Morbidity and Mortality pattern of childhood illness in Maharashtra

Report prepared by

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Contents **Page No.**

I.	**Introduction**	12
II.	**Acute Illness**	13
III	**Chronic Illness**	25
IV	**Anemic children**	33
V	**Child Death**	38
VI	**Neonatal death**	46
VII	**Infant deaths**	53
VIII	**Malnutrition**	57
IX	**Causes of Infant and Child Deaths**	62
XI	**Summary of the Findings**	74
	References	76

List of Tables	Page No.
Table1 Number of Children 0–5 years of age with acute cause-specific morbidity in Western Maharashtra Region, Maharashtra (2012-13)	12
Table2 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Western Maharashtra Region, Maharashtra (2012-13)	13
Table3 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Western Maharashtra Region, Maharashtra (2012-13)	13
Table4 Number of Children 0–5 years of age with acute cause-specific morbidity associated with moderately underweight children in Western Maharashtra Region, Maharashtra (2012-13)	14
Table5 Number of Children 0–5 years of age with acute cause-specific morbidity associated with Normal weight children in Western Maharashtra Region, Maharashtra (2012-13)	14
Table6 Number of Children 0–5 years of age with acute cause-specific morbidity in Konkan Region, Maharashtra (2012-13)	15
Table7 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Konkan Region, Maharashtra (2012-13)	15
Table8 Number of Children 0–5 years of age with acute cause-specific morbidity associated with moderately underweight children in Konkan Region, Maharashtra (2012-13)	16
Table9 Number of Children 0–5 years of age with acute cause-specific morbidity associated with Normal weight children in Konkan Region, Maharashtra (2012-13)	16
Table10 Number of Children 0–5 years of age with acute cause-specific morbidity in Kandesh Region, Maharashtra (2012-13)	17
Table11 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM condition in Kandesh Region, Maharashtra (2012-13)	17
Table12 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Konkan Region, Maharashtra (2012-13)	18
Table13 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Kandesh Region, Maharashtra (2012-13)	19
Table14 Number of Children 0–5 years of age with acute cause-specific morbidity in Marathwada Region, Maharashtra (2012-13)	19
Table15 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM condition in Marathwada Region, Maharashtra (2012-13)	20
Table16 Number of Children 0–5 years of age with acute cause-specific morbidity associated with anemic condition in Marathwada Region, Maharashtra (2012-13)	20
Table17 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Konkan Region, Maharashtra (2012-13)	21
Table18 Number of Children 0–5 years of age with acute cause-specific morbidity in Nagpur Division, Maharashtra (2012-13)	21
Table19 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Nagpur division Maharashtra (2012-13)	22
Table20 Number of Children 0–5 years of age with acute cause-specific morbidity in Western Maharashtra Region, Maharashtra (2012-13)	23
Table21 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Western Maharashtra Region, Maharashtra (2012-13)	24
Table22 Number of Children 0–5 years of age with symptoms of chronic illness in Amravati Region, Maharashtra (2012-13)	25
Table23 Number of Children 0–5 years of age and sought treatment for chronic illness in Amravati Region, Maharashtra (2012-13)	25
Table24 Number of Children 0–5 years of age diagnosed with chronic illness in Amravati Region, Maharashtra (2012-13)	26
Table25 Number of Children 0–5 years of age with symptoms of chronic illness in Konkan Region, Maharashtra (2012-13)	27
Table26 Number of Children 0–5 years of age and sought treatment for chronic illness in Konkan	27

Region, Maharashtra (2012-13)	
Table27 Number of Children 0–5 years of age diagnosed with chronic illness in Konkan Region, Maharashtra (2012-13)	28
Table28 Number of Children 0–5 years of age with symptoms of chronic illness in Marathwada Region, Maharashtra (2012-13)	28
Table29 Number of Children 0–5 years of age with symptoms of chronic illness in Nagpur division, Maharashtra (2012-13)	29
Table30 Number of Children 0–5 years of age and sought treatment for chronic illness in Marathwada Region, Maharashtra (2012-13)	29
Table31 Number of Children 0–5 years of age and sought treatment for chronic illness in Nagpur Division, Maharashtra (2012-13)	29
Table32 Number of Children 0–5 years of age diagnosed with chronic illness in Marathwada Region, Maharashtra (2012-13)	30
Table33 Number of Children 0–5 years of age diagnosed with chronic illness in Nagpur Division, Maharashtra (2012-13)	31
Table34 Number of Children 0–5 years of age with symptoms of chronic illness in Pune Region, Maharashtra (2012-13)	31
Table35 Number of Children 0–5 years of age and sought treatment for chronic illness in Pune Region, Maharashtra (2012-13)	32
Table36 Number of Children 0–5 years of age diagnosed with chronic illness in Pune Region, Maharashtra (2012-13)	32
Table37 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in Amravati Region, Maharashtra (2012-13)	33
Table38 Number of Children 0–5 years of age with anemic and non anemic cases and by BPL status in Konkan Region, Maharashtra (2012-13)	33
Table39 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Nagpur Division, Maharashtra (2012-13)	33
Table40 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Nagpur Division, Maharashtra (2012-13)	34
Table41 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Marathwada Region, Maharashtra (2012-13)	34
Table42 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Marathwada Region, Maharashtra (2012-13)	35
Table43 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Marathwada Region, Maharashtra (2012-13)	35
Table44 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Marathwada Region, Maharashtra (2012-13)	36
Table45 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural Nagpur Division, Maharashtra (2012-13)	36
Table46 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban Nagpur Division, Maharashtra (2012-13)	37
Table 47 Number of Child death by residence in Konkan Region, Maharashtra (2012-13)	37
Table48 Number of Child death by residence in Marathwada Region, Maharashtra (2012-13)	37
Table49 Number of Child death by sex in Konkan Region, Maharashtra (2012-13)	38
Table50 Number of Child death by sex in Marathwada Region, Maharashtra (2012-13)	38
Table51 Number of Child death by BPL status in Konkan Region, Maharashtra (2012-13)	38
Table52 Number of Child death by BPL status in Marathwada Region, Maharashtra (2012-13)	39
Table53 Number of Child death by caste in Konkan Region, Maharashtra (2012-13)	39
Table54 Number of Child death by caste in Marathwada Region, Maharashtra (2012-13)	39
Table55 Number of Child death by place of death in Konkan Region, Maharashtra (2012-13)	40

Table56 Number of Child death by place of death in Marathwada Region, Maharashtra (2012-13)	40
Table57 Number of Child death by main source of medical attention before death in Konkan Region, Maharashtra (2012-13)	40
Table58 Number of Child death by main source of medical attention before death in Marathwada Region, Maharashtra (2012-13)	41
Table59 Number of Child death by residence in Amravati Region, Maharashtra (2012-13)	41
Table60 Number of Child death by sex in Amravati Region, Maharashtra (2012-13)	42
Table61 Number of Child death by BPL status in Amravati Region, Maharashtra (2012-13)	42
Table62 Number of Child death by caste in Amravati Region, Maharashtra (2012-13)	42
Table63 Number of Child death by place of death in Amravati Region, Maharashtra (2012-13)	42
Table64 Number of Child death by main source of medical attention before death in Amravati Region, Maharashtra (2012-13)	43
Table65 Number of Child death by residence in Nagpur division, Maharashtra (2012-13)	43
	43
Table66 Number of Child death by sex in Nagpur division, Maharashtra (2012-13)	44
Table67 Number of Child death by BPL status in Nagpur Division, Maharashtra (2012-13)	44
Table68 Number of Child death by caste in Nagpur division, Maharashtra (2012-13)	44
Table69 Number of Child death by place of death in Nagpur Division, Maharashtra (2012-13)	45
Table70 Number of Child death by main source of medical attention before death in Nagpur Division, Maharashtra (2012-13)	45
Table71 Number of Neonate death by residence in Amravati Region, Maharashtra (2012-13)	45
Table72 Number of Neonate death by sex in Amravati Region, Maharashtra (2012-13)	46
Table73 Number of Neonate death by BPL status in Amravati Region, Maharashtra (2012-13)	46
Table74 Number of Neonate death death by caste in Amravati Region, Maharashtra (2012-13)	46
Table75 Number of Neonate death by place of death in Amravati Region, Maharashtra (2012-13)	46
Table76 Number of Neonate death by main source of medical attention before death in Amravati Region, Maharashtra (2012-13)	47
Table77 Number of Neonate death by residence in Pune Region, Maharashtra (2012-13)	47
able78 Number of Neonate death by sex in Pune Region, Maharashtra (2012-13)	47
Table79 Number of Neonate death by BPL status in Pune Region, Maharashtra (2012-13)	47
Table80 Number of Neonate death by caste in Pune Region, Maharashtra (2012-13)	48
Table81 Number of Neonate death by place of death in Pune Region, Maharashtra (2012-13)	48
Table82 Number of Neonate death by main source of medical attention before death in Pune Region, Maharashtra (2012-13)	48
Table83 Number of Neonate death by residence in Kandesh Region, Maharashtra (2012-13)	48
Table84 Number of Neonate death by sex in Kandesh Region, Maharashtra (2012-13)	49
Table85 Number of Neonate death by BPL status in Kandesh Region, Maharashtra (2012-13)	49
Table86 Number of Neonate death death by caste in Kandesh Region, Maharashtra (2012-13)	49
Table87 Number of Neonate death death by place of death in Kandesh Region, Maharashtra (2012-13)	49
Table88 Number of Neonate death by main source of medical attention before death in Kandesh Region, Maharashtra (2012-13)	50
Table89 Number of Neonate death by residence in Marathwada Region, Maharashtra (2012-13)	50
Table90 Number of Neonate death by sex in Marathwada Region, Maharashtra (2012-13)	50
Table91 Number of Neonate death by BPL status in Marathwada Region, Maharashtra (2012-13)	51
Table92 Number of Neonate death death by caste in Marathwada Region, Maharashtra (2012-13)	51
Table93 Number of Neonate death by place of death in Marathwada Region, Maharashtra (2012-13)	51
Table94 Number of Neonate death by main source of medical attention before death in Marathwada	52

Region, Maharashtra (2012-13)	
Table95 Number of infant death by sex in Amravati Region, Maharashtra (2012-13)	52
Table96 Number of infant death by BPL status in Amravati Region, Maharashtra (2012-13)	52
Table97 Number of infant death by caste in Amravati Region, Maharashtra (2012-13)	53
Table98 Number of infant death by sex in Kandesh Region, Maharashtra (2012-13)	53
Table99 Number of infant death by BPL status in Kandesh Region, Maharashtra (2012-13)	53
Table100 Number of infant death by caste in Kandesh Region, Maharashtra (2012-13)	53
Table101 Number of infant death by sex in Marathwada Region, Maharashtra (2012-13)	54
Table102 Number of infant death by BPL status in Marathwada Region, Maharashtra (2012-13)	54
Table103 Number of infant death by caste in Marathwada Region, Maharashtra (2012-13)	54
Table104 Number of infant death by sex in Nagpur division, Maharashtra (2012-13)	54
Table105 Number of infant death by BPL status in Nagpur Division, Maharashtra (2012-13)	55
Table106 Number of infant death by caste in Nagpur Division, Maharashtra (2012-13)	55
Table107 Number of infant death by sex in Pune Region, Maharashtra (2012-13)	55
Table108 Number of infant death by BPL status in Pune Region, Maharashtra (2012-13)	55
Table109 Number of infant death by caste in Pune Region, Maharashtra (2012-13)	56
Table 110: Distribution of Moderately and Severely Malnourished Children by gender and areas, Maharashtra, 2013-14	58

List of Figures	Page No.
Figure1 Percent **Distribution of Moderately and Severely Malnourished Children by Social Groups, Maharashtra, 2013-14**	58
Figure2 Percent distribution of Moderately and Severely Malnourished Children by Social Groups, Maharashtra, 2013-14	59
Figure3 Distribution of Moderately and Severely Malnourished Children in rural areas by Social Groups, Maharashtra, 2013-14	60
Figure3 Distribution of Moderately and Severely Malnourished Children in urban areas by Social Groups, Maharashtra, 2013-14	60
Figure4: Percent distribution by causes of Infant Deaths in Vidarbha -Amravati region	61
Figure5: Percent distribution by causes of Infant Deaths in Konkan-region	62
Figure6: Percent distribution by causes of Infant Deaths in Marathwada region	62
Figure 7: Percent distribution by causes of Infant Deaths in Vidarbha-Nagpur region	63
Figure 8: Percent distribution by causes of Infant Deaths in Kandesh region	64
Figure 9: Percent distribution by causes of Infant Deaths in Desh -Pune region	64
Figure 10: Percent distribution by Neonate deaths by time and In Vidarbha region of Maharashtra, 2013-14	65
Figure 11: Percent distribution by causes of Neonate deaths by time and In Konkan region of Maharashtra,201314	66
Figure 12: Percent distribution by causes Neonate deaths by time and In Vidarbha – Nagpur region of Maharashtra, 2013-14	67
Figure 13: Percentwise causes of Neonate deaths by time and In Kandesh region of Maharashtra,201314	68
Figure 14: Percent distribution by causes of Neonate deaths by time and In Desh-Pune region of Maharashtra, 2013-14	68
Figure 15: Percent distribution by causes of Neonate deaths by time and In Marathwada region of Maharashtra, 2013-14	69
Figure 16: Percent distribution by Neonate deaths by time and In Vidarbha-Amravati region of Maharashtra, 2013-14	70
Figure 17: Percent distribution by of Neonate deaths by time and In konkan region of Maharashtra, 2013-14	70
Figure 18: Percent distribution by of Neonate deaths by time and In Marathwada region of Maharashtra, 2013-14	71
Figure 19: Percentage of Neonate deaths by time and In Vidarbha region of Maharashtra, 2013-14	71
Figure 20: Percent distribution by of Neonate deaths by time and In Kandesh region of Maharashtra, 2013-14	72
Figure 21: Percent distribution by of Neonate deaths by time and In desh-pune region of Maharashtra, 2013-14	72

ACRONYM	
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
BCG	Bacillus Calmette Guerin
CHC	Community Health Centre
DH	District Hospital
DPT	Diphtheria, Pertussis and Tetanus
FRU	First Referral Unit
FP	Family Planning
FS	Female Sterilization
HIV	Human Immuno Deficiency Virus
ICDS	Integrated Child Development Scheme
ICTC	Integrated Counselling and Testing Centre
IFA	Iron and Folic Acid
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IUD	Intra-uterine Device
JSY	Janani Suraksha Yojana
JSSK	Janani Shisu Suraksha Karyakram
MTP	Medical Termination of Pregnancy
NRHM	National Rural Health Mission
NSV	Non-scalpel Vasectomy
OPD	Out-Patient Department
ORS	Oral Re-hydration Salt
OT	Operation Theatre
PHC	Primary Health Centre
PNC	Post Natal Care
RCH	Reproductive and Child Health
RKS	Rogi Kalyan Samiti
RTI	Reproductive Tract Infection
SDH	Sub-Divisional Hospital
SHC	Sub-Health Centre
STI	Sexually Transmitted Infection
TBA	Trained Birth Attendant
TT	Tetanus Toxoid

Key findings and Recommendations

- The number of children with acute illness in Maharashtra is mainly concentrated in rural areas. The most common type of acute illness is fever with rashes and other types of fever and others. Acute illness was more prevalent among normal children as compared to severely and moderately under weighed children. Other types of fever and others were the most commonly type of acute illness and was concentrated among anemic children with Hb<11.

- In Konkan region distribution of number of children by place of residence shows more number of children with acute illness in urban areas than in rural areas due to high number of cases in Mumbai.

- Diarrhea and fever with chills/malaria is the most common of acute illness in Kandesh region. Distribution of number of children by place of residence in Kandesh region shows more number of children with acute illness in rural areas than in urban areas except in Nandurbar district.

- Overall, the number of children with acute illness is found to be more in rural areas as compared to urban districts in all the districts of Nagpur region except Gadchiroli district.

- The number of children with symptoms of chronic illness was mainly concentrated in rural areas. Chronic illness such as others, hernia hydrocele peptic ulcer and respiratory were the common symptoms of chronic illness.

- Irrespective of the anemic status of the children, the numbers of children who are anemic and non-anemic belong to household which don not have BPL card.

- Distribution by background characteristics shows that highest number of deaths was reported from home and private facilities; among male child; in rural areas and with household having no BPL card.

- Caste wise, child death was highest among caste SCs and OBCs in Konkan region; among caste OBCs followed by caste others in Marathwada region.

- After home the highest number of child deaths who received medical attention before death were from Government and private hospital in Marathwada region. Overall, in Amravati region number of deaths among male were almost thrice than female and was mainly observed in Akola and Buldana districts. The highest number of child deaths is reported from home and is highest in Wardha district of Nagpur region.

- Neonatal death is mainly concentrated in rural areas, household with BPL card, and among caste OBCs during the reference period.

- The highest number of neonatal deaths is reported from health facilities and mainly in private hospital.

- Infant deaths were slightly high among males except In Amravati region number of female infant deaths was almost thrice as compared to male infant deaths and was concentrated in Amravati district. More number of infant deaths was reported from household which do not have BPL cards and among caste OBC.

- HMIS data shows Low birth weight was the prominent reason for infant deaths in all the regions of Maharashtra. Deaths due to other reasons and asphyxia were also prominent cause of child deaths.

- **To improve the Maternal and child heath in ICDS** health position need to be filled up on priority basis. Once the low birth baby is identified a routine mechanism should be in place to track the health of child and mother.

- Awareness programme need to be organised on frequent basis and keeping in mind with the local need. In the tribal area some month's family move to the other place for work. The sick children identified not possible at the time. ICDS programme need to be further widened and not confined to only children in a particular age group. Local needs and availability need to be taken in providing nutrients to children.

- Appropriate intervention measures such as supplementary iron & folic acid, periodic deworming and health & nutrition education should be strengthened. The community needs to be encouraged to their diets by consuming iron rich foods.

III. Introduction

Human resource development is a prerequisite for any nation to progress especially the children. Several provisions in the Constitution of India impose on the State the primary responsibility of ensuring that all the needs of children are met and that their basic human rights are fully protected. Article 15(3) empowers the State to make special provisions for children. Article 39(f) directs the State to ensure that children are given equal opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and guaranteed protection of childhood and youth against moral and material abandonment. Article 243 G read with schedule-11 provides for institutionalizing child care to raise the level of nutrition and the standard of living, as well as to improve public health and monitor the development and well being of children in the Country.

Early childhood, that is the first six years constitutes the most crucial period in life, when the foundations are laid for cognitive development. The young child is most vulnerable to the vicious cycles of malnutrition, disease and resultant morbidity and mortality. Hence, the assessment of the ground reality on nutritional status, morbidity and mortality of children becomes very significant.

Children under six years of age require appropriate nutrition and adequate care in order to reach their full growth and development potential. Under nutrition hampers children's survival, health, growth and development.

The nutrition situation in Maharashtra is slightly better than the national average and the state has demonstrated a notable reduction of 27% in the underweight prevalence of children under three years between NFHS-2 and NFHS-3.

The Integrated Child Development Services (ICDS) programme provides nutrition and health services for children under six years, pregnant and lactating women, as well as preschool activities for children age 3-5 years. Mid Day Meal (MDM) programme is also provides cooked meal to school going children and is contributing to improving their nutritional status.

Maharashtra is among the most economically developed states in the country. The state is also a primary financial centre and boasts of one of the country's largest industrial economies.

Maharashtra has 35 districts, divided into six revenue divisions for administrative purposes including Konkan, Pune, Kandesh, Marathwada, Amravati and Nagpur. An inter-State comparison of key indicators across some major states reveals that Maharashtra's social attainments do not match its high income level.

Maharashtra is the third most urbanized state among major states in the India. As per Census 2011, two districts Mumbai and Mumbai (suburban) have 100% of their population in urban areas while two other districts, Gadchiroli and Sindhudurg, have less than 15% of their population living in urban areas.

Maharashtra's sex ratio has remained lower than the national average, 17 districts have a sex ratio lower than national average (940).Three district Mumbai, Mumbai (suburban) and Thane have sex ratio which is less than 900, while two other districts, Ratnagiri and Sindhudurg, have a sex ratio more than 1000. Further, Maharashtra's child sex ratio is 883 in 2011.

In 2009, as per the state Health department estimations Maharashtra's IMR was 29 through SCD for year 2009 in rural areas, while as per the SRS estimations it was 37. IMR in 5 districts is more than 35 (Wardha 44, Washim, Yavatmal, Bhandara 37, Nandurbar 36).

Of the total deaths taking place, 12% are from the 0-4 year age group. Perinatal conditions are dominant causes of child death followed by respiratory infections and diarrheal diseases in 0-4 year age group. Male child deaths are more due to perinatal conditions compared to female child deaths indicating that biologically females are stronger.

Any future and present programme need to consider the local needs and address the constrain at the local level for successful implementation of Maternal and Child health schemes. The main objective of this study is to identify regional variation in terms of prevalence of malnourished children. Additionally, we investigate group of factors (measured at district level) can best predict the observed causes of child morbidity and mortality. We use DLHS4 (2012-13 to estimate child morbidity and mortality in addition we compare the height weight of these children to detect malnourished children as per SAM guideline of WHO. Analysis was carried out using risk factors in a systematic way to asses the differential in terms of children weighed.

IV. Acute Illness

Acute illnesses are those that are of short duration. Minor acute illnesses include some of the commonest problems presented in general practice, such as respiratory tract infections or skin rashes. In this section we focus on pattern of regional distribution by type of acute illness, most common symptoms and diagnosis by background characteristics.

Table1 Number of Children 0–5 years of age with acute cause-specific morbidity in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity											
	Kolhapur		Sangli		Satara		Pune		Solapur		Total	
	R	U	R	U	R	U	R	U	R	U	R	U
Acute Respiratory Tract Infection	9	2	7	3	7	2			1	6	**24**	**13**
Diarrhea	3	0	2	1	1	1	3	0	9	1	**18**	**3**
Dysentery	4	1	2	0	0	3	2	1	7	3	**15**	**8**
Fever of short duration with rashes	13	4	5	0	5	17	0	1	3	3	**26**	**25**
Fever with chills/rigors malaria etc.	2	1	1	0	4	1	4	1	1	3	**12**	**6**
Jaundice with fever	**3**	1	2	1	3	0	1	1	3	0	**12**	**3**
Other	**9**	5	2	1	6	9	1	1	2	8	**20**	**24**
Other types of fever	21	6	10	4	9	8	11	2	19	5	**70**	**25**
Total	**64**	**20**	**31**	**10**	**35**	**41**	**22**	**7**	**45**	**29**	**197**	**107**

Source: DLHS4, 2012-13; R=rural, U= Urban

The number of children with acute illness in western Maharashtra is mainly concentrated in rural areas of Kolhapur, Satara and Solapur. The most common type of acute illness is fever with rashes and other types of fever and others. Substantial number of acute respiratory infection is also found in rural areas. In urban areas fever with short duration with rashes was highest in satara district.

Table2 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																	
	Kolhapur			Sangli			Satara			Pune			Solapur			Total		
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N
Acute Respiratory Tract Infection	0	1	9	3	1	3	3	0	4				1	0	3	**7**	**2**	**19**
Diarrhea	0	2	1	2	0	0	1	0	1	1	0	1	1	1	4	**5**	**3**	**7**
Dysentery	0	0	5	0	0	2	0	0	2	1	0	1	1	0	9	**2**	**0**	**19**
Fever of short duration with rashes	2	0	13	1	0	3	9	0		1	0	0	0	0	5	**13**	**0**	**21**
Fever with chills/rigors malaria etc.	1	0	2	0	0	1	1	0	4	1	1	3	0	0	4	**3**	**1**	**14**
Jaundice with fever	**0**	1	3	1	0	2	0	0	2	0	0	1	0	1	2	**1**	**2**	**10**
Other	**0**	1	12	0	0	1	0	1	12	2	0	0	2	0	3	**4**	**2**	**28**
Other types of fever	**2**	1	20	2	0	10	3	0	11	0	0	12	1	2	16	**8**	**3**	**69**
Total	**5**	**6**	**65**	**9**	**1**	**22**	**17**	**1**	**36**	**6**	**1**	**18**	**6**	**4**	**46**	**43**	**13**	**187**

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table3 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity															
	Kolhapur			Sangli			Satara			Pune			Solapur			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection	- -	- -	- -	1	0	2	0	2	0	- -	- -	- -	0	1	0	**6**
Diarrhea	- -	- -	- -	0	2	0	1	0	0	1	0	0	0	1	0	**5**
Dysentery	- -	- -	- -	- -	- -	- -	- -	- -	- -	0	1	0	- -	- -	- -	**1**
Fever of short duration with rashes	0	1	0	0	1	0	2	5	1	0	1	0	- -	- -	- -	**11**
Fever with chills/rigors malaria etc.	- -	- -	- -	- -	- -	- -	- -	- -	- -	1	0	0	- -	- -	- -	**1**
Jaundice with fever	- -	- -	- -	0	1	0	- -	- -	- -	- -	- -	- -	- -	- -	- -	**1**
Other	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	**1**
Other types of fever	**0**	1	1	1	1	0	2	0	0	- -	- -	- -	- -	- -	- -	**6**
Total	**-**	**2**	**1**	**2**	**5**	**2**	**5**	**7**	**1**	**2**	**2**	**-**	**-**	**3**	**-**	**32**

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table4 Number of Children 0–5 years of age with acute cause-specific morbidity associated with moderately underweight children in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity															
	Kolhapur			Sangli			Satara			Pune			Solapur			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	**1**
Diarrhea	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	**2**
Fever with chills/rigors malaria etc.	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	**1**
Jaundice with fever	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	**1**
Other	--	1	--	--	--	--	1	--	--	--	--	--	--	--	--	**2**
Other types of fever	--	1	--	--	--	--	--	--	--	--	--	--	2	--	--	**3**
Total	**--**	**4**	**--**	**1**	**--**	**--**	**1**	**--**	**--**	**1**	**--**	**--**	**3**	**--**	**--**	**10**

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table5 Number of Children 0–5 years of age with acute cause-specific morbidity associated with Normal weight children in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity															
	Kolhapur			Sangli			Satara			Pune			Solapur			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection	**--**	**1**	**5**	**0**	**3**	**0**	**3**	**1**		**0**	**0**	**0**	**2**	**1**	**0**	**16**
Diarrhea	**1**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**8**
Dysentery	**2**	**2**	**1**	**--**	**--**	**--**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**6**	**1**	**13**
Fever of short duration with rashes	**1**	**3**	**4**	**--**	**3**	**0**	**5**	**0**	**0**	**1**	**2**	**0**	**0**	**3**	**0**	**22**
Fever with chills/rigors malaria etc.	**0**	**1**	**1**	**--**	**1**	**--**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**8**
Jaundice with fever	**0**	**2**	**0**	**--**	**1**	**--**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**7**
Other	**3**	**7**	**1**	**--**	**1**	**--**	**3**	**7**	**0**	**0**	**9**	**1**	**0**	**2**	**0**	**34**
Other types of fever	**3**	**12**	**3**	**--**	**6**	**3**	**1**	**5**	**2**	**0**	**0**	**0**	**3**	**8**	**1**	**47**
Total	**10**	**28**	**15**	**0**	**17**	**3**	**14**	**15**	**3**	**1**	**12**	**2**	**7**	**24**	**4**	**155**

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

More number of Normal children reported acute illness as compared to severely and moderately underweighed children. Other types of fever and others were the most commonly type of acute illness and was concentrated among anemic children with Hb<11.

Table6 Number of Children 0–5 years of age with acute cause-specific morbidity in Konkan Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity												
	Thane		Mumbai Sub.		Mumbai		Raigad		Ratnagiri		Sindhudurg		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
Acute Respiratory Tract Infection	0	0	0	1	0	0	0	1	8	0	4	1	15
Diarrhea	1	1	0	1	0	0	2	1	2	0	0	0	8
Dysentery	1	0	0	2	0	0	2	0	1	1	0	0	7
Fever of short duration with rashes	1	0	0	4	0	0	2	1	4	1	3	1	17
Jaundice with fever	0	1	0	5	0	1	0	1	2	0	2	0	12
Other	0	0	0	9	0	7	3	3	4	1	0	0	27
Other types of fever	2	3	0	21	0	16	10	12	11	12	3	3	93
Total	5	5	0	43	0	24	19	19	32	15	12	5	179

Source: DLHS4, 2012-13; R=rural, U= Urban

Table presents number of children in the age group 0-5 years and with acute illness by place of residence in Konkan region. Other types of fever are the most common of acute illness prevalent and are mainly concentrated in Mumbai. In general distribution of number of children by place of residence shows more number of children with acute illness in urban areas than in rural areas due to high number of cases in Mumbai. The highest number of child morbidity in rural areas is found in Ratnagiri district with acute illness type other types of fever.

Table7 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Konkan Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																		
	Thane			Mumbai (sub)			Mumbai			Raigad			Ratnagiri			Sindhudurg			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Diarrhea	0		1	0	1					1	0								3
Fever of short duration with rashes				1	0					0	1		0	1					3
Fever with chills/rigors malaria etc.				0	1					0	1		1	0					3
Jaundice with fever	1		0	0	1												1		3
Other										2	0								2
Other types of fever	0		1	1	2			2		0	4		2						12
Total	1	0	2	2	5	0	0	2	0	3	6	0	3	1	0	0	1	0	26

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

The number of children who are severely malnourished and with acute illness is 26 and the most common acute illness is other types of fever**.**

Table8 Number of Children 0–5 years of age with acute cause-specific morbidity associated with moderately underweight children in Konkan Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																		
	Thane			Mumbai (sub)			Mumbai			Raigad			Ratnagiri			Sindhudurg			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Diarrhea											1		0	1					2
Fever of short duration with rashes		1						1											2
Jaundice with fever											1								1
Other											1								1
Other types of fever		1									1		1	0					3
Total	**2**	0	0	0	0	0	0	1	0	0	4	0	1	1	0	0	0	0	9

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

The number of children who are moderately malnourished and with acute illness is 9 and the most common acute illness is other types of fever

Table9 Number of Children 0–5 years of age with acute cause-specific morbidity associated with Normal weight children in Konkan Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																		
	Thane			Mumbai (sub)			Mumbai			Raigad			Ratnagiri			Sindhudurg			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
Acute Respiratory Tract Infection										0	1	0				4	0	0	5
Diarrhea										0	1	0							1
Dysentery	1	0		1	0	0				0	1	0							3
Fever of short duration with rashes	0	1		1	3	0	0	2	2										9
Fever with chills/rigors malaria etc.				0	2					1	1	0				1	0	0	5
Jaundice with fever				0	1	3	1	0	0										5
Other	**0**	1		0	8	0	0	3	0	1	2	0							15
Other types of fever				0	11	2	2	8	0							2	0	0	25
Total	**1**	2	0	2	25	5	3	13	2	2	6	0	0	0	0	7	0	0	68

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

The number of children who are severely malnourished and with acute illness is 68 and the most common acute illness is other types of fever and others. Acute type of children is mainly concentrated in Mumbai.

Table10 Number of Children 0–5 years of age with acute cause-specific morbidity in Kandesh Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity										
	Ahmednagar		Dhule		Jalgaon		Nashik		Nandurbar		Total
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
Acute Respiratory Tract Infection	0	0	4	2	0	0	3	0	1	2	12
Diarrhea	3	0	19	09	2	7	9	1	3	0	53
Dysentery	1	2	7	4	6	2	1	2	2	2	29
Fever of short duration with rashes	6	3	10	0	9	6	1	2	1	5	43
Fever with chills/rigors malaria etc.	3	4	18	5	10	6	4	0	0	3	53
Jaundice with fever	**3**	3	2	4	2	1	3	0	4	3	25
Other	**1**	2	8	1	6	3	1	2	0	4	28
Other types of fever	**8**	8	22	23	23	11	30	3	1	5	136
Total	**25**	22	90	48	58	36	50	10	12	24	

Source: DLHS4, 2012-13

Above table presents number of children in the age group 0-5 years and with acute illness by place of residence in Kandesh region. Diarrhea and fever with chills/malaria is the most common of acute illness prevalent and is mainly concentrated in rural areas of Dhule district. In general distribution of number of children by place of residence shows more number of children with acute illness in rural areas than in urban areas except in Nandurbar district. The highest number of child morbidity is found in Dhule district with acute illness type other types of fever. Among rural urban difference in terms of acute illness the highest number of rural urban difference was found in Dhule and Nashik districts.

Table11 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM condition in Kandesh Region, Maharashtra (2012-13)

Acute Illness	Ahmednagar			Dhule			Jalgaon			Nashik			Nandurbar			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection (RTI)	1	0	1	1	0	2	0	0	0	0	0	1	1	0	1	5
Diarrhoea	2	0	0	10	2	13	4	2	1	0	1	6	2	0	0	27
Dysentery	1	0	2	6	0	4	1	0	4	0	0	3	1	0	2	13
Fever of short duration with rashes	0	1	4	6	0	4	3	0	10	1	0	2	0	1	4	15
Fever with chills/rigors malaria etc.	1	0	1	7	1	13	2	3	7	0	2	1	1	0	1	23
Jaundice with fever	**5**	0	2	3	1	1	**2**	0	1	0	0	3	5	0	2	12
Other	**0**	0	2	2	1	4	**0**	0	5	0	0	5	1	0	2	9
Other types of fever	**13**	0	7	13	0	7	**16**	8	43	2	3	23	13	0	7	40
Total	**23**	1	19	48	5	44	28	13	71	3	6	44	24	1	19	144

Source: DLHS4, 2012-13; S= Severely Under Weight, M = Moderately Under Weight, N= Normal

Severely malnourished children are more likely to face acute type of morbidity issues in Ahmednagar, Dhule, and Nandurbar districts whereas normal children face acute type morbidity in Jalgaon and Nasik districts. The highest number of children with morbidity was in other types of illness. The highest number of acute cause of morbidity was found in normal children of Jalgaon district with other types of fever.

Table12 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Konkan Region, Maharashtra (2012-13)

Acute Illness	**Number of children attributable fraction for morbidity**																		
	Thane			**Mumbai (sub)**			**Mumbai**			**Raigad**			**Ratnagiri**			**Sindhudurg**			**Total**
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection				0	0	1				0	0	1	1	1	3	0	0	5	12
Diarrhea	1	0	0	1	0	0				1	1	1	0	1	1				7
Dysentery	0	0	1	0	0	1				0	0	1	0	0	2				5
Fever of short duration with rashes	0	1	1	1	0	4	0	1	4	1	0	0	1	0	2	0	0	2	18
Fever with chills/rigors malaria etc.				1	0	3				1	0	2	2	0	2	0	0	1	12
Jaundice with fever	**1**	0	0	1	0	4	0	0	1	0	1	0				1	0	0	9
Other				0	0	8	0	0	5	2	1	3	1	0	3				23
Other types of fever	**1**	1	1	3	0	16	2	0	12	4	1	16	5	1	16	2	0	3	84
Total	**3**	2	3	7	0	37	2	1	22	9	4	24	10	3	29	3	0	11	170

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

The highest number of acute cause of morbidity was found in normal children of Mumbai and Ratnagiri district with other types of fever. Severely malnourished children are more likely to face acute cause of morbidity issues such as fever of short duration with rashes in Raigad district, and other types of fever in Ratnagiri district.

Table13 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Kandesh Region, Maharashtra (2012-13)

Acute Illness	Ahmednagar			Dhule			Jalgaon			Nashik			Nandurbar		
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N
Acte Respiraory Tract Infection (RTI)	0	0	0	4	4	0	1	3	0	0	0	0	0	1	0
Diarrhea	0	1	0	3	3	0	1	0	0	0	0	0	0	2	0
Dysentery	0	1	0	3	1	0	2	0	0	0	0	0	0	1	0
Fever of short duration with rashes	1	2	0	5	2	0	1	1	0	0	1	0	0	0	1
Fever with chills/rigors malaria etc.	0	2	0	2	1	0	0	2	0	0	0	0	0	0	0
Jaundice with fever	**0**	1	0	1	1	0	0	0	0	0	0	0	**3**	1	1
Other	**0**	0	0	7	2	0	0	2	0	0	0	0	**0**	0	0
Other types of fever	**0**	2	0							0	2	0	**8**	4	1
Total	1	9	0	25	14	0	5	8	0	0	3	0	11	9	3

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table14 Number of Children 0–5 years of age with acute cause-specific morbidity in Marathwada Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																
	Aurangabad		Jalna		Beed		Osmanabad		Nanded		Latur		Parbhani		Hingoli		**Total**
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	
Acute Respiratory Tract Infection	9	0	6	1	0	0	3	1	2	0	4	1	2	3	0	0	32
Diarrhea	5	5	5	2	7	5	1	0	9	6	9	2	3	2	3	5	69
Dysentery	0	4	2	0	1	0	0		1	0	1	1	6	2	0	2	20
Fever of short duration with rashes	12	3	11	4	1	1	1	1	0	1	2	5	3	2	1	2	50
Jaundice with fever	9	1	6	4	0	0	0	0	1	0	1	3	0	1	4	0	30
Other	9	9	9	17	0	0	1	1	1	0	1	2	3	1	1	0	55
Other types of fever	26	19	22	7	2	3	4	1	20	10	12	6	6	3	11	5	157
Total	70	41	61	35	11	9	10	4	34	17	30	20	23	14	20	14	413

Source: DLHS4, 2012-13; R=rural; U = urban

Table above presents number of children in the age group 0-5 years and with acute illness by place of residence in Marathwada region. Among the types of acute illness number of children with other types of fever is 157 and is mainly concentrated in rural areas of Aurangabad, Nanded and Latur districts. In general distribution of number of children by place of residence shows more number of children with morbidity in rural areas than in urban areas. The highest number of child morbidity is found in Aurangabad district with acute illness type others. Among rural areas the highest number of child morbidity is in Aurangabad district.

Table15 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM condition in Marathwada Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																								
	Aurangabad			Jalna			Beed			Osmana bad			Nanded			Latur			Parbhani			Hingoli			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection (RTI)	2	1	2	1	0	5	0	0	0	1	0	2	1	0	0	0	0	3	1	0	1	0	0	0	20
Diarrhoea	0	1	8	1	1	5	0		4	0	0	1	4	0	7	2	1	3	2	0	2	2	0	3	47
Dysentery	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	10
Fever of short duration with rashes	3	4	15	7	0	22	0	0	0	0	0	0	0	0	1	0	1	2	3	1	3	0	1	0	63
Fever with chills/rigors malaria etc.	2	2	9	5	1	8	1		0	0	0	2	0	0	0	3	0	2	0	0	4	0	0	2	41
Jaundice with fever	1	0	7	1	0	9	0	0	0	1	1	3	1	0	0	0	0	3	0	0	1	1	0	3	32
Other	1	2	12	4	1	17	0	0	0	0	0	0	0	0	1	0	0	3	0	0	2	0	0	1	44
Other types of fever	3	5	34	5	2	14	2	0	2	0	0	0	7	4	16	2	0	9	1	0	5	6	1	4	122
Total	12	15	90	24	5	80	3	0	6	2	1	8	13	4	25	7	2	26	9	1	21	9	3	13	379

Source: DLHS4, 2012-13; S= Severely Under Weight, M = Moderately Under Weight, N= Normal

The highest number of children with morbidity was in other types of illness among normal children in Aurangabad district.

Table16 Number of Children 0–5 years of age with acute cause-specific morbidity associated with anemic condition in Marathwada Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																								
	Aurangabad			Jalna			Beed			Osmanabad			Nanded			Latur			Parbhani			Hingoli			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acte Respiratory Tract Infection (RTI)	1	5	2	3	3	0	0	0	0	1	2	0	2	0	0	1	3	0	1	1	0	0	0	0	25
Diarrhea	3	7	0	1	3	0	4	2	2	0	0	0	5	4	2	4	2	0	2	2	1	1	0	4	49
Dysentery	2	0	0	0	2	0	0	1	0	0	0	0	0	0	1	1	1	0	3	2	0	0	1	1	15
Fever of short duration with rashes	10	13	3	6	22	2	1	0	0	0	0	0	1	1	0	1	1	0	5	1	1	0	1	1	70
Fever with chills/rigors malaria etc.	7	6	0	3	6	0	1	1	0	0	1	0	0	1	0	1	5	0	3	1	0	0	2	0	38
Jaundice with fever	2	7	1	1	6	0	0	0	0	0	0	0	0	1	0	1	3	0	0	1	0	0	2	0	25
Other	5	10	0	3	4	3				0	1	0	0	1	0	0	2	0	1	3	0	1	0	0	34
Other types of fever	6	33	1	1	21	4	0	1	1	3	2	0	8	9	5	3	5	3	4	2	1	4	6	4	127
Total	36	81	7	18	67	9	6	5	3	4	6	0	16	17	8	12	22	3	19	13	3	6	12	10	383

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table above presents the number of children both anemic and non anemic cases with acute illness. Other type of fever is the most common cause of acute illness and is found among 127 children in Marathwada region. Other types of fever is mainly concentrated among anemic children with Hb level

less than 11 but greater than 7 in Aurangabad and Jalna districts. Fever of short duration was also found among 13 and 22 anemic children of Aurangabad and Jalna districts.

Table17 Number of Children 0–5 years of age with acute cause-specific morbidity associated with severely underweight children in Konkan Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																		
	Thane			Mumbai (sub)			Mumbai			Raigad			Ratnagiri			Sindhudurg			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Diarrhea	0		1	0	1					1	0								3
Fever of short duration with rashes				1	0					0	1		0	1					3
Fever with chills/rigors malaria etc.				0	1					0	1		1	0					3
Jaundice with fever	1		0	0	1												1		3
Other										2	0								2
Other types of fever	0		1	1	2			2		0	4		2						12
Total	1	0	2	2	5	0	0	2	0	3	6	0	3	1	0	0	1	0	26

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Table18 Number of Children 0–5 years of age with acute cause-specific morbidity in Nagpur Division, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity												
	Nagpur		Chandrapur		Wardha		Bhandara		Gondiya		Gadchiroli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
Acute Respiratory Tract Infection	16	2	--	--	--	--	--	--	2	0	---	---	20
Diarrhea	3	2	5	0	4	1	2	3	2	0	1	1	24
Dysentery	1	0	--	--	---	--	---	--	1	0	1	1	4
Fever of short duration with rashes	6	1	--	--	5	4	---	--	5	0	----	---	21
Fever with chills/rigors malaria etc.	7	4	2	0	8	2	----	---	8	3	1	1	36
Jaundice with fever	1	2	1	6	2	0	---	---	4	1	0	1	18
Other	3	4	5	0	7	0	1	1	3	2	0	2	28
Other types of fever	8	15	9	6	5	2	10	8	3	7	4	6	83
Total	**45**	**30**	**22**	**12**	**31**	**9**	**13**	**12**	**28**	**13**	**7**	**12**	**234**

Source: DLHS4, 2012-13; R=rural, U=urban

Table above presents the rural urban distribution of children with acute illness in Nagpur region. Overall, the number of children with acute illness is found to be more in rural areas as compared to urban districts in all the districts of Nagpur region except for Gadchiroli district of Nagpur region. Other types of fever are found to be the most common type of acute illness and are mainly concentrated in urban areas of Nagpur district and rural areas of Bhandara district.

Table19 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Nagpur division Maharashtra (2012-13)

Acute Illness	Nagpur			Chandrapur			Wardha			Bhandara			Gondiya			Gadchiroli			Total
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	
Acute Respiratory Tract Infection (RTI)	4	1	10										---	-	---	-	-	---	15
Diarrhea	0	0	4	1	0	3	0	0	4				0	0	1	0	0	2	18
Dysentery	0	0	1										0	0	1	0	0	2	4
Fever of short duration with rashes	0	0	4				0	1	3				0	0	1	---	---	---	9
Fever with chills/rigors malaria etc.	2	0	7	1	0	1	1	1	5				1	0	7	---	---	---	26
Jaundice with fever	**1**	0	2	0	1	6	0	0	1				**2**	0	3	0	0	1	17
Other	**0**	1	4	0	0	2	5	0	2	1			**0**	0	3	1	0	1	21
Other types of fever	**2**	0	20	1	1	12	0	1	4	3			**1**	1	4	0	1	8	64
Total	**9**	**2**	**52**	**3**	**2**	**24**	**6**	**3**	**19**	4			**4**	1	20	1	1	14	174

Source: DLHS4, 2012-13; S= Hb<7, M = 7<Hb<11, N= Hb>= 11

Acute type of illness are found to be more among normal children as compared to severely and moderately malnourished children in Nagpur region and is found to be highest among normal children of Nagpur district.

Table20 Number of Children 0–5 years of age with acute cause-specific morbidity in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity											
	Kolhapur		Sangli		Satara		Pune		Solapur		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Acute Respiratory Tract Infection	9	2	7	3	7	2			1	6	**24**	**13**
Diarrhea	3	0	2	1	1	1	3	0	9	1	**18**	**3**
Dysentery	4	1	2	0	0	3	2	1	7	3	**15**	**8**
Fever of short duration with rashes	13	4	5	0	5	17	0	1	3	3	**26**	**25**
Fever with chills/rigors malaria etc.	2	1	1	0	4	1	4	1	1	3	**12**	**6**
Jaundice with fever	**3**	1	2	1	3	0	1	1	3	0	**12**	**3**
Other	**9**	5	2	1	6	9	1	1	2	8	**20**	**24**
Other types of fever	21	6	10	4	9	8	11	2	19	5	**70**	**25**
Total	**64**	**20**	**31**	**10**	**35**	**41**	**22**	**7**	**45**	**29**	**197**	**107**

Source: DLHS4, 2012-13

Table above presents the rural urban distribution of children with acute illness in Western Maharashtra region. Overall, the number of children with acute illness is found to be more in rural areas as compared to urban districts in all the districts of Nagpur region except for satara district. Other types of fever, fever with short duration with rashes and other illness are found to be the most common type of acute illness and are mainly concentrated in urban areas of Satara district and rural areas of Kolhapur and Solapur districts.

Table21 Number of Children 0–5 years of age with acute cause-specific morbidity associated with SAM and Anemic condition in Western Maharashtra Region, Maharashtra (2012-13)

Acute Illness	Number of children attributable fraction for morbidity																	
	Kolhapur			Sangli			Satara			Pune			Solapur			Total		
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N
Acute Respiratory Tract Infection	0	1	9	3	1	3	3	0	4				1	0	3	**7**	**2**	**19**
Diarrhea	0	2	1	2	0	0	1	0	1	1	0	1	1	1	4	**5**	**3**	**7**
Dysentery	0	0	5	0	0	2	0	0	2	1	0	1	1	0	9	**2**	**0**	**19**
Fever of short duration with rashes	2	0	13	1	0	3	9	0		1	0	0	0	0	5	**13**	**0**	**21**
Fever with chills/rigors malaria etc.	1	0	2	0	0	1	1	0	4	1	1	3	0	0	4	**3**	**1**	**14**
Jaundice with fever	**0**	1	3	1	0	2	0	0	2	0	0	1	0	1	2	**1**	**2**	**10**
Other	**0**	1	12	0	0	1	0	1	12	2	0	0	2	0	3	**4**	**2**	**28**
Other types of fever	**2**	1	20	2	0	10	3	0	11	0	0	12	1	2	16	**8**	**3**	**69**
Total	**5**	**6**	**65**	**9**	**1**	**22**	**17**	**1**	**36**	**6**	**1**	**18**	**6**	**4**	**46**	**43**	**13**	**187**

Source: DLHS4, 2012-13

Acute type of illness are found to be more among normal children as compared to severely and moderately malnourished children in western Maharashtra region and is found to be highest among normal children of Kolhapur district for other types of fever. Only severely malnourished children of satara district shows number of children with fever with short duration of rashes.

V. Chronic Illness

Chronic diseases are long-term medical conditions that are generally progressive. Examples of chronic diseases include heart disease, diabetes, stroke, and chronic respiratory problems.

Table22 Number of Children 0–5 years of age with symptoms of chronic illness in Amravati Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity										
	Akola		Amravati		Buldhana		Washim		Yavatmal		Total
	R	U	R	U	R	U	R	U	R	U	
cardiovascular	2	1	1	0	0	0	0	0	0	0	4
central nervous system	0	0	2	0	0	0	0	1	0	0	3
mouth & dental problem	0	0	0	0	0	0	1	0	0	0	1
eye-problem	1	0	3	0	0	0	0	0	0	0	4
ent-problem	0	0	0	1	0	0	0	0	0	0	1
gastrointestinal	0	0	3	0	1	0	0	0	1	0	5
genitourinary-system	1	0	1	1	0	0	0	0	0	0	3
musculoskeletal	2	0	1	1	0	0	1	0	0	0	5
other	2	1	5	1	4	1	2	0	3	2	21
respiratory	5	2	3	2	2	0	1	1	1	1	18
skin diseases	1	0	1	1	0	0	1	0	3	0	7
Total	**14**	**4**	**20**	**7**	**7**	**1**	**6**	**2**	**8**	**3**	**72**

Source: DLHS4, 2012-13; R=rural; U = urban

Table23 Number of Children 0–5 years of age and sought treatment for chronic illness in Amravati Region, Maharashtra (2012-13)

Sought treatment	Number of children attributable fraction for morbidity										
	Akola		Amravati		Buldhana		Washim		Yavatmal		Total
	R	U	R	U	R	U	R	U	R	U	
No	3	0	4	2	0	0	1	0	2	1	13
Yes- detail diagnosis treatment not available	2	0	3	1	0	0	0	1	3	0	10
Yes- detail diagnosis treatment available	9	4	13	4	6	1	5	1	3	2	48
Total	**14**	**4**	**20**	**7**	**6**	**1**	**6**	**2**	**8**	**3**	**71**

Source: DLHS4, 2012-13; R=rural; U = urban

Table24 Number of Children 0–5 years of age diagnosed with chronic illness in Amravati Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity										
	Akola		Amravati		Buldhana		Washim		Yavatmal		Total
	R	U	R	U	R	U	R	U	R	U	
anemia	2	0	2	0	1	0					5
cataract	0	0	1	0	0	0	0	0	0	0	1
gall stone cholecystitis	0	0	1	0	0	0	0	0	0	0	1
glaucoma	0	0	1	0	0	0	0	0	0	0	1
asthma chronic respiratory failure	1	0	3	0	0	0	0	0	0	0	4
cancer respiratory system	0	1	0	0	0	0	0	0	0	0	1
chronic heart disease	1	0	2	1	0	0	1	0	0	0	5
diabetes	0	0	0	1	0	0	0	0	0	0	1
epilepsy	0	0	0	0	1	0	0	0	0	0	1
hernia hydrocele peptic ulcer	2	0	2	1	1	0	0	0	2	0	8
Hypertension	0	0	0	0	1	0	0	0	0	0	1
myocardial infection heart attack	0	0	0	0	0	0	0	0	0	0	0
rheumatoid arthritis	0	1	1	0	0	0	0	0	0	0	2
tumor-any	0	0	0	0	1	0	1	0	0	0	2
not-diagnosed	2	0	2	2	0	0	0	0	4	0	10
sinusitis tonsillitis	1	0	0	0	0	0	0	0	1	1	3
piles anal fissure anal fistula	1	0	1	0	0	0	1	0	0	0	3
skin cancer	1	0	0	0	0	0	0	0	0	0	1
stroke cerebra-vascular accident	0	0	0	0	0	0	0	1	0	0	1
Rheumatic fever heart disease	2	2	3	2	1	1	3	0	0	2	16
Cancer g	0	0	0	0	0	0	0	0	1	0	1
Total	**13**	**4**	**19**	**7**	**6**	**1**	**6**	**1**	**8**	**2**	67

Source: DLHS4, 2012-13; R=rural; U = urban

The total number of children with symptoms of chronic illness in Amravati region was 72 and is mainly concentrated in rural areas of Akola district. Chronic illness such as others and respiratory were the common symptoms of chronic illness.

Table above shows out of the 69 children reporting symptoms of chronic illness 13 received no treatment and were mainly from rural areas in Amravati and Akola districts. Although 10 cases sought diagnosis but treatment was not available for the same. Whereas, 48 cases seek diagnosis and treatment was available. Diagnosis of chronic ill children shows 16 children diagnosed with rheumatic fever heart disease and 10 children were not diagnosed with chronic illness.

Table25 Number of Children 0–5 years of age with symptoms of chronic illness in Konkan Region, Maharashtra (2012-13)

Chronic Illness	Thane		Mumbai (Sub.)		Mumbai		Raigad		Ratnagiri		Sindhudurg		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
cardiovascular				1		0							1
central nervous system				1		0	1	0					2
mouth & dental problem				1		0					2	0	3
ent-problem						0			0	1			1
genitourinary-system						0	0	2					2
musculoskeletal						0			0	1			1
other	1	1		2		0	3	1	1	1			10
respiratory						0					0	1	1
skin diseases				2		0							2
Total	**1**	**1**	**0**	**7**	**0**	**0**	**4**	**3**	**1**	**3**	**2**	**1**	**23**

Source: DLHS4, 2012-13; R=rural; U = urban

Chronic illness in Konkan region was mainly reported for illness type others.

Table26 Number of Children 0–5 years of age and sought treatment for chronic illness in Konkan Region, Maharashtra (2012-13)

Treatment	Thane		Mumbai (Sub.)		Mumbai		Raigad		Ratnagiri		Sindhudurg		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
yes-details diagnosis treatment available				3			4	3	1	0	1	1	13
yes details diagnosis treatment not available	0	0		3					0	1			4
No treatment	1	0							0	2			3
Total	1	0		6			4	3	1	3	1	1	20

Source: DLHS4, 2012-13; R=rural; U = urban

Among those reported chronic illness thirteen cases out of twenty sought treatment for chronic illness in Konkan region.

Table27 Number of Children 0–5 years of age diagnosed with chronic illness in Konkan Region, Maharashtra (2012-13)

Chronic Illness	Thane		Mumbai (Sub.)		Mumbai		Raigad		Ratnagiri		Sindhudurg		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
anemia							0	1	0	1			2
asthma chronic respiratory failure											0	1	1
chronic heart disease									0	1			1
epilepsy				1					1	0			2
hernia hydrocele peptic ulcer				1			1	2					4
hypertension				2									2
tumor-any							1	0					1
not-diagnosed	0	1		3					0	1			5
sinusitis tonsillitis											1	0	1
tuberculosis							2	0					2
Total	**0**	**1**		**7**			**4**	**3**	**1**	**3**	**1**	**1**	**21**

Source: DLHS4, 2012-13; R=rural; U = urban

Out of the 21 cases diagnosed with chronic illness in five cases the illness was not diagnosed and 4 cases were diagnosed with hernia hydrocele peptic ulcer in konkan region.

Table28 Number of Children 0–5 years of age with symptoms of chronic illness in Marathwada Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity																
	Aurangabad		Jalna		Beed		Osmanabad		Nanded		Latur		Parbhani		Hingoli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	
cardiovascular	1	0			0	0					0	1					2
Asymptomatic					0	0			2	0	1	0					3
central nervous system	0	1	2	1	0	0			2	0							6
eye-problem	1	0			0	0											1
ent-problem	2	1			0	0											3
gastrointestinal	3	2	3	0	0	0			1	0							9
genitourinary-system					0	0					0	1					1
musculoskeletal	2	0	1	1	0	0					0	1			1	1	7
other	1	0	2	3	0	0	1	0	2	0	0	4	1	1	1	0	16
respiratory	1	2	7	0	0	0					1	0	2	0			13
skin diseases	0	2	3	1	0	0					2	0					8
Total	**11**	**8**	**18**	**6**	**0**	**0**	**1**	**0**	**7**	**0**	**4**	**7**	**3**	**1**	**2**	**1**	**69**

Source: DLHS4, 2012-13; R=rural; U = urban

The total number of children with symptoms of chronic illness in Marathwada region was 69 and was mainly concentrated in Jalna and Aurangabad districts. Chronic illness such as others and respiratory were the common symptoms of chronic illness.

Table29 Number of Children 0–5 years of age with symptoms of chronic illness in Nagpur division, Maharashtra (2012-13)

Chronic Illness	Nagpur		Chandrapur		Wardha		Bhandara		Gondiya		Gadchiroli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
cardiovascular	0	1	----	----	1	0	---	---	----	---	0	1	3
central nervous system	----	----	---	---	2	0	---	---	----	-----	0	2	4
mouth & dental problem	----	----	2	0	---	---	---	---	----	----	---	---	2
gastrointestinal	0	1	----	----	--	--	---	---	---	----	1	0	2
other	1	2	5	0	3	0	---	---	3	2	2	3	21
respiratory	----	----	1	0	--	---	1	0	---	---	2	0	4
skin diseases	---	----	1	0	---	---	---	----	0	1	----	-----	2
Total	1	4	9	0	6	0	1	0	3	3	5	6	38

Source: DLHS4, 2012-13; R=rural; U = urban

The total number of children with symptoms of chronic illness in Nagpur region was 38 and was mainly concentrated in rural areas of chandrapur district with chronic illness others.

Table30 Number of Children 0–5 years of age and sought treatment for chronic illness in Marathwada Region, Maharashtra (2012-13)

Treatment	Number of children attributable fraction for morbidity																
	Aurangabad		Jalna		Beed		Osmanabad		Nanded		Latur		Parbhani		Hingoli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	
No treatment	1	1	9	1					1	0	1	3	1	0			18
yes details diagnosis treatment not available	2	2	0	1							0	3	1	0	1	0	10
yes-details diagnosis treatment available	5	4	9	4			1	0	4	0	2	1	1	1	1	0	33
Total	8	7	18	6			1	0	5	0	3	7	3	1	2	0	61

Source: DLHS4, 2012-13; R=rural; U = urban

Table shows out of the 69 children reporting symptoms of chronic illness 18 received no treatment and were mainly from rural areas in Jalna district. Although 10 cases sought diagnosis but treatment was not available for the same. Whereas, 33 cases seek diagnosis and treatment was available.

Table31 Number of Children 0–5 years of age and sought treatment for chronic illness in Nagpur Division, Maharashtra (2012-13)

Treatment	Nagpur		Chandrapur		Wardha		Bhandra		Gondiya		Gadchiroli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
yes details diagnosis treatment not available	0	1	2	0	1	0	--	---	1	1	1	0	7
yes-details diagnosis treatment available	1	3	2	0	5	0	1	0	1	2	3	5	23
Total	1	4	4	0	6	0	1	0	2	3	4	5	30

Source: DLHS4, 2012-13; R=rural; U = urban

Table above shows out of the 30 children reporting symptoms of chronic illness 7 cases sought diagnosis but treatment was not available for the same. Whereas, 23 cases seek diagnosis and treatment was available.

Table32 Number of Children 0–5 years of age diagnosed with chronic illness in Marathwada Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity																
	Aurangabad		Jalna		Beed		Osmanabad		Nanded		Latur		Parbhani		Hingoli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	
anemia			2	0					1	0	0	1					4
gall stone cholecystitis									1	0							1
asthma chronic respiratory failure	2	0	1	0							2	0					5
Cancer breast			0	1													1
cancer respiratory system			1	0													1
chronic heart disease	0	2	4	0													6
epilepsy	0	1	1	0													2
hernia hydrocele peptic ulcer			3	4					4	0	0	1	1	1			14
hypertension			2	0							0	1					3
Renal stone			1	1													2
myocardial infection heart attack											0	1					1
rheumatic fever heart diseases	0	1	1	0													2
rheumatoid arthritis	0	1									1	0					2
tumor-any	2	0					1	0	1	0							4
not-diagnosed	3	3									0	3	1	0	1	0	11
sinusitis tonsillitis	2	0	1	0													3
piles anal fissure anal fistula											1	0					1
skin cancer													1	0			1
stroke cerebro-vascular accident	1	0													1	0	2
fluorosis	1	0															1
Total	11	8	17	6			1	0	7	0	4	7	3	1	2	0	67

Source: DLHS4, 2012-13; R=rural; U = urban

Diagnosis of chronic ill children shows 14 children diagnosed with hernia hydrocele peptic ulcer and 11 children were not diagnosed with chronic illness.

Table33 Number of Children 0–5 years of age diagnosed with chronic illness in Nagpur Division, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity												
	Nagpur		Chandrapur		Wardha		Bhandara		Gondiya		Gadchiroli		Total
	R	U	R	U	R	U	R	U	R	U	R	U	
anemia	**1**	**0**	**2**	**0**	**1**	**0**	---	---	---	---	**0**	**1**	**5**
cataract	---	---	----	---	**1**	**0**	---	---	---	---	---	---	**1**
asthma chronic respiratory failure	---	----	--	---	**1**	**0**	**1**	**0**	---	---	----	----	**2**
cancer respiratory system	----	----	---	--	---	--	---	---	---	---	**1**	**0**	**1**
chronic heart disease	**0**	**1**	**1**	**0**	--	---	---	---	---	---	**1**	**0**	**3**
hernia hydrocele peptic ulcer	---	----	**1**	**0**	---	---	---	---	**1**	**2**	**1**	**2**	**7**
hypertension	----	----	---	---	---	--	---	---	--	---	**0**	**1**	**1**
rheumatoid arthritis	**0**	**1**	---	---	---	---	---	---	---	---	-----	---	**1**
tumor-any	**0**	**1**	--	---	---	---	---	---	---	---	**1**	**0**	**2**
not-diagnosed	**0**	**1**	**2**	**0**	--	--	---	---	**2**	**1**	**1**	**1**	**8**
sinusitis tonsillitis	----	----	--	--	**1**	**0**	---	---	---	---	---	---	**1**
flourosis	----	----	**1**	**0**	---	---	---	---	--	---			**1**
Total	**1**	**4**	**7**	**0**	**4**	**0**	**1**	**0**	**3**	**3**	**5**	**5**	**33**

Source: DLHS4, 2012-13; R=rural; U = urban

Diagnosis of chronic ill children shows 7 children diagnosed with hernia hydrocele peptic ulcer and 8 children were not diagnosed with chronic illness.

Table34 Number of Children 0–5 years of age with symptoms of chronic illness in Pune Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity										
	Kolhapur		Sangli		Satara		Pune		Solapur		**Total**
	R	U	R	U	R	U	R	U	R	U	
symptomatic	--	--	--	--	--	--	--	**1**	--	--	**1**
cardiovascular	**1**	**0**	**1**	**0**	--	--	**0**	**1**	**0**	**1**	**4**
central nervous system	**1**	**0**	--	--	**0**	**2**	--	--	--	--	**3**
mouth & dental problem	**0**	**1**	--	--	--	--	**0**	**1**	--	--	**2**
gastrointestinal	--	--	**1**	**0**	--	--	--	--	**1**	**0**	**2**
other	**4**	**1**	**2**	**0**	**5**	**1**	**2**	**0**	--	--	**15**
respiratory	**1**	**0**	**1**	**0**	--	--	**1**	**0**	**2**	**0**	**5**
skin diseases	--	--	**1**	**0**	--	--	--	--	--	--	**1**
Total	**7**	**2**	**6**	**0**	**5**	**3**	**3**	**3**	**3**	**1**	**33**

Source: DLHS4, 2012-13; R=rural; U = urban

Table35 Number of Children 0–5 years of age and sought treatment for chronic illness in Pune Region, Maharashtra (2012-13)

Treatment	Number of children attributable fraction for morbidity										
	Kolhapur		Sangli		Satara		Pune		Solapur		Total
	R	U	R	U	R	U	R	U	R	U	
Yes	2	0	1	0	0	2	2	1	3	0	11
No	0	1	2	0	1	0	1	0	1	2	8
Total	2	1	3	0	1	2	3	1	4	2	19

Source: DLHS4, 2012-13; R=rural; U = urban

Table36 Number of Children 0–5 years of age diagnosed with chronic illness in Pune Region, Maharashtra (2012-13)

Chronic Illness	Number of children attributable fraction for morbidity										
	Kolhapur		Sangli		Satara		Pune		Solapur		Total
	R	U	R	U	R	U	R	U	R	U	
anemia	1	0	1	0	1	0	--	--	--	--	3
asthma chronic respiratory failure	--	--	1	1	0	1	0	1	--	--	4
chronic heart disease	1	0	--	--	1	0	1	0	1	0	4
diabetes	1	0	--	--	--	--	--	--	--	--	1
epilepsy	--	--	--	--	1	0	0	1	0	1	3
hernia hydrocele peptic ulcer	--	--	2	0	--	--	1	0	2	1	6
sinusitis tonsillitis	1	0	--	--	1	0	--	--	--	--	2
Total	4	0	4	1	4	1	2	2	3	2	23

Source: DLHS4, 2012-13; R=rural; U = urban

The total number of children with symptoms of chronic illness in Pune region was 33 and was mainly concentrated in rural areas of Kolhapur, Sangli and Satara districts. Chronic illness others is the common symptoms of chronic illness. Out of the19 children reporting symptoms of chronic illness 8 received no treatment. Diagnosis of chronic ill children shows each of the 4 children diagnosed with asthma chronic Respiratory failure and chronic heart disease whereas 6 children were diagnosed with hernia hydrocele peptic ulcer.

IV Anemic children

Anemia is considered as a proxy indicator of iron deficiency. Iron deficiency is caused by the poor iron intake and low iron bioavailability. Many studies have shown that iron deficiency reduces the learning capacity of the children aged below five years. Socio economic status, and poor health of mothers due to meager dietary intake are the main causes of anemia.

Anemia continues to be a severe public health nutritional problem in India affecting all physiological groups. India is the highest contributor to child anemia. About 89 million children in India are anemic.

Table37 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in Amravati Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Akola	20	27	106	169	32	70
Amravati	10	14	87	154	41	69
Buldhana	18	46	60	116	12	31
Washim	**11**	21	55	166	20	51
Yavatmal	**16**	19	60	143	11	50
Total	75	127	368	748	116	271

Source: DLHS4, 2012-13

Irrespective of the anemic status of the children, the number of children who are anemic and non-anemic belong to household which don not have BPL card. Severe anemic cases is highest in Buldana district whereas anemic children was found to be highest in washim district among households which do not have BPL card.

Table38 Number of Children 0–5 years of age with anemic and non anemic cases and by BPL status in Konkan Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Thane	6	37	31	56	8	10
Mumbai (Sub)	4	26	11	108	8	35
Mumbai	1	19	10	42	2	9
Raigad	22	73	53	153	4	28
Ratnagiri	12	16	12	47	1	31
Sindhudurg	13	30	19	46	4	6
Total	58	201	136	452	27	119

Source: DLHS4, 2012-13

Overall, anemic children are found to be highest in household which do not have BPL card in Mumbai suburb and Raigad district of Konkan region. Highest number of children with acute cause of illness was among anemic children with Hb<11 and was mainly concentrated in Mumbai suburb and Raigad district.

Table39 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Nagpur Division, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Nagpur	5	19	21	38	5	22
Chandrapur	13	6	15	13	8	12
Wardha	**8**	13	32	85	8	46
Bhandara	**2**	9	23	15	8	11
Gondiya	**8**	3	39	36	8	9
Gadchiroli	**1**	11	9	15	1	6
Total	**37**	61	139	202	38	106

Source: DLHS4, 2012-13

Number of children with Severe anemic cases is highest in both BPL and non BPL household of Chandrapur and Wardha district respectively in rural areas of Nagpur region which otherwise shows more number of anemic children in non BPL household. Anemic cases among children were found to be highest in Wardha district among household which do not have BPL card. Overall, anemic children are found to be more in wardha district of Nagpur region.

Table40 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Nagpur Division, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Nagpur	5	16	5	33	1	12
Chandrapur	2	6	5	20	2	17
Wardha	**1**	9	13	56	1	14
Bhandara	**1**	1	7	19	5	18
Gondiya	**2**	6	22	39	7	20
Gadchiroli	**1**	6	6	20	1	18
Total	**12**	44	58	187	17	99

Source: DLHS4, 2012-13

Table41 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Marathwada Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Aurangabad	6	19	32	64	5	21
Jalna	13	36	58	87	12	22
Beed	14	3	15	34	6	7
Osmanabad	13	21	45	29	8	7
Nanded	18	22	19	69	6	28
Latur	15	19	30	57	6	21
Parbhani	26	38	39	51	13	13
Hingoli	1	15	18	47	4	23
Total	106	173	256	438	60	142

Source: DLHS4, 2012-13

In rural areas of Marathwada region Severe and moderately anemic cases children are found to be highest among household which do not have BPL card. The highest number of anemic cases is observed in Jalna district with household which do not have BPL card.

Table42 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Marathwada Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Aurangabad	4	23	3	39	0	5
Jalna	3	14	10	55	3	14
Beed	6	8	13	35	5	14
Osmanabad	20	22	29	32	9	9
Nanded	8	11	16	17	8	7
Latur	5	8	20	40	1	8
Parbhani	7	22	15	48	3	9
Hingoli	5	7	16	31	14	23
Total	58	115	122	297	43	89

Source: DLHS4, 2012-13

In urban areas of Marathwada region Severe and moderately anemic cases children are highest among household which do not have BPL card. The highest numbers of anemic cases are observed in Jalna district with household which do not have BPL card.

Table43 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural areas of Marathwada Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)				Anemic (7<Hb<11				Normal (Hb>=11)			
	OBC	Others	SC	ST	OBC	Others	SC	ST	OBC	Others	SC	ST
Aurangabad	4	13	4	2	43	35	10	5	11	9	2	2
Jalna	26	6	8	6	44	36	35	24	13	7	7	5
Beed	4	1	7	0	9	3	15	15	2	3	4	1
Osmanabad	13	7	3	9	20	11	28	11	3	5	6	1
Nanded	4	14	11	4	21	31	19	5	6	16	8	1
Latur	6	5	15	3	21	21	21	14	9	8	3	3
Parbhani	33	7	17	5	45	9	18	12	11	2	10	1
Hingoli	5	5	3	1	23	12	9	8	9	8	2	4
Total	95	58	68	30	226	158	155	94	64	58	42	18

Source: DLHS4, 2012-13

Caste wise anemic children with Hb (<11) is highest among all the castes in rural areas of Marathwada region. The highest number of anemic children is observed in Jalna district and also among caste OBCs in Parbhani district. Substantial number of anemic children is found among caste OBCs in parbhani district.

Table44 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban areas of Marathwada Region, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)				Anemic (7<Hb<11				Normal (Hb>=11)			
	OBC	Others	SC	ST	OBC	Others	SC	ST	OBC	Others	SC	ST
Aurangabad	11	4	8	1	16	9	4	12	0	2	1	1
Jalna	8	2	2	3	19	30	4	2	6	8	2	0
Beed	5	2	3	4	10	6	11	8	6	4	4	3
Osmanabad	16	15	5	4	15	16	9	8	5	1	3	2
Nanded	5	2	4	1	11	10	8	2	1	6	0	0
Latur	3	4	5	1	19	17	13	2	4	3	1	0
Parbhani	9	5	9	3	22	25	8	2	9	2	1	0
Hingoli	4	0	2	1	6	4	7	13	8	3	8	0
Total	61	34	38	18	118	117	64	49	39	29	20	6

Source: DLHS4, 2012-13

Castewise anemic children with Hb (<11) is highest among all the castes in urban areas of Marathwada region. The highest number of anemic children among caste others is observed in Jalna district, among caste OBCs in Parbhani district, among caste SCs in Latur district and among STs in Hingoli district. Highest number of severe anemic children is found among caste OBCs and Others in Osmanabad district.

Comparatively lesser number of children are anemic in urban areas as compared to rural areas of Nagpur region. As observed in rural areas highest number of anemic children is from wardha district.

Table45 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in rural Nagpur Division, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Nagpur	5	19	21	38	5	22
Chandrapur	13	6	15	13	8	12
Wardha	**8**	13	32	85	8	46
Bhandara	**2**	9	23	15	8	11
Gondiya	**8**	3	39	36	8	9
Gadchiroli	**1**	11	9	15	1	6
Total	**37**	61	139	202	38	106

Source: DLHS4, 2012-13

Table46 Number of Children 0–5 years of age with anemic and non-anemic cases and by BPL status in urban Nagpur Division, Maharashtra (2012-13)

Districts	Severe anemia (Hb <7)		Anemic (7<Hb<11)		Normal (Hb>= 11)	
	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)	BPL card (yes)	BPL card (No)
Nagpur	5	16	5	33	1	12
Chandrapur	2	6	5	20	2	17
Wardha	**1**	9	13	56	1	14
Bhandara	**1**	1	7	19	5	18
Gondiya	**2**	6	22	39	7	20
Gadchiroli	**1**	6	6	20	1	18
Total	**12**	44	58	187	17	99

Source: DLHS4, 2012-13

V Child Death

Table 47 Number of Child death by residence in Konkan Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Thane	0	1	1
Mumbai	0	7	7
Mumbai (Suburban)	**0**	5	5
Raigad	**3**	0	3
Ratnagiri	**3**	3	6
Sindhudurg	**1**	0	1
Total	**7**	16	23

Source: DLHS4, 2012-13

In Konkan region highest number of child deaths is reported from Mumbai during the reference period.

Table48 Number of Child death by residence in Marathwada Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Aurangabad	7	4	11
Jalna	6	1	7
Beed	0	0	0
Osmanabad	1	0	1
Nanded	9	2	11
Latur	6	1	7
Parbhani	2	1	3
Hingoli	2	1	3
Total	33	10	43

Source: DLHS4, 2012-13

In Marathwada region highest number of child deaths is reported from Aurangabad and Nanded districts. Child death is mainly concentrated in rural areas with highest number of child death in Nanded district. Beed recorded no child death during the reference period.

Table49 Number of Child death by sex in Konkan Region, Maharashtra (2012-13)

District	Male	Female	Total
Thane	1	0	1
Mumbai	3	4	7
Mumbai (Suburban)	1	**4**	5
Raigad	0	3	3
Ratnagiri	1	5	6
Sindhudurg	**0**	1	1
Total	**6**	17	23

Source: DLHS4, 2012-13

Overall, in Konkan region number of female deaths was three times greater than male deaths.

Table50 Number of Child death by sex in Marathwada Region, Maharashtra (2012-13)

District	Female	Male	Total
Aurangabad	4	7	11
Jalna	6	1	7
Beed	0	0	0
Osmanabad	1	0	1
Nanded	6	5	11
Latur	2	5	7
Parbhani	2	1	3
Hingoli	0	3	3
Total	21	22	43

Source: DLHS4, 2012-13

Overall, in Marathwada region equal number of male and female deaths was reported. However, number of male deaths was more as compared to female in Aurangabad and Latur districts and female deaths were more compared to male in Jalna and Nanded districts.

Table51 Number of Child death by BPL status in Konkan Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Thane	1	0	1
Mumbai	1	6	7
Mumbai (Suburban)	**0**	5	5
Raigad	**2**	1	3
Ratnagiri	**0**	6	6
Sindhudurg	**0**	1	1
Total	**4**	19	23

Source: DLHS4, 2012-13

More than three forth of the number of child deaths was reported from household which do not have BPL card in Mumbai.

Table52 Number of Child death by BPL status in Marathwada Region, Maharashtra (2012-13)

District	BPL card		Total
	No	Yes	
Aurangabad	10	1	11
Jalna	6	1	7
Beed	0	0	0
Osmanabad	0	1	1
Nanded	4	7	11
Latur	4	3	7
Parbhani	1	2	3
Hingoli	3	0	3
Total	28	15	43

Source: DLHS4, 2012-13

More than half the number of child deaths was reported from household which do not have BPL card. The highest number of such household was reported from Aurangabad and Jalna districts. In Nanded district the number of household who possess BPL card reported more number of child deaths as compared to household who has no BPL card.

Table53 Number of Child death by caste in Konkan Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Thane	0	1	0	0	1
Mumbai	1	0	5	1	7
Mumbai (Suburban)	**2**	1	1	0	4
Raigad	**2**	1	0	0	3
Ratnagiri	**1**	1	2	1	5
Sindhudurg	**1**	0	0	0	1
Total	**7**	4	8	2	21

Source: DLHS4, 2012-13

Caste wise, child death was highest among caste SCs and OBCs in Konkan region.

Table54 Number of Child death by caste in Marathwada Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Aurangabad	3	6	1	1	11
Jalna	3	2	1	1	7
Beed	0	0	0	0	0
Osmanabad	1	0	0	0	1
Nanded	5	2	3	1	11
Latur	1	4	2	0	7
Parbhani	0	0	2	1	3
Hingoli	2	0	0	1	3
Total	15	14	9	5	43

Source: DLHS4, 2012-13

Caste wise, child death was highest among caste OBCs followed by caste others in Marathwada region. However, in Aurangabad and Latur districts child death was highest among caste others and in Parbhani district the child death reported belongs to caste SC and ST.

Table55 Number of Child death by place of death in Konkan Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Other-place	Total
Thane	0	1	0	0	1
Mumbai	2	2	2	1	7
Mumbai (Suburban)	**3**	0	0	2	5
Raigad	**2**	1	0	0	3
Ratnagiri	**2**	2	2	0	6
Sindhudurg	**1**	0	0	0	1
Total	**10**	6	4	3	23

Source: DLHS4, 2012-13

The highest number of child deaths is reported from home and surprisingly is highest in Mumbai. This reflects, most likely the child was not provided with medical treatment.

Table56 Number of Child death by place of death in Marathwada Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Other-place	Total
Aurangabad	8	1	2	0	11
Jalna	6	1	0	0	7
Beed	0	0	0	0	0
Osmanabad	1	0	0	0	1
Nanded	5	6	0	0	11
Latur	4	1	0	2	7
Parbhani	2	0	0	1	3
Hingoli	2	1	0	0	3
Total	28	10	2	3	43

Source: DLHS4, 2012-13

The highest number of child deaths is reported from home and is highest in Aurangabad, Jalna and Nanded districts. This reflects, most likely the child was not provided with medical treatment. The number of child deaths reported from health facilities was 10 and the highest number of child death was reported from Nanded district.

Table57 Number of Child death by main source of medical attention before death in Konkan Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Thane	0	0	1	0	0	0	0	0	0	1
Mumbai	2	0	1	0	1	1	1	1	0	7
Mumbai (Suburban)	**2**	0	0	0	0	0	0	3	0	5
Raigad	**1**	0	0	0	0	0	0	2	0	3
Ratnagiri	**0**	0	1	0	0	0	1	4	0	6
Sindhudurg	**0**	0	1	0	0	0	0	0	0	1
Total	**5**	0	4	0	1	1	2	10	0	23

Source: DLHS4, 2012-13

As observed in above table among the total number of deaths in home 10 of the deaths received medical care from private hospital.

Table58 Number of Child death by main source of medical attention before death in Marathwada Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Aurangabad	6	0	1	0	0	0	1	3	0	11
Jalna	3	0	0	0	0	1	0	3	0	7
Beed	0	0	0	0	0	0	0	0	0	0
Osmanabad	1	0	0	0	0	0	0	0	0	1
Nanded	5	1	4	0	0	0	1	0	0	11
Latur	3	0	2	1	1	0	0	0	0	7
Parbhani	1	0	1	0	0	1	0	0	0	3
Hingoli	1	0	0	0	0	0	0	2	0	3
Total	20	1	8	1	1	2	2	8	0	43

Source: DLHS4, 2012-13

As observed in above table among the total number of deaths in home 8 of the deaths received medical attention i.e out of the 6 deaths in home in Jalna district 3 received medical care from private hospital. After home the highest number of child deaths who received medical attention before death were from Government and private hospital in marathwada region.

Table59 Number of Child death by residence in Amravati Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Akola	10	7	17
Amravati	3	2	5
Buldhana	**12**	7	19
Washim	**1**	1	2
Yavatmal	**2**	1	3
Total	**28**	18	46

Source: DLHS4, 2012-13

In Amravati region highest number of child deaths is reported from Akola and Buldana districts. Child death is mainly concentrated in rural areas with highest number of child death in Buldana district during the reference period.

Table60 Number of Child death by sex in Amravati Region, Maharashtra (2012-13)

District	Male	Female	Total
Akola	14	3	17
Amravati	3	2	5
Buldhana	12	**7**	19
Washim	2	0	2
Yavatmal	3	0	3
Total	**34**	12	46

Source: DLHS4, 2012-13

Overall, in Amravati region number of deaths among male were almost thrice than female and was mainly observed in Akola and Buldana districts.

Table61 Number of Child death by BPL status in Amravati Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Akola	8	9	17
Amravati	3	2	5
Buldhana	**9**	10	19
Washim	**2**	0	2
Yavatmal	**0**	3	3
Total	**22**	24	46

Source: DLHS4, 2012-13

More or less same number of child deaths was reported from household having and not having BPL card.

Table62 Number of Child death by caste in Amravati Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Akola	0	5	3	9	17
Amravati	1	1	2	1	5
Buldhana	**5**	6	2	6	19
Washim	**0**	0	0	2	2
Yavatmal	**0**	2	0	1	3
Total	**6**	14	7	19	46

Source: DLHS4, 2012-13

Caste wise, child death was highest among caste STs followed by caste others in Amravati region.

Table63 Number of Child death by place of death in Amravati Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Other-place	Total
Akola	11	3	2	1	17
Amravati	2	3	0	0	5
Buldhana	**14**	3	1	1	19
Washim	**2**	0	0	0	2
Yavatmal	**3**	0	0	0	3
Total	**32**	9	3	2	46

Source: DLHS4, 2012-13

The highest number of child deaths is reported from home and is highest Buldana district. This reflects, most likely the child was not provided with medical treatment.

Table64 Number of Child death by main source of medical attention before death in Amravati Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Akola	6	0	0	0	1	0	0	9	1	17
Amravati	1	0	0	0	0	1	0	2	1	5
Buldhana	**9**	0	1	1	0	1	2	5	0	19
Washim	**2**	0	0	0	0	0	0	0	0	2
Yavatmal	**0**	1	0	0	0	1	0	1	0	3
Total	**18**	1	1	1	1	3	2	17	2	46

Source: DLHS4, 2012-13

As observed in above table among the total number of deaths in home 9 each of the deaths was in private hospital in Akola district and in home in Buldana district. After home the highest number of child deaths who received medical attention before death were from private hospital.

Table65 Number of Child death by residence in Nagpur division, Maharashtra (2012-13)

District	Rural	Urban	Total
Nagpur	2	3	5
Chandrapur	5	3	8
Wardha	4	3	7
Bhandara	1	1	2
Gondiya	4	1	5
Gadchiroli	2	2	4
Total	18	13	31

Source: DLHS4, 2012-13

In Nagpur region highest number of child deaths is reported from Chandrapur and Wardha districts. Child death is mainly concentrated in rural areas with highest number of child death in Chandrapur district.

Table66 Number of Child death by sex in Nagpur division, Maharashtra (2012-13)

District	Male	Female	Total
Nagpur	3	2	5
Chandrapur	5	3	8
Wardha	5	2	7
Bhandara	1	1	2
Gondiya	3	2	5
Gadchiroli	2	2	4
Total	19	12	31

Source: DLHS4, 2012-13

Overall, in Nagpur region more number of male child deaths was reported as compared to female child deaths.

Table67 Number of Child death by BPL status in Nagpur Division, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Nagpur	2	3	5
Chandrapur	7	1	8
Wardha	3	4	7
Bhandara	1	1	2
Gondiya	3	2	5
Gadchiroli	--	4	4
Total	16	15	31

Source: DLHS4, 2012-13

Almost same number of child deaths was reported from household with or without BPL card. The highest number of such household was reported from Wardha district.

Table68 Number of Child death by caste in Nagpur division, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Nagpur	1	1	1	2	5
Chandrapur	3	1	1	3	8
Wardha	4	1	---	2	7
Bhandara	1	--	---	1	2
Gondiya	2	--	1	2	5
Gadchiroli	2	--	2	---	4
Total	13	3	5	10	31

Source: DLHS4, 2012-13

Caste wise, child death was highest among caste OBCs followed by caste STs in Nagpur region.

Table69 Number of Child death by place of death in Nagpur Division, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Other-place	Total
Nagpur	2	3	--	--	5
Chandrapur	3	3	2	--	8
Wardha	4	3	--	--	7
Bhandara	1	1	--	--	2
Gondiya	3	1	--	1	5
Gadchiroli	3	1	---	---	4
Total	16	12	2	1	31

Source: DLHS4, 2012-13

The highest number of child deaths is reported from home and is highest in Wardha district of Nagpur region.

Table70 Number of Child death by main source of medical attention before death in Nagpur Division, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Nagpur	1	---	1	--	---	1	---	2	----	5
Chandrapur	1	1	---	---	---	---	---	5	1	8
wardha	1	---	2	---	---	1	1	1	1	7
Bhandara	1	---	1	---	---	---	---	---	---	2
Gondiya	1	---	---	---	1	----	2	---	1	5
Gadchiroli	3	---	---	---	---	---	---	1	----	4
Total	8	1	4	---	1	2	3	9	3	31

Source: DLHS4, 2012-13

As observed in above table among the total number of deaths in home of the deaths received medical attention in private hospital. After home the highest number of child deaths was in Home.

VI Neonatal death

Table71 Number of Neonate death by residence in Amravati Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Akola	3	0	3
Amravati	6	5	11
Buldhana	**6**	1	7
Washim	**2**	2	4
Yavatmal	**6**	3	9
Total	**23**	11	34

Source: DLHS4, 2012-13

In Amravati region highest number of neonatal deaths is reported from Amravati and Yavatmal districts. NEonatal death is mainly concentrated in rural areas with highest number of neonatal death in Buldana, Yavatmal and Amravati districts during the reference period.

Table72 Number of Neonate death by sex in Amravati Region, Maharashtra (2012-13)

District	Male	Female	Total
Akola	1	2	3
Amravati	8	3	11
Buldhana	3	4	7
Washim	3	1	4
Yavatmal	5	4	9
Total	20	14	34

Source: DLHS4, 2012-13

Overall, in Amravati region more number of male deaths was reported as compared to female neonatal deaths and was observed in Amravati district.

Table73 Number of Neonate death by BPL status in Amravati Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Akola	2	1	3
Amravati	6	5	11
Buldhana	**4**	3	7
Washim	**3**	1	4
Yavatmal	**7**	2	9
Total	**22**	12	34

Source: DLHS4, 2012-13

More number of neonatal deaths was reported from household which have BPL card. The highest number of such household was reported from Yavatmal and Amravati districts.

Table74 Number of Neonate death death by caste in Amravati Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Akola	1	0	2	0	3
Amravati	0	3	5	3	11
Buldhana	**6**	1	0	0	7
Washim	**3**	0	1	0	4
Yavatmal	**6**	1	1	1	9
Total	**16**	5	9	1	34

Source: DLHS4, 2012-13

Caste wise, neonatal death was highest among caste OBCs followed by caste SCs in Amravati region.

Table75 Number of Neonate death by place of death in Amravati Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Other	Place not given	Total
Akola	0	3	0	0	0	3
Amravati	1	7	2	1	0	11
Buldhana	**3**	1	2	0	1	7
Washim	**1**	3	0	0	0	4
Yavatmal	**0**	8	1	0	0	9
Total	**5**	22	5	1	1	34

Source: DLHS4, 2012-13

The highest number of neonatal deaths is reported from health facilities and is highest in Amravati and yavatmal districts.

Table76 Number of Neonate death by main source of medical attention before death in Amravati Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Place not given	Total
Akola	0	0	0	0	0	0	0	3	0	0	3
Amravati	1	0	5	0	0	1	0	3	0	1	11
Buldhana	**1**	0	0	0	0	0	1	5	0	0	7
Washim	**0**	0	1	0	0	0	0	3	0	0	4
Yavatmal	**0**	1	2	0	0	1	0	3	2	0	9
Total	**2**	1	8	0	0	2	1	17	2	1	34

Source: DLHS4, 2012-13

As observed in above table among the total number of neonatal deaths the highest is in private hospital.

Table77 Number of Neonate death by residence in Pune Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Kolhapur	**2**	**--**	**2**
Sangli	**2**	**--**	**2**
Satara	**2**	**--**	**2**
Pune	**1**	**--**	**1**
Solapur	**2**	**--**	**2**
Total	**9**	--	9

Source: DLHS4, 2012-13

In Pune region there was no neonatal deaths in urban areas during the reference period.

Table78 Number of Neonate death by sex in Pune Region, Maharashtra (2012-13)

District	Male	Female	Total
Kolhapur	**1**	**1**	**2**
Sangli	**1**	**2**	**3**
Satara	**2**	**3**	**5**
Pune	**1**	**--**	**1**
Solapur	**1**	**1**	**2**
Total	**6**	**7**	**13**

Source: DLHS4, 2012-13

Overall, in pune region more or less equal number of male and female neonatal deaths was reported.

Table79 Number of Neonate death by BPL status in Pune Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Kolhapur	**--**	**2**	**2**
Sangli	**1**	**2**	**3**
Satara	**2**	**3**	**5**
Pune	**1**	**--**	**1**
Solapur	**1**	**1**	**2**
Total	**5**	**8**	**13**

Source: DLHS4, 2012-13

More number of neonatal deaths was reported from household which do not have BPL card.

Table80 Number of Neonate death by caste in Pune Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Kolhapur	**2**	**--**	**--**	**--**	**2**
Sangli	**--**	**1**	**--**	**2**	**3**
Satara	**2**	**--**	**1**	**2**	**5**
Pune	**--**	**1**	**--**	**--**	**1**
Solapur	**2**	**--**	**--**	**--**	**2**
Total	**6**	**2**	**1**	**4**	**13**

Source: DLHS4, 2012-13

Caste wise, neonatal death was highest among caste OBCs followed by caste STs in pune region.

Table81 Number of Neonate death by place of death in Pune Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Total
Kolhapur	**--**	**2**	**--**	**2**
Sangli	**2**	**1**	**--**	**3**
Satara	**--**	**4**	**1**	**5**
Pune	**--**	**1**	**--**	**1**
Solapur	**1**	**1**	**--**	**2**
Total	**3**	**9**	**1**	**13**

Source: DLHS4, 2012-13

The highest number of neonatal deaths is reported from health facilities and is highest in Satara district district.

Table82 Number of Neonate death by main source of medical attention before death in Pune Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Kolhapur	--	--	2	--	--	--	--	--	--	2
Sangli	1	--	--	--	--	1	--	1	--	3
Satara	--	1	1	--	--	--	--	3	--	5
Pune	--	--	--	--	--	--	--	--	--	--
Solapur	1	--	1	--	--	--	--	--	--	2
Total	2	1	4	--	--	1	--	4	--	12

Table83 Number of Neonate death by residence in Kandesh Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Ahmednagar	3	0	3
Dhule	4	2	6
Jalgaon	**7**	2	9
Nashik	**0**	2	2
Nandurbar	**1**	3	4
Total	**15**	9	24

Source: DLHS4, 2012-13

Overall, in Kandesh region more number of neonatal deaths are in rural areas as compared to urban areas and is concentrated in Jalgaon district.

Table84 Number of Neonate death by sex in Kandesh Region, Maharashtra (2012-13)

District	Male	Female	Total
Ahmednagar	2	1	3
Dhule	1	5	6
Jalgaon	**1**	8	9
Nashik	**1**	1	2
Nandurbar	**1**	3	4
Total	**6**	18	24

Source: DLHS4, 2012-13

The number of female deaths were thrice as compared to male deaths in kandesh region and was concentrated in jalgaon district

Table85 Number of Neonate death by BPL status in Kandesh Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Ahmednagar	2	1	3
Dhule	1	3	4
Jalgaon	**4**	5	9
Nashik	**1**	1	2
Nandurbar	**1**	3	4
Total	**9**	13	22

Source: DLHS4, 2012-13

More number of neonatal deaths was reported from household which do not have BPL card.

Table86 Number of Neonate death death by caste in Kandesh Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Ahmednagar	1	1	1		3
Dhule	2	2	1	1	6
Jalgaon	**4**	1	3	0	8
Nashik	**0**	2	0	0	2
Nandurbar	**1**	1	0	1	3
Total	**8**	7	5	2	22

Source: DLHS4, 2012-13

Caste wise, neonatal death was highest among caste OBCs followed by caste Others in Kandesh region.

Table87 Number of Neonate death death by place of death in Kandesh Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Total
Ahmednagar	0	3	0	3
Dhule	3	3	0	6
Jalgaon	**4**	4	1	9
Nashik	**1**	1	0	2
Nandurbar	**2**	1	1	4
Total	**10**	12	2	24

Source: DLHS4, 2012-13

The highest number of neonatal deaths is reported from health facilities and is highest in Jalgaon district district.

Table88 Number of Neonate death by main source of medical attention before death in Kandesh Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	Non medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Ahmednagar		0	0	0	0	0	0	3	0	3
Dhule	2						1	1	2	6
Jalgaon	**1**		1		1	1	2	3	0	9
Nashik	**0**	0	0	0	1	0	0	1	0	2
Nandurbar							1	3	0	4
Total	**3**	0	1	0	2	1	4	11	2	24

Source: DLHS4, 2012-13

The main source of medical attention received by neonates is from private hospital.

Table89 Number of Neonate death by residence in Marathwada Region, Maharashtra (2012-13)

District	Rural	Urban	Total
Aurangabad	2	1	3
Jalna	7	5	12
Beed		1	1
Osmanabad	2		2
Nanded	5	3	8
Latur	1		1
Parbhani	1	3	4
Hingoli	1	4	5
Total	19	17	36

Source: DLHS4, 2012-13

Table90 Number of Neonate death by sex in Marathwada Region, Maharashtra (2012-13)

District	Female	Male	Total
Aurangabad	1	2	3
Jalna	7	4	11
Beed	1		1
Osmanabad	1	1	2
Nanded	3	5	8
Latur		1	1
Parbhani	2	2	4
Hingoli	3	2	5
Total	18	17	35

Source: DLHS4, 2012-13

Table91 Number of Neonate death by BPL status in Marathwada Region, Maharashtra (2012-13)

District	BPL card		Total
	No	Yes	
Aurangabad	2	1	3
Jalna	11	1	12
Beed	1		1
Osmanabad	1	1	2
Nanded	2	6	8
Latur	1		1
Parbhani	2	2	4
Hingoli	4	1	5
Total	24	12	36

Source: DLHS4, 2012-13

Table92 Number of Neonate death death by caste in Marathwada Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Aurangabad			2	1	3
Jalna	4	7		1	12
Beed					0
Osmanabad					0
Nanded	1	3		2	6
Latur	1				1
Parbhani	2	2			4
Hingoli	2	2	1		5
Total	10	14	3	4	31

Source: DLHS4, 2012-13

Table93 Number of Neonate death by place of death in Marathwada Region, Maharashtra (2012-13)

District	Home	Health Facilities	In transit	Total
Aurangabad	2		1	3
Jalna	6	5		11
Beed		1		1
Osmanabad		2		2
Nanded	3	3	2	8
Latur		1		1
Parbhani	3			3
Hingoli		3	2	5
Total	14	15	5	34

Source: DLHS4, 2012-13

Table94 Number of Neonate death by main source of medical attention before death in Marathwada Region, Maharashtra (2012-13)

District	Home	CHC	Government Hospital	No medic	Others	PHC	Private dispensary	Private Hospital	UHC-UHP	Total
Aurangabad			1			1		1		3
Jalna	3	1		2	1		1	3	1	12
Beed						1				1
Osmanabad								2		2
Nanded			1			4		3		8
Latur									1	1
Parbhani	2							2		4
Hingoli	1		1					3		5
Total	6	1	3	2	1	6	1	14	2	36

Source: DLHS4, 2012-13

There were 35 neonatal deaths reported from Marathwada region and the highest number of death was in Jalna district. Neonatal deaths were slightly high in rural areas and among females. About twice the number of neonatal deaths was reported from household with no BPL cards and was concentrated in Jalna district. Caste others reported highest number of neonatal deaths. Home and health facilities reported equal number of deaths. More number of neonatal death received attention in private hospital.

VII Infant deaths

Table95 Number of infant death by sex in Amravati Region, Maharashtra (2012-13)

District	Female	Male	Total
Akola	4	2	6
Amravati	12	3	15
Buldhana	**5**	1	6
Washim	**4**	0	4
Yavatmal	**5**	0	5
Total	**30**	6	36

Source: DLHS4, 2012-13

Table96 Number of infant death by BPL status in Amravati Region, Maharashtra (2012-13)

District	BPL card			Total
	Not given	Yes	No	
Akola	0	4	2	6
Amravati	0	6	9	15
Buldhana	**0**	**1**	5	6
Washim	**1**	**0**	3	4
Yavatmal	**0**	**1**	4	5
Total	**1**	**12**	23	36

Source: DLHS4, 2012-13

Table97 Number of infant death by caste in Amravati Region, Maharashtra (2012-13)

District	Not given	OBC	Other	SC	ST	Total
Akola	0	2	2	2	0	6
Amravati	0	3	4	4	4	15
Buldhana	0	**4**	0	2	0	6
Washim	**1**	**1**	2	0	0	4
Yavatmal	0	**2**	0	1	2	5
Total	**1**	**12**	8	9	6	36

Source: DLHS4, 2012-13

Table98 Number of infant death by sex in Kandesh Region, Maharashtra (2012-13)

District	Female	Male	Total
Ahmednagar	4	5	9
Dhule	2	8	10
Jalgaon	**7**	4	11
Nashik	**2**	4	6
Nandurbar	**1**	2	3
Total	**16**	23	39

Source: DLHS4, 2012-13

Above table shows more number of male infant deaths as compared to female deaths. Male deaths are highest in Dhule district whereas female deaths are highest in Jalgaon district of kandesh region.

Table99 Number of infant death by BPL status in Kandesh Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Ahmednagar	3	6	9
Dhule	2	8	10
Jalgaon	**2**	9	11
Nashik	**1**	5	6
Nandurbar	**3**	0	3
Total	**11**	28	39

Source: DLHS4, 2012-13

Number of infant death is more among household with BPL card holder and is highest in Jalgaon district in Kandesh region.

Table100 Number of infant death by caste in Kandesh Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Ahmednagar	5	1	3	0	9
Dhule	4	5	1	0	10
Jalgaon	**5**	3	1	2	11
Nashik	**2**	0	2	2	6
Nandurbar	**1**	0	1	1	3
Total	**17**	9	8	5	39

Source: DLHS4, 2012-13

Table101 Number of infant death by sex in Marathwada Region, Maharashtra (2012-13)

District	Female	Male	Total
Aurangabad	5	3	8
Jalna	3	5	8
Beed			
Osmanabad		4	4
Nanded	2	1	3
Latur	3	2	5
Parbhani	2	2	4
Hingoli	1	4	5
Total	16	21	37

Source: DLHS4, 2012-13

Table102 Number of infant death by BPL status in Marathwada Region, Maharashtra (2012-13)

District	BPL card		Total
	No	Yes	
Aurangabad	3	5	8
Jalna	6	2	8
Beed			
Osmanabad	3	1	4
Nanded	1	2	3
Latur	3	2	5
Parbhani	3	1	4
Hingoli	4	1	5
Total	23	14	37

Source: DLHS4, 2012-13

Table103 Number of infant death by caste in Marathwada Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Aurangabad	4		2	2	8
Jalna	3	2		1	6
Beed					0
Osmanabad	1	1			2
Nanded		2	1		3
Latur	3	1	1		5
Parbhani		2	2		4
Hingoli	1	2	1		4
Total	12	10	7	3	32

Source: DLHS4, 2012-13

Table104 Number of infant death by sex in Nagpur division, Maharashtra (2012-13)

District	Female	Male	Total
Nagpur	1	3	4
Chandrapur	---	2	2
Wardha	6	3	9
Bhandara	1	1	2
Gondiya	1	10	11
Gadchiroli	---	2	2
Total	9	21	30

Source: DLHS4, 2012-13

Table105 Number of infant death by BPL status in Nagpur Division, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Nagpur	1	3	4
Chandrapur	2	5	7
Wardha	4	5	9
Bhandara	1	1	2
Gondiya	5	6	11
Gadchiroli	---	2	2
Total	13	22	35

Source: DLHS4, 2012-13

Table106 Number of infant death by caste in Nagpur Division, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Nagpur	2	--	---	2	4
Chandrapur	4	---	3	---	7
Wardha	**2**	1	2	4	9
Bhandara	**---**	---	2	---	2
Gondiya	**3**		4	2	9
Gadchiroli	**-----**	1	1	---	2
Total	**11**	2	12	8	33

Source: DLHS4, 2012-13

Table107 Number of infant death by sex in Pune Region, Maharashtra (2012-13)

District	Female	Male	Total
Kolhapur	**4**	**4**	**8**
Sangli	**1**	**3**	**4**
Satara	**3**	**4**	**7**
Pune	**1**	**0**	**1**
Solapur	**1**	**8**	**9**
Total	**10**	**19**	**29**

Source: DLHS4, 2012-13

Table108 Number of infant death by BPL status in Pune Region, Maharashtra (2012-13)

District	BPL card		Total
	Yes	No	
Kolhapur	**2**	**6**	**8**
Sangli	**3**	**1**	**4**
Satara	**0**	**3**	**3**
Pune	**1**	**1**	**2**
Solapur	**0**	**1**	**1**
Total	**6**	**12**	**18**

Source: DLHS4, 2012-13

Table109 Number of infant death by caste in Pune Region, Maharashtra (2012-13)

District	OBC	Other	SC	ST	Total
Kolhapur	**7**	**--1**	**--**	**--**	**8**
Sangli	**2**	**1**	**1**	**--**	**4**
Satara	**1**	**2**	**1**	**2**	**6**
Pune	**--**	**--**	**1**	**--**	**1**
Solapur	**2**	**4**	**1**	**2**	**9**
Total	**12**	**8**	**4**	**4**	**28**

Source: DLHS4, 2012-13

There were 37 infant deaths reported from Marathwada region and the highest number of death was in Aurangabad and Jalna districts. Infant deaths were slightly high among males. More number of infant deaths was reported from household with no BPL cards and was concentrated in Jalna district. Caste OBC reported highest number of infant deaths.

Highest numbers of infant deaths are observed among caste OBCs in Kandesh resion.

There were 35 infant deaths reported from Nagpur region and the highest number of death was in Gondiya and Wardha districts. Infant deaths were slightly high among males. Among male infant death Gondiya reported highest number of death whereas among female Wardha reported highest number of female death. More number of infant deaths was reported from household with no BPL cards and was concentrated in Gondiya district. Caste Sc and OBC reported highest number of infant deaths.

Above table shows more number of male infant deaths as compared to female deaths. However, male and female death were more or less equal in Satara and Kolhapur districts of Pune region where most of infant deaths were concentrated. The number of infant deaths in non BPL card household was almost double to the household which has BPL card and was mainly concentrated in Kolhapur district. Caste OBC in Kolhapur district and caste Others in Solapur district shows higher number of infant deaths as compared to other castes in Pune region.

In Amravati region number of female infant deaths was almost thrice as compared to male infant deaths and was concentrated in Amravati district. However, male and female death were more or less equal in Satara and Kolhapur districts of Pune region where most of infant deaths were concentrated. The number of infant deaths in non BPL card household was almost double to the household which has BPL card and was mainly concentrated in Amravati district. Caste OBC in Buldhana district and each of caste Others, SCs and STs in Amravati district shows higher number of infant deaths as compared to other castes in Amravati region.

VIII Malnutrition

Millennium Development Goal aims to halve, between 1990 and 2015, the proportion of prevalence of under-weight among under-5 years children. The UN estimates that 2.1 million Indian children die before reaching the age of five every year.

The state of Maharashtra consists of 35 districts, which are grouped into six administrative regions. In Maharashtra f**or every ten** children aged three or less, born to illiterate mothers, **five children are underweight** - too thin for their age (NFHS III, 2005-06). There is a wide variation among districts in terms of socio economic development. Out of the six administrative regions, children in Pune division

fared better in terms of nutritional and health status whereas children from Amravati and Nashik divisions were worse off (CNSM, 2013). Disparities in terms of socio economic development lead to differences in maternal and child health. Therefore, it is important to detect malnutrition at early childhood for timely interventions and participation at community level.

Malnutrition, defined as underweight, acts as a catalyst in the risk of mortality and morbidity. Children bear the brunt of the disease burden associated with malnutrition.

In DLHS4 (2012-13) the level of malnutrition in the population groups is assessed by anthropometry (i.e. measurements of body size and composition), using as indicators low birth weight in newborns, low weight-for-age in preschool children. Relative estimates for diarrhoea, malaria, acute respiratory infections and other infectious diseases were correlated with estimated weight for age in children.

Disaggregated estimates (e.g. by age, sex, region) can also help policy-makers identify the segments of a population most at risk, and direct resources where they will have the greatest effect. Many factors can cause malnutrition, most of which relate to poor diet or severe and repeated infections, particularly in underprivileged populations. Inadequate diet and disease, in turn, are closely linked to the general standard of living, the environmental conditions, and whether a population is able to meet its basic needs such as food, housing and health care. Malnutrition is thus a health outcome as well as a risk factor for disease and malnutrition and it can increase the risk both of morbidity and mortality.

Although it is rarely the direct cause of death (except in extreme situations, such as famine), child malnutrition was associated with 54% of child deaths (10.8 million children) in developing countries in 2001 (WHO, 2004).

Malnutrition commonly affects all groups in a community, but infants and young children are the most vulnerable because of their high nutritional requirements for growth and development. Another group of concern is pregnant women, given that a malnourished mother is at high risk of giving birth to a LBW baby who will be prone to growth failure during infancy and early childhood, and be at increased risk of morbidity and early death.

Malnourished girls, in particular, risk becoming yet another malnourished mother, thus contributing to the intergenerational cycle of malnutrition. Growth assessment is the single measurement that best defines the health and nutritional status of a child, because disturbances in health and nutrition, regardless of their etiology, invariably affect child growth.

The weightfor-age categories were based on the number of standard deviations (SDs) from the median value of the WHO international reference population (< -3 SD; -3 SD to < -2 SD; -2 SD to < -1 SD; and > -1 SD).

We use DLHS4 (2012-13 to estimate and compare the height weight of these children. Analysis was carried out using risk factors in a systematic way to asses the differential in terms of children weighed.

To examine the differential in terms of child growth by socio economic characteristics we used the DLHS4 (2012-13) unit level data for Maharashtra.

Table 6 presents the distribution of severely and moderately malnourished children (males) in the age group two to five years. Number of moderately and severely malnourished children was estimated by adopting new World Health Organization (WHO) Growth Reference Standards (GRS), which determines the weight for height (2-5 years).

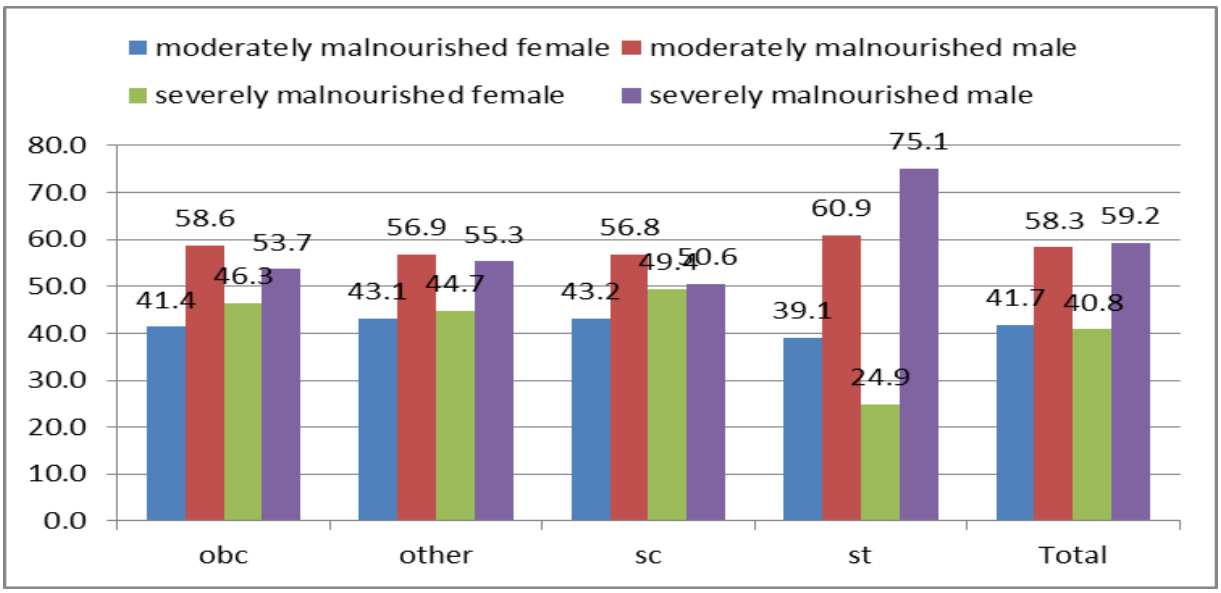
As evident from Table 6 rural urban divide is striking with more number of malnourished children in rural areas than in urban areas. Further, the rural urban gap is striking among moderately malnourished children as compared to severely malnourished children. It also indicates more number of male children is malnourished as compared to a female child.

Table 110: Distribution of Moderately and Severely Malnourished Children by gender and areas, Maharashtra, 2013-14

	Severely malnourished		Moderately malnourished	
	Rural	**Urban**	**Rural**	**Urban**
Male	589	327	974	597
Female	269	189	456	321
Total	**858**	**516**	**1430**	**918**

Source: Unit data records DLHS4, 2013-14

Figure1 Percent **Distribution of Moderately and Severely Malnourished Children by Social Groups, Maharashtra, 2013-14**

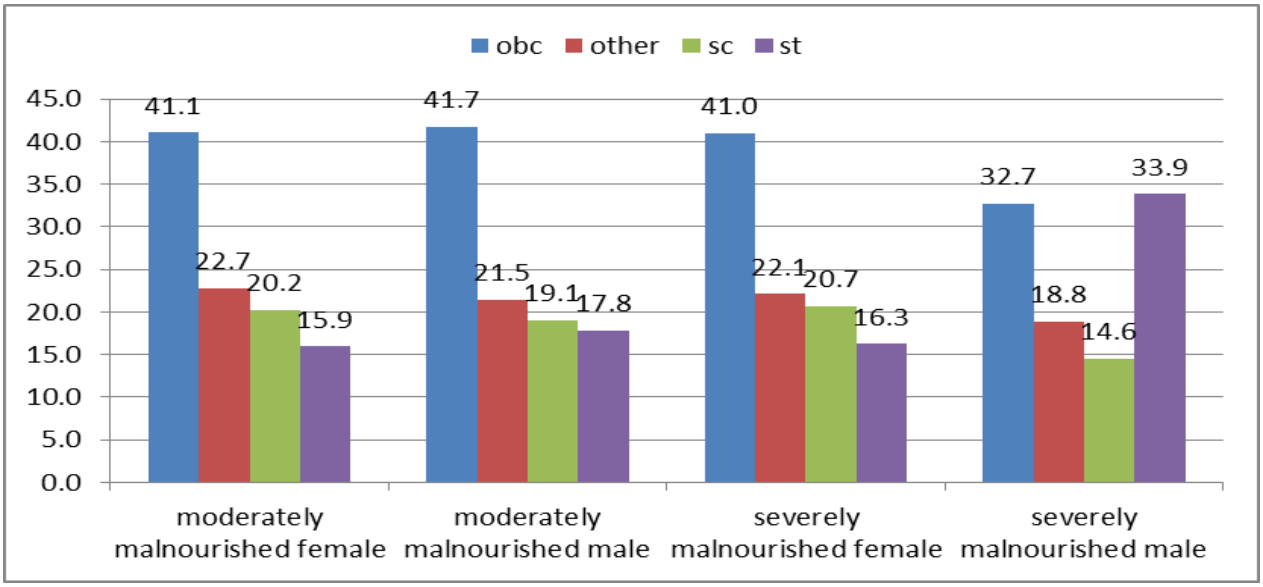


Source: Unit data records DLHS4, 2013-14

Figure 1 presents the male female distribution of moderately and severely malnorished children by social groups. Overall, the perecentage of severely and moderately malnourished male child are much higher than femal child among all the social groups. Howevere, the male female difference is striking

among the social group STs, wherea,s the male female difference was least in case of severely malnourished children among caste SCs.

Figure2 Percent distribution of Moderately and Severely Malnourished Children by Social Groups, Maharashtra, 2013-14



Source: Unit data records DLHS4, 2013-14

Figure2 presents the distribution of moderately and severely malnourished children by social groups. Caste OBCs shows highest percent of severely and moderately malnourished children for both male and female followed by caste Others and Sts.However, among social group STs highest percentageof severely malnourished male child is observed. This indicates, differential by background characteristics in terms of male and female and by social groups.

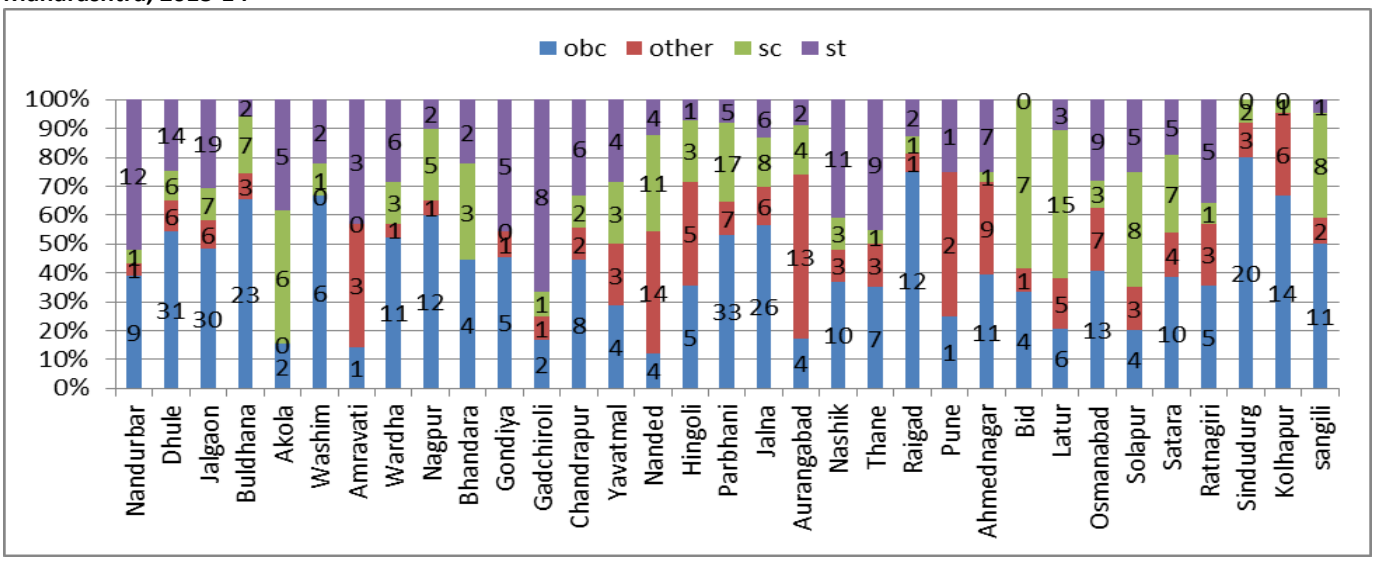
Figures 1-2, presents the overall distribution of malnourished children by social groups and place of residence. The present study also aims to cover the administrative division in Maharashtra and to identify the region with high proportion of malnourished children.

Anemia is one of the indicator used to identify severely and moderately malnourished children. Anemic mother and child is of serious concern and if not attended or treated may lead to serious health issues. The CAB file in DLHS4 (12-13) gives results of blood test with severe anemic (HB<7) and Anenic cases (<11).

Figure 3 shows distribution of number of children in the age group 0-5 years with severe anemia (Hb< 7) and residing in rural areas by social groups in all the districts of Maharashtra. Overall, the caste OBCs shows proportionately high number of severe anemic children and is highest in Dhule, Jalgaon, and Parbhani, districts and least in Akola, Pune and Gadchiroli districts. Among caste Others the highest proportionate of severe anemic children was observed in Nanded and Aurangabad districts; and among caste SCs the highest proportionate of severe anemic children was observed in Parbhani and Latur

districts. Whereas, in case of caste ST, the highest number of severe anemic children was observed in Buldhana, Dhule and Nandurbar districts of Maharashtra.

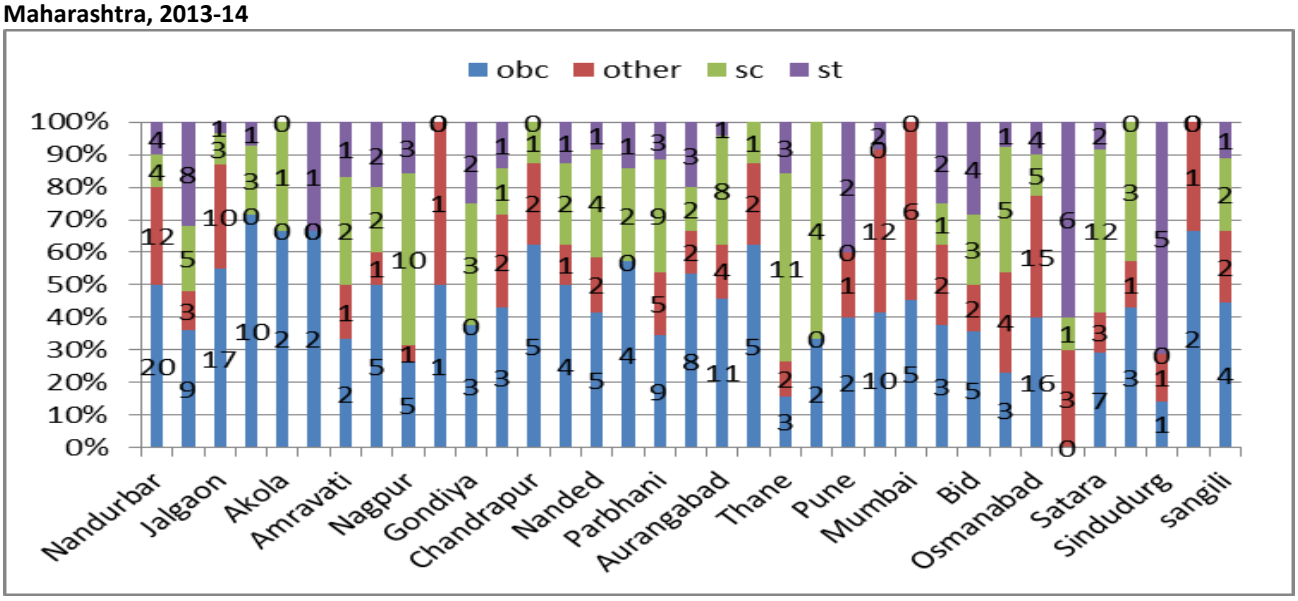
Figure3 Distribution of Moderately and Severely Malnourished Children in rural areas by Social Groups, Maharashtra, 2013-14



Source: Unit data records DLHS4, 2013-14

In urban areas as shown in figure 3 the number of children with severe anemic was highest among caste OBCs in Nandurbar and Jalgaon districts; and among caste others in Nandurbar and Mumbai districts; Whereas among caste SCs the highest number of severe anemic children was from Thane and Satara districts and among STs in Jalgaon district**.**

Figure3 Distribution of Moderately and Severely Malnourished Children in urban areas by Social Groups, Maharashtra, 2013-14

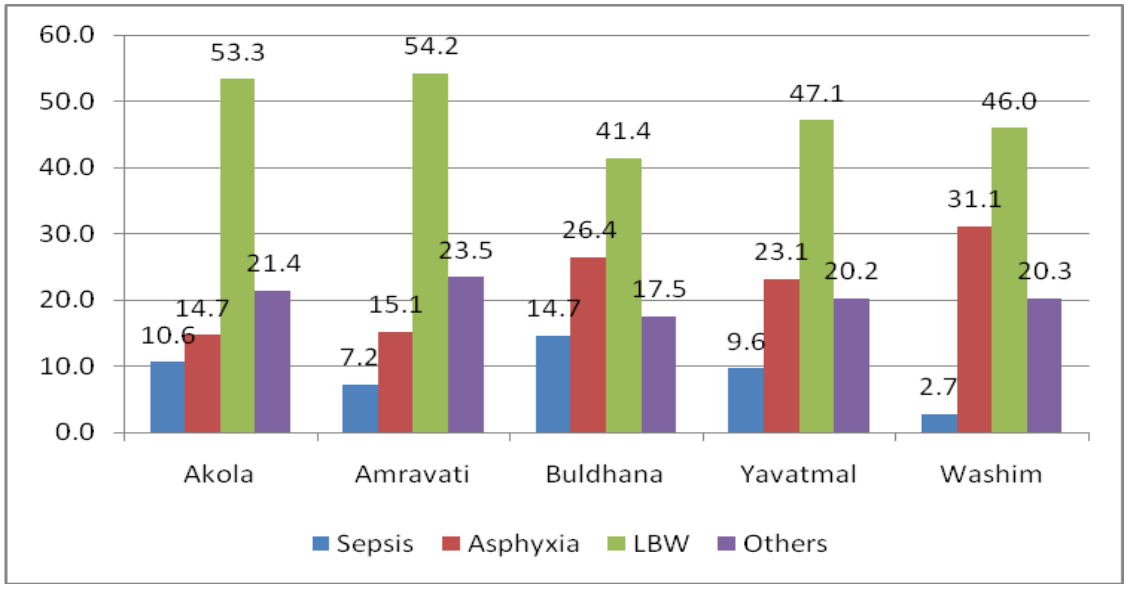


Source: Unit data records DLHS4, 2013-14

IX Causes of Infant and Child Deaths

This section examines the causes of Infant and Child deaths across Maharashtra during the year 2013-14. Data from Health monitoring information system was used to examine and identify the main causes of infant and child deaths across various regions in Maharashtra.

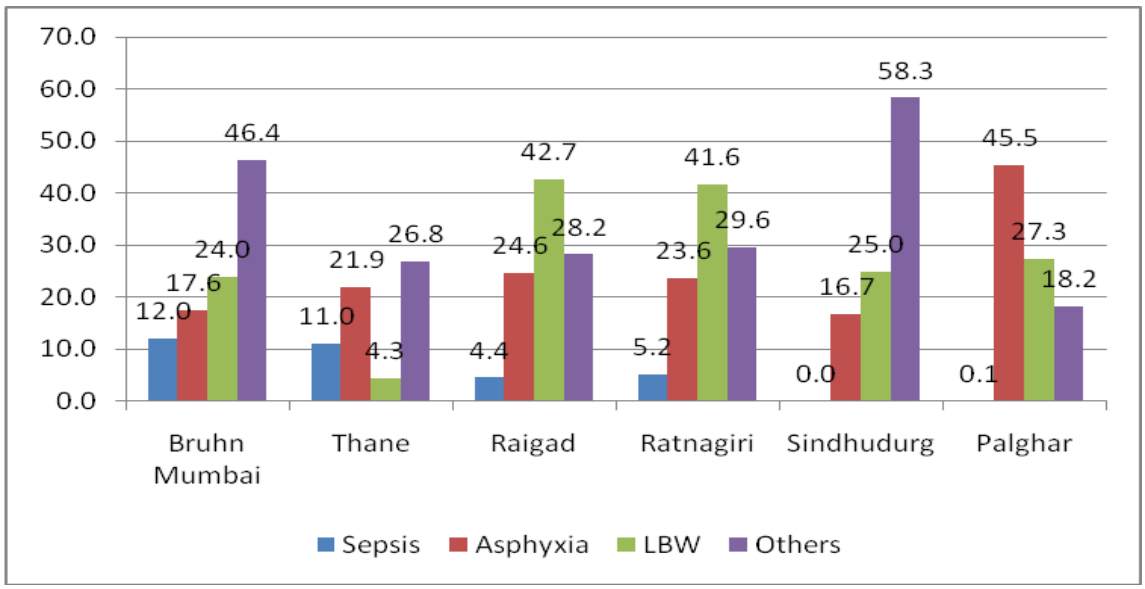
Figure4: Percent distribution by causes of Infant Deaths in Vidarbha -Amravati region



Source: HMIS (2013-14)

Low birth weight was the prominent reason for the deaths of infant in Vidarbha-Amravati region with about half of death due to low birth weight in Amravati and Akola districts. Near about quarter of deaths was also due to asphyxia in Yavatmal and Buldhana districts whereas in Washim district the death due to asphyxia was 30 percent.

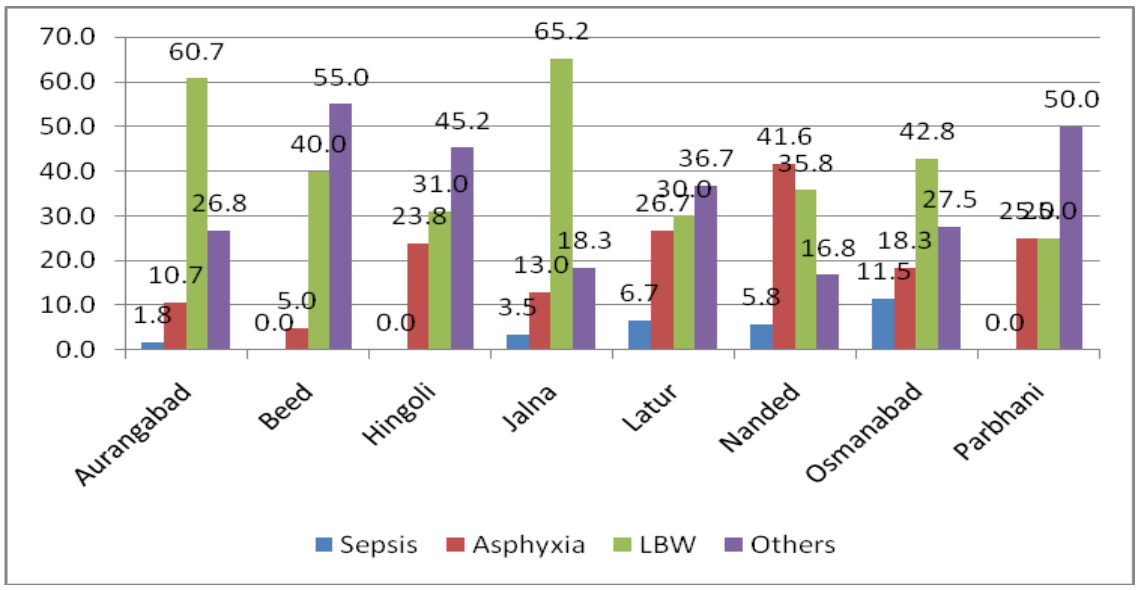
Figure5: Percent distribution by causes of Infant Deaths in Konkan-region



Deaths due to other reasons was 46 percent in Brihanmumbai and 58 percent in Sindudurg district. Near about 40 percent of deaths in Raigad and Ratnagiri districts were due to low birth weight and 45 percent of deaths in Palghar district was due to asphyxia. In Thane district a little more than quarter of deaths was due to other reasons whereas 21 percent of deaths was due to asphyxia.

Death due to low birth weight was comparatively smaller in Konkan region as compared to other regions and was only 4 percent in Thane district which is the lowest percent of death due to low birth weights as compared to other districts.

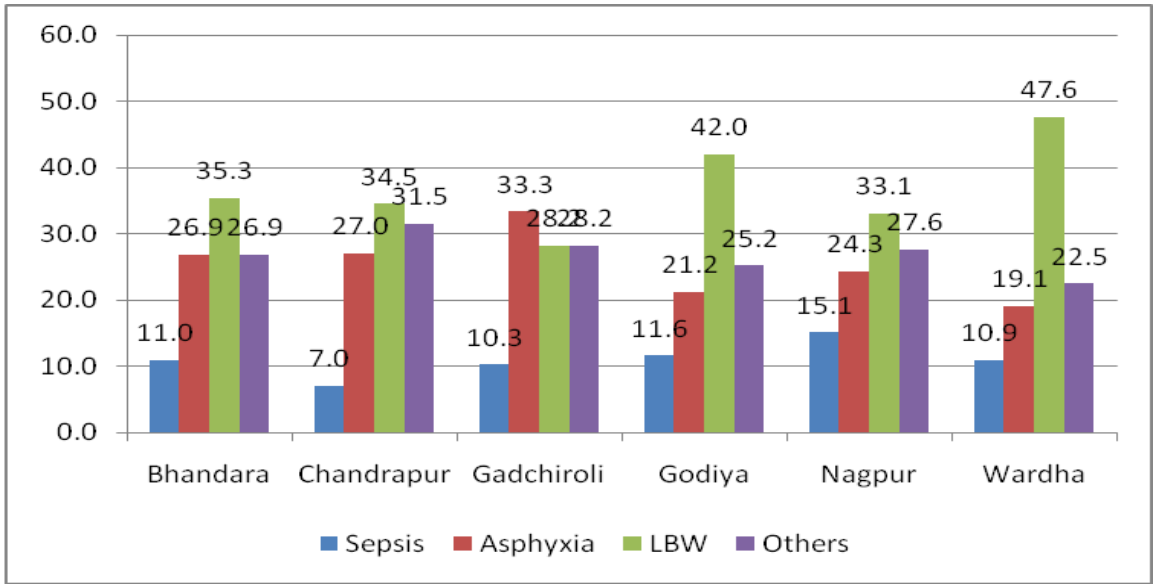
Figure6: Percent distribution by causes of Infant Deaths in Marathwada region



Deaths due to low birth weight were highest in Aurangabad and Jalna districts with 60 and 65 percent respectively. Deaths due to other reasons were 55 percent in Beed; 50 percent in Parbhani, and 45 percent in Hingoli distrcts.

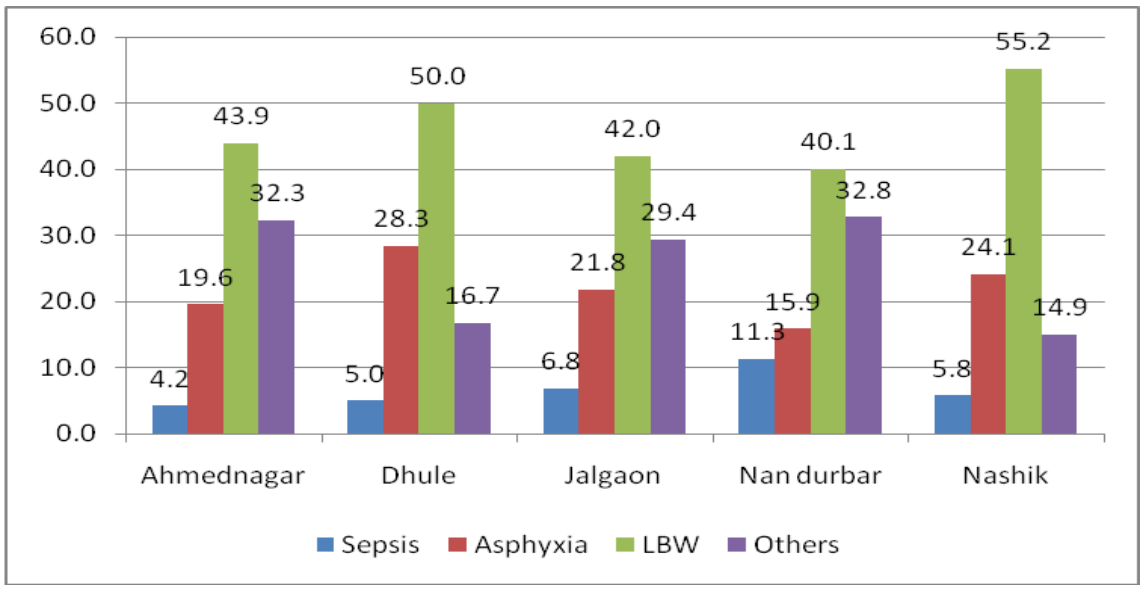
Osmanabad district also shows a significantly high number of deaths due to low birth weight with 42 percent and 41 percent of infant deaths Nanded district is due to asphyxia.

Figure 7: Percent distribution by causes of Infant Deaths in Vidarbha-Nagpur region



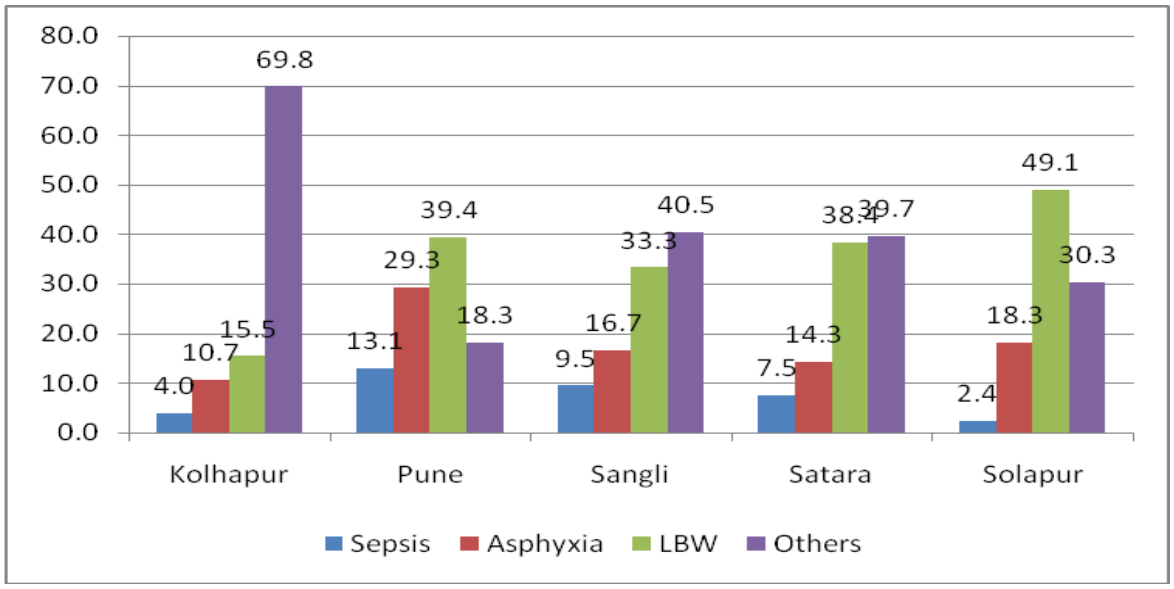
As seen above in figure 7 except for Gadchiroli district all the other districts in Vidharba –Nagpur region shows high percent of death due to low birth weight which ranges to nearly 35 percent in districts of Bhandara, Chandrapur and Nagpur districts to 42 percent in Gondiya and 47 percent in Wardha district. In Gadchiroli district deaths due to asphyxia with 33 percent was the major cause of infant death.

Figure 8: Percent distribution by causes of Infant Deaths in Kandesh region



Kandesh region also shows high infant deaths due to low birth weight. Half of infant deaths in Dhule district and 55 percent of deaths in Nashik district were due to low birth weight. Whereas, near about 40 percent of deaths in Ahmednagar, Jalgaon and Nandurbar districts was due to low birth weight.

Figure 9: Percent distribution by causes of Infant Deaths in Desh -Pune region

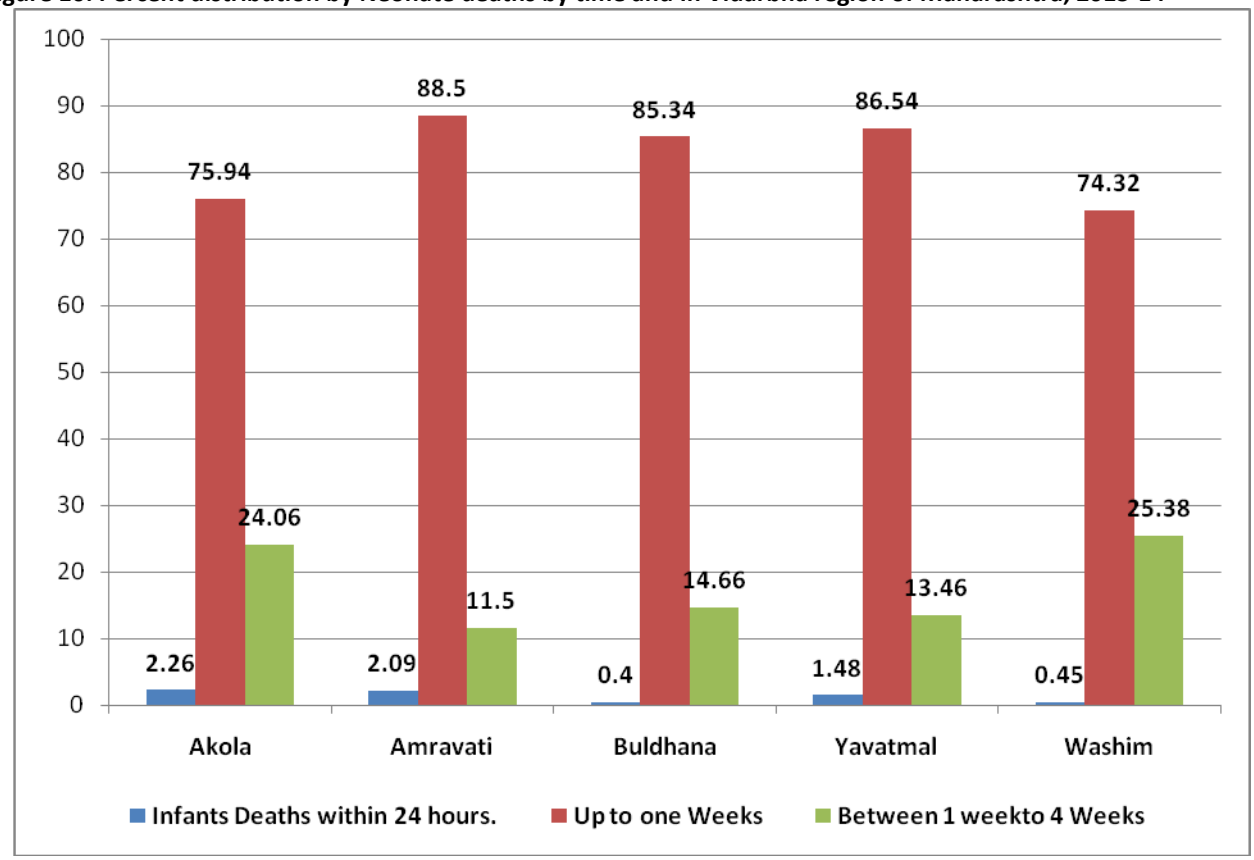


In Desh-Pune region death due to other reasons were prominent and was highest in Kolhapur district with 69 percent to near about 40 percent in Sangli and Satara districts. Near about 40 percent of deaths in Solapur and Pune districts was due to low birth weight. Significantly 29 percent of deaths in Pune district was due to asphyxia.

Overall Infant deaths was mainly due to low birth weight, asphyxia and other reasons. With proper ANC care infant deaths due to low birth weight can bereduced.

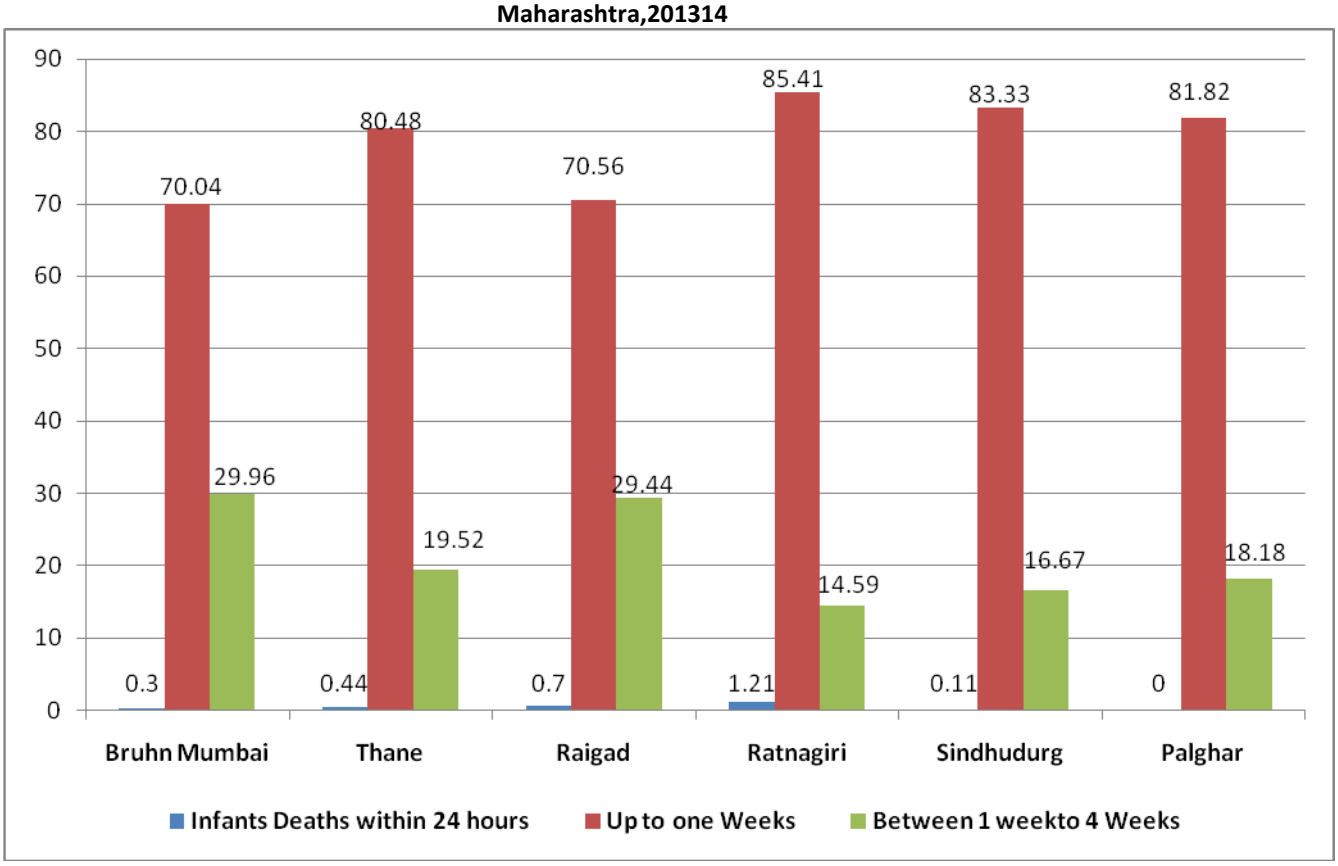
The following figure presents the death of infants in different regions of Maharastra. Death within 24 hours and within one week after birth is mainly due to genetic reasons. Whereas death between 1 week of birth to one month of birth can be reduced by timely medical intervention.

Figure 10: Percent distribution by Neonate deaths by time and In Vidarbha region of Maharashtra, 2013-14



More than three forth of deaths among infants is within first week of births in Washim and Akola districts. Neonate deaths is much higher in Amravati, Buldana and Yavatmal districts with 88, 85 and 86 percent respectively.

Figure 11: Percent distribution by causes of Neonate deaths by time and In Konkan region of Maharashtra,201314



In konkan region death of infant within 24 hours of birth is negligible. Death of neonates is highly concentrated in first week of birth. In Brihan Mumbai and Raigad more than quarter of deaths is reported between 1 week and upto 4 weeks of birth. Death upto one week was highest in Thane, Sindudurg, Ratnagiri and Palghar district with 80, 85, 83 and 81 percent respectively.

Figure 12: Percent distribution by causes Neonate deaths by time and In Vidarbha – Nagpur region of Maharashtra, 2013-14

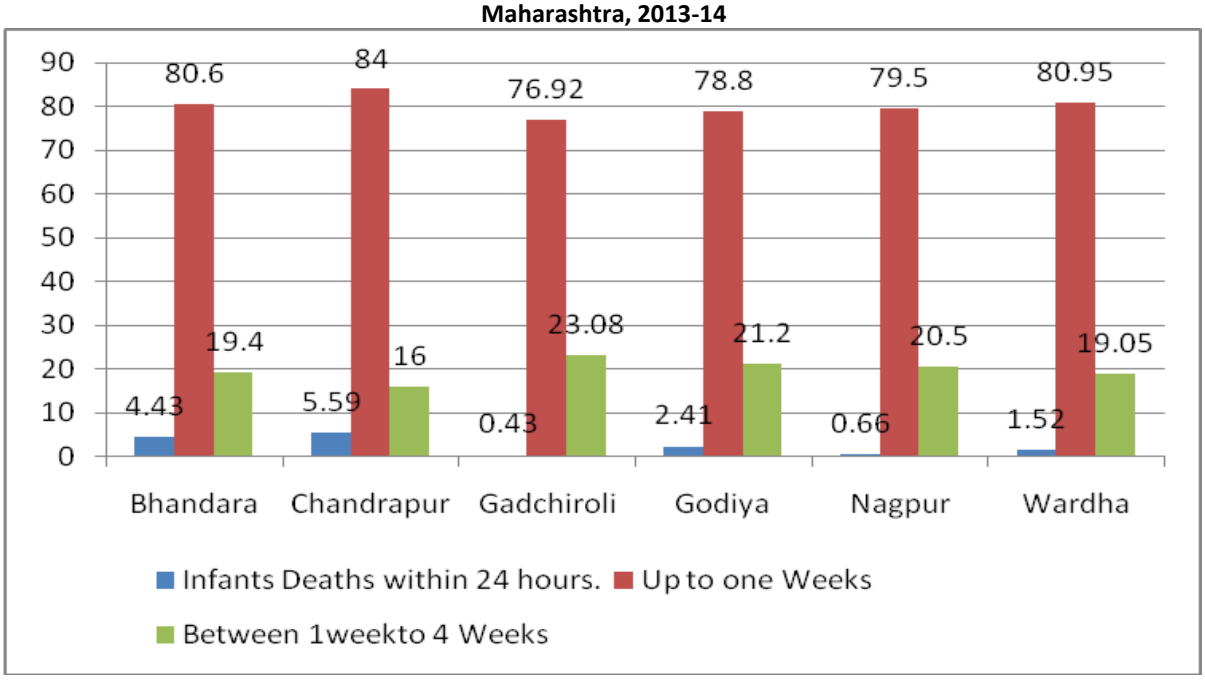


Figure12 shows more than three forth of deaths among infants are during the first week of births and is uniformly observed in all the districts and is highest in Bhandara, Wardha and Chandrapur districts with 80 and 84 percent respectively . Infant deaths can be much lower if proper ANC and neonate treatment is provided in timely manner.

Figure 13: Percentwise causes of Neonate deaths by time and In Kandesh region of Maharashtra,201314

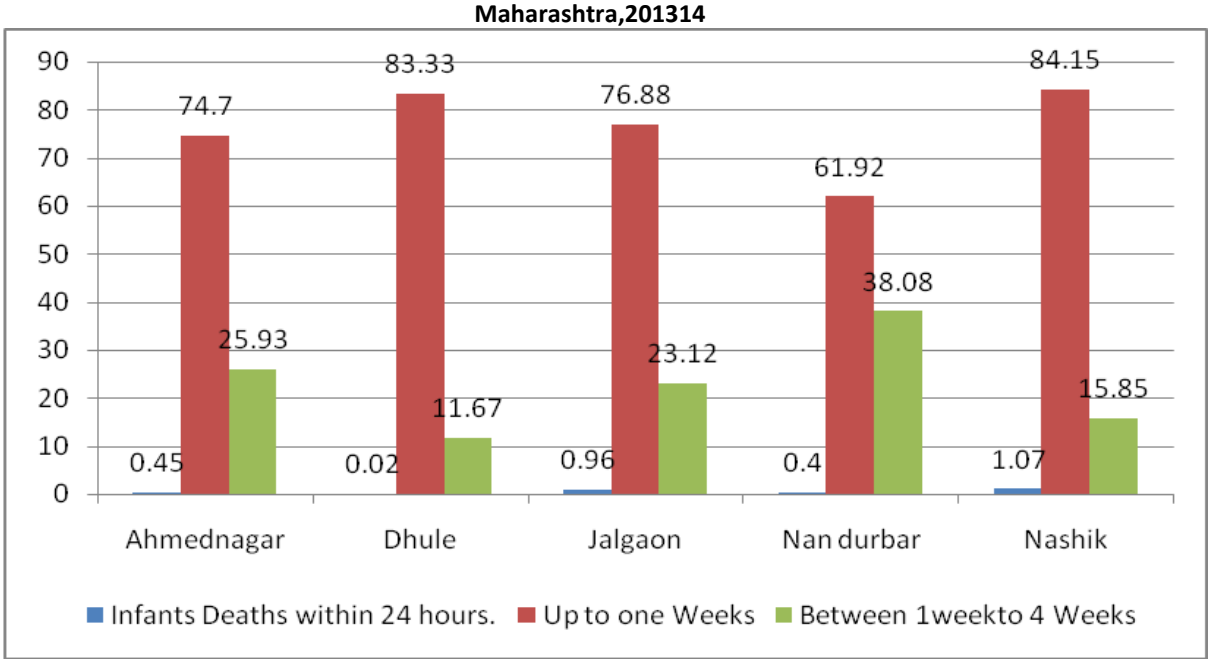


Figure 13 shows in kandesh except for Nandurbar districts more than 75 percent of the neonate deaths is during first week of birth. In Nandurbar district substantial number of deaths occur between 1 week to 4 weeks ofbirth.

Figure 14: Percent distribution by causes of Neonate deaths by time and In Desh-Pune region of Maharashtra, 2013-14

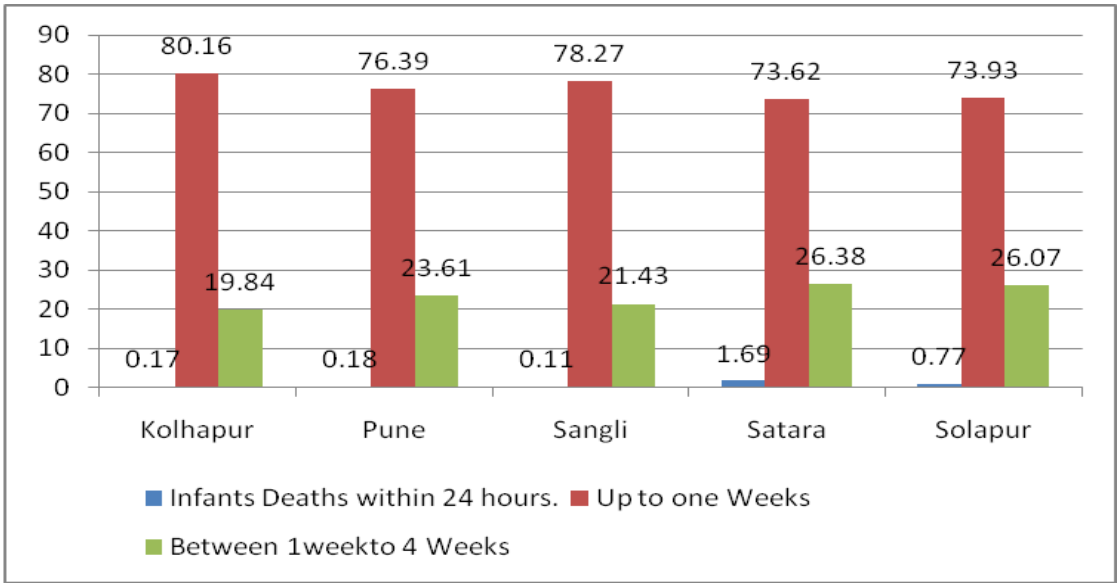


Figure 14 shows more than three forth of deaths among neonates are during the first week of births. The highest percent of neonate death was observed in Kolhapur district. More than quarter of death in stara and Solapur districts is between 1 week to 4 week.

Figure 15: Percent distribution by causes of Neonate deaths by time and In Marathwada region of Maharashtra, 2013-14

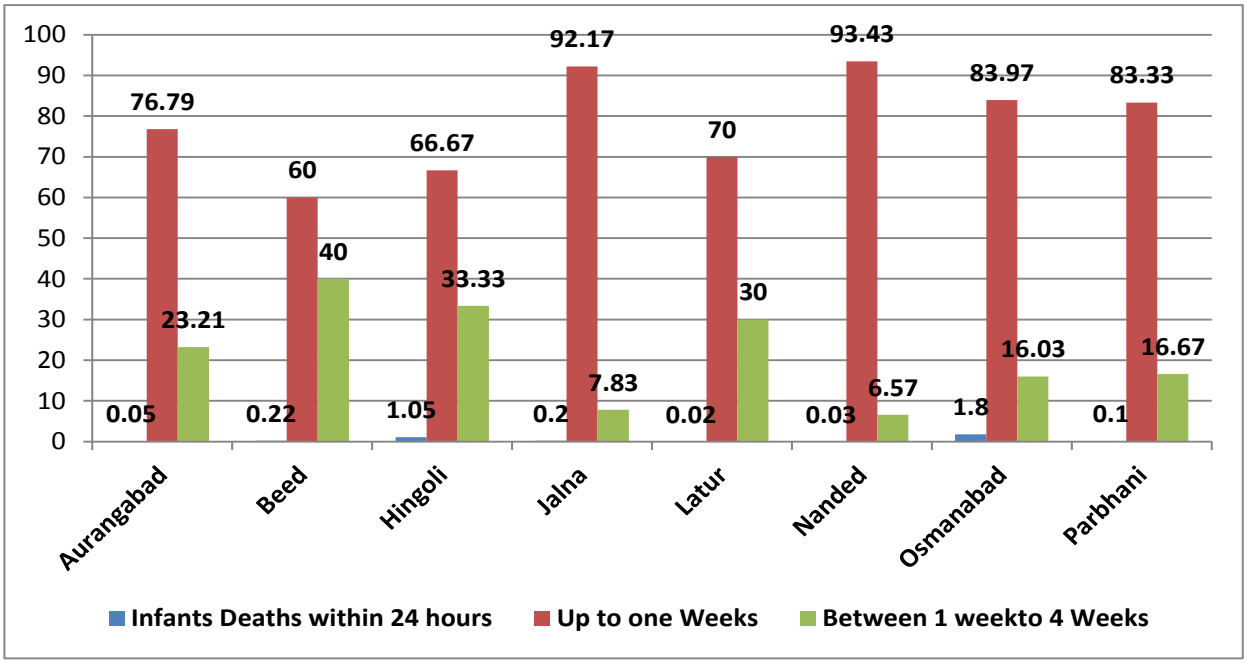


Figure 15 shows in Marathwada region in Jalna and Nanded districts nearly 90 percent of the deaths is during first week of birth whereas in Hingoli district 66 percent of neonate death happens in the first week of birth. Substantial number of deaths with 40 percent in Beed district and 33 percent in Hingoli happens between 1 week to 4 weeks.

Figure 16: Percent distribution by Neonate deaths by time and In Vidarbha-Amravati region of Maharashtra, 2013-14

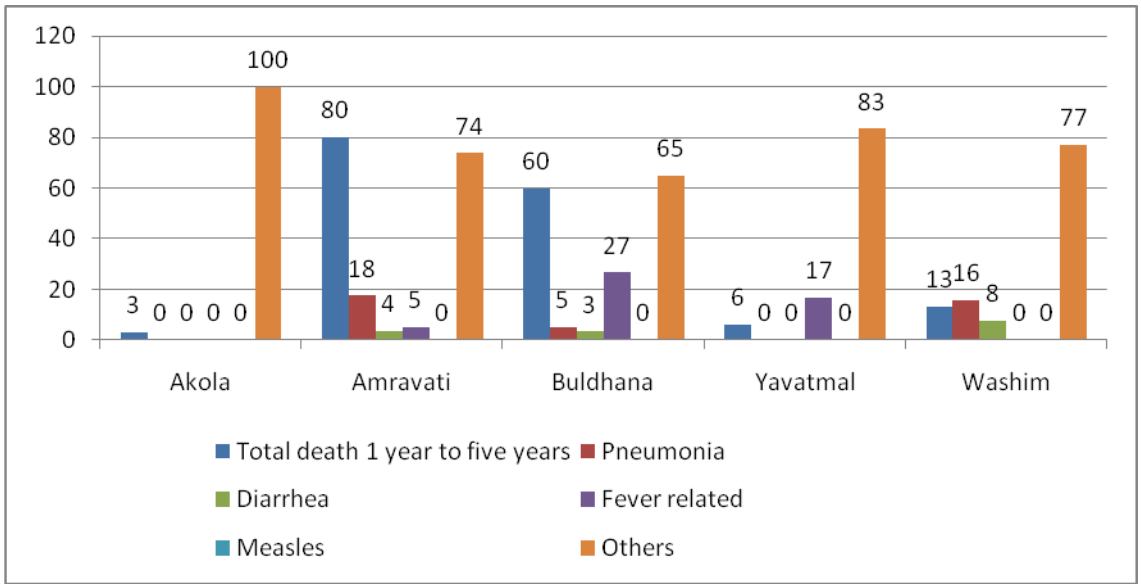
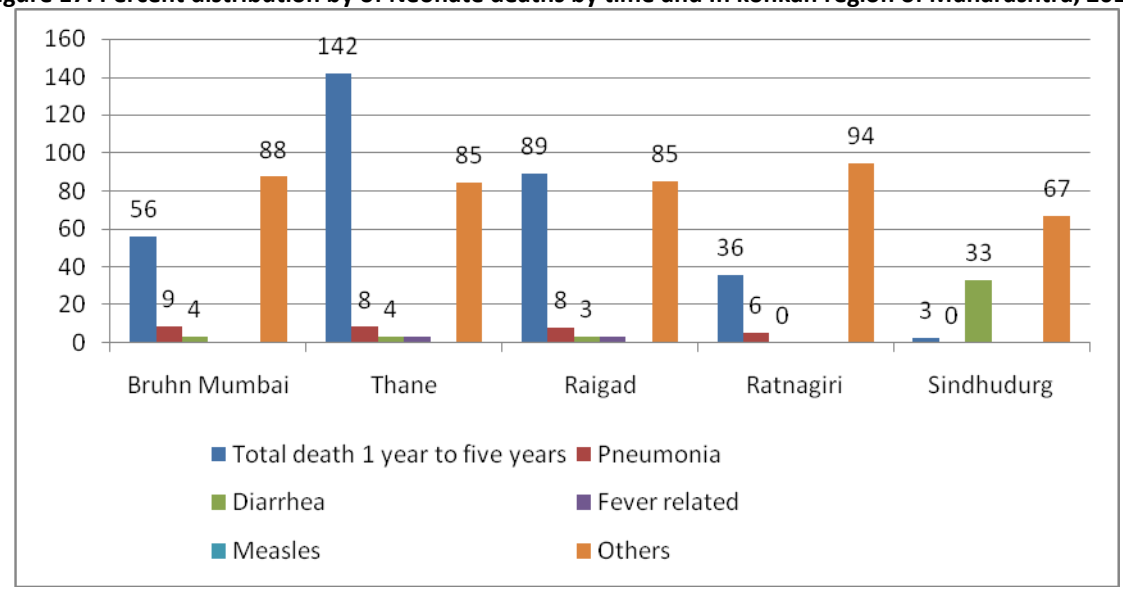


Figure 16 presents the causes of deaths among children 0-6 years in vidarbha-amravati region. Death of the children 0-6 years was least in Akola district with three deaths. Highest number of deaths of 80 was observed in Amravati district followed by 60 deaths in Buldhana district. In both these districts near about 74 percent deaths in Amravati and 65 percent deaths in Buldhana district was due to other reasons.

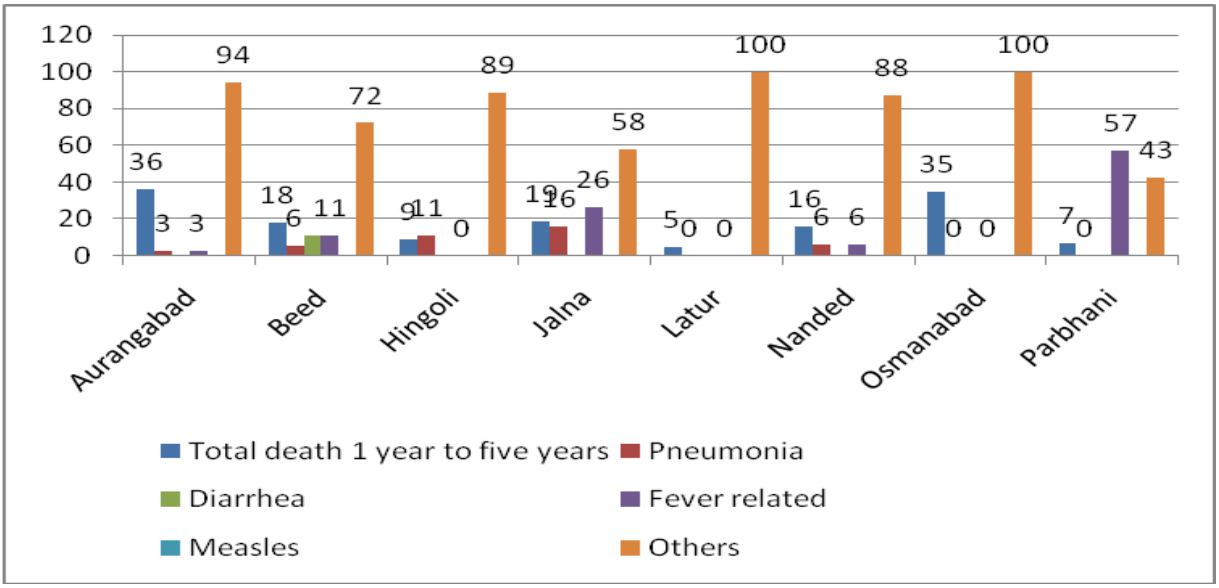
Figure 17: Percent distribution by of Neonate deaths by time and In konkan region of Maharashtra, 2013-14



In konkan region number of child deaths as shown in figure 17 above shows highest number of child deaths in Thane district with 142 child deaths followed by Raigad district with 89 deaths and the lowest

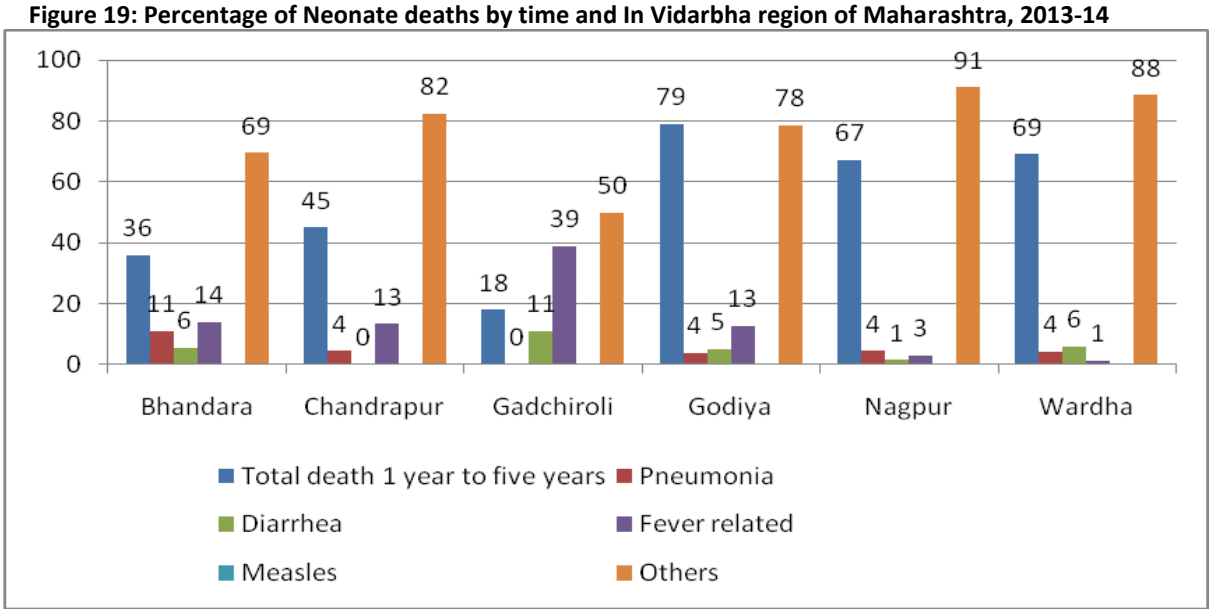
death was observed in Sindudurg district with 3 deaths. Death due to other reasons was the major cause and was observed in all the districts of Konkan region.

Figure 18: Percent distribution by of Neonate deaths by time and In Marathwada region of Maharashtra, 2013-14



Comparatively deaths in marathwada region were lesser as compared to other regions and in all the districts the major cause of deaths was due to other reasons as shown in figure 18 above.

Figure 19: Percentage of Neonate deaths by time and In Vidarbha region of Maharashtra, 2013-14



In vidarbha – Nagpur region deaths due to other reasons was highest in all the districts as shown in figure 16 above. Highest number of deaths was reported in Wardha and Nagpur districts with 69 and 67

deaths respectively and the lowest number of deaths was observed in Gadchiroli district with 18 deaths. Substantial number of deaths was due to fever related in Gadchiroli district.

Figure 20: Percent distribution by of Neonate deaths by time and In Kandesh region of Maharashtra, 2013-14

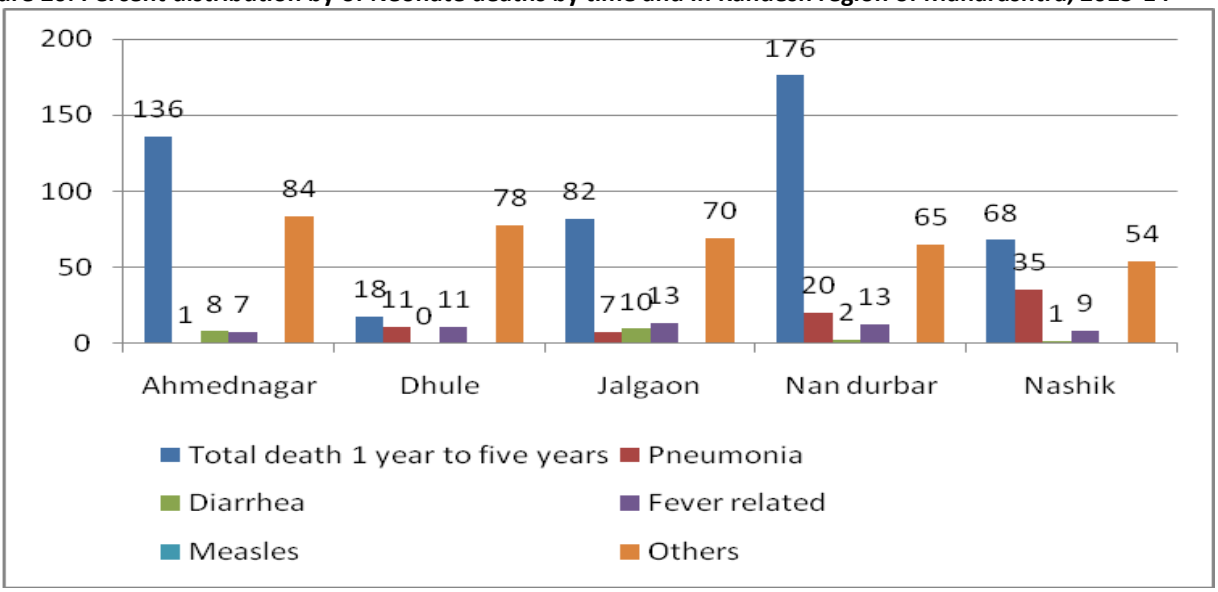


Figure 20 shows Kandesh regions with highest number of child death of 176 observed in Nandurbar followed by Ahmednagar with 136 deaths and lowest number of deaths was reported in Dhule with 18 deaths. In all the districts the major cause of deaths was due to other reasons. Significant number of deaths was also observed due to pneumonia with 35 percent of deaths in Nashik and 20 percent of deaths in Nandurbar district.

Figure 21: Percent distribution by of Neonate deaths by time and In desh-pune region of Maharashtra, 2013-14

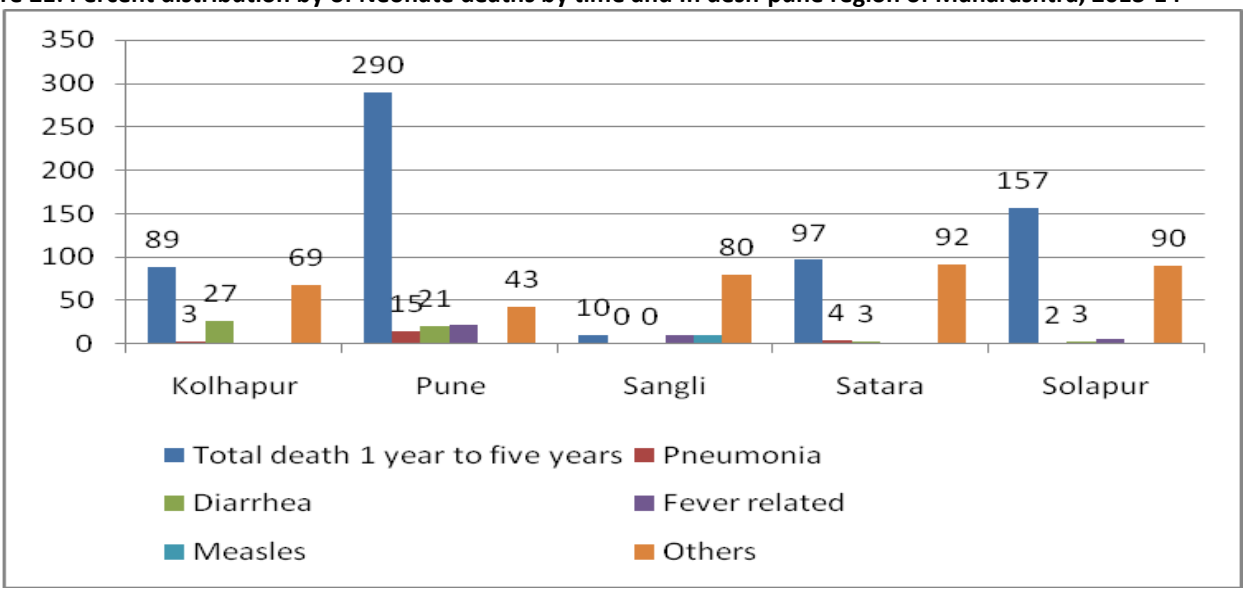


Figure 21 shows Pune district of Desh-Pune region with highest number of child deaths of 290 followed by Solapur with 157 deaths. The lowest number of deaths in this region was observed in Sangli district. Death due to other reason was the major cause of child deaths in this region.

XI Summary of the Findings

The number of children with acute illness in Maharashtra is mainly concentrated in rural areas. The most common type of acute illness is fever with rashes and other types of fever and others.
More number of Normal children reported acute illness as compared to severely and moderately under weighed children. Other types of fever and others were the most commonly type of acute illness and was concentrated among anemic children with Hb<11.
In Konkan region general distribution of number of children by place of residence shows more number of children with acute illness in urban areas than in rural areas due to high number of cases in Mumbai.
Diarrhea and fever with chills/malaria is the most common of acute illness prevalent in Kandesh region.
In general distribution of number of children by place of residence in Kandesh region shows more number of children with acute illness in rural areas than in urban areas except in Nandurbar district. The highest number of child morbidity is found in Dhule district with acute illness type other types of fever.
Other type of fever is mainly concentrated among anemic children with Hb level less than 11.
Overall, the number of children with acute illness is found to be more in rural areas as compared to urban districts in all the districts of Nagpur region except for Gadchiroli district of Nagpur region.

The number of children with symptoms of chronic illness was mainly concentrated in rural areas. Chronic illness such as others, hernia hydrocele peptic ulcer and respiratory were the common symptoms of chronic illness.
Irrespective of the anemic status of the children, the numbers of children who are anemic and non-anemic belong to household which don not have BPL card.
Caste wise anemic children with Hb (<11) is highest among all the castes in rural areas of Marathwada region. The highest number of anemic children is observed in Jalna district and also among caste OBCs in Parbhani district. Substantial number of anemic children is found among caste OBCs in Parbhani district.
Distribution by background characteristics shows that highest number of deaths was reported from home and private facilities; among male child; in rural areas and with household having no BPL card. Near about one fifth of the child deaths were reported from Marathwada region of Maharastra. In Konkan region highest number of child deaths is reported from Mumbai during the reference period. Overall, in Konkan region number of female deaths was three times greater than male deaths. More than three forth of the number of child deaths was reported from household which do not have BPL card in Mumbai. Caste wise, child death was highest among caste SCs and OBCs in Konkan region; among caste OBCs followed by caste others in Marathwada region. The highest number of child deaths is reported from home. This reflects, most likely the child was not provided with medical treatment.
After home the highest number of child deaths who received medical attention before death were from Government and private hospital in Marathwada region. Overall, in Amravati region number of deaths

among male were almost thrice than female and was mainly observed in Akola and Buldana districts. The highest number of child deaths is reported from home and is highest in Wardha district of Nagpur region. As observed in above table among the total number of deaths in home of the deaths received medical attention in private hospital.

Neonatal death is mainly concentrated in rural areas, household with BPL card, and among caste OBCs during the reference period.

Caste wise, neonatal death was highest among caste OBCs followed by caste SCs in Amravati region.

The highest number of neonatal deaths is reported from health facilities and mainly in private hospital.

There were 37 infant deaths reported from Marathwada region and the highest number of death was in Aurangabad and Jalna districts. Infant deaths were slightly high among males. More number of infant deaths was reported from household with no BPL cards and was concentrated in Jalna district. Caste OBC reported highest number of infant deaths.

In Amravati region number of female infant deaths was almost thrice as compared to male infant deaths and was concentrated in Amravati district.

Low birth weight was the prominent reason for infant deaths in all the regions of Maharashtra. Deaths due to other reasons and asphyxia were also prominent cause of child deaths. Except for Gadchiroli district all the other districts in Vidharba –Nagpur region shows high percent of death due to low birth weight. More than three forth of deaths among infants are during the first week of births. Death of neonates is highly concentrated in first week of birth. In Brihan Mumbai and Raigad more than quarter of infant deaths is reported between 1 week and upto 4 weeks of birth.

To improve the Maternal and child heath in ICDS health position need to be filled up on priority basis. Once the low birth baby is identified a routine mechanism should be in place to track the health of child and mother. Awareness programme need to be organised on frequent basis and keeping in mind with the local need. In the tribal area some month's family move to the other place for work. The sick children identified not possible at the time. ICDS programme need to be further widened and not confined to only children in a particular age group. Local needs and availability need to be taken in providing nutrients to children.

A good start in life will pay off, both in terms of human capital and economic development. Interventions that improve the physical growth and mental development of children will not only decrease the prevalence of underweight, but also prevent its negative functional consequences throughout life. Reducing malnutrition thus not only benefits child health and development in the short term, it also promotes the future, long-term growth and economic progress of the nation.

Appropriate intervention measures such as supplementary iron & folic acid, periodic deworming and health & nutrition education should be strengthened. The community needs to be encouraged to their diets by consuming iron rich foods.

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