*Child's Identification Number* __ __ / __ / __ __ __ / __ __ __ __ __ __ / __ __
                                           S  T / D  S / B  L  K / V  I  L  L  A  G  E / H  H

# INFANT AND CHILD DEATH AUDIT
## VERBAL AUTOPSY QUESTIONNAIRE

*Instructions to interviewers: Use this format for all Child deaths.*

## Section 1: Available background information (supervisor to complete before the interview)

| | | |
|---|---|---|
| 1.1 | Name of deceased child | |
| 1.2 | Sex of the child | 1. Male<br>2. Female    ☐ |
| 1.3 | When was the Deceased born ? | __ __ / __ __ / __ __ __ __<br>( D   D / M   M / Y   Y   Y   Y ) |
| 1.4 | Address of child's usual residence | _____ / _____ / _____ / _____<br>( village  /  block  /  district  /  state ) |
| 1.5 | Where was child during his / her fatal illness? | 1. own home<br>2. Relatives home<br>3. formal health facility<br>4. Other *(specify _____ )*<br>8. Don't know    ☐ |
| 1.6 | What is the address of this place (where child stayed during his/her fatal illness)?<br><br>*This is the basis of the child's identification #* | _____ / _____ / _____ / _____<br>( village  /  block  /  district  /  state ) |
| 1.7 | Name & Relationship of head of household of this place (where child stayed during his/ her fatal illness) | 1. Father<br>2. Grand Father<br>3. Relative's House<br>4. Other *(specify _____ )*<br>8. Don't know    ☐ |
| 1.8 | Date of child's death | __ __ / __ __ / __ __ __ __<br>( D   D / M   M / Y   Y   Y   Y ) |
| 1.9 | Age at Childs Death | |
| 1.10 | Date of death notification | __ __ / __ __ / __ __ __ __<br>( D   D / M   M / Y   Y   Y   Y ) |
| 1.11 | Key informant's name | 1. ANM<br>2. AWW<br>3. ASHA<br>4. MO PHC<br>5. Other *(specify _____ )*<br>8. Don't know    ☐ |

## Section 2: Information about the interviewer

| | | | | |
|---|---|---|---|---|
| 2.1 | Interviewer's name | | 2.2 | Interviewer's designation | |
| 2.3 | Date of first interview | __ __ / __ __ / __ __ __ __<br>( D   D / M   M / Y   Y   Y   Y ) | 2.4 | Date of last interview | __ __ / __ __ / __ __ __ __<br>( D   D / M   M / Y   Y   Y   Y ) |

## Section 3: Background information from respondents

| Respondents | Relationship to the deceased child (mother, father, uncle, aunty, grand mother/ father, specify other) | Were you with the child during the illness? | Were you with child when she/ he died? |
|---|---|---|---|
| 3.1 | | | |

| 3.2 | | | |
|---|---|---|---|
| 3.3 | | | |
| 3.4 | Age of child at the time of death? | 1. 0 - 2 months<br>2. > 2 months - 5 years<br>8. don't know | ☐<br><br>***If 1 Skip Section 6***<br>***If 2 or 8 Skip Section 5*** |
| 3.5 | Where did the child die? | 1. Home<br>2. Medical College Hospital<br>3. District / Sub Dist. Hospital<br>4. PHC, RH<br>5. In formal Place<br>6. Pvt. Hospital/ Clinic<br>7. Other (specify)…………….<br>8. Don't know | ☐ |

## Section 4: Information about the family  *Read:* Now I would like to ask some questions about Childs family.

| 4.1 | How many years of school did child's mother complete? | | ___ ___ Years<br>(<1=00; DK=88) |
|---|---|---|---|
| 4.2 | How many years of school did child's father complete? | | ___ ___ Years<br>(<1=00; DK=88) |
| 4.3 | Is the marriage between the parents consaignous | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 4.4 | Occupations of Mother ?<br>(Read out) | 1. House wife<br>2. employed<br>3. laborer<br>4. unemployed<br>5. working in own land<br>6. others (specify)………………<br>8. Don't know | ☐ |
| 4.5 | Occupations of Father?<br>(Read out) | 1. employed<br>2. laborer<br>3. unemployed<br>4. working in own land<br>5. others (specify)………………<br>8. Don't know | ☐ |
| 4.6 | What is the family's religion? | 1. Hindu<br>2. Muslim<br>3. Christian<br>4. Other<br>8. Don't know | ☐ |
| 4.7 | What is the family's caste? | 1. SC<br>2. ST<br>3. Other<br>8. Don't know | ☐ |
| 4.8 | Does the family have its own toilet? | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 4.9 | Does the house has electricity? | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 4.10 | Does the family have a BPL card? | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 4.11 | Do you know about the benefits of the BPL card? | 1. Yes<br>2. No<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Section 5*** |

| 4.11.1 | Please tell me the benefits of the card.<br><br>*Prompt:* Is there anything else?<br><br>[Multiple answers allowed.<br>Check all choices that the respondent mentions] | 1. Subsidized ration .................<br>2. Kerosene oil.......................<br>3. Housing ........................<br>4. Health care .........................<br>5. Referral transport.................<br>6. Other ................................. | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐ |

## Section 5: For children 0 - 2 months

*Read out : I would like to ask you some questions concerning the mother and symptoms that the deceased had/showed at birth and shortly after. Some of these questions may not appear to be directly related to the baby's death. Please bear with me and answer all the questions. They will help us to get a clear picture of all possible symptoms that the deceased had.*

### *Pregnancy History :*

| 5.1 | What was the age of mother at the time the baby died? | | ___ ___ years<br>(DK=88) |
|---|---|---|---|
| 5.2 | How is the mothers health now? | 1. Healthy<br>2. ill<br>3. Not alive<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Q. 5.3*** |
| 5.2.1 | If ill or not alive write in details about the mothers condition? | | |
| 5.3 | Did mother take any medications during pregnancy? (excluding IFA Tablets & TT inj.) | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 5.3.1 | If yes, specify | ( Specify) | |
| 5.3.2 | Dose mother have habit of smoking, drinking alcohal or tobacco chewing? | 1. Smoking<br>2. Alcohal<br>3. Tobacco chewing<br>4. others(specify)……………… | Yes   No   DK<br>1. ☐  1. ☐  1. ☐<br>2. ☐  2. ☐  2. ☐<br>3. ☐  3. ☐  3. ☐<br>4.(_____) |
| 5.4 | How many births, including stillbirths, did the mother have before this baby? | | ___ ___<br>(DK=88) |
| 5.4.1 | How many live births mother had before this baby | | ___ ___<br>(DK=88) |
| 5.4.2 | Did any babies die before the current baby | 1. Yes<br>2. No<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Q. 5.4.3*** |
| 5.4.2 a | If yes, specify the reasons for deaths | ( Specify) | |
| 5.4.3 | What is birth order of the baby | | ___ ___<br>(DK=88) |
| 5.4.3 a | If 2 or More spacing between the previous pregnancy and the pregnancy with current baby | | ___ ___ months<br>(DK=88) |
| 5.5 | How many months did the current pregnancy last? | | ___ ___ weeks |
| 5.6 | Was she ever told by a doctor or nurse that she had any of the following illnesses during pregnancy ?<br><br>[Read the problems list slowly and check "Yes," "No" or "Don't know" for each.]<br>Ask for records for Hb gm % (R-15 Register) | 1.Anemia ......................................<br>2.Heart disease.............................<br>3.Diabetes ..................................<br>4.Cancer .....................................<br>5.Hypertension<br>  (High blood pressers)...............<br>6.Tuberculosis ..............................<br>7.Epilepsy/ convulsion....................<br>8.Other......................................... | Yes   No   DK<br>1. ☐  1. ☐  1. ☐<br>2. ☐  2. ☐  2. ☐<br>3. ☐  3. ☐  3. ☐<br>4. ☐  4. ☐  4. ☐<br>5. ☐  5. ☐  5. ☐<br>6. ☐  6. ☐  6. ☐<br>7. ☐  7. ☐  7. ☐<br>8. ☐  8. ☐  8. ☐ |

| | | (specify other)......................... | (_____) |
|---|---|---|---|
| 5.7 | During the last 3 months of pregnancy, did the mother suffer from any of the following illnesses?<br><br>*[Read the problems list slowly and check "Yes," "No" or "Don't know" for each.]* | 1. Vaginal bleeding...............<br>2. Smelly vaginal discharge ....<br>3. Puffy face ........................<br>4. Headache.........................<br>5. Blurred vision....................<br>6. convulsion........................<br>7. Febrile illness/ fever..........<br>8. Severe abdominal pain that was not labor pain..........<br>9. Pallor and shortness of breath (both present).......<br>10. Other (Specify) | <u>Yes</u>    <u>No</u>    <u>DK</u><br>1. □   1. □   1. □<br>2. □   2. □   2. □<br>3. □   3. □   3. □<br>4. □   4. □   4. □<br>5. □   5. □   5. □<br>6. □   6. □   6. □<br>7. □   7. □   7. □<br>8. □   8. □   8. □<br>9. □   9. □   9. □<br>10. □  10. □  10. □<br>(_____) |
| 5.8 | Was the child a single or multiple birth? | 1. Singleton<br>2. Twin<br>3. triplet or more<br>8. Don't know | ☐<br>***If 1, go to Q. 5.9*** |
| 5.8.1 | If multiple births, what was the birth order of the child that died? | 1. First<br>2. Second<br>3. third or higher<br>8. Don't know | ☐ |
| 5.9 | Did mother seek any antenatal care for the pregnancy from an ANM, nurse or qualified doctor? | 1. Yes<br>2. No<br>8. Don't know | ☐<br>***If 2, 8 go to Q. 5.9.2*** |
| 5.9.1 | *If yes, ask:*<br>How many times did she receive antenatal care from an ANM, nurse or qualified doctor? | 1. < 3 times<br>2. 3- 5 times<br>3. > 5 times | ___ ___<br>*(DK = 88)* |
| 5.9.2 | what was the weight gain during pregenacy *(Refer R-15 Register or Other records)* | 1. < 9 kgs<br>2. 9-11 kgs<br>3. > 11 kgs<br>8. Don't Know | ☐ |
| 5.10 | Whether mother experienced any fetal movements ?<br>(>= 20 weeks of pregnancy) | 1. Yes<br>2. No<br>8. Don't know | ☐<br>***If 2, 8 go to Q. 5.11*** |
| 5.10.1 | If yes ask: Since when did she experienced fetal movements? (Please specify in weeks) | | ___ ___ weeks<br>*(DK = 88)* |
| 5.11 | How many IFA tablets mother Consumed? | 1. Less than100 tablets<br>2. 100 tablets<br>8. Don't know | ☐ |
| 5.12 | Did mother receive TT injection during pregnancy | 1. Yes<br>2. No<br>8. Don't know | ☐ |
| 5.12.1 | If yes, specify | | |
| **Delivery History :** | | | |
| 5.13 | How long did labor last? | 1. Less than 12hours<br>2. More than 12hours<br>8. Don't know | ☐ |
| 5.14 | Did mother have fever during labor or immediately after delivery? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

| 5.15 | Was her liquor (amniotic fluid) foul smelling? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
|---|---|---|---|
| 5.16 | Was liquor green colored ? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 5.17 | How many hours after the leak was baby born? | 1. Less than 12 hours <br> 2. 12 hours or more <br> 8. Don't know | ☐ <br> ***If 1 go to Q. 5.18*** |
| 5.17.1 | If 2 or 8 then ask: <br> Any medication given to mother for leak ? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 5.17.2 | If yes specify | ( Specify) | |
| 5.18 | Who attended the delivery/ labor? <br><br> *[Record the highest level provider mentioned.]* | 1. Obstetrician <br> 2. General doctor <br> 3. Nurse <br> 4. ANM <br> 5. Trained Dai <br> 6. Relative/friend <br> 7. Herself <br> 8. Don't know <br> 9. Quack <br> 10.Other (Specify) …………………........ | ☐ |
| 5.18.1 | Where was the delivery conducted | 1. Home <br> 2. Govt. Hospital <br> 3. Private Hospital <br> 4. Others (specify)……………………… <br> 8. Don't know | ☐ |
| 5.19 | How was the (baby delivered/ delivery attempted)? <br><br> . | 1. Spontaneous vaginal (no drugs) <br> 2. Mechanically induced (forceful external pushing) <br> 3. Induced with drugs <br> 4. Forceps <br> 5. Caesarean section <br> 8. Don't know | ☐ |
| 5.20 | Which part of the baby came out first? | 1. Head <br> 2. Buttocks/Feet <br> 3. Hand <br> 4. umbilical cord <br> 8. Don't know | ☐ |
| 5.21 | Was there excess bleeding on the day labor started? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| **Condition Of The Baby Soon After Birth:** | | | |
| 5.22 | At birth what was the size of the baby? | 1. Smaller Than Normal <br> 2. Normal <br> 3. Larger Than Normal <br> 8. Don't know | ☐ |
| 5.23 | What was the birth weight of the baby? <br> ( In first seven days) | 1. >2500gms. <br> 2. < 2500 – 2000gms. <br> 3. <2000-1500gms. <br> 4. <1500gms. <br> 8. Don't know | ☐ |
| 5.24 | Was the baby premature? <br> (Less than 37 weeks) | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |

|  |  |  | *If 1 go to Q. 5.25* |
|---|---|---|---|
| 5.24.1 | If yes , Write weeks of pregnancy | 1. < 28 weeks<br>2. 28 – 32 weeks<br>3. > 32 – 37 weeks<br>8. Don't know | ☐ |
| 5.25 | What was the color of the baby at birth? | 1. Normal<br>2. Pale/ Yellow<br>3. Blue<br>8. Don't know | ☐ |
| 5.26 | Did the baby cry after birth, even a little? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.27 | Was the baby given assistance to breathe? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.28 | Did the baby ever move hands & legs even a little? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.29 | If the baby did not cry, breathe or move, was it born dead (STILL BORN)? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br>*If 1, stop the interview* |
| 5.30 | Were there any signs of injury or broken bones? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br>*If 2 or 8 go to Q.5.31* |
| 5.30.1 | Where were the marks or signs of injury? | ( Specify) | |
| 5.31 | Was there any sign of paralysis? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.32 | Did the baby have any malformation? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br>*If 2 or 8 go to Q.5.33* |
| 5.32.1 | What kind of malformation did the baby have?<br><br>*(Read out)* | 1. Swelling/Defect on the back<br>2. Very Large Head<br>3. Very Small Head<br>4. Defect of Lip and/ palate<br>5. Other Malformation_____<br>            (Specify)<br>8. Don't know | ☐ |
| 5.33 | How soon after birth did baby take bath | 1. < one day<br>2. > one day to < seven days<br>3. > seven days<br>4. No bath<br>8. Don't know | ☐ |
| 5.34 | What was used to tie the umbilical cord? | 1. Thread from the house<br>2. Thread from dia kit<br>6. Cord clamp<br>8. Don't know | ☐ |
| 5.34.1 | What was used to cut the umbilical cord? | 1. Razor blade from home<br>2. New Razor blade<br>3. Knife from house<br>7. surgical blade<br>8. Any other instrument<br>8. Don't know | ☐ |

| | | | |
|---|---|---|---|
| 5.34.2 | Was anything applied to the umbilical cord stump after birth? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.35*** |
| 5.34.3 | If yes what was applied to the cord? | | <br><br>( Specify) |

### Neonatal Illness History :

| | | | |
|---|---|---|---|
| 5.35 | Was baby breast feed ? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.36*** |
| 5.35.1 | If yes, how soon after the birth did baby suckle ? | | ___ ___ minutes<br>___ ___ *hours*<br>___ ___ days |
| 5.35.2 | Was baby exclusive breast feeding ? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 1 go to Q.5.37*** |
| 5.36 | If 2 or 8, what was given to the baby ? | 1. Expressed breast milk,<br>2. Animal milk<br>3. Others ( specify) | Yes  No  DK<br>1. □  1. □  1. □<br>2. □  2. □  2. □<br>3.(_____) |
| 5.37 | If breast feeding did the baby stop suckling? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.38*** |
| 5.37.1 | If yes, when did the baby stop suckling? | | ___ ___ minutes<br>___ ___ *hours*<br>___ ___ days |
| 5.38 | How was the baby kept warm? | 1. covered with own clothes only<br>2. covered with own clothes & blanket<br>3. any other method<br>4. not covered<br>8. Don't know | [ ] |
| 5.39 | Did the baby have convulsions? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.40*** |
| 5.39.1 | How soon after birth did the convulsions start? | 1. Within 24 hrs.<br>2. After 24 hrs.<br>8. Don't know | [ ] |
| 5.40 | Did the baby become stiff and arched backwards? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.41*** |
| 5.40.1 | How soon after the birth did the baby become stiff and arched backwards? | | ___ ___<br>*(DK = 88)* |
| 5.41 | Did the baby become lethargic or drowsy ? | 1. Yes,<br>2. No<br>8. Don't know | [ ]<br><br>***If 2 or 8 go to Q.5.42*** |

| 5.41.1 | If yes when did the baby become lethargic or drowsy? | | __ __ <br> *(DK = 88)* |
|---|---|---|---|
| 5.42 | Did the baby have a fever? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.43** |
| 5.42.1 | If yes how many days after birth did the baby have a fever? | | __ __ <br> *(DK = 88)* |
| 5.43 | Did the baby become cold to the touch? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.44** |
| 5.43.1 | If yes how many days after birth did the baby become cold to the touch? | | __ __ <br> *(DK = 88)* |
| 5.44 | Did the baby have a cough? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.45** |
| 5.44.1 | If yes, how many days after birth did the baby start to cough? | | __ __ <br> *(DK = 88)* |
| 5.45 | Did the baby have fast breathing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.46** |
| 5.45.1 | If yes, how many days after birth did the baby start breathing fast? | | __ __ <br> *(DK = 88)* |
| 5.46 | Did the baby have difficulty in breathing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.47** |
| 5.46.1 | If yes, how many days after birth did the baby start having difficulty in breathing? | | __ __ <br> *(DK = 88)* |
| 5.47 | Did the baby have chest indrawing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.48 | Did the baby have grunting? *(Demonstrate)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.49 | Did the baby have flaring of the nostrils ? *(Demonstrate)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.50 | Did the baby have watery stools? | 1. Yes,<br>2. No<br>8. Don't know | ☐ <br> **If 2 or 8 go to Q.5.51** |
| 5.50.1 | If yes, how many days after birth did the baby have watery stools? | | __ __ <br> *(DK = 88)* |
| 5.51 | Was there blood in the stools? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

| 5.52 | Did the baby have vomiting? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q.5.53** |
|---|---|---|---|
| 5.52.1 | If yes how many days after birth did vomiting start? | | ___ ___<br>*(DK = 88)* |
| 5.52.2 | What was the colour of vomiting ?<br>(Please specify) | _____<br>( Specify) | |
| 5.53 | Did the baby have abdominal distension? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q.5.54** |
| 5.53.1 | If yes, how many days after birth did the baby have abdominal distension? | | ___ ___ *days*<br>*(DK = 88)* |
| 5.54 | Did the baby have redness or discharge from the umbilical cord stump? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.55 | Did the baby have a pustular skin rash? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q. 5.56** |
| 5.55.1 | If yes, specify the number & location | _____<br>( Specify) | |
| 5.56 | Did the baby have yellow palms or soles? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q. 5.57** |
| 5.56.1 | If yes, how many days after birth did the yellow palms or soles begin? | | ___ ___ *days*<br>*(DK = 88)* |
| 5.56.2 | For how many days did the baby have yellow palms or soles? | | ___ ___ *days*<br>*(DK = 88)* |
| 5.57 | Was baby getting cyanosed ( blue) on crying ? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 5.58 | Was baby weighed after birth? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q. 5.59** |
| 5.58.1 | What was the weight at different dates? | _____<br>( Specify) | |
| 5.59 | Was immunization given to the child | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Section 7** |
| 5.60.1 | Was immunization complete for the age | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

## Section 6 :For Children more than 2 months to 5 years

**Read out:** *I Would like to ask you some questions concerning previously known medical conditions the deceased had and signs and symptoms that the deceased had/showed when she/he was ill. Some of these questions may not appear to be directly related to his/her death. Please bear with me and answer all the questions. They will help us to get a clear picture of all possible symptoms that the deceased had.*
*Please tell me if the deceased suffered from any of the following illnesses:*

### Status of Mother:

| | | | |
|---|---|---|---|
| 6.1 | How is the mother's health now? | 1. Healthy<br>2. Ill<br>3. Not Alive<br>8. Don't know | ☐<br>**If 1 or 8 go to Q. 6.2** |
| 6.1.1 | If ill not alive write in details about the mothers condition? | 1. Anemia<br>2. Other _____<br>*(Specify)* | ☐ |
| 6.2 | Did mother take any medications during pregnancy? (excluding IFA Tablets & TT Inj.) | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.2.1 | If yes, specify | _____<br>( Specify) | |
| 6.2.2 | Dose mother have habit of smoking, drinking alcohol or tobacco chewing? | 1. Smoking<br>2. Alcohol<br>3. Tobacco chewing<br>4. others (specify)……………… | Yes   No   DK<br>1.☐  1.☐  1.☐<br>2.☐  2.☐  2.☐<br>3.☐  3.☐  3.☐<br>4.(_____) |
| 6.3 | How many live births mother had before this baby | | ___ ___<br>(DK=88) |
| 6.4 | What is birth order of the baby | | ___ ___<br>(DK=88) |
| 6.4.1 | If 2 or More spacing between the previous pregnancy and the pregnancy with current baby | | ___ ___ months<br>(DK=88) |
| 6.5 | Did any babies die before the current baby | 1. Yes<br>2. No<br>8. Don't know | ☐<br>**If 2 or 8 go to Q.6.6** |
| 6.5 a | If yes, specify the reasons for deaths | _____<br>( Specify) | |
| 6.6 | Was the child small at birth? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.6.1 | What was the birth weight of the baby? | 1. >2500gms.<br>2. < 2500 - 2000gms.<br>3. <2000-1500gms.<br>4. <1500gms.<br>8. Don't know | ☐ |
| 6.7 | Was the child born prematurely? (less than 37 weeks) | 1. Yes,<br>2. No<br>8. Don't know | ☐<br>**If 2 or 8 go to Q.6.8** |
| 6.7.1 | How many months or weeks premature?<br>INDICATE PERIOD OF PREGNANCY | | ___ ___ *weeks*<br>(DK = 88) |
| 6.8 | Was the child growing normally? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

| 6.9 | Was child given exclusive breast feeding for 6 months ? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
|---|---|---|---|
| 6.9.1 | If 2 or 8 what was given | _____<br>( Specify) | |
| 6.10 | Has complementary feeds started | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.10.1 | If yes when was it started | _____<br>( Specify) | |
| 6.11 | What was used in complementary feeds | 1. Plain dal water/ Rice water<br>2. Khichadi + oil<br>3. Only Tea/ milk biscuits<br>4. Others(specify)<br>8. Don't know | ☐ |
| 6.12 | Did s/he had habit of eating mud (for >1year age only) | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.13 | Did she/he suffer from any worm infestation?<br>(for >1year age only) | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.13.1 | Was Deworming done ?<br>(for >1year age only) | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>**If 2 or 8 go to Q.6.14** |
| 6.13.2 | If, Yes when was the last deworming done. (for >1year age only) | 1. 6 months<br>2. 6 months before<br>3. 6 to 12 months<br>5. more than 12 months<br>8. Don't know | ☐ |
| 6.14 | Family history for Tuberculosis? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| *History of previously known Medical conditions in child :* | | | |
| 6.15 | Heart disease?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.16 | Diabetes?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.17 | Asthma?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.18 | Convulsions?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.19 | Malnutrition?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.20 | Tuberculosis?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.21 | HIV AIDS?<br>*(Read out)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

| 6.22 | Congenital malformations? *(Read out)* | 1. Swelling/Defect on the back<br>2. Very Large Head<br>3. Very Small Head<br>4. Defect of Lip and/ palate<br>5. Other Malformation _____<br>(Specify)<br>6. No congenital malformations<br>8. Don't know | ☐ |
| 6.23 | Did she/he suffer from any other medically diagnosed illness? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*f 2 or 8 go to Q.6.24* |
| 6.23.1 | Can you specify the illness? | Illness _____<br><br>_____ | |

### Symptoms Noted During the Final Illness for 2months - 5 yrs. Children :

| 6.24 | For how long was the child ill before s/he died?<br>*( convert response to days: 1month = 30 days.)* | | ___ ___ *days*<br>*(DK = 88)* |
| 6.25 | Did s/he have a fever? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to Q.6.26* |
| 6.25.1 | If yes for how long did s/he have a fever? | | ___ ___ *days*<br>*(DK = 88)* |
| 6.25.2 | Was the fever continuous or on and off? | 1. Continuous<br>2. On and off<br>8. Don't know | ☐ |
| 6.25.3 | Did s/he have chills/ rigor? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.26 | Did s/he have a cough? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to Q.6.27* |
| 6.26.1 | If yes for how long did s/he have a cough? | | ___ ___ *days*<br>*(DK = 88)* |
| 6.26.2 | Was the cough severe? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.26.3 | Did the child vomit after s/he coughed? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.27 | Did s/he have fast breathing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.28 | Did s/he have difficulty in breathing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.29 | Did s/he have chest indrawing? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.30 | Did s/he have noisy breathing (grunting or wheezing)? *(Demonstrate)* | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

| 6.31 | Did s/he have flaring of the nostrils? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
|------|----------------------------------------|-----------------------------------|---|
| 6.32 | Did s/he have diarrhea? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Q.6.33*** |
| 6.32.1 | If yes, for how long did s/he have diarrhea? (> 14 days) | | ___ ___<br>*(DK = 88)* |
| 6.32.2 | When the diarrhea was most severe, how many times did s/he pass stool in a day? | | ___ ___<br>*(DK = 88)* |
| 6.32.3 | Did child pass less urine than before during illness? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.32.4 | Did s/he have sunken eyes? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.32.5 | Was the child lethargic/ drowsy? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.33 | At any time during the final illness was there blood in the stool? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.34 | During the illness that led to death, did s/he have any skin rash? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Q.6.35*** |
| 6.34.1 | If yes, for how long did s/he have the skin rash? | | ___ ___<br>*(DK = 88)* |
| 6.34.2 | Was the rash located on: | 1. Face.....................................<br>2. Trunk...................................<br>9. Arms and Legs.................... | <u>Yes</u>  <u>No</u>  <u>DK</u><br>1. ☐  1. ☐  1. ☐<br>2. ☐  2. ☐  2. ☐<br>3. ☐  3. ☐  3. ☐ |
| 6.34.3 | What did the rash look like? | 1. Measles Rash<br>2. Rash with Clear Fluid<br>7. Rash with pus<br>8. Don't know | ☐ |
| 6.34.4 | Did she have red eyes? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.35 | Did s/he had loss of appetite ? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.36 | Did s/he have weight loss? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.37 | Did s/he look pale (thinning/lack of blood) or have pale palms, eyes or nail beds? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.38 | Did s/he look very thin and wasted? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 6.38.1 | Was weight of the child taken 3 months prior to illness ? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>***If 2 or 8 go to Q.6.39*** |

| | | | |
|---|---|---|---|
| 6.38.2 | If yes, specify the dates and the weight taken ? | _____ <br> ( Specify) | |
| 6.39 | Did her/his hair color change to reddish or yellowish? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 6.40 | Did s/he vomit? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2 or 8 go to Q.6.41* |
| 6.40.1 | If yes, for how long did s/he vomit? | | ___ ___ <br> *(DK = 88)* |
| 6.40.2 | When the vomiting was most severe, how many times did s/he vomit in a day? | | ___ ___ <br> *(DK = 88)* |
| 6.40.3 | What was the colour of Vomiting ? please specify | _____ <br> ( Specify) | |
| 6.41 | Did s/he have abdominal pain? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 6.42 | Did s/he have abdominal distension? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2 or 8 go to Q.6.43* |
| 6.42.1 | If yes, for how long did s/he have abdominal distension? | | ___ ___ *days* <br> *(DK = 88)* |
| 6.42.2 | Did the distension develop rapidly within days or gradually over months? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 6.43 | Was there a period of a day or longer during which s/he did not pass any stool? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ |
| 6.44 | Did s/he have any mass in the abdomen? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2 or 8 go to Q.6.45* |
| 6.44.1 | If yes, for how long did s/he have the mass in the abdomen? | | ___ ___ *days* <br> *(DK = 88)* |
| 6.45 | Did s/he have yellow discoloration of the eyes? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2 or 8 go to Q.6.46* |
| 6.45.1 | If yes, for how long did s/he have the yellow discoloration of the eyes? | | ___ ___ *days* <br> *(DK = 88)* |
| 6.46 | Did s/he have bleeding from any site? eg. Vomiting of blood or passing dark coloured stools (Malena) | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2or 8 go to Q.6.47* |
| 6.46.1 | If yes specify. | _____ <br> ( Specify) | |
| 6.47 | Did s/he have mouth sores or white patches in the mouth or on the tongue? | 1. Yes, <br> 2. No <br> 8. Don't know | ☐ <br><br> *If 2 or 8 go to Q.6.48* |

| 6.47.1 | If yes, for how long did s/he have mouth sores or white patches in the mouth or on the tongue? | | ___ ___ *days* <br> *(DK = 88)* |
|---|---|---|---|
| 6.48 | Did the child have lumps on? | 1. Neck..................................... <br> 2. Armpit .................................. <br> 3. Groin.................................... <br> 4. Other Place........................... <br>      *(specify other)*...................... | <u>Yes</u>  <u>No</u>  <u>DK</u> <br> 1. □   1. □   1. □ <br> 2. □   2. □   2. □ <br> 3. □   3. □   3. □ <br> 4. □   4. □   4. □ <br> (_____) |
| 6.49 | Did child have swelling on ? | 1. Face..................................... <br> 2. Joints .................................. <br> 3. Ankles................................. <br> 4. Whole Body ………………… <br> 5.  Other Place......................... | <u>Yes</u>  <u>No</u>  <u>DK</u> <br> 1. □   1. □   1. □ <br> 2. □   2. □   2. □ <br> 3. □   3. □   3. □ <br> 4. □   4. □   4. □ <br> 5. (_____) |
| 6.50 | Did s/he have headache? | 1. Yes, <br> 2. No <br> 8. Don't know | □ |
| 6.51 | Did she have stiff or painful neck? | 1. Yes, <br> 2. No <br> 8. Don't know | □ |
| 6.52 | Did s/he become drowsy or unconscious? | 1. Yes, <br> 2. No <br> 8. Don't know | □ <br> **If 2 or 8  go to Q.6.53** |
| 6.52.1 | If yes, for how long was s/he  drowsy or unconscious? | | ___ ___ *days* <br> *(DK = 88)* |
| 6.52.2 | Did the unconsciousness start suddenly, quickly within a single day or slowly over many days? | 1. Suddenly <br> 2. Fast ( In a day) <br> 3.  Slowly ( Many days) <br> 8. Don't know | □ |
| 6.53 | Did s/he have convulsions? | 1. Yes, <br> 2. No <br> 8. Don't know | □ <br> **If 2 or 8  go to Q.6.54** |
| 6.53.1 | If yes, for how long was s/he had convulsions? | | |
| 6.54 | Was baby getting cyanosed ( blue) on crying ? | 1. Yes, <br> 2. No <br> 8. Don't know | □ |
| 6.55 | Did s/he have paralysis of the lower limbs? | 1. Yes, <br> 2. No <br> 8. Don't know | □ <br> **If 2 or 8  go to Q6.56** |
| 6.55.1 | If yes, for how long did s/he have paralysis of the lower limbs? | | ___ ___ *days* <br> *(DK = 88)* |
| 6.55.2 | Did the paralysis of the lower limbs start suddenly, quickly within a single day, or slowly over many days? | 1. Suddenly <br> 2. Fast ( In a day) <br> 3.  Slowly ( Many days) <br> 8. Don't know | □ |
| 6.56 | Did child have ear dischage | 1. Yes, <br> 2. No <br> 8. Don't know | □ |

| 6.57 | Did child have local skin infection | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to Q6.58* |
|---|---|---|---|
| 6.57.1 | If yes, specify the number & location | | _____<br>( Specify) |
| 6.58 | Was immunization given to the child | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to section 7* |
| 6.58.1 | Was immunization complete for the age ? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |

## Section 7 : History of Injuries / Accidents

| 7.1 | Did she/he suffer from any injury, poisoning or accident that led to her/his death? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to Q.7.2* |
|---|---|---|---|
| 7.1.1 | What kind of injury or accident did the deceased suffer? | 1. Road Traffic Accident<br>2. Fall<br>3. Drowning<br>4. Poisoning<br>5. Burns<br>6. Violence/ Assault<br>7. Other _____<br>　　　　　*(Specify)*<br>8. Don't know | ☐ |
| 7.1.2 | Was the injury or accident intentionally inflicted by someone else? | 1. Yes,<br>2. No<br>8. Don't know | ☐ |
| 7.1.3 | How long after the injury did s/he die? | | __ __<br>*(DK = 88)* |
| 7.2 | Did she /he suffer from any animal/ insect bite that led to her death? | 1. Yes,<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to section 8* |
| 7.2.1 | What type of animal/ insect? | 1. Dog<br>2. Snake<br>3. Insect<br>4. Other _____<br>　　　　　*(Specify)*<br>8. Don't know | ☐ |

## Section 8: Care seeking for child's illness that led to the death.

| 8.1 | What did child's family did for the illness?<br><br>*Multiple answers allowed* | 1. Gave home care<br>2. Sought care from an informal provider *(includes at his/her own home)*<br>3. Sought formal health care<br>8. Don't know | 1. ☐<br>2. ☐<br>3. ☐<br>8. ☐ |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 8.2 | *If Action 8.1 was <u>not</u> seeking formal health care, then ask:*<br>Did the family have any problems that kept them from seeking formal health care at that time?<br><br>*If Action 8.1 was <u>seeking</u> formal health care, then ask:*<br>Did the family have to overcome any problems in order to seek formal health care at that time?<br><br>*Prompt:* Was there anything else?<br><br>*[Multiple answers allowed. Check all that apply. Check only "14" if she had no careseeking problem.]* | 1. Did not think child was sick enough to need health care .........<br>2. No one was available to accompany child......................<br>3. Mother/ father had to attend to household duties .....................<br>4. Transportation not available .........<br>5. Could not pay for transportation .....<br>6. Could not pay for the care provider/facility ...........................<br>7. Other cost .....................................<br>8. Not satisfied with available health care ...............................................<br>9. Child problem(s) require traditional care...........................<br>10. Thought child was too sick to travel ................................<br>11. Thought child would die no matter what .........................<br>12. It was late at night .........................<br>13. Other*(specify)*……………………<br>………………………………………<br>14. No careseeking problem ................<br>88. Don't know .................................... | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>7. ☐<br>8. ☐<br>9. ☐<br>10. ☐<br>11. ☐<br>12. ☐<br>13. ☐<br>(_____)<br>14. ☐<br>88. ☐ |
| 8.3 | Who decided that this was the action to be taken?<br><br>*[Only one response allowed. Record the main decision maker.]* | 1. Mother<br>2. Father<br>3. Grand Mother<br>4. Grand Father<br>5. Other (Specify)<br>8. Don't know | ☐ |
| 8.4 | How long after the illness began did parents/ caretaker decide to do this?<br><br>*[Mark days, hours and/or minutes as needed.*<br>*Example: 02 days, 13 hours and 30 minutes;*<br>*Example: 00 days, 05 hours and 00 minutes]* | ___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | |
| 8.5 | Which symptom(s) did child have at this time?<br><br>*[Multiple answers allowed. Check all that apply.]* | 1. Low birth weight (<2500 gms) very low birth weight (< 1500 gms) ......................................<br>2. Premature baby < 37 weeks .........................<br>3. Feeding problems not sucking well ................<br>4. Convulsions ....................................................<br>5. Drowsy lethargic ............................................<br>6. Abdominal distention/ pain .............................<br>7. Weight loss .....................................................<br>8. Loose motions without blood.........................<br>9. Loose motions with blood...............................<br>10. cough / fever.................................................<br>11. Breathing difficulty.........................................<br>12. Other*(specify)*……………………….. ............<br>88. Don't know | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>7. ☐<br>8. ☐<br>9. ☐<br>10. ☐<br>11. ☐<br>12. ☐ (_____)<br>88. ☐ |

**If action was to seek formal care**

| | | |
|---|---|---|
| 8.6 | How many <u>formal</u> facilities was child taken to (or intended to go) before child died?<br><br>*[Include any facility child did not reach because child died before leaving or on route.]* | ☐ |

| 8.6.1 | *Mark the facility where child took treatment and where child died.* | | <u>Was Treated Here</u> | <u>Referred to</u> | <u>Died Here</u> |
|---|---|---|---|---|---|
| 8.6.2 | Name and address of the first facility child went to: **FACILITY 1** | 1. PHC<br>2. Rural Hospital<br>3. SDH/ DH<br>4. Private Hospital<br>5. Other (Specify) | ☐ | ☐ | ☐ |

| 8.6.3 | Name and address of the second facility child went to: **FACILITY 2** | 1. PHC<br>2. Rural Hospital<br>3. SDH/ DH<br>4. Private Hospital<br>5. Other (Specify) | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|
| 8.6.4 | Name and address of the third facility child went to: **FACILITY 3** | 1. PHC<br>2. Rural Hospital<br>3. SDH/ DH<br>4. Private Hospital<br>5. Other (Specify) | ☐ | ☐ | ☐ |

| – MATRIX QUESTIONS – | | **FACILITY 1** | **FACILITY 2** | **FACILITY 3** |
|---|---|---|---|---|
| After (deciding to seek care/ child was referred), how long did it take to make the arrangements to go from…<br><br>*[Discuss that this includes the time needed to arrange for transportation and the money to pay for this and the childs health care.]*<br><br>*[Mark days, hours and/or minutes as needed. Example: 01 day, 05 hours and 30 minutes; Example: 00 days, 02 hours and 10 minutes]* | | **8.7** …home to fac1?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.20** …facility1 to 2?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.33** …facility2 to 3?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* |
| How did the family arrange this money?<br><br>*Multiple answers allowed. Check all that apply.* | 1. Had available<br>2. Borrowed<br>3. Sold assets<br>4. Community fund<br>5. Govt. scheme<br>6. Other<br>8. Don't know | **8.8**<br>1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ | 8.21<br>1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ | **8.34**<br>1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ |
| How far is it from… | | **8.9** …home to fac 1?<br><br>___ ___ ___ km<br>*(<1 = 000; DK = 888)* | **8.22** …fac.1 to 2?<br><br>___ ___ ___ km<br>*(<1= 000; DK = 888)* | **8.35** …facility 2 to 3?<br><br>___ ___ ___ km<br>*(<1 = 000; DK = 888)* |
| What transportation method was used to take child there?<br><br>*Multiple answers allowed. Check all that apply.* | 1. Walk......................<br>2. Rickshaw/cart.......<br>3. Bus......................<br>4. Taxi/auto/trecker ..<br>5. Ambulance...........<br>6. Other...................<br>8. Don't know .......... | **8.10**<br>1. ☐ *If only walk, go*<br>2. ☐     *to*<br>     *Q8.12*<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ | **8.23**<br>1. ☐ *If only walk,*<br>     *go*<br>2. ☐    *to Q.8.25*<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ | **8.36**<br>1. ☐ *If only walk, go*<br>2. ☐    *to Q.8.38*<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>8. ☐ |
| How much did all this cost? | | **8.11**<br><br>___ ___ ___ ___<br>Rp<br>*(DK = 8888)* | **8.24**<br><br>___ ___ ___ ___<br>Rp<br>*(DK = 8888)* | **8.37**<br><br>___ ___ ___ ___ Rp<br>*(DK = 8888)* |
| How long did it take to travel to…<br><br>*[Mark days, hours and/or minutes as needed. Example: 01 day, 05 hours and 30 minutes; Example: 00 days, 02 hours and 10 minutes]* | | **8.12** …facility 1?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.25** …facility 2?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.38** …facility 3?<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* |
| ***STOP: If the child died before reaching the facility, go to Section 10*** | | | | |

| | | …facility 1? | **8.26**…facility 2? | **8.39**…facility 3? |
|---|---|---|---|---|
| Which illness symptom(s) did child have while at…<br><br>*Multiple answers allowed. Check all that apply.* | 1. Low birth weight (<2500 gms)<br>   very low birth weight (< 1500 gms) ....<br>2. Premature baby < 37 weeks ..............<br>3. Feeding problems not sucking well<br>4. Convulsions ...........................<br>5. Drowsy lethargic............................<br>6. Abdominal distention/ pain ...............<br>7. Weight loss ......................................<br>8. Loose motions without blood.............<br>9. Loose motions with blood.................<br>10. cough / fever ...............................<br>11. Breathing difficulty...........................<br>12. Other*(specify)*…… ........................<br>88. Don't know | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>7. ☐<br>8. ☐<br>9. ☐<br>10. ☐<br>11. ☐<br>12. ☐ (_____)<br>88. ☐ | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>7. ☐<br>8. ☐<br>9. ☐<br>10. ☐<br>11. ☐<br>12. ☐ (_____)<br>88. ☐ | 1. ☐<br>2. ☐<br>3. ☐<br>4. ☐<br>5. ☐<br>6. ☐<br>7. ☐<br>8. ☐<br>9. ☐<br>10. ☐<br>11. ☐<br>12. ☐ (_____)<br>88. ☐ |
| What did the (facility/provider) do for childs problem?<br><br>*Prompt:* Was there anything else?<br><br>*Multiple responses allowed. Check all that apply.* | 1. Oral rehydration salts and/ or intravenous fluids (drip) treatment?<br>2. Blood transfusion?<br>3. Treatment/food trough a tube passed through the nose?<br>4. Any other treatment?<br>5. Nothing<br>8. Don't know | **8.14**<br>1. ☐<br><br>2. ☐<br>3. ☐<br>4. ☐ (_____)<br>5. ☐ *If 5, go to Q 8.16*<br>8. ☐ *If 8, go Q 8.16* | **8.27**<br>1. ☐<br><br>2. ☐<br>3. ☐<br>4. ☐ (_____)<br>5. ☐ *If 5, go to Q8.29*<br>8. ☐ *If 8, go Q8.29* | **8.40**<br>1. ☐<br><br>2. ☐<br>3. ☐<br>4. ☐ (_____)<br>5. ☐ *If 5, go to Q8.42*<br>8. ☐ *If 8, go Q8.42* |
| How much did all this care cost? | | **8.15**<br><br>__ __ __ __ __ Rp<br>*(DK = 88888)* | **8.28**<br><br>__ __ __ __ __ Rp<br>*(DK = 88888)* | **8.41**<br><br>__ __ __ __ __ Rp<br>*(DK = 88888)* |
| Did the (facility/provider) refer child to another health care facility? | 1. Yes<br>2. No<br>8. Don't know | **8.16**<br><br>☐ *If 2 or 8, go to Q.8.17* | **8.29**<br><br>☐ *If 2 or 8, go to Q.8.30* | **8.42**<br><br>☐ *If 2 or 8, go to Q.8.43* |
| Why was the child referred?<br><br>*Multiple responses allowed. Check all that apply.* | 1. For a certain problem *(specify)*..<br>2. Did not have blood ...................<br>3. For a procedure *(specify)* ..........<br><br>4. Lack of a specialist *(specify)* .....<br><br>5. Other *(specify)*........................... | **8.16.1**<br>1. ☐ (_____)<br>2. ☐<br>3. ☐ (_____)<br><br>4. ☐ (_____)<br><br>5. ☐ (_____) | **8.29.1**<br>1. ☐ (_____)<br>2. ☐<br>3. ☐ (_____)<br><br>4. ☐ (_____)<br>5. ☐ (_____) | **8.42.1**<br>1. ☐ (_____)<br>2. ☐<br>3. ☐ (_____)<br><br>4. ☐ (_____)<br><br>5. ☐ (_____) |
| How long after the arrival was child referred?<br><br>*[Mark days, hours and/or minutes as needed. Example: 01 day, 05 hours and 30 minutes; Example: 02 days, 03 hours and 00 minutes]* | | **8.16.2**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.29.2**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.42.2**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* |
| How long was child at this facility after referral ?<br><br>*[Mark days, hours and/or minutes as needed. Example: 01 day, 05 hours and 30 minutes; Example: 02 days, 03 hours and 00 minutes]* | | **8.17**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.30**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* | **8.43**<br><br>___ ___ Days<br>*(DK = 88)*<br><br>___ ___ Hours<br>*(DK = 88)*<br><br>___ ___ Minutes<br>*(DK = 88)* |

| as child taken to another health facility after leaving… | 1. Yes<br>2. No<br>8. Don't know | **8.18** …facility 1?<br><br>☐<br><br>*If 8, go to Sctn 9* | **8.31** …facility 2?<br><br>☐<br><br>*If 8, go to Sctn 9* | **8.44**…facility 2 ?<br><br>☐<br><br>*If 8, go to Sctn 9* |
|---|---|---|---|---|
| *If not taken to another facility,ask:*<br>Did the family have any problems that kept child from going to another facility?<br><br>*If taken to another facility, ask:*<br>Did the family have to overcome any problems in order to go to another facility?<br><br>*Prompt:* Was there anything else?<br><br>*[Multiple answers allowed. Check all that apply.]* | 1. No transportation ...<br>2. Transportation or health care cost .....<br>3. Not satisfied with available care.........<br>4. Thought child would die no matter what .......................<br>5. child died at F1/F2 .<br>6. Other *(specify)*.......<br>7. No careseeking problem..................<br>8. Don't know............. | **8.19**<br>1. ☐<br><br>2. ☐<br><br>3. ☐<br><br>4. ☐<br><br>5. ☐ *Go to Sctn 9*<br><br>6. ☐ (_____)<br><br>7. ☐<br>8. ☐ | **8.32**<br>1. ☐<br><br>2. ☐<br><br>3. ☐<br><br>4. ☐<br>5. ☐ *Go to Sctn 9*<br><br>6. ☐ (_____)<br>7. ☐<br>8. ☐ | **8.45**<br>1. ☐<br><br>2. ☐<br><br>3. ☐<br><br>4. ☐<br>5. ☐ *Go to Sctn 9*<br><br>6. ☐ (_____)<br><br>7. ☐<br>8. ☐ |
| **If child was taken to another facility…** | | **…go to Q 8.20 (start of Facility 2)** | **…go to Q. 8.33. (start of Facility 3)** | **Go to Sctn 9** |

## Section 9: Reported cause of death

| 9.1 | Do you have a death certificate for the deceased? | 1. Yes<br>2. No<br>8. Don't know | ☐<br><br>*If 2 or 8 go to section 10* |
|---|---|---|---|
| 9.1.1 | Can I see the death certificate?<br>COPY DAY, MONTH AND YEAR OF DEATH FROM THE DEATH CERTIFICATE. | | __ __ / __ __ / __ __ __ __<br>( D  D / M  M / Y  Y  Y  Y ) |
| 9.1.2 | RECORD THE CAUSE OF DEATH FROM THE FIRST (TOP) LINE OF THE DEATH CERTIFICATE:<br><br>_____ | | |
| 9.1.3 | RECORD THE CAUSE OF DEATH FROM THE SECOND LINE OF THE DEATH CERTIFICATE (IF ANY):<br><br>_____ | | |
| 9.1.4 | RECORD THE CAUSE OF DEATH FROM THE THIRD LINE OF THE DEATH CERTIFICATE (IF ANY):<br><br>_____ | | |

## SECTION 10: DATA ABSTRACTED FROM OTHER HEALTH RECORDS

| 10.1 | Other Health records available | 1. Yes<br>2. No | ☐<br><br>*If 2, go to Open History* |
|---|---|---|---|
| 10.2 | FOR EACH TYPE OF HEALTH RECORD SUMMARIZE DETAILS FOR LAST 2 VISITS (IF MORE THAN 2) AND RECORD DATE OF ISSUE<br><br>_____ | | |

| 10.3 | POSTMORTEM RESULTS (CAUSE OF DEATH )<br>_____ |
| 10.4 | MCH/ANC/IMMUNIZATION CARD (RELEVANT INFORMATION)<br>_____ |
| 10.5 | HOSPITAL PRESCRIPTION (RELEVANT INFORMATION)<br>_____ |
| 10.6 | TREATMENT CARDS (RELEVANT INFORMATION)<br>_____ |
| 10.7 | HOSPITAL DISCHARGE (RELEVANT INFORMATION)<br>_____ |
| 10.8 | LABORATORY RESULTS (RELEVANT INFORMATION)<br>_____ |

## Section 11: Open history

*Read:* Thank you for answering the many questions that I've asked. Would you like to tell me about the illness in your own words? Also, is there anything else about Childs illness that I did not ask you would like to tell me about?
*After the respondent(s) finishes, ask*: Is there anything else?
*Write the respondent's exact words. After s/he has finished, read this back and ask her to correct any errors in what you wrote.*

_____

_____

_____

_____

_____

**Signature of Interviewer**                                    **Signature of respondent**

( Name & Designation)

## END OF INTERVIEW
## THANK RESPONDENT(S) FOR THEIR COOPERATION

| ***RECORD THE TIME AT THE END OF INTERVIEW*** | Hours _____<br>Minutes _____ |

**Supervisor's certification**

| | | | |
|---|---|---|---|
| The below supervisor certifies that s/he reviewed the information in this interview and verifies that it is correct and complete | | | |
| Supervisor's name (written) | | Date of certification | __ __ / __ __ / __ __ __ __<br>( D  D /  M  M /  Y  Y  Y  Y ) |
| Supervisor's signature | | | |

# Infant & Child Death Audit Report (April 2010)

## UNICEF(Mumbai)
## &
## State Family Welfare Bureau (Pune)

# Child Death Audit Project 2009: Report

## Introduction:

The Health Ministry of Government of Maharashtra, with support from UNICEF conducted a child death audit study in 2009 across the tribal area of Melghat, District Amravati, Maharashtra. The aims and objectives of the study were as follows:

- To identify recent child deaths and conduct community-based inquiries with close acquaintances of the child

- To identify causes of death in children

- To identify 3 delays in health seeking behavior time taken on behalf of parents to seek health delay in transport health care provided at facilities.

- To identify Lacunas in health seeking behavior of parents

- To identify Lacunas in Health Providers.

- To identify maternal factors responsible for early deaths.

- To Sensitize communities to issues in children and inquiries into child and perinatal deaths;

- To share the findings of the death inquiries with communities and help them interpret the data to develop appropriate local interventions and advocate for improvements in health care; and

- To suggest interventions on above findings.

- UNICEF also will use the findings of the inquiries to advocate with policy makers for needed improvements in health care.

## 1.Why Child Death Audit?

National Rural Health Mission aims at reduction in Maternal and Childhood Morbidity and Mortality as well as total fertility rates. State has shown steady decline in the infant mortality as well as childhood mortality rates during last 10 years. However there are geographic variations in Urban, Rural & Tribal areas. Tribal areas present a unique picture due to remoteness, difficulties in communication, illiteracy, misbelieves and misconceptions etc. State Government had constituted a special committee under the Chairmanship of Dr. Abhay Bang to assess the situation and factors responsible for Childhood deaths and completeness in reporting and to suggest suitable measures for strengthening the reporting system and preventing the Childhood deaths.

After considering both the reports submitted by the committee, Government took appropriate measures for strengthening the reporting system and prevention of Childhood deaths. As per the directives from Hon. High court Mumbai, State Government constituted a Child Death Monitoring Committee vide GR Dt. 17.5.2009 under the Chairmanship of Dr. Rajneekant Arole, Jamkhed District Ahmednager. Committee recommended that the Medical Officers should be trained in the procedure of "Child Death Audit" so that they will correctly and scientifically investigate the deaths and can come to appropriate conclusion. They will have an insight about the causes of death and the events occurring prior to death. They will also correlate the findings in a scientific way.

## 2. What is Child Death Audit?

*Background of the study:*

"Child Death Audit" means to thoroughly examine and respond to the social, biological and medical events that led to a child death. Inquiries are conducted of the deaths that occur in a community over several months time, in order to identify common factors that can be acted upon to prevent further deaths. Ongoing inquiries over several years allow a community to assess the impact of its preventive actions and the need for additional interventions. Death inquiries are conducted in the community using a "verbal autopsy" interview with the families of deceased persons. This is particularly helpful in areas where many deaths occur outside of health facilities and for highlighting relevant social factors and health careseeking problems. Health facilities where many deaths occur also should review the care provided to the d children in order to identify medical practices that need to be improved to prevent additional deaths.

This document has been developed to improve the measurement of cause-specific mortality, in areas where medical certification of death is rare. It focuses on the use of verbal autopsies to identify the causes of deaths among infants and children, since these age groups are subject to high mortality rates. The materials presented in this document were developed by a collaborative group of scientists from several institutions including the Johns Hopkins University, the London School of Hygiene and Tropical Medicine, Oxford University, the Kenya Medical Research Institute, and World Health Organization and MAPEDIR (Maternal and Perinatal Death Inquiry and Response) Project currently being implemented in some districts of Maharashtra. The document includes a validated verbal autopsy questionnaire together with a set of

standard algorithms for determining major causes of infant and childhood deaths. These algorithms provide a uniform method for analyzing the verbal autopsy interviews and assigning the most appropriate cause(s) of death.

## The causes of child mortality and its prevention:

In Child Death Audit the age group is 0 - 5yrs. because majority of preventable Child Deaths occurs in this age group. The latest estimates from world Health organization, which date for 2007, indicates that around 9.7 Million of under five deaths occur world wide out of which 3.7 million children died within first 28 days of life.

The most common causes of infant and child mortality in developing countries including India are perinatal conditions, acute respiratory infections, diarrheas, malaria, measles and malnutrition. These are also the commonest causes of morbidity in young children. In India, the common illnesses in children younger than 3 years of age according to the National Family Health Survey (II) data include fever (27% prevalence in the previous 2-week period), acute respiratory infections (17%), diarrhea (13%) and malnutrition (43%) - and often a combination of these conditions.

Infant Mortality Rate (IMR) in India continues to be high at 68/100 live births and Under Five Mortality Rate (U5MR) at 95/1000 live births. Neonatal mortality contributes to over 64% of infant deaths and most of these deaths occur during first week of life. The three main causes for neonates dying are sepsis, Preterm, Asphyxia. Mortality rate in the second month of life is also higher than at later ages. Any health program that aims at reducing IMR needs to address mortality in the first two months of life, particularly in the first week of life.

While a biological complication is defined as the cause of death, in fact most child deaths result from a chain of events that includes many social, cultural and medical factors. Some of these can be prevented even before a child becomes ill, such as by ensuring that child is well nourished and immunized completely etc. It is usually seen that their are-3 delays, which play very important role while seeking health care.

Social and cultural factors that may contribute to delay 1 include: 1) low education, 2) poverty, 3) lack of mothers participation in decision-making, 4) not recognizing or understanding the importance of Danger signals in children, and 5) using traditional home care and informal providers for treatment instead of formal providers who might be able to save the child's life. The delay 2 can be due to the time needed to organize funds to pay for transportation or health care, a lack of transport, poor roads, or long distances to a health facility where the children can receive appropriate care. The delay 3 may be due to a lack of needed drugs, blood, medical or surgical equipment, or skilled health personnel at the facility. If a child is referred from a FRU, where child should be able to receive comprehensive child care, then the third delay also includes the additional travel and waiting time before child receives adequate care at the referral facility.

## Methodology:

The study used verbal autopsy (VA) as the main method for data collection. Verbal autopsy refers to the interviewing of family members or caregivers about the circumstances of the death of a child. The guidelines and the suggestions laid down by WHO and Uganda for designing the structured VA questionnaire were adopted. In addition, to assess the health care behavior of the participants a 'Matrix' approach was adopted based on 'Maternal and parental death audit response questionnaire' from Bangladesh. This questionnaire was further validated and tested with the help of Academicians and Public health professionals as necessary to suit the local conditions. To facilitate the accurate data capture, Interviewer's reference manual was prepared and several training sessions were conducted.

The study encompassed an exclusive population of two blocks of Melghat from Amravati district (Viz Chikhaldhara and Dharani) comprising the approximate population of 2.5 lakh inhabitants. The study includes all the child deaths (excluding still births) up to the age of 5 years at the time of death. It was carried out during June to September 2009.

The study made use of 207 children less than five years of age who died in rural and urban hospitals as reference cases. These cases were reviewed by expert Physicians who used all available information not only from the VA but also from the medical records of the child to attribute the cause of death. In addition, the standard International classification of Diseases (ICD) was used to classify the death and its cause.

## Statistical Methods used:

The data on qualitative characteristic is shown as n (%) and the data on quantitative characteristic is shown as Median (Minimum- Maximum). The comparison of distribution of several characteristics (such as demography, family's health care behaviour and history of illnesses etc) across two groups of children (Group I: Deaths within six months and Group II: Deaths between six moths to 5 years) was tested using Chi-square test for independence of attributes if cell frequency is greater than 5, else Fisher's exact test is used. The comparison of average values of quantitative characteristics (such as parental age, education, usage of health care facilities etc) across two groups was tested using independent sample 't' test OR Mann-Whitney U test as appropriate.

Linear trend in the prevalence of various attributes (such as known medical history history, duration of several illness etc) within each group was tested using non-parametric Chi-square test by standardizing the equality of proportions (prevalence) across each attribute.

A special data entry programme was designed for entry and verification of the records using DATACAP software (Data Flex Corporation, Mumbai, India). Several outcome measures of interest were coded using the standard ICD classifications before the final statistical analysis. The entire data was statistically analysed using statistical package for social sciences (SPSS version 11.0 for MS Windows).

## Summary of results:

Of 207 dead children studied, 122 (58.9%) died before 6-months of age and 85 (41.1%) died between 6 months to 5 years of age.

- For the children whose age at death was below 6 months, research indicates the four major causes of death are: Prematurity (71.7%), Breathing related problems (33.6%), Abdominal distension (9.0%) and Diarrhea (8.2%).

- For six months to five-year-old children, malnutrition accounts for more than half (52.9%) of the total deaths. Other causes being Prematurity (31.8%), Breathing (31.8%), Diarrhea (23.5%), Abdominal distension (11.8%).

- Overall, more than half (52.7%) of the children died at home.

- In terms of health seeking behavior of the parents: Of the total 207 children who died, their parents preferred home care (40.6%). Overall, 24.5% of the parents felt that traditional care was required for the child during his/ her illness. Whereas, 39.1% of the parents felt hat there was no care seeking problem to take the child to health facility for seeking health care. Significantly smaller proportion (16.1%) of mothers had a decision-making role in seeking the health care facility to their children. There was a significant association between health seeking behavior and the parental education. The parents who were relatively higher educated preferred to seek care from formal health care provider. Significantly higher proportion of children who delivered at home were not taken to formal health care facility.

- Significantly higher proportion of mothers who delivered at home did not seek antenatal care during pregnancy.

- Over all (15.2%) babies died due to not having specialists such as Pediatrician, Neurologist, surgeon etc, 5.4% babies were referred to other facilities for the investigations such as CT, MRI and USG.

- With respect to the health status of the mothers: The large majority of mothers (>70.5%) had anemia as confirmed by the Physicians.

- Most to the mothers had relatively lesser age at first delivery and had relatively lesser or no education.

- About 11 mothers (9.0%) of the babies who died before 6-months of age had lack of awareness about breast feeding (delay in breast feeding).

- Significantly higher proportion (59.0%) of the mother whose baby died before 6-months, delivered at home. These deliveries were mostly attended by untrained dais.

- About 9.4% of the mothers had inter-pregnancy spacing below 12 months.

- With respect to the injuries, the babies who died between 6 months to 5 years, the incidence of injury was relatively smaller (4.7%). Half of which happened due to animal bite.

- In terms of other household facilities: Large majority of households did not have toilet (~95%) and electricity (~70%) facility. Majority of the households (84.1%) had 'Below Poverty Line' (BPL) card issued by Government of Maharashtra.

## Conclusions:

- The study confirms malnutrition as the primary causes of child mortality in the study area, responsible for about two third of deaths in children under five years of age.

- The specific neonatal causes were prematurity and respiratory problems.

- Majority of the households did not have basic facilities such as electricity and toilets. Also, large majority of mothers had anemia. Most of the parents had lesser education and lesser awareness for health care.

- The verbal autopsy method (also know as King-Lu method) has shown to be useful for attributing cause-specific mortality fractions in the study area.

## Recommendations:

- The Government should pursue and intensify its efforts to reduce the prevalence of Malnutrition, by raising the general health awareness among the community.

- The Government also should pursue and intensify its efforts to reduce neonatal mortality, increasing the proportion of deliveries assisted by health professionals, as well as its capacity for obstetrical intervention and timely referral of deliveries requiring specialised assistance.

- The Government should also intensify the 'education for all policy' in general especially for potential mothers.

- The general awareness regarding health-seeking options including the immunization needs to be strengthened. Also the awareness regarding BPL and health care needs to be developed at the community level.

- The health care facilities must be well equipped with the availability of Specialists such as Pediatrician, Surgeon, Neurologists etc.

- The involvement of women in decision-making must be encouraged.

## Section 1-2-3
## The distribution of general information according to the age at death.

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| Age at death (yrs)$^\yen$ | 0.013 (0.00 – 0.43) | 1.85 (0.54 – 4.85) | 0.090 (0.00 – 4.85) | 0.000 |
| **Age at death groups** | | | | |
| Perinatal (Up to 7 days) | 70 (57.4) | -- | 70 (33.8) | 0.000 |
| Neonatal (8 to 28 days) | 30 (24.6) | -- | 30 (14.5) | |
| Post neonatal (>28 days till 1 yr) | 22 (18.0) | 17 (20.0) | 39 (18.8) | |
| Child (< 5yrs) | -- | 68 (80.0) | 68 (32.9) | |
| **Child's Sex** | | | | |
| Male | 76 (62.3) | 44 (51.8) | 120 (58.0) | 0.131 |
| Female | 46 (37.7) | 41 (48.2) | 87 (42.0) | |
| **Key Informant** | | | | |
| ANM | 59 (48.4) | 41 (48.2) | 100 (48.3) | 0.128 |
| Anganwadi worker | 17 (13.9) | 11 (12.9) | 28 (13.5) | |
| Other health worker | 39 (31.9) | 28 (32.9) | 67 (32.4) | |
| Relative | 7 (5.7) | 5 (5.9) | 12 (5.8) | |
| **Place of illness** | | | | |
| Home | 71 (58.2) | 59 (69.4) | 130 (62.8) | 0.030 |
| Relative home | 14 (11.5) | 15 (17.6) | 29 (14.0) | |
| Health facility | 33 (27.0) | 10 (11.8) | 43 (20.8) | |
| Other | 4 (3.3) | 1 (1.2) | 5 (2.4) | |
| **Place of death** | | | | |
| Home | 63 (51.6) | 46 (54.1) | 109 (52.7) | 0.481 |
| Medical college hospital | 1 (0.8) | -- | 1 (0.5) | |
| District / Sub Hosp | 31 (25.4) | 15 (17.6) | 46 (22.2) | |
| PHC RH | 8 (6.6) | 5 (5.9) | 13 (6.3) | |
| Informal Place | -- | 1 (1.2) | 1 (0.5) | |
| Private Hospital | 3 (2.5) | 1 (1.2) | 4 (1.9) | |
| Other | 16 (13.1) | 17 (20.0) | 33 (15.9) | |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

$^\yen$Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

**Comments:**
1) **Significantly higher proportion of children from group II have home as a place of illness.**
2) **The distribution of place of death is not significantly different between two groups.**
3) **Large majority of children died at home (~53%).**

## Section-4
## Available background information  & information from respondents

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| **Religion** | | | | |
| Hindu | 121 (99.2) | 84 (98.8) | 205 (99.0) | 0.344 |
| Muslim | 1 (0.8) | -- | 1 (0.5) | |
| Other | -- | 1 (1.2) | 1 (0.5) | |
| **Caste** | | | | |
| SC | 2 (1.6) | 2 (2.4) | 4 (1.9) | 0.741 |
| ST | 108 (88.5) | 77 (90.6) | 185 (89.4) | |
| Other | 12 (9.8) | 6 (7.1) | 18 (8.7) | |
| **Consanguinity** | 12 (9.8) | 8 (9.4) | 20 (9.7) | 0.919 |
| **Household facilities** | | | | |
| No Toilet facility | 115 (94.3) | 83 (97.6) | 198 (95.7) | 0.240 |
| No Electricity | 83 (68.0) | 64 (75.3) | 147 (71.0) | 0.257 |
| BPL card | 104 (85.2) | 70 (82.4) | 174 (84.1) | 0.345 |
| Awareness of BPL | 110 (90.2) | 74 (87.1) | 184 (88.9) | 0.145 |
| **Parental Information** | | | | |
| Father's education (yrs) | 7.0 (0 –15) | 4.0 (0 –15) | 6.0 (0 –15) | 0.011 |
| **Father's occupation** | | | | |
| Employed | 4 (3.3) | 1 (1.2) | 5 (2.4) | 0.647 |
| Laborer | 53 (43.4) | 39 (45.9) | 92 (44.4) | |
| Unemployed | -- | 1 (1.2) | 1 (0.5) | |
| Working in own land | 61 (50.0) | 41 (48.2) | 102 (49.2) | |
| Others | 3 (2.5) | 3 (3.5) | 6 (2.9) | |
| Mother's education (yrs) | 4.0 (0 –12) | 2.0 (0 – 12) | 3.0 (0 – 12) | 0.043 |
| **Mother's occupation** | | | | |
| House wife | 41 (33.6) | 22 (25.9) | 63 (30.4) | 0.755 |
| Laborer | 35 (28.7) | 30 (35.3) | 65 (31.4) | |
| Unemployed | 1 (0.8) | 1 (1.2) | 2 (1.0) | |
| Working in own land | 43 (35.2) | 29 (34.1) | 72 (34.8) | |
| Others | 1 (0.8) | 2 (2.4) | 3 (1.4) | |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

¥Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

**Comments:**
1) **The distribution of household facilities are approximately similar between two groups.**
2) **Large majority of households did not have toilet (~95%) / electricity (~70%) facility.**

3) **Parents of group I children had significantly higher education compared to the group II children.**
4) **The distribution of parental occupation is not significantly different between two groups.**

**Section-5 (5.1, 5.2, 5.2.1, 5.3, 5.3.1, 5.11)**
**Section-6 (     6.1, 6.1.1, 6.2, 6.2.1)**

## Pregnancy history  (Common questions)

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| **Maternal Age (yrs)$^{¥}$** | | | | |
| At the time of delivery | 21.8 (15.9 – 40.0) | -- | -- | -- |
| At the time of child's death | 22.0 (16.0 – 40.0) | -- | -- | -- |
| **Mother's Current health status** | | | | |
| Healthy | 26 (21.3) | 24 (28.2) | 50 (24.2) | 0.651 |
| Ill | 90 (73.8) | 56 (65.9) | 146 (70.5) | |
| Not alive | 3 (2.5) | 3 (3.5) | 6 (2.9) | |
| **Type of illness (n=146)** | | | | |
| Anemia | 89 (98.9) | 53 (94.6) | 142 (97.3) | 0.158 |
| Other | 1 (1.1) | 3 (5.4) | 4 (2.7) | |
| **Medication history** | | | | |
| Taking medicine (Other than IFA & TT) | 14 (11.5) | 1 (1.2) | 15 (7.2) | 0.005 |
| **Medicine taking for (n=15)** | | | | |
| AKT Dots | -- | 1 (100.0) | 1 (6.7) | 0.001 |
| Hyper tension | 1 (7.1) | -- | 1 (6.7) | |
| Other | 13 (92.9) | -- | 13 (8.7) | |
| **No. of IFA tablets received** | | | | |
| Less than 100 | 27 (22.1) | -- | -- | -- |
| Exactly 100 | 83 (68.0) | -- | -- | -- |
| TT injection during pregnancy | 116 (95.1) | -- | -- | -- |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.
$^{¥}$Values are Median (Minimum- Maximum).

## Comments:
1) The distribution of mother's current health status is approximately similar in both the groups.
2) Large majority (~70%) of mothers are ill at the time of child's death.
3) Large majority (~97%) of mothers were anemic.
4) The distribution of medication history is significantly different between two groups.

## Section-5 (contd)
## Pregnancy history (5.4, 5.4.1, 5.4.2a, 5.4.2a, 5.4.3, 5.6)

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | P-value |
|---|---|---|
| **Parity** | | |
| Primipara | 52 (42.6) | 0.000 |
| One | 24 (19.7) | |
| Two | 21 (17.2) | |
| More than two | 25 (20.5) | |
| **No. of live births before current baby** | | |
| None | 54 (44.3) | 0.000 |
| One | 30 (24.6) | |
| Two | 21 (17.2) | |
| More than two | 17 (13.9) | |
| Any baby died before the current baby | 20 (16.4) | -- |
| **Reason of death (n=20)** | | |
| LBW | 4 (20.0) | 0.038 |
| MRCP | 1 (5.0) | |
| Septicemia | 5 (25.0) | |
| Other | 10 (50.0) | |
| **Birth order** | | |
| First | 53 (43.4) | 0.010 |
| Two | 26 (21.3) | |
| More than two | 43 (35.3) | |
| **Interval since last pregnancy (Months)** ¥ | 18.0 (8.0 – 84.0) | -- |
| **Gestation age (weeks)** | 33.0 (20.0 – 42.0) | -- |
| Premature | 86 (71.7) | 0.000 |
| Full term | 34 (28.3) | |
| **Maternal Illness during pregnancy (Told by Doctor/Nurse)** | | |
| Anemia | 49 (40.2) | 0.000 |
| Hearth Disease | 1 (0.8) | |
| Diabetes | 1 (0.8) | |
| Cancer | 1 (0.8) | |
| Hypertension | 3 (2.5) | |
| Tuberculosis | **--** | |
| Epilepsy | **--** | |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

¥Values are Median (Minimum- Maximum).

## Section-5 (contd)
## Pregnancy history (5.7, 5.8, 5.8.1, 5.9, 5.9.1, 5.10)

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | P-value |
|---|---|---|
| **Illness during last 3 months of pregnancy** | | |
| Nil | 82 (67.2) | 0.000 |
| Vaginal bleeding | 3 (2.5) | |
| Smelly discharge | 1 (0.8) | |
| Puffy face | 7 (5.7) | |
| Headache | 6 (4.9) | |
| Blurred vision | 4 (3.3) | |
| Convulsions | 2 (1.6) | |
| Febrile illness | 3 (2.5) | |
| Severe abdominal pain | 5 (4.1) | |
| Pallor & shortness of breath | 6 (4.9) | |
| Other | 3 (2.5) | |
| **Type of birth** | | |
| Singleton | 107 (87.7) | 0.000 |
| Twin | 15 (12.3) | |
| Triplet or more | -- | |
| **Birth order of dead twin (n=15)** | | |
| First | 7 (46.7) | 0.999 |
| Second | 7 (46.7) | |
| Don't know | 1 (6.7) | |
| **Antenatal care** | | |
| Taken from ANM /Nurse / Doctor | 118 (96.7) | -- |
| **Number of times the care received** | | |
| Never | 4 (3.3) | 0.000 |
| Once | 9 (7.4) | |
| Twice | 13 (10.7) | |
| Thrice | 32 (26.4) | |
| More than thrice | 63 (52.1) | |
| **Fetal movements** | | |
| Fetal movements experienced | 111 (91.0) | -- |
| Weeks since fetal movements experienced[¥] | 20 (16 – 28) | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

[¥]Values are Median (Minimum- Maximum).

## Section-5 (contd)
## Delivery history (5.13…5.21)

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | P-value |
|---|---|---|
| **Duration of labor** | | |
| Less than 12 hours | 101 (82.8) | 0.000 |
| More than 12 hours | 19 (15.6) | |
| Mother have fever during /after labor | 4 (3.3) | -- |
| Liquor (Amniotic fluid) smelling | 3 (2.5) | -- |
| Green coloured liquor | 2 (1.6) | -- |
| **Time of birth after the leak (hrs)** | | **--** |
| Less than 12 hours | 110 (90.2) | 0.000 |
| More than 12 hours | 3 (2.5) | |
| Any medication for leak | -- | -- |
| **Delivery / Labor attended by** | | **--** |
| Obstetrician | 7 (5.7) | 0.000 |
| General doctor | 13 (10.7) | |
| Nurse | 11 (9.0) | |
| ANM | 17 (13.9) | |
| Trained Dai | 46 (37.7) | |
| Relatives / Friend | 13 (10.7) | |
| Herself | -- | |
| Quack | 4 (3.3) | |
| Other | 11 (9.0) | |
| **Place of delivery** | | |
| Home | 72 (59.0) | -- |
| Government Hospital | 37 (30.3) | -- |
| Private Hospital | 4 (3.3) | -- |
| Other | 9 (7.4) | -- |
| **Mode of delivery** | | |
| Normal (Spontaneous vaginal (no drugs)) | 114 (93.4) | 0.000 |
| Mechanically induced | -- | |
| Induced with drugs | 6 (4.9) | |
| Forceps | -- | |
| Cesarean section | 2 (1.6) | |
| **Part of baby came out first** | | |
| Head | 113 (92.6) | 0.000 |
| Buttocks/Feet | 6 (4.9) | |
| Hand | -- | |
| Umbilical cord | -- | |
| Excess bleeding on the day of labor | 9 (7.4) | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.
[¥]Values are Median (Minimum- Maximum).

## Section-5 (contd)
## Condition of the baby soon after birth (5.22…5.30)

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | P-value |
|---|---|---|
| **Size of the baby** | | |
| Smaller than normal | 79 (64.8) | 0.000 |
| Normal | 42 (34.4) | |
| Larger than normal | -- | |
| **Birthweight (g)** | | |
| <1500 | 36 (29.5) | 0.000 |
| 1500-2000 | 26 (21.3) | |
| 2000-2500 | 23 (18.9) | |
| >2500 | 35 (28.7) | |
| **Recently baby weighed** | 110 (90.2) | -- |
| **Recent Weight (kg)** $^{\yen}$ | 1.8 (1.0 – 6.0) | -- |
| Prematurity status (<37 wks) | 83 (68.0) | -- |
| **Time of bath after birth (days)** | | |
| < 1 | 55 (45.1) | 0.000 |
| 1 to 7 | 19 (15.6) | |
| >7 | 4 (3.3) | |
| DK | 44 (36.1) | |
| **Umbilical cord tied with** | | |
| Thread from house | 26 (21.3) | 0.000 |
| Thread from dai kit | 77 (63.1) | |
| Cord clamp | 17 (13.9) | |
| **Umbilical cord cutted with** | | |
| Razor blade from home | 4 (3.3) | 0.000 |
| New Razor blade | 83 (68.0) | |
| Knife from house | -- | |
| Surgical blade | 32 (26.2) | |
| Other instrument | 2 (1.6) | |
| **Application to umbilical cord** | 18 (14.8) | -- |
| **Material applied to umbilical cord (n=18)** | | |
| Oil (Edible / Coconut/ Soya) | 14 (77.8) | 0.000 |
| Kum-kum (Sindhor) | 4 (22.2) | |
| Signs of injury at birth | -- | -- |
| Signs of paralysis | 1 (0.8) | -- |
| Any Malformation | 8 (6.6) | -- |
| **Type of malformation** | | |
| Swelling/Defect on the back | 1 (0.8) | 0.417 |
| Very small / large head | -- | |
| Defect of lip and / palate | 3 (2.5) | |
| Other | 4 (3.3) | |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.
$^{\yen}$Values are Median (Minimum- Maximum).

## Section-5 (contd)
## Condition of the baby soon after birth (5.31)

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | P-value |
|---|---|---|
| **Colour of baby at birth** | | |
| Normal | 100 (82.0) | 0.000 |
| Pale /Yellow | 12 (9.8) | |
| Blue | 4 (3.3) | |
| Baby cried after birth | 110 (90.2) | -- |
| Baby given assistance to breathe | 25 (20.5) | -- |
| Baby movements (Hand & legs) | 113 (92.6) | -- |
| Dead baby at birth (Still birth) | -- | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

## Section-5 (contd)
## Neonatal illness history (5.36…5.42.1)

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | P-value |
|---|---|---|
| **Breast feeding history** | | |
| Baby ever breastfed | 80 (65.6) | -- |
| Duration of baby suckle after the birth (hours)[¥] | 0.75 (0.17 – 72.0) | -- |
| **Type of breastfeeding** | | |
| Exclusive | 69 (56.6) | 0.000 |
| Non-Exclusive | 11 (9.0) | |
| **Type of feeding (for Non-exclusive) (n=11)** | | |
| Cows milk | 5 (45.5) | 0.007 |
| Buffalo milk | 1 (9.0) | |
| Other | 5 (45.5) | |
| Event of stopping suckling (min) | 30 (24.6) | -- |
| Time to stop suckling after the birth (days)[¥] | 3 (1 – 86) | -- |
| **Mode of keeping baby warm** | | |
| Covered with own clothes only | 43 (35.2) | 0.002 |
| Covered with own clothes & blanket | 40 (19.3) | |
| Any other method | 39 (32.0) | |
| Baby had convulsions | 15 (12.3) | -- |
| **Time of convulsions after the birth (hrs) (n=15)** | | |
| Within 24 | 2 (13.3) | 0.000 |
| After 24 | 13 (86.7) | |
| Baby become stiff & arched backward | 5 (4.1) | -- |
| Time to become stiff & arched backward (hrs)[¥] | 14 (1 – 47) | -- |
| **Lethargy / drowsy** | | |
| Event of lethargy / drowsy | 63 (51.6) | -- |
| Time to event of lethargy / drowsy[¥] | 6 (1 – 156) | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.[¥]Values are Median (Minimum- Maximum).

## Section-5 (contd)
## Neonatal illness history (5.43…5.58.1)

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | P-value |
|---|---|---|
| **Adverse outcomes after birth** | | |
| Fever | 20 (16.4) | -- |
| Time to have fever[¥] | 14 (2 – 155) | -- |
| Cold to the touch | 32 (26.2) | -- |
| Time to cold to the touch (days)[¥] | 3 (1 – 48) | -- |
| Cough | 17 (13.9) | -- |
| Time to cough (days)[¥] | 12 (1 – 155) | -- |
| Fast breathing | 35 (28.7) | -- |
| Time to fast breathing (days)[¥] | 4 (1 – 155) | -- |
| Difficulty in breathing | 41 (33.6) | -- |
| Time to difficulty in breathing (days)[¥] | 4 (1 – 156) | -- |
| Chest in indrawing | 21 (17.2) | -- |
| Grunting | 24 (19.7) | -- |
| Flaring of the Nostrils | 14 (11.5) | -- |
| Watery stools | 10 (8.2) | -- |
| Time to watery stools(days)[¥] | 17 (1 – 156) | -- |
| Blood in the stools | 2 (1.6) | -- |
| Vomiting | 30 (24.6) | -- |
| Time to stray vomiting(days)[¥] | 4 (1 – 148) | -- |
| **Vomiting colour (n=30)** | | |
| White | 20 (66.7) | 0.000 |
| Reddish | 4 (13.3) | |
| Yellowish | 2 (6.7) | |
| Other | 4 (13.3) | |
| Abdominal distention | 11 (9.0) | -- |
| Time to abdominal distention (days)[¥] | 2 (1 – 28) | -- |
| Redness / Discharge from umbilical cord | 2 (1.6) | -- |
| Pustular skin rash | 4 (3.3) | -- |
| **Location of Pustular skin rash** | | |
| Face only | 1 (25.0) | 0.003 |
| All over body | 1 (25.0) | |
| Other | 2 (50.0) | |
| Yellow palm / soles | 6 (4.9) | -- |
| Time to yellow palm /soles (days)[¥] | 4 (2 – 7) | -- |
| Duration of yellow palm / soles (days)[¥] | 3 (1 – 19) | -- |
| **Immunization History** | | |
| Immunization given | 33 (27.0) | -- |
| Immunization complete for age | 17 (51.5) | -- |
| Immunization incomplete for age | 16 (48.5) | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.[¥]Values are Median (Minimum- Maximum).

## Section-6
## History of previously known medical condition in child (6.3…6.11)
## Symptoms noted during final illness (6.12…6.15)

| Parameters | Group II (Age at death > 6 Months) (n=85) | P-value |
|---|---|---|
| **Known Major Illness** | | |
| Heart Disease | 1 (1.2) | 0.000 |
| Diabetes | -- | |
| Asthma | 1 (1.2) | |
| Convulsions | 4 (4.7) | |
| Malnutrition | 45 (52.9) | |
| Tuberculosis | 5 (5.9) | |
| HIV AIDS | -- | |
| **Congenital malformation** | | |
| Swelling / defect on the back | -- | 0.000 |
| Very large head | 3 (3.5) | |
| Very small head | -- | |
| Defect of lip / palate | -- | |
| Other | 3 (3.5) | |
| No malformation | 78 (91.8) | |
| **Other medical illness** | 17 (20.0) | |
| **Type of illness (n=17)** | | |
| Blood cancer | 1 (5.9) | 0.001 |
| Koch's infection | 1 (5.9) | |
| PEM | 4 (23.5) | |
| Other (gastro, multi vitamin deficiency etc) | 11 (64.7) | |
| **Symptoms during final illness** | | -- |
| Small at birth | 11 (12.9) | -- |
| **Birthweight categories (gms)** | | |
| <1500 | 1 (1.2) | 0.000 |
| 1500 – 2000 | 1 (1.2) | |
| 2000 – 2500 | 23 (27.1) | |
| >2500 | 58 (68.2) | |
| Prematurely born | 27 (31.8) | -- |
| Gestational age (wks) for premature babies[¥] | 36 (28 – 38) | -- |
| Normal Growth | 36 (42.4) | -- |
| Duration of illness before death (days) [¥] | 8 (1 – 180) | -- |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

[¥]Values are Median (Minimum- Maximum).

## Section-6 (contd)
## Symptoms noted during final illness (6.16…6.24)

| Minor illness | Group II (Age at death > 6 Months) (n=85) | P-value |
|---|---|---|
| **Fever related** | | |
| Had fever | 41 (48.2) | -- |
| Duration of fever (days) $^{¥}$ | 5 (1 – 90) | -- |
| **Type of fever (n=41)** | | |
| Continuous | 21 (51.2) | 0.127 |
| On and off | 19 (46.3) | |
| Chills / Rigor | 10 (11.8) | |
| **Cough related** | | |
| Had cough | 28 (32.9) | **--** |
| Duration of cough (days) $^{¥}$ | 5 (1 – 180) | **--** |
| Sever cough | 13 (15.3) | **--** |
| Vomited after cough | 5 (5.9) | **--** |
| **Breathing related** | | |
| Fast breathing | 25 (29.4) | 0.057 |
| Difficulty in breathing | 27 (31.8) | |
| Chest indrawing | 16 (18.8) | |
| Noisy breathing | 15 (17.6) | |
| Flaring of nostrils | 12 (14.1) | |
| **Diarrhea related** | | |
| Had Diarrhea | 20 (23.5) | **--** |
| Duration of diarrhea (days) $^{¥}$ | 6 (1 – 45) | **--** |
| Frequency of passing tools (per day) $^{¥}$ | 4 (2 – 12) | **--** |
| Less urine passed | 7 (8.2) | **--** |
| Sunken eyes | 11 (12.9) | **--** |
| Lethargic / drowsy | 14 (16.5) | **--** |
| Blood in the stools | 9 (10.6) | **--** |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

$^{¥}$Values are Median (Minimum- Maximum).

# Section-6 (contd)
# Symptoms noted during final illness (6.25…6.31.3)

| Parameters | Group II (Age at death > 6 Months) (n=85) | P-value |
|---|---|---|
| **Skin related** | | |
| Any skin rash | 2 (2.4) | -- |
| Duration of skin rash (days) | 3 and 9 | -- |
| **Site of rash (n=2)** | | |
| Face | -- | -- |
| Trunk | -- | -- |
| Arms & legs | -- | -- |
| Don't know | 2 (100.0) | -- |
| **Rash looks like** | | |
| Rash with pus | 1 (50.0) | 0.989 |
| Don't know | 1 (50.0) | |
| Red eyes | -- | **--** |
| Loss of appetite | 18 (14.8) | **--** |
| Weight loss | 44 (51.8) | **--** |
| Pale look | 29 (34.1) | **--** |
| Thin / wested look | 32 (37.6) | **--** |
| **Weighed recently** | 70 (82.4) | **--** |
| Current weight (kg) $^{¥}$ | 6.7 (3.0 – 14.5) | **--** |
| Change in hair colour to red / yellow | 5 (5.9) | **--** |
| **Vomiting** | | |
| Vomited | 23 (27.1) | **--** |
| Duration of vomiting | 2 (1 – 30) | **--** |
| Frequency of vomiting per day | 3 (1 – 8) | **--** |
| **Colour of vomiting (n=23)** | | |
| White | 6 (27.3) | 0.282 |
| Yellow | 4 (18.2) | |
| Watery | 9 (40.9) | |
| Other | 3 (13.6) | |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

$^{¥}$Values are Median (Minimum- Maximum).

# Section-6 (contd)
# Symptoms noted during final illness (6.32…6.43)

| Parameters | Group II (Age at death > 6 Months) (n=85) | P-value |
|---|---|---|
| **Abdominal pain and distension** | | |
| Abdominal pain | 13 (15.3) | -- |
| Abdominal distension | 10 (11.8) | -- |
| **Duration of abdominal distension (days) (n=10)** | | |
| 1 | 4 (40.0) | 0.392 |
| 2 | 2 (20.0) | |
| >2 | 4 (40.0) | |
| No stool passing (n=10) | 7 (70.0) | -- |
| Mass in abdomen | -- | -- |
| Yellow discoloration of eyes | 3 (3.5) | -- |
| Bleeding from any site | 9 (10.6) | -- |
| **Bleeding Site** | | |
| Through stool (n=9) | 8 (88.9) | -- |
| Mouth sores | 8 (9.4) | -- |
| Duration of mouth sores (days) (n=8) | | |
| 2 | 2 (25.0) | 0.000 |
| >2 | 6 (75.0) | |
| **Lumps on** | | |
| Neck | 1 (1.2) | -- |
| Armpit | -- | -- |
| Groin | -- | -- |
| Other place | -- | -- |
| **Swelling on** | | |
| Face | 2 (2.4) | 0.881 |
| Joints | 1 (1.2) | |
| Ankles | -- | |
| Whole body | 1 (1.2) | |
| Other place (Hands / Limbs) | 2 (2.4) | |
| Headache | 1 (1.2) | -- |
| Stiff on painful neck | 4 (4.7) | -- |
| **Event of Drowsy / Unconscious** | | |
| Drowsy / Unconscious | 21 (24.7) | -- |
| Duration of unconsciousness (days) (n=21) | | |
| 1 | 8 (38.1) | 0.327 |
| 2 | 6 (28.6) | |
| >2 | 3 (14.3) | |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

## Section-6 (contd)
## Symptoms noted during final illness (6.43.1…6.48.1)

| Parameters | Group II (Age at death > 6 Months) (n=85) | P-value |
|---|---|---|
| **Development of Unconsciousness (n=21)** | | |
| Suddenly | 11 (52.4) | 0.116 |
| Fast | 4 (19.0) | |
| Slowly | 5 (23.8) | |
| **Convulsions** | 15 (17.6) | -- |
| **Paralysis** | | |
| Paralysis of lower limbs | 5 (5.9) | -- |
| Duration of paralysis (days) (n=5) | | |
| 1 | 1 (20.0) | 0.000 |
| >1 | 4 (80.0) | |
| **Onset of Paralysis (n=5)** | | |
| Suddenly | 3 (60.0) | 0.449 |
| Fast in a day | 1 (20.0) | |
| Slowly | 1 (20.0) | |
| **Ear discharge** | 2 (2.4) | -- |
| **Skin infection** | 16 (18.8) | -- |
| **Type of skin infection (n=16)** | | |
| Bed sour | 1 (6.3) | 0.180 |
| Leg & Hand | 4 (25.0) | |
| **Immunization history** | | |
| Immunization given | 81 (95.3) | -- |
| Immunization complete for age | 73 (85.9) | 0.000 |
| Immunization incomplete for age | 12 (14.1) | |

Values are n (%), p-values are by Chi-square test for testing equality of proportions across all sub-categories.

## Section-7
## History of Injuries / Accidents

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| Suffer from Injury | -- | 4 (4.7) | 4 (1.9) | 0.028 |
| **Type of Injury** | | | | |
| Road accident | -- | 1 (1.2) | 1 (0.5) | 0.214 |
| Fall | -- | 1 (1.2) | 1 (0.5) | |
| Drowning | **--** | 1 (1.2) | 1 (0.5) | |
| Poisoning | -- | 1 (1.2) | 1 (0.5) | |
| Intentional accident | -- | -- | -- | -- |
| Animal/ Insect bite | -- | 2 (2.4) | 2 (1.0) | 0.055 |
| Type of Animal / Insect | | | | |
| Snake | -- | 1 (1.2) | 1 (0.5) | 0.238 |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

## Comments:
1) **The distribution of event of suffering from injury is significantly different between two groups.**

**Section-8**
**Care seeking information that led to death**
**(Note:- This section has been filled up only on 192 cases)**

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=111) | Group II (Age at death > 6 Months) (n=81) | All (n=192) | P-value |
|---|---|---|---|---|
| **Family action on illness** | | | | |
| Home care | 44 (39.6) | 34 (42.0) | 78 (40.6) | 0.745 |
| Informal care provider | 23 (20.7) | 42 (51.9) | 65 (33.9) | 0.000 |
| Formal health care | 67 (60.4) | 51 (63.0) | 118 (61.5) | 0.714 |
| **Decision on action** | | | | |
| Mother | 19 (17.1) | 12 (14.8) | 31 (16.1) | 0.001 |
| Father | 25 (22.5) | 37 (45.7) | 62 (32.3) | |
| Grand Mother | 5 (4.5) | 3 (3.7) | 8 (4.2) | |
| Grand Father | 6 (5.4) | 4 (4.9) | 10 (5.2) | |
| Other | 51 (45.9) | 16 (19.8) | 67 (34.9) | |
| **Duration for Action on Illness (Hours)$^¥$** | 2.0 (0.0 – 720.0) | 17.5 (0.0 – 1248.0) | 3.0 (0.0- 1248.0) | 0.008 |
| **Symptoms** | | | | |
| Abdominal Distention | 6 (4.9) | 11 (12.9) | 17 (8.2) | 0.039 |
| Difficulty in Breathing | 24 (19.7) | 16 (18.8) | 40 (19.3) | 0.879 |
| Cough/ Fever | 22 (18.0) | 37 (43.5) | 59 (28.5) | 0.000 |
| Convulsions | 6 (4.9) | 10 (11.8) | 16 (7.7) | 0.070 |
| Loose Motions | 6 (4.9) | 21 (24.7) | 27 (13.0) | 0.000 |
| Drowsy / Lethargic | 22 (18.0) | 3 (3.5) | 25 (12.1) | 0.002 |
| Vomiting | 13 (10.7) | 14 (16.5) | 27 (13.0) | 0.222 |
| Prematurity (LBW/VLBW) | 43 (35.2) | -- | 43 (20.8) | 0.000 |
| **Reason for not seeking formal health care** | | | | |
| Child not sick enough | 43 (38.7) | 24 (29.6) | 67 (34.9) | 0.191 |
| Nobody to accompany | 1 (0.9) | 3 (3.7) | 4 (2.1) | 0.312 |
| Parents busy in household duties | 3 (2.7) | 2 (2.5) | 5 (2.6) | 0.999 |
| **Barriers to formal health care** | | | | |
| Transportation | 5 (4.5) | 5 (6.2) | 10 (5.2) | 0.607 |
| Money for transportation | 1 (0.9) | 1 (1.2) | 1 (1.0) | 0.999 |
| Money for care provider | -- | -- | -- | -- |
| Other costs | -- | -- | -- | -- |
| Unsatisfied on health care | 2 (1.8) | 8 (9.9) | 10 (5.2) | 0.019 |
| Require traditional care | 23 (20.7) | 24 (29.6) | 47 (24.5) | 0.156 |
| Too sick to travel | 2 (1.8) | 4 (4.9) | 6 (3.1) | 0.242 |
| Thought child would die | 3 (2.7) | 3 (3.7) | 6 (3.1) | 0.698 |
| Late at night | 4 (3.6) | 8 (9.9) | 12 (6.3) | 0.128 |
| No care seeking problem | 50 (45.0) | 25 (30.9) | 75 (39.1) | 0.047 |
| Other | 5 (4.5) | 9 (11.1) | 14 (7.3) | 0.082 |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.$^¥$Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

**Comments:**

1) **Significantly higher proportion of children from group II had informal care provider compared to the group I.**
2) **The distribution of decision on action is significantly different between two groups.**
3) **The distribution of time for action on illness is significantly different between two groups.**
4) **The distribution of some of the symptoms (such as abdominal distension, cough, loose motions, drowsy and lethargic) are significantly different between two groups.**
5) **The distribution of reasons for not seeking formal health care is approximately similar between two groups.**
6) **Significantly higher proportion of parents from group II were not satisfied on health care facilities provided.**
7) **Significantly higher proportion of parents from group I felt that there was no care seeking problem to seek formal health care.**

## MATRIX QUSTIONS (8.6…8.12)
## Note:- This has been filled up for 113 cases

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) | P-value |
|---|---|---|---|---|
| **No. of formal facilities used** | | | | |
| 1 | 41 (58.6) | 24 (55.8) | 65 (57.5) | 0.609 |
| 2 | 22 (31.4) | 12 (27.9) | 34 (30.1) | |
| >2 | 7 (10.0) | 7 (16.3) | 14 (12.4) | |
| Time taken to make the arrangements (hrs) ¥ | 0.62 (0.0 – 52.0) | 0.50 (0.0 – 8.42) | 0.75 (0.0 – 52.0) | 0.444 |
| Travel time to facilities (hrs) ¥ | 0.5 (0.0 – 8.4) | 1.0 (0.03 – 6.9) | 0.7 (0.0 – 8.4) | 0.062 |
| Referral time at the facility (hrs) ¥ | 0.0 (0.0 – 101.0) | 0.0 (0.0 – 264.0) | 0.0 (0.0 – 264.0) | 0.905 |
| Duration of stay at the facility (hrs) ¥ | 24.0 (0.0 – 267.0) | 9.0 (0.0 – 384.0) | 15.0 (0.0 – 384.0) | 0.092 |
| Distance to facility (km) ¥ | 15.0 (0.0 – 310.0) | 15.0 (0.0 – 160.0) | 15.0 (0..0 – 310.0) | 0.843 |
| Transportation cost (Rs) ¥ | 0.0 (0.0 – 2000.0) | 0.0 (0.0 – 400.0) | 0.0 (0.0 – 2000.0) | 0.141 |
| Care cost (Rs) ¥ | 0.0 (0– 15000) | 0.0 (0 – 500) | 0.0 (0– 15000) | 0.054 |
| **Source of money (n=112)** | | | | |
| Own | 18 (25.7) | 18 (42.9) | 36 (32.1) | 0.162 |
| Borrowed | 4 (5.7) | 4 (9.5) | 8 (7.1) | |
| Sold assets | -- | -- | 0 | |
| Community fund | 1 (1.4) | -- | 1 (0.1) | |
| Govt scheme | 48 (68.6) | 20 (47.6) | 68 (60.7) | |
| Other | 5 (7.1) | 1 (2.4) | 6 (5.4) | |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

¥Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

### Comments:

1) The distribution of number of facilities used is approximately similar in both the groups.
2) The distributions of health care parameters (such as travel time, referral time, duration of stay at the facility, distance to facility etc) are not significantly different between two groups.
3) The distributions of health economic parameters (such as transportation cost, care cost etc) are not significantly different between two groups.
4) Large majority of cases (~60%) had Government scheme to avail the health care facilities.

# MATRIX QUSTIONS (contd)
# Transport methods used (8.10)

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | p |
|---|---|---|---|
| Total facility visits | 107 | 69 | |
| Walk | 10 (9.3) | 13 (18.8) | 0.068 |
| Rickshaw/Cart | 2 (1.9) | 2 (2.9) | 0.51 |
| Bus | 4 (3.7) | 6 (8.7) | 0.15 |
| Taxi/auto | 10 (9.3) | 12 (17.4) | 0.12 |
| Ambulance | 57 (53.3) | 29 (42.0) | 0.14 |
| Other | 15 (14.0) | 7 (10.1). | 0.45 |
| Multiple methods | 10 (8.5) | - | |

Values are n(%), p by Chi-square test fot independence, Fishers exact test if cell frequency is more than 5.

## Comment:
**Use of ambulance facility is high.Walking was marginally higher in group 2.**

## MATRIX QUSTIONS (contd)
### (8.13…8.19)

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) | P-value |
|---|---|---|---|---|
| **Treatment provided** | | | | |
| Oral rehydration | 37 (52.9) | 15 (35.7) | 52 (46.4) | 0.078 |
| Blood transfusion | 3 (4.3) | 1 (2.4) | 4 (3.6) | 0.898 |
| Tube through nose | 22 (31.4) | 4 (9.5) | 26 (23.2) | 0.010 |
| Other (majority treated by antibiotics) | 48 (68.6) | 23 (54.8) | 71 (63.4) | 0.142 |
| Nothing | 1 (1.4) | 4 (9.5) | 5 (4.5) | 0.065 |
| **Cause of referral** | | | | |
| Certain problem | 5 (7.1) | 4 (9.5) | 9 (8.0) | 0.654 |
| No blood | -- | -- | -- | -- |
| For a procedure (CT, MRI, USG) | 4 (5.7) | 2 (4.8) | 6 (5.4) | 0.898 |
| Lack of Specialist (16 Pediatricians, 1 each Surgeon & Neurologist) | 14 (20.0) | 3 (7.1) | 17 (15.2) | 0.101 |
| Other (Father decided, Infection, Ventilator required) | 1 (1.4) | 2 (4.8) | 3 (2.7) | 0.555 |
| **Reasons for not going to other facility** | | | | |
| No transportation | 1 (1.4) | -- | 1 (0.9) | 0.375 |
| Transportation / Health care cost | 1 (1.4) | -- | 1 (0.9) | 0.375 |
| Not satisfied with available care | 3 (4.3) | 9 (21.4) | 12 (10.7) | 0.009 |
| Thought child would die | 1 (1.4) | 3 (7.1) | 4 (3.6) | 0.147 |
| Child died | 22 (31.4) | 9 (21.4) | 31 (27.7) | 0.252 |
| No care seeking problem | 26 (37.1) | 14 (33.3) | 40 (32.7) | 0.684 |
| Other | 12 (17.1) | 9 (21.4) | 21 (18.8) | 0.574 |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

**Comments:**
1) **The distribution of treatment provided (except tube through nose) is approximately similar between two groups.**
2) **The distribution of cause of referral is approximately similar between two groups.**
3) **The distribution of reasons for not goring to the other facilities are approximately similar between two groups.**

## Illnesses recorded in 2 groups (section-5, section-6 respectively)

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| **Illness reported** | | | | |
| Convulsions | 15 (12.3) | 15 (17.6) | 30 (14.9) | 0.282 |
| Lethargic / Drowsy | 63 (51.6) | 14 (16.5) | 77 (37.2) | 0.000 |
| Fever | 20 (16.4) | 41 (48.2) | 61 (29.5) | 0.000 |
| Cough / Cold | 17 (13.9) | 28 (32.9) | 45 (21.7) | 0.001 |
| Fast breathing | 35 (28.7) | 25 (29.4) | 60 (28.9) | 0.910 |
| Difficulty in breathing | 41 (33.6) | 27 (31.8) | 68 (32.8) | 0.781 |
| Chest indrawing | 21 (17.2) | 16 (18.8) | 37 (17.9) | 0.766 |
| Grunting | 24 (19.7) | 15 (17.6) | 39 (18.8) | 0.714 |
| Flaring of nostrils | 14 (11.5) | 12 (14.1) | 26 (12.6) | 0.573 |
| Diarrhea / Watery stools | 10 (8.2) | 20 (23.5) | 30 (14.5) | 0.002 |
| Vomiting | 30 (24.6) | 23 (27.1) | 53 (25.6) | 0.689 |
| Abdominal distension | 11 (9.0) | 10 (11.8) | 21 (10.1) | 0.519 |
| Skin rash | 4 (3.3) | 2 (2.4) | 6 (2.9) | 0.989 |
| **Immunization history** | | | | |
| Immunization given | 33 (27.0) | 81 (95.3) | 114 (55.1) | 0.000 |
| Immunization complete for age (n=114) | 17 (51.5) | 73 (85.9) | 90 (78.9) | 0.000 |
| Immunization incomplete for age (n=114) | 16 (48.5) | 8 (9.9) | 24 (21.1) | |

Values are n (%), p-values are by Chi-square test for independence of attributes if cell frequency is more than 5, else Fisher's exact test is used.

¥Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

## Comments:

1) **Significantly higher proportion of group I children had lethargy / drowsiness compared to group II children.**
2) **Significantly higher proportion of group II children had fever, cough/cold, diarrhea compared to group I children.**
3) **Significantly higher proportion of group II children had immunization which was completed for the age.**

# ADDITIONAL TABLES

## Table 1) Frequency of children died before 24 hours of age.

| Information | Total (n=122) |
|---|---|
| Age at death ≤24 hours | 24 (19.7) |
| Age at death >24 hours | 98 (80.3) |

**Values are n (%).**

## Table 2a) Association between place of death and health seeking behavior

| Place of death | Home care | | |
|---|---|---|---|
| | Yes | No | Total |
| Home | 52 (54.7) | 43 (45.3) | 95 |
| Medical college hospital | 0 | 1 (100.0.) | 1 |
| District / Sub Hosp | 8 (17.4) | 38 (82.6) | 46 |
| PHC RH | 4 (30.8) | 9 (69.2) | 13 |
| Informal Place | 0 | 1 (100.0) | 1 |
| Private Hospital | 1 (25.0) | 3 (75.0) | 4 |
| Other | 13 (40.6) | 19 (59.4) | 32 |

**Values are n (%), P-value=0.002, by Fisher's exact test.**

## Comments:

1) **The place of death and health seeking behavior are significantly associated.**
2) **Significantly higher proportion of parents whose babies died at home had preferred home care option of health care.**

**Table 2b) Association between place of death and health seeking behavior**

| Place of death | Sought care from informal provider | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| Home | 42 (44.2) | 53 (55.8) | 95 |
| Medical college hospital | 0 | 1 (100.0.) | 1 |
| District / Sub Hosp | 7 (15.2) | 39 (84.8) | 46 |
| PHC RH | 0 | 13 (100.0) | 13 |
| Informal Place | 1 (100.0) | 0 | 1 |
| Private Hospital | 1 (25.0) | 3 (75.0) | 4 |
| Other | 14 (43.8) | 18 (56.2) | 32 |

**Values are n (%), P-value=0.001, by Fisher's exact test.**

## Comment:

**The place of death and health seeking behavior are significantly associated.**

**Table 2c) Association between place of death and health seeking behavior**

| Place of death | Sought formal health care | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| Home | 32 (33.7) | 63 (66.3) | 95 |
| Medical college hospital | 1 (100.0.) | 0 | 1 |
| District / Sub Hosp | 46 (100.0) | 0 | 46 |
| PHC RH | 12 (92.3) | 1 (7.7) | 13 |
| Informal Place | 0 | 1 (100.0) | 1 |
| Private Hospital | 4 (100.0) | 0 | 4 |
| Other | 23 (71.9) | 9 (28.1) | 32 |

**Values are n (%), P-value=0.000, by Fisher's exact test.**

**Comments:**

**The place of death and health seeking behavior are significantly associated.**

**Table 3) Average time lapse between date of reporting and date of death.**

| | Median (Minimum - Maximum) |
|---|---|
| Difference between time of notification and Time of death (days) | 0.0 (0.0 – 62.0) |

**Table 4) The distribution of respondents.**

| Respondent | Total (n=207) |
|---|---|
| Mother | 137 (66.2) |
| Father | 50 (24.2) |
| Grand Mother | 6 (2.9) |
| Grand Father | 8 (3.9) |
| Relatives (Uncle / Aunt) | 2 (0.95) |
| Other | 4 (1.9) |

**Values are n (%).**

**Table 5) The distribution of place of death according to the age at death.**

| Place of death | Group I (Age at death $\leq$ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| Home | 63 (51.6) | 46 (54.1) | 109 (52.7) | 0.481 |
| Medical college hospital | 1 (0.8) | -- | 1 (0.5) | |
| District / Sub Hosp | 31 (25.4) | 15 (17.6) | 46 (22.2) | |
| PHC RH | 8 (6.6) | 5 (5.9) | 13 (6.3) | |
| Informal Place | -- | 1 (1.2) | 1 (0.5) | |
| Private Hospital | 3 (2.5) | 1 (1.2) | 4 (1.9) | |
| Other | 16 (13.1) | 17 (20.0) | 33 (15.9) | |
| **Specification of Other (n=33)** | | | | |
| During Transportation (On road) | 8 | 9 | 17 | |
| Relative's home | 6 | 6 | 12 | |
| Can't say | 2 | 2 | 4 | |

**Values are n (%), P-value by Fisher's exact test.**

**Table 6) The association between parental education and health seeking behavior.**

| Health seeking behavior | | Parental education status | | | |
|---|---|---|---|---|---|
| | | Father's education | P-value | Mother's education | P-value |
| Home care | Yes | 5.0 (0.0 – 15.0) | 0.666 | 4.0 (0.0 – 12.0) | 0.722 |
| | No | 7.0 (0.0 – 15.0) | | 3.0 (0.0 – 12.0) | |
| Sought care from informal provider | Yes | 4.0 (0.0 – 13.0) | 0.006 | 2.0 (0.0 – 10.0) | 0.003 |
| | No | 7.0 (0.0 – 15.0) | | 4.0 (0.0 – 12.0) | |
| Sought formal health care | Yes | 7.0 (0.0 – 15.0) | 0.736 | 4.0 (0.0 – 12.0) | 0.021 |
| | No | 5.0 (0.0 – 13.0) | | 2.0 (0.0 – 12.0) | |

**Values are Median (Minimum – Maximum), P-values by Mann-Whitney U test.**

**Comment:**

1) **The parental education and health seeking behavior are significantly associated.**
2) **In general, parents having relatively higher education preferred to seek formal health care option.**

**Table 7) The distribution of children suffering from injury**

| Parameters | Group I (Age at death $\leq$ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) |
|---|---|---|---|
| No. of children suffer from Injury (including animal / insect bite) | 0 | 6 (7.1) | 6 (2.9) |

**Values are n (%).**

**Table 8a) Association between place of delivery and health seeking behavior**

| Place of delivery | Home care | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| Home | 32 (50.0) | 32 (50.0) | 64 |
| Government Hospital | 7 (20.0) | 28 (80.0) | 35 |
| Private Hospital | 0 | 4 (100.0) | 4 |
| Other | 5 (62.5) | 3 (37.5) | 8 |

**Values are n (%), P-value =0.005, by Fisher's exact test.**

**Comments:**
1) **The place of delivery and the health seeking behavior for home care are significantly associated.**
2) **Significantly higher proportion of parents whose children borne in government hospital preferred not to have home care.**

**Table 8b) Association between place of delivery and health seeking behavior**

| Place of delivery | Sought care from informal provider | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| Home | 13 (20.3) | 51 (79.7) | 64 |
| Government Hospital | 7 (20.0) | 28 (80.0) | 35 |
| Private Hospital | 0 | 4 (100.0) | 4 |
| Other | 3 (37.5) | 5 (62.5) | 8 |

**Values are n (%), P-value =0.605, by Fisher's exact test.**

**Table 8c) Association between place of delivery and health seeking behavior**

| Place of delivery | Sought formal health care | | |
|---|---|---|---|
| | **Yes** | **No** | **Total** |
| Home | 36 (56.3) | 28 (43.8) | 64 |
| Government Hospital | 24 (68.6) | 11 (31.4) | 35 |
| Private Hospital | 4 (100.0) | 0 | 4 |
| Other | 3 (37.5) | 5 (62.5) | 8 |

**Values are n (%), P-value =0.136, by Fisher's exact test.**

**Table 9) Association between place of delivery and delivery attended by the expert.**

| Delivery attended by | Place of delivery | | | |
|---|---|---|---|---|
| | Home | Government Hospital | Private Hospital | Other |
| Obstetrician | 1 (1.4) | 3 (8.1) | 3 (75.0) | 0 |
| General doctor | 0 | 10 (27.0) | 1 (25.0) | 2 (22.2) |
| Nurse | 0 | 11 (29.7) | 0 | 0 |
| ANM | 3 (4.2) | 13 (35.1) | 0 | 1 (11.1) |
| Trained Dai | 43 (59.7) | 0 | 0 | 3 (33.3) |
| Relatives / Friend | 11 (15.3) | 0 | 0 | 2 (22.2) |
| Herself | 0 | 0 | 0 | 0 |
| Quack | 3 (4.2) | 0 | 0 | 1 (11.1) |
| Other (Untrained Dai) | 11 (15.3) | 0 | 0 | 0 |
| **Total** | **72** | **37** | **4** | **9** |

**Values are n (%), P-value =0.000, by Fisher's exact test.**

**Comments:**

1) **The place of delivery and the event of attending delivery by the expert are significantly associated.**
2) **Significantly higher proportion of deliveries that took place at home was attended by trained Dais.**
3) **About 15% deliveries were attended by untrained Dais.**

**Table 10) Association between place of delivery and no. of time antenatal care received.**

| Number of times the antenatal care received | Place of delivery | | | |
|---|---|---|---|---|
| | Home | Government Hospital | Private Hospital | Other |
| Never | 0 | 2 (5.4) | 0 | 2 (22.2) |
| Once | 9 (12.7) | 0 | 0 | 0 |
| Twice | 8 (11.3) | 4 (10.8) | 1 (25.0) | 0 |
| Thrice | 19 (26.8) | 9 (24.3) | 0 | 4 (44.4) |
| More than thrice | 35 (49.3) | 22 (59.5) | 3 (75.0) | 3 (33.3) |
| **Total** | **71** | **37** | **4** | **9** |

**Values are n (%), P-value =0.021, by Fisher's exact test.**

**Comments:**

1) **The place of delivery and the number of time antenatal care received are significantly associated.**
2) **Significantly higher proportion of mothers who delivered at the government hospital received antenatal care for more than three times during pregnancy.**

**Table 11) Association between place of delivery and assistance to breathe given to the child.**

| Assistance to breathe given | Place of delivery | | | |
|---|---|---|---|---|
| | Home | Government Hospital | Private Hospital | Other |
| Yes | 7 (9.7) | 16 (43.2) | 2 (50.0) | 0 |
| No | 64 (88.9) | 21 (56.8) | 2 (50.0) | 9 (100.0) |
| Don't know | 1 (1.4) | 0 | 0 | 0 |
| **Total** | **72** | **37** | **4** | **9** |

**Values are n (%), P-value = 0.001, by Fisher's exact test.**

**Comments:**

1) **The place of delivery and the event of assistance given to breathe are significantly associated.**
2) **Approximately 10% of the babies delivered at home were given the assistance to breathe.**

**Table 12) Distribution of time to breast-feed after the birth (hrs).**

| Breasst feed time (hrs) | Total (n=80) |
|---|---|
| Less than equal 0.5 | 39 (48.8) |
| 0.5 to 1.0 | 12 (15.0) |
| 1.0 to 6.0 | 19 (23.8) |
| 6.0 to 18.0 | 2 (2.5) |
| 24.0 to 48.0 | 6 (7.5) |
| 72 | 2 (2.5) |

**Values are n (%).**

**Table 13) Association between immunization history and age at death..**

| | Age at death (Months) | | |
|---|---|---|---|
| **Immunization History** | $\leq$ 1 Month | 1 to 6 Months | Total |
| Immunization given | 17 (16.7) | 16 (80.0) | 33 |
| Immunization not given | 82 (80.4) | 4 (20.0) | 86 (70.5) |
| Don't Know | 3 (2.9) | 0 | 3 |
| **Total** | **102** | **20** | **122** |
| Immunization complete for age (n=33) | 8 (47.1) | 9 (56.3) | 17 |
| Immunization incomplete for age | 9 (52.9) | 7 (43.7) | 16 |

**Values are n (%), P-value = 0.000, by Fisher's exact test.**

**Comments:**

1) **The age at death and the immunization history are significantly associated.**
2) **Significantly higher proportion of babies who died between 1 to 6 months was given the immunization.**

**Table 14) For BPL how many could tell Benefits for Health care**

| Parameters | Group I (Age at death ≤ 6 Months) (n=122) | Group II (Age at death > 6 Months) (n=85) | All (n=207) | P-value |
|---|---|---|---|---|
| **Awareness of BPL for Health Care** | | | | |
| Yes | 43 (35.2) | 29 (34.1) | 72 (34.8) | 0.000 |
| No | 79 (64.8) | 56 (65.9) | 135 (65.2) | |

Values are n (%).
**Comments:**
**Only 35.2% from group I and 34.1% from group II were aware of BPL card for health care.**

**Table 15) Information on age of mother at the baby died in primipara, one issue, two issues and more than 2 issues.**

| Parity | Maternal Age (years) (Mean (SD)) |
|---|---|
| Primipara (n=52) | 19.5 (2.1) |
| One (n=24) | 22.2 (1.7) |
| Two (n=21) | 22.8 (2.3) |
| More than two (n=25) | 28.7 (5.3) |
| **P-value (ANOVA)** | **0.000** |

**Comments:**
**Maternal age at the time of babies death progressively increased with parity.**

**Table 16) Spacing between the 2 pregnancies can we get break-up like < 12 months, > 12-24 months > 24-36 months, > 36 months.**

| Spacing between two pregnancies groups | n (%) |
|---|---|
| <12 Months | 6 (9.4) |
| 12 to 24 Months | 30 (45.5) |
| 24 to 36 Months | 16 (24.2) |
| > 36 Months | 14 (21.2) |
| **Total** | **66** |

**Comments:**
**Very few pregnancies (9.4%) were spaced within a year**

**Table 17) Gestation age > 28 -32 weeks, > 32 weeks - 36 weeks, > 37 weeks.**

| Gestation age groups | n (%) |
|---|---|
| <28 weeks | 9 (7.5) |
| 28 to 32 weeks | 49 (40.8) |
| 32 to 36 weeks | 28 (23.3) |
| $\geq$ 37 weeks | 34 (28.3) |
| **Total** | **120** |

**Comments:**
**About (48%) babies delivered very prematurely ( <32 weeks)**

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**Table 18) Care received during pregnancy check-up is minimum 5 times. There for how many mothers received minimum 5 times ANC check-up.**

| Number of times antenatal care received | n (%) |
|---|---|
| Nil | 4 (3.3) |
| 1 | 9 (7.4) |
| 2 | 13 (10.7) |
| 3 | 32 (26.4) |
| 4 | 29 (24.0) |
| 5 | 26 (21.5) |
| 6 | 3 (2.5) |
| 7 | 3 (2.5) |
| 8 | 2 (1.7) |
| **Total** | **121** |

**Comment:**
**About 28% (n=34) mothers sought antenatal care from ANM, nurse or qualified doctor at least 5 times.**

**Table 19) In older children weeks of prematurely 28-32 weeks, >32-36 weeks, ≥ 37 weeks.**
Gestational age is not recorded for older children ( ie those in group II).

## Table 20) Duration of stay before referral.

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) |
|---|---|---|---|
| Referral time at the facility (hrs) ¥ | 0.0 (0.0 –72 .0) | 0.0 (0.0 – 264.0) | 0.0 (0.0 – 264.0) |
| Facility 1 | 0.0 (0.0-53.0) | 0.0 (0.0-72.0) | 0.0 (0.0-72.0) |
| Facility 2 | 0.0 (0.0-72.0) | 0.75 (0.0-264.0) | 0.0 (0.0-264.0) |
| Facility 3 | 0.0 (0.0-25.5) | 0.0 (0.0-1.0) | 0.0 (0.0-25.5) |
| Facility 4 | 0.0 | - | 0.0 (0.0-0.0) |

¥Values are Median (Minimum- Maximum)

## Table 21) Duration of stay at facility.

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) |
|---|---|---|---|
| Duration of stay at the facility (hrs) ¥ | 11.0 (0.0 – 260.0) | 2.0 (0.0 – 336.0) | 8.0 (0.0 – 336.0) |
| Facility 1 | 5.5 (0.0-260.0) | 1.0 (0.0-336.0) | 4.0 (0.0-336.0) |
| Facility 2 | 30.0 (0.0-71.4) | 2.5 (0.0-312.0) | 18.5 (0.0-312.0) |
| Facility 3 | 16.0 (1.5-192.0) | 12.0(2.0-240.0) | 12.0 (1.5-312.2) |
| Facility 4 | 62.0 (62.0-62.0) | - | 62.0 (62.0-62.0) |

¥Values are Median (Minimum- Maximum)

## Table 22) Number of referrals

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) |
|---|---|---|---|
| Facility 1 | 41 | 24 | 65 |
| Facility1 to Facility 2 | 22 | 12 | 34 |
| Facility2 to Facility 3 | 6 | 7 | 13 |
| Facility3 to Facility 4 | 1 | - | 1 |

## Table 23) Break up of children who died during transportation

### In all 17 children died during transportaion.

| Parameters | Group I (Age at death ≤ 6 Months) (n=8) | Group II (Age at death > 6 Months) (n=9) | All (n=17) |
|---|---|---|---|
| Home-Facility 1 | 0 | 3 | 3 |
| Facility1 to Facility 2 | 2 | 4 | 6 |
| Facility2 to Facility 3 | 6 | 1 | 7 |
| Facility3 to Facility 4 | - | 1 | 1 |

**Table 24) Care seeking for child's illness**
**Section-8.1**

| Type of care | n=192 | % |
|---|---|---|
| Exclusive home care | 27 | 14.1 |
| Home care + informal care | 18 | 9.4 |
| Home care+informal care+formal care | 16 | 8.3 |
| Formal care | 71 | 36.9 |

¥Values are Median (Minimum- Maximum), p-values are obtained by independent sample t test.

**Table 25) The distance between facilities.**

| Facility | Distance in km |
|---|---|
| Home-facility 1 | 7.0 (0.0-100.0) |
| Facility 1 – facility 2 | 45.0 (0.0 – 180.0) |
| Facility 2 – facility 3 | 19.0 (0.0 – 150.0) |
| Facility 3 – facility 4 | 65.0 (65.0 – 65.0) |

Values are Median (Minimum- Maximum)

**Table 26) The Travel time  between facilities.**

| Facility | Time in hours |
|---|---|
| Home-facility 1 | 0.33 (0.0 – 4.0) |
| Facility 1 – facility 2 | 1.0 (0.08 – 6.0) |
| Facility 2 – facility 3 | 1.0 (0.17 – 4.0) |
| Facility 3 – facility 4 | 2.0 (2.0 – 2.0) |

Values are Median (Minimum- Maximum)

**Table 27)  (% referrals from different facilities)**

| Parameters | All (n=113) | Referred to next facility (n) | % |
|---|---|---|---|
| Facility 1 | 65 | 34 | 52 |
| Facility 2 | 34 | 13 | 38 |
| Facility 3 | 13 | 13 | 89 |

## Table 28)  Duration of stay at facility.

| Parameters | Group I (Age at death ≤ 6 Months) (n=70) | Group II (Age at death > 6 Months) (n=43) | All (n=113) |
|---|---|---|---|
| Duration of stay at the facility (hrs) ¥ | 24.0 (0.0 – 267.0) | 9.0 (0.0 – 384.0) | 15.0 (0.0 – 384.0) |
| Facility 1 | 5.5 (0.0-260.0) | 1.0 (0.0-336.0) | 4.0 (0.0-336.0) |
| Facility 2 | 30.0 (0.0-71.4) | 2.5 (0.0-312.0) | 18.5 (0.0-312.0) |
| Facility 3 | 16.0 (1.5-192.0) | 12.0(2.0-240.0) | 12.0 (1.5-312.2) |
| Facility 4 | 62.0 (62.0-62.0) | - | 62.0 (62.0-62.0) |

¥Values are Median (Minimum- Maximum)

## Table 29) Duration of baby suckle after the birth

### Number of babies ever breastfed=80

| Time of first suckle (hours) | Group I (Age at death ≤ 6 Months) (n=80) |
|---|---|
| Up to 0.5 | 38 (48) |
| 0.5-1.0 | 12 (15) |
| 1.0-1.5 | 7 (9) |
| 1.5-2.0 | 7 (9) |
| >2 | 15 (19) |

¥Values are n, %