INFANT DEATH ANALYSIS IN MAHISAGAR DISTRICT OF GUJARAT AND CHALLENGES IN REDUCING IT

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Introduction:

Definition of Infant Mortality Rate (IMR) = (Total number of deaths under one year of age /Total number of live births)*1000, in a calendar year in a defined geographical area.

Forms of infant mortality:

- **Perinatal mortality** is late fetal death (22 weeks of gestation to birth), or death of a newborn upto 1 week postpartum.
- **Neonatal mortality** is newborn death occurring within 28 days postpartum. Neonatal death is often attributed to inadequate access to basic medical care during pregnancy and after delivery. This accounts for 65-80 percent infant mortality in developing countries.
- **Post natal mortality** is the death of children aged 29 days to 1 year. Major contributors are: malnutrition, infectious diseases, troubled pregnancy, sudden infant death syndrome and problems in the home environment.

The prominent causes of death among infants are:

- Perinatal conditions (46 percent)
- Respiratory conditions (22 percent)
- Diarrheal disease (10 percent)
- Other infections and parasitic disease (8 percent)
- Congenital anomalies (3.1 percent)

The major causes of neonatal death are:

- Infections (33 percent) such as pneumonia, septicemia and umbilical cord infection
- Prematurity (35 percent) i.e, birth of new born before 37 weeks of gestation
- Asphyxia (20 percent) i.e, inability to breathe immediately after birth and leads to lack of oxygen.

Thrust areas under child health are:

Thrust area 1:

- There should be essential new born care at every delivery point at the time of birth
- Availability of facility based sick new born care at FRUs and District Hospitals
- Home based new born care to be strictly followed by ASHAs

Thrust area 2:

- Promotion of Infant and Young Feeding Practices
- Vitamin A and Iron Folic Acid supplementation
- Vitamin K injection to be administered to Low birth weight babies
- Promotion and initiation of breast feeding within one hour of birth
- Management of SAM (severe Acute Malnourished) children

Literature Review

- Infant Mortality Rate is not only indicator of infant health but also of the entire population.
- IMR has reduced in India as well as in Gujarat but it is still high as compared to the Developed Nations. IMR has drastically reduced after commencement of NRHM in mid 2005.
- With the country moving towards development it is important to identify the factors hindering prevention of Infant Death.
- There is a huge disparity between

  Rural-Urban,

  Rich – Poor,

  Gender differentials

Thrust area 3:

Integrated management of Neonatal and Childhood Illness (IMNCI), such as:

- Management of diarrheal diseases
- Management of pneumonia and acute respiratory infections

Thrust area 4:

- Intensified Routine Immunisation
- Polio eradication
- Elimination of measles related deaths

- **To reduce IMR, there is role of different:**

  demographic,

  educational,

  socio-economic,

  biological and

  care seeking factors

- A high level expert group appointed by the **Planning Commission of India** has considered health and social inequality interface, the poor and disadvantaged are more vulnerable for diseases. This includes:

  Urban and rural poor

  Women and children

  Specially abled persons

  Traditionally marginalized and excluded communities, such as- adivasis, or STs, dalits, or SCs and ethnic and religious minorities

Rationale

Infant Mortality Rate of India is 34 per 1000 live birth (SRS 2015-16), Infant Mortality Rate of state of Gujarat is 30 (SRS 2016) and IMR of district Mahisagar is 71 per 1,000 live births in 2016-2018 (E-mamta). Since there is huge discrepancy between the status at National as well as State level and the district level, despite various efforts from the state and district, therefore it is important to look into this matter so as to find out a way to rule out the existing issues.

Research question

1. What are the major causes of infant death?
2. What are the factors hindering prevention of infant death?

Objectives

1. To evaluate the causes of infant death
2. To analyse other than biological reasons which attribute to infant death

Methodology

- **Study type**: Descriptive Cross – sectional and quantitative study.
- **Study Site**: This study has been conducted in Mahisagar district of Gujarat in five blocks of the district namely, Lunawada, Khanpur, Kadana, Balasinor, and Santrampur.
- **Sampling Technique**: Purposive sampling
- **Sample size**: 185
- **Source of Data**: E-mamta and HMIS
- **Duration of study**: 3 months (5 February 2018 to 4 April 2018)

- **Study tool**: In depth interview, verbal autopsy form
- **Study technique**: Interpersonal interview, structured questionnaire
- **Participatory factor**: 50 in depth interview with relatives of descendant.
- **Data Collection**: Qualitative and quantitative data collection

Primary data has been collection:

Data collected from quantitative method in the form of verbal Autopsy forms

Qualitative data collected from in depth interview with relative of descendant

Secondary data collection:

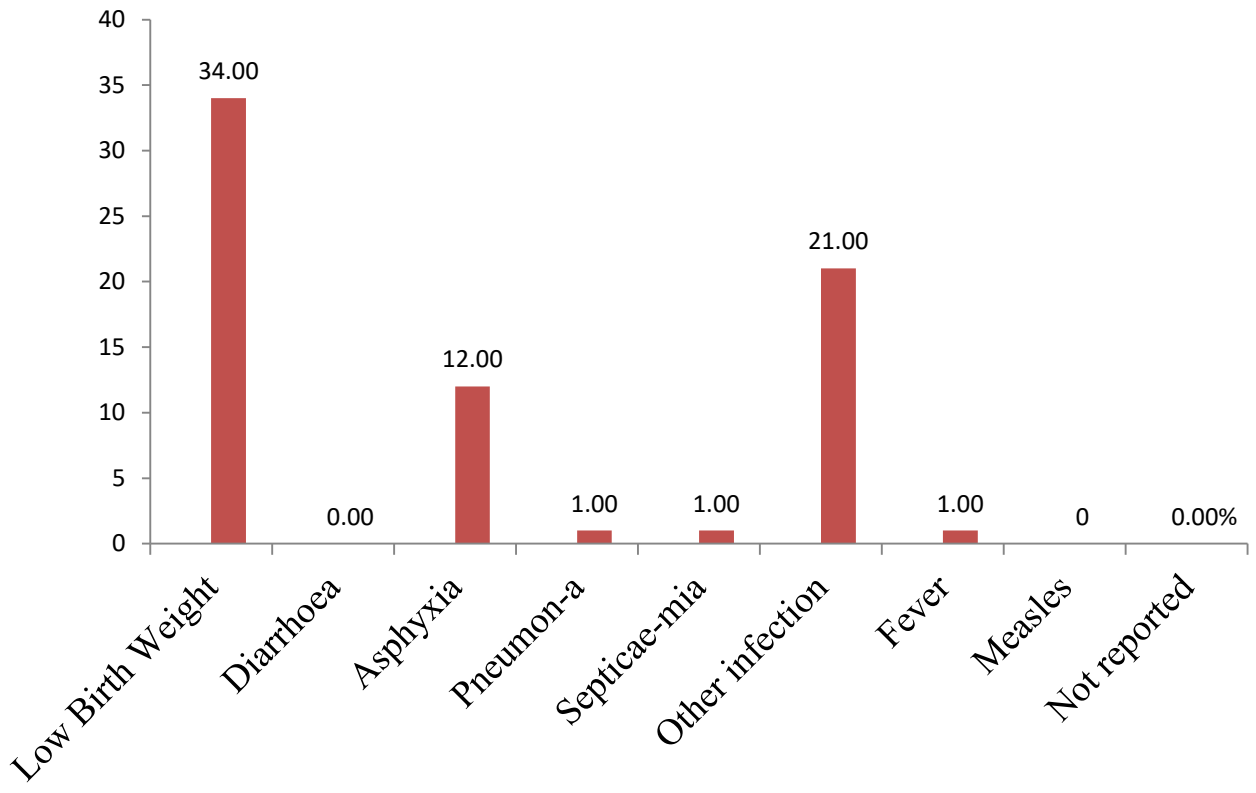
HMIS

E–mamta

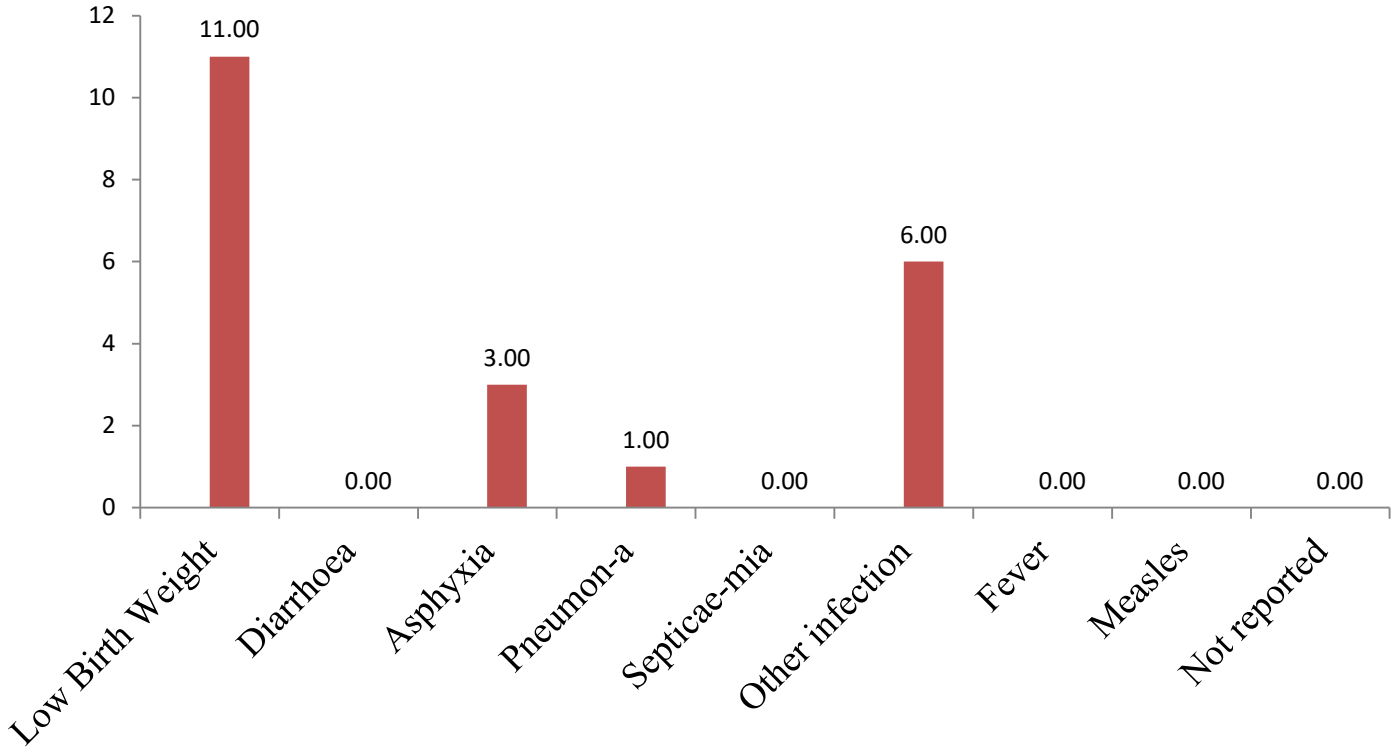
- **Inclusion criterion**: All Infant deaths in all the five blocks (Balasinor, Kadana, Khanpur, Lunawada and Santrampur)of the district.
- **Ethical consideration**: Informed consent was taken from the beneficiary.

Data Analysis

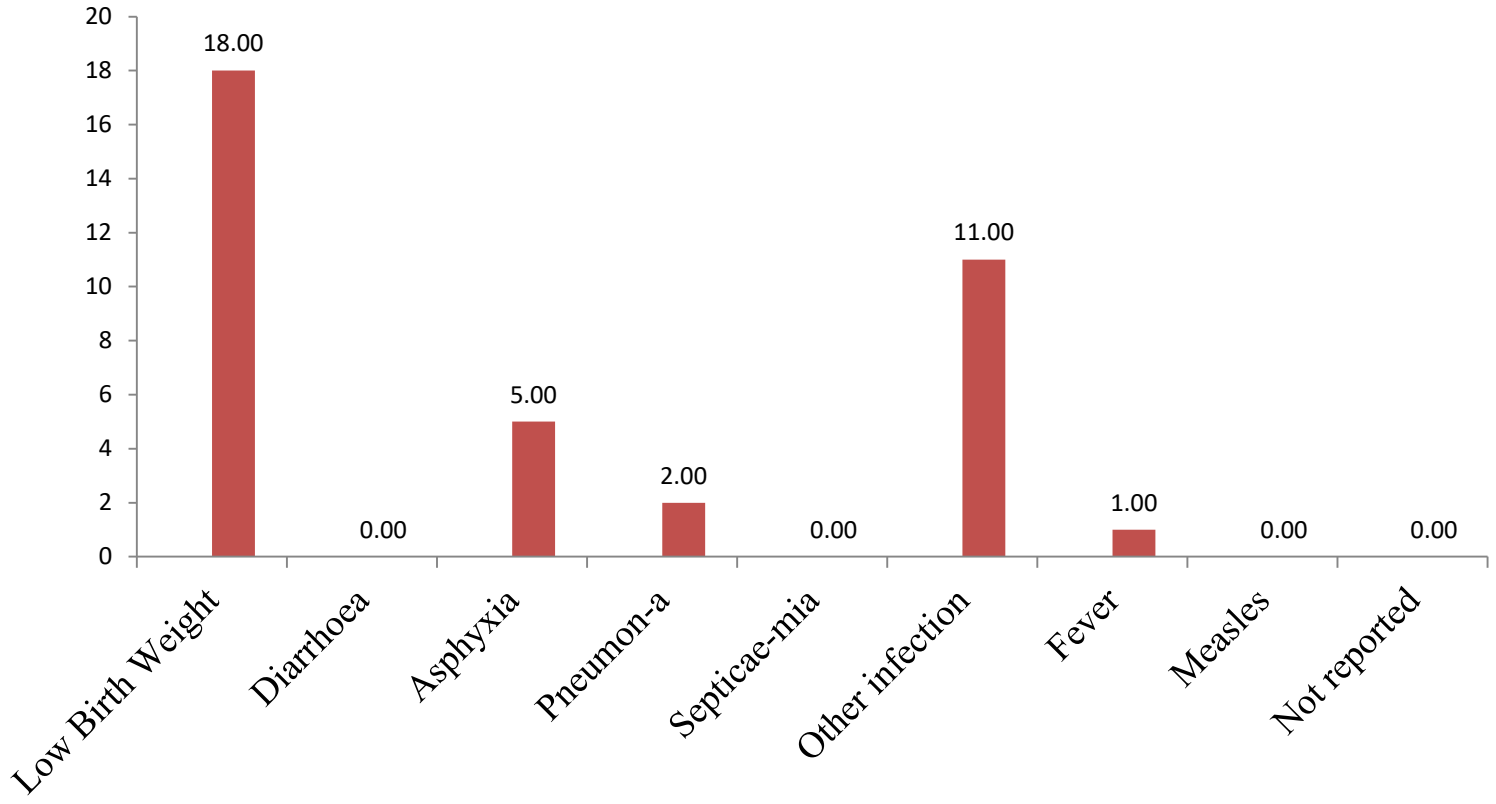
Graph 1: Cause of deaths within 48 hours of birth (N=70)



Graph 2: Cause of deaths during early neonatal period (N=21)



Graph 3: Cause of deaths during late neonatal period (N=35)



Graph 4: Cause of infant deaths(N = 185)

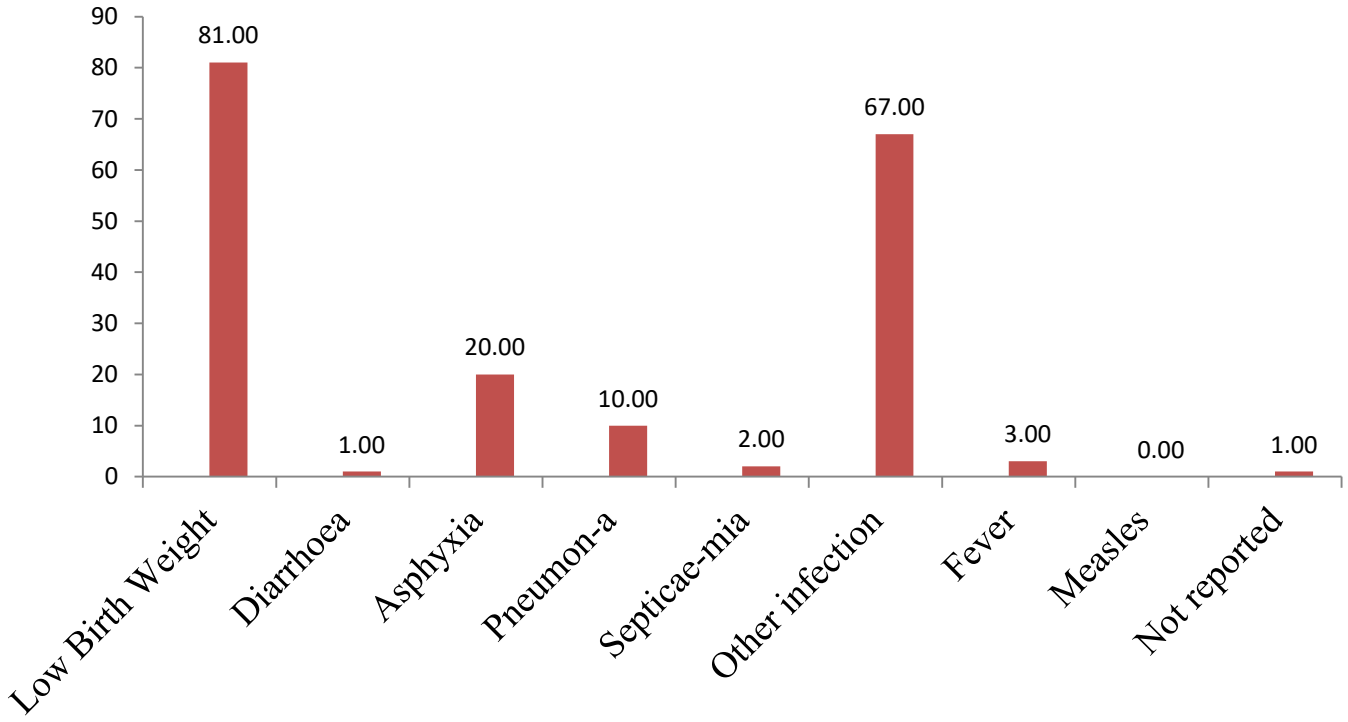


Table 1: Educational status of the respondents (N=185)

Sl. No.	Educational Status	Percent
1	Illiterate	60.02
2	Literate upto 5th standard	19.04
3	Literate more than 5th standard	11.42
4	Literate upto 10th standard	9.52

Table 2: Caste and religion of the respondent (N=185)

Sl.No.	Category	Percent distribution of the respondents
1	Genaral	2.86
2	OBC	94.28
3	SC/ST	2.86
4	Hindu	89.52
5	Other religion	10.48

Table 3: Sex of the infants died (N=185)

Sl.No.	Sex of the infant died	Percent
1	Male	51%
2	Female	49%

Conclusion

- Infant Mortality Rate of state of Gujarat is 30 (SRS 2016) and IMR of district Mahisagar is 71 per 1,000 live births in 2016-2018 (E-mamta).
- Premature birth and low birth weight are the major contributors to the IMR.
- Other leading causes of infant death are birth asphyxia, pneumonia, and birth complications such as abnormal presentation of foetus umblical cord prolapse, or prolonged labour, neonatal infection, diarrhea, malaria, measles and malnutrition.
- Government facilities lack adequate essential new born care unit at every delivery point.
- At many PHCs delivery is also not being conducted, for this reason also people are going to private facilities where maximum deliveries are conducted by untrained nurses, leading a threat to life of both mother and child.
- Deaths are more among children of people who are less literate, who belongs to OBC category, whose mothers are anaemic and are residing in hard to reach areas.

Suggestions

- It is important to sensitize people at all levels in the organization.
- There should be paid more focus on tribal and hard to reach areas.
- In order to decrease infant death it is important for the health organisation to have functional SNCUs, NBSUs and more hospitals to be empanelled under various schemes proposed by government, which are meant to provide financial assistance to the poor.
- There should be timely HBNC visit done by ASHA and proper inspection to be done by her, if in case the child is not well she should inform the Medical Officer and refer him/her as required.
- Sufficient number of hospitals must be empanelled in the list under **Bal Sakha Yojana III.**

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Questionnaire

1. Name of the infant_____
2. Age of the infant_____
3. MCTS No._____
4. Name of the respondent_____
5. Relationship with the deceased_____
6. Did ASHA come for HBNC visit

   Yes ☐ No ☐

7. Who advised you to go to doctor?

ASHA ☐

AAW ☐

FHW ☐

TH Helper ☐

Other (Specify)_____

8. After you found, your baby is ill, how long did it take you to go to the hospital?_____

9. Which facility did you choose? ☐ ☐

Private Government

10. Why did you prefer a Government/ Private facility?

_____

THANK YOU