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A study on the role of Education and Social awareness to reduce Urban and Rural gap of Infant Mortality Rate (IMR) in West Bengal

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Abstract:

Infant Mortality Rate is an important index to judge of the health status of a Country. Infant mortality rates are considered as key indicators of living and socio-economic conditions of a nation which can be reduced through improving various determinants. Being an significant tool, education aids in the creation of a well-developed and progressive nation. This comparative study between the rural and urban gap of IMR in West Bengal aimed to determine the relationship between infant mortality and related factors especially the role of education and society. The district wise Infant Mortality Rate (IMR) obtained from the National Family Household Survey 4 and 5 are compared along with other connected indicators like mothers' health knowledge, place of delivery, vaccination coverage, best delivery practices and literacy rate in females in the rural areas. The paper comes up with findings and suggestion that can improve the availability of health services, mother's education, poor hygiene and insanitary environment and proper child care practices including implementation of government programmes which can help to reduce urban-rural gap of infant mortality rate in West Bengal as well as other states of India.

Keywords: Infant mortality, Rural, Urban, West Bengal.

Introduction: Child mortality is a vital index of child health and overall public development (McGuire). A substantial global progression has been made in to reduce child deaths, from 12.6 million in 1990 to 5.2 million in 2019. Since 1990, the global under- 5 mortality rate has dropped 59, from 93 deaths per 1000 live births in 1990 to 38 in 2019 (Danzhen, Tessa et.al). This is original to 1 in 11 children dying before reaching age 5 in 1990, compared to 1 in 27 in 2019 (WHO, 2019). The world as a total has been accelerating progress in reducing the under-5 mortality rate (WHO, 2019). In 2019, 122 countries have met the Sustainable Development Goals (SDG) target for under- 5 mortality and a farther 20 countries are anticipated to meet the target by 2030 if current trends continue (WHO, 2019). Still, accelerated progress will be demanded in 53 countries, which won't achieve the target by 2030 on current trends. Thirty of these countries will need to double their current rate of

reduction and 23 will need to triple their current rate of reduction (WHO, 2019). Meeting the SDG target would reduce the number of under- 5 deaths by 11 million between 2019 and 2030 (WHO, 2019). Concentrated sweats are still demanded in sub-Saharan Africa and South- East Asia to help 80 per cent of these deaths (WHO, 2019). Half of all under-5 deaths in 2019 passed in just 5 countries Nigeria, India, Pakistan, the Democratic Republic of the Congo and Ethiopia. Nigeria and India alone account for nearly a third of all deaths (WHO, 2019). Report of WHO revealed top 10 countries (Table- 1) with the loftiest figures of deaths of under- 5 children in the World.

Top 10 Countries with the highest numbers of deaths (thousands) for children under-5 years, 2019.

Table-1

Country	Under-five deaths	Lower bound	Upper bound
Nigeria	858	675	1118
India	824	738	913
Pakistan	399	343	465
Democratic Republic of the Congo	291	187	440
Ethiopia	178	146	216
China	132	116	152
Indonesia	115	97	139
United Republic of Tanzania	103	78	172
Angola	93	43	172
Bangladesh	90	82	99

(Source: WHO)

Present Scenario of IMR in India and West Bengal: India has registered a substantive acceleration in IMR. India has witnessed substantially declined IMR over the period- from 79 per 1,000 live births in NFHS-1 (1992-93) to 22 per 1,000 live births in NFHS- 5. Infant Mortality Rate (IMR) declined from 41 to 22 per 1,000 live births between NFHS-4 (2015-16) and NFHS-5 (2019-20). According to the latest National Family Health Survey-5, Infant and child mortality across all Indian states declined in the past half-a-decade, Sikkim, Jammu & Kashmir, Goa and Assam are among four state witnessed a steep reduction not only in neonatal mortality rate (NMR), but in for infant mortality rate (IMR) and under-five mortality rate (U5MR) as well as per NFHS-5 data.

State-wise Infant Mortality from 2011 to 2020 in Table-2 clearly showed large variations of IMR across the Country.

TABLE- 2 STATE-WISE INFANT MORTALITY RATE										
(Per Thousand)										
State/Union Territory	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Andaman & Nicobar Islands	23	24	24	22	20	16	14	9	7	7
Andhra Pradesh	43	41	39	39	37	34	32	29	25	24
Arunachal Pradesh	32	33	32	30	30	36	42	37	29	21
Assam	55	55	54	49	47	44	44	41	40	36
Bihar	44	43	42	42	42	38	35	32	29	27
Chandigarh	20	20	21	23	21	14	14	13	13	8
Chhattisgarh	48	47	46	43	41	39	38	41	40	38
Dadra & Nagar Haveli	35	33	31	26	21	17	13	13	11	16*
Daman & Diu	22	22	20	18	18	19	17	16	17	16*
Delhi	28	25	24	20	18	18	16	13	11	12
Goa	11	10	9	10	9	8	9	7	8	5
Gujarat	41	38	36	35	33	30	30	28	25	23
Haryana	44	42	41	36	36	33	30	30	27	28
Himachal Pradesh	38	36	35	32	28	25	22	19	19	17
Jammu & Kashmir	41	39	37	34	26	24	23	22	20*	17
Jharkhand	39	38	37	34	32	29	29	30	27	25
Karnataka	35	32	31	29	28	24	25	23	21	19
Kerala	12	12	12	12	12	10	10	7	6	6
Lakshadweep	24	24	24	20	20	19	20	14	8	9
Madhya Pradesh	59	56	54	52	50	47	47	48	46	43
Maharashtra	25	25	24	22	21	19	19	19	17	16
Manipur	11	10	10	11	9	11	12	11	10	6
Meghalaya	52	49	47	46	42	39	39	33	33	29
Mizoram	34	35	35	32	32	27	15	5	3	3
Nagaland	21	18	18	14	12	12	7	4	3	4
Odisha	57	53	51	49	46	44	41	40	38	36
Puducherry	19	17	17	14	11	10	11	11	9	6
Punjab	30	28	26	24	23	21	21	20	19	18
Rajasthan	52	49	47	46	43	41	38	37	35	32
Sikkim	26	24	22	19	18	16	12	7	5	5
Tamil Nadu	22	21	21	20	19	17	16	15	15	13
Telangana	.	.	.	35	34	31	29	27	23	21
Tripura	29	28	26	21	20	24	29	27	21	18
Uttar Pradesh	57	53	50	48	46	43	41	43	41	38
Uttarakhand	36	34	32	33	34	38	32	31	27	24
West Bengal	32	32	31	28	26	25	24	22	20	19
ALL INDIA	44	42	40	39	37	34	33	32	30	28
Not Applicable.										
*: IMR value stated is for Dadra & Nagar Haveli, Daman & Diu taken together.										
Source: Sample Registration System Bulletin, various issues, Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India.										

Recent data of NFHS-5 along with India showed a clear progression of IMR, in the year 2011 it was 44 per 1000 live births where as the number decreased at 28 per 1000 live births in 2020 (SRS Bulletin). In the state of West Bengal the Infant Mortality Rate has also improved its level. There are specific points which have influenced the reduction of IMR. As per recent data of NFHS-5, West Bengal's IMR is 22 per 1000 births which were 27 per 1000 births according to the report of NFHS-4 and 48 per 1000 births as per NFHS-3 data. There are heterogeneous determinants which have been covered in the NFHS-5 data. In this paper the NFHS-5 and NFHS-4 data have been closely analyzed and the determinants of IMR has presented and discussed below to find out the relations of decrement of urban-rural gap. Reduction of IMR of the state of West Bengal clearly visible in NFHS-5 data and the gap between the urban and the rural areas is also decreasing. The decremental gap of urban-rural IMR in West Bengal is a clear indication of the direct and indirect relation between the determinants of IMR which have been identified, analyzed and discussed in Table-3

NFHS-5 and NFHS-4 Data of West Bengal

Table-3

Indicators	**NFHS-5**			**NFHS-4**
	Urban	Rural	Total	Total
IMR	21	22.4	22	27
Iron Folic Acid Consume	64.4	61.8	62.8	28
Safe Drinking Water facilities	93.3	95.1	94.6	93.7
Institutional Births	92.3	91.6	91.7	75.2
Births attended by Skilled Health Personnel	95.2	93.7	94.1	81.6
Mother and Child Protection Card (MCPC)	96.7	99.1	98.4	97.4
Vaccinations in Public Health Facilities	90.2	98.5	96.3	96.6
Antenatal Check- up	74.9	71.8	72.6	54.9
Antenatal Care Visit	81.2	73.8	75.8	76.4

(Source: NFHS-4, 2015-16 & NFHS-5, 2019-20)

Infant mortality is the death of an infant before the infant's reaches his or her first birthday (CDC). The occurrence such infant mortality in a population is described as the Infant Mortality Rate (IMR). The scenario of IMR in most of the Indian states is not satisfactory. A survey was conducted to find out the present status of IMR, out of the 22 surveyed states in the first phase except Manipur, Meghalaya, Tripura and Andaman & Nicobar Island revealed towards decreasing level (NFHS-5). The survey showed that in Union Territories (UTs) of India there is increment in the prevalence of under-5 mortality rates. The Condition of Rural children were found to be more vulnerable than their urban counterparts in a majority of states. In contrast to other 20 states and Union Territories,

West Bengal and Mizoram showed the presence of higher rates of neonatal deaths in urban area as compared to rural areas (NFHS-5).

Highest rate of rural-urban gap in IMR was observed in the State of Manipur, where less than half of the infant deaths took place in both urban areas than rural areas. Urban regions accounted for nearly fourfold instance the neonatal deaths than rural regions (NFHS-5). Unlike other states of India, urban areas of Maharashtra and Dadra and Nagar Haveli & Daman and Diu had better under-5 mortality rates compared to their rural parts.. The State Tripura accounted maximum rural-urban gap in U5MR; it was 49 in the rural area and 24 in the urban counterpart. Rural-urban gap in IMR in the state of West Bengal accounted only 1.4 per 1000 births. This gap accounted 16 per 1000 births in NFHS-4 data.

Review of Previous Studies: Infant mortality is an alarming public health problem in developing countries. Of the estimated 130 million infants born each year worldwide, 4 million dies in the first 28 days of life. Three quarters of neonatal deaths occur in the first week and more than one-quarter occur in the first 24 hours (World health report 2019).In India the most common causes of neonatal mortality (0-4 weeks) are low birth weight & prematurity, birth injury, sepsis .The post-neonatal mortality causes are dominated by diarrhoea and respiratory infections. Neonatal health is dependent on health care services whereas post-neonatal health is mainly dependent on environmental factors. A high Infant mortality rate (IMR) thus indicates unmet health needs and unfavourable environment factors (Mausner, 1985 and Park, 2013). That is why UNICEF maintains that IMR is one of the most expressive indices of development concept (Mir Fattahi, 1985).

A study on relative role on public health program and socio-economic factors in influencing infant mortality in India revealed that survival through infancy is dependent on socio-economic condition of household, maternal condition, antenatal and neonatal care, infant feeding practices, malnutrition and environmental sanitation. It has also showed the role of program factors in reduction of infant mortality. Findings of this study suggest that one on hand it is social change and on the other hand it is the effective utilization of the available public health services that has resulted in reducing infant mortality in the country (Das, N. P. 1996).

A study of the data aggregated at the state level clearly demonstrates the importance of both medical and non-medical factors for explaining the observed regional differences in infant mortality in rural India. The percentage of presence of trained medical personnel during birth and poverty, are the two important determinants of regional variations in neo-natal mortality; and the availability of medical facilities at village-level and the extent of triple vaccination are the two important determinants of post-neo-natal mortality (Jain, A.K., 1985). The role of adult women's literacy on infant mortality is explained by better medical care during birth and preventive and curative medical care during the post-neo-natal period. In this study Medical factors have been shown to be slightly more important in compare to non-medical factors. The study suggests that it might be possible to reduce the

high level of infant mortality currently prevalent in many states in India by simple preventive medical interventions (Jain, A.K., 1985).

The availability and accessibility of a round-the-clock health delivery service, especially with neonatal care facilities, is an important social indicator determining IMR. Due to absence of availability of such kind of services, possibility of care seeking may be delayed because of long distances or unavailability of transport from remote rural areas to appropriate care centers. A close association between health-care accessibility and IM has been seen in studies worldwide (Kumar C, Singh P.K, Rai R.K., 2012).

In less developed countries, studies have attributed the rural disadvantage in infant mortality so-called as ‘urban bias' (Crenshaw and Ameen 1993), which indicates that urban population gained benefit in a disproportionate manner through the allocation of public resources (Lipton 1977; Redclift 1984). Several studies have pointed out a significant relationship between such kind of urban advantage in terms of health care facilities and urban-rural mortality gaps in developing countries, including India (Akbar 1985; Balarajan, Selvaraj, and Subramanian 2011). In fact, urban-based health care services in India continue to receive a larger share of public resources, resulting least proportion of public investments in rural health facilities (Balarajan, Selvaraj, and Subramanian 2011).

Although some studies have examined the rural-urban differential in mortality risks during infancy, there is a big issue of systematic attempts to understand the factors explaining the rural- urban gap in infant and child mortality are limited. Given the lack of evidence on the determinants of the rural-urban gap in child mortality in India, the present study aims to identify the major variables related to the quality of health and welfare services, like vaccinations in a public health facilities, institutional births, births attended by skilled health personnel, neonatal and post natal care, mother and child protection card, antenatal care visit, consumption of iron and folic acid, facilities of safe drinking water. This study has become even more relevant and effective because the Government of India has implemented several new policy measures to improve the health of the rural population.

Factors influencing decremental gap of Urban-Rural IMR in West Bengal: The examination of factors related to the rural-urban gap in infant mortality in India is primarily based on statistics from the National Family Health Survey (NFHS). The NFHS is a large-scale, cross-sectional, multi-round survey performed in a nationally representative sample of households throughout India (IIPS 1995; IIPS and ORC Macro 2000; IIPS and ORC Macro 2007).The objective of the NFHS was to provide national and state level estimates of fertility, family planning, infant and child mortality, reproductive and child health, nutrition of women and children, the quality of health and welfare services, and socio- economic conditions.

According to WHO (2020), Children from low-profits international locations along with sub-Saharan Africa persevered to have the best mortality rates with inside the global at 74 (68 to 86) deaths according to one thousand live births, that is 14 instances better than the hazard for children in Europe and North America. Interestingly in a few countries, the gap

in under-five mortality within country is stark. One such country is India, where there is wide variation in Infant and under-five mortality by socio-economic and regional characteristics. India was identified as a high disparity country on Infant Mortality Rate (IMR). There is a considerable variation in the IMR in different states of India. The highest IMR per thousand is observed in Madhya Pradesh (43); Uttar Pradesh (38); Chhattisgarh (38); Assam (36); Odisha (36); Rajasthan (32) and whereas the low IMR states are Kerala (6); Tamil Nadu (13); West Bengal (22).

Ever since the inception of National Health Mission (NHM) in 2005, West Bengal as a State has shown a significant decline in IMR from 48 (NHHS-3, 2005-2006) to 22 (NFHS-5, 2019-2020), which is lower than the national average. The urban-rural Infant mortality gap in West Bengal is also decreasing according to data NFHS-5 in comparison with the data NFHS-4 and NFHS-3. According to NFHS-4, (2015-2016) the IMR of the urban areas of West Bengal was 16 whereas in rural areas it was 32. Several studies showed that there was a straight co-relation between the literacy rate of the women with the infant mortality rate of West Bengal and as less percentage of women are literate in the rural areas in comparison to the urban areas shown in Table-4, reveals that the IMR in the rural areas is also higher than urban areas.

Table-4

	NFHS-4		**NFHS-5**		**Urban-Rural Gap**		**Growth Rate**	
% Women	Urban	Rural	Urban	Rural	NFHS-4	NFHS-5	Urban	Rural
Literacy	79.4	66.9	80.6	69.2	12.5	11.4	1.2	2.3

(Source: NFHS-4, 2015-16 & NFHS-5, 2019-20)

The percentage of literacy rate among the women had 79.4% in the urban areas whereas 66.9% in the rural areas according to NFHS-4 data that indicating a gap of 12.5% between literacy rate of urban-rural women. Likewise, NFHS-5 data on the percentage of women literacy in urban-rural areas clearly shows the gap between urban –rural literacy of women is 11.4%. The literacy percentage of rural women in term of growth rate of NFHS-4 to NFHS-5 is 2.3%. As per recent data of NFHS-5, West Bengal's IMR is 22 per 1000 births which were 27 per 1000 births according to the report of NFHS-4. Rural-urban gap in IMR in the state of West Bengal accounted only 1.4 per 1000 births as per data NFHS-5. But urban-rural gap in IMR gap accounted 16 per 1000 births in NFHS-4 data. This data clearly showed women literacy is an important factor to reduce urban rural gap but there are so many variables related to the quality of health and welfare services, like vaccinations in a public health facilities, institutional births, births attended by skilled health personnel, mother and child protection card, antenatal care visit, consumption of iron and folic acid, facilities of safe drinking water also influenced the process of decrement the urban-rural gap of IMR in West Bengal, all these societal factors which also influenced the process of decrement of urban-rural gap in West Bengal discussed in this section one by one.

Consumption of Iron and folic acid: The scheme of National Health Mission (NHM) on iron-folic-acid (IFA) supplementation to antenatal and postnatal mothers serves as a major tool to combat Iron-deficiency anemia which is considered to be a major health problem in India. Iron deficiency is taken into consideration to be the most common nutritional deficiency causing anemia in the antenatal period and has an important impact on maternal and fetal morbidity and child mortality. Consumption of Iron-Folic tablets has a close relationship with the IMR and also an identifying factor to determine gap of urban-rural IMR. The study of 653 pregnant women from Burdwan district of West Bengal reported the prevalence of anemia and compliance to IFA tablets was 80% and 67%, respectively, the habit of IFA tablets consumption improved with increasing duration of pregnancy (Agarwal, Sen, & Gupta, 1999).

NFHS-4 data showed the IMR in the rural areas was higher that was 32 as the percent of iron-folic tablet consumption was lower that was 26.6%. On the contrary the IMR of the urban areas was lower that was 16 as the percentage of iron-folic tablet consumption was higher that was 31.6%. Likewise, NFHS-5 data showed the IMR in the rural areas is decreasing from 32 (NFHS-4) to 22.4 (NFHS-5) as the percent of iron-folic tablet consumption reported higher that is 61.8% in comparison with NFHS-4 data where it was reported only 26.6% in the year 2015-2016. So, there is a co-relation between the higher rates of consumption of IFA by the rural women with the process of decrement of urban-rural gap in IMR of West Bengal according to the NFHS-5 data.

Safe Drinking Water facilities: The United Nations Children's Fund (UNICEF), the worldwide flag bearer for humanitarian and developmental assistance to children, has identified the determinants of child survival in India. Apart from varied maternal and demographic, along with socio-economic, factors, the concerned agency has also stated that IMR among families with better access to safe drinking water sources and improved toilet facilities with proper hygiene indicate much lower than those bereft of the same facilities. This inference has been drawn from NFHS-5 data. According to NFHS-5 data the IMR in the rural areas is decreasing as the percent of availability of safe drinking water facilities is recorded higher that is 95.1% in rural areas and 93.3% in urban areas. So, availability and use of safe drinking water facilities in the rural areas is definitely acted as an influencing factor to the process of decrement of urban-rural IMR gap in West Bengal. This has been taken place due to the role of education and social awareness among the rural people.

Institutional Births and Births attended by Skilled Health Personnel: Improved institutional delivery in West Bengal in the past half a decade has led to a sharp fall in infant and child mortality rates as well urban-rural gap in IMR as per the National Family Health Survey (NFHS-5) data for the year 2019-20 concern. According to NFHS-4 and HFHS-5 a majority of deliveries in both urban and rural areas have taken place in the institution. Though the proportion of institutional birth varied from urban to rural setting, in urban areas the percentage of institutional birth was 83.7% whereas in the rural areas it was 71.9% as per NFHS-4 data, but the figure of the proportion of institutional birth for rural areas in compare to urban areas, the percentage of institutional birth is very much similar for urban

to rural setting as reflected in NFHS-5 data. In urban area it is 92.3% and in the rural areas it is 91.6%. Public health facilities played a key role in the sharp increase in institutional births in West Bengal from 75.2% in 2015-16 to 91.7% in 2019-20. Due to this, births attended by skilled health care personnel have also increased from 81.6% in 2015-16 to 94.1% in 2019-20.This clearly showed that maximizing and acceptance of the coverage of institutional births and births attended by skilled health care personnel have a close connectivity with the process of reduction of urban-rural gap in IMR and this has become meaningful due to peoples' proper education and social awareness.

Mother and Child Protection Card (MCPC): The Mother and Child Health Programme in the country aim to reduce the maternal, neonatal and under-five mortality and morbidity. The National Institute of Public Co-operation and Child Development (NIPCCD) in collaboration with UNICEF and Ministry of Women and Child Development have advanced MCPC which become added and taken into grant from April 1, 2010. The MCPC has been advanced as a device for communication, utilized by ASHA, Anganwadi workers, ANMs to provide an explanation for the households about mother and child health (MCH) services; danger signs during pregnancy; preparation for delivery; dangers in newborn; weight; childhood illnesses; nutrition, immunization, etc. The MCP card additionally facilitates households to emerge as aware about the exclusive forms of offerings supplied for mother and children. Registration of pregnant women and continuity of proper follow-up under MCPC programme played a key role to diminish IMR as per NFHS-4 and NFHS-5 data. NFHS-4 data showed the IMR in the state 27 per 1000 as the percentage of registration coverage was recorded 97.4% under MCPC programme and 98.1% in rural areas where IMR was recorded 32 per 1000 births. NFHS-5 data clearly indicating a progression of IMR in the State with 22 per 1000 births as the percentage of registration coverage increased from 97.4 to 98.4%.under MCPC programme. The progression of IMR in rural areas also visible in NFHS-5 data as the percentage of registration under MCPC programme increased from 98.1% to 99.1% with IMR 22 per 1000 births which was recorded 32 per 1000 birth in NFHS-4 data. MCPC programme benefited IMR of rural Bengal and also acted as an influential social factor to diminish urban-rural gap in West Bengal.

Vaccinations in Public Health Facilities: Immunization programme is one of the key inventions for protection of children from the life threatening conditions, which are preventable. Immunization programme in India was came into force in 1978 as Expanded Programme of Immunization. This gained momentum in 1985 as Universal Immunization Programme (UIP) implemented in phase manner to cover all districts in the country by 1989-90. UIP turn out to be part of Child Survival and Safe Motherhood Programme in 1992. Since, 1997, immunization activities had been an essential element of National Reproductive and Child Health Programme. Immunization is one of the key areas under National Rural Health Mission (NRHM) launched in 2005 and now it is under the umbrella of National Health Mission (NHM).

Several studies showed it clearly that vaccination coverage of Infant through public health facilities have a major contribution to diminish IMR and urban-rural gap, the contribution of the proportion of fully vaccinated children diminished from NFHS-1 to NFHS-3. In NFHS-3, the percentage of children fully vaccinated contributed only 14 per cent to the rural-urban gap in infant mortality risk whereas it was about 42 per cent in NFHS-1. Rural-urban gap in IMR in the state of West Bengal accounted only 1.4 per 1000 births in NFHS-5 data as the percentage of children fully vaccinated reached up to 98.5% in rural areas in the year 2019-20.

Antenatal Check- up and Antenatal Care Visit: During pregnancy and childbirth and after delivery health care services are important for the survival and well-being of both the mother and the infant. Antenatal care (ANC) can act as an additional mechanism to reduce the health risks for mothers and their babies by monitoring pregnancies and screening for complications. Antenatal check-up and Antenatal care visits play a key role to diminish IMR and urban-rural gap in West Bengal as well as in the country, as the proportion of women who received Antenatal check-up in the state has increased to 72.6 percent in NFHS-5 from 54.9 in NFHS-4, the Infant Mortality rate in the state also decreasing in parallel way from 27 per 1000 births in NFHS-4 to 22 per 1000 births in NFHS-5. In rural Bengal the percentage of Antenatal check-up and Antenatal care visits is recorded 71.8% and 73.8% in NFHS-5, as the higher accessibility recorded for ANC, there is a clear picture of reduction between urban-rural gap in IMR which has been reflected in NFHS-5 data for the year 2019-20, present gap is recorded only 1.4 per 1000 births which was recorded 16 per 1000 births in NFHS-4.

Suggestions: West Bengal has been able to drastically reduce its infant mortality rate and urban-rural gap of infant mortality in recent years. Due to the launch of National Rural Heath Mission in 2005 through the various policies and cash incentive schemes such impressive performance has taken place. But rural urban gap still prevail in India as well as in West Bengal. As we know the Gross Enrollment Ratio (GER) of education is lower in rural areas compared to urban areas. According to the AISHE data, the GER at the higher education level in rural areas was counted 25.7 percent in 2020-21, while in urban areas, it was estimated 33.4 percent. The following factors can help in improving the infant mortality rate and urban-rural gap as mentioned below:

1. Equal educational access in urban-rural areas
2. Inclusion and implementation of health education in school syllabus
3. Equal access to health care facilities both in urban-rural areas.
4. Need to economic justice within urban-rural level.
5. Improvement of rural transportation for better connectivity
6. Better implication of governmental facilities as well as social welfare schemes in backward districts of the State.
7. To increase literacy that increases to health and environmental awareness in rural areas.
8. Accurate application of rural health and sanitation planning.

9. More and more focus towards education and empowerment of rural women in the State.
10. Social awareness programmes for full immunization drive in rural areas.
11. To organize more and more health awareness camp in rural areas.
12. To promote and secure institutional births in rural areas.

Conclusion: Child health policies should be reviewed to uphold the achievements that have been already done, enhance quality and efficiency, and address specific neonatal care gaps. Child health oriented existing programs and several strategies including initiatives for the eradication of vaccine-preventable childhood diseases and specific health and nutrition interventions need to be reviewed in the context of socio-economic factors. It is revealed that the economic status of the household is an important factor in the infant mortality rates. So, the role of education among rural people including women has a contributory element which will make rural masses capable for better job and employment opportunities. To reduce infant mortality and urban-rural gap, not only the health services, but social awareness about proper and best uses of safe drinking water and sanitation facilities should be improved by proper implementation of the programs and also the poverty elimination programs be implemented effectively among the rural people. Educated women are capable of taking care of their children and extended family. They are aware of the dangers of maternal mortality and take proper measures to reduce child and maternal mortality. Hence, improvement of female education and nutrition and increasing tendency of proper and timely use of health services during pregnancy and delivery, would lower infant mortality rate and urban-rural gap. If we compare the level of infant morbidity and mortality between girls and boys, it is higher for girls aged one month to 5 years than for boys. Through eliminating gender differences in mortality rates will significantly reduce infant mortality overall and in absence of rural education and social awareness this cannot be achieved properly. The initiative 'Beti Bachao Beti Padhao' by the Government of India aims to create awareness among the masses to eliminate discrimination against girl child at all stages especially in rural areas, this initiative might be successfull through education and social awareness among rural masses.

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