number of hours/ days)
Is the mother alive?: ☐ Yes , ☐ No

Signs and symptoms prior to death:
_____
_____
Submitted by:
Name and signature of Midwife: _____, Station
_____

Cause of death (*Should be filled up by MHO/DHO*):
_____ Birth Asphyxia _____ Prematurity(less than 37 weeks AOG)
_____ Neonatal Sepsis _____ Neonatal Tetanus
_____ Neonatal Pneumonia _____RDS
_____ Congenital Anomalies (Specify) _____
_____ Other (please specify)_____

Validated and submitted by:
Name & signature of MHO/DHO _____
Station _____
Date _____

ATTACHMENT D: Facility Neonatal Death Reporting Form

Name of health facility: _____
Address: _____
Date: _____

Essential data items	Details
Name of deceased baby	
Name of the **mother** of deceased baby	
Sex of deceased **baby**	☐Boy ☐Girl
Address	Barangay: _____ Municipality: _____
Birth order of deceased baby	
Informant	Name _____ Relationship with deceased _____ Contact No. _____ Address: _____
Referral from (*please check as appropriate)*	☐BHS , ☐ RHU/DHC, ☐Lying in clinic, ☐District hospital ☐Other (please specify)_____
Facility admission details	Date: _____Time: _____ Total hours/days of stay: _____
Date, time and place of birth	Date: _____ Time:_____ Place: _____
Age of gestation	Birth weight: _____
Date and time of death	Date: _____ Time:_____ How many hours/days after birth? (specify hours/days) _____
Place of death	☐In facility, Name: _____ Address _____ ☐ In transit
Occurrence of death	☐During delivery, ☐After delivery
Cause of death	☐Birth Asphyxia, ☐ Neonatal Sepsis ☐Neonatal Tetanus ☐ Neonatal Pneumonia, ☐RDS ☐Congenital anomalies_____ (please specify) ☐Prematurity_____(Specify birth weight, AOG) ☐ Other: _____(please specify)
Attendant at delivery *(please check as appropriate)*	☐Doctor, ☐ Midwife, ☐Nurse, ☐TBA (*Hilot*) Others (Specify):_____
Medical management received	

Submitted by: Printed name & position _____
Signature: _____
Submitted to: Name of ILHZ chairperson _____
Name of PHO/CHO_____

ATTACHMENT E: MATERNAL MORTALITY REVIEW (MMR) QUESTIONNAIRES

FORM 1: MEDICAL RECORDS REVIEW

Please check (✓) data sources:

_____ FHSIS E-2 (Maternal Mortality Form)
_____ Individual Treatment Record
_____ Patient's chart in hospital or clinic

_____Target Client List
_____Partograph

_____ Hospital OPD record
_____ Other available records
_____ Death Certificate
For those who died at home:
_____ Home-Based Mother's Record
_____ Birth Plan (Mother & Child Book)

Fill this form using records at facility or home as reference

Name of the deceased:
Age *(at the time of death)*:
Address:
Name of nearest relative (*as indicated in the patient's chart)**:

PAST MEDICAL HISTORY: ***Please note significant medical conditions that could have been triggered by pregnancy.***

PAST OBSTETRIC HISTORY:
No. of pregnancies: _____
No of deliveries: _____ Obstetric score: _____

Year of Delivery (start with the first child)	**Type of Delivery**	**Place of Delivery**	**Attendant at Birth**	**Complications**	**Outcome of Pregnancy**

THIS LAST PREGNANCY:

Last Menstrual Period: _____
Expected Date of Confinement: _____
Pre-natal

No. of visits by trimester	Services Given
1st	
2nd	
3rd	
Total no. of visits	

Death occurred: ( ) during pregnancy No. of weeks/months pregnant: _____
( ) during delivery
( ) postpartum No. of hours/days postpartum: _____

Was she able to deliver her baby prior to death? ( ) Yes, ( ) No
If yes, type of delivery ( ) vaginal spontaneous ( ) forceps delivery
( ) vaginal induced ( ) vacuum cap extraction
( ) breech extraction ( ) caesarean section
Date of delivery: month _____ day_____ year_____
Place of delivery _____
Attendant at delivery _____
Number of hours in labor _____ Was the baby alive? ( ) Yes ( ) No
Birth weight: _____
Estimated amount of blood lost during delivery: _____
after delivery: _____

Note: Please indicate *N/A* if information is not applicable or not available.

1. New patient ( ) Yes ( ) No
   If yes:
2. Referred by:

_____
(Name of facility or referring doctor)

Date and time referred: _____
Reason(s) for referral:

_____

Management Tracking Form (*from arrival to death); use additional page when necessary.*

Date/Time	Condition of Patient	Actions Taken	Staff Job Title (MD, RN, RM, etc.)
	When first seen by any health worker:		
	Time of admission:		
	While in the labor room		
	While in the delivery room		
	While giving birth		
	While in the recovery room		
	While in the ward		
	At the time of discharge		

Final diagnosis (cause of death)

_____

O**ther related conditions: (circumstances surrounding the death and action taken)**

Circumstances Surrounding Death	Actions Taken

Autopsy findings:

_____
_____
_____
_____
_____
_____

Name of data collector _____
Date of data collection_____

MATERNAL MORTALITY REVIEW (MMR) QUESTIONNAIRES
FORM 2: FACILITY STAFF INTERVIEW

Introduce yourself and thank the interviewee for agreeing to be interviewed. Offer to answer any questions about the purpose and methods of the maternal mortality review before starting the interview. Reassure the interviewee that any information derived during the interview will be kept strictly confidential and will not be used to put any person at fault. However, inform the interviewee that her or his job title or category will be noted for improving the health service delivery system.

The questions in the checklist are to be used as memory prompts. They are illustrative and open-ended to enable health workers to gather relevant information. If necessary, they should be translated into the respondent's dialect. *This form is optional and may be used as necessary.*

Name of the deceased:
_____

Checklist of Topics	Job Title	Answers/Details
1. Can you tell me what happened at the time she (the deceased) arrived at the facility?		
RESPONDENT'S/INTERVIEWEE'S KNOWLEDGE		
2. Were you with her when she died? If no, how long just before she died did you see her? Who told you about her death? Was this person with her when she died?		
3. How soon (about how many hours) did you learn about her death?		

Checklist of Topics	Job Title	Answers/Details
TREATMENT AT THE FACILITY		
1. . Who admitted her?		
2. Who was attending to her when you first saw her?		
3. . What was your assessment of her condition when you first saw her?		
4. What was your plan of care then? (*If plan of care included referral, record name of facility or job title of health worker for whom referral was made.)*		

5. Was there any obstacle or delay in implementing your plan? [ ] Yes [ ] No If yes, what was it? Could you describe it further?		
6. Were you able to provide personal medical or nursing care to her during her stay in this facility? [ ] Yes [ ] No If no, why? Did anyone provide care (e.g., other staff, relatives, friends)?		
ACTION TAKEN		
1. About how long after you felt something was seriously wrong with the patient did you decide to act?		
2. What did you do then? *(If referral to medical staff or facility was performed, take note of the name of the facility and job title of health worker)*		
3. Did you feel you had enough support and expertise in carrying out your plan of action? If not, what was lacking?		
4. Did you have the appropriate equipment and drugs? If no, why?		

Checklist of Topics	Job Title	Answers/Details
SIGNS AND SYMPTOMS BEFORE DEATH		
1. Close to the time of death, did the deceased have any of the following problems? a) Convulsions *b)* Bleeding from vagina *(exclude bloody show)* *c)* Prolonged labor *(longer than 12 hours)* d) High fever e) Pallor f) Severe abdominal pain g) Severe chest pain h) Difficulty breathing i) Coughing up blood j) Hand and/or facial edema k) Hypertension l) Other m) Unstable state of consciousness *(Lethargic, comatose, etc.)*		

FACTORS BEFORE ARRIVAL AT FACILITY		
2 Were there any factors before arrival at the facility that might have affected her condition? Example: *a)* Treatment from *hilot* b) Unavailability of transport facility c) Others		
PRENATAL CARE		
3. Did the deceased ever consult a skilled health professional for prenatal care during this pregnancy? *(A skilled health professional is a doctor, nurse or midwife.)*		
4. How many times did she visit the health center for prenatal care?		
5.Were these prenatal visits made because she had a problem or just part of her regular pregnancy check-up?		
GENERAL HEALTH		
5. Do you know of any medical problem she had before she became pregnant? If yes, could you please specify?		
7 Was she ever hospitalized before for conditions other than normal delivery? (please specify)		
AVOIDABLE FACTORS		
8. What else could have been done to prevent her death?		

MATERNAL MORTALITY REVIEW (MMR) QUESTIONNAIRES
FORM 3: COMMUNITY INTERVIEW RECORD

Note: HEALTH WORKER USES THIS FORM IF THE WOMAN DIED AT HOME.

The respondent in this interview should be the nearest relative, friend or neighbor who has knowledge of the death and the circumstances surrounding it. The interviewer is advised to write the exact words of the respondent.

The interviewer must introduce himself or herself first. An introduction is necessary to inform the interviewee(s) of the purpose of the interview. It is important for the respondent to recognize that it is difficult for them to talk about the death but their cooperation will help other women avoid suffering the same fate and will help the government provide better services.

==========

Name of the deceased woman: _____
Interviewee's relationship with the deceased: _____
(Partner/mother/daughter/sister/friend/neighbor)

VERBATIM REPORT:

1. Can you tell me what happened before she died?
   _____
   _____

2. What do you think was the cause of her death?

_____

_____

_____

_____

RESPONDENT KNOWLEDGE:

1. When did she die? Day: _____Month _____ Year _____

2. Where did she die?
   _____ Home. _____ BHS/ BHC
   _____ RHU/ DHC, _____ Private hospital
   _____ Government hospital (please specify)_____ _____
   _____Other (Please specify, including in transit)_____

3. At what month of her pregnancy did she die? (Record month of pregnancy)_____

4. Were you present when she died? ( ) Yes ( ) No.
   If YES, proceed to "**Health Condition before Arriving at Facility"**
   If NO, about how long (how many hours, days, months) just before her death did you see her?
   _____

5. Who told you about her death? _____

6. Was this person with her when she died? ( ) Yes ( ) No

7. About how long after her death did you learn about it? (No. of days/weeks/months/years)
_____

HEALTH CONDITION BEFORE ARRIVING AT FACILITY:

Signs & Symptoms	Yes	No	Action Taken	Treatment Given	Reasons
Close to the time of death, did she have any of the following problems? • Convulsions • Bleeding from vagina • High grade fever • Severe abdominal pain • Severe chest pain • Extreme shortness of breath • Coughing up blood • Pallor • Prolonged labor (more than 12 hours) Other Conditions: • Yellowish? • Suffering from any disease of the blood? • Loss of weight during pregnancy? • Shortness of breath when carrying out household activities? • Diarrhea during pregnancy? • Swallowed any poisonous substance?			○ Treatment sought for the problem? ○ Treatment sought from whom? _____ Where? _____ 1.) Why was no treatment sought?_____ __ _____ _____ _____ _____ _____ _____ _____	What treatment did she have at the facility?	What was the reason given for the treatment?

If death occurred during labor, childbirth or after childbirth:

1. Where did the childbirth take place?_____ Home
_____ Hospital
_____ Health center
_____ Clinic
_____ Other, specify _____

2. Who attended the delivery (check [√] appropriate response)?
_____ Doctor *Hilot* _____
_____ Nurse Relative _____
_____Midwife Other, specify _____

GENERAL HEALTH DURING PREGNANCY:
(*Note: If deceased woman had a HBMR or Mother & Child Book, ask for it*)

1. Do you know of any medical problem she had before she became pregnant? ( ) Yes ( ) No

2. What was her medical problem?
   Check ( ) the appropriate response:

_____Reproductive tract infection
_____ Tuberculosis
_____ Heart disease
_____ Bronchial asthma
_____ Goiter
_____ Malaria
_____Diabetes
_____Chronic hypertension
_____Other, specify_____

PRENATAL CARE:

1. Did she ever go for a prenatal care visit during her pregnancy? ( )Yes ( )No
   If YES, did she have any of the following records?
   _____Prenatal Care Card
   _____HBMR (Home-Based Mother's Record)
   _____Mother-Baby Book

2. Where did she go for prenatal care? _____

3. Whom did she consult for prenatal care? _____

4. How many times did she consult for prenatal care? _____

5. Did she go for prenatal care because she had a problem with her pregnancy or just to check that everything was fine? If it was because of a problem, what was the problem?
   _____

6. How many live births did she have? _____

7. How many of her children are still alive after her death? _____

8. Has she ever had a pregnancy that ended before full-term (before 9 months of pregnancy)?
   ( )Yes ( )No If yes, how many? _____

9. Has she ever had a pregnancy that ended in a stillbirth?
   ( )Yes ( )No If yes, how many? _____

10. Did she have a caesarean section in her previous pregnancy? ( )Yes ( )No

WARNING SIGNS:

1. Did something happen to make you realize that something was going wrong with her?
   ( ) Yes ( ) No. If yes, what was it? _____

2. Did she have swelling of the legs during her pregnancy? ( ) Yes ( ) No

3. Did she have swelling the face during the pregnancy? ( ) Yes ( ) No

4. Did she complain of blurred vision during her pregnancy? ( ) Yes ( ) No

5. Did she have high blood pressure during her pregnancy? ( ) Yes ( ) No

6. During her last illness, was she bleeding from the vagina? ( ) Yes ( ) No
   If yes, did it wet her clothes, the bed or the floor? _____
   Was she in pain while bleeding? ( ) Yes ( ) No

7. Did she have other episodes of bleeding during this pregnancy? ( ) Yes ( ) No
   If yes, were they painful? _____ ( ) Yes ( ) No

8. Did she have a vaginal examination during her illness? ( ) Yes ( ) No
   If yes, did it increase the bleeding? ( ) Yes ( ) No

9. Did she have a high fever during her last illness? ( ) Yes ( ) No

10. Has she been ill with any other illness during this pregnancy? ( ) Yes ( ) No
    If yes, what was the illness? _____

11. Did anyone recommend that she be referred? ( ) Yes ( ) No
    If yes, by whom? _____

Avoidable factors, including delays and steps needed to prevent them:

1. About how long after you felt something was wrong did you decide to bring her to the facility?
   _____

2. About how long did it take you to get to the facility? _____

3.When you arrived at the facility, how long did you wait before a nurse, midwife or doctor came to examine her? _____

   (Note: The interviewer determines whether there was a delay; if there was a delay, validate it with the interviewee).

4. What else could have been done to prevent the delay?

_____
_____
_____
_____

ATTACHMENT F: NEONATAL MORTALITY REVIEW (NMR) QUESTIONNAIRES

FORM 1: MEDICAL RECORDS REVIEW

Please check (√) data sources:

_____ FHSIS E-2 (Maternal Mortality Form)
_____ Individual Treatment Record
_____ Patient's chart in hospital or clinic

_____Target Client List
_____Partograph

_____Hospital OPD record
_____Other available records
_____Death Certificate
For those who died at home:
_____Home-Based Mother's Record
_____Birth Plan (Mother & Child Book)

Fill this form using facility or home records as reference (please indicate N/A if information is not applicable or not available)

Name of the deceased baby
Age *(at the time of death, specify how many hours/days after birth)*:
Is this a referral: ( ) Yes ( ) No If YES, referred by: (*pls specify name of referring facility and health worker)*_____ _____ Date and time referred: _____ Reasons for referral: _____ _____
Baby died: ( ) during delivery ( ) after birth No. of hours/days after birth:
Name of mother:
Address:
Name of informant: Relationship to the deceased baby:

GENERAL INFORMATION OF MOTHER:

Age:	Civil status:
Educational attainment:	Occupation:
Religion:	Blood type:
PhilHealth member: Yes ( ) No ( )	

PSYCHOSOCIAL HISTORY OF MOTHER:

Cigarette smoker: Yes ( ) No ( ), If YES, duration_____
Alcohol drinker: Yes ( ) No ( ), If YES, amount _____
Drugs: Yes ( ) No ( ), If YES, specify _____

MEDICAL HISTORY OF MOTHER: ***Please note significant medical conditions including management given***

OBSTETRIC HISTORY OF MOTHER:

Obstetric History of Mother

No. of pregnancies of mother: _____
No of deliveries of mother: _____ Obstetric Score: T ___ P___A___L___

Year of Delivery (***start with the first child)***	**Type of Delivery**	**Place of Delivery**	**Attendant at Birth**	**Complications**	**Outcome of Pregnancy**	**Alive (yes/no)**	**Remarks** (***if baby died put age at death and cause of death***)

PRENATAL HISTORY OF MOTHER:

Last menstrual period:_____ Expected date of confinement:_____

No. of Visits by Trimester	**Symptoms /Complaints of Mother (Please indicate if routine check-up only)**	**Findings (Physical Examination and Laboratory)**	**Assessment**	**Services/Management Given**
1st				
2nd				
3rd				
Total no. of visits				

HISTORY OF LABOR AND DELIVERY OF MOTHER:

Signs/Symptoms *Please check (√)*		Onset of Symptoms	Assessment	Management Given
Leaking Bag of Water Clear:____ Meconium Stained:__				
Hypertension *B*P:_____				
Convulsion				
Vaginal Bleeding				
Fever				
Severe Abdominal Pain				
Obstetrical Complications *(please specify)*				
Other (*please specify*)				

Onset of active labor (date and time):_____ Time of full cervical dilatation:_____
No. of hours of 1st stage of labor (from onset of active labor to full cervical dilatation)_____
No. of hours of 2nd stage of labor (from full cervical dilatation to the delivery of the baby)
_____Total no. of hours in labor:_____

Type of pregnancy:
( ) Singleton ( ) Multiple pregnancy

Type of delivery
( ) Vaginal spontaneous ( ) Forceps delivery
( ) Vaginal induced ( ) Vacuum cap extraction
( ) Breech extraction ( ) Caesarean section

Is the mother alive? ( ) Yes ( ) No
If mother died: ( ) during labor and delivery
( ) during postpartum (*please specify hours/days postpartum*)_____

BIRTH HISTORY OF BABY:

Date of birth: month_____ day_____ year _____time_____ Age of gestation (AOG):_____
Place of birth:_____ Attendant at birth: _____
At birth, was the baby:
Crying: ( ) Yes ( ) No Cyanotic: ( ) Yes ( ) No

Apgar score: 1 minute____ 5 minutes:____ 10 minutes:_____
If Apgar score is 4 or below at 1 minute, was resuscitation performed: ( ) Yes ( ) No
Management given: _____

ESSENTIAL INTRAPARTUM AND NEWBORN CARE *(please check* (√) *if done)*

1. Immediate and thorough drying ( ) 3. Properly timed cord clamping ( )
2. Skin to skin/initiation to breastfeeding ( ) 4. Non separation of mother and baby ( )

Onset (time) of feeding:_____ Age of first full breastfeeding (minutes):_____

Vitamin K injection: ( ) Yes ( ) No
Eye prophylaxis: ( ) Yes ( ) No

Birth weight:_____ Blood type:_____

Anthropometric measurements:
Head circumference:_____ _____ Chest circumference:_____ ____
Abdominal circumference:_____ _____ Length:_____ _____

Significant physical examination findings:_____
_____

Newborn screening: ( ) Yes ( ) No
If YES, result:_____
If positive, confirmatory test done: ( ) Yes: ( ) No
If YES, result (*specify*)_____ _____
Actions taken:_____ _____

Date/time baby was discharged *(if applicable*):_____
Baby's condition on discharge: _____

INTERVAL HISTORY OF THE BABY (If applicable):

Date	**Consultation**	**Admission**	**Symptoms of the Baby**	**Findings**	**Assessment**	**Management Given**
	Please check (√)					

FEEDING HISTORY OF BABY:

Exclusive breastfeeding: ( ) Yes ( ) No If NO, state reason/s_____
_____
Specify feeding given:_____

MEDICAL EVENTS PRIOR TO DEATH (from birth/arrival to death) ***Use additional page when necessary.*** **Date/ time**	**Signs and Symptoms**	**Findings (Physical Examination and Laboratory)**	**Assessment**	**Management Given**	**Staff Job Title** (MD, RN, RM, etc.)
	When first seen by any health worker/time of admission:				
	While in the ward *(in chronological order):*				

Final diagnosis (cause of death) _____
Date and time of death:_____

OTHER RELATED CONDITIONS:

Circumstances Surrounding Death	Actions Taken

Autopsy findings:_____
_____
_____

Name & signature of data collector _____

Date of data collection:_____ _____

NEONATAL MORTALITY REVIEW (NMR) QUESTIONNAIRES
FORM 2: FACILITY STAFF INTERVIEW

Introduce yourself and thank the interviewee for agreeing to be interviewed. Offer to answer any questions about the purpose and methods of the neonatal mortality review before starting the interview. Reassure the interviewee that any information derived during the interview will be kept strictly confidential and will not be used to put any person at fault. However, inform the interviewee that her or his job title or category will be noted for improving the health service delivery system.

The questions in the checklist are to be used as memory prompts. They are illustrative and open ended to enable health workers to gather relevant information. If necessary, they should be translated into the respondent's dialect. *This form is optional and may be used as necessary.*

Name of the deceased:

_____

Checklist of Topics	Job Title	Answers/Details
1. Can you tell me what happened at the time the baby was born/ arrived at the facility?		
RESPONDENT'S/INTERVIEWEE'S KNOWLEDGE		
2. Were you with the baby when the baby died? If no, how long just before the baby died did you see the baby? Who told you about the baby's death? Was this person with baby when the baby died?		
3. How soon (about how many hours) did you learn about the baby's death?		

Checklist of Topics	Job Title	Answers/Details
TREATMENT AT THE FACILITY		
1. Who admitted the baby?		
2. Who was attending to the baby when you first saw the baby?		
3 What was your assessment of the baby's condition when you first saw the baby?		
4. What was your plan of care then? (*If plan of care included referral, record name of facility or job title of health worker for whom referral was made.)*		

5. Was there any obstacle or delay in implementing your plan? [ ] Yes [ ] No If yes, what is it? Could you describe it further?		
6. Were you able to provide personal medical or nursing care to the baby during his or her stay in this facility? [ ] Yes [ ] No If no, why? Did anyone provide care (e.g., other staff, relatives or friends)?		
ACTION TAKEN		
7. About how long after you felt something was seriously wrong with the patient did you decide to act?		
8. What did you do then? *(If referral to medical staff or facility was performed, take note of the name of the facility and job title of health worker.)*		
9. Did you feel you had enough support and expertise in carrying out your plan of action? If not, what was lacking?		
10. Did you have the appropriate equipment and drugs? If no, why?		

SIGNS AND SYMPTOMS BEFORE DEATH		
1 . Close to the time of death, did the deceased have any of the following problems? (*please check*) ( ) Hypothermia ( ) Hyperthermia ( ) Convulsions/Seizures ( ) Difficulty breathing or fast breathing ( ) Poor or no breastfeeding ( ) Poor activity or difficulty to arouse ( ) Restlessness or irritability ( ) Deep jaundice ( ) Severe abdominal distension ( ) Umbilical infection ( ) Other (specify) _____		
FACTORS BEFORE ARRIVAL AT FACILITY		
2. Were there any factors before arrival at the facility that might have affected the condition of the baby? Example: ( ) Treatment from hilot ( ) Unavailability of transport facility ( ) Others		

GENERAL HEALTH OF MOTHER		
3. Do you know of any medical problem the mother of the deceased baby had before she became pregnant? If yes, could you please specify?		
4 Was the mother of the deceased baby ever hospitalized before for conditions other than normal delivery? (please specify)		
PRENATAL CARE		
5. Did the mother of the deceased baby ever consult a skilled health professional for prenatal care during this pregnancy? *(A skilled health professional is a doctor, nurse or midwife.)*		
6. How many times did the mother visit the health center for prenatal care?		
7. Were these prenatal visits made because the mother had a problem or just part of her regular pregnancy check-up?		
CONDITION OF MOTHER DURING LABOR AND DELIVERY		
8 .Did the mother have problems during labor and delivery? If yes, please specify.		
9. What was the assessment of the mother?		
10. What was the management given?		
BIRTH HISTORY OF THE BABY		
11. If the baby was born in this facility, how was the condition of the baby? a) At birth		
b) During stay in the facility		
12.What was the assessment of the baby?		
13. What was the management given?		
INTERVAL HISTORY		
14.Was the baby brought for consultation/admission prior to the last admission? If yes, how many times? Give details including assessment and management given.		
AVOIDABLE FACTORS		
15. What else could have been done to prevent neonatal death?		

NEONATAL MORTALITY REVIEW (NMR) QUESTIONNAIRES
FORM 3: COMMUNITY INTERVIEW RECORD

Note: HEALTH WORKERS USES THIS FORM IF THE BABY DIED AT HOME. THIS FORM CAN ALSO BE USED TO GATHER ADDITIONAL INFORMATION.

The respondent for this interview should be the nearest relative, friend or neighbor who has knowledge of the death and the circumstances surrounding it. The interviewer is advised to write the exact words of the respondent.

The interviewer must introduce himself or herself first. An introduction is necessary to inform the interviewee(s) of the purpose of the interview. It is important for the respondent to recognize that it is difficult for them to talk about the death but their cooperation will help other babies avoid the same fate and will help the government provide better services.

==========

Name of the mother of deceased baby: _____
Name of the deceased baby: _____
Interviewee's relationship with the deceased: _____
(Grandparent/father/mother/neighbor/other)

VERBATIM REPORT:

1. Can you tell me what happened before the baby died?

_____
_____

2. What do you think was the cause of the baby's death?

_____
_____

RESPONDENT KNOWLEDGE:

1. When did the baby die? Day: _____Month _____Year _____

2. Where did the baby die?
   _____ Home. _____ BHS/ BHC
   _____ RHU/ DHC, _____ Private hospital
   _____ Government hospital (please specify)_____ _____
   _____Other (Please specify, including in transit)_____

3. At how many hours/days after birth did the baby die? _____

4. Were you present when the baby died? ( ) Yes ( ) No.
   If YES, proceed to "**Health Condition before the Death of the Baby"**
   If NO, about how long (how many hours, days or months) just before the baby's death did you see the baby? _____

5. Who told you about the baby's death? _____

6. Was this person with the baby when the baby died? ( ) Yes ( ) No
7. About how long after the baby's death did you learn about it? (No. of days/weeks/months/years)
   _____

HEALTH CONDITION BEFORE THE DEATH OF THE BABY:

Signs & Symptoms	Yes	No	Action Taken	Treatment Given	Reasons
Close to the time of death, did the baby have any of the following problems? • Hypothermia • Hyperthermia • Convulsions/Seizures • Difficulty in breathing or fast breathing • Poor or no breastfeeding • Restlessness or irritability • Poor activity or difficulty to arouse • Deep jaundice • Severe abdominal distension • Umbilical infection • Other (specify) _____			○ Treatment sought for the problem? ○ Treatment sought from whom? _____ Where? _____ Why was no treatment sought? _____ _____ _____ _____ _____ _____ _____ _____	What treatment did the baby have at the facility?	What was the reason given for the treatment?

1. Where did the childbirth take place?
   _____ Home. _____ BHS/ BHC
   _____ RHU/ DHC, _____ Private hospital
   _____ Government hospital (please specify)_____ _____
   _____Other (Please specify, including in transit)_____

2. Who attended the delivery (check [√] appropriate response)?
   _____ Doctor *Hilot* _____
   _____ Nurse Relative _____
   _____Midwife Other (specify) _____

GENERAL HEALTH DURING PREGNANCY:

(*Note: If deceased woman had a HBMR or Mother & Child Book, ask for it*)

1. Do you know of any medical problem mother had before she became pregnant? ( ) Yes ( ) No
2. What was the mother's medical problem?
   Check ( ) the appropriate response:

_____Reproductive tract infection
_____ Tuberculosis
_____ Heart disease
_____ Bronchial asthma
_____ Goiter
_____ Malaria
_____Diabetes
_____Chronic hypertension
_____Other, specify_____

PRENATAL CARE:

1. Did the mother ever go for a prenatal care visit during her pregnancy? ( )Yes ( )No
   If YES, did the mother have any of the following records?
   _____Prenatal Care Card
   _____HBMR (Home-Based Mother's Record)
   _____Mother-Baby Book
2. Where did the mother go for prenatal care? _____
3. Whom did the mother consult for prenatal care? _____
4. How many times did the mother consult for prenatal care? _____
5. Did the mother go for prenatal care because she had a problem with her pregnancy or just to check that everything was fine? If it was because of a problem, what was the problem?
   _____
6. How many live births did the mother have? _____
7. How many of her children were alive at the time of death of the baby? _____
8. Has the mother ever had a pregnancy that ended before full-term (before 9 months of pregnancy)?
   ( ) Yes ( ) No If yes, how many? _____
9. Has the mother ever had a pregnancy that ended in a stillbirth?
   ( ) Yes ( ) No If yes, how many? _____
10. Did the mother have a caesarean section in her previous pregnancy? ( ) Yes ( ) No
11. Has the mother ever had a pregnancy that ended before full-term (before 9 months of Pregnancy)?
    ( ) Yes ( ) No
    If yes, how many? _____

WARNING SIGNS:

1. Did something happen to make you realize that something was going wrong with the pregnancy?
   ( ) Yes ( ) No. If yes, what was it?_____
2. Did something happen to make you realize that something was going wrong during labor and delivery?
   ( ) Yes ( ) No. If yes, what was it? _____
3. Did something happen to make you realize that something was going wrong when the baby was born?
   ( ) Yes ( ) No. If yes, what was it? _____
4. Did something happen to make you realize that something was going wrong with the baby before baby died?
   ( ) Yes ( ) No. If yes, what was it?_____

Avoidable factors, including delays and steps needed to prevent them:
If the baby was brought to the health facility prior to the death at home,

1. About how long after you felt something was wrong did you decide to bring the baby to the facility?
   _____

2. About how long did it take you to get to the facility? _____

3. When you arrived at the facility, how long did you wait before a nurse, midwife or doctor came to examine the baby? _____
   (Note: The interviewer determines whether there was a delay; if there was a delay, validate it with the interviewee).

4. What else could have been done to prevent the delay?

_____
_____
_____

ATTACHMENT G: Causes of Maternal Mortality

(Source**: Philippine Obstetrical & Gynecological Society ISIS (POGS ISIS))**

- **Direct obstetric death**:, Those resulting from obstetric complications of the pregnant state (pregnancy, labour and puerperium),from interventions, omissions, incorrect treatment.
- **Indirect obstetric death:** Those resulting from previous existing diseases or that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiological effects of pregnancy.
-

DIRECT MATERNAL DEATH	
ANTECEDENT	**UNDERLYING**
HEMORRHAGE	Spontaneous abortion
	Induced abortion
	Retained secundines
	Ectopic pregnancy
	Abruption placenta
	Placenta previa
	Placenta accrete
	Uterine rupture
HYPERTENSION	Pre-eclampsia
	Eclampsia
	Pre-existing hypertension
	Combination
	HELLP Syndrome
	Others
INFECTION	Induced Abortion
	Pelvic Abscess
	Puerperal infection
	Chorioamnionitis
	Adnexal infection
	Pelvic thrombophlebitis
	Septic embolism
	Others
VASCULAR ACCIDDENT	Amniotic fluid embolism
	Puerperal nonseptic embolism
	Air embolism
	Others
ANESTHESIA	None
OTHERS	Peri-postpartum cardio myopathy
	Transfusion hemolysis
	Electrolyte imbalance
	Pregnancy anemia
NON-MATERNAL DEATH	
ACCIDENTS	Stab wound
	Gunshot
	Vehicular accident
	Accident poisoning
	Others
MURDER	Suicide
	Homicide

INDIRECT MATERNAL DEATH	
ANTECEDENT	**UNDERLYING**
CARDIAC	Rheumatic Heart Disease
	Hypertensive Heart Disease
	Congenital Heart Disease
	Atherosclerotic Heart Disease
	Undiagnosed
	Others
VASCULAR	Pre-existing hypertension
	Vascular thrombosis/embolism
	Thrombophlebitis
	Others
REPRODUCTIVE TRACT	Uterine anomalies
	Uterine myoma
	Ovarian cyst
	Reproductive tract Malignancy
	Others
URINARY TRACT	Glomerulonephritis
	Urinary Tract Infection
	Hydronephrosis
	Renal Malignancy
	Others
HEPATIC	Infectious hepatitis
	Liver cirrhosis
	Hepatic abscess
	Hepatic malignancy
	Others
PULMONARY	Tuberculosis
	Pneumonia
	Bronchial Asthma
	Lung Cancer
	Malignancy with lung matastasis
	Others
METABOLIC	Diabetes mellitus
	Thyroid storm
	Adrenal dysfunction
	Others
HEMATOLOGIC	Leukemia
	Aplastic anemia
	Others
GASTRO INTESTINAL	Acute gastroenteritis
	Appendicitis
	Gastrointestinal tract Malignancy
	Others

ATTACHMENT H: ND Presentation template

MNDR presentatiom

Case: Neonatal or Maternal
Type of MNDR: XX MNDR
Name of Presenter: XXXXXXXXXX
Facility of Presenter: XXXXXXXXX
Date of presentation:XXXXXXXXX

Introduction of case

- Age of deceased baby (hours/days after birth)
- Referral (if referral case, reason of referral, timing of referral)
- Timing of baby death(during, after delivery)
- Final diagnosis of death

Information on Mother

1. General information
- Age
- Means of livelihood
- Education level
- Marital status
- Coverage of Insurance
- Poverty level/social class of family

2. Psychosocial Information
- Alcohol, cigarette,drug taking habits

Medical History of mother

- History of Chronic illness (HB, Diabetes)
- Allergy
- Asthma
- History of operation/hospitalization
- Medicines or supplements being taken (including herbal prep.)

Obstetric History of mother

- No. of pregnancy, births ,abortion and miscarriage
- History of facility delivery (facility vs non facility)
- History of Complications on pregnancy/delivery
- History of Caesarian Section

Prenatal history

- No of PNC visits
- Symptoms and findings
- Assessment and services/management provided.

History of delivery and labor of mother

- Signs and symptoms
- Treatment given
- Type of delivery
- Is mother alive or dead?

Birth, interval and feeding history of baby

- Date, time, venue and birth attendant of delivery
- Apgar score
- Complications at Delivery (breech delivery etc.)
- Warning signs
- Status of Essential intrapartum and Newborn care (Physical examination findings, Blood type etc.)
- Interval history
- Feeding history

Chronology of event

- Start as early as event started till death

- General conditions
- Condition (hemorrhage, VS etc.)
- Action taken (Treatment, medicines etc.)

Date /Time	General situation	Patient conditions	Action taken
3 Nov. 2011, 09:45	Referred from XX due to XX	Conscious No pain, BP(120/80)	IV
10:20		Start pain	Oxytocin (XX mg)
17:08		XX	
4 Nov. 2011, 09:05			
09:35	Declared death		

Analysis and findings of cases

- Classification of factors (Medical, non medical, Contributory factor)
- Avoidable factors (3 delays)
- Other factors

Possible interventions and action plan

- Interventions according to analysis
- Action plan according to the levels (DOH-CHD EV, PHO/CHO, MHO,BHS, LGUs, CHTs, Community)