

Public Health in West Bengal –Current Status and Ongoing Interventions

1. Introduction

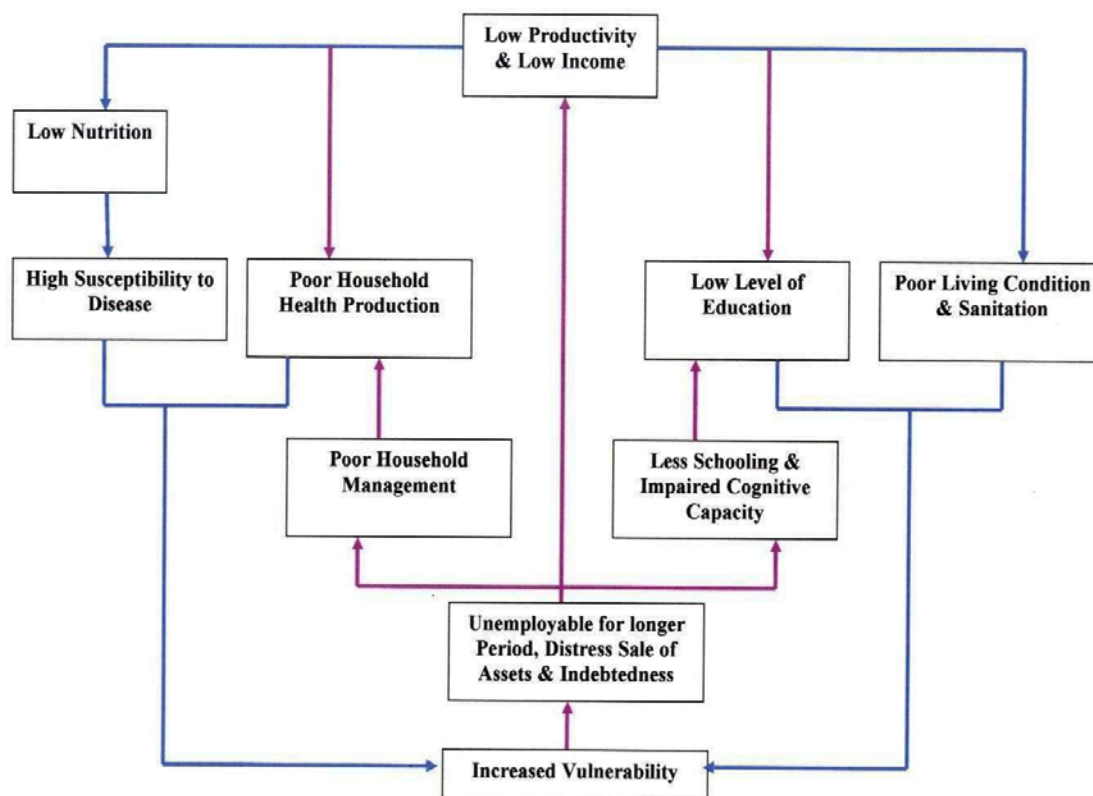
The nations of the world have agreed that enjoying the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief and economic or social condition. Beyond its intrinsic value for individuals, improving and protecting health is also central to overall human development and to the reduction of poverty. The Millennium Development Goals (MDGs), derived from the UN Millennium Declaration, commit countries to halving extreme income poverty and to achieving improvements in health by 2015. Three of the eight MDG goals are health-related; calling for a two-thirds reduction in child mortality, a three-quarters reduction in maternal mortality, and a halt to the spread of HIV/AIDS, malaria and tuberculosis. India is far away from achieving the goal and the situation in West Bengal, though generally better than the Indian average, also requires substantial improvement. Apart from reaching those specific goals, there is need for substantial improvement of all aspects of public health, particularly in prevention of morbidity and mortality as well as reaching curative health care services to every one and to make that affordable. This paper describes various aspects of public health and current status of development, available public health infrastructure, constraints and interventions through the National Rural Health Mission (NRHM) as well as through other initiatives in the state of West Bengal.

2. Poverty and Health

Reducing poverty is the fundamental objective of economic development. In 2001, more than 1 billion people in the developing world lived in poverty. The poverty ratio based on 2004-05 NSSO data for the country works out to 28.27%. The poverty ratio based on 2004-05 NSSO data for the country as per the new methodology (Expert Group under the chairmanship of Prof Tendulkar) works out to 37.2%. In West Bengal, the poverty ratio is 34.3% as per new methodology. Poverty has many faces and being unable to receive minimum health care to remain free from even common ailment is an important dimension of poverty. The World Health Organization (WHO) stated in 1999 that poverty must be addressed in all its dimensions, not income alone, because the resulting inequalities in health outcomes are stark. For example, the under-five mortality rate is five times higher for people who are living in absolute poverty than for those in higher income groups.

There is a close relationship between poverty and poor health. The poorest people in every society usually experience much higher levels of child and maternal mortality. The low capabilities of the poor individuals (low nutritional status, lack of awareness, marginal living and

hazardous working conditions), coupled with poor access to health services and lack of money compels them to face more health related shocks. Owing to inadequate social security provisions, poor people are vulnerable to these shocks and tend to experience lower well being. The poor suffer worse health and die younger. They have higher than average child and maternal mortality, higher levels of disease burden, limited access to health care and social protection. Gender inequality affects the health of poor women and girls more adversely. For poor people especially, health is also a crucially important economic asset. Their livelihoods depend on it. When a poor or socially vulnerable person becomes ill or injured, the entire household can become trapped in a downward spiral of lost income and high health care costs. The cascading effects may include diverting time from generating an income or from schooling to care for the sick; they may also force the sale of assets required for livelihoods. Poor people are more vulnerable to this downward spiral as they are more prone to disease and have more limited access to health care and social insurance. The relationship between health and poverty works in both directions. Poor health can be a catalyst for poverty spirals and, in turn, poverty can create and perpetuate poor health status. Low productivity and low income lead to low level of nutrition. Low nutrition makes the poor highly susceptible to disease. In addition, low income leads to poor living conditions and sanitation facilities. These in turn increase the vulnerability of the household. The wage earner in the family remains unemployable for longer periods owing to frequent and prolonged illness. Increased vulnerability to disease may also compel distress sale of assets, leading to indebtedness. As a result, productivity and income are further reduced. Inter-relation of all those factors is presented below graphically.



The graphical presentation above helps one to identify appropriate entry points to break

Breaking the vicious cycle, by initiating the positive spiral, results in consequential development in many fronts. Improved health contributes to economic growth in various ways: it reduces production losses caused by prolonged illness; it not only enhances the enrolment and retention of children in school but also enable them to learn better; and it provides the opportunity for alternative uses of resources that would otherwise have to be spent on treating illness. Households with more education enjoy better health, both for adults and for children.

A number of factors typically associated with income poverty are also determinants of ill-health, malnutrition, and high fertility. These include high level of female illiteracy, lack of access to clean water, insanitary conditions, food insecurity, poor household caring practices, heavy work demand, and lack of fertility control, as well as low access to preventive and basic curative care. Uttar Dinajpore district, which has the lowest female literacy in the state, is the only district in which share of population in the age group 0-6 increased between 1991 and 2001 census, which leads to higher dependency ratio and all consequential problems. This highlights the impact of female literacy in improving health outcome. So is the impact of poverty on ill health. Typically around 70 percent of variance in infant mortality can be attributed to across- and within-country differences in income. Communicable diseases, which are mostly preventable, represent most of the burdens of illness of the poor. Consequently, ample evidence shows that increased use by the poor and other vulnerable groups of a basic package of cost-effective health interventions can significantly improve their health and general welfare. In Asia, the proportion of household income spent on health services is typically higher in low-income groups than in higher income groups. Catastrophic illnesses often precipitate near-poor households into major economic difficulties. For example, studies in East Asia showed that 50 percent of financial crises in poor families are triggered by catastrophic illnesses including TB, HIV, severe malaria and diarrhoea.

2.1 The Economic Rationale for Investing in the Health of the Poor

Investment in health is also increasingly recognised as an important – and previously under-estimated – means of economic development. As the Commission on Macroeconomics and Health (CMH) of the World Health Organization (WHO) has shown, substantially improved health outcomes are a prerequisite if developing countries are to break out of the cycle of

poverty. Good health contributes to development through a number of pathways, which partly overlap but in each case add to the total impact as mentioned below:

- **Improved human capital.** Healthy children have better cognitive potential. As health improves, rates of absenteeism and early school drop-outs fall, and children learn better, leading to growth in the human capital base.

- **Higher labour productivity.** Healthier workers are more productive, earn higher wages, and miss fewer days of work than those who are ill. This increases output, reduces turnover in the workforce, and increases enterprise profitability and agricultural production.

- **Higher rates of national savings.** Healthy people have more resources to devote to savings, and people who live longer save for retirement. These savings in turn provide funds for capital investment.

- **Demographic changes.** Improvements in both health and education contribute to lower rates of fertility and mortality. After a delay, fertility falls faster than mortality, slowing population growth and reducing the “dependency ratio” (the ratio of active workers to dependants). This “demographic dividend” has been shown to be an important source of growth in per capita income for many low-income countries.

In addition to their beneficial macro-economic impact, health improvements have intergenerational spill-over effects that are clearly shown in micro-economic activities, not least in the household itself. The “demographic dividend” is particularly important for the poor as they tend to have more children, and less to “invest” in the education and health of each child. With the spread of better health care and education, family size declines. Children are more likely to escape the cognitive and physical consequences of childhood diseases and to do better in school. These children are less likely to suffer disability and impairment in later life and so are less likely to face catastrophic medical expenses and more likely to achieve their earning potential. Then, as healthy adults, they have more resources to invest in the care, health and education of their own children.

3. Important Public Health Indicators and the Indian Scenario

Public health outcome is measured by certain key indicators such as Infant Mortality Rate or IMR (no of children dying within one year after birth out of 1,000 live birth); Child Mortality Rate or CMR (no of children dying within five years after birth out of 1,000 live birth); Neonatal Mortality Rate or NMR (no of children dying within four weeks after birth out of 1,000 live birth); Maternal Mortality Rate or MMR (no of death of women while pregnant or within 42 days of termination of pregnancy out of one lakh live birth); Birth Rate (no of child birth per 1,000 population per year), Death Rate (deaths per 1000 population per year); Total Fertility Rate or TFR (average number of children that would be born to a woman over her lifetime if (1) she were to experience the exact current age-specific fertility rates through her lifetime, and (2) she were to survive from birth through the end of her reproductive life), Life expectancy at birth

(which is the statistically expected number of years of life remaining at birth) etc. There are other indicators for measuring disease specific morbidity and mortality. However, the overall burden of disease is measured by Disability-Adjusted Life Year (DALY), which is expressed as the number of years lost due to ill-health, disability or early death. The DALY thus combines both mortality and morbidity including mental and physical disability. The public health status of the country can be judged through those indicators are regularly monitored. Status of India in terms of some of those indicators is briefly presented below.

It may be mentioned in general that there has been substantial improvement in the status of health of the country during the last five decades due to improvement in socio-economic conditions and public health interventions. The notable progresses are doubling of longevity from 32 years in 1947 to 66 years as of now; the fall of IMR by over 70% points between 1947-1990; containment of malaria at 20 lakh cases per year; eradication of small pox and guinea-worm and the near certainty of the elimination of polio in the next few years; averting over five hundred thousand deaths in the last five years due to the up scaling of Directly Observed Treatment Short-course (DOTS) for treatment of TB and reducing every year an estimated 9% deaths due to TB. However, these achievements, remarkable though they may be, cannot mask India's failure to arrest the unacceptably high levels of morbidity and mortality, particularly due to communicable and infectious diseases. The 1990s saw the stagnation of the levels of malnutrition, infant and maternal mortality. Despite India's widely acknowledged intellectual prowess, an inherent capability to adapt and innovate, and a relatively well performing economy, the record on ensuring good health to its citizens' has been below its potential. The decline in public investment in health, the unpredictability of illness and the absence of any form of social insurance have increased vulnerability, heightening insecurities and a sense of powerlessness, particularly among those too poor to afford private treatment and too dependent on the breadwinners to neglect their need for treatment, no matter the costs. The not so poor households live on the brink — ever vulnerable to having their life's savings and assets being irreversibly eroded. It is estimated that hospitalization expenditures result in the impoverishment of 330 lakh persons annually, with adverse consequences on the future well being of their children as well. Although India accounts for 16.5% of the global population, the country contributes to a fifth of the world's share of diseases; a third of the diarrhoeal diseases, TB, respiratory, and other infections and parasitic infestations, peri-natal conditions; a quarter of maternal ill health; a fifth of nutritional deficiencies, diabetes, Cardio Vascular Diseases, and second largest number of HIV/AIDS cases after South Africa. Improvement of health requires more public spending. Yet, India is one of the five countries in the world where public spending is lesser than 0.9% of GDP and one of the fifteen where households account for more than 80% of total health spending. The need to increase spending on health is well recognized. The Common Minimum Programme of the current Government has committed itself to raise public health spending to 2%-3% of GDP. Such an increase would be required for strengthening the regulatory aspects of governance, expanding the scope and institutional capacity for intensive

health education and dissemination of public information, disease surveillance and research. In addition, there is need to strengthen delivery of health services, decentralize systems for monitoring and oversight by involving local governments and establishing systems for ensuring accountability and providing financial risk protection. Poor public health outcome in the country can be appreciated from the table below, which shows a few important health indicators for India as well as some other countries. Even more telling is the fact that similarly placed countries, in terms of historical legacy or economic pressures, like Bangladesh, Sri Lanka and Nepal has better health indicators. Against India's IMR of 68 per 1000 live-births, corresponding figures for Bangladesh, Nepal and Sri Lanka are 54, 56 and 12 respectively (figures as on 2009).

India in comparison with other countries in 2009

	India	China	Sri Lanka	Bangladesh	Thailand	Nepal	Vietnam	USA
Life Expectancy at birth (M/F) – 2009	63/66	72/76	65/76	64/66	66/74	65/69	70/74	76/81
IMR/1000 live-births – 2009	51	20	11	39	10	39	20	6
Under-5 mortality /1000 live-births – 2009	70	22	13	51	12	48	23	7
Maternal Mortality Rate – 2009	230	38	39	340	48	380	56	24
Neonatal Mortality Rate – 2009	34	11	9	30	8	26	12	4
% births by skilled attendants - 2009	47	96	99	18	99	19	88	99
Health expenditure as % of GDP – 2008	4.2	4.3	4.1	3.3	4.1	6	7.2	15.2
Government share of Total Expenditure (%) – 2008	32.4	47.3	43.7	31.4	74.3	37.7	38.5	47.8
Government health spending to total government spending (%) – 2008	4.4	10.3	7.9	7.4	14.2	11.3	9.3	18.7
Per Capita spending in international dollars PPP – 2008	122	265	187	44	328	66	201	7164

Source: World Health Report 2011

4. Public Health Status of West Bengal

Public health status of West Bengal, as judged by various indicators, is presented below with occasional comparison with the national scenario and with that of some of the important states which has shown good progress.

4.1 Demographic Features

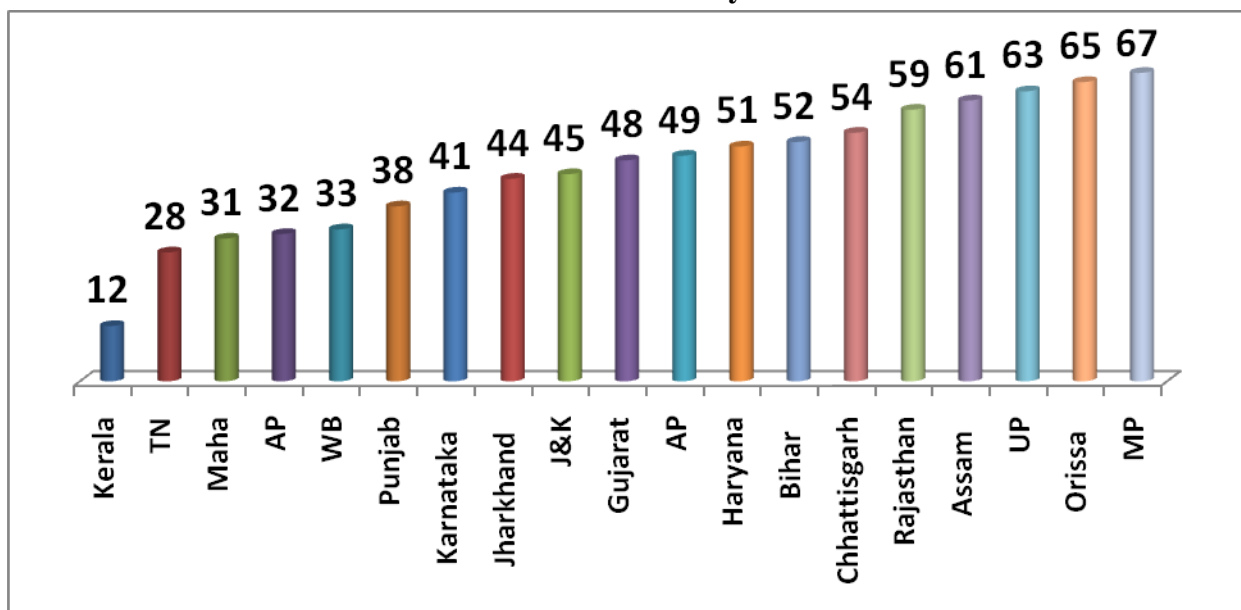
Population of West Bengal as per 2011 census was 9.13 crore, which is around 7.6% of the total population (121.02 crore) of the country. The growth rate of population during the decade from 2001 to 2011 has been 14.0% in the state compared to national growth rate of 17.5%. The growth rate of population in the state in the previous decade (1991-2001) was 17.8%, indicating further reduction of fertility. As per SRS (Sample Registration System) 2008 conducted by the Registrar General of India (RGI) TFR of West Bengal was 1.9 (against replacement level of 2.1) compared to TFR of 2.6 for the country. The birth rate and the death rate of the state as per SRS 2009 was 17.2 (rural 19.1 and urban 12.1) and 6.2 (rural 6.1 and urban 6.4) respectively. In respect of the former West Bengal was behind three bigger states namely Kerala, Tamil Nadu and Punjab. In respect of the latter the state was behind two bigger states namely Delhi and Jammu & Kashmir. As per the third National Family Health Survey (NFHS-3) conducted during 2005-06, the state had 54% of women of the age group 20-24 married before the age of 18 years. The same was as high as 63.2% for rural areas. Also, 25.3% (30% for rural areas) of all women aged 15-19 years were already mothers or pregnant at the time of survey. Early conception is fraught with risk of the mother and the child. At the same time 8% of the mothers had unmet need for family planning indicating poor access to services. Education and empowerment of women have strong correlation with all those factors and there is need for more state interventions in this regard for improving maternal and child health.

4.2 Maternal and Child health

4.2.1 Infant Mortality:

The most important indicator of child health is the IMR. Progress of improvement of IMR in the state is given in the graph below.

State-wise Infant Mortality rate-2009



Source: Registrar General, India, Govt. of India, Census and Vital Statistics, January 2011

It will appear from the graph that the IMR of the state is well below the national average and the same is declining steadily. As per SRS 2009, the IMR of the state was 33 (rural 34 and urban 27) as compared to national average of 50 (rural 55 and urban 34) and was the fourth lowest in the country as will be seen from the graph below showing state-wise picture. The MDG for IMR for the country is 28 to be achieved by 2015 and only Kerala and Tamil Nadu have achieved that so far.

It is estimated that around 50,000 infants die every year before their first birthday in this state. Out of all infant death roughly two third die within the first four weeks (neonatal period) and out of all neonatal deaths around two third die within the first one week. The decline in infant death in West Bengal as well as in other state has been mostly on account of preventing death in the post neonatal period and it is a big challenge to reduce death in the neonatal period. Many of such deaths are due to premature birth with low and very low birth weight, various pregnancy related risks, delivery without assistance of doctors or trained nurses and poor antenatal & postnatal care. Proper antenatal and postnatal check up, improvement of nutrition level of women, delivery at health institution with facilities for newborn care and awareness of mothers to assess severity of the risk of the sick newborn requiring care at hospital as well as arrangement for transporting the sick child with the least delay are some of the solutions for averting deaths of children. Most of those factors are relevant for safety of the mother and avoiding maternal death.

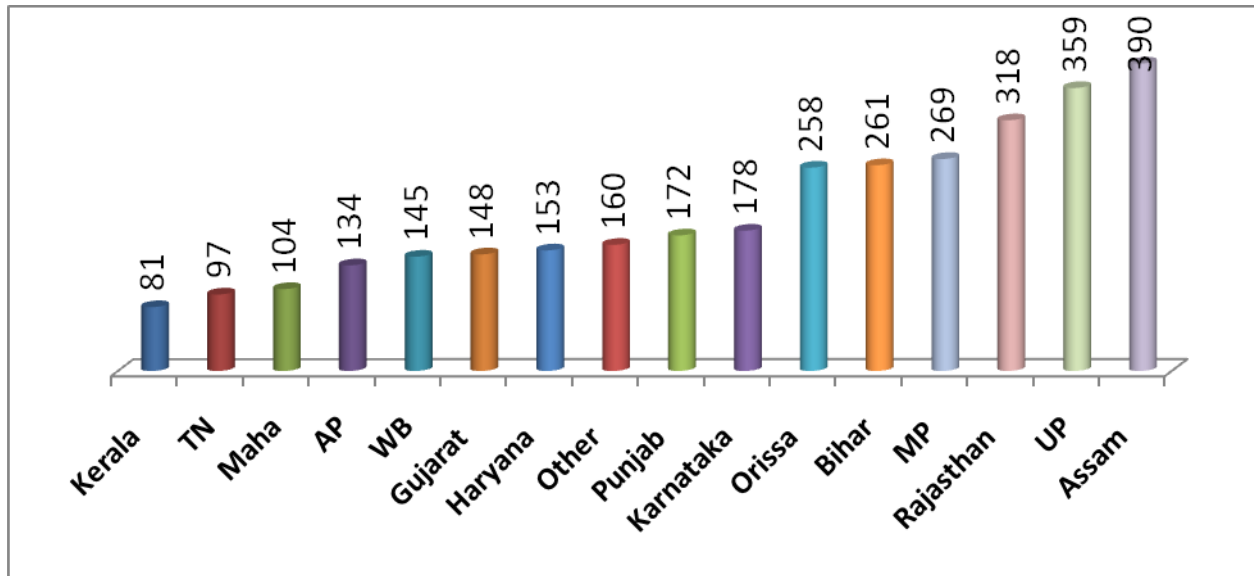
4.2.2 Child Mortality:

The CMR of the state is also an important indicator of health. The CMR for West Bengal was 40, as per SRS 2009 and the state has already achieved the MDG target of 42. However, CMR for Kerala is 14 and that for Tamil Nadu is 33. The corresponding figure of the country was 64. Rank of West Bengal among different states of the country in respect of CMR is worse than that of IMR deserving more attention to reducing CMR along with reduction of IMR.

4.2.3 Maternal Mortality:

MMR of different states, estimated through SRS for the period 2007-09 as shown in the graph below.

Maternal Mortality Rate 2007- 09



Source: Registrar General, India, Ministry of Home Affairs, Govt. of India, Census and Vital Statistics, January 2011 <http://www.censusindia.gov.in>

Bihar includes Jharkhand, MP includes Chattisgarh, UP includes Uttarakhand

Though MMR of the state is better than most of the states but it is the only state where the MMR increased between the period 2004-06 (141) and the latest report of 2007-09. The MDG to be achieved by 2015 is to reach MMR of 109 for the country and West Bengal should achieve the same much earlier as already achieved by Kerala, Tamil Nadu and Maharashtra. It is estimated that there are around 2,100 cases of maternal deaths in this state every year. There are many reasons behind inability of the state in reducing MMR at par with comparable states like Tamil Nadu and Maharashtra. Some of the reasons are that the state is lagging behind in institutional delivery (which has reached nearly 100% in several states compared to around 71% at the end of the year 2010-11 in the state), lack of training of all nurses posted in labour rooms providing them skill for safe delivery, inadequate facilities and not following recommended protocols in the labour rooms including maintaining high level of sterility for preventing infection, inadequate beds and specialist doctors in government hospital for properly attending all expecting mothers, lack of access to the health centres providing facilities for delivery and having arrangement for blood transfusion and cesarean operation on a 24X7 basis as well as inability of identification and management of pregnancies having risk of delivery through better antenatal checking and appropriate interventions in mitigating the risks etc. Poor status of nutrition, high incidence of anemia and early age at first birth of the child also contribute to higher MMR in this state.

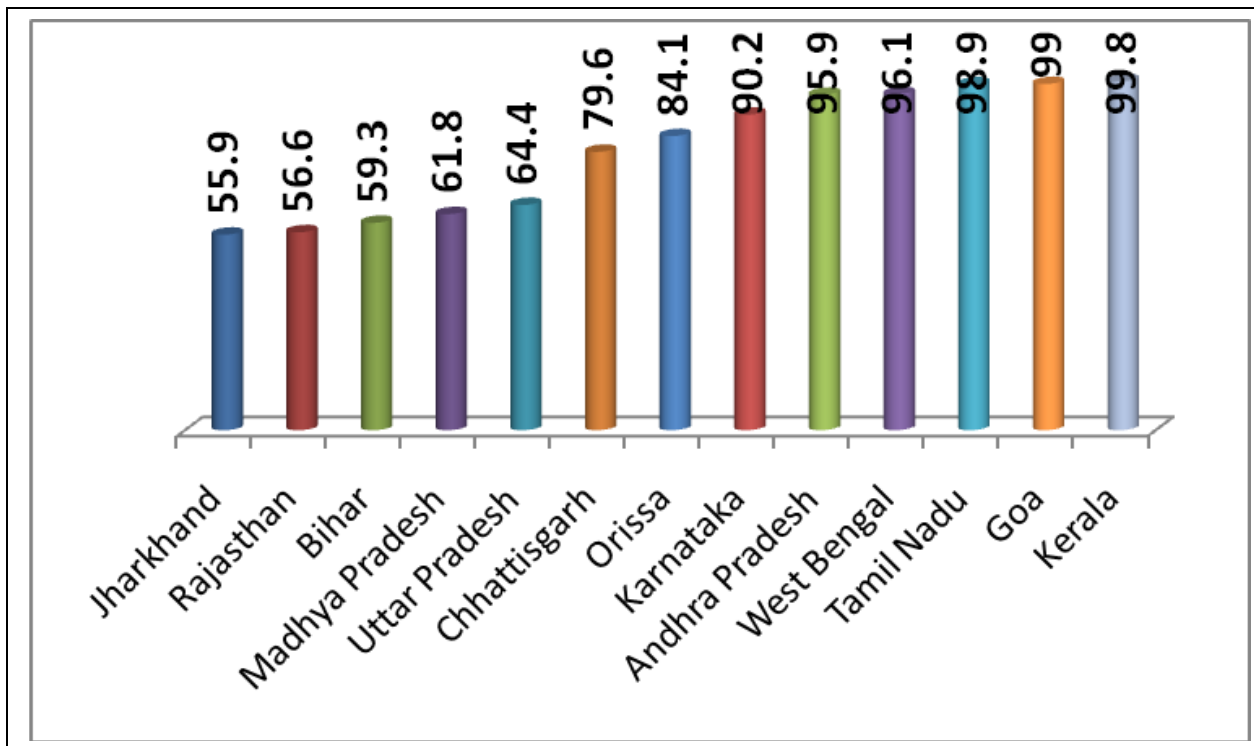
4.2.4 Antenatal & Postnatal Check Ups (ANC & PNC)

Proper antenatal and postnatal check up is very important for reducing morbidity and avoiding mortality of the mother as well as the infant. There should be three ANC during the first three

trimesters and preferably a fourth check up (at the residence of the expecting mother) around 36th & 37th week. The expecting mother should register for first ANC within the first trimester of pregnancy.

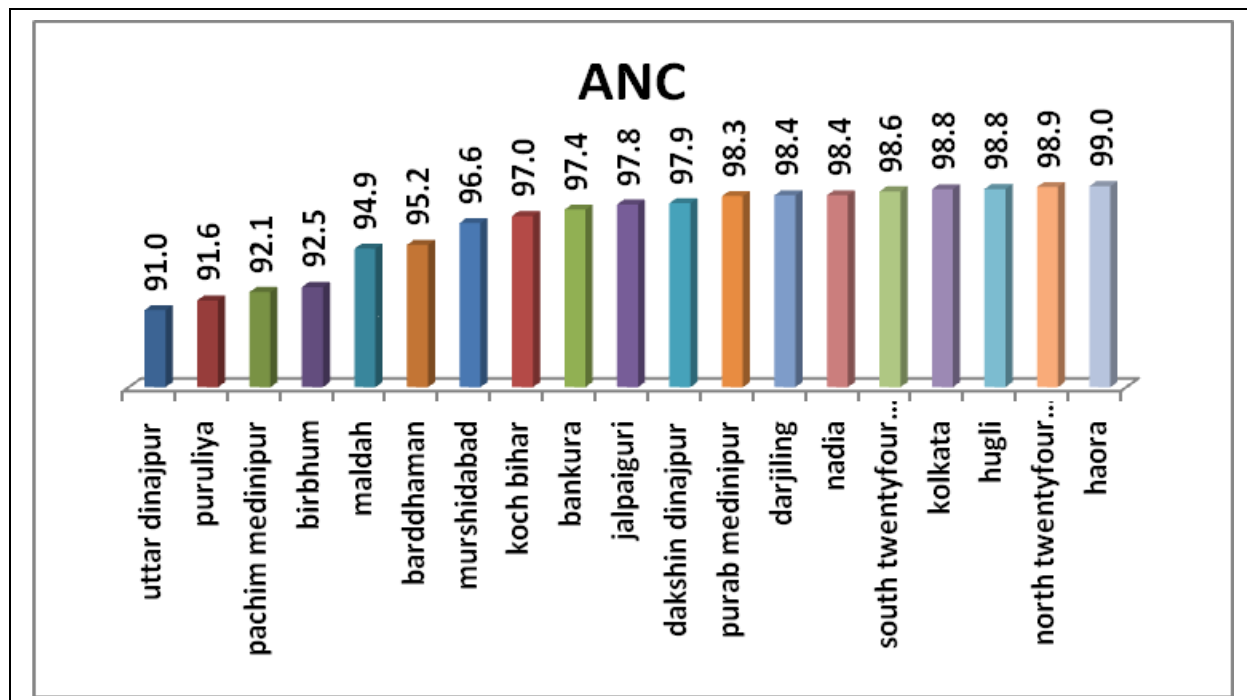
For the state as a whole total 46% of pregnant women got themselves registered for ANC within first trimester as per HMIS 2009-10. Out of all those registered for ANC only 69% completed three ANCs. Full ANC includes three checkups and consumption of 100 iron tablets, percentage of completing the course is even less. Delivery of services at the Sub-centre which provides ANC services such as examination of the mother including weight gain by the mother, measuring blood pressure, estimating haemoglobin, checking presence of albumin in mother's urine (for knowing the risk of suffering from eclampsia) has to improve for identifying the risk of pregnancy and to ensure checking of such expecting mothers by doctors and appropriate interventions for mitigating the risks. Improvement of ANC will require availability of adequate infrastructures of the Sub-centres such as proper space for examination of the mothers, running water, toilet and availability of supplies for conducting all the prescribed tests and improving monitoring and supervision. Ideally the population to be covered by one Sub-centre should be within 5,000 for plain areas and 3,000 in tribal and hilly areas. Many of the existing Sub-centres have much larger coverage of population requiring opening new centres. Conducting postnatal check up for assessing complication of the mother after delivery and illness of the infant is also very crucial but more neglected than the ANC.

Present status of ANC in Indian States is given below:



Source: DLHS-3

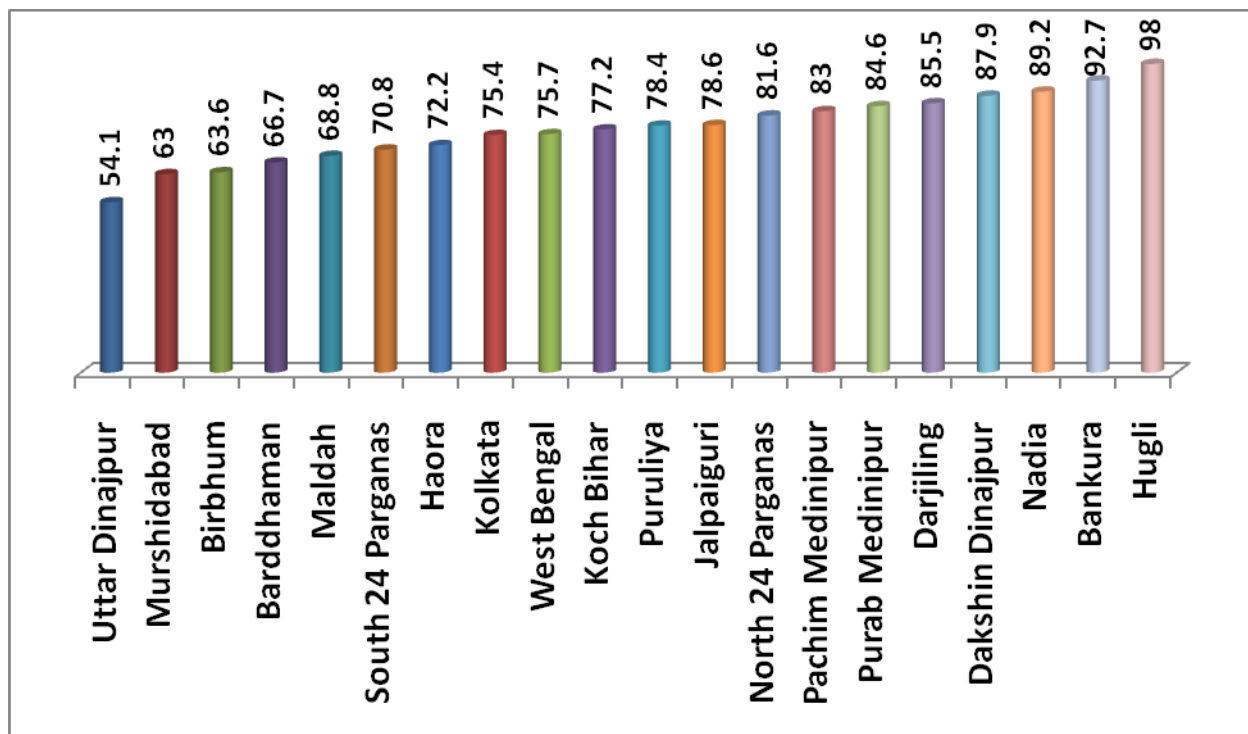
Present status of ANC in the district of West Bengal has been depicted in figure below:



4.2.5 Immunization of Expecting Mother & the Children

Universal immunisation is another very important public health measure for preventing vaccine preventable illnesses. Proper functioning of the Sub-centres, awareness of the mothers and convergence with functioning of the ICDS centres as well as reaching out to the communities through Village Health & Nutrition Day (VHND) is crucial for ensuring 100% immunization. Total number of children aged between 9 and 11 months who have been fully immunised (BCG+DPT123+OPV123+Measles) during the year 2010-11 in West Bengal as per HMIS was 13,51,560 (Male 6,98,964 and female 6,52,596). District-wise status of immunization as per DLHS-3 is shown below. The average achievement masks the poor performances in many pockets. Poor immunization coverage in such pockets is one of the reasons for delay in eradication of Polio from the state. Incidentally, the last known case of Polio in the country was detected in Howrah district during the early part of the year 2011.

District-wise status of immunization



Source: DLHS_3

4.3 Nutrition:

India as well as West Bengal is facing a huge challenge related to poor nutritional status of the population, particularly the children and the women. In India, every second woman is anaemic (55.3 %), every third woman is undernourished (35.6 %) assessed by their Body Mass Index and every fourth baby is born with low birth weight (22 %). Only every second infant younger than six months is exclusively breastfed (46 %), nearly every second young child is underweight (42.5 % of children under five years) or stunted (48 % of children under five years) and three out of four young children are anaemic (79%). Another cause of concern is persistence of high levels of under-nutrition showing hardly any improvement between 1998-99 & 2005-06. Maternal and Child Under-nutrition is responsible for more than one third of the deaths of children under 5 years.

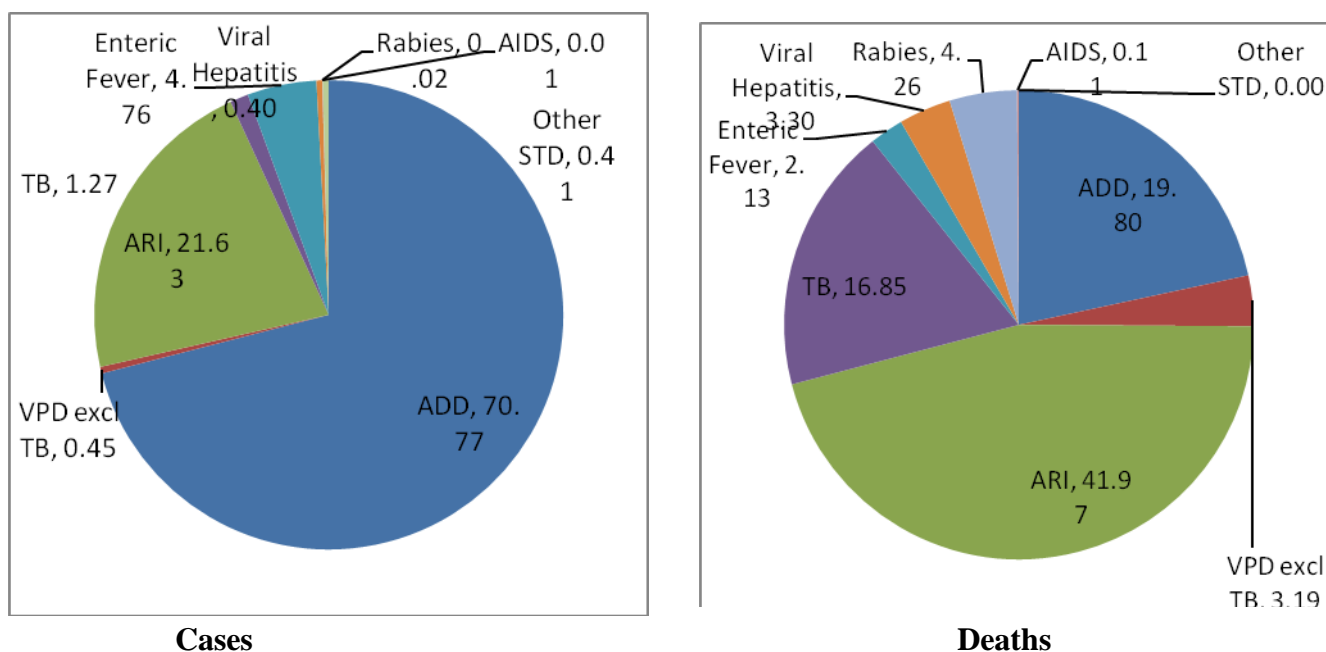
Situation of West Bengal is not much different and is just marginally better than that of the country. The newborn is to be breastfed exclusively up to the first six months and the same has to be started within one hour. However, the NFHS-3 survey in the state found that only around 23.7% of the newborn were being breastfed within the first one hour and only around

58.6% of children in age group 0-5 months were being breastfed exclusively. Thus there is need for awareness generation and community mobilization for promotion of breastfeeding as well as other child feeding practices. In fact, apart from poverty, the main causes of malnutrition in the state are deficiencies in child caring and poor feeding practices. The status of nutrition of the children becomes worse at the higher age group. Percentage of underweight children in the age group below 3 years was 37.6% as per the NFHS-3 survey, which suggests interventions for preventing such decline of nutritional status between six months and three years. This has tremendous impact on development of cognitive skill of the child. Improvement of nutritional level of mother, proper feeding practice, availability of food, control of childhood illness, particularly diarrhoea, warm infestation due to poor hygiene and insanitary environment and proper child care practices including proper implementation of the ICDS programme are very crucial from child's nutrition point of view.

4.4 Burden of Communicable Diseases

People of the state, particularly the poorer section, face a very high burden of communicable diseases such as diarrhoea, tuberculosis, malaria, HIV and AIDS etc. Incidences of the common diseases and the interventions in controlling those diseases are mentioned at section 6.

Communicable Diseases in West Bengal



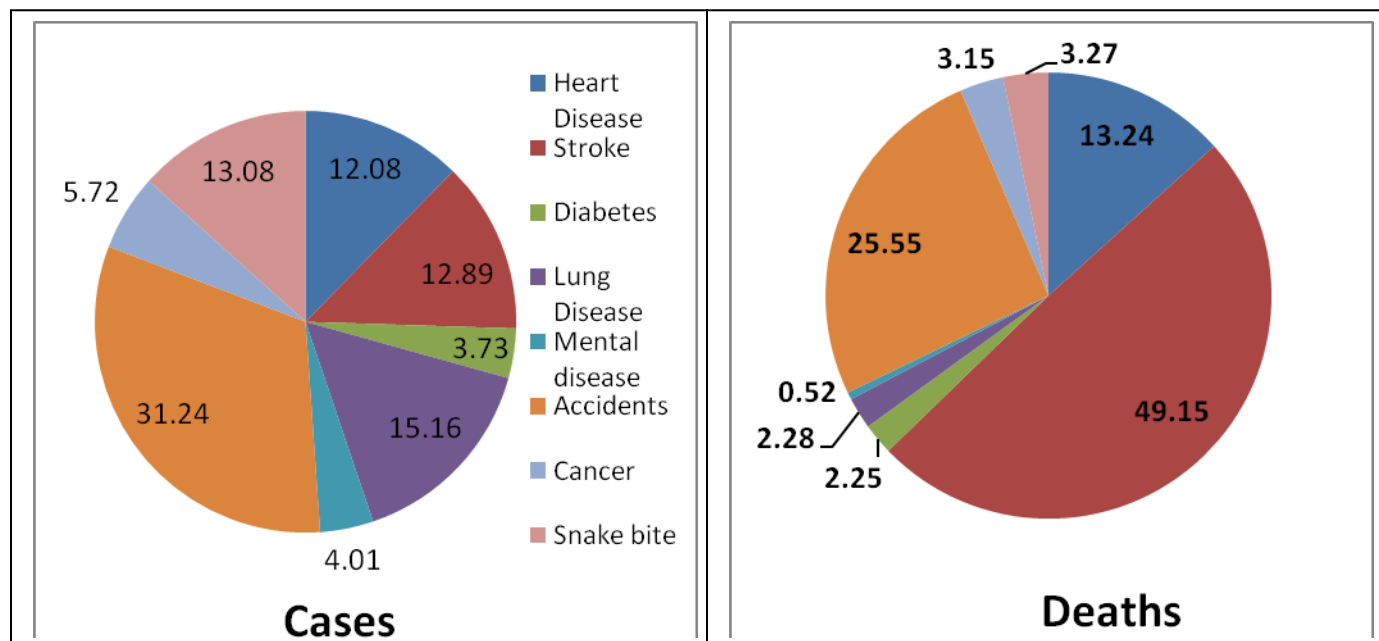
IPD, 2009

4.5 Burden of Non-communicable Diseases

The entire country as well as the state is facing very fast growing incidences of several non-communicable diseases such as diabetes, hypertension, cancer and mental illness. GOI proposes to launch one national programme for control of Diabetes, Cancer and Stroke. The

burden can be reduced by improving life style and adopting appropriate food habits etc. The primary health care system is being geared up for early detection of onset of those diseases through more intensive surveillance.

Non-communicable Diseases in West Bengal



IPD,2009

4.6 Incidence of Thalassemia

The state also has a relatively higher burden of thalassemia, which is a genetic disorder of the blood. It is estimated that around 6-10 % (in absence of proper survey actual level of incidence cannot be correctly guessed) of the population are carriers of the disease and they live normal life without any physical problem arising out of that. However, marriage of two such individuals may lead to birth of child with genetic disorder of the blood in not being able to produce haemoglobin and, therefore, will require regular blood transfusion. Thalassemia can be eradicated by avoiding marriage between two carriers. The immediate task is to arrange for pre-marriage counselling for avoiding marriage between two carriers of thalassemia. Current effort is to establish thalassemia detection centre in every district hospital and some of the sub divisional hospitals. Also, to promote detection of carriers of thalassemia the testing is done free of cost.

5. Public Health Infrastructures of the State and Delivery of Related Services

The public health infrastructure comprises of the health institutions, health professionals and other personnel and the overall arrangement for delivery of various health related services. Preventive and promotive services are mostly delivered in the public sector. In rural areas such

services are provided by the Sub-centres (SC), the Primary Health Centres (PHC) and the Block Primary Health Centres (BPHC). The BPHCs with at least 30 beds are generally declared as Rural Hospitals (RH) and have facilities better than the BPHCs. The BPHC and the RH have otherwise similar functions and are headed by the Block Medical Officer of Health (BMOH). All primary health care services in rural areas are delivered by the RH/BPHC, PHC and the SC. In urban areas such services are provided by the municipalities and coverage of such services varies with the capacity of the urban local government and is not as well structured as it exists in the rural areas. RH/BPHC or even higher level hospitals located within municipalities provide some of those services to the urban population.

5.1 Health Care Infrastructures in Rural Areas

5.1.1 Sub Centres (SCs):

The state has 10,356 SCs catering to around 622 lakh rural population (as per 2011 census). Thus, average population covered by one SC comes to around 6,000 against the norms of 5,000 (3,000 in tribal, hilly and backward areas). Thus on a normative basis there is shortage of more than 2,000 SCs, which should be opened by splitting the jurisdictions of existing SCs with population coverage beyond norm. In practice, the shortage of SCs is around 3,000 or even more because there are many SCs with population coverage below average. The SC needs adequate infrastructure like room for examination of mothers, office room, delivery room (if delivery is decided to be conducted there), adequate space for waiting of the visiting mothers, running water supply, toilet, electricity etc. Also, each SC should be connected through all- weather road. The status of SC infrastructure as at the end of March 2011 is given below. It will appear from the table that there is huge gap to be covered for which the PS and the GP should be very proactive. Also, suitable land is to be arranged for construction of own building of the SCs which are running in hired premises, which normally have very inadequate infrastructures.

Sub-Centre Infrastructure in West Bengal

Total no. of Sub-centre	10,365
No. of SC in govt. building	5,361
No. of SC in rented building	3,330
Other rent free Accommodation	1,870
No of SC under construction	1,432
No of SC ready for const.	589
SC having all weather road	7,391
SC having electricity	4,899
SC having water source within campus	4,861
SC having running water	2,252

SC having toilet facility	5,633
SC where delivery is conducted	362

There should be one Auxiliary Nurse-cum-Midwives (ANMs) and one male Health Workers (known as Multi-Purpose Worker (Male) or simply MPW) for looking after preventive healthcare other than those related to Reproductive & Child Health (RCH). Posts of male Health Workers are mostly vacant and those who are available are attached to the Sub-centre at the GP Head Quarter (known as GP HQ Sub-centre). However, one more ANM, known as the second ANM, who are resident of the area covered by the SC are being engaged under contract under the National Rural Health Mission (NRHM) in the Sub-centres. They have to undergo the 18 months training programme from Nursing School like the regular ANMs. As on September 2011 there were 9,865 regular ANMs and 6,088 Second ANMs in the state, indicating shortage of such nurses. The SCs are to provide RCH related services like ANC & PNC and those related to Family planning and contraception, Immunization etc. Some drugs for treatment of minor ailments, particularly for controlling common childhood illness like fever, diarrhoea (through ORS), Respiratory Tract Infection (RTI) etc are made available with the SCs and ANMs are allowed to administer those drugs. Availability of supplies of those medicines is very important for providing curative support to the children at the village level. The SC also provides first aid in accidents and arrange for referral for (high risk) pregnancies, accidents and other emergencies. Other public health services like working as the DOT centre for controlling TB and surveillance work related to various communicable diseases are performed by the SCs. This is the most important health institution, being closest to the community, for surveillance and prevention of diseases as well as promotion of good health. It also acts as the lowest forum for convergence of functioning of the public health workers and the ICDS workers as well as other community based workers.

5.1.2 Community Process for Improving Delivery of Public Health Services

Actual delivery of services depends not only on ensuring supply of the same but also on unmediated access and other demand side constraints at the family level. Also, one or two ANM and one male Health Worker (if available), looking after such a large population will not be able to keep track of events at the family level. Involving the community for taking care of those issues is very important. GOI launched the Community Health Guide (CHG) scheme almost three decades ago and the scheme has been withdrawn though some CHGs still exist in the state. The NRHM has introduced the Accredited Social Health Activists or ASHA for working at the community level and maintaining close contact with the families, particularly the mother and the ailing infants. ASHA workers are oriented on different aspects of public health through trainings in different phases. There should be one ASHA worker for every one thousand population and west Bengal requires nearly 60,000 such workers. The BDO and the Panchayats have important role in engaging them as well as to see that they are performing their tasks properly. There were 45,157 ASHA workers in the state at the beginning of the year 2011-12. They have completed

various phases of training and completion of all the modules of training as well as engagement of the remaining ASHA are important tasks.

5.1.3 Supervision, Monitoring and Convergence of Services at the GP level

Supervision of ANM and ASHA workers are to be done by the Health Supervisors (HS) and their jurisdiction is coterminous with that of the GP. The office of the HS has been located at the GP office as per joint decision of the Health & FW and the Panchayat & RD Departments. That makes it easier for the coordination with the Gram Panchayat. A formal meeting for such coordination is done in a meeting held on every fourth Saturday where all concerned working at the village level like ICDS Supervisor, representatives of the SHGs and ANMs participate along with the functionaries of the PRI looking after health. At the SC level there is one meeting held on every third Saturday between the ANM and the ICDS workers within its area. Those meetings should identify the problems, interventions required and monitor various services being delivered not only on health and nutrition related services but on incidence of important diseases and progress of development of some of the important health determinants like water supply, sanitation, drainage and solid waste management etc. At the Block level the BMOH meets all the ANMs and the HSs once a month to monitor their works as well as to guide them for the next month. The BMOH is assisted by the BPHN (Block Public Health Nurse) and the PHN (Public Health Nurse) etc in supervision and monitoring of preventive and promotive health care related to mother and child. There is one post of Block Sanitary Inspector, which is generally lying vacant, for assisting the BMOH in monitoring works related to various diseases, particularly those which are communicable.

5.1.4 Delivery of Primary Health Care through Rural Hospital (RH), Block Primary Health Centre (BPHC) & Primary Health Care (PHC)

Primary health care refers to those services provided at the first point of contact with health professionals and general medical practitioners of any recognised system of medicine are supposed to provide such services. Also, such services should be provided at places closer to the community. The primary health care service within the Block is headed by the Block Medical Officer of Health (BMOH) with assistance of other doctors, nurses and medical technologists etc. The health centre closest to the community is the PHC, which should be established for every 30,000 population (20,000 populations in tribal, hilly and backward areas). The PHC should have two doctors and four GNMs to provide OPD and round the clock IPD services with facilities for normal delivery and laboratory for a few routine tests. However, the number of PHCs and services delivered is far from adequate. There are 922 number PHCs out of which only 248 had beds (generally 10 beds or even less in some cases) and functioned round the clock as at the end of March 2011 and the rest PHCs had no beds and, therefore, provided only OPD services.

As per GOI norms there should be one Community Health Centre (CHC), which is equivalent to the RH and BPHC of the state, for every 1 lakh to 1.2 lakh populations. Thus the

CHC (RH/BPHC for West Bengal) should serve as the referral centre for every four PHCs and is conceived as the first major curative health service providers addressing 80% of all ailments requiring out-patient services or hospitalization. There should be three specialist doctors namely, Gynaecologists & Obstetricians, Paediatricians and Anaesthetists along with two General Duty Medical Officer and normally the BMOH works as the superintendent of the hospital at the CHC (RH & BPHC for West Bengal) for providing primary curative care which cannot be attended by a doctor with only MBBS degree (there are a few BPHCs with 15 beds only because of presence of a bigger hospital nearby and there is no specialist doctor in those BPHCs). All national health programmes such as those related to control of vector borne, diseases HIV/ AIDs, Leprosy, Blindness Control etc are to be implemented at this level. There should be facility for round the clock Emergency Obstetric Care, diagnostic facilities like ECG, X-ray, Ultrasound and routine pathological tests. Ideally there should also have Blood Storage Units (BSU) for emergency blood transfusion so that it functions as the First Referral Unit (FRU) for any labour related complication. One of the interventions of the NRHM is to improve the quality of services to Indian Public Health Standards. That will help avoiding referral to higher facilities in respect of all diseases which can be treated at that level, which is far from reality because of several factors. At that level there should be availability of dentists and doctors from AYUSH (Ayurved, Yoga, Unani, Siddha & Homeopathy) branch to give more options to the people. In West Bengal AYUSH doctors include only Ayurved & Homeopathy.

There is one RH or BPHC in every Block of the state and only in a few cases there are both RH and the BPHC and the BMOH is located at the BPHC. There are 99 RHs (total bed 3678) and 244 BPHCs (total bed 5065) in the state. Population coverage at present is, therefore, rather high compared to the all India norms. As a result of that there is overcrowding and compromising with quality of services. The BPHCs have generally 30 beds with some exceptions of having more or less beds. The RHs have beds varying from 30 to 60.

5.1.5 Secondary and Tertiary Care Facilities

First level of referral services for treatment by specialist doctors is called secondary health care services. State General Hospital, Sub Divisional Hospitals and District Hospitals are the backbone of secondary health care facilities with various specialist services. Such hospitals also provide most of the ordinary diagnostic services. There are 16 District Hospitals (total bed 7,270), 45 Sub Divisional Hospitals (total bed 8,296) and 26 State General Hospitals (total bed 2,454). Diseases requiring more advance investigation and consultations by super specialist doctors are called tertiary care and such services are provided by the Medical College Hospitals and other teaching hospitals. Those hospitals also provide important referral services to the rural people. One important feature of the health care system of the state is that around 70% of indoor patients are treated in government hospitals as compared to the national average of around 40%. That leads to tremendous crowding of most of the hospitals and compromising with quality of care. The problem is further aggravated by vacancies in crucial posts as well as general managerial problems.

5.2 National Rural Health Mission

The National Rural Health Mission (NRHM) has been launched in the country with a view to bringing about improvement in the health system and the health status of the people, especially those who live in the rural areas. The Mission seeks to provide universal access to equitable, affordable and quality health care which is accountable at the same time responsive to the needs of the people, reduction of child and maternal deaths as well as population stabilization, gender and demographic balance. In this process, the Mission would help achieve goals set under the National Health Policy and the Millennium Development Goals. The specific objectives of the Mission are:

- ❖ Reduction in IMR & MMR to 30 and 100 by the year 2012
- ❖ Universal access to public services for food and nutrition, sanitation and hygiene and universal access to public health care services with emphasis on services addressing women's and children's health and universal immunization
- ❖ Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- ❖ Access to integrated comprehensive primary health care.
- ❖ Population stabilization, gender and demographic balance.
- ❖ Revitalize local health traditions & mainstreaming AYUSH.
- ❖ Promotion of healthy life styles.

Plan of action under the NRHM includes the following components:-

- Strengthening the community process with the support of ASHA as mentioned before.
- Strengthening of SCs by helping to open new SCs, allowing engagement of Second ANM and improving supplies of medicines and vaccines and equipments etc.
- Improving outreach services and convergence with other related services.
- Strengthening the PHCs, BPHCs and RHs by improving infrastructures, providing more doctors, nurses (General Nurse-cum-Midwives or GNMs) and medical technologists on contract, availability of equipments and other supplies. Improving available services, particularly those related to maternal and child care in those hospitals.
- Strengthening District Hospitals and other secondary care hospitals for developing proper infrastructure, improving and expanding health services offered by those institutions and developing proper referral system, particularly for mother & child care.
- Strengthening sanitation, hygiene and system of disposal of medical waste.
- Strengthening various disease control programmes, as described later.
- Improving management practices related to delivery of health services, procurement of medicine and equipment, logistic management, maintenance of accounts etc.

- Involvement of other stake-holders in better delivery of services through formation of Rogi Kalyan Samiti at every hospital and formation of Health & Family Welfare Society at State, District and Block levels. Substantial quantum of fund is routed through the societies of respective levels.
- Improving availability of skilled manpower by supporting various training and skill development programmes and in development of new human resources such as ANMs and GNMs.
- Stabilization of population and providing related services.
- Seeking private partnership including the NGOs in improving health care.

5.2.1 Planning Under NRHM and Funding Arrangement

Annual allocation is communicated to each state by the Ministry of Health & FW, GOI for preparing plan for the year. There are three streams of funding; one for the RCH related services, the second one is for meeting all critical gap through a flexible fund, which also have some specific components and the third one is for controlling diseases through various national programmes. For district level activities in every sector there should be a District Health Plan to be approved by the Zilla Parishad and the District Plan should be based on the Block Plans so that needs felt at those levels are reflected in the District Plan. The specific components under the NRHM Flexible component includes untied fund for all health facilities such as Sub-centre @Rs 10,000/ per SC, PHC (@Rs 25,000/ per SC and BPHC/RH (@Rs 50,000/. For proper maintenance of the facilities fund is allocated at fixed rates of to each type of hospitals, which are Rs 10,000/ per SC, Rs 50,000/ for PHC and Rs 1.0 lakh for BPHC/RH. The other important component is the fund for the Rogi Kalyan Samiti (RKS), which is formed for each hospital. Allocation under NRHM for West Bengal for the year 2011-12 was Rs 1246.68 crore of which the GOI share of RCH component and the Flexible component were Rs 399.37 crore and Rs 358.93 crore respectively. State share of the total allocation mentioned above is 15% and therefore, the state should make full use of the entire allocation. However, West Bengal has not been able to spend the entire allocation in any of the years. One immediate task is to ensure full absorption of fund available under NRHM.

5.3 Important Interventions under the NRHM

Some of the important interventions being supported under the NRHM, particularly those related to mother and child health, are briefly mentioned below.

5.3.1 Promoting Institutional Delivery and Safe Motherhood

Improving safety of motherhood requires many steps starting from proper ANC and institutional delivery following due protocol. One major drive under NRHM is to improve access to institutional delivery for safety of the mother and the new born. Around 71% of deliveries in West Bengal during the period 2010-11 were conducted in institutions or in presence of skilled birth attendants. There are states which have reached figures close to 100%

in this respect and the same should be achieved in West Bengal as soon as possible. One strategic intervention is to make available 24X7 delivery centres within reasonable distance from every village and improving the arrangement for delivery and new born care. The labour rooms and the maternity wards should also maintain high level of cleanliness and sterility and are being upgraded accordingly. Arrangements are also being made to have a New Born Care Corner (NBCC) for resuscitation of sick newborn in those health facilities. Augmenting beds for maternal wards, which are extremely crowded, is another priority for West Bengal. One way of doing that is to utilize the services of private nursing homes to conduct delivery at government rate, under a scheme called AYUSMATI. Only those expecting mothers covered under JSY (mentioned below) are eligible for receiving free obstetric services under the scheme and the bill is paid by the government. For improving on labour room protocol the nurses are given SBA (Skilled Birth Attendant) training and they are also made to maintain Partograph for every delivery. The Partograph is a system for graphical plotting of some of the parameters related to progress of labour and is very useful to check obstructed labour requiring surgical intervention. Timely transfer of such mothers to facilities having Comprehensive Emergency Obstetric Care (CEmOC) facilities which includes facility for round the clock caesarean delivery can save the mother and the baby. The government has also issued order for ensuring free treatment and transport of all mothers, irrespective of BPL or not, for receiving care related to delivery and post delivery complications. It should be ensured that the expecting mothers actually get free service including all medicines.

5.3.2 Janani Surakshya Yojana (JSY)

The JSY has been launched under NRHM with the vision of reducing MMR and IMR and increasing institutional delivery of pregnant mothers from BPL families. The strategy adopted has been promoting early registration, identification of risk pregnancies, ensuring three ANC and post delivery visit. Providing referral transport free of cost for promotion of institutional delivery is another important objective. Women above 19 years and belonging to SC, ST and BPL families are covered under the JSY for providing cash benefit. The scheme is operative in urban areas also. The expecting mothers are paid @ Rs 500/ for completing three ANCs irrespective of place of delivery and those who have delivery of the babies at the hospital are paid an additional Rs 200/. The strategy also includes making birth plan for each expecting mother and providing quality services round the clock for delivery and attending complicated cases. During the first quarter of the year 2011-12 total 1,72,649 expecting mothers (rural 1,65,037 and urban 7,612) were registered under the JSY in West Bengal (as per HMIS report).

5.3.3 Janani-Shishu Suraksha Karyakaram (JSSK)

The JSSK was launched in June 2011 by the GOI, as an initiative under the NRHM for providing free and cashless services to all pregnant women including normal deliveries and caesarean operations and also treatment of sick new born in all government health institutions across the country. NRHM provides fund for providing such free treatment irrespective of the

economic or social status of the family and it is the responsibility of the state to implement the same. Most crucial criteria of achievement will be to bring down the out pocket expenditure for buying medicines or other supplies and cost of transportation etc by improving delivery of those services in government hospitals.

5.3.4 Referral Transport System

Getting quick access to the health facilities for the expecting mother and the sick infants is a major problem because of both problem of availability of transport as well as money required for the same may not be affordable. An arrangement has been made by placing ambulance/vehicle (known as Matri Yan) which may carry mother at every health facility providing round the clock delivery services. The services of the vehicle is accessed by dialling 102, which is toll free and there is one control room in every district for receiving the call and despatching the vehicle to the village for bringing the mother or the sick child to the hospital. Expecting mother including those who had deliveries within last six weeks and sick infants up to one year can only avail the facility free of cost for which the mother is given a voucher during ANC. The voucher is to be used for going to the hospital as well as for returning home and also for visiting higher level hospital, in case the patient is referred to that hospital.

5.3.5 Improving neonatal care

As mentioned earlier the reduction of IMR is largely dependent on reduction of neonatal death. In order to prevent neonatal death there is need for both improving more home-based neonatal care through training of the ASHA and improving level of awareness of the mothers so that they can assess the risk and take the baby to the hospital for which no cost has to be incurred. At the RH/BPHC level there should be a Sick Newborn Stabilization Unit (SNSU) which require Radiant Baby Warmer and Phototherapy Unit to stabilize very sick newborn. The GNMs are also being trained to utilize the equipment and to take care of such sick children. Also, treatment of all infants, irrespective of BPL or not, should be made free of cost including free supply of medicine and transport. It should be ensured that the infants are really getting treated without any out of pocket expenditure being made by the family. In case the condition of the baby is very critical the baby after stabilization is to be taken to the Sick Newborn Care Unit (SNCU), which are being established in the district and sub divisional hospitals.

5.3.6 Integrated Management of Neonatal & Childhood Illness (IMNCI)

The training package has been developed for better management of neonatal and childhood illness and all the ANMs and ASHA as well as ICDS workers are being imparted the training. Early completion of such training will help better management of sick children. Another type of IMNCI, called Facility based IMNCI (or F-IMNCI) is imparted for handling sick children at the hospital and the GNMs are given such training.

5.3.7 Birth & Death Audit for Maternal and Infant Death

Death audit is conducted for knowing the cause of death. Such audit is done through collecting information verbally from the members of the family when the death takes place at residence (outside hospital). In case of death at the hospital audit is done by the hospital authority. It is recommended that 100% maternal and infant deaths are to be conducted in prescribed format for ascertaining the cause(s) of death and the data is compiled for appropriate interventions to avoid death for similar causes in future, if possible. There may be incidence of deaths at the hospital due to delay in deciding to take the patient to the doctor/hospital (delay- I), delay in transporting the patient to the doctor/hospital (delay- II) and delay in responding by the hospital authority after the patient reaches the hospital (delay- III) or a combination of more than one such causes apart from quality of treatment and nature of illness. Avoiding all such delays by itself may save many lives. In order to make death audit effective all incidences of maternal and infant death are to be reported and promptness of reporting indicates the sincerity of the monitoring system.

5.3.8 Village Health & Nutrition Day (VHND)

The purpose of the VHND is to extend services related to nutrition and health, particularly of the mother and child, to the village level by bringing all services given by the SC and the ICDS centre together on fixed days. The VHND is generally organized in selected ICDS centres on fixed days. Involvement and attendance of all local mothers and children along with workers from the said two streams (ANM, ASHA and the ICDS worker) is very crucial. Senior officers from Block levels should also visit some of the VHNDs for monitoring the arrangement and to sort out problems, if any.

5.3.9 Health Management Information System

Health Management Information System (HMIS) was first introduced in 2008 as a component of NRHM for monitoring all major health indicators. This is a web based system and compulsory to be used by all the States for capturing data related to activities accomplished at the level for better public health outcome. The system earlier captured district level consolidated data which were collected by different programmes of Public Health and RCH. But since April, 2011, data from all facilities viz Sub-centre, Primary Health Centres, Block Primary Health Centres and District and Sub-Divisional Hospitals are being collected and uploaded on line for monitoring, supervision and making corrective policy decision. To have both consolidated data at state level and district and its disaggregation up to the lowest level of facilities, data is captured at the facility level. The data is filled up in a pre-defined format (to be downloadable from the website) and after off-line data entry and checking of primary validation, the data is uploaded to the web portal. As there is no e-readiness at sub-centre and PHC level, data is uploaded from the office of the Block Medical Officer of Health and is automatically collated. The entire dataset consists of 227 number of fields to be filled up from the Sub-Centre level regarding registration of pregnant women for Anti natal Check up, status of coverage of TT

to the pregnant women and the periodicity of administration, status of immunization of children and other activities of neonatal care like status of exclusive breast feeding, status of post natal check up, status of sterilization of adult couple. From the PHC level, numbers of fields are captured. Interested officials can view the data for any level of aggregation from the portal www.nrhm-mis.nic.in (ID: nrhm-wb.1 and Password: p@ssw0rd).

5.3.10 Rogi Kalyan Samity

One committee, named Rogi Kalyan Samiti, is formed for each hospital for involvement of all stake holders like elected representatives, officials from general administration, doctors and nurses from hospital etc is formed for supervising functioning of the hospital, particularly from the point of view of services being delivered and to the patients. 60% of all collection of user charges is allowed to be retained with the RKS for which a bank account is maintained and the same is utilized as per decision of the RKS for meeting needs of services delivered in the hospitals. In addition to the user charges an amount @Rs 5 lakh for district and sub divisional hospital, @ Rs 1lakh for RH/BPHC and @ Rs 50,000/ per PHC is given from the NRHM as grant every year. BDO is an important member of the RKS of the RH/BPHC. There is one guideline on spending of fund from RKS issued by the Health & FW Department.

5.3.11 GIS Map for Health Infrastructure

Health & FW department has prepared GIS maps of all the health facilities showing the nature of services available along with the location etc. Such maps are uploaded in the website www.trendsindia.org/nrhm and can be seen by any one. Such maps may be very useful in planning for improvement of health infrastructure, in bridging existing gaps and for various types of monitoring. The site may be visited and location of the facilities to be visited may be checked for having a prior knowledge of the facilities.

6. Common Diseases and Related Control Programmes

6.1 Water Borne Diseases

Major water borne diseases in the state are Acute Diarrhoeal Disease including Cholera, other Diarrhea, Dysentery, Enteric Fever and Viral Hepatitis (A & E). Incidence of such diseases is much higher for the poorer section of the people living in insanitary environment with poor access to safe water and sanitation facilities. Better awareness and hygienic practices along with safe water and proper drainage, sewerage and sanitation facilities leads to reduction of incidence of those diseases. Preventing open defecation with the help of the Total Sanitation Campaign will have positive impact on prevention of all those diseases. High incidences of such diseases also result in nutrition deficiency for the children. During the year 2010 as many as 19.45 lakh patients were admitted in government hospital with diarrhoea & similar diseases and there were 250 deaths. Actual number of people who suffered from such diseases will be much more and there could be much more death, particularly the children on account of such diseases. Apart from what has been stated interventions for preventing morbidity and mortality due to

those diseases include surveillance for any outbreak of such diseases, identification of causative agent and taking urgent actions as per finding. The state has also started monitoring water quality by establishing water testing laboratories and regular testing of water of areas known to be prone to such diseases may also result in taking appropriate preventing actions. Awareness about ORS and availability of ORS at SC level reduces adverse effect of such diseases and there is no need to visit the hospital unless there is fever or other complications.

6.2 Vector Borne Diseases

Six Vector Borne Diseases are mainly predominant in West Bengal. These are Malaria, Filariasis, Japanese Encephalitis, Kala-azar, Dengue and Chikungunya. Prevention and control activities in general include (i) Early detection and prompt complete treatment (ii) Mass drug administration (filariasis) (iii) Integrated Vector control activities including insecticidal residual spray (iv) Personal protection through distribution of Long Lasting Impregnated Net (LLIN) and insecticide treated net (ITN) (v) Capacity building of health care service providers (vi) Inter-sectoral co-ordination and (vii) Behavioural Change Communication. There is a National Vector Borne Disease Control Programme for taking up surveillance and organizing appropriate interventions related to all such diseases.

6.2.1 Malaria prevention and control activities

Malaria is most widespread among all the vector borne diseases. Malaria is detected by examination of blood slide and blood sample is taken for such purposes in all health facilities including Sub-centres from all persons having fever and this is an important activity of SCs in malaria prone areas. During the year 2010 as many as 54.4 lakh blood slides were examined and 1.35 lakh persons were found to have malaria. Out of those around 25 thousand (18% of all cases) were Falciparum (Pf) type, which may lead to death within a short period. Patients with Pf malaria are treated with Artesunate Combination Therapy (ACT). There were 47 reported deaths due to malaria in the state during the year 2010 (down from 203 during 2006). Such deaths may be prevented by using Rapid Diagnostic Kits (RDKs) to know the presence of Pf type malaria parasite. RDKs and ACT are to be kept at all SCs (apart from hospitals). RDKs should be available with some of the ASHA workers living in areas having reported such types of malaria. Availability of RDKs and need to test all cases of high fever should be well notified in the villages so that even on holidays and at odd hours Pf type malaria may be detected. Delay in such detection and treatment is likely to lead to death. Another important measure for controlling malaria is to distribute Long lasting insecticidal nets (LLIN) to every family in malaria endemic blocks, which has very positive impact on reduction of incidence of malaria.

6.3 Tuberculosis (TB)

TB is the largest killer among all the communicable diseases in the country. Diagnosis is done primarily through sputum smear microscopy at Designated Microscopy Centres (DMC) established at different parts of the state. Some types of TB can be detected only through chest X-Ray. There are 850 such designated microscopy centres (DMC) in the state. There are also 151 sputum collection centre from where sputum is collected and taken to DMCs for examination. During the year 2010 there were 5.6 lakh suspected cases in government hospitals and 1.02 lakh cases were registered for treatment. Treatment for TB is provided through the DOT centres and 16,281 such centres exist in the state. Drug for TB is provided free of cost by the government under the Revised National Tuberculosis Control Programme (RNTCP), which a national programme for control of TB. Objectives of the RNTCP is to achieve and sustain a case detection rate of 70% in respect of new sputum positive cases and to achieve and sustain a cure rate of 90% in respect of new sputum positive cases put on treatment.

6.4 Leprosy

The Prevalence Rate of Leprosy (no. Of cases per 10,000 population) in the state as on 2010 was 0.92, which is higher compared to the national Prevalence Rate of 0.71 (as on 2010). The Prevalence Rate is above 1 in the districts of Purulia (3.55), Bankura (2.61), West Midnapore (1.69), Dakshin Dinajpore (1.51) Kolkata (1.50), Uttar Dinajpore (1.41), Burdwan (1.31), Malda & Birbhum (both 1.15). Leprosy is controlled by the National Leprosy Eradication Programme (NLEP) and the goal is to have Leprosy Free India. One important task in this regard is to identify new cases through family-wise surveillance, which may be done by the ASHA workers also and to treat them. During the year 2010-11 as many as 10,321 new cases were detected and there were 8,435 old cases under treatment in West Bengal. Leprosy is treated through Multi Drugs Therapy available free of cost. There is also need for reconstructive surgery to rectify the deformities in some cases. To remove stigma in the society against Leprosy Affected Persons through comprehensive IEC activities and rehabilitation of Leprosy patients are important tasks, which requires support of the general administration and the PRI.

6.5 Acute Respiratory Infection (ARI)

Large number of children of this state suffer from various types of ARI including pneumonia, which is also one of the important causes of death of children. Nearly 19.5 cases of ARI were registered in government health facilities of the state during the year 2010 and there were 439 deaths. It is important to assess the risk of a child suffering from ARI by counting of respiratory rate and treatment may be started immediately with co-trimoxazole, which is available at the Sub-centres. Regular visit to the families for assessing the risk of sick children by the ASHA workers, IEC on home-based management, Behavioral Change Communication, early referral of patient with high risk and case management at different levels of health facilities as per protocol are the way out for reducing morbidity and mortality related to ARI of the children.

6.6 National Programme for Control of Blindness (NPCB)

The goal of the programme is to reduce prevalence of blindness in the country. Apart from cataract operation and other interventions related to control of blindness the programme provides for primary eye care services at RH, BPHC and PHC. In West Bengal such facilities are available at the RH and BPHCs only by screening of eyes and correcting for refractive errors. There is a post of Medical Technologist for this purpose who is also supposed to visit the schools regularly as per prior programme for screening of eye sight of the students. Efficiency of such screening improves if the school authority takes more interest. The teachers are also trained in doing preliminary screening with the help of Snell's Chart (the chart with different size of letters for testing eye sight) and prior short listing of the students with difficulty in eye sight helps faster screening by the Medical Technologist. During the year 2009-10 such screening was done in 11,451 schools and 10.80 lakh students were screened. 40,696 students were found to have refractive error and such students are given spectacles free of cost out of NPCB.

6.7 National AIDS Prevention & Control Programme

National AIDS Control Programme-III (2007-2012) with an objective of halting and reversing the spread of HIV epidemic in the country has been rolled out since April 2007. Saturation of coverage with care and support services for People Living with HIV and AIDS (PLWHA) is another objective of the programme. The West Bengal State AIDS Prevention and Control Society under the Health & FW department is responsible for implementation of the programme. The activities include generation of awareness on control of HIV and AIDS as well as providing care, support and treatment for those who are HIV or have developed AIDS. There are Integrate Counselling and Testing Centres (ICTC) in the hospitals to test for HIV and to provide counseling. Some community level ICTCs have also been opened with the help of NGOs. There were total 258 ICTCs at the beginning of the year 2011. During the year 2009-10 as many as 1,49,869 general clients including High Risk Groups were tested for HIV and 6,338(4.23 %) of them have been found positive. Testing for HIV for the pregnant mothers is an important task for preventing infection of the children of HIV positive mothers. During the same period, 2,88,746 pregnant mothers were tested for HIV, and 375(0.13 %) were found to be HIV positive. There should be more convergences between the interventions under the NRHM (particularly the RCH and the RNTCP) and those taken up under the AIDS Prevention & Control Programme. During the year 2009-10, 1,49,869 general clients including High Risk Groups were tested for HIV and 6338(4.23 %) of them have been found positive. During the same period, 288746 pregnant mothers were tested for HIV, and 375(0.13 %) were found to be HIV positive. In 2010-11 (till July 10) 73788 general clients including HRG and 121588 pregnant women were tested out of which 2587 (3.50%) and 141 (0.12%) were found positive. Another important intervention in controlling HIV is done through the Adolescent Education Programme, which has been rolled out in 11,400 schools in the state in collaboration with West Bengal Board of Secondary Education.

7. Improvement of Public Health and the PRI

Like any country has responsibility of improving the public health scenario for its entire citizen so is the responsibility of any local body, including any tier of Panchayat to improve health status of the people living within its jurisdiction. The Panchayat, in general, has many types of responsibilities in this respect. First one is to perform all responsibilities devolved by the Health & FW Department on those bodies like registration of birth & death; maintenance of the Sub-centres, PHCs, BPHCs and the Rural Hospitals; running GP level dispensaries etc. There are several health determinants like availability of safe water, proper sanitation arrangement including solid waste management, drainage and sewerage, improvement of environment etc which have been assigned to the Panchayats under the W.B.Panchayat Act. Proper discharge of those responsibilities can have tremendous impact on the prevention of diseases, particularly which are communicable. The Panchayats should also play an important role in ensuring convergence of various health related services through proper coordination of various implementing agencies within their respective jurisdictions. Another important function of the Panchayats, particularly the Gram Panchayats (GP) is to monitor delivery of various health related services to the people living in their areas, to mobilize the people for receiving various public health services and to build awareness about the programmes concerned. The Standing Committees on Health & FW of the Zilla Parishad (ZP) and the Panchayat Samiti (PS) and the Upa Samiti dealing with health and family welfare of the GP are responsible for monitoring and coordination and convergence of services at respective levels. Proper functioning of those bodies is, therefore, very important in reaching benefits of various public health programmes to the people. Important activities of the Panchayats in these respect is briefly narrated below.

7.1 Improving the Community Process and Augmenting Health Related Awareness

There are several constraints faced by the poor and people living in remote rural areas in receiving public health services, which are normally provided free of cost. Lack of awareness and information related to service offered, problem of access including cost of accessing the services and out of pocket expenditure due to inadequate provision or inefficiency in the system as well as health seeking behaviour etc are the important causes behind failure of services reaching the poor and those living in remote areas. The Panchayats may be strengthen the process of reaching services to the community by raising awareness of the people, proper deployment of the ASHA and involving SHGs and other community level organizations as well as in mobilizing people to actual come forward and access various services.

7.2 Monitoring and Convergence of Various Services

Monitoring at the grass root level to check actual delivery of services is very crucial. The GP can be instrumental in noting the failures and bringing those to notice of the health functionaries at GP and higher level. This is achieved through the 4th Saturday meeting as well as continuous negotiation with the HS and the ANM & MPW. The PS, ZP as well as the Health

& FW department have responsibility of disaggregating all health related data GP-wise and to share the same so that it is possible to highlight the area of failures which are captured through MIS report of the health system. If the GP becomes sensitive to whatever the citizen are reporting and what is flowing from the health system for comparing performance of the GP or even PS and ZP for initiating necessary actions may lead to appropriate interventions and improvement in delivery of services. For the said purpose, the Panchayat has to collect all public health related information and develop capability of analyzing those with the support of the HS and if possible the doctors of BPHC/PHC or those engaged by the GP for running the clinic, who are required to attend the fourth Saturday meetings and plan and implement local interventions in coordination with functionaries associated with health and ICDS programmes, NGOs associated with Sanitary Marts and water testing facilities. There is need to develop database related to public health within every GP. Those will be useful in assessing whether the overall health situation is improving or not. While some of the physical factors, which help in improvement of health like availability of drinking water, quality of the water, availability of toilet, drainage facilities, buildings for ICDS centres and health centres are easier to monitor but more challenging is to know the outcome in terms of documenting the public health related events. Those are incidences of death, particularly of child and pregnant mothers, illness, level of malnutrition measured by taking weight of children, pregnant mothers etc. The GPs have been given wall chart to note total occurrence of such events during the month so that the information remains displayed and it becomes easier for anyone to track the changes. Those data will be helpful in preparing annual plan, which every Panchayat has to prepare and implement.

7.3 Registration of Birth & Death

Registration of birth & death are important vital events to understand demography of any area. The Pradhan has been empowered to act as the sub-registrar of birth & death. The GP should ensure 100% registration of births and deaths taking place within its jurisdiction. Registration of birth is now close to 100% but that of death is still lagging behind and it should be ensured with the help of the ASHA workers and the Self Help Groups (SHG) that each and every birth and death are registered properly.

7.4 Development and Maintenance of Health Infrastructure

Construction of PHC and SC and maintenance of RH, BPHC, PHC and SC have been entrusted with the PS and the GP respectively. Maintenance grant is released every year under NRHM for that purpose, which is not always utilized on time. Available infrastructure of SCs is highly inadequate as mentioned before. So is the case for RHs, BPHCs and the PHCs. The PS may be proactive in improving the infrastructure to IPH standard. That apart, fund under MGNREGA may be utilized for taking up works related to drainage, sewerage, internal pathway, landscaping and afforestation etc for improving the physical environment of the hospitals. The PRI may also mobilize the community for cleanliness drive to make the hospital premises clean and patient friendly with arrangement for water, toilet, rest-shed etc for the patient party.

7.5 Improving the Proximate Factors of Health

Public health outcome of any area is substantially decided by several proximate factors of health like poverty, level of nutrition, proper shelter, access to safe water and sanitation facilities, proper solid & liquid waste management, drainage etc. Monitoring of the ICDS and MDM programmes, generating awareness on feeding practices as well as augmenting production of fish, meats, milk, fruits and vegetables by utilizing whatever land and other assets the poor have may lead to improving level of nutrition. The Panchayats can play a major role in improving all the other sectors, which are devolved on the Panchayats.

7.6 Curative Services at the GP HQ Sub-centre & RCH Camps

Travelling to the RH/BPHC or the PHC involves substantial time and expenditure. The poorer sections are tremendously benefitted if curative services may be brought to the doorstep. This is being attempted firstly by organizing health camps preferably weekly or at higher frequency but on fixed schedule so that people may consult the doctors involving little time and expenditure and in an environment psychologically more accepted by the people. These are generally organized in GP HQ Sub-centres, as extension of OPD services of the RH/BPHC or PHC as the case may be and attended by an allopathic doctor from the said health facility. These are organized as RCH camp for taking special care of the mother and the child but are useful for also treating other common illnesses. Maintaining the schedule, availability of medicines etc is very crucial for success of the scheme. Sending Mobile Medical Units (MMU) with diagnostic facilities, particularly in remote areas are also being planned under the NRHM. The second approach is to establish one AYUSH dispensary at the GP HQ Sub-centre where either one Homoeopathic or an Ayurved doctor is engaged on contract by the GP and runs the clinic five days a week and for at least four hours a day. There are around 1000 such dispensaries, most of which are financed by the Health & FW department from own budget or from NRHM and in some cases the expenditure is borne by the GP out of its own income. Proper involvement of the GP and monitoring of the services delivered can make a big difference in deciding the quality and level of satisfaction of the citizen in receiving curative healthcare services from the GP dispensaries.

7.7 Meeting Critical Need Related to Public Health, Particularly for the Poor

The marginalized section of the society who have lower level of literacy and lower quality of life suffers more from many of the preventable diseases and they fail to take advantage of available health services due to various factors such as inadequate knowledge of the services available, inefficiency in delivery of those services and lack of monitoring, lack of access to those services etc. The Panchayat may give special drive to monitor delivery of health related services in those habitations where such people generally live. Many of their needs may not be fulfilled by the available government services and there may be necessity of spending from own

fund of the Panchayat for providing essential healthcare to the poor people, particularly those who are destitute. Annual plan for Panchayat of each tier may earmark fund as a part of their Annual Plan. The Panchayat & RD Department has launched an initiative known as the Community Health Care Management Initiative (CHCMI) for augmenting capacities of the Panchayat bodies in discharging their responsibilities related to public health. Activities under the CHCMI should be given due importance by all the Panchayats and the progress should be monitored every month.

7.8 Functioning of Village Health & Sanitation Committees (VHSCs)

A VHSC has to be constituted at every Gram Sansad for managing petty activities related to public health, which may be taken care of at that level. An untied fund of Rs 10,000/ is earmarked under the NRHM for every VHSC. Such fund is released through the Panchayat & RD department and though the annual allocation is Rs 10,000/ actual flow of fund will depend on utilization submitted, otherwise the unspent amount is treated as available fund and in that case only the balance between Rs 10,000/ and the opening balance of the year is released. Fund is given to the Gram Unnayan Samiti (GUS) account or is kept at the GP if the GUS is not functional. It is important that entire allocation of Rs 10,000/ is utilized every year and spent for preventive, promotive or even curative care for the people of the Gram Sansad. Level of utilization at present is poor requiring improvement in expenditure as well as timely reporting.

7.9 Community Health Care Management Initiative (CHCMI)

CHCMI was taken up as an initiative by the Panchayat & RD department for building capacity of the Panchayats in playing their roles in improving public health. The activities include training and orientation of Panchayat functionaries on public health, sensitizing the SHGs for taking up work at the community level, mobilizing the community in participating in all public health programmes as well as to improve the proximate factors of health by its own resource and initiatives. The system of organizing convergence meeting on every fourth Saturday at the GP was started as a part of that initiative. The GPs are also given health chart to record important incidents and data related to morbidity and mortality (mother & child) and to compare progress over the years.

8. Rastriya Swasthya Bima Yojana (RSBY)

RSBY has been launched by the Ministry of Labour and Employment, Government of India and is a Central & State co-sponsored social assistance scheme to provide health insurance coverage for Below Poverty Line (BPL) families. The access to the scheme is ensured by providing Biometric RSBY Smart Card through which they can get health benefit in empanelled hospitals at pre-decided Package Rate. Beneficiaries are registered based on the BPL list provided by district authority [from RHS Data] and given RSBY Smart Card. The scheme provides for in-patient cover of Rs. 30,000/- per family (5 members) per annum in a cashless mode from any of the empanelled hospitals (may be private as well as public). The scheme is

implemented by the ESI (MB) directorate of the Labour Department. Normal Policy period is one year, which should be renewed after expiry. The premium is paid by the state and the central government and the same is shared at a rate close to around 25% for the state and rest by the GOI and the maximum premium per year is Rs 750/ only. The beneficiary is required to pay Rs. 30 only per family per year towards registration fees. As on September 2011, the scheme is yet to be rolled out in the districts of Dakshin 24 Parganas, Dakshin Dinajpur, Darjeeling and Kolkata.

9. Issues for Learning of the Trainee Officers

The focus of the assignment is to help the trainee officer to know about public health infrastructure in rural areas, related programmes, particularly those related to RCH and communicable diseases and how those are being accessed by the poorer sections of the community as well as to understand their roles as Executive Officers of the Panchayat Samitis in improving the rural health care system. The trainee officers should visit at least one SC and one RH/BPHC and if possible one PHC and submit a report as to how those institutions are functioning in terms of services being delivered, coverage of those services in reaching out to the remotest part of the area covered by the health institution and the level of satisfaction and grievances of the people. Some of the issues, which may be covered, are mentioned below.

9.1 Sub Centres & Village level activities and the Community Process:

Population coverage of the SC, achievement of ANC & PNC, identification of risk pregnancies and interventions made, tracking of mother and newborn for various services, involvement of the ASHA in visiting every household for disease surveillance and for keeping track of the expecting mother and the new born. Types of tests conducted in the SC for identifying risk pregnancies and if not difficulties for doing that may be ascertained. Arrangement for immunization, current achievement, outreach through VHND or other-wise, services delivered and participation of the villagers and convergence with the ICDS workers and the Panchayats and SHG members should be studied. Whether convergence meetings are being held between the ICDS workers and the ANM every third Saturday, decisions taken and follow up activities. Awareness related to home based new born care and steps taken for improving nutrition of under-weight infants by the ICDS worker and the ANM may be reviewed. Problems faced in reaching universal immunization, maintenance of cold chain, organization of Polio rounds and identifying pockets/habitations within the SC where coverage under immunization is the lowest. Trainee officers may track a few children with incomplete immunization and interact with the family members to know what prevented them from ensuring full immunization of the child. May also try to meet families where home delivery was conducted recently and what prevented them from visiting the hospital. Services provided by ASHA to those families may also be studied. Availability of Nischay kit (for detection of pregnancy) with them, providing assistance to the pregnant mothers in ANC & PNC check up and taking them to the health institution for delivery may be reviewed. It may also be ascertained from the mothers who have given birth to children recently whether they have received JSY money, amount received and

difficulties faced, if any. Their views on efficacy of the Referral Transport system (Nischay Yan/Matri Yan) may also be ascertained. Availability of drugs for child illness at the SC may be checked.

9.2 Functioning of GP level Dispensary & RCH Camps

Whether RCH camps are organized, knowledge about the camps and maintenance of schedule with prior information and availability of drug in the camp may be reviewed. If the GP where the SC is located has dispensary functioning of the same may be studied.

9.3 RH/BPHC/PHC level services

Average daily OPD Attendance, share of male, female and children who come to OPD. OPD hours and when the same actually start and generally ends. Average admission and bed occupancy ratio, seasonal variation of OPD & IPD attendance and reasons. Percentage of patients referred to higher facilities. Availability of drugs and average amount of drugs to be purchased due to lack of supply. Availability of diagnostic services. Whether delivery service is available round the clock and availability of transport for referral, extent of newborn with low birth weight, average age at first delivery in the facility may be analyzed. Availability of manpower against sanctioned posts and difficulties related to lack of manpower and shortage of tools and equipment may be enquired. Arrangement for providing diet and quality and level of satisfaction about the diet may be looked in to. It may be checked if there is ICTC, TB Unit, Anwesa clinic for adolescent health care in the RH/BPHC and in that case how those are functioning. Whether there is BSU, newborn care corner in the labour room, SNSU at the RH/BPHC and whether the facility provides emergency obstetric care. Visit to schools for adolescent health and surveillance for eye sight problem from the RH/BPHC and the outcome may be enquired.

9.3 Functioning of RKS, Block Health & FW Samiti

Frequency of meetings held, effectiveness, constraints faced and utilization of fund. Status of maintenance of accounts of the Block Samiti and the extent of involvement of the BDO and the Sabhapati for proper functioning of the Samiti.

9.4 Death Audit & Follow Up

Whether death audits are being conducted, who conduct the audit at the community level, lessons learnt and whether steps are taken to avoid similar deaths? How promptly deaths are reported and whether BDOs, SDOs and DMs are informed immediately (may be informed through SMS). Whether review meetings on death audit are held and what is the outcome?

9.5 Prevalence of Various Diseases & Prevention Measures

What are the common communicable diseases and incidence of those diseases? Prevalence of water borne diseases, sanitation coverage in the area at the household as well as in

public facilities like school, ICDS centre, market etc and arrangement for testing of water in the area may be looked in to. Activities related to surveillance of various diseases like malaria, TB, Leprosy, problem of eye sight etc may be reviewed. Availability of RDK and ORS in the Sub Centre and health facilities and its use may be checked. Number of TB patients under DOT and how many have discontinued treatment and why may be ascertained. Incidence of outbreak of such diseases in that area and preparation for preventing the same be reviewed.

9.6 Arrangement for Monitoring, Supervision and Convergence

The system of monitoring and supervision at the field level by the Health Supervisor, PHN, BPHN and the BMOH may be studied. What type of data is collected under the HMIS, the system of reporting and if the data is analyzed and used at the local level may be enquired. The Health Supervisor should sit in the GP office and will help the GP in coordination and supervision of all activities involving the community. It should be checked if the Supervisor is sitting in GP office and, if not, the difficulties. Arrangement for maintaining cold chain for vaccines and supervision arrangement may be checked.

9.7 Status of Infrastructure

Status of infrastructure of the RH/BPHC/PHC and SC. Whether the buildings are colour washed every year? Condition of toilet, kitchen and general cleanliness as well as overall environment, including drainage and sewerage within the hospital complex, may be observed. Availability of water, electricity and system of routine maintenance of hospital building and quarter may be reviewed. Status of maintenance of equipment and if services are being affected due to non-maintenance or non-availability of tools, equipment and other essential supplies.

9.8 Utilization of Fund Available from NRHM, Payment for JSY & to ASHA etc.

Availability and utilization of fund at the SC, PHC and RH/BPHC (untied fund, annual maintenance grant) and the Block Health & FW Samiti may be reviewed. In case fund is lying unutilized the reason for the same may be studied. Release of payment to ASHA workers and whether the same is based on tasks performed or at flat rate is to be looked in to. System of payment to mothers under JSY may be looked in to.

9.9 Involvement of the PRI and Issues Related to Convergence

Status of the 4th Saturday meeting, participation by officials of the Health & FW and the WCD & SW departments and the PRI may be reviewed. Activities related to CHCMI and activities of the GP/PS in improving public health should be studied. Quality of service related to birth and death registration should be looked in to. Extent of expenditure and purpose for which the same was spent out of own fund and untied fund of the GP and PS may be ascertained. Whether meetings of the Upa Samiti and Standing Committee of health at the GP & PS level respectively are being held, what were decided and interventions made may be studied.