

BIHAR: ROAD MAP FOR DEVELOPMENT OF HEALTH SECTOR

**A REPORT OF THE SPECIAL TASK
FORCE ON BIHAR**



**GOVERNMENT OF INDIA
NEW DELHI**

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Chairman

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

Executive Summary

Bihar, the third most populous State in India, with a population density of 880 persons per sq. km., has recorded the highest decadal growth during the nineties and around 40% of its population is below poverty line. The major health and demographic indicators of the State like infant mortality rate, maternal mortality ratio, total fertility rate, etc. are much higher than the all India level and reflect a poor health status in the State. Amongst the major States, the Human Development Index in Bihar has been the lowest for the last three decades.

The recent National Family Health Survey (NFHS-3, 2005-06) indicates some improvement in immunization coverage, contraceptive use, institutional deliveries and the proportion of women who have heard of AIDS. However, malnutrition among children and women has increased. The prevalence of certain vector borne diseases, communicable diseases, and water borne diseases is also high in the State.

There are substantial gaps in health sector infrastructure and essential health requirements in terms of manpower, equipment, drugs and consumables in primary health care institutions. There is a drastic decline in the share of public health facilities in treatment of non-hospitalized ailments in both rural and urban areas. Though review of National Rural Health Mission (NRHM) at the end of first year produced a dismal picture, the official figures at the end of second year reflect a better status.

Health is now being given due attention by the State. With the upgradation of health infrastructure, recruitment of doctors on contract, outsourcing of diagnostic facilities, availability of free medicines, provision of ambulance services, increasing outreach through mobile medical units and through a mechanism of web-based monitoring, better health outcomes are expected in the State.

In Bihar, there are substantial gaps in sub-centers, primary health centers, and a very large gap in community health centers along with shortage of manpower, drugs and equipments necessary for Primary Health Care and woefully inadequate training facilities. Other factors affecting the health status include: very high fertility rate; low level of institutional deliveries and a high level of maternal deaths; very low coverage of full immunization; low level of female literacy; and poor status of family planning programme.

State has launched a variety of programmes to reduce morbidity and mortality rates and these programmes are at various stages of implementation. These programmes broadly cover the following: Janani Evam Bal Suraksha Yojana under the overall umbrella of the National Rural Health Mission, Anaemia Control Programme, Blindness Control Programme, Vitamin – A Supplementation Programme, Routine Immunization, Programme for Elimination of Iodine Deficiency Disorders, Revised National Tuberculosis Control Programme (RNTCP), National Leprosy Eradication Programme, Kala-azar Eradication Programme, etc.

For Bihar, as for other priority States, NRHM has been an urgent need and most challenging task. However, this also provides an important opportunity to improve health outcomes through a variety of new approaches. Undoubtedly, this will be carried out in a phased and gradual manner. But the nature of initial programmes will set the tone and direction for effective implementation of NRHM's basic thrust.

Two of the key elements of NRHM viz. ASHA Programme and District Health Planning have been undertaken by the State in a rigorous manner. District Health Plans, for the first time, have assumed a new centrality and urgency in the current context of the NRHM. This will also encourage decentralization and community participation, convergence and improved accountability of health systems at the grassroot levels.

Specific activities have been undertaken to affect the basic indicators of health. These include improvements in infrastructure and delivery system of health care, provision of manpower, equipments and drugs, improved inter-sectoral coordination, monitoring and evaluation, and other innovative approaches. These initiatives would have far reaching implications towards better health of common people across the State.

By focusing on the outcomes and the associated key processes for the achievement of these outcomes, health status in Bihar is expected to improve at a faster pace. The strategies and policies would focus on key areas affecting the important indicators of health. By the end of Eleventh Plan, the State would strive to reduce: Infant Mortality rate from 61 per 1000 live births to 29; Maternal Mortality Ratio from 371 per 100,000 live births to 123; Total Fertility Rate from 4.2 to 3.0; and proportion of underweight children from 58.4% to 27.2%. Though the Child Sex Ratio (0-6 years) of 942 is better than the all India figure of 927, the State should reach the goal of 950 by the end of Eleventh Plan.

In order to achieve the desired outcomes and to bring about an improvement in the health sector, it is necessary that a right mix of public health approaches is adopted. This consists of: **Service Approach:** A blend of services delivered through (i) Static health facilities, (ii) Outreach

facilities, and (iii) *Telémedicine*; **Education approach:** Behavioural change communication strategy will be used for social mobilization for better health outcomes in Bihar; **Regulatory approach:** Not a viable option on a large scale. However, certain issues like strict enforcement of PC and PNMT Act will be taken care of.

For the first time in Bihar, attention has been given to the aspects of monitoring and evaluation of health programmes. This aspect will now be the integral component of all the health related activities. Annual District Health Surveys through the Registrar General of India will be carried out to complement the already existing mechanisms of monitoring and evaluation.

Recommendations

Health status in Bihar is expected to improve at a faster pace by focusing on the associated key processes for the achievement of specific outcomes. The future directions in strategies and policies should include the following measures:

- (i) Reduction of Infant Mortality Rate by such initiatives as: home based neonatal care including emergency life saving measures; improving breast feeding practices; integrated management of neonatal and childhood illnesses (IMNCI); and increasing immunization coverage.
- (ii) Reduction of Maternal Mortality Ratio by: operationalisation of Janani Evam Bal Suraksha Yojana; improved antenatal care; provision of skilled attendance at birth; enhancing facilities for emergency obstetric care; increased accessibility to emergency obstetric care (maximum two hours travel time); and PPP arrangements in case of non availability of facilities.
- (iii) Reduction of Total Fertility Rate by: behavioural change communication; increase in the age at marriage of girls; delay in first child birth; greater male participation; meeting the unmet needs for contraception; improved infrastructure; and organization of family planning camps.
- (iv) Reduction of Malnutrition by: better coordination with ICDS; proper organization of monthly health days at the Anganwadis; and Health and Nutrition Education.
- (v) Improvement in Child Sex Ratio by: strict enforcement of PC & PNMT Act; and greater emphasis on gender issues.

Concerted efforts are required for improved infrastructure, availability of trained human resources, provisioning of drugs and equipment, enhanced training facilities with an overall aim to provide accessible and acceptable quality health care services for the community. The State has

to have a right mix of public health approaches to achieve the desired outcomes. Service approach should be utilized for correcting the Sub-District and Block level regional imbalances, existing deficiencies in the health care infrastructure, making all static facilities operational and also for enhanced outreach activities to reach hitherto unreached segments of the population.

Mobile medical units providing OPD services, lab investigations and minor operations are needed to provide health services to rural populations of distant areas. Upgradation of district hospitals including blood-banking facilities, especially in areas lacking any sub-district hospitals/ community health centres, should be undertaken on priority.

Detailed plan is required to fill up existing vacancies either on regular or contractual appointment. Service approach should also be utilized for appropriate use of *Télémedicine* and information technology. Education approach should be used for behavioural change communication strategy to yield dividends in the long run. Regulatory approach should be used only for specific issues viz, strict enforcement of PC and PNDDT Act.

The opportunity provided by NRHM should be fully utilized. District Health Plans have assumed a new centrality and urgency as per the mandate of NRHM. Capacity building efforts have to be all inclusive to cover not only RCH but also other programmes for the delivery of comprehensive health care.

A systematic district specific approach is needed along with upgradation/expansion of the network of fully equipped training facilities. For improving the availability of trained para-medical staff, while on one hand the state government needs to strengthen and increase training facilities in the State run institutions, on the other hand it needs to encourage and attract private sector to play a greater role.

Systematic efforts should be undertaken to integrate AYUSH systems into the national health programmes, by enhancing their social & community outreach, increased role in public health, and revitalization of community based local health traditions, with the ultimate aim of enhancing the outreach of AYUSH health care in an accessible, acceptable, affordable and qualitative manner.

Action needs to be completed immediately for the preparation/improvement of the State Action Plan which identifies sectoral needs and priorities, specifically related to the monitorable targets suggested by the Planning Commission and the NRHM. Monitoring & Evaluation activities based on variables related to Planning Commission's targets set forth for 11th Five Year Plan and the NRHM need to be expedited for the State.

To share the administrative responsibility and workload at the district level, managers and accountants need to be inducted to provide much needed resource management. A grievance and complaint cell along with a website would increase interaction with the community and improve governance.

An effective convergence between the departments dealing with health, ICDS, education, drinking water and sanitation is required as the indicators of health depend as much on other sectors as they do on hospitals and functional health systems.

Considering vast amount of financial resources going to the health sector, there is a need to provide effective accounting standards and social audit system at key operating level, particularly in the vast rural areas. Monitoring of benefits should be the key in the accrued social audit function.

Preamble

Good health is an integral component of human wellbeing. It is a fundamental human capacity that enables every individual to achieve her/his potential to actively participate in social, economic and political processes. In particular, a growing body of evidence highlights the importance of the early years in the development of individual potential. Therefore, optimum care, nutrition and protection of children from infection, at birth and during their first three years of life, not only ensure survival but importantly form the foundations for lifelong development. Overall, improving the health of its large population, especially among the most economically and socially vulnerable sections of the society, is central to the achievement of human development of any nation. The entire approach of socio-economic development is human based. Thus, the importance of health sector is vital as reflected in this Report.

GENERAL HEALTH CONDITIONS IN BIHAR

1. Bihar, with a population of 83 millions, is the third most populous State in India. The population density in the State is 880 persons per sq. km., which is more than double the national average of 324 persons per sq. km. The State has recorded the highest decadal growth during the nineties. While all-India decadal growth rate of population was 21.34%, the population of Bihar rose by 28.45% between 1991 and 2001. Around 40% of the population is below poverty line. The major health and demographic indicators of the State like infant mortality rate (IMR), maternal mortality ratio (MMR), total fertility rate (TFR), etc. are much higher than the all-India level and reflect a poor health status in the State. The Human Development Index (HDI), a composite of literacy, life expectancy and per capita income, has increased for Bihar like the rest of India. But the State still lags at 0.367 compared to the Indian average of 0.472. Amongst the major States, the HDI of Bihar has been the lowest for the last three decades. In view of the large population size, high poverty ratio, and high decadal growth indices in the State, Bihar is one of the States covered by the National Rural Health Mission.

2. Based on the indicators primarily related to primary health care infrastructure and reproductive and child health care, the State ranks 35th in the country (DLHS 2002-04). On a similar basis, the districts in Bihar have also been ranked (**Annexure-I**). Amongst the districts which are lagging behind in the State are-Seohar, Samastipur, Kishangaj, Jahanabad, Nalanda, Khagaria, Araria, Sitamarhi, and Pashchim Champaran.

3. The MMR in Bihar is 371 per 100,000 live births, which is fourth highest in the country. The high level of MMR can be attributed to low level of institutional / supervised deliveries, high level of anaemia among women, and low level of full ante-natal coverage etc.

4. Though the infant and child mortality rates in Bihar are nearer the national figures, yet the State is amongst the States with high mortality rates. The Infant Mortality Rate (IMR) in the State is 61 per 1000 live births, which is close to the national average of 58.0. The Total Fertility Rate in the State is second highest in the country (4.2 compared to the national average of 3.0). However, the mean age of marriage in Bihar is relatively high at 18.9 years. Figures for Birth Rate and Death Rate in the State are still higher than the national average with Birth Rate being 30.4 and Death Rate as 8.1 per thousand population.

5. The coverage under routine immunization and pulse polio is also very low as compared to the national figure. As per 2001 census, full immunization in the State was only 11% against the

national average of 54%. As a result, a large number of cases of vaccine preventable diseases are still reported in the State. Under-nutrition among children and women is also much higher than the national level with 54.4% children being underweight and 81% anaemic. The percentage of women with chronic energy deficiency (39.3%) is also higher than the national figure of 35.8%.

6. However, the recent National Family Health Survey (NFHS-3, 2005-06) indicates some improvement since NFHS-2(1998-99). It has shown increase in: immunization coverage from 12% to 33%; contraceptive use from 24% to 34%; institutional deliveries from 15% to 22%; and the proportion of women who have heard of AIDS from 11% to 35%. But the figures are still far off from the national averages. Malnutrition continues to be very high. In fact, malnutrition among children has increased from 54% to 58%. Number of children showing wasting (weight for age) has gone up by 8%. Anaemia has gone up from 81% to 88% amongst children of 6-35 months and from 46% to 60% amongst pregnant women.

7. The State has the largest number of Kala-azar cases. The prevalence of other vector borne diseases like malaria, filariasis and communicable diseases like tuberculosis is quite high. The occurrence of water borne diseases is also high. In 2006-07, the second highest number of polio cases in the country is from Bihar.

8. Available data on rural primary health care infrastructure indicate that, in Bihar, there are substantial gaps in sub-centres, primary health centres and, community health centres, and also in essential requirements in terms of manpower, equipment, drugs and consumables in primary health care institutions. The State has a shortage of 1210 sub-centres, 13 primary health centres, and 389 community health centres. As per the 11th Plan approach paper of Government of Bihar, there is only one sub-centre for 10,000 population. However, according to the national norms there should be at least one sub- centre for 5000 population. Moreover, Bihar has one Primary Health Centre for one lakh population where ideally there should be one PHC for every 30,000 population.

9. Shortage of human resources in the health sector is another major problem with 5648 female health workers and 9786 male health workers being deficient. There is also a lack of specialists at the Community Health Centres.

10. NSSO-60th Round (2004) reflected a drastic decline in the share of public health facilities in treatment of non-hospitalized ailments in both rural and urban areas. In rural areas, the share declined from 13% (1995-96) to 5% (2004). In urban areas, it declined from 33% to 11% during the corresponding period. The survey also showed that the number of hospitalized cases treated (per 1000) in public hospitals in rural areas is only 144 as compared to all-India average of 417. In urban areas, the figure is 215 as compared to all-India average of 382.

11. At the end of one year of implementation of the NRHM, based on a survey conducted in 17 districts of the State, the Centre for Health and Social Justice reported that half the Anganwadis Workers (AWW) had not heard about the NRHM. Most of the Auxiliary Nurse Midwives (ANMs) and AWWs felt that ASHA was meant to assist them in immunization and listing of pregnant women. A few districts did not even receive the money to disburse as untied fund and District Action Plans had not been prepared. Neither the women got any money under the Janani Evam Bal Suraksha Yojana, nor did the ones who were sterilized know about the family planning insurance schemes. However, now the official figures at the end of second year of NRHM reflect a better picture.

12. The State has 11 Ayurvedic, 5 Unani and, 11 Homoeopathic hospitals. It also has 311 Ayurvedic, 143 Unani and, 179 homoeopathic dispensaries (Department. of AYUSH, Ministry of Health & Family Welfare). By placing AYUSH practitioners in the PHCs along side the MBBS doctors, it will be possible to mainstream this system into the general health care system and also enable the patients to avail the care in the system or their choice. Training and reorientation of AYUSH practitioners in Family Welfare and National disease Control Programmes will help in improving the coverage under these programmes.

13. Health is now being given due attention by the State. Details of few of the important activities undertaken and achievements of the State and selected health and demographic indicators have been provided in **Annexure II** and **III** respectively. With the efforts towards upgradation of health infrastructure, recruitment of doctors on contract, outsourcing of diagnostic facilities, availability of free medicines, provision of ambulance services, increasing outreach through mobile medical units and through a mechanism of web-based monitoring, better health outcomes are expected in the State.

ISSUES IN THE HEALTH SECTOR

14. The important Issues concerning Health in Bihar are:

- (i) Substantial gaps in sub-centres, primary health centres, and a very large gap in community health centres.
- (ii) Substantial gaps in essential requirements in terms of manpower, equipment, drugs and consumables in the primary health care institutions.
- (iii) Skewed sex ratio (919).
- (iv) Very low Couple protection rate (34%).
- (v) Very high fertility rate (4.2).
- (vi) Very high percentage of girls marrying below 18 years of age (51.5%).
- (vii) Very low coverage of Full Immunization (33%).
- (viii) Very low Awareness of HIV/AIDS (25.6%).
- (ix) Low level of institutional delivery (23.2%) and high level of maternal deaths (3.71 per 1000).
- (x) High level of malnutrition among children of age 0-6 years (55.9% children are moderately and 24.5% are severely malnourished).
- (xi) Very high levels of anaemia among children (81%), adolescent girls (40.9%) and pregnant women (63.4%).
- (xii) Very low coverage for Vitamin A (10%) and salt Iodisation 25.2% (15 ppm & above).

Substantial Gaps in Primary Health Care Infrastructure:

15. In Bihar, there are substantial gaps in sub-centers, primary health centers, and a very large gap in community health centers. The State has a shortage of 1210 health sub-centers, 13 Primary Health Centers (PHCs), and 389 Community Health Centers. Besides, out of the 38 districts, only 24 districts hospitals are currently functional.

Shortage of Manpower, Drugs and Equipments Necessary for Primary Health Care

16. There are also substantial gaps in essential requirements in terms of manpower, equipment, drugs and consumables in the primary health care institutions. Moreover, there are no specialists at the Community Health Centers. There is a shortage of 3376 Medical officers and 19945

Auxiliary Nurse Midwife (ANM). Percentage of PHCs adequately equipped with equipments stands at only 6.2% compared to the national figure of 41.3%. There is inadequate and erratic availability of essential Drug supplies, ORS packets, weighing scales, etc. There is a big shortage of gynecologists and obstetricians to provide maternal health services in peripheral areas of the State.

Lack of Training Facilities

17. The status of training facilities in the State (both in terms of infrastructure and human resources) remains far from satisfactory at all levels. At the State level, there is only one Training Institute {the State Institute of Health and Family Welfare (SIHFW)} that imparts training to health personnel. The SIHFW is facing a severe shortage of faculty and related facilities. At the regional level too there is an acute shortage of good Training Centers.

Very High Fertility Rate

18. The Total Fertility Rate in the State is second highest in the country (4.2 compared to the national figure of 3.0). The Birth Rate is also second highest in the State (30.4 compared to the national figure of 23.8). Besides, birth order 3 + is 54.4% compared to the national figure of 42%. Roughly 51.5% of the girls get married below the age of 18 years as compared to the national figure of 28%. The couples practicing any method of contraception are only 34% against the national figure of 53.9%.

Low Institutional Deliveries and High Level of Maternal Death

19. The Maternal Mortality Ratio in Bihar (371 per 100,000 live births) is the 4th highest in the country. The high level of MMR can be attributed to low level of institutional deliveries (23.2% compared to national figure 41%), high level of anaemia among women (63.4% compared to national figure of 51.8%), low provision of iron and folic acid tablets to ante-natal cases (8.1% compared to national figure of 20.4%), and low level of full ante-natal coverage (5.4% compared to national figure of 16.4%).

Under-Nourishment among Children and Women

20. Bihar is a State with lowest per capita income and with very high level of poverty. Diet surveys carried out by the Department of Women & Child Development indicate that the State ranks very low in terms of dietary intake (not more than 2000 calories). Under-nutrition rate is very high in the State, because of low dietary intake, high morbidity and also closely spaced pregnancies. Roughly 39.3% of women are undernourished (BMI of less than 18.5 kg/m²). The

State has very low overweight and obesity rates in women. The percentage of women with chronic energy deficiency is also higher (39.3%) compared to the national figure of 35.8%.

21. In the State, 54.4% of children under the age of three years, as assessed by weight-for-age, are under weight in comparison to the national figure of 47%. About 53.7% of the children are stunted, as assessed by height-for-age in comparison to the national figure of 45.5%. Number of infants receiving semi-solid foods at the age of six months is much lower than the national level and as a result, under nutrition rate in children is much higher than the national level. About 54.4% children are under weight and 81% are anemic.

Very Low Coverage of Full Immunization

22. The coverage under routine immunization and Pulse polio is low. As per 2001 census, full immunization in the State was only 11% against the national average of 54%. As a result, a large number of polio cases are still reported in the State. Coverage of Vitamin-A dose (10%) is also very low in the State. Due to improvement in the immunization services in the State, the coverage of immunization is at present 33% (NFHS 3).

Low Level of Female Literacy

23. Low female literacy rate in the State, particularly in rural areas, is one of the major reasons for poor health conditions in the State. According to 2001 census, female literacy rate in the State is 33.57% against the national average of 54.28%. Due to illiteracy, there is a lack of awareness among women about ante natal, intra natal and post natal care, especially in rural areas.

Poor Status of Family Planning Programmes

24. Key indicators related to Maternal and Child Health (MCH) and Family Planning clearly show the poor health status in Bihar. Roughly 51.5% of the girls in the State get married below the age of 18 years compared to the national figure of 28%. The proportion of couples practicing any method of contraception is 34% against the national figure of 53.9%. Some of the reasons affecting the implementation of the Family Planning programme in the State are: lack of health facilities, both in terms of physical infrastructure and skilled human resources to deliver quality family planning services, evidently low exposure to mass media in Bihar, leading to lower exposure of family planning messages in the community, particularly among rural and socio-economically disadvantaged groups. There is a failure of the programme to effectively undertake measures to increase median age at marriage and first childbirth, etc.

CENTRAL AND STATE GOVERNMENT'S PLANS AND PROGRAMMES

Janani Evam Bal Suraksha Yojana:

25. Janani Evam Bal Suraksha Yojana under the overall umbrella of the National Rural Health Mission integrates the benefit of cash assistance with institutional care during delivery, coupled with antenatal care and immediate post-partum care. This is to reduce maternal as well as infant mortality. Under this scheme, pregnant women from BPL (below poverty line) families will receive Rs. 1400 in rural areas and Rs. 1000 in urban areas for registering with a clinic and giving birth either in a government or private hospital. The scheme has been implemented in the State since 1st July, 2006 and so far 3.5 lakh registrations and 89839 deliveries have taken place. To include the private nursing homes in this scheme, so far 53 private nursing homes have been accredited. This can be considered a good progress in the programme.

Reproductive and Child Healthcare (RCH) Services

26. These services basically include three major packages. First is package for mothers, which includes early registration, antenatal care, institutional deliveries and deliveries by skilled Birth Attendants, home based post natal care and increased facilities for MTP. Second is package for new born which includes skilled care at birth, integrated management of Neonatal and Childhood Illness (IMNCI) for common childhood illness and immunization. Other services include increased choice and availability of family planning services, gender sensitization and gender equality, and prevention and management of RTIs & STIs etc.

Anaemia Control Programme

27. Decrease in the hemoglobin level which affects the oxygen carrying capacity of blood is known as Anaemia. Under this programme, Pregnant and Lactating mothers are given IFA (Iron and Folic acid) tablets to prevent anaemia during pregnancy. Therefore, IFA tablets are distributed to all the pregnant and lactating mothers through Anganwadi Centers.

Vitamin – A Supplementation Programme

28. Government of Bihar and State Health Society have been successfully implementing Vitamin 'A' supplementation Programme for pre-school children. It has, therefore, been decided to

undertake the respective programmes for the children of the age group 9 months to 5 years in all the 38 Districts of the State, following the biannual fixed day strategy linked with Routine Immunization. Children of 9 months to 5 years of age would be covered with six monthly doses of Vitamin A syrup. The State has been conducting catch-up rounds of Vitamin-'A' and has got exceptional success in it as its coverage soared to 95%. As a long term strategy, diet management has been included in all training and communication materials.

Routine Immunization & Pulse Polio

29. The year 2006 was declared Routine Immunization year by the State Government. The efforts of last year (2006) have yielded results, as the dismal figure of 11% complete immunization has improved to 34% and the projected figure by the end of this year (2007) is 60-70%. Polio rounds are also being taken up regularly. The target of the State Government is that by year 2010, all the districts in Bihar would provide timely and safe immunization with all antigens (plus 2 dosages of Vitamin 'A') to all children between 12-23 months (100% coverage) and all pregnant women with 2 doses of TT (100% coverage). Under Intensive Pulse Polio Immunization, microplans including area maps are available and special emphasis has been given on information, education and communication (IEC) and social mobilization.

National Rural Health Mission

30. Bihar is one of the focused States. It has as its key components provision of a female health activist in each village (in case of focus State); a village health plan prepared through a local team headed by the Health & Sanitation Committee of the Panchayat; strengthening of the rural hospital for effective curative care made measurable and accountable to the community through Indian Public Health Standards (IPHS); integration of vertical health & family welfare programmes for optimal utilization of funds and infrastructure and strengthening delivery of primary healthcare. It seeks to revitalize local health traditions and mainstream AYUSH into the public health system. It aims at effective integration of health concerns with determinants of health like sanitation & hygiene, nutrition and safe drinking water through a District Plan for health.

31. The State has set up the institutional arrangements for implementing the activities under the NRHM. If NRHM is implemented effectively, it is expected that State may have indicators like other better performing States.

Programme for Elimination of Iodine Deficiency Disorders

32. Iodine deficiency continues to be a public health problem in Bihar. The Median urinary

iodine is 85.6ug/L, which is indicative of iodine deficiency in the population. A high proportion of the population (31.5%) has very low urinary iodine excretion- suggesting existence of severe iodine deficiency in many pockets. Only 40.1% of the households consume adequately iodized salt. This is a drastic reduction in household coverage, compared to the findings of NFHS-2 done in 1998-99. IDD elimination programme was initiated in the State in the late 1960s in few districts. It was realized later that iodine deficiency constituted a public health problem in all the districts of the State. By 1988, legislative measures were put in place to ban the sale of non-iodized salt in the entire state.

National Vector Borne Diseases Control Programme (Kala-azar)

33. Insecticidal residual Spray of DDT is being done in all 31 Kala-azar endemic districts. Drugs for Kala-azar treatment, like SAG (Sodium Antimony Gluconate), are available at primary health centres and Amphotericin-B available in District hospitals and medical colleges. There is a provision of free diet for Kala-azar patient and one attendant. Currently, selection of beneficiaries is in progress. To meet the gap in demand and supply, rate contract for Amphotericin-B has been done.

34. All Districts & Medical Colleges have been authorized to purchase Amphotericin-B up to Rs. 50,000 & Rs. 1 lakh, respectively, so that treatment of Kala-azar patient is not interrupted in case of shortage of drugs. For quick & effective diagnosis, rk-39, rapid diagnostic kits are being introduced in Bihar. Miltefosine & Ambisone which are new drugs in this field are being introduced in the State.

National Vector Borne Diseases Control Programme (Malaria and Filariasis)

35. Currently, a three pronged strategy is being implemented through Primary Health Care for prevention and control. This includes disease management, Integrated Vector Control, and supportive interventions like behaviour change communication.

Revised National Tuberculosis Control Programme (RNTCP)

36. RNTCP started in 1993 in India but real expansion started in early 1999 with a well-planned strategy where shortcomings of the previous program were especially taken care of. Results are very encouraging. In Bihar, this programme has been launched in all the 38 districts. Adequate personnel have been recruited, procurement process has been streamlined, and the new sputum positive case detection rate has increased from 25% to 41%. In the year 2006-07, 11,157 patients were put on treatment for TB.

National Leprosy Eradication Programme

37. A 100% centrally sponsored National Leprosy Control Programme (NLCP) had been in operation since 1954-55. With the introduction of highly effective MDT for cure of leprosy, the programme was redesigned as National Leprosy Eradication Programme (NLEP) in 1983. The current Prevalence Rate (PR) of Leprosy of Bihar is 1.6 per 10,000 populations at the end of November 2005. Registered Case on record at the beginning of November 2005 are 16196. In the beginning of 2006-07, there were 12166 cases of leprosy on record. During the year, 21350 new cases were detected and 23358 cases were released from treatment leaving only 10158 cases of Leprosy on record, under treatment. By the end of March 2007, Prevalence Rate has come down to 1.06, which is very close to its elimination point. Presently, there are 16 districts where PR is less than 1 and 22 districts where PR is in the range of 1 to 2.

38. Under this programme in the State, MDT drugs are available at all district hospitals, Sub divisional hospitals, Medical College Hospitals, Referral Hospitals, PHCs, Central Govt. Establishment like Railways, Army, Referral Hospitals and ESI Hospitals. 90% of Medical Officers have started diagnosing cases at PHC and Addl. PHC. NLEP and contract staffs have already been deputed to District hospitals/Sub-Divisional hospitals/Referral Hospitals/Medical College Hospitals/PHC/APHC as per availability.

National AIDS Control Programme

39. Bihar is among low prevalence States based on HIV prevalence data. District is the basic unit of implementation in Phase III of the programme, which is being implemented through Bihar State AIDS Control Society.

Integrated Disease Surveillance Programme (IDSP)

40. IDSP has been started in the State with the objective to detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. It is also expected to provide essential data to monitor progress of ongoing disease control programmes and help allocate health resources more optimally.

Blindness Control Programme

41. National Programme for Control of Blindness (NPCB) was launched in the year 1976 as a 100% Centrally sponsored Scheme with the goal of reducing the prevalence of blindness in the State. The goal set for the terminal year of the 10th Plan is to reduce the prevalence of blindness to 0.8% by 2007.

NATIONAL RURAL HEALTH MISSION

A. The Concept

42. The National Rural Health Mission (NRHM) concept was announced in September 2004 as a part of the Common Minimum Programme of the Government of India with a goal “to promote equity, efficiency, quality and accountability of public health services through community driven approaches, decentralization and improving local governance.” The Mission is an articulation of the commitment of the Government to raise public spending on Health from 0.9% of GDP to 2-3% of GDP. It aims to undertake architectural correction of the Health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Programme and promote policies that strengthen public health management and service delivery in the country. The duration of the Mission is seven years (2005-2012) and it focuses on 18 States¹, where the challenge of strengthening the public health system and improving key health indicators is the greatest.

43. Taking an ‘omnibus approach’ by integrating existing vertical health programmes², the NRHM seeks to provide accessible, affordable, accountable, effective and reliable primary health care facilities, especially, to the poor and vulnerable sections of the population. It also aims at bridging the gap in Rural Health care services through creation of a cadre of Accredited Social Health Activists (ASHA) and improved hospital care, decentralization of programme to district level to improve intra and inter-sectoral convergence and effective utilization of resources. The NRHM further aims to provide overarching umbrella to the existing programmes of Health and Family Welfare including RCH-II, Malaria, Blindness, Iodine deficiency, Filariasis, Kala-Azar, T.B., Leprosy and Integrated Disease Surveillance. Further, it addresses the issue of health in the context of sector-wide approach addressing sanitation and hygiene, nutrition and safe drinking water as basic determinants of good health in order to have greater convergence among the related social sector Departments i.e. AYUSH, Women & Child Development, Sanitation, Elementary Education, Panchayati Raj and Rural Development.

¹ These include: Uttar Pradesh, Uttranchal, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Orissa, Rajasthan, Himachal Pradesh, Jammu & Kashmir, Assam, Arunachal Pradesh, Manipur, Nagaland, Meghalaya, Mizoram, Sikkim and Tripura

² The vertical health programmes converged under the NRHM includes the Reproductive and Child Health II project (RCH II), the National Disease Control Programmes (NDCP) and the Integrated Disease Surveillance Project (IDSP).

44. The Mission further seeks to build greater ownership of the programme among the community through involvement of Panchayati Raj Institutions, NGOs and other stake holders at National, State, District and Sub-District levels to achieve the goals of National Population Policy 2000 and National Health Policy.

45. The cornerstone of the NRHM is the Accredited Social Health Activist (ASHA) Programme, which involves placing a community based change agent at a 1000 population level, to catalyse a sustainable community-owned process for behavioural change and to facilitate access to basic health services by the poor. The primary role of the ASHA is to create awareness on health and its social determinants and mobilize the community towards local health planning and increase utilization and accountability of the existing health services. She would be a promoter of desired health practices and will also provide a minimum package of curative care as appropriate and feasible for that level and make timely referrals.

46. The ASHA programme builds on an extensive history of civil society and State efforts to involve communities in changing their health status by influencing the determinants of health at the household and community level as well as ensuring that health services are contextually relevant, timely, need based and accountable. In all of these experiences, wherever Community Health Workers have been appropriately identified, trained and supported, health and nutrition indicators have dramatically improved.

47. In fact, experience suggests that the introduction of a community-based change agent on a large scale, such as the ASHA, should be conceptualized at the heart of two interrelated processes:

- (i) Strengthening of primary healthcare systems and services; and
- (ii) Sustainable community-owned and driven behavioural changes.

48. Creating a space for such an activist – within the community, within the programme, and within the public health system – requires flexibility to both the community's and individual's needs, as well as commitment to providing continuous inputs and supportive structures. Most importantly, the health activist should occupy a unique position, one that is based in the community and yet has access to knowledge and resources from the larger programme. These are two processes considered critical for both the success of the ASHA programme as well as for ensuring the effectiveness of the health system.

B. The Accredited Social Health Activist (ASHA) Programme

49. The accredited Social Health Activist (ASHA) Programme is one of the cornerstones of the NRHM and aims to select, train and support a community-based change agent for at least every

cluster of 1000 people in rural areas. This Community Health Volunteer is expected to be a locally selected woman who will catalyse a community-based process of behavioural change and facilitate better access to basic health services by poor households. She will disseminate knowledge and create awareness about health issues and their social determinants, engage closely with pregnant women, mothers, and other household members, to negotiate and adopt appropriate care practices, and mobilize her community to participate in local health planning and increase the utilization and accountability of existing health services. In addition to her primary role as a promoter of desired health practices, she could also provide a minimum package of curative care as appropriate and feasible for her profile and make timely referrals.

50. In recent times, Community Health Workers (CHWs) have received renewed attention, both nationally and internationally, as research has established and emphasized the effectiveness of community strategies and household-level practices in promoting child survival and development. For instance, three largely preventable and treatable causes – diarrhoea, pneumonia and a limited set of neonatal conditions – account for 82 per cent of all child deaths and that malnutrition is an underlying cause in around 52% of all cases. A number of household practices, such as improved nutrition and care during pregnancy, providing warmth and hygienic care to newborns, breastfeeding and complementary feeding, the use of Oral Rehydration Salts (ORS), hygiene practices during food preparation, and the use of insecticide treated bed nets for pregnant women and young children can have a significant impact on child mortality and malnutrition. As individual interventions, breastfeeding and ORS are especially effective: taken alone they are each capable of averting 16 per cent and 14 per cent, respectively, of all child deaths in India.

51. Most strikingly, analysis presented in The *Lancet* Child Survival Series estimates that actions taken at the household and family level alone can prevent over 30 per cent of child deaths and a similar proportion (up to 37 per cent) of neonatal deaths. Aware and vigilant families are also more likely to ensure that their children get prompt and appropriate facility – based clinical care, further contributing to declines in mortality. This is, therefore, clearly a priority area in high mortality resource-poor settings and requires investment in creative, contextual and decentralized strategies to work with families and communities. In this context, CHWs, such as those who are currently joining the ASHA Programme, have a vital role to play. From a review of a range of past experiences, it has been observed that wherever Community Health Workers have been appropriately identified, trained and supported, health and nutrition indicators have dramatically improved.

52. In addition to drawing strength from the latest scientific research, the ASHA Programme also builds on a rich history of civil society innovation in community health in India, and in many other developing countries. This is an attempt to translate earlier experiences and insights, a

majority of which have emerged from smaller field-level initiatives, into large-scale processes of community participation in an ownership of health knowledge and services. Here, the critical challenge is to conceptualize and implement state-wide CHW programmes in regions with very weak health systems. Creating a space for such an activist - within the community, within the programme, and within the public health system - requires flexibility to both the community's and individual's needs, as well as commitment to providing continuous inputs and supportive structures. Most importantly, the health activist should occupy a unique position, one that is based in the community and yet has access to knowledge and resources from the larger programme. At this stage in particular, when States such as Bihar have already selected thousands of ASHAs across the districts, the quality of ASHA training and ongoing support must assume priority. This is also an area that lends itself to innovation and can benefit greatly from civil society expertise adapted to the challenges of large-scale programme management.

C. ASHA (Community Health Workers Training)

53. Training is an important element of the ASHA programme since it goes a long way in determining its effectiveness. Training equips motivated but untrained ASHAs to undertake their wide and complex responsibilities for preventive, promotional and curative health, as well as their role in educating and planning with the community. A large body of work exists and has been undertaken, where Community Health Worker (CHW) training has been conceptualized as a form of education for participation, empowerment and action for change.

54. Informed by this experience, the following have emerged as important aspects of training.

- (i) **Training Curriculum:** This defines the abilities, knowledge and perspectives that the ASHA needs to have, as well as training methodology, which refers to the ways in which this knowledge will be acquired. Given the ASHA's role, it is important to plan and create training modules that address health, nutrition and social issues comprehensively. In the context of Bihar, where literacy levels, especially among rural women living in poverty are significantly low, majority of the ASHAs would be from non-literate and semi-literate backgrounds. In this situation, recognizing the unique needs of this population, and addressing them in the conceptualization and implementation of training programmes, by innovating on content and methodology, is imperative for the training to be meaningful and for the ASHA programme to be effective. It is, therefore, important that the training methodology takes into account the existing learning levels and integrates significant scope for field-based training, to provide the ASHA with more confidence in her knowledge, through an ability to assess issues in reality rather than in a training centre, and act on them accordingly. Training techniques need to be innovative and be based on principles of adult learning, avoiding didactic presentations and information overload, and learning

by drawing from life experiences instead. These could include elaborate explanation of the training modules using interactive techniques such as pictorial materials, story telling, skits, role plays, folk media such as Kalajathas, mass media such as local radio programmes to impart in-depth understanding about social issues, and technical health knowledge to the ASHAs.

- (ii) **Training Strategy:** Given the large number of ASHAs (approximately 50,000 or more) that every State is expected to have, it is important to plan how the training of such large numbers is to be organized, not just once, but continuously over a number of years. This implies detailing out the block, district and state level training structures and strategies. Additionally, it includes determining whether the training will be modular or one time, camp or field-based, its duration as well as the site of training. Specifying the profile of trainers and their support systems would be important for ensuring the continuity of training. Other important aspects include costs, monitoring and use of training materials.

Experience suggests that for effectiveness, trainings should be conducted in different rounds, gradually introducing new knowledge and constantly reinforcing learnings. Such phased training ensures time for reflection on basic concepts and does not load the individual with too much information at the same time. Importantly, the training should positively impact attitudes, build knowledge, skills and confidence. Thus, the training process should be conceptualized as part of a process of empowerment. A training strategy should aim to adapt itself to and emerge from the social and cultural context of different regions within the State.

55. In large scale programmes, where hierarchical 'training pyramids' (in the form of a cascade approach) have been created to train ASHAs, it is important to address the issue of 'transmission losses' and hold strong training sessions at the 'senior' levels. Developing modules in the form of books has also been found to be useful for quality and standardized training in scaled programmes. At the same time there needs to be sufficient flexibility for district and block level trainers to innovate and include within their training sessions local health issues and practices and address them within the frames of regional variations of ethnicity, tribe, religion and caste that would arise in the context of Bihar.

There is, therefore, an important need to develop a contextualized training curriculum and strategy which is rooted in the socio-cultural milieu of any State.

The Focus

56. The National Rural Health Mission (NRHM)³ has provided States with a comprehensive framework for policy reform, programmatic innovation, and health systems strengthening over the next few years. For Bihar, as for other priority States, investment and action in this area is an urgent need and challenge, but also presents an important opportunity to improve health outcomes through a variety of new approaches. Undoubtedly, this will be a phased and gradual process, but the nature of initial programmes will set the tone for way in which the Mission is translated. Thus, the recommendations of the two critical aspects, **the ASHA Programme and District Health Planning**, should be considered as early priorities for immediate attention.

57. First, ensuring effective, contextual and ongoing training of the thousands of ASHAs currently selected across Bihar will empower these local women to disseminate essential health knowledge among their communities and support household and community level changes in health behaviours and practices. This has the potential to significantly reduce child mortality and malnutrition among the rural poor. Second, building the capacities of district health resource persons through innovative initiatives such as the Public Health Resource Network (PHRN) will enable meaningful decentralized planning and generate contextual solutions designed to address diverse district-specific needs and utilize the varied resources available within different districts. Crucially, both initiatives seek to mobilize and activate already existing resources from within communities and health systems individuals and networks that have the most potential and stake in improving health services and outcomes. Of course, further investments in infrastructure, personnel and structural change will be vital, but both these programmes will create a larger mobilizational context within which new investments and initiatives are likely to be much more responsive, contextual and publicly accountable. These efforts require strong support in conceptualization and implementation and fresh approaches, but they will provide the impetus and idiom necessary for much more community-based, participatory and effective health system reform and strengthening.

³ National Rural Health Mission (2005-2012), the Ministry of Health and Family Welfare, Govt. of India.

DISTRICT HEALTH PLANNING

58. District Health Plans have assumed a new centrality and urgency in the current context of the National Rural Health Mission. The rationale for having District Health Plans comes from the concept of addressing local needs and local specificities of health and nutrition in a district. Districts vary widely in their specific population needs and even more in innovations for intervention. Thus, in one district, there may be a problem of drug resistance in malaria control programme, whereas in another district the need may be to integrate control of malaria with filarial control. In one district there may be an active private sector available even in smaller towns for proposing partnerships, whereas in another there may not be. Strategies, therefore, have to be district specific, not only because health needs vary, but because perceptions of people and capacities to conduct programmes also vary. In a centrally designed and driven plan, there is little room for such adaptation and contextualization. Hence, district planning becomes critical.

59. Other reasons for focusing on District Health Planning are:

- A. Enabling decentralization and community participation:** Community participation needs to be seen as an important aspect for decision making in public health spheres. District Planning and even other more local levels of planning, such as village level planning and block level planning give the scope to do so.
- B. Convergence:** One major area which requires reform and a critical thrust is the coordination between various departments contributing to health. Currently, they operate as distinct vertical programmes, delinked from each other, leading to wastage of resources, duplication and various inefficient and suboptimal outcomes. There is therefore, a need to have effective coordination between all health related sectors like water and sanitation, nutrition and food security, education, environment etc. to ensure health outcomes. There is also a need for coordination between different disease control programmes and Reproductive and Child Health programmes and for close integration between the management of different facilities such as CHCs, PHCs and district hospitals. Planning at the district level makes use of the resources made available from numerous “vertical” programmes into a single “horizontally integrated” district plan.
- C. Improving Accountability of Health Systems:** By clearly stating what the problems and goals of the health sector are at the local level, the district plan brings the whole process of health sector functioning into public scrutiny.

60. Most importantly, it is at the district level that large number of individuals, both within government agencies and NGOs, are currently working close to the ground and where individual initiative in planning, administration, supervision and service delivery can make significant impact even in a larger context of institutional constraint. It is also precisely at this level that a lack of technical knowledge and skills and a supportive network of similarly motivated individuals impede functionaries from making improvements within their control and dishearten them from pursuing effective strategies. Developing ways to reach out to these motivated but often isolated individuals, whether they are district programme managers, medical officers, NGO workers or ICDS project officers, is a key challenge. This becomes especially complex when one considers the need for strategies that are at once linguistically and analytically accessible, professionally actionable, and ultimately viable given the time constraints within which district and block level functionaries operate.

61. The PHRN is an effort to interact with and empower district functionaries both from within the government health system and civil society to meaningfully participate in and strengthen district planning processes and outcomes⁴. Structured as an innovative distance-learning course aimed at building in-service and field-based capacity at the decentralized levels of districts and blocks in the area of public health planning, management and implementation, the PHRN aims to disseminate technical resources through modules and reference materials to district level functionaries proactively enrolled in the course at an affordable cost. The technical content and contact programmes have been specifically developed to build perspectives and technical knowledge of participants and provide them with a variety of options that can be immediately put into practice within their work environments and everyday roles. As importantly, the programme is concerned with building a vibrant network of district resource persons, with the hope of creating greater energy and multiple points from which to leverage change.

62. Bihar is one of the four States where the PHRN has been launched in its first phase and course enrolment and networking is underway in a number of districts. Most recently, District Programme Managers have begun participating in the programme. With active support, the PHRN and other district level capacity building efforts can be scaled up and strengthened across the State.

⁴ The PHRN is a civil society initiative, organized as a partnership programme of a number of government and non-governmental organizations and resource centres. The partners are: The National Rural Health Mission, National Institute of Health and Family Welfare, Department of Health and Family Welfare (Government of Chhattisgarh), State Institute of Health and Family Welfare (Government of Chhattisgarh), Jharkhand Health Society, Institute of Public Health(Government of Jharkhand). State Institute of Health and Family Welfare (Government of Orissa), Population Foundation of India (Regional Resource Centre for RCH), Child In Need Institute, ICICI Centre for Child Health and Nutrition. The coordination agency is the State Health Resource Centre, Chhattisgarh.

63. The expected outcomes are:

- IMR reduced to 29/1000 live births by 2012.
- Maternal Mortality reduced to 123/100,000 live births by 2012.
- TFR reduced to 3.0 by 2012.
- Malaria Mortality Reduction Rate - 50% up to 2010, additional 10% by 2012.
- Kala Azar Mortality Reduction Rate - 100% by 2010 and sustaining elimination until 2012.
- Filariasis/Microfilaria Reduction Rate - 70% by 2010, 80% by 2012 and elimination by 2015.
- Dengue Mortality Reduction Rate - 50% by 2010 and sustaining at that level until 2012.
- Leprosy Prevalence Rate – reduce from 1.06 per 10,000 to less than 1 per 10,000 thereafter.
- Upgrading all Community Health Centers to Indian Public Health Standards.
- Increase utilization of First Referral units from bed occupancy by referred cases of less than 20% to over 75%.

Challenges and Issues

64. Health is a complex sector with deep cross linkages across other social sectors like nutrition, literacy, poverty, women and child development, panchayati raj, etc. The interventions under NRHM need to be catalyzed by parallel actions in these sectors. Health is still not a high priority area and as such needs to be brought under the prime focus, particularly at the State level. For successful planning and implementation of the Mission activities, it is extremely important that there is an assured availability of incremental outlay. It is also necessary that the outlay is made known to the State in time so that these could be factored while preparing the annual plan. The State also needs to hike its health budget very significantly in order to meet the target of 2-3% of the GDP.

65. PRIs have a very crucial role to play in the entire process. It is, therefore, imperative that sufficient powers are delegated to them for enabling them to lead the process. The shortage of manpower particularly doctors and paramedical staff willing to work in the rural areas will be a serious challenge. Operationalising all the health care facilities in the light of the manpower constraints would be a major challenge for the State.

FUTURE DIRECTION IN STRATEGIES AND POLICIES

66. For the Eleventh Five Year Plan, the Planning Commission has set forth certain socio-economic targets for the health and related sectors. By focusing on the outcomes and the associated key processes for the achievement of these outcomes, health status in Bihar is expected to improve at a faster pace. The focus on future strategies and policies for Bihar would cover the following aspects.

- a) *Infant Mortality Rate:*** The Infant Mortality Rate in Bihar (61 per 1000 live births) is above the national average (58 per 1000 live births) and sixth highest in the country. The goal for the State is to reduce it to 29 by the end of Eleventh Plan. This can be achieved through emphasis on home based neonatal care including emergency life saving measures (Gadchiroli model), improving breast feeding practices, integrated management of neonatal and childhood illnesses, and increasing immunization coverage. ASHAs have a vital role to play on all such aspects. The State is planning to introduce universal tracing of new born. As per NFHS-3, children breast fed within first hour of birth are a mere 4% in comparison to the all India figure of 23.4%. Similarly, children below six months exclusively breast fed are 27.9% in comparison to the all India figure of 46.3% and the immunization coverage has been 33% in comparison to the national average of 44%. Introduction of a number of innovative steps like vaccine carriers for each Sub-center on immunization day, mobile van immunization campaigns in the hard to reach areas, outreach sessions in the Anganwadi Centres etc have given boost to the routine immunization. This needs to be vigorously pursued and programmes to be expanded throughout Bihar for having vast impact.
- b) *Maternal Mortality Ratio:*** The Maternal Mortality Ratio (371 per 100,000 live births) is fourth highest in the country and above the national average of 301. The goal for the State is to reduce it to 123 by the end of Eleventh Plan. Though this is a formidable task, yet the State should make all out efforts to reach that goal. With the operationalisation of Janani Evam Bal Suraksha Yojana(JBSY), the institutional deliveries are picking up, but this needs to be further accelerated. Besides, efforts should be made to improve antenatal care, provide skilled attendance at birth, and enhance facilities for emergency obstetric care. Accessibility to emergency obstetric care within two hours travel time would be most facilitating. For that, efforts should be made to connect PHCs and CHCs by all weather roads so that women can be reached quickly in emergencies. Alternatively, where all such facilities are readily available in private sector, accessibility specifically so

to the poor could be ensured through PPP arrangements, like the Chiranjeevi Yojana of Gujarat. As per NFHS-3, mothers who had at least three ante-natal care visits for their last child were a mere 16.9% in comparison to the national average of 50.7%. The births attended by skilled personnel were 30.9% in comparison to the national average of 48.3%. The levels of institutional deliveries have also been lower (23.2%) than the national averages (48.3%). There is a need to expand these facilities with expanded coverage.

- c) **Total Fertility Rate:** The Total Fertility Rate in the State is second highest in the country (4.2 compared to the national average of 3.0). The State expects to achieve TFR of 3.0 by the end of Eleventh Plan. This would have to be brought about through behavioural change in communication to bring an increase in the age at marriage of girls, delay in first child birth, greater male participation and meeting the unmet needs for contraception through improved infrastructure, and organization of family planning camps. 51.5% of the women were married by the age of 18 years as compared to the all India figure of 44.5%. Similarly, the median age at first child birth was also lower (18.7 years) than the national figure (19.8 years). The male participation in family planning has also been lower than the national averages. Still there is a large unmet need for contraception (23.1%) as compared to the need at all India level (13.2%). For spacing, the unmet need in Bihar is 10.7% and for limiting the family size, it is 12.4%. All these would require expanded infrastructure facilities, equipments, medical aids, and massive trained field level staff. Encouragement must be given to the private sector, with conducive policy guidelines and incentives, for their active role in such field services.
- d) **Child Sex Ratio:** The Child Sex Ratio (0-6 years) of 942 is better than the all India figure of 927. The State should reach the goal of 950 by the end of Eleventh Plan through strict enforcement of PC & PNDT Act and greater emphasis on gender issues.
- e) **Malnutrition:** The percentage of children under three years, who are under-weight, is 58.4 (all India - 45.9). The Eleventh Plan goal for the State is to reduce it to 27.2%. Similarly, anaemia among women 15 to 49 years is also higher (68.3%) than the all India figure (56.2). It is pertinent to indicate that only 9.7% mothers consumed iron and folic acid tablets for 90 days or more when they were pregnant last time. The all India figure for this is 22.3% (NFHS-3). The Eleventh Plan goal for the State is to reduce anaemia among women to 31.7%. Through a better coordination with ICDS and proper organization of monthly health days at the Angwanwadis, the State should make all out efforts to reduce malnutrition among children (0-3 years) and anaemia among women and girls to at least half its present level by the end of Eleventh Plan. Nutri candies

consisting of Vitamin A, iron, folic acid and Vitamin C are currently being distributed under ICDS/Dular project. A systematic study should be conducted to assess the effectiveness of such an intervention. Based on the findings of the Study, further refinements/adjustments should be introduced in the on-going programmes.

Public Health Approaches

67. In order to achieve the desired outcomes and to bring about an improvement in the health sector, it is necessary that a right mix of public health approaches/measures is adopted. This consists of

- (a) **Service Approach:** For an appropriate health care delivery system, it is absolutely necessary to have a blend of services delivered through (i) Static health facilities – This would involve correcting the regional imbalances, existing deficiencies in the health care infrastructure and making it operational; (ii) Outreach facilities – With the development of infrastructure in Bihar which also consists of better road connectivity, the unreached segments of the population should be reached through mobile medical units. This may involve having more than one medical mobile unit per district. At least each block should be provided with one Mobile unit; and (iii) *Telémédecine* - Though it is desirable to develop proper referral linkages, yet in order to get faster consultations, with an improvement in the information technology network, telemedicine is an option which the State should actively pursue.

A plan has been prepared for operationalisation of Telemedicine in the State. In the first phase, video conferencing facilities will be started at the district headquarters. Every year 1544 new sub centers and 331 new PHCs will be operationalised in the State. Besides, the dilapidated health facilities are being refurbished in the State in collaboration with the Department of Building Construction.

- (b) **Education approach:** The other important public health approach to yield dividends in the long run consists of behavioural change communication strategy. Mass media is effective for advocacy, whereas, community/group education is necessary for further providing programme information. Thereafter, education at the individual/family level to address the specific queries and facilitation for the utilization of health services would lead to social mobilization for better health outcomes in Bihar. BCC/IEC campaigns should be launched in collaboration with ICDS/PRIs to bring about desirable, attitudinal and behavioural changes among the rural people.

- (c) **Regulatory approach:** In the current context, the regulatory approach may not be a viable option on a large scale. However, on certain issues viz, strict enforcement of PC and PNDT Act, it is a must.

National Rural Health Mission (NRHM)

68. NRHM is an opportunity. District Health Plans have assumed a new centrality and urgency. Action needs to be completed immediately for the preparation/improvement of the State Action Plan which identifies sectoral needs and priorities, specifically related to the monitorable targets suggested by the Planning Commission and the NRHM. It should include outlays for Reproductive & Child Health Programme, National Disease Control Programmes, Integrated Disease Surveillance Programme, Janani Evam Bal Suraksha Yojana, Immunisation Programme, etc. Further funds under AYUSH, Finance Commission, Grants-in-aid, Rashtriya Sam Vikas Yojana/BRGF, external bilateral funding and NGO grants need to be included. Outlays for improving sanitation and nutrition should be reflected even though the budgeting would remain separate. The State Action Plan has to be based on the District Action Plans and the districts should consolidate the existing resources within health & family welfare sector and plan for convergence with nutrition, drinking water and sanitation. It would be even desirable, if Coordination Committees are formed in each and every district and at all functional levels, i.e. Blocks, with representatives from the Departments dealing with health, family welfare, nutrition, water supply and sanitation.

Capacity Building

69. Though Reproductive & Child Health (RCH) is the flagship programme of NRHM, yet the capacity building efforts have to be all inclusive to cover not only RCH but also other programmes for the delivery of comprehensive health care. For that, it is necessary to give appropriate orientation to the functionaries of the public health system and the private providers at different levels. The ones who matter outside the health system viz. PRIs, NGOs, related departments, district collectors etc, should also be sensitized. Sensitization to community on various issues pertaining to health is also required. A conceptual framework for capacity building for health is reflected in the figure (**Annexure-IV**).

70. In essence, there is a need to combine training on health care and public health. This can be achieved by converging the training funds available under NRHM with those available under Total Sanitation Campaign and ICDS, to run one closely coordinated programme that shares resource persons, logistics and feedback systems. An integrated training programme of this nature for Panchayat members would be efficient and cost effective. ASHAs also require much more training in hygiene and sanitary practices and AWWs need training in maternal and child

health care. Training content preparation should, therefore, involve all the Departments concerned, as also SIRD, NGOs and CBOs across the State.

71. For integrated training programme of large number of health and non-health functionaries, a systematic district specific approach is needed. It is also important to upgrade/expand the network of fully equipped training facilities. A comprehensive programme for capacity development needs to be chalked out.

Inter Sectoral Coordination

72. The indicators of health depend as much on drinking water, female literacy, nutrition, early childhood development, sanitation, women's empowerment, etc., as they do on hospital and health systems. Realizing this, an effective convergence between departments dealing with health, ICDS, education, drinking water and sanitation has been planned. Village health committee will be a modified version of health and sanitation committee already existing in villages. They will co-opt ANM and ASHA in their committee.

Monitoring & Evaluation

73. At present, information on health related indicators is being collected by the National Family Health Survey (NFHS) and District Level Household Surveys (DLHS) under the aegis of Ministry of Health & Family Welfare. The International Institute for Population Sciences (IIPS) is the nodal agency which coordinates these surveys. Most of the work is outsourced. The Sample Registration System also provides periodic estimates on selected indicators. To get a sense of performance at closer intervals and to supplement the existing surveys (NFHS, DLHS etc.), Annual District Health Surveys through the Registrar General of India, on a priority basis in 284 districts in the EAG States, are on the anvil. The same needs to be expedited for the State of Bihar.

74. The variables on which evaluation is proposed are basically related to Planning Commission's targets set forth for 11th Five Year Plan and the National Rural Health Mission. Information for monitoring and evaluation should be validated through triangulation i.e. civil society/community monitoring, health management information system and special field studies.

75. Community based monitoring system should be designed to help to empower communities to manage the health and nutrition status of women and children through village level social maps depicting key indicators and family based self-monitoring tools.

76. It is pertinent that besides evolving a mechanism to validate information, extensive surprise field visits are made by multiple stake-holder teams at all levels, to make an assessment

by observing the health facilities and also to get a feedback by meeting the villagers in the remote areas. Social audit exercise on parameters like accessibility, quality, reliability, responsiveness, timeliness of the delivery mechanisms and the levels of consumers' satisfaction etc. can provide useful feedback on the way the important interventions of the government are performing. It also provides valuable insights as to what needs to be done to improve them.

77. Since there is a variety of health programmes under implementation involving vast financial resources, it is very important to pay particular attention to accounting system and social audit at key operating levels on fund allocation, utilization, and actual benefits to the health sector users.

CONCLUSIONS

78. Health is now being given due attention by the State. With the upgradation of health infrastructure, recruitment of doctors on contract, outsourcing diagnostic facilities, availability of free medicines, provision of ambulance services and through a mechanism of web-based monitoring, better health outcomes are expected in the State. In a span of about a year, manifold (100 times) increase in OPD attendance has been reported at the CHCs/Block PHCs.

79. The goal for the State is to reduce IMR from present 61 to 29 by the end of Eleventh Plan. This is aimed to be achieved through emphasis on home based neonatal care, improving breast feeding practices, integrated management of neonatal and childhood illnesses and increasing immunization coverage. With the thrust being given by the State, an increase in immunization coverage has already been observed.

80. The goal of reducing MMR from 371 per 100,000 live births to 123 by the end of Eleventh Plan is a formidable task. Yet, the State would be making all out efforts to reach that goal. With the operationalisation of Janani Evam Bal Suraksha Yojana, the institutional deliveries are fast picking up. Besides, efforts are being made to improve antenatal care, provide skilled attendance at birth, and enhance facilities for emergency obstetric care.

81. The State is hopeful to reduce TFR from 4.2 to 3.0 by the end of Eleventh Plan through behavioural change communication to bring an increase in the age at marriage of girls, delaying first child birth, greater male participation and meeting the unmet needs (23.1%) for family planning through improved infrastructure and organization of family planning camps, and other service delivery measures.

82. The State is confident of reaching the goal of 950, Child Sex Ratio (0-6 years), by the end of Eleventh Plan through strict enforcement of PC&PNDT Act and emphasis on gender issues. By better inter Sectoral coordination with ICDS and organization of health days at the Anganwadis, the State also expects to reduce malnutrition amongst children (0-3 years) and anaemia amongst women and girls to half its present level by the end of Eleventh Plan.

83. The State officials feel that the National Rural Health Mission has been a facilitating factor and is expected to further improve the health system and its outcomes. In Bihar, NRHM has been launched to provide accessible, affordable, accountable, effective and reliable primary health care facilities, especially, to the poor and vulnerable sections of the population. The aim is to bridge

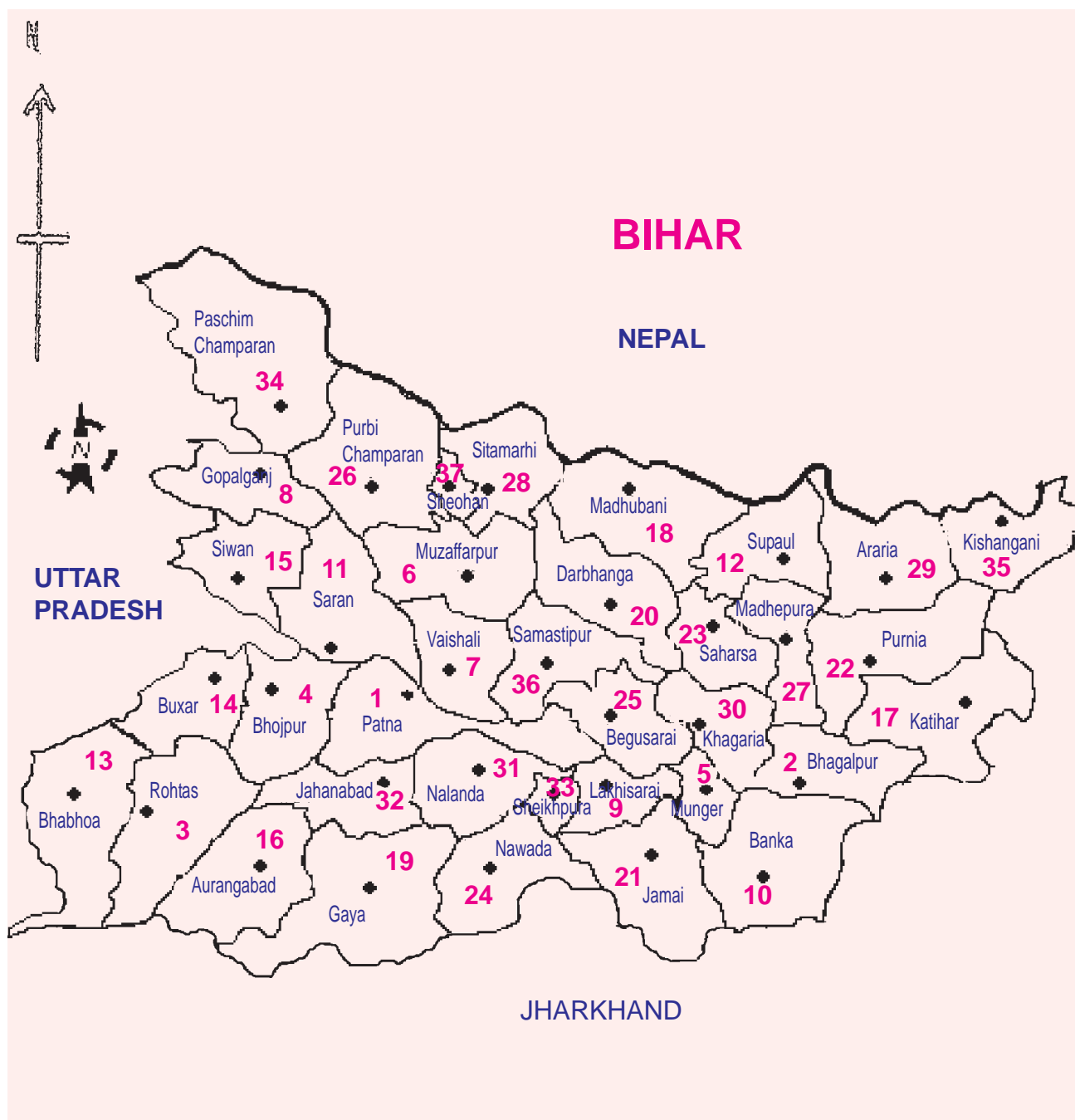
the gap in Rural Health care services through creation of a cadre of Accredited Social Health Activists (ASHA) and improved hospital care, decentralization of programme to district level to improve intra and inter-sectoral convergence, and effective utilization of resources. Further, an overarching umbrella has been provided to the existing programmes of Health and Family Welfare including RCH-II, Malaria, Blindness, Iodine deficiency disorders, Filariasis, Kala Azar, T.B., Leprosy and Integrated Disease Surveillance.

84. Issues of health, in the context of sector-wide approach addressing sanitation and hygiene, nutrition and safe drinking water as basic determinants of good health in order to have greater convergence among the related social sector Departments i.e. AYUSH, Women & Child Development, Sanitation, Elementary Education, Panchayati Raj and Rural Development, are also being addressed. Community is being involvement through Panchayati Raj Institutions, NGOs and other stake holders for greater ownership. Extensive and focused initial trainings for all human resources have been carried out to make NRHM a success.

85. Efforts are being made to mainstream AYUSH and increase social & community outreach by enhanced role in public health revitalization of community based local health traditions of AYUSH with the ultimate aim of enhancing the role of AYUSH health care in providing accessible, acceptable, affordable and quality health care to all.

86. Mechanism to validate information by surprise field visits and feedback need to be built. Vast financial resources make it imperative to pay particular attention to accounting system and social audit at key operating levels on fund allocation, utilization, and actual benefits to the health system users. Recent efforts towards human resources, provisioning of drugs and equipment, convergence, district level planning and monitoring, training, etc., have shown positive results in key indicators of health.

HEALTH - RANKING OF DISTRICTS OF BIHAR



ACTIVITIES UNDERTAKEN AND ACHIEVEMENTS

Infrastructure

- i) A number of measures have been initiated for bridging the gaps.
- ii) For construction of new health facilities viz, sub-centers, PHCs, CHCs, FRUs, Sub-Divisional and District Hospitals, a detailed plan has been chalked out.
- iii) The PHCs, Sub-Divisional hospitals and District Hospitals are being constructed in the newly created Blocks, Sub-divisions and Districts respectively.

Human Resources

- i) Systematic assessment of the gaps in the man power at PHCs, FRUs, Sub-Divisional and District Hospitals.
- ii) To fill the gaps it has been decided to recruit the general doctors, specialists and para-medical staff on contractual basis.
- iii) Sanctioning four posts of Doctors for every CHC. 1200 Doctors have already been recruited on contract basis. 1300 posts of ANM have been filled up. 10,000 ANMs will be recruited next year.

Drugs and Medicines

- i) Adequate provision of drugs and medicines has resulted in increase in attendance at PHCs/CHCs from 39 to 3000 per month.
- ii) List of essential drugs have been prepared and funds given for purchase of 17 essential drugs for OPD and 22 drugs for indoor patients at CHCs/PHCs level.
- iii) List of 10 drugs for indoor patients at district hospital has been prepared.

Monitoring of Drugs/Medicines and Treatment

- i) Data Centres at CHCs: Records from 450 CHCs/block PHCs giving details of patients' name, address, Doctors, medicines are maintained which would be put up on the Web Site.
- ii) Establishment of phone lines at CHCs.
- iii) Control room at State Health Society: Control room with 10 telephone lines has been set up at State Health Society, which monitors CHCs every week. The availability of

medicines for TB, Kalazar, and Leprosy is monitored every fortnight. Availability of 17 essential drugs for OPD patients and 22 essential drugs for indoor patients is also monitored.

- iv) Procurement of drugs/medicines is also ensured through fixing up of the rate of drugs at the State level. Civil Surgeons have been authorized to purchase it from the concerned companies. Payment problems have been overcome through authorizing Civil Surgeons to prepare Draft from NRHM funds. Subsequently payment is made from the State funds.

Training

- i) Massive training programmes have been undertaken for multi-skilling of doctors, Skilled Birth Attendants and the paramedical staff.
- ii) The ANM Training Schools /GNM Training Schools are being operationalised in a phased manner to augment the availability of trained nurses.

Maternal Mortality Ratio (MMR)

- i) Enhanced coverage under Janani Evam Bal Suraksha Yojana: Institutional deliveries are picking up under this scheme, Rs. 1.5 crore spent in January 2007 alone.
- ii) Increase in infrastructure and manpower.
- iii) 76 FRUs have been identified to take care of emergency deliveries. FRUs are proposed to be upgraded through European Commission's Funds. The DPRs have been prepared.
- iv) Training in emergency obstetric care and anaesthesia being given to MBBS Doctors.
- v) Training to ANMs for ensuring skilled attendance at birth being taken up under SBA training programme.
- vi) Preference to traditional 'Daaies' in selection of ASHA, 60,000 ASHAs have been selected.
- vii) Training will also be given to ASHAs.
- viii) Introduction of 102 ambulance service for timely referral of the patients. Dial 102 service has been out-sourced for effective implementation.
- ix) The private clinics are being accredited for providing maternal health care to the patients.

Infant Mortality Rate

- i) Routine Immunization has increased from 11% to 33% in NFHS-3 in 2005-06. This has now increased to more than 40%.

- ii) Immunization weeks are being organized to take care of backlog. For each day of the week, one village is selected. Mobile vans are hired for the purpose. Target is to cover 55000 children every week.
- iii) IMNCI training is being given to ANMs and AWWs, it has been dovetailed with home based neonatal care.
- iv) Initiation of early breast feeding and exclusive breast feeding for first six months is being emphasized in training to ASHA.

Total Fertility Rate

- i) Family Planning camps
- ii) Greater emphasis on male sterilization
- iii) Health Melas at every CHC/Block PHC
- iv) IEC drive along with required infrastructure.
- v) Designated family planning day in all the Government health facilities in the State.
- vi) Family Planning Camps are being organized at one PHC of a district every week by rotation.

Nutrition

- i) Improvement in the ICDS programme under the State scheme of Dular where 14 districts have already been covered.
- ii) Distribution of fortified candies (with Vitamin A, iron, Folic Acid and Vitamin C to the beneficiaries.
- iii) The geographical coverage under nutrition being increased from present 60% to 100%.

Anaemia

- i) Distribution of Fortified candies.

AYUSH

- i) Provision of one AYUSH doctor at every CHC/Block PHC has been made. Provision of essential drugs under AYUSH has also been made.

District Action Plan under NRHM

- i) District Action Plan under NRHM, reflecting convergence with ICDS, water supply and sanitation programme have been prepared.

Public Health Approach

- i) 24x7 health care services at all the PHCs have been initiated for augmenting the static health facilities.
- ii) The availability of doctors clubbed with free distribution of drugs has resulted in multi-fold increase in number of patients visiting the static health facilities from January, 2006 to June, 2007.
- iii) At Government health facilities the pathology and radiology services have been out-sourced to private parties. The hospital maintenance services and ambulance services have also been started and out-sourced to private parties.
- iv) Out reach facilities are also being augmented through Mobile Van immunization campaigns in the hard to reach areas.

Regulatory Approach

- i) Regular review meeting with the district administration and the health officials posted at districts for making the PNDT effective.
- ii) Introduction of the Private Nursing Homes Regulation Act,2006 in the State.
- iii) Steps have been taken to curb the menace of circulation of spurious drugs in the State.

Selected Health and Demographic Indicators

	UNIT	BIHAR	INDIA
POPULATION (2001)	MILLION	82.88	1027.02
DECADAL GROWTH (1991-01)	PERCENTAGE	28.43	21.34
POPULATION DENSITY (2001)	PER SQ. KM	880	324
MATERNAL MORTALITY RATIO (MMR) (2005-06)	PER LAKH LIVE BIRTHS	371	301
TOTAL FERTILITY RATE (2005-2006)	PER THOUSAND	4.2	3.0
INFANT MORTALITY RATE (IMR) (2005)	PER THOUSAND LIVE BIRTHS	61.0	58.0
BIRTH RATE (2005)	PER THOUSAND	30.4	23.8
DEATH RATE (2005)	PER THOUSAND	8.1	7.6
CHILD SEX RATIO (0-6 YEARS) (2005-06)	PER THOUSAND	942	927
LIFE EXPECTANCY AT BIRTH (1999-03)	YEAR		
MALE		61.6	61.8
FEMALE		59.7	63.8
FULL IMMUNIZATION(2005-06)	PERCENT	33	44
HUMAN DEVELOPMENT INDEX (2001)	INDEX	0.367	0.472

Capacity Building for Health

