

Causes of Infant and Under-Five Mortality in Rural India: Findings from a Household Survey in Madhya Pradesh among Targeted Households

Introduction

Reduction in infant and child mortality is not only a major goal but also an important strategy to achieve health for all. The International Conference on Population Development (ICPD, 1994) focused on reproductive health with the objective of enabling women to go safely through pregnancy and childbirth and providing couples with the best chance of having healthy infants. The Millennium Declaration released by the United Nations (September, 2000) has set eight Millennium Development Goals, one of them being reduction in child mortality with the target of reducing it by two-thirds, between 1990 and 2015. It implies that India has to reduce its IMR to 27 per 1000 live births and under five mortality rates to 32 per 1000 live births by 2015 to achieve the MDGs.

Madhya Pradesh, a member of the Empowered Action Group (EAG) states, in India who is demographically regressive, lags behind in development and has highest infant and under-five mortality rate in the country. The infant mortality Madhya Pradesh in 2004 was estimated at 79 (84 for rural areas and 56 for urban areas) as against national IMR of 58, the highest among all states in the country. As per the Human Development Report 2007, the state had a shortage of 26% in primary health centers, the very basis of primary health. Infant and child mortality rates have declines faster in rural areas than in urban areas. Between 1991-95 and 2001-05, infant mortality declined by 27% in rural areas, compared with 21% in urban areas.

Children die before they reach the age of one year due to a combination of factors including poor nutrition for their mothers while pregnant, inadequate immunization of mothers from tetanus and lack of haemoglobin in their bodies, poor sanitary and health care conditions at birth, poor care during delivery, overall unhygienic environment from which respiratory and water borne diseases could be contacted etc.—there are indicators of poverty, poor level of awareness, unclean environment, and a poor health delivery system and post natal care. (MP HDR 2007)

Study Objectives

This paper aims to understand the overall status of new born, infant and under-five mortality in rural areas of Madhya Pradesh and their major determinants. Paper objectives are as follows:

- to better understand health and nutritional practices during pregnancy of last dead child
- to better understand causes of death for infant and under-five mortality
- to better understand degree to which demand (social, cultural, knowledge and practice, and economic) and supply side

Data and Methods

Data has been taken from a household survey conducted by health department of the study state. The target population in this household survey is mothers whose at least one child aged below five years died in past two years prior to the survey and a total of 261

household covered and 243 quantitative schedule canvassed completed from 20 revenue villages. Some qualitative tools were also canvassed from various stakeholders and service providers to understand supply side constraints.

Major Findings from Analysis

Profile of the Sampled Households

In all the selected districts, maximum household members of the sampled households are less than 35 years old. Overall, 30.2 percent members of all the households are less than 10 years old. Around 36 percent of the population is in the age group of 20-34 years. In the villages with facility of sub centre, more than 52 percent population is comprised of males while in the villages without sub centre facility more than 54 percent household population is female.

A large proportion (41.7 percent) of the population continues to have no education at all. This proportion is much higher among the female population (51.3) than the male population (31.7). All the areas covered in the survey are mainly rural and on an average more than 50 percent respondent have BPL card. As per developed SLI index, approximately 80 percent deaths have occurred in low and medium standards of living, 67 percent deaths took place in kaccha house and only 6.5 percent in pucca house

Almost 32 percent respondents when asked about their health seeking behavior stated that their household members go for treatment after waiting for the illness to heal off automatically or they practice some home remedy for medication. The average delay in seeking medication at a health center comes out to be 3 days. They visit a health facility only in case of complexities.

Characteristics of Respondent Mothers and their Birth History

The percentage of mothers is lowest (14.4 %) in age groups of less than 21 years and more than 31 years. Most of the infant and under-five deaths (71.2 %) have occurred to mothers who are 21-30 years old. More than 50 percent eligible mothers have a low standard of living. More than 52 percent mothers from the villages with sub centre facility lost their child aged 5 years or less in the past 2 years.

Greater than 58 percent women had never received any education. On an average all the surveyed mothers got married before the legal age of marriage i.e. 18 years. More than 57 percent (N=20) mothers aged below 21 years (N=35) reported that it was their first pregnancy which was live birth. Out of 708 pregnancies of 243 mothers, 15 pregnancies (2.1%) resulted in abortion, miscarriage or still birth.

A total of 133 neo-natal deaths occurred among 287 death. More than 50 percent of neo-natal deaths (69) took place in the villages without sub centre facility. Villages with sub centre facility have more infant deaths (50 out of 152 deaths) than the villages without sub centre facility where it is 34 out of 135. Child deaths between ages 1-5 years are more (38 out of 70) in the villages with sub centre facility.

Maternal Health

Around 93.4 percent of the surveyed mothers have registered their pregnancy for ANC. The percentage of mothers receiving TT injections and IFA tablets is quite high at 91.7 percent and 85.1 percent respectively. 80-90 percent of mothers in each age group had inadequate ANC i.e. less than 3 ANC visits or less than 2 TT injections or intake of IFA tablets/syrup less than 100 days. The main reasons for women not availing Full ANC services were High Cost (44.4%), Unawareness regarding ANC Services (40%) and Distance of facility from home (40%). 11.1 percent of pregnant mothers were not allowed by their families to go for ANC. Women from the backward classes still don't go for the ANC tests because of their belief in Social Traditions, which is one of the reasons for the child deaths. Superstitions about pregnancy abound and families don't encourage the mother to go for Ante-natal Care.

More than 70 percent of deliveries have taken place at government institutions i.e. Government Hospitals, CHC, PHC etc. Low awareness regarding the importance of Safe Delivery and the decision of the family/husband is a deciding factor regarding the place of delivery. The proportion of home deliveries is found to be more in villages with sub-center (24.6%), as compared to villages without sub-center (17.2%). The major health personnel who conducted delivery of the last dead child was the ANM. The percentage of mothers going to PHC/CHC is much higher for mothers residing in villages without sub-center (48.4%), compared to villages located near the district head-quarter (30.0%).

Around 13.1 percent of mothers could not get any bed and had to stay on the floor during delivery period while 0.5 percent of mothers had their bed shared. Mothers undergoing home delivery cited a number of reasons for not visiting the health facility, for e.g. the cost-effectiveness of home delivery as compared to institutional delivery, which involves a lot of costs like transportation etc. While 27.1 percent of mothers did not get time to go to the health facilities, around 35 percent of mothers were barred from institutional deliveries by the families or following customary rights. More than 20 percent mothers preferred home delivery fearing the poor services rendered at the health facilities as also the attitude of the support staff there and unhygienic conditions.

Mothers are found to be negligent regarding post natal care, leading to deterioration of their health as well as that of the babies. Of 56.2 percent mothers who underwent a health check after delivery, 31.1 percent had their check-up within 2 hours while 41.5 percent were checked between 2 – 6 hours after delivery. Post-natal check-ups were received by only 56 percent mothers, which is quite low and a major cause of Infant Mortality.

Child Health

Though a small percentage of mothers (approx 4.5%) visited sub centre or private facility for delivery, 80 percent of them received advice about initial and exclusive breastfeeding, cord care, immunization, routine check up and spacing methods etc. The proportion of births with a reported birth weight is 55.4 percent only among the surveyed households.

The survey reveals that almost all of the infants were screened for the first time during the checkup of the mothers but for young and less educated mothers (between age group

of <21-25 years) the percentage of newborns who were checked with their mother was found to be less.

One third of children who died in past two years preceding the survey were not breast feed by their mothers. Most of the mothers (65.3%) reported that they breastfeed their child after 24 hours from birth. The difference in Breastfeeding practices is evident in the villages without sub centre facility, where breastfeeding is initiated late as compared to the villages with sub centre facility.

66 children out of 243 did not receive colostrum, which is very important to save the new born. One-third mothers (22.7 percent) gave their last child (who died later on) something to drink other than breast milk in the three days after delivery. Women with increase in age, belonging to schedule caste/ tribe, engaged in agricultural work and having high standard of living, show a greater tendency of exclusively breastfeeding their child.

More than half of mothers agree that women have no freedom to decide anything regarding care during pregnancy nor the vaccination required. Most of interviewed mothers have more faith on the traditional Dai, who they feel can handle delivery cases better than others. A few superstitions that have been witnessed among the mothers in the post natal period include- waste disposal in the same courtyard and this practice saves them from evils, applying cow dung to the cut end of the umbilical cord and branding the child all over the body with hot needles drive away fever and giving “Gutti” in place of breast milk to the infant is a good practice and it is believed to be healthy for baby.

Immunization

The level of immunization for the children aged five or less who had died in the last two years comes out to be very low. Out of 243 mothers who were interviewed only twenty three were able to provide information on vaccination of their last died child Overall, except one child, none from the rest twenty two received vaccinations accurately. Mostly mothers were from age groups of 21-25 years, illiterate or having less than primary level of education, came from SC and General caste status, generally housewives or agricultural laborer by profession and had a low or medium standard of living.

Traditional practices, Superstitions, Lack of Awareness and the Low Standard of Living are few of the causes responsible for such low levels of immunization of children. All these findings came out during the FGD’s and Interviews.

Perception of Mothers on Causes of Death

Around 8.7 percent of the children died suffering from diarrhoea, the proportion being higher for villages with SC facility. The percentage of children suffering from Pneumonia, Malaria and Sepsis/Meningitis stands at 7.4 percent, 1.2 percent and 6.6 percent respectively. The proportion of children suffering from Pneumonia is slightly on the higher side for mothers residing in the villages without SC, and who belong to general caste.

The most important disease that needs to be mentioned here in this context is fever associated illnesses which is determined by medical expert as 'Pyrexia of Unknown Origin' (PUO), taking the lives of 24 percent children among the surveyed households.

More than eleven percent of mothers have also lost their children due to low birth weight, the proportion being slightly higher for those coming from districts without SC (13.0 %) than those coming from villages with SC (10.2%).

The perception of mothers and fathers regarding child mortality becomes clear once the FGD outcomes are seen. Most of the people believe that Births before time, malnutrition of mother, pneumonia or fever are some other major factors behind neonatal deaths...while whooping cough, pneumonia, chicken-pox etc are the major causes of infant deaths. Carelessness of parents, belief in superstitions for the treatment of diseases like chicken-pox also contributes to a large extent to child mortality.