



DEPARTMENT OF  
PUBLIC HEALTH AND FAMILY WELFARE,  
GOVERNMENT OF MAHARASHTRA



Guidance on  
**MATERNAL AND CHILD  
DEATH REVIEW  
AT DISTRICT LEVEL**



Maharashtra is one of the frontrunner State to provide quality primary health care to its citizens. Public health department is giving prime importance to improve maternal and child health parameters in the State. Over a past decade, although, the State has shown considerable decline in maternal and child mortality, we reaffirm our commitments to make every effort to prevent maternal and child deaths.

To reduce preventable maternal and child deaths, maternal and child death reviews are the most important strategy at the district level. It not only analyses the gaps in service deliveries but also the effective action plan to reduce each of such unfortunate deaths. This guidance note has been designed to assist district level authorities for in-depth review of the each of the maternal and child deaths and to make the action plan to address the identified gaps from community level to facility level.

I am confident that this strategic approach will strengthen the efforts to improve maternal health and child survival in Maharashtra. This will also help department to reform its policies if required based on suggestions received from districts.

I believe this document would be used effectively at the district and corporation levels to improve the condition of women and children and fill in the gaps at various life stages leading to reduced maternal and child mortality.

A handwritten signature in black ink, appearing to read 'Tanaji Sawant', written over a stylized, curved line that serves as a decorative underline.

**DR TANAJI SAWANT**  
Hon. Health Minister (Public Health)  
Maharashtra



Improving maternal and child survival and development is one of the key goals of National Health Mission (NHM). It is acknowledged that most maternal and child deaths occurring in the State are preventable as reasons for such deaths are the most common conditions, for which the prevention and treatment strategies are available and implemented. So every maternal and child death therefore is unfortunate and there are actionable points to be drawn from each such death so that the underlying causes can be identified and gaps in the implementation and delivery maternal and child health services are addressed through actions at various levels of the healthcare delivery system.

The purpose of this guidance note is to establish a process through which all maternal and child deaths are investigated and reviewed. Also this will help district and block level functionaries in identification of societal/community and health system related causes leading to deaths for which necessary actions are taken through the public health system.

I hope that this guidance note on maternal and child death review will streamline the process of review and audit across the State and will help districts to prepare most appropriate and timely action plans for local conditions in rural and urban areas.

A handwritten signature in blue ink, appearing to read 'Milind Mhaisekar'.

**DR. MILIND MHAISEKAR, I.A.S.**

Additional Chief Secretary, Public Health Department  
Government of Maharashtra



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Maternal and Child Death Review is already been in place district level as a strategy for identifying gaps and response for these identified gaps.

The already established system and platforms like district maternal / child death review committee will benefit from the this document for identification of gaps and strengthening program implementation at local level This will bring greater accountability at district level from frontline workers upto district officials and also empower them with actionable information for preparation of local level action plan and implementation

We hope that the understanding of the gaps and systemic bottlenecks related to major causes of maternal and child deaths will help us in directing our all efforts into the most important and critical interventions for the most vulnerable geographical areas and populations.

I give my best wishes to district and State team for the preparation of actionable plans and reducing maternal and child mortality further.

A handwritten signature in black ink, appearing to read 'Dheeraj Kumar'.

**DHEERAJ KUMAR, I.A.S.**  
Commissioner Health Services,  
MD (NHM)  
Government of Maharashtra



State is already implementing programs for maternal and child death review as per guidelines given by MoHFW for last many years. This guidelines give instructions regarding immediate reporting, brief and detail investigation, data transmission from PHC to district for monthly reporting. Also guidelines regarding district level review of sample child death cases and all maternal death cases are already in place where in district level officers review these deaths in detail and find out common areas which require immediate action.

This document contains additional templates for investigating gaps related to society/family, health service delivery, monitoring of program and policy level issues for major causes of maternal and child death. This specific death cause wise guidance template will help districts to identify gaps related to specific causes of maternal and child deaths and gaps in delays related to these deaths.

Also template for preparation of action plan and monitoring of suggested activities is given for district to assess the progress made on various activities.

For preparation of action plan, a brief summary of major causes of deaths having information related to definition, risk factors, major interventions is also given as a readymade template for guiding district committee.

This document is expected to use for individual death review/audit and also cumulative data analysis. This data analysis in detailed and systematic fashion is expected to facilitate formation of district specific road map for achieving single digit maternal and child death.

I hope this document will help district level committee for proper identification of gaps and preparing actionable plan for reducing future maternal and child deaths.

**DR. NITIN AMBADEKAR, MD, PHD**

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## EXECUTIVE SUMMARY

State has made substantial improvement in the reducing the number of maternal and child deaths since the start of National Health Mission in 2005. However many preventable maternal and child deaths still occur because of lack of quality of care, socioeconomic issues, gaps in health delivery especially in remote, rural and tribal areas of the State. In order to reduce the number of maternal and child deaths further, State needs to improve quality of care given around birth and address the modifiable factors that contribute to majority of deaths.

Understanding the circumstances and the modifiable of factors that lead to maternal or child death can prevent these deaths. Audit and review of maternal and child deaths is an important tool for identifying gaps in health service provision at facility or community level. This also helps in identification of socioeconomic factors which are directly or indirectly leading to mortality. This identification of gaps in service delivery can help in planning various interventions to improve the quality of care in health facilities and in communities. This is also essential for identifying new health interventions and reforms in health system at local and State level.

For this purpose, all public health facilities providing services to pregnant women and children need to establish an effective system for maternal and child death reviews. Also, at block and district level, committees on maternal and child death review need to have regular monitoring and review of maternal and child deaths. Maternal and child death audits along with reviews provide in detail information regarding how a similar death may be avoided in the future.

This document helps in providing guidance to district and block level health functionaries for establishing and conducting maternal and child death reviews as part of improvement in overall quality of care provided at facility and in community.

The guidance note describes in detail the key parameters of maternal and child death audit and review at facility and district level. The steps in the death audit and review are: (i) Notification of Death, (ii) Investigation of Death (First Brief Investigation and Detailed Investigation including verbal autopsy, Identifying the causes of death and potentially modifiable factors) (iii) Data Transmission iv) Analysis of data and recommending solutions or actions, (v) implementing an action plan (vi) monitoring the implementation of action plan.

This guidance note includes forms for notification, investigation of death. This also includes template to identify gaps in society/family, health service delivery, monitoring and policies for major causes of maternal and child deaths. Also, a short summary brief information on major causes of deaths, definition, risk factors associated, diagnosis and preventive actions is given for districts to plan interventions.

The annexures in the guideline provide forms for notification of death, brief and detail investigation of deaths for assigning cause of death, templates for asking key questions for major causes of maternal and child deaths regarding gaps in different areas (society/family, health service delivery, monitoring and policies) and level of delays, summary line list format for death review meeting and summary action plan format for preparation of action plan along with compliance.

## CHAPTER 1: BACKGROUND AND PURPOSE

### BACKGROUND

Reducing maternal and child mortality is one of the key goals under National Health Mission. There are various programs implemented to prevent maternal and child mortality. Over the years there has been decline in maternal and child deaths. Maharashtra has already achieved SDG goals for maternal and child mortality. However, there are some variations in urban and rural areas as per SRS surveys. So, to reduce mortality further down focus has to be given on areas, age groups where mortality is high. For this purpose, specific interventions are to be made for major causes of maternal and child mortality. This requires identification of gaps in health service delivery, monitoring of programs and issues related to socioeconomic conditions.

Districts are required to undertake this in-depth analysis for identification of gaps and formulation of local context specific implementation plan on key maternal and child health strategies identified based on mortality patterns. This will be possible if special efforts are made to investigate maternal and child death in depth for identification of information required to prepare plans specific to districts. This kind of analysis will help district and State program managers to identify key gaps for health service delivery at facility and community level.

#### **The objectives of maternal and child death audit are**

- To report all maternal and child deaths
- To ensure that each death is assigned a cause or causes
- To ensure to identify preventable causes and areas of improvement
- To investigate in detail about health services provided and whether they are provided as per guidelines and treatment protocols
- To identify 3 types of delays in each case of death as well as reasoning for these delays and to identify the actionable actions to reduce these delays.
- To investigate the social, family and individual related risk factors for any death;
- To identify gaps in health service delivery, monitoring of programs and policies
- To identify geographical areas having high mortality
- To identify possible modifiable factors in all such areas
- To plan interventions to change modifiable factors to improve the quality of care and avoid similar deaths in future
- The death audit also shall be used as tool for monitoring the implementation of activities/program to reduce the maternal and child death
- The ultimate aim of death audit is to improve the quality of care, to prevent maternal and child deaths.

### **Purpose of this document**

State has already issued guidelines for conducting maternal and child death audit. This document suggests the possible approach towards doing maternal and child death review which will help district level officers to identify gaps for major reasons of maternal and child deaths in various areas like societal/family issues, health service delivery, monitoring of programs and policy level gaps. Also, template will help to identify reasons behind level of delay related to above areas.

This document will help district officers to prepare action plan based on identified gaps and monitoring of plan to achieve desired results.

### **The purpose of this document is to;**

- To enlist the steps for MDR and CDR at the health facility and community levels.
- To identify specific cause related gaps in individual or societal issues, health service delivery, monitoring of programs and policies along with causes for level of delay in these areas.
- To prepare plan based on identified gaps and monitoring of action plan by district level committee.
- To provide guideline related to notification, investigation and data transmission under MDR and CDR programs.

## Chapter 2: Key Steps in Maternal Death Review

Key steps of maternal death review are summarised in this section. Details of maternal death review have been given in the guidelines issued previously by the department. (Annexure No. 9 & 10)

- All the maternal deaths reported during month, should be investigated irrespective place of the death. Every death shall be investigated within 15 days of reporting by district committee.
- Maternal death review process should be taken at both community and facility level.
- Linelist of all maternal deaths is to be prepared every month.
- It is crucial that district officials should monitor the reporting deaths from high delivery load facilities as well as from high priority areas in the district.
- Focus on the blocks or facilities who have reported zero deaths.
- Special emphasis should be given to deaths occurred during home delivery and during transit.

### A. Community based maternal death review

- Verbal Autopsy - Interview of family members or neighbours who are knowledgeable about the events leading to the death.
- All maternal deaths should be reviewed to explore the personal, family and community factors.

#### Steps-

- **Notification:** All deaths of women in the age group of 15 to 49 years irrespective of the cause i.e. maternal or non-maternal will be reported by ASHA within 24 hours to ANM and Medical Officer PHC / UPHC / Health Post. This is to be given in the FORM No. 1 (annexure no. 10)

**After receipt of information from ASHA/Informant, ANM and Health Supervisor will verify whether death occurred during pregnancy or in post-natal period (within 42 days). After verification ANM will countersign format and send to MO PHC/UPHC.**

- **Investigation:** Verbal autopsy to be done within 3 weeks by the three-member team comprised either of Medical Officer/CHO, LHV, ANM, ASHA BF, ASHA. Ensure that at least one member should be a woman. This team will undertake the analysis of social factors, health service delivery and monitoring gaps, policy level gaps and delays associated with the death (templates for asking questions regarding above areas for different causes of maternal deaths attached in annexure no.1 to 2)
- **Data transmission:** Send line list of maternal deaths to district / corporation nodal officer on the 5th of every month; share the completed investigation format to district as well
- **Analysis:** Analysis of data at block level and share the findings to district
- **Review:** District MDSR committee (CS as chairman) and Committee under chairmanship of CEO, Zila Parishad will review the data collected from community level audits.
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### B. Facility based maternal death review

Facility based maternal death review helps in improving the quality of maternal care and responsiveness of the health facility in the emergency conditions.

All district hospitals, medical colleges, subdistrict hospitals and rural hospitals should conduct monthly facility based maternal death review.

#### Steps-

- **Notification:** Information of death to Facility In-charge by Medical Officer on duty and from facility in-charge to district within 24 hours of death.

- **Investigation:** Detail investigation of maternal death is to be done at facility level. In case of Medical Colleges, Officer no lower than Associate Professor level along with treating doctors is expected to investigate the case in detail. At DH/SDH/RH, MS/ACS/Facility Incharge along with senior Gynaecologists will investigate the death case.
- **Data transmission:** Facility in-charge will send investigation formats to district / corporation officials within 48 hours and line list of maternal deaths before 7th of every month
- **Analysis:** Analyse the line of management done, if necessary, conduct in detail clinical audit.
- **Review:** Facility In-charge will conduct review meeting every month at facility level. Based on gaps identified during review, actions should to be implemented at facility level and review of action points suggested during last month meeting is to be done and documented.

#### **MDSR process for migrant death**

- If migrant death is occurred in ambulance during transit, medical officer / paramedical staff on ambulance will inform the death to district / corporation nodal officer of district /corporation in which ambulance is located
- If migrant death is reported from community, district / corporation nodal officer will inform the domicile district / corporation of the migrant. In case of migrant death from other state, district / corporation nodal should inform SNO of the State of migrant mother.

## Chapter 3: Key Steps in Child Death Review

State has already given guideline for Child Death Review at district level. (Annexure No 11 & 12). Summary regarding is given as below;

### Child death Review will be of two types:

- Community Based Child Death Review (CBCDR)
- Facility Based Child Death Review (FBCDR)

### Community Based Child Death Review (CBCDR)

Steps for CBCDR are as follows:

#### Step 1: Notification of child death:

ASHA will report any death in her area (even if death takes place at health facility, home or in transit) within 24 hours after death of child to ANM/SN and MO PHC/UPHC/Health Post

#### Step 2: Investigation of child death:

- A line list of all child deaths within block/corporation area will be prepared. Duplicate entries of child deaths reported by facility within block and by ASHAs through PHCs need to be removed. A final list will be prepared combinedly by THO and MS of health facilities. Similar procedure is to be done at Corporation level.
- Based on line list, detailed investigation of 6 child deaths of different age groups (0-28 days, 29 days – 1 year and 1-5 year) will be done every month by an investigation team.
- Investigation team consisting of THO, MO DTT, District PHN will investigate in detail in rural and council areas.
- In corporation area, a team of Medical Officer, Health Supervisor/SN will investigate the child death.
- This team will undertake the analysis of social factors, health service delivery and monitoring gaps, policy level gaps and delays associated with the death (templates for asking questions regarding above areas for different causes of child deaths attached in annexure no.5 to 6 )
- Monthly at least 6 deaths shall be investigated by the team.
- Formats 3a, 3b and 3c will be used for detailed community-based investigations.
- Format 4a & b shall be used for facility-based investigation.
- For every facility-based investigation community-based investigation also needs to be done.
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#### Step 3: Data transmission

##### Block Level / Ward / UPHC level

- THO / Ward /UPHC Office will prepare a line list of all child deaths reported by ANMs / SNs in the block/ward/UPHC area every month.
- Report of all the verbal autopsies of the month should reach the district by 10th of next month

##### District / Corporation level

- Verbal Autopsy forms will be reviewed and the cause of death will be assigned with support from Paediatricians at district / corporation level.
- Also, district / corporation office will send key information from brief and Detailed investigations undertaken in the entire district / corporation through **forms 5a, 5b** to State.
- District / Corporation level office must ensure that all the deaths reported through CDR reporting

system and are also reported on HMIS portal at appropriate levels.

**Step 4: Analysis of the data followed by making suitable action plans from it** - is common for both CBCDR & FBCDR

- A detailed District / Corporation child death report should be prepared on monthly basis.
- In addition, a **District/Corporation Child Death Review Report** will be prepared for presentation in the **DCDRC /Corporation level Committee under Civil Surgeon/MOH** based on the detailed analysis.
- For this purpose, District / Corporation team will undertake the analysis of social factors, health service delivery and monitoring gaps, policy level gaps and delays associated with the death for sample cases identified. (templates for asking questions regarding above areas for different causes of child deaths attached in annexure no. 5 and 6)
- After the DCDRC meeting, committee under chairmanship of the CEO ZP/ Commissioner Municipal Corporation will review random cases from total cases reported at district office (CS/DHO/MOH) every month.
- Detailed report prepared from the analysis of verbal autopsy forms will also be shared with the State.
- Based on DCDRC and CEO/Commissioner meetings, action plan will be prepared by district with timeline and responsible persons.
- Also, compliance on action plan suggested for last meeting will be compiled and shared with State.

#### **Facility Based Child Death Review (CBCDR)**

Facility based child death review will be conducted at all public health hospital (DH/WH/GH/SDH/RH) and medical colleges.

**Steps for FBCDR are as follows:**

#### **Step 1: Notification of child death**

All child deaths in the hospital should be informed immediately by the Medical Officer / Senior Resident on duty (at the time of death) to the **Facility In-charge (MS/ACS/Facility In-charge at Corporation hospital/CMO at GMC Hospital)**. He will fill details of death in the **Notification Card (Form 1)** and send it to the office of the Facility In-charge **within 24 hours** of death.

#### **Step 2: Investigation of child death**

Detailed investigation should be conducted in **all cases of child deaths taking place in a hospital**. The **Facility Based Neonatal & Post-Neonatal Death Review Forms (Forms 4a & 4b)** should be filled for the child death (depending on the age category) by the **on duty Medical Officer**. The **Treating Medical Officer will assign the medical cause of death**. Medical cause of death is to be ascertained based on the **ICD 10 (Annexure - II)** and recorded in the Death Certificate. The form should be filled **within 48 hours** of death. Facility In-charge will review the FBCDR forms for completeness.

#### **Step 3: Data transmission**

Facility In-charge will prepare a line list of all child deaths (0-5 years) that have taken place in the hospital during the month in the **Facility Level Reporting Form (Form 5c)** and send it to district level. Also, one copy of format 4 a / 4 b of all child deaths will be sent to district office.

These reports will be compiled and analysed at the district level and key findings and recommendations will be included in the report to be presented in the **DCDRC meeting**

**Step 4: Analysis of the data followed by making suitable action plans from it – As given in the community based review**

## Chapter 4: Use of Guidance Templates – MDR and CDR

The booklet and contents are to be used as a guidance note for child and maternal death review. The format is to guide how to approach the maternal and child death individually as well as a cumulative analysis. The causes, reasons mentioned are not in any way exhaustive and committee need to go into identifying the preventable causes as well as systemic failure which can be corrected. These guidelines are developed to facilitate committee as well as district administration to formulate district specific action plan to reduce maternal as well as child death. Committee is expected to approach the death review from hospital as well as community point of view and also with broader view of developing implementable action plan and evidence-based action plan.

The committee and district are at complete liberty to explore the data in more comprehensive way to achieve this goal.

### A. **Guidance Template for Maternal Death Audit and Review (Annexure No. 1 to 4)**

Maternal deaths occur as a result of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy and most are preventable or treatable. In some cases, complications may exist before pregnancy but are worsened during pregnancy.

**Definition:** The maternal death is defined as the death of the woman who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy.

Maternal death review (MDR) helps in identifying the gaps in the existing health care delivery systems, prioritize and plan for intervention strategies and to strengthen health services.

This document is intended to assist district officials/programme managers to conduct maternal death audit effectively with the objective of reducing maternal deaths due to preventable causes.

This guidance templates should be used to analyse each of the maternal deaths to identify the multifaceted underlying causes, gaps in health care service delivery, level of delays.

It consists of 4 Annexures which will assist in making effective action plan to address the identified gaps.

**Annexure 1-** Gap analysis at community, health system, monitoring and policy level

**Annexure 2-** Gap analysis as per Three-delays model

**Annexure 3-** Line list format for maternal death review at district level

**Annexure 4-** Plan of action and compliance report of maternal death review meeting

Details of annexures is given in following sections.

### **Annexure 1- Gap analysis at community, health system, monitoring and policy level**

- This sheet has some pointers for identification of gaps with respect to most important causes of maternal deaths i.e. APH/PPH, PIH, Sepsis, Abortion, Anemia and also regarding home / transit deaths
- For above mentioned causes of death some questions are suggested which are to be asked in each maternal death case regarding previous history, gaps at community/individual level, health system and service delivery level, monitoring of programs and policy level.
- This will help in finding gaps at various levels, program implementation, monitoring etc.
- This analysis should be done to identify underlying gaps for each cause of maternal death.

**A) Details regarding underlying areas of gaps is as follows-**

- 1. Previous History:** Detail previous history before the maternal death is to be investigated.
- 2. Community, Society or family:** Enlist the causes existing among the community or at individual level which are related to particular cause of maternal death. For example, following questions may be asked
  - If there are any misconceptions?
  - What is the awareness level of the bereaved family?
  - Are the family members resistant to seek institutional help?
  - If there any geographic or infrastructural constraints?
- 3. Gaps in health service delivery:** Explore the gaps in service delivery which would have been proved beneficial to the deceased mother.  
For example, following questions should be asked to assess the gaps in service delivery.
  - Was the deceased mother visited by ASHA/ANM for ANC?
  - Was the ambulance available in that particular area?
  - Were the due services given to deceased mother as per her high-risk status?
- 4. Gaps on health policies:** Committee should review the policies which could have addressed the maternal death. Committee can also suggest the policies needed to address such events.  
Sample questions-
  - Presence of IEC/BCC policy which is covering the misbeliefs and resistance in the area
  - Is there any policy which is engaging local healers in providing health services?
  - Is there need of any policy which will provide the special health services to migrated or floating population?
  - Is there need of any human resource policy modifications?
- 5. Gaps in monitoring and implementation of health programmes:**  
Ongoing national and state health programmes should be reviewed for their implementation in the concerned area. **Also, monitoring and follow up of high-risk mothers should be analysed.**  
Following sample questions should be considered to review the monitoring and implementation of the health programmes.
  - What is the status of PMSMA services in the concerned area?
  - Is there proper monitoring of high-risk mothers going on?
  - Are ASHA home visits being monitored?
  - Is line list of high-risk mothers being maintained?
- 6. Identification of facilities/areas/blocks/PHCs:** Investigate about the trends of the maternal deaths in the given area/facility for at least 3 years. It will guide the committee to identify hotspots of poor maternal health service coverage and high maternal deaths. If the concerned area / facility has repeated events of maternal deaths, then review the maternal and child health care services at these facilities. Plan the supportive supervision visit to concerned area/hospital to review the field level activities.
- 7. Programs which address these problems/gaps:** Identify the ongoing national and state programmes which are involved in reducing maternal deaths. For example, investigate about the implementation status of JSSK, PMSMA and identify the programme which need to be strengthened for reduction of maternal mortality.

**8. Status of programs in the field/facility:** Review the maternal health programme implementation status in the given areas of maternal deaths. Further, investigate about the benefits of the ongoing health programmes received by the deceased. Analyse and identify the gaps in receiving the benefits of the health programmes which are intended to reduce maternal mortality.

**9. Action Points:** After analysing the causes, the action points should be suggested to prevent future deaths with defined roles of responsibilities of concerned health workers/officials.

**10. Compliance on action plan:** Take follow up of suggested action points in next meeting. Analyse the bottlenecks in implementing the action points for example shortage of human resources, lack of trained staff, supervision visits etc.

Template for analysing the causes of maternal death for finding the gaps has been given in **Annexure No 1**.

It can be used for finding the gaps and making action plan for various causes of maternal death.

### **Annexure 2- Three-delays model for preparing action plan to reduce maternal deaths**

The 3-Delays Model helps in the identification of barriers in accessing the maternal health services. It identifies the causes at household, community and health system levels which are responsible for the maternal death.

Identify the level of delay responsible for the maternal death. Three delays in accessing the health care services as given as-

- i. First Delay- Delay in the decision seeking care
- ii. Second Delay- Delay in identifying and reaching the health facility
- iii. Third Delay- Delay in receiving treatment at the facility

Each maternal death should be analysed for each level of delay and gaps need to be identified. Questions should be asked in each maternal death case for each level of delay for following areas

1. **Enlist the reasons behind level of delay responsible for the maternal death for each area** i.e., Society/Individual area, Health service delivery in facility/field, Policies and Monitoring of programs. For example, in case of maternal death due to APH, for level 1 delay question in the area of society or family level can be asked regarding misconceptions about bleeding during ANC or no belief on government services

2. **Common areas/facilities:** Assess that whether the identified reasons for the level of delay is the common phenomenon in the concerned area or facility. Investigate whether the concerned area / facility is prone to identified reasons. This will give a high priority area for maternal deaths.

3. **Programs to tackle delays:** Identify the ongoing programmes which would address the identified delays and its reasons.

4. **Status of program implementation in these areas/facilities:** Also assess the implementation status of these programs useful to tackle various levels of delay and to strengthen the related programmes.

5. **Action Plan:** After identifying and assessing the delays and its reasons and related programmes, committee should suggest action points to address delays leading to the maternal mortality.

6. **Compliance on suggested action plan:** All the suggested action points must be followed up in next monthly meeting.

**Annexure No 2** can be used as template to investigate the delays and making action points to address

them.

### **Annexure 3- Line list format for maternal deaths reviews at district level**

- Annexure-3 is designed for the summarizing maternal deaths at district level meeting
- Enlist the maternal deaths with details of causes of deaths, reasons for the cause leading to deaths, type of delays and its reasons and proposed corrective measures.
- This format can also be used to present the maternal and child death information to district collector and CEO.
- This format will give brief information about the cause of deaths in the given month which will help to prioritize the preventive measures.

### **Annexure 4 - Summary format for maternal death review meeting at district level**

- Summarize the meeting minutes reviewing maternal deaths at district level meeting in separate sheet
- Summarize common preventable reasons leading to deaths, common problems identified with service delivery and common areas involved. Also identify programs for the said reasons.
- Based on these inputs, prepare common preventive measures for reducing maternal deaths and activities to be implemented in the district.
- Also take follow up of action plan prepared in the last meeting of maternal death audit and actions taken for the same.
- Mention about any improvement in the programs/indicators based on actions implemented as per last meeting.

## B. Guidance Note for Child Death Audit and Review (Annexures 5 to 8)

Child mortality is one of most important public health concern. Although Maharashtra has shown substantial decline in child mortality, intrastate variation still warrants the attention to strengthen the preventive measures. About 75 percent of the child deaths occur due to preterm birth, birth asphyxia, infections and birth defects. Most of these complications are observed during first month of life and are preventable or treatable.

Child death review (CDR) helps in identifying the gaps in the existing health care delivery systems, prioritize and plan for intervention strategies and to strengthen the child health services.

This document is intended to assist district officials/programme managers to conduct child death audit effectively with the objective of reducing child deaths due to preventable causes.

This guidance templates should be used to analyse sample of child deaths (atleast 5 cases) every month to identify the multifaceted underlying causes, gaps in health care service delivery, level of delays. It consists of 4 Annexures which will assist in making effective action plan to address the identified gaps.

**Annexure 5-** Gap analysis at community, health system, monitoring and policy level

**Annexure 6-** Gap analysis as per Three-delays model

**Annexure 7-** Line list format for child death review at district level

**Annexure 8-** Plan of action and compliance report of child death review meeting

Details of annexures is given in following sections.

### **Annexure 5- Gap analysis at community, health system, monitoring and policy level**

- This sheet has some pointers for identification of gaps pertaining to most important causes of child deaths i.e. Prematurity / low birth weight, Sepsis / Pneumonia, Birth Asphyxia and also regarding deaths occur at home or during transit
- For above mentioned causes of death, some questions are suggested which are to be asked in each child death case regarding previous history, gaps at community/individual level, health system and service delivery level, monitoring of programs and policy level.
- This will help in finding gaps at various levels, program implementation, monitoring etc.
- This analysis should be done to identify underlying gaps which can be attributed to the child death for a sample of 6 child deaths every month.

### **Details regarding underlying causes / areas of gaps is as follows-**

1. **Previous History** – For each child death case, previous history is to be asked in detail for the cause of death as given in template.
2. **Community, Society or family Gaps:** Enlist the causes existing among the community or at individual level which are related to particular cause of child death. For example, following questions may be asked
  - i. If there are any misconceptions?
  - ii. What is the awareness level of the bereaved family?
  - iii. Are the family members resistant to seek institutional help?
  - iv. If there any geographic or infrastructural constraints?
3. **Gaps in health service delivery:** Explore the gaps in service delivery which would have been proved beneficial in preventing the child death. For example, following questions should be asked to assess the gaps in service delivery for death due to Prematurity or Low birth weight

- Was maternal weight gain monitoring done during ANC period by ASHA/CHO?
- Was Inj Dexa (antenatal steroids) given to mother for premature delivery before 34 weeks
- Was counselling for KMC done during home visits by ASHA under HBNC?

4. **Gaps on health policies :** Committee should review the policies which could have addressed the child death. Committee can also suggest the policies needed to address such events.

Sample questions which can be asked in case of child death due to Sepsis/Pneumonia are

- Any policy for referral linkage for transfer of sick newborn?
- Any policy on CHO involvement in management of newborn and child diseases?

5. **Gaps in monitoring and implementation of health programmes:**

Ongoing national and state health programmes should be reviewed for their implementation in the concerned area / health facility.

**Also, monitoring and follow up of the child and high-risk pregnant women should be analysed.**

Following sample questions should be considered to review the monitoring and implementation of the health programmes related to cause of child death –

E.g., For child death due to Birth Asphyxia

- Was high risk ANC monitoring done or not?
- Was health facility preparedness monitored to tackle cases of birth asphyxia or prevent cases of birth asphyxia
- Was monitoring of referral of labor cases monitored or not?
- Was regular skill assessment of staff working in labor room monitored?

6. **Identification of facilities/areas/blocks/PHCs:** Investigate about the trends of the child deaths in the given area/facility for at least 3 years. It will guide the committee to identify hotspots of poor child health service coverage. If the concerned area has repeated events of child deaths, then review the maternal and child health care services. Plan the supportive supervision visit to concerned area/hospital to review the field level activities.

7. **Programs which address these problems/gaps:** Identify the ongoing national and state programmes which are attributed in reducing child deaths. For example, investigate about the implementation status of SNCU, NBSUs, JSSK, HBNC, Home Based KMC, RI and identify the programme which need to be strengthen for higher impact in reduction of maternal mortality.

8. **Status of programs in the field/facility:** Further, investigate about the benefits of the ongoing health programmes received by the deceased child. Analyse and identify the gaps in receiving the benefits of the health programmes which are intended to reduce maternal mortality.

9. **Action Points:** After analysing the causes, the action points should be suggested to prevent future deaths with defined roles of responsibilities of concerned health workers/officials.

10. **Compliance on action plan:** Take follow up of suggested action points in next meeting. Analyse the bottlenecks in implementing the action points for example shortage of human resources, lack of trained staff, supervision visits etc.

Template for analysing the causes of child death for finding the gaps has been given in **Annexure No 5**. It can be used for finding the gaps and making action plan for various causes of maternal death.

**Annexure 6- Three-delays model for preparing action plan to reduce maternal deaths**

The 3-Delays Model helps in the identification of barriers in accessing the child health services. It identifies the causes at household, community and health system levels which are responsible for the child death.

Identify the level of delay responsible for the child death. Three delays in accessing the health care services as given as-

- i. First Delay- Delay in the decision to seek care
- ii. Second Delay- Delay in identifying and reaching the health facility
- iii. Third Delay- Delay in receiving treatment at the facility

1. **Enlist the reasons behind level of delay responsible for the child death for each area** i.e. Society/Individual area, Health service delivery in facility/field, Policies and Monitoring of programs.

For example in case of child death at home, for level 1 delay, question in related to society or family level can be asked eg. Family members do not know about danger signs in child, Family didn't call for ambulance etc.

2. **Common areas/facilities:** Assess that whether the identified reasons for the delay is the common phenomenon in the concerned area. Investigate whether the concerned area / facility is prone to identified reasons. This will give a high priority area for child deaths.

3. **Programs to tackle delays:** Identify the ongoing programmes which would address the identified delays and its reasons.

4. **Status of program implementation in these areas/facilities:** Also assess the implementation status of these programs useful to tackle various levels of delay and to strengthen the related programmes.

5. **Action Plan:** After identifying and assessing the delays and its reasons and related programmes, committee should suggest action points to address the child mortality t

6. **Compliance on suggested action plan:** All the suggested action points must be followed up in next monthly meeting.

**Annexure No 6** can be used as template to investigate the delays and making action points to address them.

#### **Annexure 7- Line list format for Child deaths reviews at district level**

- Annexure-4 is designed for the summarizing child deaths at district level meeting
- Enlist the child deaths with details of causes of deaths, reasons for the cause leading to deaths, type of delays and its reasons and proposed corrective measures.
- This format can also be used to present the maternal and child death information to District collector and CEO.
- This format will give brief information about the cause of deaths in the given month which will help to prioritize the preventive measures.

#### **Annexure 8 - Summary points of Child death review**

- Summarize the meeting minutes reviewing child deaths at district level meeting in separate sheet
- Summarize common preventable reasons leading to deaths, common problems identified with service delivery and common areas involved. Also identify programs for the said reasons.
- Based on these inputs, prepare common preventive measures for reducing child deaths and activities to be implemented in the district.
- Also take follow up of action plan prepared in the last meeting of child death audit and actions taken for the same.
- Mention about any improvement in the programs/indicators based on actions implemented as per last meeting.

## Chapter 5: District Maternal / Child Death Review Committees

### A. Committees for Maternal Death Review

Maternal Death and Surveillance Review Committees should be constituted at different level as given in following sections. (As per SFWB Letter dated 19/09/2019 attached in Annexure No 9)

#### 1. Facility Based Maternal Death Review Committee (FBMDRC)

Committee should meet every month even if there are no maternal deaths reported in the given month. The Facility In-charge should fix the date after discussion with Civil Surgeon and communicate with other members of the committee.

1	Obstetrics and Gynaecologist, Class-1	Chairperson
2	Staff in charge of Labour room, ANC clinic and PNC Ward	Member
3	Anaesthetist	Member
4	Medical Officer- Blood Bank	Member
5	Physician	Member
6	Facility Nodal Officer (FNO)	Member-Secretary

#### 2. District Level Maternal Death Review Committee

Monthly meeting should be organised at district level to discuss each maternal deaths and to review the actions suggested in the previous meeting. The structure of the district level maternal death review committee is given in the following table.

1	Civil Surgeon, District Hospital	Chairperson
2	Medical Officer-Health, Municipal Corporation	Member
3	Senior Obstetrics and Gynaecologist, District Hospital	Member
4	General Surgeon, District Hospital	Member
5	Senior Anaesthetist, District Hospital	Member
6	Pathologist, District Hospital	Member
7	Medical Officer- Blood Bank	Member
8	Matron, District Hospital	Member
9	FOGSI representative	Member
10	District RCH Officer	Member
11	Resident Medical Officer- Outreach	Member-Secretary

Committee should select at least 3 cases for the review meeting of CEO, ZP/Commissioner, Corporation.

#### 3. Brihanmumbai Municipal Corporation (BMC) Maternal Death Review Committee

Maternal death review committee for BMC, Mumbai should be constituted as given below. Frequency of the meetings should be once in a month. ToR for the committee should be same as given in guidelines

1	Executive Medical Officer, BMC, Mumbai	Chairperson
2	Head of Department, Obstetrics and Gynaecology, Government/Corporation Medical College	Member
3	General Surgeon,	Member
4	Senior Anaesthetist, District Hospital	Member
5	Medical Officer- Blood Bank	Member
6	President, Indian Medical Association, Mumbai	Member
7	President, FOGSI, Mumbai	Member

8	Matron, Obstetrics and Gynaecology, Government/Corporation Medical College	Member
9	Deputy Executive Medical Officer, Mumbai	Member-Secretary

#### 4. Maternal Death Review Committee for Other Municipal Corporations

Maternal death review committee for municipal corporation other than BMC, Mumbai should be formed as follows.

1	Medical Officer Health, Municipal Corporation	Chairperson
2	Senior Obstetrics and Gynaecologist, Municipal Corporation area	Member
3	Senior General Surgeon, Municipal Corporation area	Member
4	Senior Anaesthetist, Municipal Corporation area	Member
5	FOGSI representative, Municipal Corporation area	Member
6	RCH Officer, Municipal Corporation	Member- Secretary

### B. Committees for Child Death Review

(As per SFWB Letter dated 19/05/18 attached in annexure no 10)

#### 1. Committee under Civil Surgeon

1	Civil Surgeon, District Hospital	Chairperson
2	District Health Officer	Co Chairperson
3	Additional Civil Surgeon	Vice Chairperson
4	Senior Gynecologist, District Hospital	Member
5	Senior Anaesthetist, District Hospital	Member
6	Senior Pediatrician, District Hospital	
7	Senior Pediatrician, Medical College	
8	Pediatrician, SNCU	Member
9	Senior Gynecologist, Medical College	Member
10	Matron, District Hospital	Member
11	IAP representative	Member
12	MS and THO (All Facilities and blocks)	Member
13	PHN (District / Women Hospital)	
14	Resident Medical Officer- Outreach and DRCHO	Member-Secretary

#### 2. Committee for Corporation Level

1	Commissioner MC	Chairperson
2	Medical Officer, Municipal Corporation	Member- Secretary
3	RCHO Officer	Member
4	Senior Pediatrician, Medical College, Municipal Corporation area	Member
5	Senior Pediatrician, Corporation Hospital	Member
6	IAP representative, Municipal Corporation area	Member
7	Matron/PHN Corporation	Member
8	Medical Officer (concerned facility)	Member

#### 3. Committee at District Level - CEO ZP

1	CEO ZP	Chairperson
2	Civil Surgeon, District Hospital and District Health Officer	Co Chairperson
3	Resident Medical Officer- Outreach and DRCHO	Member-Secretary

4	Senior Pediatrician, District Hospital	Member
5	PHN, District Hospital	Member
6	PHN ZP Member	
7	IAP representative	Member
8	MS and THO (All Facilities and blocks)	Member

#### **Guidance for District level Committees under MDR and CDR**

- District Committee will look into details of all maternal deaths and at least 6 child deaths every month (3 facility deaths and 3 community deaths)
- Criteria for selection of child deaths will be major causes of child deaths in the newborn (0-28 days), infant (29 days -1 year) and more than 1 year of age. Also deaths at home or in transit will be selected.
- For each major cause of maternal and child death, gaps at the level of society/family, health services delivery, monitoring of programs, policy level matters and level of delay are to be identified. Based on these gaps, status of health programs implemented in the district is to be reviewed. For identification of these gaps for each major cause of maternal/child death in various areas, GUIDANCE TEMPLATE given for each cause of death or home /transit deaths is to be used as given in template
- Based on identification of gaps, summary of each maternal/child death case is to be written in a format. For this purpose format given is to be used by district committee.
- Based on gaps identified in individual death case audit as per GUIDANCE Template for maternal and child deaths, status of health programs in the district and monthly reports received from facilities and blocks, district committee will prepare action plan. For this purpose format given in annexure is to be used.
- This action plan format should contain details about number of deaths for which detail audits are done, common reasons, common problems in service deliveries, common areas/facilities for particular cause of deaths, program involved, preventive measures suggested, activities to be implemented.
- Also this action plan will review action taken as per last meeting and compliance on the actions suggested. Any improvement seen since last meeting will be noted down.

#### **District Review Meeting under CEO ZP / Commissioner Corporation**

- All maternal deaths and at least 3 child deaths which are reviewed by the DCDRC (under CS/MOH) will be presented in the district review under CEO ZP/ Commissioner, Municipal Corporation. The child death cases should be identified as per detail guidelines given
- The parents/relatives (max. 2 persons) of the deceased child or mother would be invited for the meeting. The health service providers who had attended the mother or child (either in facility or in community) will also be called for this meeting.
- Details regarding this are given in guideline (annexure no 9 and 11)

**Annexure 1: Maternal death review- Gap analysis at community, health system, monitoring and policy level**

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
1	Home Death/Transit		1. Previous H/o Home birth 2. Is Home birth a isolated incidence in the village/area or common occurrence 3. Home death is common to the village or taluka or whole district	1. Gone to local faith healer 2. Not aware about health facility/Not willing for taking government hospital help/No faith in modern medicine 3. No road/communication network 4. Teenage pregnancy 5. Unmarried 6. Not aware about	1. No visit by ASHA or ANM in last trimester/last month 2. No visit by health worker as patient is recently shifted/came back from migration 3. Non availability of ambulance/delay in reaching ambulance/Non response from ambulance services 4. Non identification of refusal families and no follow-up 5. No action taken on previous similar H/o 6. No high-risk factor identified	1. No proper IEC/SM strategies for refusal families 2. No policy for engagement of faith healers in such areas 3. No specific policies for intersect oral involvement for this area	1. High risk areas are not mapped and activities not monitored from districts 2. Monitoring of Gram samittee activities and their involvement 3. Monitoring of Gram samittee activities and their involvement is not taken in meetings of district administration 4. No monitoring of ambulance services 5. No monitoring of delivery points for conducting high risk cases 6. Premature delivery and not anticipated by health worker	1. What is the trend of home birth over the period 2. How many affected areas due to similar reasons	1. JSSK/JSY 2. EMS services 3. IEC/BCC/SM 4. ANC care services e.g ANC visits, specialist visit 5. Perinatal visits			
2	APH / PPH		1. Was there any complication during last delivery of mother eg. APH/PPH, rupture, retained placenta etc? 2. Was mother	1. Gone to local faith healer 2. Not aware about health facility 3. Not willing for taking government hospital help/No faith	1. high risk ANC not identified during ANC period 2. No visit by ASHA or ANM in last trimester/last month 3. No action taken on previous similar H/o PPH	1. No IEC/SM strategies for refusal families 2. No policy for engage	1. No strict monitoring of high-risk ANCs at all levels 2. No monitoring of PMSMA	1. What is trend of APH PPH cases in the facility? 2. Is there any common facilities	1. ANC care services e.g ANC visits, specialist visit 2. Dakshata 3. JSSK 4. ASHA Program			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>identified as a high risk ? eg. Previous placenta abruption, rupture, Severe anemia, previous LSCS, PIH, coagulopathy etc</p> <p>3.Was high risk mother treated for the cause of high risk during ANC?</p> <p>4.was mother monitored for labor using partograph or safe childbirth checklist?</p> <p>5.Was third stage of labor managed as per guideline (AMTSL)?</p> <p>6.Was mother delivered by trained staff or whether doctor attended delivery?</p> <p>7.was there any complication during delivery eg. Rupture, retained placenta, tear?</p> <p>8.was there any prolonged or obstructed labor?</p> <p>9.was mother suffering from</p>	<p>in modern medicine/No faith in Govt institute</p> <p>4. Do not know where to contact in case of emergency / danger signs of APH</p> <p>5. Physical violence in family</p> <p>6. Misconceptions about bleeding during pregnancy</p> <p>7. No road/communication network</p> <p>8. Refusal from Family to seek Medical care</p>	<p>4. Premature delivery and not anticipated by health worker</p> <p>5. Refusal families not identified and no followup for treatment of high risk causes</p> <p>6. No Counselling by Health care workers regarding danger signs in pregnancy</p> <p>7. No USG done during ANC or USG facility not available</p> <p>8. No check up by Specialists under PMSMA</p> <p>9. No proper examination (lack in quality care - Anemia, Wt gain monitoring, BP)</p> <p>10.Timely referral to higher facility not done</p> <p>11.No nearby facility with blood transfusion</p> <p>12.No nearby FRU/ Specialist not available at FRU</p> <p>13.No availability of treatment protocols at facility</p> <p>14Drugs and logistics not available at facility</p> <p>15Staff not trained for management of APH / PPH</p> <p>16Post delivery monitoring not</p>	<p>ment of faith healers in high risk areas</p> <p>3.No training or reorientation training policy for staff</p> <p>4. No Near Miss Cases audit policy</p> <p>5. No Policy on non rotation of trained staff working in LR</p>	<p>program monitoring of health facility preparedness</p> <p>4.No monitoring of JSSK services eg blood transfusion, diagnostic - USG</p> <p>5.No monitoring of post delivery visits by ANM/ASHA</p> <p>6. No monitoring of identification, management of APH PPH cases at all levels</p>	<p>where there is problem with APH/PPH management.</p> <p>3. are their common facilities</p>	<p>5. PMSMA</p> <p>6. 102/108</p> <p>7. SUMAN</p> <p>8. LaQshya</p> <p>9. E Aushadhi</p> <p>10. JSSK</p> <p>11. FRUs</p>			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>any infection during labor?</p> <p>10. was blood transfusion given and if yes was it done as per protocol?</p> <p>11. was mother on any anticoagulants?</p>		<p>done as per guidelines</p> <p>17. No use of Partograph/safe childbirth checklist as per guidelines</p> <p>18. No monitoring of admitted cases at facility</p> <p>19. Treatment protocol not followed</p> <p>20. In home delivery cases - no check up by ANM / MO within 24 hours</p> <p>21. Post delivery home visits by ANM/ASHA not done</p> <p>22. Non availability of ambulance/delay in reaching ambulance</p> <p>23. Non response from ambulance services</p> <p>24. ANM / Staff not trained for identification of high risk cases /SBA Training</p> <p>25. No referral management</p>							
3	Hypertensive Disorders in pregnancy		1. Was there similar complications during her last pregnancy?	1. Non compliance to drug (Calcium,	1. Non Identification of High Risk Pregnancy during ANC check up	1. No proper IEC/SM strategies	1. No monitoring of health	1. What is trend of HDP/Eclampsia	1. ANC care services e.g ANC visits,			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>2. Was mother identified as a high risk for PIH?</p> <p>3. Was mother identified having PIH?</p> <p>4. If identified as PIH, was mother on any treatment for PIH?</p> <p>5. If already identified as high risk for PIH or mother having PIH, was the delivery conducted at FRUs</p> <p>6. Before referral was any loading dose of Inj MgSO4 given?</p> <p>7. Was any IV drip of MgSO4 was started during referral?</p> <p>8. Was mother treated at private facility?</p> <p>9. If treated at private facility, was treatment given as per protocol?</p> <p>10. Was eclampsia identified during intrapartum period at facility?</p> <p>11. Was safe childbirth checklist used during delivery?</p> <p>12. Was delivery attended by Gynecologists?</p>	<p>antihypertensive drugs)</p> <p>2. Not aware about danger signs</p> <p>3. Do not know where to contact in case of emergency / danger signs of APH</p> <p>4. Not aware about health facility</p> <p>5. Did not think that the illness is significant</p> <p>6. Gone to local faith healer</p> <p>7. No faith in modern medicine/No money available for treatment</p> <p>8. No road/communication network/cut off villages/pada</p>	<p>2. Errors in noting Blood pressure by health staff</p> <p>3. No check up of high risk ANC's during PMSMA Day or No examination by Specialist during ANC period</p> <p>4. No identification of danger signs during home visit by health workers</p> <p>5. No Counselling by Health care workers regarding treatment and danger signs</p> <p>6. No Counselling regarding diet (salt intake) in case of H/o HTN.</p> <p>7. Staff not trained for diagnosis and management of PIH</p> <p>8. Non availability of logistics (BP appa.), drugs with FLW and at facility</p> <p>9. No follow up of PIH cases by FLWs</p> <p>10. Delay in referral</p> <p>11. Prereferral management of PIH cases not done as per guidelines</p> <p>12. Patient not seen by Specialists at FRU</p> <p>13. No proper documentation of health status when admitted in facility</p> <p>14. Treatment</p>	<p>for refusal families</p> <p>2.No policy for engagement of faith healers in such areas</p> <p>3.No Near Miss Cases audit policy</p>	<p>facility preparedness</p> <p>2. No monitoring of identification, management of PIH cases at all levels</p> <p>3. No monitoring of PMSMA program</p> <p>4. No monitoring of referred cases - for outcome</p>	<p>mortality in the facility?</p> <p>2. What is trend of HDP/Eclampsia mortality in the block?</p> <p>3. What is trend of identification of hypertension among pregnant women during ANC in the facility or block?</p>	<p>specialist visit</p> <p>2. PMSMA</p> <p>3. FRUs</p> <p>4. ASHA Program</p> <p>5. SUMAN / LaQshya</p> <p>6. JSSK</p> <p>7. Dakshata - Training</p> <p>8. E Aushadhi</p> <p>9. IPHS</p>			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			13. Was treatment given as per protocol at facility for PIH? 14. Was delivery terminated after eclampsia as per protocols?		protocol not followed 15.No monitoring of admitted cases at facility 16.Non calibrated Sphygomanometer/ Digital B.P Apparatus							
4	Sepsis		1. Was mother identified as high risk eg. Malnourished / Low BMI, Anemia etc 2. was mother normal delivered or through C section 3. Was delivery conducted by untrained staff? 4. Was safe childbirth checklist used during delivery? 5. Were multiple PVs were done against protocol? 6. Was monitoring of mothers health condition done after C section during post partum period as per protocol? 7. Was there any premature rupture of	1. Home Delivery 2. Not aware about dangers signs of sepsis 3. Unhygienic practices followed after pregnancy 4. Gone to local faith healer 5. Did not think that the illness is significant 6. Do not know where to contact in case of emergency / danger signs 7. No road/communication network/cut off villages/pada 8. Didn't call to ambulance services	1. DAMA/LAMA in case of C-Section Delivery 2. Infection control practices not followed in facility 3. No use of Partograph/safe childbirth checklist as per guidelines 4. Treatment protocol not followed 5. No antibiotic policy followed 6. Monitoring of C section cases at facility not as per protocol 7. No check up by MO ANM in case of home delivery with 24 hours 8. Training of staff on infection control practices not done 9. No proper documentation of monitoring during hospitalisation 10. Treatment protocols not available with facility 11. Disfunctional Infection control	1. No policy of near miss case audit 2. No policy for engagement of faith healers in such areas	1. No monitoring of Microbiological surveillance 2. No monitoring of infection control practices at facility 3. No monitoring of PNC visits by ANM/ASHA	1. What is trend of Sepsis in PNC cases in facility or block/area? 2. What is trend of deaths due to sepsis in facility or block?	1. FRU 2. LaQshya 3. Dakshata 4. PNC Visits - HBNC 5. IPHS 6. TRAINING 7. E AUSHADHI 8. Infection control program 9. 28 DAYS PROGRAM			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>member (PROM) and if yes any antibiotic given as per protocol?</p> <p>8. were all hygienic conditions followed during delivery and after?</p> <p>9. Was family planning operation done after delivery?</p> <p>10. Did mother stayed for all 7 days after C section or 3 days after normal delivery?</p> <p>11. At the time of discharge whether counseling regarding danger signs done or not?</p> <p>12. Was mother followed by ANM/ASHA after discharge at home?</p>		<p>committee</p> <p>12. Late referral</p> <p>13. No treatment before referral</p> <p>14. Beneficiaries not informed about 102/108 services</p> <p>15. No road / communication network</p> <p>16. Non availability of ambulance/delay in reaching ambulance</p> <p>17. No response from ambulance services</p> <p>18. Driver posts Vacant on 102</p> <p>19. Diesel not available at the time of referral</p>							
5	Severe Anemia		1. Was mother identified with iron deficiency anemia/hemoglobinopathies/ other anemias	<p>1. Non compliance to IFA tablets due to traditional myths and side-effects</p> <p>2. Did not take complete dose</p>	<p>1. No testing for anemia / hemoglobinopathies during ANC visits</p> <p>2. Birth Planning for SCD, Severe anemia cases not</p>		1. No monitoring of severe anemic pregnant women detection and	<p>1. aggregation of such cases if any in the district</p>	<p>1. Anemia Mukta Bharat/ WIFS</p> <p>2. BSU / BB</p> <p>3. FRU</p> <p>4. TRAINING</p>			

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>during her pregnancy?</p> <p>2. If mother was anemic, any treatment given during ANC period?</p> <p>3. was complete treatment for iron deficiency anemia was given (inj iron sucrose) during pregnancy?</p> <p>4. Was mother tested for Hb at the time of admission for delivery?</p> <p>5. Was birth planning for delivery of high risk case done at FRU level</p> <p>6. If mother was high risk, was the delivery conducted at FRU having blood transfusion facility?</p> <p>7. was mother treated at private facility?</p> <p>8. If treated at private facility, was treatment given as per protocol?</p> <p>9. was there any</p>	<p>of Iron sucrose</p> <p>3. Did not think that the illness is significant</p>	<p>done as per high risk status - (eg . Delivery at tertiary care level/FRUS)</p> <p>3. ASHA do not know where to take severe anemic mother</p> <p>4. No tracking of severe anemic mothers</p> <p>5. Full dose of Inj Iron sucrose / BT not given as per protocol during ANC</p> <p>6. No followup taken for severe anemic mother after detection/iron sucrose treatment</p> <p>7. No followup of anemic PNC mother by ANM or MO at PHC</p> <p>8. Delivery was not conducted at FRU in case of severe anemic mother</p> <p>9. Hb testing not done when admitted to facility for labor or after</p> <p>10. BSU not functional at facility</p> <p>11. Transfusion not given due to non availability of blood group</p>		<p>treatment</p> <p>2. No monitoring of severe treatment of anemic cases at facility</p> <p>3. No monitoring of performance of BSU/BB</p>					

S N	Reasons	Percentage	Previous H/o	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<p>complication during delivery ?</p> <p>10. Was the delivery conducted by trained staff or specialists?</p> <p>11. Was any blood transfusion done at the time of delivery or after?</p> <p>12. If mother was anemic after delivery was any treatment given?</p> <p>13. Was hb test done at the</p>									
			<p>time of discharge from facility?</p> <p>14. was mother followed by ANM/ASHA after discharge at home?</p>									

Annexure 2: Maternal death review - Gap analysis as per Three-delays model

S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Suggeste d Action s	What actions actually impleme nted in the district
1	Home Death/Tr ansit		1. Type One 2. Type Two	1. Societal Cause 2. Health Care delivery 3. Monitoring 4. Health Services 5. Policies 6. Monitoring	1. Family unaware of dangers of home delivery or not seeking medical help 2. Family refused medical help 3. Underage marriage 4. No access to health facility 5. Due to emergency didn't get the time/Didn't call to ambulance services 6. Delay in reaching health facility due to poor road connectivity 7. No IEC of existing health services/ high risk factors/health seeking advice 8. High risk areas are not mapped and activities not monitored from districts 9. Monitoring of Gram samittee activities and their involvement is not taken in meetings of district administration 10. No awareness about 102/108 ambulance service 11 Non availability of ambulance/delay in reaching ambulance/Non response from ambulance services 12. Non availability of ASHA/ANM 13. No free alternate transportation policy 14. Monitoring of Ambulance service is lacking from District	1. Common occurrence or isolated incidence		1. JSSK 2. 102 3. IEC 4. IEC 5. VHNSC 6. EMS 7. HR			



S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>refusal families and no followup</p> <p>14. No proper IEC/SM strategies for refusal families/ engagement of faith healers</p> <p>15. Non Identification of High Risk Pregnancy / refusals and their counselling</p> <p>16. No visit by health worker as patient is recently shifted/came back from migration</p> <p>17. No visit by ASHA or ANM in last trimester/last month</p> <p>18. Non availability of ambulance/delay in reaching ambulance/Non response from ambulance services</p> <p>19. Timely referral to higher facility not done</p> <p>20. No nearby hospital with blood transfusion facility</p> <p>21. No proper IEC for JSSK</p> <p>22. No policy for alternate transport arrangement</p> <p>23. No monitoring of ambulance functionality</p> <p>24. Specialist not available at FRU</p> <p>25. No availability of treatment protocols</p>						



S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			Type Three	6.Policies 7.Monitoring  8.Health Care delivery  9.Policies 10. Monitoring	Counselling by Health care workers regarding danger signs in pregnancy 8. Not aware about 102/108 9. No good experience with Govt hospitals/services 10. Non identification of refusal families and no followup 11. No visit by health worker as patient is recently shifted/came back from migration 12. No follow up of PIH cases by FLWs 13. No money for transportation 14. No road/communication network/cut off villages/pada 15. Non availability of ambulance/delay in reaching ambulance 16. No response from ambulance services 17. No policy for alternative transport 18. No monitoring of ambulance functionality 19. No monitoring of availability of drivers 20. No monitoring of admitted cases at						

S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					facility 21. Treatment protocol not followed 22. No proper documentation of health status when admitted in facility 23. Non availability of logistics (BP appa.), drugs with FLW and at facility 24. Staff not trained for management of PIH 25. Prereferral management of PIH cases not done as per guidelines 26. Patient not seen by Specialists at FRU 27. Timely referral to higher facility not done 28. Policy of NO Rotation of trained staff working in LR not followed 29. No monitoring of logistics/drugs availability in facilities 30. No monitoring of health facility preparedness 31. No death audit in facility						

S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
4	Sepsis		Type One  Type Two  Type Three	1. Societal cause  2. Health Care delivery  3. Policies 4. Monitoring 5. Societal cause 6. Health Care delivery 7. Policies 8. Monitoring 9. Societal cause 10. Health Care delivery	1. Gone to local faith healer 2. No faith in modern medicine 3. No faith in Govt institute 4. No road/communication network 5. Self Negligence to seek Medical care 6. Refusal from Family to seek Medical care 7. Danger signs about sepsis not known 8. Unaware about precautions to be taken during pregnancy 9. No Counselling by Health care workers regarding danger signs in pregnancy 10. Not aware about 102/108 11. No good experience with Govt hospitals/services 12. Not willing for taking government hospital help 13. Not aware about health facility 14. Non identification of refusal families and no followup		1. LaQshya 2. Dakshata 3. PNC Visits - HBNC 4. VHSND 5. TRAINING 6. E AUSHADHI 7. 28 DAYS PROGRAM				

S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
				11 Policies	15. No proper IEC/SM strategies for refusal families						
				12. Monitoring	16. No policy for engagement of faith healers in such areas						
					17. Non Identification of High Risk Pregnancy / refusals						
					18. No visit by health worker as patient is recently shifted/came back from migration						
					19. No money for transportation						
					20. Didn't call to ambulance services						
					21. Don't know ambulance services						
					22. Non availability of ambulance/delay in reaching ambulance						
					23. Timely referral to higher facility not done						
					24. Non response from ambulance services						
					25. No proper IEC for JSSK						
					26. No policy for alternate transport arrangement						
					27. No monitoring of ambulance functionality						
					28. No monitoring of						

S N	Reasons	Percentage	Common /Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					availability of drivers 29. No nearby FRU/ Specialist not available at FRU 30. No availability of treatment protocols at facility 31. Lack of Skilled H.R 32. No referral management 33. Policy of NO Rotation of trained staff working in LR 34. Lack of infrastructure/ equipments/ logistics 35. No policy for revision in DP as per need and data 36. No monitoring of logistics/drugs availability in facilities 37. No monitoring of health facility preparedness 38. No daily monitoring of facility and critical areas						

**Annexure 3: Maternal death review - Line list format for maternal death review at district level**

District/Corporation											
Date of MDA											
Number of Deaths audited											
SN	Name	Age	Date of Death	hospital audit done? (Y/N)	Community audit done? (Y/N)	Cause of Death	Reasons for the cause leading to death	Delay	Reasons for delay	Proposed corrective measures	Activities proposed for corrective measures

**Annexure 4: Maternal death review - Plan of action and compliance report of maternal death review meeting**

District/Corporation			
Date of MDA			
Number of Deaths audited			
SN	Summary Points	Compliance	Remarks
1	Number of of audit completed		
2	What are the common preventable reasons leading to deaths		
3	What are the common problems identified with service deliveries		
4	What are the common areas involved		
5	What are the programs involved		
6	What are the common preventive measures suggested		
7	What are the activities will be implemented in the district to prevent		
8	What was the sugegstions in last death audit		
9	What was the actions taken on last meeting minuites		
10	What is the improvement seen		

## Maternal Death Causes Details and Preventive action

Maternal Death Causes						
SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
1	APH		<p>APH - placenta previa and placental abruption, Primary/Immediate PPH - Occurring during delivery till 24 hours postpartum 4T's</p> <ol style="list-style-type: none"> <li>1. Tone - Atonic PPH - Most common cause (80-90%)</li> <li>2. Tears or trauma</li> <li>3. Tissue - retained or incomplete placenta, membranes</li> <li>4. Thromboembolic - Coagulopathy</li> </ol>	<p>1.APH- abruption in a previous pregnancy, recurrent abruption,</p> <p>2. Other risk factors for placental abruption include: pre-eclampsia, fetal growth restriction, non-vertex presentations, polyhydramnios, advanced maternal age, multiparity, low body mass index (BMI), pregnancy following assisted reproductive techniques, intrauterine infection, premature rupture of membranes, abdominal trauma (both accidental and resulting from domestic violence), smoking and drug misuse (cocaine and amphetamines) during pregnancy</p> <p>3. Other risk factors for placenta previa: Previous caesarean sections, Previous termination of pregnancy, Multiparity, Advanced maternal age (&gt;40 years), Multiple pregnancy.</p>		<p>PPH</p> <ol style="list-style-type: none"> <li>1. Focused ANC care</li> <li>2. Anemia prevention and early detection &amp; complete treatment</li> <li>3. Identification of previous and current co-morbidities</li> <li>4. Ensuring skilled attendant at birth,</li> <li>5. high-risk deliveries to be conducted at FRUs</li> </ol>

Maternal Death Causes						
SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
	PPH	<p>PPH -</p> <ol style="list-style-type: none"> <li>1. Loss of 500 ml or more of blood during delivery and up to 6 weeks after delivery (may be less in anemia) OR</li> <li>2. Blood loss sufficient to cause signs and symptoms of hypovolemia OR</li> <li>3. Woman soaks 1 pad or cloth in &lt;5 min"</li> </ol> <p>Secondary/Delayed PPH - From 24 hours postpartum till 42 days or 6 weeks</p> <ol style="list-style-type: none"> <li>1. Infection in the uterus</li> <li>2. Retained placental fragments</li> </ol>		<ol style="list-style-type: none"> <li>1. Anemia in pregnancy</li> <li>2. Multiple Pregnancy</li> <li>3. Preeclampsia</li> <li>4. Fetal Macrosomia</li> <li>5. Prolonged third stage of labor</li> <li>6. Retained Placenta</li> <li>7. Episiotomy</li> <li>8. Placenta accreta</li> <li>9. Perineal laceration</li> <li>10. Failure to progress in second stage of labor</li> <li>11. Previous PPH</li> <li>12. women with preexisting bleeding disorders and taking anticoagulants</li> </ol>	<p>PPH -</p> <ol style="list-style-type: none"> <li>1. Loss of 500 ml or more of blood during delivery and up to 6 weeks after delivery (may be less in anemia) OR</li> <li>2. Blood loss sufficient to cause signs and symptoms of hypovolemia OR</li> <li>3. Woman soaks 1 pad or cloth in &lt;5 min</li> </ol>	<p>PPH</p> <ol style="list-style-type: none"> <li>1. Focused ANC care</li> <li>2. Anemia prevention and early detection &amp; complete treatment</li> <li>3. Identification of previous and current co-morbidities</li> <li>4. Ensuring skilled attendant at birth,</li> <li>5. high-risk deliveries to be conducted at FRUs</li> <li>5. Early identification of prolonged and obstructed labor by partograph. Avoid exhaustion, dehydration,</li> <li>6. Avoiding unnecessary augmentation, fundal pressure and episiotomies</li> <li>7. Controlled head delivery with perineal support</li> <li>8. Active Management of Third stage of Labor (AMTSL)</li> <li>9. Checking of completeness of placenta</li> <li>10. Routine immediate postpartum care</li> <li>11. monitoring: 4th Stage of Labor - Observe vital signs, atony, bleeding and treat</li> <li>12. Early initiation of breastfeeding</li> <li>13 All labor room should be equipped with PPH Box.</li> <li>14. Postpartum patient - monitored</li> </ol>

**Maternal Death Causes**

SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
						<p>for at least 2 hours after delivery.</p> <p>15. Ensure properly applied TVUAC (transvaginal uterine artery clamp) clamps, UBT, condom tamponade or effective packing should be done depending on the type of PPH along with IV Fluids</p> <p>16. BSU to be made operational in all FRU.</p> <p>17. Community awareness-BCC &amp; IEC</p>

Maternal Death Causes						
SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
2	Hypertensive Disorders in Pregnancy	<p>1. Raised BP in pregnancy: The BP is 140/90 mmHg or more . The systolic blood pressure has increased by 30 mmHg, &amp; diastolic blood pressure has increased by 15 mmHg .</p> <p>2.Pre - eclampsia - Hypertension associated with proteinuria and oedema occurring primarily in Nulliparous after 20th week's gestation and most frequently near term.</p> <p>3.Eclampsia - Eclampsia is the occurrence of seizures that cannot be attributed to any other cause in a pre-eclampsia patient</p>		<p>For preeclampsia - Risk factors –</p> <ol style="list-style-type: none"> <li>1. Nulliparity (primi)</li> <li>2. Multifetal pregnancy</li> <li>3.polyhydramnios</li> <li>4.history of chronic htn</li> <li>5. Maternal age &lt; 18 Or &gt; 35 yrs</li> <li>6.obesity</li> <li>7. H/o diabetes, preeclampsia</li> <li>8. Family h/o preeclampsia in first degree relative</li> </ol> <p><b>Medical risk factors for preeclampsia</b></p> <ol style="list-style-type: none"> <li>1. Chronic hypertension</li> <li>2. Secondary causes of chronic hypertension such as hypercortisolism, hyperaldosteronism, pheochromocytoma, or renal artery stenosis</li> <li>3. Preexisting diabetes (type 1 or type 2), especially with microvascular disease</li> <li>4. renal disease</li> <li>5. Systemic lupus erythematosus</li> <li>6. Obesity</li> <li>7.Thrombophilia</li> </ol> <p><b>Placental/fetal risk factors for preeclampsia</b></p> <ol style="list-style-type: none"> <li>1. Multiple gestations</li> <li>2. Hydrops fetalis</li> <li>3. Gestational trophoblastic disease (GTD) Triploidy</li> </ol>	<p>DIAGNOSTIC CRITERIA FOR PREECLAMPSIA - Minimum criteria -BP &gt;140/90mmHg after 20wks-Proteinuria &gt;300mg/24hrs or &gt;1+ dipstick Diagnostic criteria for EclampsiaSeizures that cannot be attributed to any other cause in a patient with pre - eclampsia.</p>	

**Maternal Death Causes**

SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
3	Sepsis	Life threatening condition defined as organ dysfunction resulting from infection during pregnancy, childbirth, postabortion, or postpartum	<p><b>Aerobic:</b></p> <ol style="list-style-type: none"> <li>Group A Streptococci: (Toxic shock syndrome, necrotizing fasciitis in Episiotomy wounds, C section wound)</li> <li>Group B Streptococci: (Neonatal deaths, septicemia, RD, Meningitis)</li> <li>Others: S aureus, E coli, klebsiella, pseudomonas</li> </ol> <p><b>Anaerobic:</b> Streptococci, Bacteroides, clostridia</p>	<ol style="list-style-type: none"> <li>Malnutrition</li> <li>Anemia, UTI, TBDM, Malaria</li> <li>Preterm labor</li> <li>PROM (chorioamnionitis)</li> <li>Repeated PV exam</li> <li>Traumatic delivery</li> <li>Retained products of conception</li> <li>Placenta previa</li> <li>APH/PPH</li> <li>C section</li> <li>Forgotten mop / cotton in vagina, abdomen</li> </ol>	<p>SIRS - Systemic Inflammatory Response Syndrome</p> <ol style="list-style-type: none"> <li>Temperature - &gt;100.4 or &lt; 96.8</li> <li>RR: &gt;22</li> <li>HR: &gt;90</li> <li>WBC: &gt;12000 OR &lt;4000</li> <li>PCO2: &lt;32 mm/hg</li> </ol> <p>Sepsis - SIRS (any 2 signs) + Confirmed or Suspected Infection</p>	<p><b>Antenatal:</b> Improving nutritional status, Hb, treating infective foci</p> <p><b>Intra natal:</b> Full surgical asepsis, hand hygiene, PV exam 4 hourly in first stage of labor in low-risk cases</p> <ol style="list-style-type: none"> <li>No PV exam without hand hygiene</li> <li>Use of sterile gloves for internal exam</li> <li>Catheterization by NO TOUCH method</li> <li>Allowing spontaneous delivery of placenta...NO routine MRP in c section</li> <li>No mopping of uterine cavity in C-section</li> <li>Tissue respect while suturing ... NO strangulation</li> <li>Rule out RTI/STI before IUCD insertion</li> <li>NO TOUCH TECHNIQUE for IUCD insertion</li> <li>Evacuation procedure by MVA only</li> <li>Checking IV site daily.</li> <li><b>Antibiotic prophylaxis:</b> <b>Inj cephalosporine- what is the reference</b> 1 hr. before skin incision for c section, PPROM, MRP, 3rd 4th degree</li> </ol>

**Maternal Death Causes**

SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
						<p>tear, mother with GBS colonization</p> <p>12. Vaginal cleaning with povidone iodine before c section</p> <p>13. Postpartum period - Use of sterile vaginal pads</p> <p>Other Actions:</p> <ol style="list-style-type: none"> <li>1. Ensure 100% institutional deliveries.</li> <li>2. Follow up during post-natal period</li> <li>3. Signs of sepsis should be picked up at the earliest for timely diagnosis and intervention.</li> <li>4. Antibiotic to be started by ANM before referral</li> <li>4. Proper sterilization of instruments to be ensured and adequate sets of instruments to be kept ready after autoclaving depending on the number of delivery load.</li> </ol>

**Maternal Death Causes**

SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
4	Anemia	<p>Anemia is defined as decrease in the oxygen carrying capacity of the blood due to decrease in number of RBCs or hemoglobin or both.</p> <p>1. In adult female less than 12 gm Hb % in peripheral blood is called anemia.</p> <p>2. As per WHO definition...Hb % ...&lt;11 gm in 1st and 3rd trimester &lt;10.5 gm in 2nd trimester.</p> <p>3. Degrees of anemia: Mild anaemia-9 to 11 gm Hb, Moderate-7.1 to 9 gm Hb Severe-&lt;= 7 gm Hb Very severe- &lt;= 4 gm Hb</p>	<p>Causes of anemia:</p> <p>1) Physiological. Due to physiological hemodilution during pregnancy. Increase in plasma volume as compared to RBC mass.</p> <p>2) Nutritional - Iron deficiency, Folate &amp;/or vit B12 deficiency, Dimorphic</p> <p>3) Hemorrhagic... Acute Chronic</p> <p>4) Haemoglobinopathies</p> <p>5) Hemolytic Congenital Acquired</p> <p>6) Aplastic anemia.</p>	<p>Risk factors:</p> <p>Major cause for anemia in pregnancy is Nutritional anemia.</p> <p>1) Mothers eating diet with low iron intake.</p> <p>2) mothers with depleted iron stores.</p> <p>3) poor absorption because Indian diet is predominantly vegetarian which contains inhibitors like phytates in cereals, tannins in tea, polyphenols in coffee, oxalates in vegetables, phosphates.</p> <p>4) poor utilization - as the bioavailability of non-heme iron (vegetarian diet) is poor and is slowly absorbed.</p> <p>5) Poor reserve of iron - because there is inadequate nutrition during adolescent period</p> <p>6) Increased loss - due to high incidence of malaria and Hook worm infestation, Excessive menstrual loss before pregnancy.</p>	<p>Diagnosis/ identification:</p> <p>1. Clinical history of fatigue, weakness, dizziness, giddiness, headache, dyspnea on exertion, palpitation, edema</p> <p>2. Clinical examination: Pallor, glossitis, stomatitis, koilonychia, tachycardia.</p> <p>3. Investigations:</p> <p>1) For diagnosis and degree of anemia- Hb estimation Hb &lt; 11gm RBC count...&lt;3 million PCV-&lt;30 %</p> <p>2) For Type of anemia:</p> <p>A) peripheral smear (morphology of RBCs)</p> <p>B) Hematological indices (MCV, MCH, MCHC)</p> <p>C) serum iron</p> <p>D) Total iron binding capacity</p> <p>E) serum ferritin level</p> <p>F) bone marrow examination (not routinely done)</p> <p>3) For diagnosing cause of anemia:</p> <p>A) urine examination. Routine and microscopy</p> <p>B) stool examination...ova, cysts, occult blood</p> <p>C) serum protein</p> <p><b>Special tests:</b></p> <p>Serum folate</p> <p>Serum vit B12</p> <p>Serum bilirubin</p> <p>Coombs test- Sickel test</p> <p>Hb, electrophoresis, NESTROF test</p> <p>Red cell osmotic fragility test</p>	<p>1. Screening of adolescent girls in school and giving iron supplements</p> <p>2. IFA supplementation to women in reproductive group as per AMB guidelines.</p> <p>3. Education and motivation for taking iron rich diet</p> <p>4. Change in food habits i.e., avoiding tea or coffee for at least 2 hours after meals, Cooking in iron utensils</p> <p>5. Fortification of food by iron and fortification of common salt by iron</p> <p>6. Treatment and prevention of Anemia by providing IFA supplementation in ANC and PNC as per AMB guidelines.</p> <p>7. Prevention of hookworm and malaria.</p> <p>8. Ensure Hb level estimation of pregnant women (Minimum 4 ) during ANC visits.</p> <p>9. Integrated approach to prevent maternal anemia and treatment of severe anemic mothers by Inj Iron sucrose at PHC level.</p> <p>10. Severely anemic Pregnant women (&lt;5 gm % Hb) should be referred urgently to DH/FRU for</p>

**Maternal Death Causes**

SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
						evaluation and blood transfusion 11. Screening of Sickle cell disease 12. Antepartum management of SCD pregnant women. 13. Adequate birth spacing 14. Follow-up by ASHA/ANM/CHO of high-risk mother ie severe anemic for complete treatment 15. Conducting high risk delivery at FRUs having blood transfusion services

Maternal Death Causes						
SN	Important Causes	Definition	Causes	Risk Factors	Diagnosis/ Identification	Prevention
5	Abortion	Abortion is defined as the spontaneous or induced termination of pregnancy before fetal viability. World Health Organization defines abortion as pregnancy termination before 20 weeks' gestation or with a fetus born weighing < 500 g.		Spontaneous abortion 1. Fetal anomalies Chromosomal and Structural 2. Uterine defects. Congenital Leiomyomas, Incompetent cervix 3. Placental causes- Abruption, previa, defective spiral artery transformation, Chorioamnionitis 4. Maternal disorders. Autoimmune, Infections, Metabolic 5. Induced Abortion - Therapeutic or Elective		1. Preventing unintended pregnancy 2. Increase contraceptive services 3. Training of staff & medical officers 4. Transfer patients to a medical facility that is capable of providing emergency care when a complication arises 5. Postabortion family planning counseling 6. Follow up of abortion cases by ASHA /ANM/CHO for any complications

**Annexure 5: Child death review- Gap analysis at community, health system, monitoring and policy level**

S N	Reasons	% of deaths to total deaths (During annual review)	Previous H/o, Associated history to be elicited	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area or repeated areas-village/pada/hospital. Trend of similar episodes in the district/facility.	Programs which address these problems	Whether this baby revealed all benefits of the program. If not where is the GAP.	Status of these programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
1	Home Death/ Transit		<ol style="list-style-type: none"> <li>1. Previous H/o newborn deaths during birth at Home</li> <li>2. Is Home death a isolated incidence in the village/area or common occurrence</li> </ol>	<ol style="list-style-type: none"> <li>1. Gone to local faith healer</li> <li>2. Not aware about health facility</li> <li>3. Not willing for taking government hospital help</li> <li>4. No faith in modern medicine</li> <li>5. No faith in Govt institute</li> <li>6. No good experience with Govt hospitals/services</li> <li>7. No road/ communication network</li> <li>8. No money available for treatment</li> <li>9. No hope for survival of the child</li> </ol>	<ol style="list-style-type: none"> <li>1. Not aware about 102/104</li> <li>2. No visit by ASHA or ANM</li> <li>3. No visit by health worker as patient is recently shifted/came back from migration</li> <li>4. Non availability of ambulance/delay in reaching ambulance</li> <li>5. No response from ambulance services even if called</li> <li>6. non availability of 102 ambulance in the health</li> </ol>	<ol style="list-style-type: none"> <li>1.No proper IEC/SM strategies for refusal families</li> <li>2.No policy for engagement of faith healers in such areas</li> <li>3.No specific policies for intersect oral involvement for this area</li> </ol>	<ol style="list-style-type: none"> <li>1.High risk areas are not mapped and activities not monitored from districts</li> <li>2.Monitoring of Gram samittee activities and their involvement</li> <li>3.Monitoring of Ambulance services</li> <li>4.Monitoring of ANC visits/High risk ANCs followup</li> </ol>	<ol style="list-style-type: none"> <li>1. What is the trend of over the period ?</li> <li>2. Any facilities or areas with high deaths ?</li> <li>3. Any particular months / period having more deaths ?</li> <li>4. How many affected areas due to similar reasons</li> </ol>	<ol style="list-style-type: none"> <li>1.JSSK</li> <li>2. Pick Up and Drop Back</li> <li>3. 108</li> <li>4. IEC/BCC/SM</li> <li>5. ANC care services e.g ANC visits, specialist visit</li> <li>6. 28 days program</li> </ol>				

S N	Reasons	% of deaths to total deaths (During annual review)	Previous H/o, Associated history to be elicited	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area or repeated areas-village/pada/hospital. Trend of similar episodes in the district/facility.	Programs which address these problems	Whether this baby revealed all benefits of the program. If not where is the GAP.	Status of these programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
				10. Did not think that the illness was serious	center 7. Non availability of ASHA/ANM in village at the time of labor pains 8. Non identification of refusal families and no followup 9. No action taken on previous similar H/o 10. No high risk factor identified 11 Premature delivery not anticipated by health worker								

S N	Reasons	% of deaths to total deaths (During annual review)	Previous H/o, Associated history to be elicited	Underlying causes related to society/family	Underlying causes related to Health service delivery	Underlying causes related to policies	Underlying causes related to Monitoring	Common area or repeated areas-village/pada/hospital. Trend of similar episodes in the district/facility.	Programs which address these problems	Whether this baby revealed all benefits of the program. If not where is the GAP.	Status of these programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
2	Birth Asphyxia		<p>1. history of birth asphyxia in a previous birth</p> <p>2. Was mother high risk case eg. Severe anemia, PIH etc</p> <p>3. was mother severe anemic or having baby with IUGR ?</p> <p>4. Was mother had any bleeding during antepartum period</p> <p>5. was there any fetal distress during intrapartum period?</p> <p>6. Was partograph used during delivery?</p> <p>7. Was there any delay in identification of high risk during intrapartum</p>	<p>1. Practice of home delivery by local dai</p> <p>2. Family do not know nearby delivery point or health facility or prefer home delivery</p> <p>3. Mother is not aware about danger signs during pregnancy or of newborn</p> <p>4. Take child to local faith healer</p> <p>5. Mother / family members do not know whom to contact in case of danger signs</p> <p>6. No road/ communication network</p>	<p>1. ASHA/ANM not able to identify danger signs of asphyxia in case of home delivery</p> <p>2. ASHA/ANM do not know referral plan</p> <p>3. ANM didn't attend the delivery</p> <p>4. PIH/risk factors not identified during ANC period or during labor</p> <p>5. No counseling or birth preparedness plan as per high risk status of Pregnant</p>	<p>1. Referral linkage policy</p> <p>2. Policy of "No rotation of staff in labor room or SNCU"</p> <p>3. Referral audit policy</p> <p>4. Capacity building policy</p>	<p>1. High risk ANCs monitoring not done</p> <p>2. No mechanism of monitoring of high risk ANCs from block or district</p> <p>3. Health facility preparedness monitoring not done (eg. NBCC in LR)</p> <p>4. No regular Skill assessment of staff working in labor room on management of birth asphyxia</p> <p>5. No monitoring of health facilities with high rate of birth asphyxia or</p>	<p>1. Are there any facilities with high birth asphyxia deaths?</p> <p>2. Are there any blocks/P HCs/areas having high birth asphyxia deaths ?</p> <p>3. What is the trend of over the period ?</p> <p>4. Any facilities or areas with high deaths ?</p> <p>5. Any particular months / period having more deaths ?</p>	<p>1. JSSK</p> <p>2. ANC Care</p> <p>3. FRU and DP</p> <p>4. Training - Dakshata, NSSK</p> <p>5. NBCC</p> <p>6. LaQshya</p> <p>7. SNCU</p> <p>8. 108/102</p> <p>9. HBNC</p>				

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			<p>period ?</p> <p>8.history of obstructed or prolonged labor?</p> <p>9.Was there any placental abruption/rupture of uterus</p> <p>10. Was there any cord prolapse</p> <p>11Was any birth companion present during labor?</p> <p>12. Was there any delay in treatment of severe preeclampsia/eclampsia during labor?</p> <p>13. Was high risk mother not treated as per protocol during ANC period eg for hypertension</p>		<p>mother</p> <p>6. Mapping of Delivery points not done properly</p> <p>7. Delay in identification of prolonged or obstructed labor</p> <p>8. Delay in identification of premature delivery by health care provider</p> <p>9. Non assessment of high risk pregnancies by Gynecologists during labour</p> <p>10.Staff not trained on SBA or Dakshata / NSSK</p> <p>11.Staff not trained</p>		<p>deaths due to birth asphyxia</p> <p>6. No monitoring of referral outcomes</p>						

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			<p>n?</p> <p>14. Was resuscitation of newborn baby done after birth?</p> <p>15. Was there any delay at private facility for treatment?</p> <p>16. Were there any multiple referral at various facilities?</p> <p>17. Was there any unnecessary augmentation of labor during intrapartum period?</p> <p>18. Was mother high risk and delivered at SC/PHC level?</p>		<p>on management of preeclampsia or eclampsia</p> <p>12. Partograph and Safe Child birth checklist not used for monitoring labor</p> <p>13. Inappropriate use of Oxytocin during labor</p> <p>14. No specialist available at FRU</p> <p>15. No NBCC at Delivery point or NBCC not maintained properly</p> <p>16. Essential Newborn Care not done as per</p>								

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					<p>guidelines</p> <p>17. Referral not done timely for prolonged or obstructed labor</p> <p>18. No breathing support during referral transport</p> <p>19. No skilled staff during transport of asphyxiated newborn</p> <p>20. Referral transport guidelines not followed - prereferral stabilisation, communication with higher hospital</p> <p>21. In SNCU, management</p>									

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					ent of Birth Asphyxia not done as per treatment protocol. Pediatrician not available while receiving /managing baby in SNCU.								
3	Sepsis / Pneumonia		1.Any H/o of repeated episode of pneumonia 2.How long the symptoms were there before death and before approach to health system 3.Any H/o private treatment. Whether that was a quack or registered practitioner 4.Whether Safe delivery kit used?	1. Not aware about danger signs of Sepsis / Pneumonia 2. Exclusive breastfeeding not followed 3. Did not think that the illness was serious 4. Gone to local faith healer 5. Not aware about health	1.Non availability of ASHA/ANM or No visit by ASHA as per HBNC program 2.ASHA/ANM not able to identify danger signs or delay in identification of danger signs 3.family was not made aware	1. No proper IEC/SM strategies for refusal of families 2. No policy for engagement of faith healers in such	1. High risk areas not mapped and activities not monitored from districts 2. No monitoring of drugs and logistics at facility and field level 3. Faulty supply chain management 4. MAA	1What is the trend of sepsis / Pneumonia deaths over the period ? 2. Any facilities or areas with high deaths due to Sepsis/ Pneumonia ? 3. Any particular months / period having more	1. JSSK 2. 108 3. IEC/BC C/SM 4. 28 days program 5. HBNC 6. HBVC 7. HBKMC 8. SAANS 9. MAA 10.RBSK 11.JSY 12.SNCU 13.NBSU 14.IMNCI / FIMNCI 15.PCU				

S N	Rea son s	% of deaths to total deaths (Durin g annual review )	Previous H/o, Associated history to be elicited	Underlying causes related to society/famil y	Underlying causes related to Health service delivery	Underly ng causes related to policies	Underlying causes related to Monitoring	Common area or repeated areas- village/pada/ hopsital. Trend of similar episodes in the district/facilit y.	Progrms which address these problems	Whe ther this baby reveied all benefits of the progra m.If not where is the GAP.	Status of these progra ms in these areas, taluks and district	Sug ges ted Acti ons	What actions actual ly implem ented in the district
			<p>Where were delivery occurred? Who did delivery?</p> <p>5. Whether children was SAM /MAM or having any other disease</p> <p>6. In case of neonatal sepsis - was there prematue rupture of membrane and was any antibiotics given for the same to mother</p> <p>7. Were multiple PV examinations done during delivery of mother?</p> <p>8. In case of neonatal sepsis - was it early or late onset sepsis</p> <p>9. Was mother having fever or any infection at the time of</p>	<p>6. Not willing for taking government hospital help</p> <p>7. No good experience with Govt hopsitals/se rvices</p> <p>8. PCV, MR Penta vaccines refusal</p>	<p>about danger signs by health staff</p> <p>4.No regular knowledge updation of ASHAs in monthly meeting</p> <p>5.No visit by health worker as patient is recently shifted/ca me back from migration</p> <p>6.Refusal families not identified and no followup done for them</p> <p>7.No action taken on previous silmilar episodes</p> <p>8.Serious newborn with sepsis / pneumonia not referred</p>	<p>3. No specific policies for inters tectora l</p> <p>4. No policy for reorie ntatio n</p> <p>5. No policy on referral linkag e</p> <p>6. No policy of CHO involv ement</p>	<p>meetings monitoring not done</p> <p>5. Review of monthly SAANS program reports not done</p> <p>6. Not conducting refresher trainings / capacity building</p> <p>7. No monitoring of HBNC program</p> <p>8. No monitoring of Sepsis cases and deaths in SNCU/ward</p> <p>9. No daily monitoring rounds by ACS/Metron to SNCUs/ Pediatric wards</p> <p>10.No monitoring of NBSUs in the district</p> <p>11.No monitoring of LBW and high risk</p>	<p>deaths due to Sepsis/ Pneumonia?</p>	<p>16.EAUSH ADHI 17.CHO 18.VHSN D</p>				

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			<p>delivery and any antibiotics given for the same?</p> <p>10. Did mother applied anything to umbilical cord or was newborn baby having any umbilical cord infection</p> <p>11. Was baby on breastfed or on top feed and any prelacteals given</p> <p>12. Whether all vaccines were given as per schedule? (MR, Penta, DPT, PCV)</p> <p>13. Were Vitamin A doses given as per schedule?</p> <p>14. Was child suffering from any congenital</p>		<p>directly to SNCU by ASHA</p> <p>9. High risk children identification and follow up not done by ANM/CHO/MO</p> <p>10. Beneficiaries not informed about 102/108 services</p> <p>11. Non availability of ambulance/delay in reaching ambulance/No response from ambulance services/Driver posts Vacant on 102/Diesel not available at the time of referral</p> <p>12. Ant</p>	<p>in newborn and child disease management</p>	<p>children</p> <p>12. No monitoring of SNCU/NBSU discharged children in field</p> <p>13. No regular review of ASHA/ANM regarding HBNC, PNC visits by MO/THO.</p>						

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			<p>defects like CHD, cleft palate</p> <p>15. Was any treatment given by ANM before referral to higher facility?</p> <p>16. Was child LBW or SAM and anytime admitted with NRC/CTC?</p> <p>17. Was child identified by ASHA/ANM during home visits and referred?</p> <p>18. Was any prereferral treatment given by ASHA/ANM before referral?</p> <p>19. In case of denial of referral, were antibiotics given by</p>		<p>13. Infection control practices not followed in SNCU/Health Facility</p> <p>14. No triaging of newborn in SNCU at the time of admission</p> <p>15. MR, PCV, Penta Vaccines not given timely</p> <p>16. No prereferral treatment given by ASHA / ANM / SN/MO at facility/pre referral stabilisation, communication,</p>								

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			ANM at home level?		tion with higher hospital not done 17. Staff / ASHA ANM not trained on SAANS treatment protocols 18. Medicines not available with frontline workers or health facilities								
5	Pre maturity and LBW		1. Any previous H/o of LBW/prematurity 2. Any signs/symptoms suggestive of premature labour identified 3. Age of the mother 4. Whether received all	1. Not aware about danger signs 2. IFA supplementation / Treatment not taken by pregnant mother as advised 3. Misconceptions about eating during pregnancy - leading to large size	1. No service delivery/early registration by ASHA/ANM/Health worker and no early identification of high risk. 2. No maternal weight monitoring, no	1. No policy of CHO involve ment in newborn and child disease management 2. No policy on referral linkage 3. No proper IEC/SM	1. No monitoring of high risk ANCs 2. No review of high risk ANC follow up at PHC/Block/District/Facility 3. No monitoring of drugs and logistics at facility and field level 4. No	1. Which are the areas with high proportion of prematurity and LBW 2. What is the trend of Child death due to Prematurity & LBW over the period 3. How many affected areas due	14 ANC 2. PMSMA 3. JSSK 4. JSY 5. Amrut Ahar Yojana in tribal areas 6. Use of Inj Antenatal Steroids 7. HBNC 8. HBKMC 9. FRU and				

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			<p>food suppliments in AWW during pregnancy</p> <p>5. Any migration during ANC period</p> <p>6. What is the status of physical labour</p> <p>7. Whether offered Maherghar facility.</p> <p>8. Whether received Inj Dexa.</p> <p>9. Who refer the patient or travelled on own after labour pain</p> <p>10. Place of delivery</p> <p>11. Was mother having severe anemia/hypertension / diabetes during pregnancy?</p> <p>12. Were there any</p>	<p>4.PW with low BMI</p> <p>5.THR not taken / Amrut Ahar (in tribal areas) not taken</p> <p>6.Stressful life/domestic violence</p> <p>7.Not aware about health facility about ANC Care /delivery services</p> <p>8.Gone to local bhumaka/padiyal/ faith healer</p> <p>9.Not willing for taking government hospital help</p> <p>10. No faith in modern medicine/ Trust on traditional treatment</p> <p>11.No faith in Govt institute/staff</p>	<p>abdominal girth taken and no early intervention</p> <p>3. No examination by Gynecologist</p> <p>4. No nutrition counselling and no regular food supplimentation in Anganwadis</p> <p>5. No Folic Acid , IFA ,Calcium supplementation or irregular supplimentation</p> <p>6. No identification of severe anemic mother and treatment</p> <p>7. NO check up</p>	<p>strategies for refusal families</p> <p>v</p>	<p>monitoring of LBW babies</p> <p>5.No monitoring of SNCU discharged babies</p> <p>6.No monitoring of KMC practices in SNCU/NBSU/PNC ward</p> <p>7.No monitoring of breastfeeding practices in LR/SNCU/PNC wards</p> <p>8.No monitoring of identification of preterm deliveries and use of antenatal corticosteroids</p> <p>9.No maternal weight monitoring, no abdominal girth</p>	<p>to similar reasons</p>	<p>DP</p> <p>10.SNCU</p> <p>NBSU</p> <p>11.NBCC</p> <p>12.NRC CTC</p>				

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			<p>complications during pregnancy/intrapartum period - Placental bleeding, infections etc</p> <p>13. Was high risk cases treated as per guideline during ANC period or during intrapartum period?</p> <p>14. Were any sonography done during ANC period?</p> <p>15. Was mother detected for IUGR during ANC period?</p> <p>16. Pregnancy with Twins/triplet</p> <p>17. PW with low BMI</p> <p>18. Was child breastfed or</p>	<p>12. No good experience with Govt hospitals/services/staff</p> <p>13. No money available for treatment</p> <p>14. No road/communication network/cutoff villages/pada</p> <p>15. No hope for survival of the child</p> <p>16. Did not think that the illness is significant</p> <p>17. Didn't call to ambulance services</p> <p>18. Early bathing done for newborn with lbw</p> <p>19. Not willing to give KMC at home</p> <p>20. Do</p>	<p>done by Medical officer /CHOs(at least 4 ANC Check up)</p> <p>8. No referral of High Risk Mother at proper time</p> <p>9. USG not conducted as per guideline</p> <p>10. Followup and tracking of migrated pregnant women not done</p> <p>11. No followup as per EDD/EPD of pregnant women</p> <p>12. Antenatal corticosteroids not given for preterm delivery or before</p>		<p>monitoring and no early intervention</p> <p>10. No monitoring of AWW diet for pregnant women</p>						

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			<p>top fed</p> <p>19. Were any nutritional supplements eg, Multivitamin drops with Zinc, Vitamin D, Calcium/ Phosphorus given for lbw baby?</p> <p>20. was baby having any congenital defect? Eg heart diseases</p> <p>21. was child SAM/anytime admitted in NRC in case of SAM?</p> <p>22. Was child detected for sickness by ASHA during HBNC / HBYC visits?</p> <p>23. Were any check up/ visits given by</p>	<p>not know how to keep baby warm</p> <p>21. Not willing to stay in Maher Ghar (tribal area)</p> <p>22. Not willing to stay in SNCUNBSU</p> <p>23. Not confident about breastfeeding of preterm or very low birth weight newborn</p> <p>24. Discharge taken against advise from SNCU/NBSU</p>	<p>referral to higher centre</p> <p>13. No advance funds are provided to ASHA for transportation of PW</p> <p>14. Early initiation of Breast feeding not done</p> <p>15. counseling for KMC at home not done</p> <p>16. 102 /108 services not available on time</p> <p>17. No response from ambulance services</p> <p>18. Diesel not available at the time of referral</p> <p>19. ASHA or ANM was</p>								

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			<p>CHOs/MOs to high risk children</p> <p>24. was child referred timely to higher facility?</p> <p>25. was resuscitation done before and during referral?</p> <p>26. was surfactant or CPAP used for preterm delivery?</p> <p>27. High Risk Mother - Multipara, spacing less than 2 years, addiction, short height,</p> <p>28. Teenage or elderly or multigravid a pregnancy</p> <p>29. Pregnancy with Twins/triplet/ other</p>		<p>not present while referring</p> <p>20. No prereferral treatment given by ASHA / ANM / SN at facility</p> <p>21. Referral transport guidelines not followed - prereferral stabilisation, communication with higher hospital</p> <p>22. Not prompt referral of Newborn to NBSU/SNCU</p> <p>23. Unavailability of Specialist / check up by specialist</p>								

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			30. Previous H/o premature delivery 31. H/o Abortion, H/o PIH/DM 32. Any medical complications in ANC period 33. History of Birth defects		24. No NBCC in facility 25. Essential newborn care not done after delivery 26. No breastfeeding within 1 hour after delivery 27. No triaging of newborn in SNCU at the time of admission 28. Staff do not know about identification of preterm delivery 29. NB SU not functional 30. Staff / ASHA ANM not trained on KMC / Breastfeeding - IYCF protocols								

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					<p>31. Staff do not know treatment protocols</p> <p>32. Medicines not available with frontline workers or health facilities</p> <p>33. No utilization of Maher Ghar Yojana/non functional Maher ghar/non availability in remote area</p>								



S N	Reasons	% of deaths	Comm on / Repeat ed Delay type	Reason s for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Commo n area/vil lage/ pada/h opsital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Sug ges ted Acti ons	What actions actualy impleme nted in the district
					<p>with Govt hopsitals/services</p> <p>12. No policy on awareness/helath seeking behaviour</p> <p>13. No policy for engagement of faith healers</p> <p>14. No monitoring of home deaths - areas wise</p> <p>15. No monitoring of refusal families/communities by field level staff/PHC/Block level officers</p> <p>16. No nearby Delivery point or FRU</p> <p>17. Delay in ambulance services due to -No Govt ambulance available/Ambulance driver was not available/Private ambulances not identified in case of emergency</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					18. Referral not done timely 19. JSSK IEC Not done in remote areas 20. No policy for any alternative transport arrangement 21. DP mapping not done considering remote/hard to reach areas 22. No monitoring of 24*7 ambulance availability 23. No monitoring of driver availability 24. No monitoring of performance of ambulances						
2	Birth Asphyxia		Type One	1. Individual / family / Societal cause 2. 3. Health Care delivery	1. Do not know about danger signs/high risk status eg. Eclampsia, PROM 2. Gone to local faith healer/No faith in Govt institute/No			1. JSSK /ANC care 2. IEC 3. DP FRU 4. SNCU 5. NBSU 6. IEC			

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<b>Type Two</b>	4.Policies 5.Monitoring 6.Individual / family / Societal cause 7.Health Care delivery	faith in modern medicine 3. No hope for survival of the child 4. Didn't think that illness is serious 5. Do not know nearby delivery point or health facility 6. No good experience with Govt hospitals/services/not willing to go to government hospital 7. Home birth not attended by trained birth attendant 8. No counselling regarding health facility availability/High risk status /hospital delivery 9. No policy for IEC for awareness 10.No monitoring in refusal families or resistant areas			7. Monitoring and Review 8. JSSK / IEC 9. DP / FRU 10.JSSK  11. Referral Transport Guidelines  12.TRAINING 13.ANC Care 14.Dakshata 15.LaQshya MusQan  16.NBCC 17.FRUs/ DP 18.IPHS 19.Training 20.SNCU  21.Training 22.DP FRU  23.Monthly Meetings 24.LaQshya MusQan 25.LaQshya MusQan			
			<b>Type Three</b>	8. P o l i c i e s 9. 10. M o n i t o r i n g 11. H e a l t h C a r e d e l i v e r y							

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>11. Do not know whom to contact for ambulance</p> <p>12. No nearby Delivery point or FRU</p> <p>13. No Govt ambulance available/Ambulance driver was not available/Private ambulances not identified in case of emergency</p> <p>14. Referral not done timely</p> <p>15. Referral transport guidelines not followed - prereferral stabilisation, communication with higher hospital</p> <p>16. Referral points not mapped so inappropriate referral or multiple referrals.</p> <p>17. JSSK IEC Not done in remote areas</p> <p>18. DP mapping not done considering</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>remote/hard to reach areas</p> <p>19.No policy for any alternative transport arrangement</p> <p>20.No monitoring of 24 *7 ambulance availability</p> <p>21.No monitoring of driver availability</p> <p>22.No monitoring of performance of ambulances</p> <p>23.Staff not trained on SBA or Dakshata / NSSK</p> <p>24.Delay in identification of prolonged or obstructed labor</p> <p>25.Birth Companion policy not followed in specific facilities or area - block/district</p> <p>26.Staff not trained on management of preeclampsia or eclampsia</p> <p>27.Partograph</p>						

S N	Reasons	% of deaths	Comm on / Repeat ed Delay type	Reason s for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Commo n area/vil lage/ pada/h opsital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Sug ges ted Acti ons	What actions actually impleme nted in the district
					<p>and Safe Child birth checklist not used for monitoring labor</p> <p>28.Lack of esesntial newborn care</p> <p>29.No NBCC at Delivery point or NBCC not maintained properly</p> <p>30.No specialist available at FRU/high risk delivery not attended by Pediatrician</p> <p>31.Staff in SNCU not trained on NSSK</p> <p>32.In SNCU, management of Birth Asphyxia not done as per treatment protocol</p> <p>33.Not attended by specialist on time</p> <p>34.No intimation to facility prior to referal so delay in starting treatment</p> <p>35.No training policy - priority</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>for FRU staff training, reorientation on important topic etc</p> <p>36.No policy of DP or FRU identification and revision in facilities</p> <p>37.No policy for non rotation of staff in LR, SNCU</p> <p>38.Perinatal management preparedness monitoring is not regularly monitored at institutional level</p> <p>39.Audit is not being conducted regularly at facility level</p> <p>40.Referred in management time lag need to be monitored</p>						
3	Sepsis / Pneumonia		Type One	Individual / family / Societal cause	<p>1. Not aware about danger signs of Sepsis / Pneumonia</p> <p>2. Exclusive breastfeeding not followed</p> <p>3. Did not think that the illness was serious</p> <p>4. Gone to local faith healer/No faith in Govt institute/Not aware about health facility</p>			<p>1.ASHA Program</p> <p>2.</p> <p>3. Routine Immunisation, VHSND</p> <p>4. SNCU</p> <p>5. NBSU</p> <p>6.IEC</p>			

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			<b>Type Two</b>	<b>Policies Monitoring</b>	5. No hope for survival of the child			7.IEC 8. JSSK IEC			
			<b>Type Three</b>	<b>Societal cause Health Care delivery</b>	6. Didn't call to ambulance services 7. Migrated parents 8. PCV, MR Penta vaccines refusal 9. No examination in HBNC/No PNC visits			9.JSSK IEC 10. Referral Transport guidelines 11. SAANS 12. IMNCI F IMNCI 13. HBNC HBYC 14. Training			
				<b>Policies Monitoring</b>	10. Health worker not able to identify high risk signs			15. CHO 16. SAANS 17. HBNC			
				<b>Health Care delivery (Facility and field)</b>	11. Not done awareness about disease and treatment facilities available 12. SAM children not referred to NRC or CTC 13. Specific awareness policy						
				<b>Policies Monitoring</b>	14. No specific monitoring of refusal families or resistant areas 15. No monitoring of HBNC/PNC visits						

S N	Reasons	% of deaths	Comm on / Repeat ed Delay type	Reason s for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Commo n area/vil lage/ pada/h opsital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Sug ges ted Acti ons	What actions actually impleme nted in the district
					<p>16. No awareness about JSSK scheme</p> <p>17. Beneficiaries not informed about 102/108 services</p> <p>18. ASHA/ANM didn't refered on time</p> <p>19. Non availability of ambulance/delay in reaching ambulance/No response from ambulance services/Ambulance driver was not available/Diesel not available at the time of referral</p> <p>20. Private ambulances not identified in case of emergency</p> <p>21. CHOs not oriented on appropriate referral protocol of sick children</p> <p>22. No policy for any alternative transport arrangement</p> <p>23. No monitoring</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					of 24 *7 ambulance availability 24. No monitoring of performance of ambulances 25. No pre- referral treatment given by ASHA / ANM / SN at facility 26. Referral transport guidelines not followed - pre- referral stabilisation, communication with higher hospital 27. Delay in identification of sepsis / pneumonia signs by ASHA/ANM / CHO or at facility 28. Staff / ASHA ANM not trained on SAANS treatment protocols 29. Facility Staff do not know treatment protocols 30. Medicines not						

S N	Reasons	% of deaths	Comm on / Repeat ed Delay type	Reason s for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Commo n area/vil lage/ pada/h opsital	Progrms which address these problems	Status of These programs in these areas, taluks and district	Sug ges ted Acti ons	What actions impleme nted in the district
					<p>available with frontline workers or health facilities</p> <p>31. No appropriate antibiotic protocols in SNCU / Health Facility</p> <p>32. Not attended by MO/Specialist on time</p> <p>33. No policy of CHO involvement in newborn and chld disease management</p> <p>34. No monitoring of drugs and logistics at facility and field level</p> <p>35. No monitoring of Sepsis cases and deaths in SNCU/ward</p> <p>36. No daily monitoring rounds by ACS/Metron to SNCUs/Pediatric wards</p>						
4	<b>Prematurity and LBW</b>		Type One	<b>Individual / family / Societal cause</b>	<p>1. Not aware about danger signs , delivery conducted by local untrained dai</p> <p>2. Gone to</p>			IEC ANC CARE ASHA PROGRAM VHSND RI SESSIONS			

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
			Type Two	Health Care delivery	local bhumaka/padiyal/ faith healer			MusQan			
			Type Three	Policies Monitoring Individual / family / Societal cause	3. Did not think that the illness is significant			ASHA Program			
				Health Care delivery	4. No one advised to visit facility			JSSK Referral Transport			
				Health Care delivery	5. Not aware about health facility /Not willing for taking government hospital help/No faith/No trust on modern medicine			CHO PROGRAM HWC Referral Transport - JSSK			
				Policies Monitoring Health Care delivery (Facility and field)	6. No good experience with Govt hospitals/services/staff			VHSND			
				Policies Monitoring	7. Delivery conducted by untrained personnel			AMB NHM GB EC MEETING			
					8. No visit by ASHA or ANM as per HBNC or other program						
					9. No policy for engagement of faith healers in such areas						
					10.No propoer IEC/SM						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>strategies for refusal families</p> <p>11.No monitoring in refusal families or resistant areas or Home deliveries</p> <p>12.Not aware about health facility/taken to local healer</p> <p>13.No road/communication network/cut off villages/pada</p> <p>14.ASHA/ANM didn't refered on time</p> <p>15.Non availability of ambulance/delay in reaching ambulance/No response from ambulance services/Ambulance driver was not available/Diesel not available at the time of referral</p> <p>16.Private ambulances not identified in case of emergency</p> <p>17.CHO not</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>oriented on referral management protocol of sick children</p> <p>18.No policy of CHO involvement in sick newborn and children referral and disease management</p> <p>19.No Monitoring of Ambulances working or not/No monitoring of performance of ambulances</p> <p>20.Health care worker visiting home delivery is not trained in management of prematurity and LBW babies/Essential newborn care not done after delivery</p> <p>21.Health facility is not intimated while referring for receipt of baby</p> <p>22.No treatment given</p>						

S N	Reasons	% of deaths	Common / Repeated Delay type	Reasons for Delay	Underlying Reasons	Frequency (Common occurrence or isolated incidence)	Common area/village/ pada/hospital	Programs which address these problems	Status of These programs in these areas, taluks and district	Suggested Actions	What actions actually implemented in the district
					<p>by Medical officer as per protocol/ baby not attended by MO or pediatrician.</p> <p>23. Unavailability of Specialist / check up by specialist at health facility</p> <p>24. Treatment protocols not available at facility level - SNCU/NBSU/other facilities</p> <p>25. Capacity building</p> <p>26. No policy on referral linkage</p> <p>27. No monitoring of high risk ANC's admitted by Specialists</p> <p>28. No monitoring of drugs and logistics at facility and field level</p> <p>29. No monitoring of LBW babies in wards</p> <p>30. Premature discharge from SNCU</p> <p>31. No monitoring of KMC practices in SNCU/NBSU/PNC ward</p> <p>32. No monitoring of breastfeeding practices in LR/SNCU/PNC wards</p>						

**Annexure 7: Child death review- Line list format for child death review at district level**

District/Corporation											
Date of CDA											
Number of Deaths audited											
SN	Name	Age	Date of Death	hospital audit done? (Y/N)	Community audit done?(Y/N)	Cause of Death	Reasons for the cause leading to death	Delay	Reasons for delay	Proposed corrective measures	Activities proposed for corrective measures

**Annexure 8: Child death review- Plan of action and compliance report of child death review meeting**

District/Corporation			
Date of CDA			
Number of Deaths audited			
SN	Summary Points	Compliance	Remarks
1	Number of of audit completed		
2	What are the common preventable reasons leading to deaths		
3	What are the common problems identified with service deliveries		
4	What are the common areas involved		
5	What are the programs involved		
6	What are the common preventive measures suggested		
7	What are the activities will be implemented in the district to prevent		
8	What was the sugegstions in last death audit		
9	What was the actions taken on last meeting minuites		
10	What is the improvement seen		

## Child Death Causes Details and Preventive action

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
1	Birth Asphyxia	<p>Clinically a neonate should be labeled as having suffered perinatal asphyxia if there is presence of any one of the following:</p> <ol style="list-style-type: none"> <li>1. Gasping or ineffective breathing or lack of breathing at one minute of life.</li> <li>2. Need for positive pressure ventilation for &gt; 1 minute.</li> <li>3. Apgar Score &lt;3 at 5 minutes or longer.</li> </ol> <p>(Source: FBNC Training Booklet MoHFW)</p>	<p>1. Maternal events (hemorrhage, amniotic fluid embolism; hemodynamic collapse)</p> <p>2. Placental events (acute abruption)</p> <p>3. Uterine events (rupture)</p> <p>4. Cord events (tight nuchal cord, cord prolapse/avulsion)</p> <p>5. Intrapartum infection (maternal fever in labor)</p> <p>1. Failure of gas exchange across the placenta – excessive or prolonged uterine contractions, placental abruption, ruptured uterus</p> <p>2. Interruption of umbilical blood flow – cord compression, cord prolapse, delayed delivery, e.g. shoulder dystocia</p> <p>3. Inadequate maternal placental perfusion, maternal hypotension or hypertension – often with intrauterine growth restriction (IUGR) compromised fetus – anemia, IUGR</p> <p>4. Failure of cardiorespiratory adaptation at birth – failure to breathe.</p>	<p>1. Maternal Factors - Younger/older mother, Hypertension/pre-eclampsia, antepartum bleeding</p> <p>2. Obstetric factors - Prolonged labor, Fetal distress</p> <p>3. Neonatal factors - Prematurity, Low Birth Weight, Postdated delivery history of birth asphyxia in a previous birth.</p>	<p>1. Gasping or ineffective breathing or lack of breathing at one minute of life.</p> <p>2. Need for positive pressure ventilation for &gt; 1minute.</p> <p>3. Apgar Score &lt;3 at 5 minutes or longer.</p>	<ol style="list-style-type: none"> <li>1. Identification and monitoring of high-risk pregnancies eg. PIH, Anemia</li> <li>2. Planning delivery of high-risk cases at FRUs</li> <li>3. Timely referral of high-risk deliveries</li> <li>4. Monitoring the labor progress through plotting of partograph</li> <li>5. Emotional support with birth companions</li> <li>6. Use of ANCS in pre-term births</li> <li>7. Appropriate management of pre-eclampsia/eclampsia</li> <li>8. Avoid un necessary augmentation of labor</li> <li>9. Maintain hydration of mothers at all times</li> <li>10. Allow mother to assume left lateral position during labor</li> <li>11. Ask mother to push only during contractions</li> <li>12. Ask mothers take deep breaths in between contractions</li> <li>13. Do not apply fundal pressure during labor</li> <li>14. Newborn corner in LR - Well equipped NBCC in LR of all hospitals</li> <li>15. Trained Staff at Labor Room (SBA, NSSK trainings)</li> </ol>

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
2	Sepsis	<p>Neonatal Sepsis-Definition Neonatal sepsis is a clinical syndrome characterized by signs and symptoms of infection with or without accompanying bacteremia in the first month of life. It encompasses various systemic infections of the newborn such as septicemia, meningitis, pneumonia, arthritis, osteomyelitis, and urinary tract infections. Superficial infections like conjunctivitis and oral thrush are not usually included under neonatal sepsis.</p>	<p>1. Neonates acquire infection from a wide range of micro-organisms including bacteria, virus and protozoa. 2. Bacteria-mediated infection constitutes a common morbidity and accounts for nearly one-third of total neonatal deaths. 3. Infections can be superficial and systemic.</p>	<p>Risk factors for early onset sepsis (EOS) in Newborn are; 1. Very low birth weight (&lt;1500 g) 2. Spontaneous preterm delivery 3. Foul smelling liquor 4. Rupture of membranes &gt;24 hours 5. Single unclean or &gt;3 sterile vaginal examination(s) during labor 6. Intra-partum maternal fever</p> <p>(&gt;38°C) Risk factors for late onset sepsis (LOS) in Newborn are; 1. Very low birth weight, prematurity 2. Lack of breastfeeding 3. Delayed enteral feeding 4. Frequent handling 5. Disruption of skin integrity with needle pricks and use of intravenous fluids 6. Poor hygiene 7. Poor maintenance of asepsis in neonatal units including improper hand washing techniques 8. Superficial infections (pyoderma, umbilical sepsis) 9. Previous or prolonged hospitalization</p>	<p>1. Blood culture: It is the gold standard for diagnosis of sepsis 2. Isolation of microorganisms from blood, CSF, urine or pus is diagnostic. 3. In clinically suspected cases of sepsis, blood culture should be sent prior to starting antibiotics. 4. Early onset sepsis (EOS), where the signs and symptoms of sepsis appear within 72 hours of birth. The source of pathogens is the maternal genital tract or the delivery area. 5. Respiratory distress due to congenital (intrauterine) pneumonia is the predominant manifestation of EOS. 6. Late onset sepsis (LOS), where the signs and symptoms of sepsis appear after 72 hours of age. The pathogens are acquired from community or hospital (nosocomial). 7. LOS commonly presents as septicemia, pneumonia or meningitis.</p>	<p>1. Appropriately manage maternal infections and use prophylaxis wherever needed, antibiotics in PROM &gt;24 hours as per guidelines 2. Delivery of high-risk cases eg. IUGR at FRUs 3. Use of Partograph in labor, 4. Do not do unnecessary PV examination 4. Maintain "Six Cleans" during delivery 5. Perform hand hygiene every time before handling the baby 6. Early initiation of breast feeding and exclusive breast feeding, avoid pre-lacteal feeds, 7. KMC for lbw as early as possible, counseling for home based KMC 8. Dry cord care 9. Avoid unnecessary interventions for the baby like routine suctioning of every newborn 10. Immunization as per schedule 11. Early identification of danger signs during home visits by ASHAs/ANM/CHOs 12. Monitoring of high-risk children by ANM/CHOs eg. LBW, SNCU discharged 13. Antibiotic Policy for SNCU 14. Prompt Referral mechanism along with pre-referral treatment 15. Infection control practices in SNCU and other health facilities</p>

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
3	Pneumonia	Pneumonia is a form of acute respiratory infection that affects the lungs.	<p>Pneumonia is caused by several infectious agents, including viruses, bacteria and fungi. The most common are the following;</p> <ol style="list-style-type: none"> <li>1. Streptococcus pneumoniae is the most common cause of bacterial pneumonia in children.</li> <li>2. Haemophiles influenzae type b (Hib) is the second most common cause of bacterial pneumonia.</li> <li>3. Respiratory syncytial virus is the most common viral cause of pneumonia.</li> <li>4. In infants infected with HIV, Pneumocystis Jiroveci is one of the most common causes of pneumonia.</li> </ol>	<ol style="list-style-type: none"> <li>1. Birth defects like cleft palate, congenital heart disease etc. are important contributors of recurrent childhood Pneumonia</li> <li>2. Malnutrition - SAM / SUW children</li> <li>3. Pre-existing illnesses, such as symptomatic HIV infections and measles</li> <li>4. Infants who are not exclusively breastfed.</li> <li>5. Indoor Air Pollution</li> <li>6. Children whose immune systems are compromised</li> </ol>	<ol style="list-style-type: none"> <li>1. Severe Pneumonia - General danger signs (inability to breastfeed or drink, lethargy or reduced level of consciousness, convulsions) or Chest indrawing</li> <li>2. Pneumonia Fast breathing: (Respiratory rates: • 2-11 months ≥50/min •12-59 months ≥40/min)</li> </ol>	<ol style="list-style-type: none"> <li>1. Exclusive breastfeeding for 6 months</li> <li>2. Adequate complimentary feeding</li> <li>3. Vitamin A Supp</li> <li>4. Vaccines - Pertussis, measles, Hib, PCV and rotavirus</li> <li>5. Monitoring of high-risk children like children with birth defects, heart diseases SAM, LBW etc.</li> <li>6. Awareness regarding Handwashing with soap</li> <li>7. Availability and use of Safe drinking water and sanitation practices</li> <li>8. Reduce household air pollution</li> <li>9. Early referral &amp; treatment of pneumonia cases</li> <li>10. Availability of antibiotics with ASHAs for prereferral treatment</li> <li>11. In case of denial of referral home treatment by ANM of injectables as per guidelines</li> <li>12. SAANS trainings of all frontline workers</li> </ol>

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
4	Prematurity and LBW	Preterm birth is defined by WHO as all births before 37 completed weeks of gestation or fewer than 259 days since the first day of a woman's last menstrual period. Low birth weight infants defined as babies born with a birth weight below 2.5kg regardless of gestational age	<p>1. <b>IUGR -Maternal</b> - Undernutrition, Maternal hypoxia, e.g. cyanotic heart disease, chronic respiratory disease, high altitude. Drugs, e.g. cigarettes, alcohol, illicit drug use.</p> <p>2. <b>Placental</b> - Reduced maternal uterine vascular supply – pre-eclampsia, chronic maternal disease, e.g. hypertension, diabetes mellitus, renal disease. Placental vascular thrombosis and/or infarction, e.g. sickle cell disease. Unequal sharing of uteroplacental vascularity – multiple gestation</p> <p>3. <b>Fetal</b> Chromosomal disorders, e.g., trisomy 18 and other syndromes</p> <p>4. <b>Preterm</b> - Most preterm births happen spontaneously, common causes include multiple pregnancies, infections and chronic conditions, such as diabetes and high blood pressure; Short inter -pregnancy interval of &lt;6 months, previous premature birth, infections in pregnancy, anemia, Maternal nutrition – low BMI (body mass index), Obese mothers, Problems with the uterus, cervix or placenta, Some infections, mainly those of the amniotic fluid and lower genital tract, High levels of maternal psychological or social stress, Smoking cigarettes, taking illicit drugs or drinking alcohol, underage or elderly pregnancy.</p>		Preterm birth can be further sub -divided based on gestational age: extremely preterm (<28 weeks), very preterm (28 - <32 weeks) and moderate preterm (32 - <37 completed weeks of gestation)	<p><b>Services for married couples</b></p> <ol style="list-style-type: none"> <li>Increase spacing between pregnancies</li> <li>In Preconception period - Folic acid supplementation, anemia correction, Smoking, tobacco cessation counseling</li> </ol> <p><b>During ANC</b></p> <ol style="list-style-type: none"> <li>All 4 ANC Checkups, weight gain monitoring, lab tests and sonography,</li> <li>Anemia detection and treatment (facility/PHC wise performance)</li> <li>Identification of high-risk cases and treatment eg. PIH, sickle cell, IUGR, GDM</li> <li>Counseling regarding smoking, tobacco cessation, diet, supplementary nutrition</li> <li>Monitoring Amrut Ahar, THR, supplementary nutrition taken by ANC</li> <li>Birth preparedness plan of high-risk cases at FRUs</li> </ol> <p><b>Intra partum Care –</b></p> <ol style="list-style-type: none"> <li>Antenatal corticosteroids</li> <li>Use of antibiotics for Preterm premature rupture of the membranes (PPROM)</li> <li>Use of CPAP and surfactants if required</li> <li>Trained staff at LR</li> </ol>

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
						<p>(NSSK, SBA)</p> <p>5. Well equipped LR with NBCC</p> <p>6. Early referral of high-risk cases at FRUs, Delivery of IUGR cases at FRUs.</p> <p><b>Post Partum –</b></p> <ol style="list-style-type: none"> <li>1. Early and exclusive breastfeeding, complementary feeding counseling and monitoring</li> <li>2. Kangaroo Mother Care: For all LBW babies at facilities</li> <li>3. Home Based KMC Counselling by ANM/MO and ASHAs</li> <li>4. Strengthening HBNC and HBYC visits of ASHAs</li> <li>5. Nutritional supplements for LBW as per guidelines (Vitamin D, Calcium and Phosphorus, IFA, Multivitamin with Zinc)</li> <li>6. Vitamin A supplementation</li> <li>7. IFA syrup as per AMB guidelines and Deworming of all children, detection of anemia in children and treatment</li> <li>8. Monitoring of high-risk children - SAM, LBW, CONGENITAL DEFECTS like Heart diseases</li> <li>9. Early identification of growth failure and management</li> <li>10. Health checkup of all high-risk children on monthly basis by CHOs/ANM</li> <li>11. Identification of</li> </ol>

SN	Important Causes: Child death	Definition	Causes	Risk Factors	Diagnosis/Identification	Prevention
						<p>SAM cases and referral to NRC/CTC, follow - up after discharge</p> <p>12. Follow-up and monitoring of SNCU discharged children at home by CHO/ANM</p>

फॉर्म क्र.१

आशांसाठी ० ते ५ वर्षे मृत बालकांचे सुचना पत्र (Notification Card)

कार्यालयीन उपयोगासाठी फक्त	
सुचनापत्र मिळाल्याची तारीख	
सुचनापत्र घेणाऱ्याचे नाव	

सुचना

- १) आशा कार्यकर्तीने आपल्या रहिवासी क्षेत्रातील ० ते ५ वर्षे वयोगटातील मृत्यु झालेल्या बालकांची (जरी बालकाचा मृत्यु आरोग्य संस्थेत उदा. एसएनसीयु, आरएच, एसडीएच, वैद्यकीय महाविद्यालय इत्यादी/ प्रवासा दरम्यान , घरी झाला असला तरीही) भरावी.
- २) गावपातळीवरील मृत्युंची (CB CDR) २ प्रतीमध्ये माहिती भरावी. (एक प्रत आरोग्य परिचारिका यांस सादर करावी व एक प्रत मृत्यु झालेल्या बालकाच्या कुटूंबास द्यावी.)
- ३) सुचना पत्र मोठ्या अक्षरात लिहा.
- ४) योग्य प्रतिसादास गोल करा किंवा आवश्यकतेनुसार टिक मार्क करा.

१) बालकाचे नाव :- \_\_\_\_\_  
(नवजात शिशू असल्यास, मातेच्या नावाचा उपयोग करा. उदा. निर्मलाचे बाळ)

२) जन्म तारीख (उपलब्ध असल्यास):   दिवस,   महिना,     वर्ष

३) वय:   वर्ष,   महिना,   दिवस,   तास

४) लिंग :  पुरुष,  स्त्री

५) आईचे नाव: \_\_\_\_\_

६) वडिलांचे नाव: \_\_\_\_\_

७) पुर्ण पत्ता: \_\_\_\_\_

घर क्रमांक: \_\_\_\_\_

मोहल्ला/ कॉलनी: \_\_\_\_\_

गाव/ नगर/ शहर: \_\_\_\_\_

तालुका: \_\_\_\_\_

जिल्हा/ तहसिल: \_\_\_\_\_

राज्य: \_\_\_\_\_

पिनकोड: \_\_\_\_\_

८) जवळची खुण असल्यास: \_\_\_\_\_

९) पालकांचे/ कुटूंबातील व्यक्तीचा दुरध्वनी क्रमांक (एकाच घरात राहणारे)

घरचा : \_\_\_\_\_

भ्रमणध्वनी (मोबाईल) क्रमांक : \_\_\_\_\_

१०) मृत्युचा दिनांक   दिवस,   महिना,    वर्ष

११) मृत्युचे ठिकाण:-

अ) घर , ब) दवाखाना , (दवाखान्यात मृत्यु झाला असल्यास नाव नमूद करा)

क) प्रवासात

आशाचे नाव : \_\_\_\_\_ वेळ \_\_\_\_\_

स्वाक्षरी

सुचना पत्रचा दिनांक \_\_\_\_\_

हे कार्ड बालकाच्या पालकांना द्यावे त्यामुळे बालकाच्या मृत्युची तपासणी आशाने केल्याची खात्री होईल तसेच इतरांना मृत्यु झाल्याची माहिती देणे शक्य होईल व प्रक्रिया पुन्हा पुन्हा करावी लागणार नाही.

प्रिय पालक,

आपले बाळ गेल्याचे आम्हाला खुप दुःख होत आहे. तुमच्या बाळास झालेल्या आजाराबाबत व मृत्युस कारणीभूत असलेल्या अजुनही काही बाबीची अधिक माहिती आम्हास हवी आहे जेणेकरुन भविष्यात होणारे असे मृत्यु टाळणे शक्य होईल. या संदर्भात काही आरोग्य कर्मचारी येत्या आठवडयामध्ये आपणास भेट देतील.

आपणास विनंती करण्यात येते की, आपण बाळाची व मातेची आरोग्यासंबंधीची सर्व माहिती (document) जपुन ठेवावी.

आरोग्य कर्मचाऱ्याच्या भेटीच्यावेळी कृपया हे पत्रक (कार्ड) आरोग्य कर्मचाऱ्यास दाखवावा.

माहिती देणाऱ्याची स्वाक्षरी

हुददा:-

दिनांक:-



१६)	आजारपणातील लक्षणे	योग्य प्रतिसादास गोल करा	होय असल्यास, लक्षणांचा कालावधी
इ	जलदशवास (धाप)	होय/नाही	.....दिवस
फ	आकडी	होय/नाही	.....दिवस
ग	त्वचेवर पुरळ	होय/नाही	.....दिवस
ह	इजा (फ्रॅक्चर/जखम)	होय/नाही	.....दिवस
ई	इतर लक्षणे (जर असतील) नोंदवा..... .....	होय/नाही	.....दिवस

१७) उपचाराबाबत माहिती :-

- १) आजारपणासाठी उपचार घेतले किंवा नाही. होय.....नाही.....  
(नाही, असल्यास विभाग ब पहावा)
- २) होय असल्यास, उपचार कोठे करण्यात आले :-  
अ. सार्वजनिक आरोग्य संस्था :- प्रा. आ.केंद्र, ग्रामीण रुग्णालय, उपजिल्हा रुग्णालय, सामान्य रुग्णालय, स्त्री रुग्णालय, जिल्हा रुग्णालय, युसीएचसी  
ब. खाजगी दवाखाना/सुश्रुषा रुग्णालय (Nursing Home)  
क. खाजगी परवानाधारक ॲलोपॅथी दवाखाना...  
ड. आयुष दवाखाना.....  
इ. Unqualified provider (quack, informal provider) .....  
फ. Traditional healer .....

विभाग ब. मृत्यूच्या कारणांची शक्यता :-

- |                            |                                  |                  |
|----------------------------|----------------------------------|------------------|
| अ. अतिसार.....             | ब. न्युमोनिया.....               | क. हिक्का.....   |
| ड. गोवर...                 | इ. सेप्टिसेमिया (जंतुसंसर्ग).... | फ. मेंदूज्वर.... |
| ग. जखम.....                | ह. इतर कारण (ठराविक).....        |                  |
| च. न ओळखण्यासारखे कारण.... |                                  |                  |

विभाग क. जवाब नोंदवणारी व्यक्तीच्या मतानुसार (पालक, कुटुंबातील जवळचे नातेवाईक) मृत्यूचे कारण काय आहे.

विभाग ड. कोणत्या स्तरावरून उशिर झालेचे आपणास निदर्शनास आले.

१. घरी झालेला उशिर (उदा. आजाराचे गांभीर्य ओळखता आले नाही.  
उपचार घेतले नाहीत, फारच उशिरा उपचार घेतले, उपचार घेण्यासाठी कुटुंबातील व्यक्तींनी परवानगी दिली नाही.)
२. वाहतूक दरम्यान झालेला उशिर (उदा. वाहतूक व्यवस्था उपलब्ध नव्हती, स्थानिक वाहतूकीसाठीचा खर्च करणे शक्य नव्हते, अवघड डोंगराळ भाग, आरोग्य संस्था जास्त अंतरावर)...
३. आरोग्य संस्था स्तरावर झालेला उशिर (उदा. वैद्यकीय अधिकारी/ परिचारिका उपलब्ध /हजर नव्हते, औषधे व उपकरणे उपलब्ध नव्हती, उपचार उशिरा सुरु करण्यात आले.)

विभाग इ. मृत्यू झाल्याच्या परिस्थितीचे अवलोकन केले असता, तुमच्या दृष्टीने मृत्यू कसा वाचवता आला असता.

- १) .....
- २) .....
- ३) .....

परिचारिकेचे नाव :.....

सही:.....

आरोग्य केंद्राचे नाव :.....

तारिख:.....

### FORM 3a

### VERBAL AUTOPSY FORM: NEONATAL DEATHS

**Instructions**

- NOTE: This form must be completed for all neonatal deaths (0-28 days)
- Write in capital letters
- Circle the appropriate response (or) place a  $\surd$  (tick) wherever applicable

District: .....		Block / Ward : .....		Village / Area : .....		
PHC / UPHC : .....		Sub-Centre: .....				
RCH Number: .....		Date: ..../..../.....				
Name of Head of the Household:						
Full Name of the deceased:						
Name of mother of deceased:						
<b>Section A: Details for Respondent and Deceased</b>						
Details of the Respondent:						
1.	Name of Head of the Household:					
2.	Relationship of the respondent with the deceased:					
	a. Brother/ Sister	<input type="checkbox"/>	b. Mother/ Father	<input type="checkbox"/>	c. Neighbor/ No relation	
				<input type="checkbox"/>	d. Grandfather/Grandmother	
					<input type="checkbox"/>	
					e. Other relative	
					<input type="checkbox"/>	
3.	Did the respondent live with the deceased during the events that led to death?					
a.	Yes	<input type="checkbox"/>	b.	No	<input type="checkbox"/>	
4.	What is the highest standard of education the respondent has completed?					
a.	Literate and literate with no formal education		<input type="checkbox"/>			
b.	Literate, Primary or below	<input type="checkbox"/>	c.	Literate, Middle	<input type="checkbox"/>	
d.	Literate, Matric (Class-X)		<input type="checkbox"/>			
e.	Literate, Class XII		<input type="checkbox"/>	f.	Graduate & Above	
				<input type="checkbox"/>		
5.	Category:	a. SC/ST	<input type="checkbox"/>	b.	OBC	
				<input type="checkbox"/>	c.	General
					<input type="checkbox"/>	
6.	Religion of the head of the household					
a.	Hindu	<input type="checkbox"/>	b.	Muslim	<input type="checkbox"/>	
c.	Christian		<input type="checkbox"/>	d.	Sikh	
				<input type="checkbox"/>		
e.	Buddhist	<input type="checkbox"/>	f.	Jain	<input type="checkbox"/>	
g.	No religion		<input type="checkbox"/>	h.	Others, Specify.....	
				<input type="checkbox"/>		
Details of deceased						
7.	Deceased's Sex : a. Male <input type="checkbox"/> b. Female <input type="checkbox"/>					
8.	Age in Completed days: a. Less than 1 day <input type="checkbox"/> b. 01-28 days <input type="checkbox"/>					
9.	Date of birth : ___/___/___					
10.	Date of death : ___/___/___					
11A	House address of the deceased					
11B	PIN : <input type="text"/>					
12.	Place of death:					
a.	Home	<input type="checkbox"/>	b.	On way to health facility/in transit	<input type="checkbox"/>	
c.	Sub Center		<input type="checkbox"/>			
d.	PHC/CHC/Rural Hospital	<input type="checkbox"/>	e.	District Hospital	<input type="checkbox"/>	
f.	Medical college		<input type="checkbox"/>			
g.	Private Hospital	<input type="checkbox"/>	h.	Other, Specify .....	<input type="checkbox"/>	
i.	DNK		<input type="checkbox"/>			
<b>Section B: Neonatal Death</b>						
13A	Did the child with an accident					
a.	Yes	<input type="checkbox"/>	b.	No	<input type="checkbox"/> (if No, go to Q 14A)	
13B	If yes, what kind of injury or accident?					
a.	Road traffic injury	<input type="checkbox"/>	b.	Falls	<input type="checkbox"/>	
c.	Fall of objects		<input type="checkbox"/>			
d.	Burns	<input type="checkbox"/>	e.	Drowning	<input type="checkbox"/>	
f.	Poisoning		<input type="checkbox"/>			

g.	Bite/sting <input type="checkbox"/>	h.	Natural disaster <input type="checkbox"/>	i.	Homicide/ assault <input type="checkbox"/>	
x.	Other, Specify ..... <input type="checkbox"/>					
13C	Do you think the child died from an injury or accident					
a.	Yes <input type="checkbox"/> (if Yes, go to Section C)	b.	No <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
Details of pregnancy and delivery						
14A	How many months long was the pregnancy?		<input type="checkbox"/> (in completed months)			
14B	Mother's age: <input type="text"/>					
15	Did the mother receive 2 doses of tetanus toxoid during pregnancy?					
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
16A	Were there any complications during the pregnancy, or during <b>labour</b> ?					
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 17)	c.	DNK <input type="checkbox"/> (go to Q 17)	
16B	If yes, what complications occurred? (Check all that apply)					
	a. Mother had fits		<input type="checkbox"/>			
	b. Excessive (more than normal) bleeding before/ during delivery		<input type="checkbox"/>			
	c. Water broke one or more days before contractions started		<input type="checkbox"/>			
	d. Prolonged/ difficult labour (12 hours or more)		<input type="checkbox"/>			
	e. Operative delivery (C-Section)		<input type="checkbox"/>			
	f. Mother had fever		<input type="checkbox"/>			
	g. Baby had cord around neck		<input type="checkbox"/>			
	h. Instrumental delivery/ Assisted		<input type="checkbox"/>			
	i. DNK		<input type="checkbox"/>			
17.	Was the child a single or multiple birth?					
a.	Single <input type="checkbox"/>	b.	Multiple <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
18.	Where was she/ he born?					
a.	Home <input type="checkbox"/>	b.	On way to health facility/ in transit <input type="checkbox"/>	c.	Sub Centre <input type="checkbox"/>	
d.	PHC/CHC/Rural Hospital <input type="checkbox"/>	e.	District Hospital <input type="checkbox"/>	f.	Medical College <input type="checkbox"/>	
g.	Private Hospital <input type="checkbox"/>	h.	Other, Specify..... <input type="checkbox"/>	i.	DNK <input type="checkbox"/>	
19.	Who attended the delivery?					
a.	Untrained traditional birth attendant <input type="checkbox"/>	b.	Trained traditional birth attendant <input type="checkbox"/>			
c.	ANM/Nurse <input type="checkbox"/>	d.	Allopathic Doctor <input type="checkbox"/>	e.	Other, Specify..... <input type="checkbox"/>	
f.	None <input type="checkbox"/>	g.	DNK <input type="checkbox"/>			
20.	Was a disinfected or new knife/ blade used to cut the umbilical cord?					
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
21.	Was it a live/ still birth:		a.	Live Birth <input type="checkbox"/>	b.	Still birth <input type="checkbox"/> (go to Section C)
Details of baby after birth						
22.	Did the baby ever cry, move or breath?					
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
23.	Were there any bruises or signs of injury on child's body after the birth?					
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
24A	Did baby had any visible malformation at birth?					
a.	Yes <input type="checkbox"/>	b.	NO <input type="checkbox"/>	c.	DNK <input type="checkbox"/>	
24B	Compared to other children in your area, what was the child's size at birth?					
a.	Very small <input type="checkbox"/>	b.	Smaller than average <input type="checkbox"/>	c.	Average <input type="checkbox"/>	
d.	Larger than average <input type="checkbox"/>	e.	DNK <input type="checkbox"/>			
24C	What was the birth weight?					
a.	Kgs. <input type="text"/> <input type="text"/> <input type="text"/>	b.	DNK <input type="checkbox"/>			

25A	Did baby stop crying after some time? (Denoting any illness)		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 26A)	c. DNK <input type="checkbox"/> (go to Q 26A)
25B	If yes, how many days after birth did baby stop crying?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
26A	When was baby first breastfed?		
a.	Immediately/ within one hour of birth <input type="checkbox"/>	b. Same day child was born <input type="checkbox"/>	
c.	Second day or later <input type="checkbox"/>	d. Never breastfed <input type="checkbox"/> (go to Q 27A)	
e.	DNK <input type="checkbox"/>		
26B	Was baby able to suckle normally during the first day of life?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 27A)	c. DNK <input type="checkbox"/> (go to Q 27A)
26C	If yes, did baby stop being able to suck in a normal way?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 27A)	c. DNK <input type="checkbox"/> (go to Q 27A)
26D	If yes, how many days after birth did baby stop sucking?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
27A	Was the baby ever given anything to drink other than breast milk?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 28A)	c. DNK <input type="checkbox"/> (go to Q 28A)
27B	If yes, what was given (specify)		
a.	Frequency <input type="text"/> <input type="text"/> per day	b. DNK <input type="checkbox"/>	
Details of sickness at the time of death			
28A	Did baby have fever?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 29A)	c. DNK <input type="checkbox"/> (go to Q 29A)
28B	If yes, how many days did the fever last?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
29A	Did baby have any difficulty in breathing?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 30A)	c. DNK <input type="checkbox"/> (go to Q 30A)
29B	If yes, for how many days did the difficulty with breathing last?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
30A	Did baby have fast breathing?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 31A)	c. DNK <input type="checkbox"/> (go to Q 31A)
30B	If yes, for how many days did the fast breathing last?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
31	Did baby have in-drawing of the chest?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32A	Did baby have a cough?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32B	Did baby have grunting (demonstrate?)		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32C	Did baby's nostrils flare with breathing?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
33A	Did baby have diarrhoea (frequent liquid stools)?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 34A)	c. DNK <input type="checkbox"/> (go to Q 34A)
33B	If yes, for how many days?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
34A	Did baby vomit?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 35A)	c. DNK <input type="checkbox"/> (go to Q 35A)
34B	If yes, for how many days did baby vomit?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	



**FORM 3b:**  
**VERBAL AUTOPSY FORM: POST-NEONATAL DEATHS**

Instructions

- NOTE: This form must be completed for all Post Neonatal Deaths (29 days - 5 years)
- Write in capital letters
- Circle the appropriate response (or) place a (tick) wherever applicable

District: .....												Block: .....												Village: .....																																				
PHC: .....												Sub-Centre: .....																																																
RCH Number: .....												Date: ..../..../.....																																																
Name of Head of the Household:																																																												
Full Name of the deceased:																																																												
Name of mother of deceased:																																																												
Section A: Details for Respondent and Deceased																																																												
Details of the Respondent:																																																												
1.	Name of the Respondent:																																																											
2.	Relationship of the respondent with the deceased:																																																											
a.	Brother/ Sister <input type="checkbox"/>											b. Mother/ Father <input type="checkbox"/>											c. Neighbor/ No relation <input type="checkbox"/>											d. Grandfather/Grandmother <input type="checkbox"/>											e. Other relative <input type="checkbox"/>															
3.	Did the respondent live with the deceased during the events that led to death?																																																											
a.	Yes <input type="checkbox"/>											b. No <input type="checkbox"/>																																																
4.	What is the highest standard of education the respondent has completed?																																																											
a.	Literate and literate with no formal education <input type="checkbox"/>																																																											
b.	Literate, Primary or below <input type="checkbox"/>											c. Literate, Middle <input type="checkbox"/>											d. Literate, Matric (Class-X) <input type="checkbox"/>																																					
e.	Literate, Class XII <input type="checkbox"/>											f. Graduate & Above <input type="checkbox"/>																																																
5.	Category: a. SC/ST <input type="checkbox"/>											b. OBC <input type="checkbox"/>											c. General <input type="checkbox"/>																																					
6.	Religion of the head of the household																																																											
a.	Hindu <input type="checkbox"/>											b. Muslim <input type="checkbox"/>											c. Christian <input type="checkbox"/>											d. Sikh <input type="checkbox"/>																										
e.	Buddhist <input type="checkbox"/>											f. Jain <input type="checkbox"/>											g. No religion <input type="checkbox"/>											h. Others, Specify..... <input type="checkbox"/>																										
Details of deceased																																																												
7.	Deceased's Sex : a. Male <input type="checkbox"/>																																			b. Female <input type="checkbox"/>																								
8.	Age : a. 29 day-1 year <input type="checkbox"/>											b. 01-05 years <input type="checkbox"/>																																																
9.	Date of birth : ___/___/___																																																											
10.	Date of death : ___/___/___																																																											
11A	House address of the deceased																																																											
11B	PIN : <input type="text"/>																																																											
12.	Place of death:																																																											
a.	Home <input type="checkbox"/>											b. On way to health facility/in transit <input type="checkbox"/>											c. Sub Center <input type="checkbox"/>																																					
d.	PHC/CHC/Rural Hospital <input type="checkbox"/>											e. District Hospital <input type="checkbox"/>											f. Medical college <input type="checkbox"/>																																					
g.	Private Hospital <input type="checkbox"/>											h. Other, Specify .....											i. DNK <input type="checkbox"/>																																					
Section B: Post Neonatal Death																																																												
13A	Did the child met with an accident																																																											
a.	Yes <input type="checkbox"/>											b. No <input type="checkbox"/>											(if No, go to Q 14A)																																					
13B	If yes, what kind of injury or accident?																																																											
a.	Road traffic injury <input type="checkbox"/>											b. Falls <input type="checkbox"/>											c. Fall of objects <input type="checkbox"/>																																					
d.	Burns <input type="checkbox"/>											e. Drowning <input type="checkbox"/>											f. Poisoning <input type="checkbox"/>																																					
g.	Bite/sting <input type="checkbox"/>											h. Natural disaster <input type="checkbox"/>											i. Homicide/ assault <input type="checkbox"/>																																					

x.	Other, Specify ..... <input type="checkbox"/>		
13C	Do you think the child died from an injury or accident		
a.	Yes <input type="checkbox"/> (if Yes, go to SectionC) <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
<b>Details of pregnancy and delivery</b>			
14A	When was child first breastfed?		
a.	Immediately/ within one hour of birth <input type="checkbox"/>	b.	Same day child was born
c.	Second day of later <input type="checkbox"/>	c.	Never breastfed
e.	DNK <input type="checkbox"/>		
14B	Did the mother receive any feed other than breast milk during the first 6 months of life?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
14C	During the illness that led to death, was the child breastfeeding (if child less than 18 months)		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
<b>Details of sickness at time of death</b>			
15A.	Did the child had fever?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 16)
		c.	DNK <input type="checkbox"/> (go to Q16)
15B	If yes, how many days did the fever last?		
a.	≤ 1 day <input type="checkbox"/>	b.	<input type="text"/> <input type="text"/> days
15C	Was the fever accompanied by chills/rigors?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
16	Did the child have convulsions or fits?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
17.	Was the child unconscious during the illness that led to death?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
18.	Did the child develop stiffness of the whole body?		
a.	Yes <input type="checkbox"/>	b.	NO <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
19.	Did the child have a stiff neck (demonstrate)?		
a.	Yes <input type="checkbox"/>	b.	NO <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
20A	Did the child have diarrhoea (more frequent or more liquid stools)?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 21A)
		c.	DNK <input type="checkbox"/> (go to Q 21A)
20B	If yes, for how many days?		
a.	≤ 1 day <input type="checkbox"/>	b.	<input type="text"/> <input type="text"/> days
20C	Was there blood in the stools?		
a.	Yes <input type="checkbox"/>	b.	NO <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
21A	Did the child have a cough?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 22A)
		c.	DNK <input type="checkbox"/>
21B	If yes, for how many days?		
a.	≤ 1 day <input type="checkbox"/>	b.	<input type="text"/> <input type="text"/> days
21C	If yes, was there blood?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
22A	Did the child have breathing difficulties?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 22C)
		c.	DNK <input type="checkbox"/> (go to Q 22C)
22B	If yes, for how many days?		
a.	≤ 1 day <input type="checkbox"/>	b.	<input type="text"/> <input type="text"/> days
22C	Did the child have fast breathing?		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>
22D	Did the child have in-drawing of the chest		
a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/>
		c.	DNK <input type="checkbox"/>

22E	Did the child have wheezing (demonstrate sound)?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
23A	During the illness, did child have abdominal pain?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
23B	Did the child have abdominal distention?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
24A	Did the child vomit?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q 25)	c. DNK <input type="checkbox"/> (go to Q 25)
24B	If yes, for how many days?		
a.	≤ 1 day <input type="checkbox"/>	b. <input type="text"/> <input type="text"/> days	
25	Did the eye/skin colour change to yellow		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
26A	Was the rash all over the body?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
26B	Did the child have red eyes?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
26C	Was this measles (use local term)?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
27	During the weeks preceding death, did the child become very thin?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
28	During the weeks preceding death, did the child have any swelling of hand, feet or abdomen?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
29	During the weeks preceding death, did the child suffer from lack of blood or appear pale?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
30	Compared to other children of the same age, was child growing normally?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
31A	Did the Child have multiple illness?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/> (go to Q32A)	c. DNK <input type="checkbox"/> (go to Q32A)
31B	If yes, what were the symptoms associated with these illnesses? (Check all that apply)		
a.	Cough <input type="checkbox"/>	b. Diarrhoea <input type="checkbox"/>	c. Ear discharges <input type="checkbox"/>
d.	Fever <input type="checkbox"/>	e. Rashes <input type="checkbox"/>	f. Other specify..... <input type="checkbox"/>
g.	DNK <input type="checkbox"/>		
32A	Did the child receive BCG injection?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32B	Number of doses received of Penta / DPT?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32C	Did the child received polio drops in the mouth?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
32D	Did the child receive an injection for Measles / Measles Rubella (use local term)?		
a.	Yes-Only one <input type="checkbox"/>	b. Yes-more than one <input type="checkbox"/>	
c.	No- did not receive any <input type="checkbox"/>	d. DNK <input type="checkbox"/>	
33	Did She/he have yellow Palms/soles?		
a.	Yes <input type="checkbox"/>	b. No <input type="checkbox"/>	c. DNK <input type="checkbox"/>
<b>Section C: Written narrative in local language</b>			
34	Please describe the symptoms in order of appearance, doctor consulted or hospitalization, history of similar episodes, enter the results from reports of the investigations if available. (use additional sheets if required)		
<hr/> <hr/> <hr/> <hr/> <hr/>			



# FORM 3c

## SOCIAL AUTOPSY FORM

### Instructions

1. To be filled for all verbal autopsies conducted and attach with the same.
2. Write in capital letters
3. Circle the appropriate response (or) place a ✓ (tick) wherever applicable.
4. Attach a copy of the case records to this form.

RCH Number \_\_\_\_\_

Section A : Background Information		
1	Name of key Informant	
2	Relation of key informant to deceased	
3	Place of death of Child	
4	Telephone / Mobile Number	
5	Total Number of family members of deceased	
6	Number of children <5 years	
7	Caste	
8	Do you have Below Poverty Line (BPL) Card :	Yes / No
9	What are the Key family Assets : <b>(Multiple answers allowed. Tick all that apply)</b>	1) Vehicle (motorized) <input type="checkbox"/> 2) Television <input type="checkbox"/> 3) Own House <input type="checkbox"/> 4) Own Land <input type="checkbox"/> 5) Cattles <input type="checkbox"/> 6) Telephone <input type="checkbox"/>

Section B : Treatment Seeking History			
10.1	Did ASHA/AWW/VHN/ANM advice on hospital treatment?		
a.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	(go to Q 11)
c.	DNK <input type="checkbox"/>	(go to Q 11)	
10.2	If Yes, who advised	i. ASHA ii. ANM iii. Link Worker iv. Other specify.....	
11	During the illness that led to the death, did you seek care outside the home for the infant?	1) Yes <b>(Go to Q 13)</b>	2) No 3) DNK
12.	If "NO", then ASK "What were the reasons for not seeking care?"		
12.1	Did not think that the illness was serious	1) Yes	2) No 3) DNK
12.2	Money not available for treatment	1) Yes	2) No 3) DNK
12.3	Family members were not able to	1) Yes	2) No 3) DNK

	accompany			
12.4	Bad weather	1) Yes	2) No	3) DNK
12.5	Did not know where to take the infant	1) Yes	2) No	3) DNK
12.6	No hope for survival of the infant	1) Yes	2) No	3) DNK
12.7	Transport not available	1) Yes	2) No	3) DNK
12.8	Others (Specify)	<b>(go to section C)</b>		
13.	What was the condition of the infant at the time when it was decided for medical consultation?(Tick if any of the condition mentioned in the options is present)	a. Alert / Active/feeding	<input type="checkbox"/>	
		b. Conscious but Drowsy / Inactive/ Unable to feed	<input type="checkbox"/>	
		c. Unconscious	<input type="checkbox"/>	
14.	From where or from whom did you seek care ?			
14.1	Quack / informal service providers	1) Yes	2) No	3) DNK
14.2	Traditional healer / Religious healer	1) Yes	2) No	3) DNK
14.3	Sub Center	1) Yes	2) No	3) DNK
14.4	PHC	1) Yes	2) No	3) DNK
14.5	CHC	1) Yes	2) No	3) DNK
14.6	Sub-district hospital	1) Yes	2) No	3) DNK
14.7	District (Govt.) Hospital	1) Yes	2) No	3) DNK
14.8	Private allopathic doctor	1) Yes	2) No	3) DNK
14.9	Doctors in alternate system of medicine	1) Yes	2) No	3) DNK
14.10	Reason for seeking care from there : _____ _____ _____			

- 15 Problems faced by the parents in getting treatment in the health facility : Now I will ask you questions related to problems you might have faced in getting the treatment from various health facilities.

	Details	First Health Facility	Referral Institution I	Referral Institution II	Referral Institution III
15.1	Specify in which hospital you took the baby first and then where was the baby taken thereafter ? Govt. _____ 1 Private _____ 2 Note for Profit _____ 3				
15.2	Specify the problem /complication with which				

	Details	First Health Facility	Referral Institution I	Referral Institution II	Referral Institution III
	baby was taken to this facility				
15.3	Total time taken from the onset of the problem to reach this facility (from home to the facility)	..... Hours	..... Hours	..... Hours	..... Hours
15.4	Type of treatment received in the institution / hospital				
	NIL				
	First Aid				
	Others (Specify) ..				
15.5	Specify the reasons for referring to another institution				
	Lack of Specialists				
	Lack of Equipments				
	Others (Specify)				
15.6	Mode of transport from one institution to other				
15.7	Distance from one facility to other (in kms)	..... Kms	..... Kms	..... Kms	..... Kms
15.8	If baby was taken to any institution other than the one referred, state the reasons				
15.9	If baby was taken to any institution other than the one referred, who advised (eg; caregivers, relatives etc.)				
15.10	Was the child attended immediately Yes _____ 1 No _____ 2				
15.11	If yes, time taken to initiate treatment in the institution on reaching the hospital	..... Mins.	..... Mins.	..... Mins.	..... Mins.
15.12	Reasons for the delay in initiating treatment (Use your judgment in arriving the reasons)				
a.	Doctor not available				
b.	Paramedical workers not available				
c.	Too much patient rush				
d.	Informal payment				

	Details	First Health Facility	Referral Institution I	Referral Institution II	Referral Institution III
e.	Mobilizing specialists				
f.	Could not afford to pay for the services				
g.	Investigations could not be done				
h.	Other problem (specify)				

16.1 If the baby was shown as having been discharged against medical advice / absconded, record the reasons for the same.

.....

.....

.....

.....

.....

.....

16.2 Was the discharge due to the dissatisfaction of the treatment given in the hospital ?

Yes  No  DNK

16.3 What was the state of child at the time of LAMA / Discharge. ....

.....

.....

.....

**Section C : Brief Social History of the family**

17.1	Any history of alcoholism in family	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	DNK	<input type="checkbox"/>
17.2	Any history of smoking in family	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	DNK	<input type="checkbox"/>
17.3	Any history of domestic violence in family	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	DNK	<input type="checkbox"/>
18	Awareness of mother & family members about treatment Seeking						
18.1	Do you know the danger signs when a newborn or infant should be taken to health facility ?						
a.	Yes	<input type="checkbox"/>	b.	No	<input type="checkbox"/>	<b>(go to Q 18.3)</b>	
18.2	If yes, what will be the conditions <b>(don't read the options)</b>						
a.	Pre-term	<input type="checkbox"/>	b.	LBW	<input type="checkbox"/>	c.	No cry at birth <input type="checkbox"/>
d.	Fits	<input type="checkbox"/>	e.	Difficult breathing	<input type="checkbox"/>	f.	Drowsiness / inactivity / unconsciousness <input type="checkbox"/>
g.	Jaundice	<input type="checkbox"/>	h.	Diarrhoea	<input type="checkbox"/>	i.	Refusal to feed <input type="checkbox"/>
j.	Fast Breathing	<input type="checkbox"/>	k.	High grade fever	<input type="checkbox"/>		
18.3	Do you know about any hospital where newborns / infants / children can be admitted and treated ?						

a.	Yes <input type="checkbox"/>	b.	No <input type="checkbox"/> (go to Q 19)
18.4	If yes, then please name these facilities.		

### Section D : Expenditure History

19. Can you tell us regarding the total amount that you had to spend on your child ?

- a. Total amount = Rs.....
- b. Treatment (medicines, consultation, home treatment etc.) .....
- c. Transport ..... 3. Others .....

<p>20 How did you (the family) arrange this money ?</p> <p><b>Multiple answers allowed. Tick all that apply</b></p>	1. Available / Savings	<input type="checkbox"/>
	2. Borrowed	<input type="checkbox"/>
	3. Sold assets	<input type="checkbox"/>
	4. Community fund	<input type="checkbox"/>
	5. Govt. Scheme	<input type="checkbox"/>
	6. Other	<input type="checkbox"/>
	7. Don't know	<input type="checkbox"/>

# FORM 4a:

## FACILITY BASED NEONATAL DEATH REVIEW FORM

### For Office Use Only:

<b>FBCDR NO:</b>	<b>Year</b>
------------------	-------------

Name & Address of the facility where death occurred:.....  
(Including State, District, Block):

.....

### Instructions

1. *NOTE: This form must be completed for all new born deaths (upto 28 days) occurring in the hospital.*
2. *Complete the form in duplicate within 48 hours of the newborn death. The original remains at the institution where the death occurred and one copy is sent to the DNO within one month.*
3. *Write in capital letters.*
4. *Circle the appropriate response (or) place a ✓(tick) wherever applicable.*
5. *Attach a copy of the case records to this form.*

Section A: Details of Deceased	
1.	Inpatient Number/ID
2.	Age <input type="text"/> <input type="text"/> Days
3.	Sex Male <input type="checkbox"/> Female <input type="checkbox"/>
4.	Category SC/ST <input type="checkbox"/> OBC <input type="checkbox"/> General <input type="checkbox"/>
5.	Name of the newborn
6.	Name of the Mother
7.	Address (including Block/Tehsil, District/Taluq/Division, State)
8.	Date of birth <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
9.	Place of birth Health facility <input type="checkbox"/> Home <input type="checkbox"/> Transit <input type="checkbox"/>
10.	Birth weight (if available on record) <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> Kgs.
11.	Date of admission <input type="text"/> / <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
12.	Time of admission -----:-----AM/PM
13.	Date of death <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
14.	Time of death -----AM/PM
15.	Death certified by : (Name & designation of the doctor)

16.	Type of facility where death took place		
a.	RH / UCHC		<input type="checkbox"/>
b.	Sub district hospital		<input type="checkbox"/>
c.	District Hospital / WH / GH / Corporational Hospital		<input type="checkbox"/>
d.	Medical College/tertiary hospital		<input type="checkbox"/>
17.	Main complaints at the time of admission		If Yes, Duration of symptoms
a.	Inability to feed	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
b.	Fever	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
c.	Loose Stools	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
d.	Vomiting	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
e.	Fast breathing	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
f.	Convulsions	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
g.	Appearance of Skin rashes	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
h.	Injury (like fractures, wounds)	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
i.	Lethargy	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
j.	Stiffness of neck	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
k.	Bluish discolouration of lips,nails	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
l.	Skin pustules of yellowish colour	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
m.	Any other symptom (if yes specify _____)	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
18.	Weight of child on admission: <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> kgs.		
19.	Immunization history of child : BCG <input type="checkbox"/> OPV Birth Dose <input type="checkbox"/> Hepatitis B birth dose <input type="checkbox"/>		
<b>Section B : Condition on Admission</b>			
20.	Breathing status of child at the time of admission		
a.	Normal breathing		<input type="checkbox"/>
b.	Severe chest in drawing		<input type="checkbox"/>
c.	Apnoeic episodes		<input type="checkbox"/>
d.	Central cyanosis		<input type="checkbox"/>
e.	Gaspings		<input type="checkbox"/>
f.	Not breathing		<input type="checkbox"/>
21.	Consciousness level of child at the time of admission		
a.	Alert, responds to normal stimuli		<input type="checkbox"/>
b.	Semi-conscious, responds to painful stimuli		<input type="checkbox"/>
c.	High pitched cry or persistent crying		<input type="checkbox"/>
d.	Lethargic		<input type="checkbox"/>

e.	Inability to suck	<input type="checkbox"/>
f.	Unconscious	<input type="checkbox"/>
22.	Circulation status of child at the time of admission	
a.	Capillary refill time <3 seconds <input type="checkbox"/> >3 seconds <input type="checkbox"/>	
b.	Extremities : warm to touch and colder than the abdomen <input type="checkbox"/>	
c.	Pulse : <input type="checkbox"/> Not palpable Weak pulse <input type="checkbox"/> fast pulse <input type="checkbox"/>	
23.	Did child have any other symptoms	
a.	Dehydration <input type="checkbox"/>	b. Bleeding <input type="checkbox"/>
c.	Icterus <input type="checkbox"/>	d. Petechial rashes or bruising <input type="checkbox"/>
e.	Trauma/other surgical condition <input type="checkbox"/>	f. Congenital malformation <input type="checkbox"/>
g.	Bulging fontanelle <input type="checkbox"/>	h. Hypothermia <input type="checkbox"/>
i.	Hyperthermia <input type="checkbox"/>	j. Sclerema <input type="checkbox"/>
24.	Duration of stay in the health facility <input type="checkbox"/> <48 hours <input type="checkbox"/> 48 hours – 7 days <input type="checkbox"/> 8-14 days <input type="checkbox"/> 14-21 days <input type="checkbox"/> More than 21 days	
25.	Investigations done	Note down the results
a.	Blood glucose	Y/N
b.	CBC	Y/N
c.	Sepsis screen	Y/N
d.	CRP	Y/N
e.	Renal function tests	Y/N
f.	Liver function tests	Y/N
g.	CSF	Y/N
h.	S.Bilirubin	Y/N
i.	Others (Please specify): _____	Y/N
<b>Section C: Referral Details</b>		
26.	Was the child referred from another Centre?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK <b>(if no or DNK, go to Section D)</b>
27.	If yes (to any of the questions above), type of facility from which last referred?	a. 24 x 7 PHC <input type="checkbox"/> b. SDH/Rural Hospital/CHC <input type="checkbox"/> c. District Hospital <input type="checkbox"/> d. Private Hospital <input type="checkbox"/> e. Private clinic <input type="checkbox"/> f. Others (specify.....) <input type="checkbox"/>
28.	Have multiple referrals been made?(include both private and public health facilities)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK <b>(if no or DNK, go to Section D)</b>
29.	If yes, how many?	<input type="checkbox"/> One <input type="checkbox"/> Two <input type="checkbox"/> Three <input type="checkbox"/> Four <input type="checkbox"/> More Than 4

**Section D: Intrapartum and Postpartum Details (Only for inborn babies)**

*Instruction : To be filled for inborn babies only otherwise go to Section - E*

30.	Was the onset of labour	<input type="checkbox"/> Spontaneous <input type="checkbox"/> Induced <input type="checkbox"/> DNK
31.	What was the Gestational age at the time of admission	<input type="checkbox"/> Term (>37-<42 weeks) <input type="checkbox"/> Preterm( <input type="checkbox"/> < 28 weeks; <input type="checkbox"/> 28-<32 weeks; <input type="checkbox"/> 32-<37 weeks) <input type="checkbox"/> Post term (>42weeks)
32.	What was the Mode of Delivery	<input type="checkbox"/> Spontaneous Vaginal (with/without episiotomy) <input type="checkbox"/> Vacuum/forceps <input type="checkbox"/> Caesarean section
33.	Were there any complications during labour?	<input type="checkbox"/> PROM <input type="checkbox"/> Sepsis <input type="checkbox"/> Eclampsia <input type="checkbox"/> Obstructed labour/Rupture Uterus <input type="checkbox"/> Others Specify.....
34.	Was partograph used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK
35.	Birth Weight	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> kgs
36.	Was the resuscitation at birth done	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK (if No or DNK, go to Q37)
37.	If Yes, Who gave resuscitation ?	<input type="checkbox"/> Obstetrician <input type="checkbox"/> Paediatrician <input type="checkbox"/> MBBS doctor/other specialist <input type="checkbox"/> Staff Nurse <input type="checkbox"/> Others (specify)
38.	APGAR Score (if recorded at time of birth)	

**Section E: Treatment Details**

39.	Details of treatment given in the hospital	
a.	Resuscitation	<input type="checkbox"/> Yes <input type="checkbox"/> No
b.	Temperature Control (in case of newborns only)	<input type="checkbox"/> Yes <input type="checkbox"/> No
c.	Phototherapy	<input type="checkbox"/> Yes <input type="checkbox"/> No
d.	Oxygen use	<input type="checkbox"/> Yes <input type="checkbox"/> No
e.	IV Fluids Provide details:	<input type="checkbox"/> Yes <input type="checkbox"/> No
f.	Antibiotics	<input type="checkbox"/> Yes <input type="checkbox"/> No
g.	anticonvulsants	<input type="checkbox"/> Yes <input type="checkbox"/> No
h.	Bronchodilators	<input type="checkbox"/> Yes <input type="checkbox"/> No
i.	Blood Components Provide details:	<input type="checkbox"/> Yes <input type="checkbox"/> No
j.	Steroids	<input type="checkbox"/> Yes <input type="checkbox"/> No
k.	Antiretroviral drugs	<input type="checkbox"/> Yes <input type="checkbox"/> No
l.	Vasopressors (Dopamine, dobutamine, vasopressors)	<input type="checkbox"/> Yes <input type="checkbox"/> No
m.	Exchange Blood transfusion	<input type="checkbox"/> Yes <input type="checkbox"/> No
n.	Respiratory support (CPAP/Ventilator)	<input type="checkbox"/> Yes <input type="checkbox"/> No

o.	Surgical interventions <b>Provide details:</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
p.	Other interventions <b>Provide details:</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No

<b>Section F: Diagnosis</b>	
40.	Please tick against the appropriate option:
a.	Death was within 24 hours of birth <span style="float: right;"><input type="checkbox"/></span>
b.	Death was in first week (day 2-7 days ) <span style="float: right;"><input type="checkbox"/></span>
c.	Death was in the late neonatal period (8-28 days) <span style="float: right;"><input type="checkbox"/></span>
41.	Provisional diagnosis at time of admission
42.	Provisional diagnosis at time of death  <b>(immediately at the time of death, by the medical officer on duty)</b>
43.	Probable direct cause of death
44.	Indirect cause of death
45.	Final diagnosis (Within one week)  (final Diagnosis by the treating doctor)

**Signature of the certifying doctor**

Name: .....

Designation: .....

Stamp & Date: .....

**Signature of the treating doctor**

Name: .....

Designation: .....

Stamp & Date: .....

**Verified by facility nodal officer/administrative in charge of the hospital:**

Signature: .....

Designation: .....

Name: .....

Stamp and Date: .....

**FORM 4 b:****FACILITY BASED****POST – NEONATAL DEATH REVIEW FORM****For Office Use Only:**

FBCDR NO:	year
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Name & Address of the facility where death occurred:.....

(Including State, District, Block):

.....

**Instructions**

- NOTE: This form must be completed for all post – neonatal deaths (29 days to 5 years) occurring in the hospital.
- Complete the form in duplicate within 48 hours of the child death. The original remains at the institution where the death occurred and one copy is sent to the DNO within one month.
- Write in capital letters.
- Circle the appropriate response (or) place a (tick) wherever applicable.
- Attach a copy of the case records to this form.

Section A: Details of Deceased	
1.	Inpatient Number/ID
2.	Age Years <input type="checkbox"/> (in Completed Months) <input type="checkbox"/>
3.	Sex Male <input type="checkbox"/> Female <input type="checkbox"/>
4.	Category SC/ST <input type="checkbox"/> OBC <input type="checkbox"/> General <input type="checkbox"/>
5.	Name of the child
6.	Name of the mother
7.	Address (including Block/Tehsil, District/Taluq/Division, State)
8.	Date of birth <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9.	Place of birth Health facility <input type="checkbox"/> Home <input type="checkbox"/> Transit <input type="checkbox"/>
10.	Birth weight (if available on record) <input type="checkbox"/> <input type="checkbox"/> . <input type="checkbox"/> <input type="checkbox"/> Kgs.
11.	Date of admission <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12.	Time of admission -----AM/PM
13.	Date of death <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
14.	Time of death -----AM/PM
15.	Death certified by : (Name & Designation of the Doctor)
16.	At any time child was admitted to NRC <input type="checkbox"/> Yes <input type="checkbox"/> No

17.	Growth Curve (fill for child less than 3 years; check MCP card):		
a.	Green zone <input type="checkbox"/>	b. Yellow Zone <input type="checkbox"/>	c. Orange Zone <input type="checkbox"/>
18.	Type of facility where death took place		
a.	RH / UCHC		<input type="checkbox"/>
b.	Sub District hospital		<input type="checkbox"/>
c.	District Hospital / WH / GH / Corporational Hospital		<input type="checkbox"/>
d.	Medical college/tertiary hospital		<input type="checkbox"/>
19.	Main complaints at the time of admission		If Yes, Duration of symptoms
a.	Inability to feed	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
b.	Fever	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
c.	Loose Stools	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
d.	Vomiting	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
e.	Cough or difficult breathing	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
f.	Convulsions	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
g.	Lethargic or unconscious	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
h.	Appearance of Skin rashes	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
i.	Bleeding	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
j.	Injury (like fractures, wounds)	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
k.	Corneal ulcer	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
l.	Stunted growth	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
m.	Severe muscle wasting	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
n.	Oedema of both hand & feet	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
o.	Unknown bites or strings Any other symptom	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
p.	Any other symptom (if yes specify)	Y/N	<input type="checkbox"/> <input type="checkbox"/> days
20.	Weight of child on admission: <input type="text"/> <input type="text"/> kgs.		
21.	Height at the time of admission : <input type="text"/> <input type="text"/> <input type="text"/> Cms		
22.	<b>Immunization history of child : (if yes then √ )</b>		
	● At Birth	1) OPV0 <input type="checkbox"/>	2) BCG <input type="checkbox"/> 3) HEP B <input type="checkbox"/>
	● 6 Weeks	1) OPV1 <input type="checkbox"/> 4) Pentavalent 1 <input type="checkbox"/>	2) RVV1 <input type="checkbox"/> 5) PCV1 <input type="checkbox"/> 3) FIPV1 <input type="checkbox"/>
	● 10 Weeks	1) OPV2 <input type="checkbox"/>	2) RVV2 <input type="checkbox"/> 3) Pentavalent 2 <input type="checkbox"/>
	● 14 Weeks	1) OPV3 <input type="checkbox"/> 4) Pentavalent 3 <input type="checkbox"/>	2) RVV3 <input type="checkbox"/> 5) PCV2 <input type="checkbox"/> 3) FIPV2 <input type="checkbox"/>
	● 9 to 12 Months	1) MR 1 <input type="checkbox"/> 4) JE 1 <input type="checkbox"/>	2) FIPV3 <input type="checkbox"/> 3) PCV Booster <input type="checkbox"/>
	● 16 to 24 Months	1) OPV Booster <input type="checkbox"/> 4) JE <input type="checkbox"/>	2) MR <input type="checkbox"/> 3) DPT Booster 1 <input type="checkbox"/>
	● 5 to 6 Years	1) DPT Booster 2 <input type="checkbox"/>	

Section B : Condition on Admission		
23.	Breathing status of child at the time of admission	
a.	Normal breathing	<input type="checkbox"/>
b.	Severe chest in drawing	<input type="checkbox"/>
c.	Central cyanosis	<input type="checkbox"/>
d.	Gasping	<input type="checkbox"/>
e.	Not breathing	<input type="checkbox"/>
24.	Consciousness level of child at the time of admission	
a.	Stable	<input type="checkbox"/>
b.	Convulsions	<input type="checkbox"/>
c.	Semi-conscious, responds to verbal commands	<input type="checkbox"/>
d.	Semi-conscious, responds to painful stimuli	<input type="checkbox"/>
e.	Unconscious	<input type="checkbox"/>
25.	Circulation status of child at the time of admission	
a.	Capillary refill time <3 seconds <input type="checkbox"/> >3 seconds <input type="checkbox"/>	
b.	Extremities : <input type="checkbox"/> warm to touch and colder than the abdomen	
c.	Pulse : Not palpable <input type="checkbox"/> Weak pulse <input type="checkbox"/> fast pulse <input type="checkbox"/>	
26.	Did child have any other symptoms	
a.	Dehydration <input type="checkbox"/>	b. Bleeding <input type="checkbox"/>
c.	Icterus <input type="checkbox"/>	d. Petechial rashes or bruising <input type="checkbox"/>
e.	Trauma/other surgical condition <input type="checkbox"/>	f. Burns <input type="checkbox"/>
g.	Oedema of both feet <input type="checkbox"/>	h. Severe wasting <input type="checkbox"/>
i.	Ear discharge <input type="checkbox"/>	j. Severe cyanosis <input type="checkbox"/>
27.	Duration of stay in the health facility	
	<input type="checkbox"/> <48 hours	<input type="checkbox"/> 48 hours – 7 days <input type="checkbox"/> 8-14 days
	<input type="checkbox"/> 14-21 days	<input type="checkbox"/> More than 21 days
28.	Investigations done	Note down the results
a.	Blood glucose	Y/N
b.	CBC	Y/N
c.	Urine test	Y/N
d.	Renal function tests	Y/N
e.	CSF	Y/N
f.	Widal test	Y/N
g.	Serum bilirubin	Y/N
h.	Blood culture	Y/N
i.	Liver function Test	Y/N
j.	Urine culture	Y/N
k.	Others (specify.....)	Y/N

Section C: Referral Details		
29.	Was the child referred from another Centre?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK <b>(if no or DNK, go to Section D)</b>
30.	If yes (to any of the questions above), type of facility from which last referred?	a. 24 x 7 PHC <input type="checkbox"/> b. SDH/Rural Hospital/CHC <input type="checkbox"/> c. District Hospital <input type="checkbox"/> d. Private Hospital <input type="checkbox"/> e. Private clinic <input type="checkbox"/> f. Others (specify.....) <input type="checkbox"/>
31.	Have multiple referrals been made? (include both private and public health facilities)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DNK <b>(if no or DNK, go to Section D)</b>
32.	If yes, how many?	One <input type="checkbox"/> Two <input type="checkbox"/> Three <input type="checkbox"/> Four <input type="checkbox"/> More Than 4 <input type="checkbox"/>
Section D : Treatment Details		
33.	Details of treatment given in the hospital	
a.	Resuscitation	<input type="checkbox"/> Yes <input type="checkbox"/> No
b.	Oxygen use	<input type="checkbox"/> Yes <input type="checkbox"/> No
c.	IV Fluids Provide details :	<input type="checkbox"/> Yes <input type="checkbox"/> No
d.	Antibiotics	<input type="checkbox"/> Yes <input type="checkbox"/> No
e.	Anticonvulsants	<input type="checkbox"/> Yes <input type="checkbox"/> No
f.	Bronchodilators	<input type="checkbox"/> Yes <input type="checkbox"/> No
g.	Blood components Provide details:	<input type="checkbox"/> Yes <input type="checkbox"/> No
h.	Steroids	<input type="checkbox"/> Yes <input type="checkbox"/> No
i.	Antitubercular drugs	<input type="checkbox"/> Yes <input type="checkbox"/> No
j.	Antiretroviral drugs	<input type="checkbox"/> Yes <input type="checkbox"/> No
k.	Vasopressors (Dopamine, dobutamine, adrenaline)	<input type="checkbox"/> Yes <input type="checkbox"/> No
l.	Respiratory support (CPAP/Ventilator)	<input type="checkbox"/> Yes <input type="checkbox"/> No
m.	Surgical interventions <b>Provide details:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No
n.	Other interventions <b>Provide details :</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>Section E: Diagnosis</b>	
34.	Provisional diagnosis at time of admission
35.	Provisional diagnosis at time of death  <b>(Immediately at the time of death, by the medical officer on duty)</b>
36.	Probable direct cause of death
37.	Indirect cause of death
38.	Final diagnosis (within one week)  <b>(Final Diagnosis by the treating doctor)</b>

**Signature of the certifying doctor**

Name: .....  
 Designation: .....  
 Stamp & Date: .....

**Signature of the treating doctor**

Name: .....  
 Designation: .....  
 Stamp & Date: .....

**Verified by Facility Nodal Officer/administrative in charge of the Hospital:**

Signature: .....  
 Name: .....

Designation: .....  
 Stamp and Date: .....

**FORM 5a:**  
**BLOCK/UPHC LEVEL LINE LIST**

TO be compiled at the block/UPHC level from the deaths reported by ANMs;

Name of District/Corporation:

Name of Block/UPHC:

Month:

Year:

	Indicators	Case1	Case2	Case3	Case4	Case5	Total
1.	RCH ID						
2.	Name						
3.	Mother's name						
4.	sex	Male	1				
		Female	2				
5.	Category	SC/ST	1				
		OBC	2				
		General	3				
6.	Age	<28 days	1				
		29 days	2				
		1-5 years	3				
7.	village/city						
8.	PHC area/UPHC						
9.	Sub-centre area						
10.	Place of birth	Home	1				
		Health facility :					
		Public	2				
		Health facility:					
		Private	3				
	In transit	4					
11.	Birth weight (kg)						
12.	Last weight recorded in MCP card (for children < 3 years)						
13.	Immunization status : complete as per age	Yes	1				
		No	2				
14.	Date of death	DD/MM/YYYY					
15.	Place of death (Public Health facility/Private Hospital/Home/in transit)	Home	1				
		Health facility :					
		Private	2				
		Health facility:					
		Public	3				
	In transit	4					
16.	Probable cause of death						
17.	Level of delay (I/II/III/multiple levels/cannot be ascertained)						
18.	Name of the ANM who conducted first brief investigation						
19.	Date on which first brief Investigation carried out DD/MM/YYYY						
20.	Case selected for Verbal Autopsy	Yes	1				
		No	2				
21.	Assigned Cause of death/final diagnosis						



