IMPLEMENTATION OF THE NATIONAL RURAL HEALTH MISSION IN ODISHA: A CASE STUDY OF KENDRAPARA DISTRICT

DOCTOR OF PHILOSOPHY

POLITICAL SCIENCE

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IMPLEMENTATION OF THE NATIONAL RURAL HEALTH MISSION IN ODISHA: A CASE STUDY OF KENDRAPARA DISTRICT

A THESIS SUBMITTED TO THE UNIVERSITY OF HYDERABAD IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN POLITICAL SCIENCE

BY

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DECLARATION

I, hereby declare that the research embodied in the present thesis entitled "**Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District"** is an original research work carried out by me under the supervision of Prof. I. Ramabrahmam, Department of Political Science, for the award of Doctor of Philosophy in Political Science from the University of Hyderabad.

I declare to the best of my knowledge that no part of this thesis was earlier submitted for the award of any research degree in part or full to this or any other university.

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CERTIFICATE

This is to certify that Ramesh Chandra Sethi has carried out the research work embodied in the present thesis entitled **"Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District"** for the degree of Doctor of Philosophy in Political Science, which is primed under my supervision. I declare to the best of my knowledge that no part of this thesis is earlier submitted for the award of any research degree in part or full at any university.

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Preface

Studies on policy and implementation of public health are few. Post globalized societies are re-evaluating their strategies for health. The liberalization, privatization policies, for some strange reasons, neglected social sector mostly due to misclassification of the items as non-merit goods. While welfare itself was pushed to background, private provisioning is gaining greater currency.

Change in regimes brought some shift in policy priorities. In India, health received policy attention only a decade ago. The initiation of the National Rural Health Mission (NRHM) in rural areas shows a marked shift in the policy priority of health. The Rs. 4500 crore program launched in 2005 attempts to bring in major changes in 18 states especially in rural areas so far as health of women and children are concerned.

This thesis is a modest attempt at analyzing the processes of the institutional arrangements for the implementation of the major drive. Mandated to enhance health through access in an affordable at means, the NRHM has a built in provision for accountability. It is a challenge to the students of public policy as to have a program of this magnitude can be effectively implemented. A program on health is difficult to evaluate merely with the help of quantitative indicators even if it is meant to be a quick feedback. While institutional studies focused on quantitative tools, independent research tries to look at the qualitative aspects too.

What follows is a study of the processes of implementation of the NRHM. The objective of the study includes the reach of the program to the targeted group and how the group got benefited. It is divided into five chapters with an introduction and conclusion. It is conducted with the help of eight types of structured schedules in Kendrapara district of Odisha. The study made use of both the primary and secondary sources of data.

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Acronyms

A & N Island: Andaman & Nicobar Islands

AIDS: Acquired Immune Deficiency Syndrome

AIIMS: All India Institute of Medical Sciences

AMO: Additional Medical Officer

ANC: Antenatal Care

ANM: Auxiliary Nurse Midwife

AP: Andhra Pradesh

APL: Above Poverty Line

ARI: Acute Respiratory Infections

ARSH: Adolescent Reproductive and Sexual Health

ASHA: Accredited Social Health Activist

AWW: Anganwadi Worker

AYUSH: Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy

BDS: Bachelor of Dental Surgery

BEEO: Block Education Extension Officer

BHEIO: Block Health Education and Information Officer

BPL: Below Poverty Line

BST: Bio-Statistical Theory

CAG: Comptroller and Auditor General

CBO: Community Based Organization

CDMO: Chief District Medical Officer

CDP: Community Development Program

CGHS: Central Government Health Scheme

CHC: Community Health Centers

CMP: Common Minimum Program

CMR: Child Mortality Rate

COS: Committee of the Secretaries

D & N Haveli: Dadra & Nagar Haveli

DAM: District Account Manager

DFID: Department for International Development

DH: District Hospital

DHH:	District Headquarter Hospital
DHIO:	District Health Information Officer
DLHS:	District Level Household Survey
DOTs:	Directly Observed Treatment
DPM:	District Program Manager
EAG:	Empowered Action Group
EPC:	Empowered Program Committee
EPW:	Empowered Procurement Wing
ESIS:	Employees State Insurance Scheme
FHW:	Female Health Worker
FNGOs:	Field Non-Governmental Organizations
FRU:	First Referral Units
FYP:	Five Year Plans
GDP:	Gross Domestic Product
GKS:	Gaon Kalyan Samiti
GoI:	Government of India
GoO:	Government of Odisha
GP:	Gram Panchayat
H&FW:	Health and Family Welfare
HDI:	Human Development Index
HDR:	Human Development Report
HIV:	Human Immunodeficiency Virus
HLEG:	High Level Expert Group
HMIS:	Health Management Information System
HSC:	Health Sub-Center
HWT:	Holistic Welfare Theory
ICDS:	Integrated Child Development Scheme
ICMR:	Indian Council of Medical Research
ICU:	Intensive Care Unit
IDSP:	Integrated Disease Surveillance Program
IDSP:	Integrated Disease Surveillance Project
IECM:	Information Education Communication and Motivation

IMF:	International Monetary Fund
IMR:	Infant Mortality Rate
IPHS:	Indian Public Health Standards
ISM:	Indian Systems of Medicine
ISM&H:	Indian Systems of Medicine and Homeopathy
JSY:	Janani Suraksha Yojana
KBK:	Koraput-Bolangir-Kalahandi
LA:	Laboratory Assistant
LHV:	Lady Health Visitor
LT:	Laboratory Technicians
MBBS:	Bachelor of Medicine and Bachelor of Surgery
MCHs:	Medical College Hospitals
MDGs:	Millennium Development Goals
MDSS:	Multi Disease Surveillance System
MHUs:	Mobile Health Units
MHW:	Male Health Worker
MIS:	Management Information System
MMR:	Maternal Mortality Ratio
MMU:	Mobile Medical Units
MNGOs:	Mother Non-Governmental Organizations
MNP:	Minimum Needs Program
MoHFW:	Ministry of Health and Family Welfare
MO I/C:	Medical Officer In Charge
MOU:	Memorandum of Understanding
MP:	Madhya Pradesh
MPHW:	Multipurpose Health Worker
NAC:	Notified Area Council
NACO:	National AIDS Control Organization
NACP:	National AIDS Control Program
NCAER:	National Council of Applied Economic Research
NCMH:	National Commission on Macroeconomics and Health
NDC:	National Development Council

NE:	North East
NFHS:	National Family Health Survey
NPT:	Nishchay Pregnancy Test
NGO:	Non-Governmental Organization
NGOs:	Non-Government Organizations
NHP:	National Health Policy
NHSRC:	National Health System Resource Center
NPCB:	National Program for Control of Blindness
NPH:	New Public Health
NPP:	National Population Policy
NRHM:	National Rural Health Mission
NVBDCP:	National Vector Borne Disease Control Program
OBC:	Other Backward Classes
OPD:	Out Patient Department
ORS:	Oral Rehydration Therapy
OT:	Operation Theater
PACS:	Poorest Areas Civil Society
PCS:	Panchabyadhi Chikitsa Scheme
PG:	Post Graduate
PHC:	Primary Health Centre
PHU:	Primary Health Unit
PNC:	Post Natal Care
PPP:	Public Private Partnership
PRI:	Panchayati Raj Institution
RCH:	Reproductive and Child Health
RGI:	Registrar General of India
RMPs:	Registered Medical Practitioners
RNTCP:	Revised National Tuberculosis Control Program
RTI:	Reproductive Tract Infections
SA:	Statistical Assistant
SAP:	Structural Adjustment Program
SBA:	Skilled Birth Attendants

SC:	Scheduled Caste
SC:	Sub-Center
SDHs:	Sub-divisional Hospitals
SHGs:	Self Help Groups
SHSRC:	State Health System Resource Center
SNGOs:	Service Non-Governmental Organizations
Sq. Km:	Squire Kilo Meters
ST:	Scheduled Tribes
STI:	Sexually Transmitted Infections
TB:	Tuberculosis
TFR:	Total Fertility Rate
TT:	Tetanus Toxoid
TRIPS:	Trade-Related Aspects of Intellectual Property Rights
UGPHC:	Upgraded Primary Health Center
UNICEF:	United Nations International Children's Emergency Fund
UNFPA:	United Nations Population Fund
UP:	Uttar Pradesh
UPA:	United Progressive Alliance
UN:	United Nations
USID:	United States Agency for International Development
UTs:	Union Territories
UHC:	Universal Health Coverage
VHND:	Village Health and Nutrition Days
VHSC:	Village Health and Sanitation Committee
WB:	World Bank
WHO:	World Health Organization

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Chapter – 1

Introduction

The present chapter is divided into seven sections. The first section examines assiduously of different issues of health problems in India. The second section elucidates in understanding the concept of disease, health, public health, new public health and discusses different approaches and various definitions of health provided by the different scholars. The third section debates on the theoretical perspective of both health and disease. The fourth section presents the review of literature of earlier studies which helps in understanding the problems of the public health and present health delivery system in India. In addition, the section also emphasizes on the research gaps between earlier studies and the present study. The fifth section focuses on the objectives of the study, discusses the significance and rationality behind for the selection of the study. The sixth section discusses the study design, sampling procedure, methods of data collection used in field survey. Finally, the seventh section describes the outlines of the remaining chapters and mentions the limitations of the study.

1.1 Statement of the Problem

The Indian health care system has been the issue of much debate around the world because of growing casualties. For instance, at the country level India accounts for 19 percent of the total number of maternal deaths,[1] 30 percent of neonatal deaths,[2] 24 percent of under-five child deaths,[3] and 20 percent of disability-adjusted life-years (DALYs)[4] worldwide. It shows India's substantial proportion of the global burden of diseases and deaths. However, during the past two decades, India has achieved appreciable economic growth, but it has not led to investment in health. Though, achievement is visible particularly in the improvement of life expectancy (increased from 32 years in 1951[5] to 65 years in 2011),[6] which is still less as compared to other developing countries (Mexico: 76, China: 74, Brazil: 73, Sri Lanka: 71, Indonesia: 68). While analyzing various health indicators in India, the researcher did not find any

[1] *Trends in Maternal Mortality: 1990 to 2010*, WHO, UNICEF, UNFPA and The World Bank Estimates, WHO Library Cataloguing-in-Publication Data, World Health Organization, Switzerland, 2012, p. 1.
[2] *Levels and Trends in Child Mortality: Report 2012*, Estimates Developed by the UN Inter-Agency Group for Child Mortality Estimation, UNICEF, WHO, The World Bank, United Nations Population Division, New York, Switzerland, Washington D.C, 2012, p. 11.
[3] *Committing to Child Survival: A Promise Renewed*, Progress Report, UNICEF, New York, 2012, p. 9.
[4] Y Balarajan, S Selvaraj, S V Subramanian, "Health care and equity in India", India: Towards universal health coverage, Series-4, *The Lancet*, Vol. 377, February 5, 2011, p. 1.
[5] *Report of the Working Group on Health for All by 2000 A.D*., Ministry of Health and Family Welfare, Government of India, March 25, 1981, p. 5.
[6] Life expectancy at birth, total (Years), Data by Country-India, The World Bank. http://data.worldbank.org/indicator/SP.DYN.LE00.IN, Accessed on December 22, 2012.

appreciable improvement. The Infant Mortality Rate (IMR) in the country is still high 47/1,000 live births in 2010[7] compared to other developing countries like China, Bangladesh, Sri Lanka, Brazil, Indonesia, those achieved 16, 38, 14, 17, and 27 respectively per 1,000 live births. The Under 5 Mortality Rate (U5MR) is also high which is 59/1,000 live births[8] in India compared to other developing countries such as 48 in Bangladesh, 35 in Indonesia, 19 in Brazil, 18 in China, and 17 in Sri Lanka. Similar case observed for the Maternal Mortality Ratio MMR in the country is high 212 per one lakh live births as compare to any other developing countries (which is 37 in China, 56 in Brazil, and 35 in Sri Lanka).[9]

Since 64 years of India's independence, the health outcomes of various health indicators remain as high such as the IMR shows 58[10], U5MR 77[11] and death rates 7.6[12] per 1,000 live births. Similarly, the child immunizations and institutional deliveries remain inadequate in India at 44 percent,[13] and 41 percent[14] respectively. Apart from that, the country has also witnessed the burden of preventable diseases, high rate of morbidity and mortality of both communicable and non-communicable diseases. Currently, India faces the emerging challenges with the burden of chronic diseases like cardiovascular disease, diabetes, cancer and mental health disorder, and fights to control endemic deaths from HIV/AIDS. However, IMR at the national level is 58 per 1,000 live births (where as states like Madhya Pradesh 76, Uttar Pradesh 73, Assam and Rajasthan 68, Chhattisgarh, and Bihar 61)[15] and Maternal Mortality Ratio (MMR) is 254 per one lakh live births which stands as high at the national level and also alarming in different states (like Assam 480, Uttar Pradesh/Uttarakhand 440, Rajasthan 388, Madhya Pradesh/Chhattisgarh 335, Bihar/Jharkhand 312). But, both the IMR (75 per 1,000 live

[7] Sample Registration System, Registrar General of India, Vol. 46, No. 1, December, 2011.
[8] Ibid.
[9] WHO, Global Health Observatory Data Repository, http://apps.who.int/gho/data/?vid=240. Accessed on October 23, 2012.
[10] Sample Registration System (SRS), Registrar General of India, Vol. 41, No. 1, October 2006.
[11] Ibid.
[12] Ibid.
[13] National Family Health Survey-3 (2005-06), The Ministry of Health and Family Welfare, Government of India, 2006.
[14] Ibid.
[15] Op.cit., Registrar General of India, October, 2006.

births) and MMR (258, per one lakh live births) are particularly alarming in the state of Odisha.[16]

The aforementioned health care scenario shows India's inattentiveness towards provision of public health. Even the primary health service which is the foundation of the rural health care system as well as an integral part of the national health care system is neglected for a long period. The continuous negligence of the primary health sector has resulted in increasing of the morbidity and mortality rate among the common people, especially in rural areas. Now-a-days, the country faces major public health problems particularly in rural areas. The issue of inequalities related to socioeconomic status, high out of pocket expenditures, rural-urban divide, and gender gaps in health have been accentuated by the dissociation of disease from social realities in the planning process. This issue of negligence in the primary health sector has been addressed by the Health Survey and Development Committee in 1946 (also known as Bhore Committee) in the very early stage of India's health planning development. However, the policy prescription recommended by the Bhore Committee has not been implemented properly.

The issue of health problem and its development was also addressed by the Commission on Macroeconomics and Health (WHO, 2001), which states "*health is a creator and prerequisite of development, with an extension in the coverage of health services and improved health care not only the key to better health outcomes and reductions in poverty, but also increased productivity, that leads growth in poorer countries like India."* In this context, the noted economists like, Boom and Canning (2008) argued that the instrumental value of health can be taken as a ground for action on its own and the intrinsic value of health for health's sake cannot be ignored.[17] In addition to that, eminent economist Amartya Sen has also commented "*Health inequity, i.e. unfair, unjust and unavoidable causes of ill health, resulting in inequalities in the health functioning of individuals, social groups, and national population, raises fundamental social justice questions*".[18] The moral motivation to direct health policy particularly in

[16] *Maternal and Child Mortality and Total Fertility Rate*, Sample Registration System, Registrar General of India, July 7, 2011.

[17] David E., Bloom, and David, Canning, "Global demographic change: Dimensions and economic significance", *Population and Development Review*, Vol. 34, 2008, pp. 17-51.

[18] Amartya Sen, "Why health equity", *Health Economics*, Vol. 11, Issue. 8, December, 2002, pp. 656-666.

poorer countries seeking to decide on the most appropriate distribution of limited resources in a certain equitable way, thus, health becomes paramount to the rights based approach.[19] Regardless of whether one is moved by the efficiency or the equity argument, or the desirability of the goal of achieving better population health status is undisputed. Even it is also difficult for the people of India to provide health care facilities for themselves as the burden of diseases both communicable and non-communicable are much larger, and their economic capability is much lower compared to other developing countries. In this regard the Alma-Ata Declaration "Health for All by 2000 A.D" became a distant dream for the people of India.

India is the largest democracy in the world, abides by the welfare principle and gives priority to the social sectors i.e. health and family welfare, nutrition and social safety, safe drinking water, sanitation, conducive living condition, and education as the responsibility of the state for the development of the people. However, it has been neglected health sector which may promote equity and development of the country. Furthermore, health has not been prioritized in the policy planning and implementation even after more than six decades of India's independence.

The health care situation mentioned above not only makes rural people of India vulnerable to diseases but also creates hurdles in the socioeconomic development of the country. In this context, what is the role of the state in providing health service delivery to its population? Is it simply allowing the people to take the burden of diseases on themselves or is there a way out? It is the Constitutional mandatory for the welfare country like India to provide basic health care facilities to the people. On the other side, it is also noticed that the issue of health equity and social justice has been increasing in policy anvil at the global arena which also enforces all the national government to take the initiative of universal health coverage in their respective countries with the local responsive service system at the primary health care level. Therefore, the Government of India (GoI) finally on 12th April, 2005 launched a new national health policy program known as National Rural Health Mission (NRHM) as a plan of the Common Minimum Program which aimed to emphasis on quality of health in a more comprehensive manner

[19]S. Venkatapuram, and M. Marmot, "Epidemiology and social justice in light of social determinants of health research", *Bioethics*, Vol. 23, No. 2, 2009, pp. 79-89.

and to improve the availability, accessibility, affordability particularly to the vulnerable sections of the society like poor, women, and children from the rural areas.

There are also other problems for which health service system has been neglected over a period of time in India and some of them are discussed below.

A. Delay in policy implementation

The primary health care system was at the top of the agenda in *Alma-Ata Declaration-1978*, where all the world leaders including India agreed to provide "Health for All by 2000 A.D." through primary health services to the people. The Declaration asserts provision of comprehensive primary health care at the grassroots level of the community. Further, the Declaration forces for each and every signatory to expand and re-organize the primary health delivery system in their respective countries as an integral part of national health program and for overall socioeconomic development of the country. India as a signatory of the Declaration prepared a report in March 1981 (Report of the Working Group on Health for All by 2000 A.D.) on how to achieve "Health for All by 2000 A.D." Indian government recognized that the public health system is being ignored and vowed to make a coordinated and comprehensive approach to integrate all the sectors to achieve the target. Such issues were supposed to be addressed during the sixth Five-Year Plan (FYP) (1980-85) as well as National Health Policy-1983 but not address properly during that period. Since then, India's primary health care service aims at providing comprehensive primary health care to the people through the Primary Health Centers (PHC) which is not yet realized. As a result, the rural health care with regard to maternal and child health has been least prioritized.

B. Lack of decentralized policy

The public health care system in India has a major drawback in terms of centralized policy planning which has been debated for a long time. The conceptualization and planning of most of the government programs in India are centralized. The role and participation of Gram Panchayats and local communities are very much negligible in health policy planning hence; the locally relevant strategies are not part of the mainstream health plan and development. Therefore, the participation of the local communities are important that can help in overcoming the gap between

centralized health care policies and its' implementation in the rural areas. The intervention of the local community would bridge the gap.

C. Lack of coordination and cooperation

In spite of plenty numbers of primary, secondary and tertiary health care institutions in the country, there are no well organized referral linkages between these health care institutions in the same locality. There is also no proper coordination and cooperation among the other parallel developmental schemes, departments, and health running programs. As a result, all the development plans and schemes relating to health run by the Central as well as State Governments do not reach out to the targeted rural people.

D. Lack of investment, inadequate fund, and less interest towards public health

A public health service of the democratic institutions in the country like India is affected more because of electorates. Politicians typically give preference to public funds to be used to provide private goods rather than public goods whereas in the developed world public health authorities fight to ensure adequate flow of funds for public health. However, in India and other developing countries it shows a serious negligence of public health as observed by the noted health analyst of the World Bank, Monica Das Gupta (2005). She highlights that India spends a substantial proportion of budget on health particularly for medical training, public sector employment of medical graduates and for high-end tertiary medical treatments that largely benefit the middle strata of the society and detract the rural poor from the provision of public health care services.[20] T. Satyanarayana (2005) argues that the public health investment in the country over the years has been comparatively low, and as a percentage of Gross Domestic Product (GDP) has declined from 1.3 percent in 1990 to 0.9 percent in 1999.[21] The total public health expenditure in India for the year 2001-02 was tuned Rs. 10,57,341 million, which accounted for 4.63 percent of the GDP, whereas other developing countries like Brazil (7.9 percent), Mexico (6.1 percent), and China (5.8 percent) spend more than India. Developed countries like USA, Germany, France, Canada and UK spend 14.6 percent,

[20] Monica Das Gupta, "Public health in India: Dangerous neglect", *Economic and Political Weekly*, Vol. XL, No. 49, December 3, 2005, pp. 5159-5165.
[21] T. Satyanarayana, "Globalization and reforms in India's health sector: Emerging trends and issues", *Administrative Change*, Vol. XXXII, No. 2 and Vol. XXXIII, No. 1, January-December, 2005, pp. 62-88.

10.9 percent, 9.7 percent, 9.6 percent and 7.7 percent respectively out of total health expenditure of their GDP.[22]

A close analysis into the investment on health from India during the year 2001-02, out of total expenditure, 20.3 percent has been from public expenditure, and 77.4 percent of private expenditure and remaining 2.3 percent from external support (see Table- 1.1).[23] And during the year 2004-05, the total health expenditure has been reduced to 0.38 percent from 4.63 percent to 4.25 percent of its GDP. Out of total public health expenditure, 19.67 percent was public expenditure; 78.05 percent of private expenditure and the remaining 2.28 percent was generated from the external flow (see Table-1.1).[24] The provisional estimates from 2005-06 to 2008-09 shows that health expenditure as a share of GDP has come down to 4.13 percent in 2008-09. Though health expenditure has increased in absolute terms, proportionately higher growth of GDP has resulted in a moderate increase in the share of health expenditure to GDP over the years. However, the share of public expenditure in GDP has increased consistently during 2005-06 to 2008-09. It reached 1.10 percent of GDP in 2008-09 from 0.96 percent in 2005-06.[25] It is noticed that financial allocation in the health has come down from the year 1990 to 1999 and again further reduced from the year 2001-02 to 2004-05. Although there is a minimal increase during the year 2005-06 to 2008-09 but still it enforces the public/households to spend a significant portion, i.e. 71.13 percent of their total expenditure for availing health care facilities from various health care institutions. It is reported by NSSO 60th round data that people spend almost over 70 percent from out of pocket expenses for availing healthcare facilities in India. This shows India's lack of investment and less interest towards the development of the public health.

[22] *World Health Report - 2005*. World Health Organization, Switzerland, 2005.
[23] *National Health Accounts: 2001-02*, National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India, p. 1.
[24] *National Health Accounts: 2004-05* (with Provisional Estimates from 2005-06 to 2008-09), National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India, p. 3.
[25] Ibid.

Table - 1.1: Total health expenditure in India of 2001-02 and 2004-05

Sl. No.	Type of expenditure		Expenditure	Distribution of total health expenditure (In percentage)	Share of GDP (In percentage)
1	Public expenditure	2001-02	214,391,018	20.3	0.94
		2004-05	263,132,133	19.67	0.84
2	Private expenditure	2001-02	818,104,032	77.4	3.58
		2004-05	1,044,135,932	78.5	3.32
3	External support	2001-02	24,846,646	2.3	0.11
		2004-05	30,495,141	2.28	0.10
4	Total Health Expenditure	2001-02	1,057,341,696	100.0	4.63
		2004-05	1,337,763,206	100.0	4.25
5	Gross Domestic Product (GDP)	2001-02	22,81,30,50000	---	---
		2004-05	31,494,120,000	---	---

Source: National Health Accounts: 2001-02 and 2004-05, National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India.

E. Constitutional provisions and problems in implementation process

The seventh Schedule of the Indian Constitution states that subjects like public health, sanitation, hospital management and dispensaries, fall under the State list, implying the devolution of responsibility of the State Governments whereas the subjects like population stabilization, family planning, medical education, medical profession, vital statistics, etc. are all under the Concurrent list, and responsibilities are shared by both the Centre and the States. The State Government receives funds for the programs under the Concurrent list and holds the responsibility for implementing those programs which are identified as of national importance, such as family welfare, primary health care, prevention and control of diseases and such others. At the same time, Constitutional fiscal provisions direct states to hand over the huge amount of their tax revenues to the Central Government and states run with a shortage of budget to allocate more on the health sector. The Central health authorities leverage their funds by requiring states to provide co-financing for many of their programs for which there is little support from the Central Government, i.e. environmental sanitation and other core functions of the public health system. In this process the Constitutional provisions neglect the states to be receiving the proper share from the Centre.[26]

[26] Op.cit. Monica Das Gupta, 2005.

F. Negligence of preventive and promotive health care

Although, different development plans and various health Committees recommended giving priority to both preventive and promotive health services along with curative service in the country, the health sector focuses largely on curative aspects based on the western model, which is inappropriate and irrelevant to the socioeconomic conditions and the need for the Indian society. As righteously Debabar Banerji (1995) said that, the hospital based western model approach, which provides to establish medical services, benefits to the upper strata of the society, especially those residing in urban areas. This approach provides a comprehensive understanding of primary health services. However, putting emphasis on curative approach, led to neglect the preventive, promotive of public health. The existing approach instead of improving the awareness and building up self-reliance has tended to enhance dependency and weaken the community's capacity to cope with its problems.[27]

The other error the government has committed by merging public health services with medical services in 1950s noticed by Monika Das Gupta (2005). More importance is given to the qualifications of specialization of creative skills, and gradually senior positions are filled by untrained or inexperienced people in public health services. Therefore, the demand as well as supply of public health training is atrophied. The atrophy was further fuelled by the fact that it is politically much easier to respond to budget constraints by cutting (that is relatively invisible) public health positions and other activities, while widening the curative health services for which there is a strong electoral demand.[28]

G. Withering away of public health services due to global policy trends

Different health professional and Committees recommended for giving priority to the public health provision through primary health services, due to global trends in policy change; the public health sector is undermined severely. The introduction of Structural Adjustment Program (SAP) in the nineties, and the direction of the World Bank (WB)[29]

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[27] Debabar Banerji, "Contours of a health policy in Panchayati Raj", *IASSI Quarterly*, Vol.14, No. 1 and 2, 1995, pp. 35-42.
[28] Op.cit. Monica Das Gupta, 2005.
[29] A World Bank Policy Study, "*Financing Health Services in Developing Countries; An Agenda for Reform*", The World Bank, Washington D.C, USA, 1992.

and International Monetary Fund (IMF) enforce the government for the systematic budgetary reduction of the welfare sector such as diversion of funds from public health services.[30] The implication of such decision by the government was profoundly detrimental to build up primary health services. The main effects as observed by eminent health analyst Imrana Qadeer (1995) of SAP on health sector are:[31]

A. A cut in the total investment in the welfare sector which lead to the stagnation and dismantling of public health services.
B. The introduction of user fees at public health institutions that essentially reduced the health care access of the poor.
C. Handing over the responsibility of the health services to the private and voluntary health sectors, help save state resources but undermined the rationality of public health. The voluntary groups did only that for which international aid was available and moreover, the private health sector focused only on curative care.
D. When the basic services suffered, the state continued to receive funds from the International agencies, i.e. the WB and IMF. It thereby became a single and the most domineering health program and at the same time the crunch of resources to the welfare sector shifted emphasis from a "demand based inter-sectoral development" approach[32] to a more 'techno-centric' strategy of controlling women's fertility.[33] As a result, eminent health analyst Imrana Qadeer observed that the SAP impacts of receding secondary and tertiary level public sector medical care through district and state hospitals. In the absence of the much-needed referral back-up, primary health care became an illusion

After the SAP, India is forced to follow the direction of the WB and IMF. The immediate impact during 1991 was the reduction of budgetary allocation for the social sector (see Table-1.1). Health care was a major casualty, as the share of states constitutes

[30] Op.cit T. Satyanarayana, 2005.
[31] Imrana Qadeer, "Primary health care-A paradise lost", *IASSI Quarterly*, Vol. 14, No. 1 and 2, 1995, pp. 1-20.
[32] *Report of Working Group on Population Policy*, Planning Commission, Government of India, 1980, pp.1-3.
[33] *Draft – National Population Policy*, Expert Group Meeting (Chairman: M.S. Swaminathan), Ministry of Health and Family Welfare, Government of India, 1993.

a major portion of expenditure.[34] The severe disjunction produced by the cuts in the initial years of the 1990s contributed to the intensification of the epidemics of malaria, diarrhea and encephalitis and return of plague over these years. These events created doubts about the government's claim of "adjustment with the human face".[35] In 1992-93, the government was forced to bring some shift in the financial allocations to welfare sector, especially health in Annual Plan outlay which is shown in Table-1.2.

Table - 1.2: Annual plan outlay for social sector by heads of the Department

(Rs. in crore)

Sl. No.	Sectors	1990-91	1991-92	1992-93	1993-94	1994-95
1	Rural Development	4149.0	4141.6	5091.4	7013.2	8627.4
2	Education	2316.5	2599.0	2619.4	3559.1	4400.0
3	Medical & Public Health	**1040.8**	**924.8**	**1213.9**	**1435.5**	**1819.1**
4	Family Welfare	**782.2**	**1023.3**	**1008.1**	**1273.6**	**1430.0**
5	Housing	939.8	603.9	650.6	1373.1	1347.9
6	Urban Development	740.2	784.4	791.3	763.0	1341.2

Source: Economic Survey - 1994-95, Ministry of Finance, Government of India.

In addition to these constraints of resources, the quality of services continued to deteriorate due to inadequate prioritization, strategies, supervision and lack of resources and personnel. To resolve the dilemma of coping with structural adjustment, the WB in 1992 came up with a draft plan for India on 'health sector financing.[36] While, on the one hand it asserted the importance of primary health care and gave top priority to restore cuts on communicable disease control, on the other hand, it gave no assurance for providing basic securities of food, shelter, and employment opportunity, which are a necessary requirement of a healthy life. Furthermore, the WB also emphasized spending on "non-salary inputs," for the peripheral purpose; such as drugs and equipments, it opted for imported and expensive technologies which made the cost of primary health care unaffordable. At the same time, by proposing indiscreet cuts at the tertiary level, it undermined an important referral support to the basic services. Briefly, the thrust was towards creating more dependency and encouraging commodification of illness and

[34] Op.cit. T. Satyanarayana, 2005.
[35] Op.cit. Imrana Qadeer, 1995.
[36] "*India: Health Sector Financing – Coping with Adjustment, Opportunities for Reforms*", Asia Country Department, Report No-10859-IN, World Bank, Evaluation and Human Resources Operation Division, pp.13-20.

diseases.[37] As a result people belonging to rural areas spend out of pocket expenses to avail health care facilities from the private hospitals and borrowed money from the money lenders for the health expenses which led due to more debts fall into the vicious circle of poverty.

H. Lack of convergence with other key departments

The existing public health system lacks in convergence with other key departments, which affect the delivery of better health care, some of the departments like rural development for providing safe drinking water, hygiene and sanitation facilities, department of food and nutrition, and department of education. The following departments need to work together for the development of smooth delivery of health services. It is also noted that despite the shortage of human resources, the practitioners of Indian Systems of Medicine (ISM), Registered Medical Practitioners (RMPs) have not been adequately mobilized and integrated into the health care system.[38]

I. Urban based health care

In the National Health Policy (NHP-1983), the Government of India admitted that health services in the country are curative, urban-oriented, and catering mostly to the upper crust of the society. For instance, there has been a rapid expansion of health services since independence but as pointed out in the NHP-1983, only privileged urban-based, and curative oriented health service developments are existing. This reflects the class character of Indian society.[39] Class-character against the mass-appeal was quite evident in our health services. Added to this limitation there is also an undue urban bias noticed in the development of the health sector in India. A major difficulty was that the country's failure to integrate health services with other departments. The Indian medical system not only focuses the problem of quality and quantity of competent manpower, but is also confronted with the unequal distribution of available manpower and financial resources. Public health services appear to grow with the social outlook of the elite class,

[37] Op.cit. Imrana Qadeer, 1995.
[38] Eleventh Five Year Plan (2007-12), Vol. II, Social Sector, The Planning Commission, Government of India, Oxford University Press, New Delhi, 2008, p.55.
[39] Op.cit. Debaber Banerji, Political Economy of Public Health in India, p. 311.

with more and better services to the wealthier section of the society and fewer and poorer services to the low-income groups.[40]

J. Difficulties of the health delivery system

The public health service system has been undermined since independence. While looking at the State of present health care situation, it is observed by various studies that the primary health care system provided by the Primary Health Centers (PHCs) is neglected. For which the service has become difficult, especially to rural people where 68.84 percent[41] of the total population live, and basic health services are still a distant dream for them. The basic service of health supposed to be available, accessible and affordable for every single citizen of the country. There is still an existence of high absenteeism of doctors and other paramedical staff, vacancy for various posts in different health institutions, lack of infrastructures such as, buildings, electricity, water supply, and ambulance facilities, which put the public health service more crestfallen for which most of the people prefer to go private hospitals.

Studies show that still many people suffer and die with various infectious and communicable diseases such as HIV/AIDS, tuberculosis, dengue and malaria. Deaths related to infant and children are still high in some states. Though, recently India has achieved the reduction in child mortality, the rate of reduction is very slow and it noticed the average annual rate of reduction of child mortality rate between 1990 and 2006 has been 2.6 percent. The UNICEF reported in 2009 that each year, globally around four million children die within the first 28 days of life after their births (newborn-neonatal deaths), and India shares about one million, that means a quarter of all neonatal deaths in the world occur in India.[42] So, it shows that both infants and child mortality rates are still alarming in India. In this context, one can question, whether the infant mortality rate will decline from 47 to 28 and child mortality rate from 64 to 42 per 1,000 live births and the MMR from 212 (in 2007-09) to 109 per one lakh live births to reach the target of the Millennium Development Goals (MDGs) by 2015? And is India reaching the expected

[40] Op. cit. Bhat, Vignesh N., p. 11.
[41] Census - 2011, Ministry of Home Affairs, Office of the Registrar General and Census Commissioner, Government of India, India.
[42] Op.cit. UNICEF, 2007.

outcome of the MMR from 212 (in 2007-09) to 109 per one lakh live births.[43] All these issues have emerged as continuous challenge and remained as high priority on the country's unfinished health agenda.

1.2 Approaches to the Study of Health

There are three major approaches to understand disease and health in the discourse of philosophy of medicine. These are discussed below.

A. Health and illness: Biomedical approach

The Biomedical approach (Foucault, 1973 and Underwood, Owen, et.al., 1986) on health shows that body operates like a machine. If any breakdown happens at any point of the body, then the body ceases to function normally. The biomedical approach (by Curtis and Taket, 1996) distinguishes between disease and illness, and mentions: disease involves a set of signs and symptoms and medically diagnosed pathological abnormalities and illness is primarily about how an individual feels/experiences the disease. Disease is viewed as more objective, involving professional rather than diagnosis. The biomedical model of health assumes a mind/body dichotomy, and it does not place much emphasis on how an individual's mental health might affect physical health status.

B. Health and illness: Critical approach

The critical approach on health has been particularly influential in health literature. Health is defined in such a way by the dominant forces in a capitalist society that it becomes a defining and controlling mechanism (Doyal, 1979; Richard Wilkinson, 1996; Vicente Navarro, 2002; 2003, 2004). Such type of definition is based on Marxist approach. Vicente Navarro in his work - *Medicine under Capitalism* (1976), *and Crisis, Health and Medicine: A Social Critique* (1986), have examined how the fundamental pursuit of profit by the capitalist system produces disease. Both authors argue that capitalist societies are structured in such a way that they produce disease. The system is geared up to maximize profit rather than protecting the health of workers and their families. Health is affected by practices such as shift work, overtime, monotonous work and hazardous chemicals in the workplace. It is defined in terms of the ability of people to function and carry on with their normal activities. Doyal (1979) notes that definitions

[43]Office of the Registrar General, *Sample Registration System (SRS),* Maternal Mortality and Total Fertility Rate, Government of India, July 7, 2011.

of health and illness in a functional way is an important example of how a capitalist value system defines people primarily as producers - as forces of production. Such type of functional definition does not concern itself with people's fear, anxiety, suffering, and this may further limit expectations of health.

C. Health and illness: Political economy approach

The political economy of health has been criticized by several scholars. The individualistic definition of health shows as widespread under capitalism. Doyal (1979) comments that this 'emphasis on the individual origin of disease is to consider as social significance, as it effectively obscures the social and economic causes of ill health'. It underpins a notion of health that stresses personal responsibility for maintaining health. This perspective defines health in terms of individual responsibility and absolves other factors of responsibility. McKinlay (1984) has mentioned that: "*The emerging emphasis on personal responsibility for health mystifies the social production of disease and undermines demands for rights and entitlements for health care. Beneath and rhetoric about the cost of medical care and obligation of the individual to remain healthy less a political problem to shift the burden of costs back to labor and consumers and to paralyze regulatory efforts undertaken to control environmental and occupational hazards"*.

The political economy aspect of health in terms of its distribution in society (and so focuses on inequalities in health status, especially those resulting from class differences) and in terms of the structural factors that create or detract from health, or environmental, housing and occupational conditions. From this perspective, studying the health of individuals is less valuable than studying the collective health of societies and the socioeconomic forces that affect collective health. Increasingly, the political-economic view stresses the connections between the health of people in rich countries and that of poor countries in the processes of economic globalization.

In this regard noted economist Amartya Sen (2002) has documented similar incongruent findings from the study of life expectancy in India. In his research, he identified health inequalities among various states. The sociological foundation of health as a concept which can be seen at the societal level, considering that 'health' involves decisions regarding how to structure health care system or is health a private good to be

purchased under market mechanisms or is it a public good, guaranteed as Fundamental Rights by the Constitution. The above discourse and discussion reflect upon the notion of health, which is socially constructed, including cultural aspects and how one responds to pain and suffering, and how one conceptualizes health and illness.

American Sociologist C. Wright Mills (1959) defines health and illness as '*sociological imagination',* a kind of thinking that involves understanding and drawing connections between personal troubles and public issues. Mill's sociological imagination requires, to link personal circumstances with structural economics and politics. It also requires to be aware of an idea of social structure and to use it with sensibility. This influential approach to social research enables to see ill health - surely one of the most important and personal troubles which is explicitly social. In sociology, it is argued that the concept of health and disease is socially constructed and varies by culture, time, and place (Samson, 1999). And lastly, health is a sociological concept in the sense that social conditions ultimately determine the levels of people's health (Marmot and Wilkinson, 2006). Both sociologists and epidemiologists have firmly documented that health is socially constructed, socially positioned, and social hierarchical system strongly determines health and illness. It also partly determines how long one may expect to live as per the condition and environment of a particular country.

1.2.1 Understanding Disease Health: Definitions and Perspectives

Health and diseases are multifaceted phenomena, so defining health and disease is not an easy task in the philosophy of medicine. Many philosophers have given different philosophical accounts and defined the term. The concepts of 'health' and 'disease' have been the major focus of studies in the discipline of social sciences, particularly in anthropology, sociology and philosophy for few decades. Most of the philosophers and medical professionals elaborated the concept of health and its manifestation, which is more important in the philosophy of health. It can be understood in many ways in which health is used. Traditional definition of health is concerned with an individual body's mechanical ability, and the power operation of its constituent parts of organs. The

medical notion of defining health is related to physical and mental conditions of an individual and freedom from diseases and abnormalities.[44]

In laymen perspectives, it is little difficult to define health than disease, probably because disease presents a problem to which societies have to respond.[45] Health is broadly defined in sociology. According to the sociologist Williams (1983)[46] the word 'health' carries considerable cultural, social, and professional baggage, and its contested nature suggests that it is a key to our culture and a word that involves important ideas and strongly held values. Both Susan Sontag (1978)[47] and Crawford (1984)[48] have considered health as a cultural factor and a pre-occupation of modern society. However, Susan Sontag has noted that health and illness are culturally important. Not being healthy and being ill have often seen as undesirable and states that imply adverse moral and psychological judgments about the ill person.

Another noted sociologists Pill (1988), says being healthy requires no action (unlike being ill) and may be taken for granted. She identifies three main domains of health: health is not being ill; it is a prerequisite for life's functions, and it is a sense of well-being expressed in physical and mental terms. Pill argues health is seen as an absence of illness in terms of functional capacity and as a positive condition of mental and physical well-being. She also says health is to perceive the dynamic relationship between the individual and the environment. Another sociologist named Herzlich (1973),[49] while working with French middle-class people, found that health is defined as the simple absence of disease, a positive state of well-being and as having a reserve to cope with life and illness.

Talcott Parson (1951), in his work 'The Social System,[50] has noted that "too low a general level of health, too high incidence of illness, is dysfunctional: this is the first instance because illness incapacitates the effectiveness of social roles." He has explained

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[44] Andrew Green, *An Introduction to Health Planning in Developing Countries*, Oxford University Press, Oxford, New York and Tokyo,1999.
[45] David Locker, *Symptoms and Illness: The Cognitive Organization of Disorder*, Tavistock, London, 1981.
[46] R.Williams, "Concept of Health: An Analysis of Lay Logic", *Sociology*, Vol. 17, pp. 185-205
[47] Susan Sontag, "*Illness as Metaphor*", Published by Farrar Straus Giroux, 1978.
[48] Robert Crawford, "A Cultural Account of 'Health': Control, Release and the Social Body", in J. McKinlay (ed.), *Issues in the Political Economy of Health Care*, Tavistock, London, 1984, pp. 275-307.
[49] Herzlich, C., *Health and Illness*, Academic Press, London, 1973.
[50] Talcott Parson, *The Social System*, Free Press, New York.

health valued as a social commodity, an essential resource for individual's achievement and the smooth running of the society.[51] However, Parson's perspective on illness is complex and inability to fulfill valued social roles (such as breadwinner parent), but alongside this, the individual's actual failure to work or to look after his or her child was to be understood in psychological terms.[52]

According to (WHO and UNICEF) Alma-Ata-Declaration 1978: health is defined in the following manner: "*Health as a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is the most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector.*"[53] In this definition, the WHO defined health beyond a limit, biomedical and pathology-based perspective to the more positive domain of 'well-being'. Also, explicitly defines including the mental and social dimensions of well-being. The WHO radically expanded the scope of health and by extension, the roles and responsibilities of health professionals and their relationship to the larger context of society. The definition by WHO also highlights the importance of health promotion, as "the process of enabling people to increase control over, and to improve, their health condition." To do so, "an individual or group must be able to identify and realize aspirations, to satisfy needs, and to change or cope with the environment".[54] The societal dimensions of this effort were also emphasised in the Declaration of Alma-Ata (1978), which described "health as a social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector".[55] Thus, the concept of health goes beyond health care to embrace the broader social dimensions and context of individual and population well-being. The most far-reaching statement about the expanded scope of health is contained in the preamble of

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[51] Talcott Parson, *The Social System*, Routledge & Kegan Paul Ltd, London, 1951.

[52] Ellen Annandale, *The Sociology of Health and Medicine: A Critical Introduction*, Polity, UK, 2001.

[53] WHO & UNICEF, WHO, *Alma-Ata-1978, Primary Health Care, Report of the International Conference on Primary Health Care, Alma-Ata*, USSR, 6-12 September 1978, Jointly sponsored by WHO and UNICEF, WHO, Geneva, 1978, pp. 1-80.

[54] *Ottawa-Charter for Health Promotion*, presented at First International Conference on Health Promotion, Ottawa, November 21, 1986.

[55]World Health Organization, *Declaration of Alma-Ata,* "Health for All" Series No. 1, WHO, Geneva, September 12, 1978.

the WHO which declared that "*the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being.*" It gives a broader definition of health.

1.2.2 Understanding of Public Health and New Public Health

The concept of public health has evolved from ancient to modern times with a series of scientific experiments and advancement of research in the philosophy of medicine and health. Public health is primarily concerned with the health of the entire population, rather than of the individuals. In the past, public health was seen as a discipline that studied and implemented measures for control of communicable diseases, primarily by sanitation and vaccination. However, in recent times the meaning of public health has changed and is defined in different ways. Public health is the science and art of prevention of diseases, prolonging life and promoting physical health. It can be developed efficiently through organized community efforts for the sanitation of the environment, the control of community infections, and through the education to the individual. The education makes aware about the principles of personal hygiene, the early diagnosis and preventive treatment of disease. It could also achieve through the development of the social machinery, which would ensure every individual in the community a standard of living and investment of adequate budget for the maintenance of good health.

The government intervention in public health involves public officials taking appropriate measures for protection of the people's health. The key elements in public health are the role of the government – its power and obligation to involve mandatory or coercive measures to eliminate a threat to the public's health (Rothstein, 2002). Thus, public health is multi-dimensional in its definition and application. The term 'public health' is broadly defined by the Committee to study on the Future of Public Health, Institute of Medicines, Washington, "public health' what we, as a society, do collectively, to assure the conditions in which people can be healthy.[56] In India, it is noticed that the responsibility and duty of the society/government, to reduce the population's exposure to disease by providing safe drinking water, assuring food safety, and other health measures:

[56] *The Future of Public Health*, Committee for the Study of the Future of Public Health Division of Health Care Services, Institute of Medicine, National Academy Press, Washington D.C., 1988, p. 1.

vector control; monitoring waste disposal, and water systems; and also by creating awareness among the people, health education to improve personal health behaviors and build citizen demand for better public health outcomes.[57] The public health outcome depends on the sanitary revolution and development of modern bacteriology, which contributes to the improvement of health. However, other societal factors such as housing facilities, sanitation facilities, improved food habits, and health education have influenced public health a lot. Such, factors have played an important role in the improvement of environmental, physical, economic, and socio-cultural aspects of personal style of living in a better health. At the same time, with the growth of industrialized urban communities, rapid transport, and extensive trade and commerce in multinational economic systems, the health of individuals and communities have become more than just a personal, family, and local problem. An individual is not only a citizen of the village, city, or country in which s/he lives, but of a 'global village'. Taken together all have contributed to evolving a concept of disease and their causes but health system, which fails to adjust to changes in maternal health, child health and development of occupational health, brought a new change in the paradigm of public health. The fundamental concept of public health suffers from immense inequity and the burdens of preventable disease, disability, and death. Such concept of public health leads to the development of "New Public Health' (NPH) in the 21st century.

The emergence of NPH in this century is very comprehensive in its scope. It relates to or encompasses all communities and individual activities directed towards improving the environment for health, reducing factors that contribute to the burden of disease, and fostering those factors that relate directly to improve health. The NPH program ranges broadly from immunization, health promotion, and child care, to food labeling as well as to the assurance of well-managed, accessible health care services. A strong NPH system would have adequate preparedness for natural and man-made

[57] Monica Das Gupta, "P*ublic Health in India: An Overview"*, Development Research Group, The World Bank, WPS-3787, 2005, pp. 1-13.
http://www-wds.worldbank.org/servlet/.../WDSP/IB/.../wps3787.pdf, Accessed on March 12, 2011.

disasters, as seen in the recent tsunami, hurricanes, biological or other attacks by terrorists, wars, and conflicts.[58]

Thus, the NPH targets to maximize human health and well-being for individuals and communities, locally, nationally and globally. To achieve this, the NPH works with:[59]

A. Total societal efforts to maximize quality of life and health, economic growth and equity for all societies;
B. Prevention and treatment of illness and disability;
C. Environmental, biological, occupational, social and economic factors that endanger health and human life addressing: (a). Diseases and infirmity, trauma and injuries; (b). Local and global environment and ecology; (c). Healthful nutrition, food security, availability, quality, safety and affordability of food products; (d). Disaster, natural and man-made, including war, terrorism, genocide; (e). Population groups at special risk and with specific health needs;
D. Health policy and management of health systems recognizing economic and quality standards of medical, hospital and other professional care to health of individuals and population;
E. Training of professional public health workforce and education of all health workers in the principles and practices of public health;
F. Maintain and promote individual and community rights to health with equity and high professional and ethical standards.

The NPH involves a change in paradigm and organized public health system which needs to work and to reduce inequities between and inside states within the country. It also demands special attention to health through promotional activities at the national and the local levels. It provides access for groups with special needs for medical and community health care with the currently available and newly developing knowledge and technologies. It has identified the widening gap between available capabilities to

[58]Theodore H. Tulchinsky, and Elena A. Varavikova, *The New Public Health*, Elsevier Academic Press, London, 2009.
[59] Ibid.

prevent and treat disease with actually reaching all those in need. This gap is still the source of great national and local inequities. The NPH would help to develop the applications of existing and new knowledge and the importance of social solidarity in implementation of the new discoveries for every member of the society, in spite socioeconomic, ethnic, or other differences. The importance is given to political will and leadership, adequate financing, and organizational systems in the health setting to be supported by well-trained staff for planning, management, and monitoring functions of the health system. It includes responsibilities and coordination at all levels of government and also by the non-state actors. Importantly the NPH tries to bring transformation in the health conditions of the people specially among the vulnerable groups, i.e. women, children, poor, and old age people. In this context, the new policy of the National Rural Health Mission (NRHM, for details see chapter-2) has based on the objectivity of NPH and targets to bring the changes in health situation of rural areas particularly among the poor, women, and the children.

1.3 Theoretical Debates on Health and Disease

The concept of health occupies a central place in the philosophy of medicine. The philosophical debate on the concept of health is the rapid growth recently. It was introduced in the seventh century by the school of medicine in Europe. Health has not generally been viewed as a proper object of philosophical study. It is not well known that health and health care was important topics for Plato and Aristotle, as well as for, John Locke, and Immanuel Kant. Few people know that the dominant school of medicine in Europe until the seventh century – Galenic medicine – was an application of central themes in Aristotle's natural philosophy, or many of the schools which followed and highly influenced by Descartes's philosophy. Even some of them believe that philosophical analysis could make any valuable contribution to modern medicine. Medicine for a long time has liberated itself from the bonds of philosophy in its move to become an empirical science.[60] There is thus a case going into the philosophy of health and medicine and its potential value. The health is discussed on three points of view:

[60] Lennart Nordenfelt, "*On the Nature of Health: An Action-Theoretic Approach*", Philosophy and Medicine Series, No-26, Kluwer Academic Publishers, Dordrecht/Boston/London, 1995, p. 1.

from the philosophy of anthropology, science and most particularly from philosophy of clinical medicine.

A. Health as a subject for philosophy of anthropology

Health, impairment, disease and disability are concepts, which are well embedded in ordinary thinking and, which have a long non-scientific tradition. There is an ordinary concept of health, which can be used by the layman point of view with the same accuracy as it can use most other central concepts characterizing human. To characterize a human being in terms of health or illness is to describe one aspect of the 'status' of this human being, what we often call his 'state of well being'. Similarly, the purpose of philosophical anthropology is to understand and intellectually organize the qualities of man in order to construct reasonable humankind. It is the significant task for philosophy to analyze the concept of health and determine its relation to other central characteristics of human beings.

B. Health as a subject for philosophy of science

The medical sciences mainly focus their interest in health on the scientific research point of view. They meticulously describe the various human diseases; they classify them, investigate their etiology and look for therapies with which to combat them. The concept of disease is thus a key concept in medicine. Thus, understanding the concept of disease is essential to understanding of health in medical science and thus the discipline of medicine falls in philosophy of science, which treats of the science, theories and concepts.

C. Health as a subject for philosophy of clinical medicine

The clinical medicine and health care do not merely focus on disease but a broad spectrum of the health care system. It is the health care institution that provides the required facilities to cure diseases, and it is the responsibility of health care personnel to maintain and promote the existing health of the population in a larger context.

1.3.1 The Classical Debates: The Aristotelian Philosophy

Aristotle was one of the philosophers to spell out the differences between medicine and natural philosophy. Aristotle, and Aristotelianism, made and facilitated major discoveries in the field of comparative anatomy, physiology, embryology, pathology, therapeutics and pharmacology. They provided a comprehensive and

consistent theoretical framework for research and understanding of the human body, its structure, workings and failings and its reactions to foods, drinks, drugs and the environment.[61]

Aristotle had a keen interest in medicine and biology. He focuses emphatically the context of natural science: the theoretical study of *nature* and to him, psychology means *psycho-physiology*, an analysis both formal (mental) and of the material (physical) aspects of what it means for a natural entity to be a living being.[62] He says that he will be concerned with the most important 'activities and experiences' of living beings (man, and animals) in particular, with those that are 'common to the soul and the body' and sense-perception, memory and recollection, sleep and waking, youth and old age, growth and decay, breathing, life and death, health and disease. These are, he says, the most important functions of living beings who can realize or experience *qua* living beings, health and diseases are characterized by a living being.[63]

Discussion of health and disease was apparently planned by Aristotle at the end of the series of treatises, which is known as the "*Parva Naturalia"*. He prefers the study of nature rather than medicine, because the former is concerned with universals, the latter with particulars, and because the former reaches a higher degree of accuracy, but he also recognizes that even medicine may contribute to the study of nature. He, however views the soul as the principle of organization of all bodily functions, the formal apparatus which enables every organism to live and to realize its various functions. His views on the bodily aspects of thinking, and it would attempt to show that although thinking, according to Aristotle, is perhaps itself a non-physical process; bodily factors have a much more significant part to play in it than has been recognized.

1.3.2 The Classical Debates: The Platonic Philosophy

The Platonic notion of health concept was different than Aristotle. He says philosophers, judges, and true political leaders are a special kind of doctors as they bring about virtue in individuals and society. In a way, they all engage in curing and caring, even if they work in different fields. Plato also has articulated that, 'Virtue seems, then,

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[61]Philip J. Van Der Eijk, "*Medicine and Philosophy in Classical Antiquity: Doctors and Philosophers on Nature, Soul, Health and Disease"*, Cambridge University Press, Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, Sao Paulo, 2005.
[62] Ibid.
[63] Ibid.

to be a kind of health, fine condition, and well-being of the soul, while vice is disease, painful condition, and weakness'. His opinion about the concept of health is very little, but keeps a common core as he defines health as a kind of harmony, a balance, and order within the body and disease as a lack of balance, a disproportion or a disorder. He says the aim of the doctor's work is to bring about health. Plato feels pleasure and desire to be threats against health and there is a strong connection between pleasure, health and a good life (Republic, 444d).[64]

Health according to Plato is not the most significant element of human life. We must not concentrate our interest and ambition on our health or on questions on health and disease. Man is healthy by nature, and he has to carry out his share of work for the state. To keep alive at any price, without being able to take part in the work for the state, is not good. On the contrary, when people concentrate on their health and want to consult a doctor anytime, then that is a sigh of unsound condition in a society. Plato also says excessive care of the body, apart from physical training, is pretty well the biggest obstacle of all. He presupposes a close connection between man's bodily and mental functions. Even if the relation is far from specified, he evidently starts from the point that the soul and its properties determine the function and properties of the body. We need to care the soul in order to achieve balance in the body. "*It seems to that a fit body doesn't by its own virtue do the soul good, but instead the opposite is true-a good soul by its own virtue makes the body as well as possible*" (Republic, 403d).

Plato also emphasizes some sort of epidemic diseases and he says such diseases occur mainly because the way we live our life, he named such disease as 'lifestyle disease'. Again he emphasizes that excessive and intemperate use of food and drink or a depraved and disorderly life cause disease.

1.3.3 The Contemporary Debate on the Biostatistical/Naturalist Theory

The debate on health and diseases basically focuses on two theories which are more important in the philosophy of medicine. One is Christopher Boorse's Biostatistical theory and other one Lennart Nordenfelt's holistic welfare theory. Christopher Boorse is one of the pioneers in the field of public health and particularly in Biostatistical theories

[64] Bo Petersson, "Health, doctors, and the good life: A footnote to Plato", in Lennart Nordenfelt and Per-Erik Liss (ed.), "*Dimensions of Health and Health Promotion*", Rodopi, Amsterdam-New York, Value Inquiry Book Series-138, 2003, pp. 1- 22.

of health, argues on naturalist point of view whereas Lennart Nordenfelt is a noted health analyst and profounder of the holistic welfare theory of health, discusses on normative point of view. Both the theorist argues on different perspectives. All the contemporary debates on health and diseases revolve around both the theories.

Christopher Boorse (1977, 1987, and 1997)[65] advocates the concept of health and disease in medical sciences, ethics and society in a broader perspective. In his series of essays, he has discussed that disease nested within the theoretical apparatus of evolutionary biology. The health is a character of normal species' functioning, and statistically typical contribution of all the organism's parts, and processes to the organism's overall goals of survival and reproduction. He defines "a disease is a type of internal state which is either an impairment of normal functional ability, i.e. a reduction of one or more functional abilities below typical efficiency, or a limitation on functional ability caused by environmental agents". He says if you are healthy, then you would function normally and normal function is discovered by the natural sciences and based on a scientific experiment. He argues what is biologically natural is normal for humans. By defining disease, Boorse makes it a matter of scientific investigation, ultimately free from bias and social influence, so, according to him, health and diseases are both value free.

Boorse recognizes that the criteria physicians use in diagnosing and treating disease involve values, but he sees these as a secondary overly, supervening upon the underlying, value neutral core. Boorse claims that health is determined solely by empirical facts and does not depend on evaluative judgment. Boorse has been the most influential naturalist theorist because his approach provides a representational strategy for working out some core assumptions integral to modern medicine and his core features of his work is based on: (1) scientific, value-free basis, and applies to all; (2) broad, social and individual values come in as a second strand, influencing when a given disease is treated, but these values are supervening. Finally, (3) socioeconomic factors will not play a fundamental role in how we understand and treat disease.[66] Thus, Christopher Boorse advocates his Biostatistical theory of health and disease.

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[65] Christopher Boorse, "A rebuttal on health" in J. M. Humber, and R. F. Almeder (eds.), *What is Disease*?" Humana Press, Towata, NJ, 1997, p. 23.
[66] Ibid.

1.3.4 The Contemporary Debate on the Holistic Welfare/Normative Theory

Lennart Nordenfelt understanding of health and disease is quite different than Boorse. *He describes the human being as an active creature living in a network of social relations. Thus, health and illness are viewed as phenomena which involve the individual as a social agent, and in particular involve his or her way of acting society*".[67] The Holistic Welfare theory of Nordenfelt has mainly two features; firstly, he refers to a particular type of feeling, a feeling of well being in case of healthy, and feeling of suffering in case of illness. Secondly, he emphasizes the individual's ability to perform the actions that s/he wishes to perform daily life. He argues that the term ability occupies a central position in his theory and highlights two above mentioned ideas of health and disease. He says, suffering is almost always connected with some reduction of ability. When one is in great pain it is almost impossible to perform a complex action and there are a number of cases of reduced ability, for instance the extreme case unconsciousness, which do not want to entail any suffering. Thus, the holistic theories of health make ability their central concept in the characterization of health. His idea; however is to relate ability to a certain class of the individual's goal. He says by stating: "*P is completely healthy, if and only if, P has the ability. Given standard circumstances, to realize all his or her vital goals in a given standard circumstances P is unhealthy (or ill) to some degree, if and only if P, given standard circumstances, cannot realize all his vital goals or can only partly realized at them in a given standard circumstances.*[68]

Thus, when a person is healthy, a balance or equilibrium exists between what a person can do and what s/he in a deeper sense wants to do. In such a theory of health, Nordenfelt calls his theory 'holistic'- health and disease are not contradictory opposites. When a person cannot reach her/his vital goals, the person is unhealthy, but that does not necessarily mean that the person has a disease. Many causes for why a person cannot reach her vital goals are possible, from exterior circumstances to bodily capacities and mental factors. According to Nordenfelt one cannot understand the physiological norms of nested functions integral to medicine in terms of some species type of theoretical biology as Boorse accounted. He says that the term 'health' and 'disease' reflect value

[67] Lennart Nordenfelt, "Concepts of health and their consequences for health care", *Theoretical Medicine*, No. 14, 1993, pp. 277-285.
[68] Ibid.

judgments. Healthy status is something that we desire, and disease status is something that we want to avoid. Nordenfelt rightly appreciates that health concepts are tied to social-historically conditioned notions of human welfare, and not just survival and reproduction as Boorse argues (1997).

Thus, Nordenfelt's theory brings health in the notion of happiness as health is understood in terms of a functional ability of a person to realize vital goals necessary for minimal happiness. The vital goals that determine functional ability may vary from individual to individual. By defining health in this individually relative way, Nordenfelt captures a primary feature of the current bioethical consensus, and he makes it integral to the fundamental theoretical apparatus of medicine. He says that the ends of a clinical encounter are specified in the context of a physician-patient interaction, whereby the physician solicits the patient's values, and then 'applies' medical science for the advancement of those ends. The formulation of vital goals is in the hands of the individuals themselves and – concerning certain basic vital goals – in the hands of physicians. Once these goals are given, the physician plays the role of a 'technician', applying the tools of science to realize them (Nordenfelt, 1995). The contemporary ethos of patient autonomy, thus, becomes a vehicle for specifying the ends that are necessary for the appropriate technical intervention. In this way Nordenfelt accounts his health and disease concept.

1.3.5 New Trends on Health: George Khushf

George Khushf argues that modern medicine involves a 'thought style' that pre-supposes at multiple levels, the value distinction which is integral to Boorse's thought. Theoretical, ethical, and policy reflection colludes in diverse ways to uphold this value dichotomy. He argues that if there is a scientific core integral of medicine, only then we would be able to nest pathology within the explanatory framework of biology, which is evolutionary theory. He has given a new definition of weak and strong normativism: weak normativists think that it can distinguish factual and evaluative components, or, in a related variant, they think it can neatly distinguish 'medical' values from those that are non-medical, where the warrant of the medical/non-medical distinction is rooted in the logic of health concepts. While the theorists see values as integral to health concepts,

weak normativists share with naturalists a confidence in our ability to tease out the facts from values.[69]

There are many variants in this approach, but all seek to protect the medicine from outside intrusion. The task of clarifying health concepts is itself seen as an important feature of this protection of a bio-medical ideal. Strong normativists do not think it is possible to disentangle factual and evaluative judgments. Instead, they seek to show how diverse cultural, socio-political, and economic values unavoidably configure our health concepts, and they seek to make explicit and open for debate some of the underlying structures and values that are taken for granted. For strong normativist, medical theories depend on individual and social conventions and decisions regarding what we want to treat and how we want to treat it, as well as on the resources we have for supporting our health systems. Such concept of health is most appropriate in Indian context. This argument shows that how such values are integral to the meaning of pathology, the strong normativist opens medical standards of care to a broader communal deliberative process. Some strong normativists are social constructivists. They give priority to the socially determined features of health concepts, and downplay the descriptive, scientific aspects of medicine. Other strong normativists, however, give much greater weight to the descriptive role of health concepts, and they privilege modern, scientific accounts of disease.

In recent years, much of the philosophical debate on health concept has been changed and disconnected from the trends that concretely influence medical practice. George Khushf (2007) has in fact argued that health concepts have been changed recently and there is a new importance and role in the philosophical debate. The changes that have been occurring according to George Khushf are reflected in things like managed care and total quality review the researcher like to connect with the flagship program of NRHM, where the total health service intends to be system is changed compared to earlier health service system. The NRHM focuses on much on quality health service with a proper management system for the people and especially rural women and children in India. In recent years it has been observed that there is an increasingly prominent role given to socioeconomic factors and population-based health considerations in the formation of

[69] Ibid.

medical standards of care. Largely implicit economic considerations are now being made explicit and directly incorporated into the formation of guidelines and clinical pathways, which, in turn, structure the protocols of health systems. Increasingly, there is overlap between administrators and clinicians. In many ways, we are moving from an individually-based on a population based practice, and from an individually oriented clinical encounter to one that simultaneously addresses individuals as well as the populations. Thus, George Khushf argues that it is difficult to sustain the fact/value distinction in its classical form, and that the administrative versus clinical division of labor, which provides a material embodiment of that distinction, would it increasingly blur. The challenge is how appropriately conceptualize these new 'quality management' strategies into the practice of health delivery system.

1.4 Review of Literature

The review of literature is classified into three phases for better understanding and for the purpose of the study. The first phase discusses about the health care situation during economic liberalization in India and implementation of Structural Adjustment Program (SAP) since 1990s. It illustrates the impact of SAP on health sector from 1990 to 1999. The second phase of the review describes the health care situation in general and health care facilities for women and children in the country from 2000 to 2005 in particular. This phase has witnessed three major policies of the nation, i.e. the National Population Policy-2000 and the National Health Policy-2002 and importantly the nationwide flagship program of the NRHM. The third phase of literature reviews post discusses health care system in the country in general and the changes that have occurred in post implementation of the NRHM in particular. It emphasizes development of primary health with a thrust area of maternal and child health in India since 2006-2012.

Thus, three phases of review of literature would comprehensively enhance a comparative perspective on health development in the country which shaped since 1990s. The significant change has begun after the liberalization period; the present study focuses the impact of liberalization on the public health situation in India. It is found that the health services are provided to the people by three institutional levels i.e. the Sub-Centers (SCs), Primary Health Centers (PHCs) and the Community Health Centers (CHCs) in India. Therefore, the review of literature generally focuses the health care provisions

related to availability, accessibility and affordability of health facilities on the one hand and infrastructures, human resources, drugs, and quality of health services including the behavior of doctors, on the other hand. It also particularly reviews the public health issues and perspectives and its implication on health in India since 1990s to 2012.

A. First phase (1990-1999)

The first phase review of the literature includes some of the major studies on public health undertaken by different scholars. One of the studies conducted by S. P. Ranga Rao (1993)[70] who has studied three southern states of India namely Andhra Pradesh (A.P), Tamil Nadu and Karnataka. While conducting the study on PHCs in the backward regions of A.P, he finds high absenteeism of doctors, inadequate health care in the backward region of A.P. It is also noticed that, the doctor renders adequate services of only those patients who pay money. In some cases, doctors advise the patients to come to their residence for private treatment, and doctors earn an income of Rs 4000-5000 per month in the remote corner of the district to where many doctors have been reluctant to go and where alternative medical services are unavailable even though the private practice of government doctors has strictly been banned. Similarly, his work on Tamil Nadu indicates that all the sanctioned posts in some PHCs are not filled up by the government. Some other PHCs doctors have complained that they have not been able to discharge their functions more effectively because of competent technicians are not available to handle the equipments and more over these equipments are not in working condition. However, the case of Karnataka is differentiated comparatively better than two states.

K. Seeta Prabhu (1994)[71] has studied on the Structural Adjustment Program (SAP) and its implications on health in India. She argues that adoption of SAP in India has resulted in several states to experience of fiscal stress since mid-eighties, and the consequent financial compression has further affected the financial situation of different state Governments. The states have been suffering on account of the deceleration in tax revenues and plan and non-plan grants from the Central Government. Her estimation

[70] S. P. Ranga Rao, *Administration of Primary Health Centres in India: A Study of Three Southern States*, Mittal publications, New Delhi, 1993.
[71] K. Seeta Prabhu, "*World Development Report-1993: Structural Adjustment and the health sector in India*", Social Scientist, Vo. 22, No. 9/12, September –December, 1994, pp. 89-97.

shows that growth in several states share in Central taxes was 22.15 percent in 1992-93, which reduced to 7.27 percent in 1994-95 (B.E). In case of plan grants, the deceleration was from 25.75 percent in 1993-94 to 1.45 percent in 1994-95 (B.E). During non-plan grant, there was a negative growth in all the years since 1991-92. And the budget of 1995-96 also did not bring any required changes in arrangement for sharing revenue between the Centre and States, despite the recommendations of the Tenth Finance Commission. As a result, there was increasing the revenue deficit from Rs. 5309 crore in 1990-91 for a high deficit of Rs. 8365 crore in 1994-95 (B.E). This revenue deficit as a proportion of revenue expenditures had been hovering around 6-7 percent at all state levels which force the states to decelerate its expenditures in the social sector in general and health sector in particular. Therefore, in the public health sector, there was the deceleration in real per capita revenue and capital expenditure on health since the mid-eighties. There was declining in the share of the health sector in total revenue expenditures in different states. It enforces to undermine the role of the state in public sectors, particularly while investing in the health sector. As per the recommendation, the role of the public sector is confined to providing the preventive services and the curative health services would be provided by the private sector. Such policy adoption shows lack of concern of the part of the government for the poor sections of the society who mainly depend on public health services. During 1990s there was a continuous reduction in the share of the health sector in total State Government expenditures. As a result the total health expenditures as percentage of Gross Domestic Product (GDP) was declined from 1.05 percent in 1985-86 to 0.96 percent in 1990-91 and further come down to 0.88 in 1995-96.[72] It is also evident that medical share and the public health in total State Government expenditures declined in several states in the country. The huge decline trend of investing in public health since 1990s put the public health delivery system into jeopardy. This state of the situation leads the country, particularly rural part in the country to face more morbidity and mortality.[73]

[72] National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India.
[73] Ibid, p. 93-96.

In 1995 the World Bank has studied the health care situation in India and has reported extensively. According to the World Bank (1995)[74], the health care system in India has serious problems with respect to access, efficiency, effectiveness and quality, despite the high level of overall private and public expenditures on health. The key health indicators like child health and maternal morbidity and mortality remain low when compared to Asian countries, like Sri Lanka and China. These are the major problems which prevent the health care system from achieving desirable outcomes. Moreover, India faces challenges in providing health services to its people from different reasons as child mortality, infant mortality and maternal mortality are very high. At the same time, new health problems such as HIV/AIDS and various communicable diseases, including malaria and tuberculosis have also emerged. It is mentioned that without careful attention to the provision and financing of primary health services in general and preventive and promotive services, in particular, India took a risk in spending a large share of GDP on health while still failing to get sufficient return for that investment.

Besides above study, the Human Development Report (1999), India has also been included in this review as it has documented some of the insights of health care situation in India. It has documented the accessibility of rural health care in some of the major states in India. It reveals that there has been quantitatively better health coverage in Tamil Nadu with 50 percent villages having health access, and between 30-36 percent in Maharashtra and Haryana. The southern states like Tamil Nadu, Kerala and Karnataka also have greater access to a hospital within five kilometers of the place of residence. Less than 30 percent of villages in Gujarat have access to a PHC. It also noticed the public health system and faces a critical problem of shortages of staff, especially in rural areas, as medical personnel in general do not want to post in rural and remote areas. As a result, many posts in Sub-Centers and Primary Health Centers in rural areas remain vacant.

[74] *India: Policy and Finance Strategies for Strengthening Primary Health Care Services*, The World Bank, Report No. 13042-IN, on Population and Human Resources Division, South Asia Country Department II, Bhutan, India, Nepal, May 15, 1995.

B. Second phase (2000-2005)

This section tries to discuss the health care situation in India before implementation of the NRHM. Therefore, the second phase review of literature is important as the government has implemented two major health policies i.e. the National Population Policy-2000 and National Health Policy-2002. The implications of both the policies are identified from various studies conducted during the phase. The study conducted by Pia Malaney in 2000[75] focuses the public health sector reform in Tamil Nadu. She tries to know the health services in the state by questioning that why people access private health services by paying more money when the public health sector provides the same kind of service with free of cost or little cost. The reason she found that because of quality care, modern equipments, availability of doctors, and availability of drugs motivated people to use the private service over the public service. She noticed that after health care reforms initiated by the Government of Tamil Nadu, the situation of the public health sector has changed. As part of the reforms, more compensations and incentives are provided to medical and paramedical staff. The government has developed the infrastructure facilities, provision of human resources, and social insurance system for people. Apart from that importance is given for the availability of equipments, drugs, effective referral system, quality health care and regular monitoring of public health delivery system. The emphasis is placed for the development of both the PHCs and HSCs simultaneously. At the same time, the government strictly imposed the regulation on the private health sector. All such steps taken by the Government of Tamil Nadu developed the demand of the public health services of the state. Hence, the study pointed out timely required reform in the public health sector could revitalize the health facilities which are reported as a dysfunctional health service system.

The rural health service in India has always been neglected as noticed some of the studies. In one of the studies, Sucha Singh Gill, Ranjit Singh Ghuman (2000)[76], in Punjab's rural health care system finds the similar result. They have addressed that the

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[75] Pia Malaney, *Health Sector Reform in Tamil Nadu: Understanding the Role of the Public Sector*, Center for International Development, Harvard University, January 2000, pp. 1-36.

[76] Sucha Singh Gill, Ranjit Singh Ghuma, "Rural health: Proactive role for the state", *Economic and Political Weekly*, December 16, 2000, pp. 4474-4477.

growing disparity in health care facilities between rural and urban areas of the state creates a major problem. They have found that Punjab's health care system has been beset with many lacunas. According to them, primary prevention, health promotion and specific protection have almost been non-existent in rural Punjab. The majority of the population (70 percent of total population) lives in rural Punjab and continues to face the onslaught of traditional disease pattern as well as the whole range of new diseases associated with modernization of the society. During 1992, the fever has been the biggest scourge in Punjab, claimed 24 percent of the total deaths in rural Punjab. A close analysis of the situation shows that most of the deaths in rural Punjab are due to more neglect of the rural health care service. The rural hospitals and dispensaries in the state have continued to be a shortage of essential medicines, cotton, first-aid material, test facilities, etc. Emergency and hospitalization services have almost been non-existent in the government-run health care programs in the rural hospitals. There has been a wide disparity in rural and urban health services and infrastructure, in Punjab. The availability of doctors and paramedical staff are also skewed in favor of urban areas. Almost all studies pointed out that the large-scale absenteeism of doctors and medical staff in medical institutions in all the blocks. In many cases, absenteeism was in connivance with the senior officers and patronage of other influential and well-connected persons, those medical staff who reside in cities and towns. The study conducted in Sir Hind block, of Punjab reveals that there has been no responsibility and accountability in the existing state sponsored health care system. And in Sanaur block, it has observed that due to total collapse of the enforcement and inspection mechanism, the utilization of these services has touched their lowest possible level. There has been a huge shortage of staff quarters in rural health care institutions. The above discussion shows that how the health delivery system in rural Punjab has been neglected since long time.

Another study conducted by Panikar, P. G. K. (2001),[77] also reported more insights on health care provisions in the country. It is documented that Kerala remains top in terms of health indicators, when compared to other Indian states. This achievement becomes possible by low cost health care and its universal accessibility and availability

[77] Panikar, P. G. K., "Resources not the constraints on health improvement: A case study of Kerala", *Economic and Political Weekly*, Vol. No. XIV, 1979, pp. 1803-1809.

even in the poorer sections of society. It is largely attributed to the universal availability and efficient functioning of the government health delivery system, as competition from government facilities have served as an important factor in determining treatment costs even in private hospitals (Krishnan 1994; Uplekar and George, 1994; Government of India 1997; Kunhikannan and Aravindan, 2000; Government of India, 2002b). Panikar studied the infrastructure of health care facility and has identified that the expansion of the infrastructure facilities in Kerala implies that there is an unmet demand for health and family welfare services in the state. It shows, if the government provides proper health services, then definitely it would facilitate the needs of the people.

K. Seeta Prabhu (2001)[78] studied the Primary Health Centers (PHCs) of two Indian states namely Maharashtra and Tamil Nadu. She has selected two PHCs from Maharashtra and one PHC from Tamil Nadu. She focused on medical doctors and facilities provided by the PHCs. She has found that there has been a lack of facilities of all the PHCs in two states. Except detection of malaria equipments and equipment for deep freezers to store vaccination, she did not find any other equipment in all three PHCs of two states. There has been a shortage of medicines and water facilities in PHCs. She noticed a single medical doctor norm working in two different PHCs of Maharashtra and they stay in the respective PHC village whereas the PHC of Tamil Nadu has two doctors and they have been commuted daily from the metropolitan city of Chennai. It has noticed that sometimes the single doctor of the PHC not available because of a meeting at Taluk/district level. Therefore, people from two PHCs of Maharashtra prefer to visit general hospital than visiting PHCs. Surprisingly, she found that not a single patient over a period of two weeks did not visit one of the PHC in Maharashtra. As a reason she has identified that due to lack of convenient transport facilities people do not utilize health care facilities. On the other side, there were communication facilities in Tamil Nadu to visit PHC. But as it has not been fully functional, hence people visit the general hospital to avail the health care facilities. Here, due to communication problem, lack of health facilities, and absenteeism of doctors people suffer a lot and take treatment from the general hospital situated 15-18 Km. away from their village other than visiting the PHCs.

[78] K. Seeta Prabhu, *Economic Reform and Social Sector Development: A Study of Two Indian States*, Sage Publication, New Delhi, Thousand Oaks, London, 2001, pp. 231-237.

In a major study, David H Peters, K Sujatha Rao, and Robert Fryatt (2003)[79] have argued on demographic transition and health policy in India. They observed that the policy that the India adopted is inappropriate to meet the new health challenges. Health policy at the state level with the appropriate health financing system would better address health problems and emerging epidemic of non-communicable diseases at the state levels whereas the Central Government would focus to reduce large inequalities of outcomes among the states. The Central Government supports and facilitates of the states and the districts particularly in building critical capacities in a technical way rather than directly managing the programs. Hence, it is the responsibility of states to formulate appropriate innovative health policies to meet epidemiological transition in the state as well in the district levels.

D. Varatharanjan, R. Thankappan and Sabeena Jayapalan (2004)[80] assessed the performance of PHCs under decentralized government in Kerala. They found that allocation of more resources to PHCs through decentralization increases better health care facilities. They also observed that the government health care system of Kerala functions relatively well compared to other Indian states, but utilization levels are decreasing due to lack of essential facilities. The overwhelming reason for the low utilization of government health care is the provision of poorer facilities, which in turn limits the utilization of the resources available such as the Medical and paramedical staff (Nair, 1998; Varartharajan et. al., 2002). The availability of physical infrastructure is crucial for the staff to perform better. In many government healthcare institutions, including the PHCs, the staff present are underemployed due to lack of support facilities. This could arguably be due to the diminishing non-salary component in government health expenditure (Kutty, 2000). It is also estimated that only 30-40 percent of the low - income group seeks medical help from government health units, including the PHCs (Kunhikannan and Aravindan, 2000). Only about 15 percent of rural inpatients and 10 percent of urban inpatients receive free treatment in Kerala (Krishnan, 1994). As a result, the poor spend 40 percent of their income on health care, in contrast to the rich who

[79] David H Peters, K Sujatha Rao, and Robert Fryatt, "Lumping and splitting: The health policy agenda in India', *Health Policy and Planning*, Vol. 18, Issue. 3, 2003, pp. 249-260.

[80]D.Varatharanjan, and et.al, "Assessing the performance of primary health centres under decentralised government in Kerala, India", *Health Policy and Planning*, Vol. 19, No. 1, 2004, pp. 41-51.

spend a mere 2.4 percent (Kunhikannan and Aravindan, 2000). The opportunity cost of seeking medical care from the government sector is high, even for the poor, with 60–70 percent of the poor seeking care from the private sector and spending out of pocket expense disproportionately on health care.

Debabar Banerji (2005)[81] has discussed in politics of rural health in India since independence. He criticizes the Ministry of Health and Family Welfare (MoHFW) for not learning anything from past experiences and ignoring the recommendation of the various health Committees including Bhore Committee-1946 and Independent Commission of Health, which was set up by the Voluntary Health Association of India. He is skeptical about the NRHM and its outcomes, as it is not based on scientific evidence and shows lack of competence of political and bureaucratic leadership of the MoHFW. He says health is a complex issue whereas the Ministry of Health adopted a simplistic approach for the NRHM instead of bottom-up approach for development. He said it can't deal with the daunting task of improving the health care situation of the rural population in the country.

Alastair Ager and Katy Pepper (2005)[82] have studied the pattern of health service utilization in Odisha. Both have identified; Odisha achieved a considerable progress in the last decade in the health sector in the areas of service management, staff development, and construction facilities, particularly through the Odisha Health and Family Welfare Project and Odisha Health Services Development Project funded by the World Bank. However, regarding the level of utilization of services in the state only 21 percent of births are attended by a trained health professional (Misra et al., 2003), and only 32 percent of mothers receiving full parental care (Peters et al., 2002). The state provides health service to 89 percent of inpatients, compare to the national average of 50 percent (Misra et al., 2003). However, 96 percent of inpatients those who make avail in-patient facility belong to Below Poverty Line (BPL) of the state (Peters et al., 2002).

[81]Debabar Banerji, "Politics of rural health in India", *Economic and Political Weekly*, Vol. 40, No.30, July 23-29, 2005, pp. 3253-3258.

[82] Alastair Ager and Katy Pepper, "Patterns of health service utilisation and perceptions of needs and services in rural Orissa", *Health Policy and Planning*, Vol. 20, No. 3, May 2005, pp. 176-184.

At the national level, while analyzing the data collected during National Family Health Survey-3 (2005-06), it is found that one third of households use the public hospitals and nearly two-thirds of all households (65 percent) in India generally seek treatment from the private hospitals. About 46 percent of urban households and 36 percent of rural households go to a private doctor or private clinic for health care service. The survey finds that the most common reason for not using public health care facilities is due to poor quality of the services, followed by non-availability of facilities nearby in the locality.

C. Third phase (2006-2012)

The third phase of literature is significant as the NRHM has been implemented during this period of time and it has a major impact on health development in the country particularly in the rural areas. For instance, Krishna Dipankar Rao, David H. Peters and Karen Bandeen-Roche (2006)[83] have evaluated the Uttar Pradesh Health Systems Development Project (UPHSDP). A total of 117 health care institutions from 28 districts are brought under UPHSDP, which included 28 District Hospitals (DHs), 25 District Hospitals for female, 28 Community Health Centers (CHCs), and 36 Primary Health Centers (PHCs). This study measures patient perceptions of quality health care services by various health centers. They have found better staff and physician; interpersonal skills, infrastructure facility, and availability of drugs which show more effective in improving patient satisfaction at public health facilities. Apart from that the study has also identified five distinct dimensions of perceived quality: (i) availability of medicines, (ii) medical information, (iii) staff behavior, (iv) doctor behavior, and (v) hospital infrastructure. All the perceived quality dimensions have a positive and substantially significant effect on overall inpatient and outpatient satisfaction, except for the hospital infrastructure for inpatients. The effect of the perceived quality dimensions of general satisfaction does not significantly differ from inpatient and out-patients, except staff behavior, which is significantly lower for out-patients compared with inpatient.

[83]Krishna Dipankar Rao, David H. Peters and Karen Bandeen-Roche, "Towards patient-centered health services in India a scale to measure patient perceptions of quality", *International Journal for Quality in Health Care*, Vol. 18, No. 6, 2006, pp. 414–421.

Similarly, M. Gopinath Reddy, K. Jayalakshmi and Anne-Marie Goetz (2006)[84] have studied on primary health care in tribal areas of Visakhapatnam in Andhra Pradesh (A.P.). They have found that A.P. has been facing tremendous logistical problems in reaching out to its most disadvantaged citizen, tribal groups living in remote and inaccessible areas. In these areas, the public health infrastructure for communication is barely present. Such rural facilities do have absenteeism, an absence of drugs and equipment in PHCs, a weak referral system, and the absence of an orientation in the rural health system to preventive care instead of curative care. As a consequence, health indicators for tribal populations in A.P. are considerably worse than those for the rest of the population.

Apart from these studies, the review covers the District-Level Household Survey (DLHS): 2007-08, and notices that out of its sample (8,619) PHCs serving 22,825 villages in India, three fourth of PHCs (75.8 percent) have a medical officer, out of which less than one-fourth of PHCs have a lady medical officer and more than two third PHCs have pharmacists. It also explores more than half (54.6 percent) of PHCs have residential quarters for medical officers. Out of total PHCs 52.8 percent is functioning as 24 hours and two thirds (67.2 percent) PHCs have at least four beds. In Jharkhand, Maharashtra, Madhya Pradesh (M.P) and Uttarakhand more than 70 percent health centers are functioning for 24 hours but only 35.7 percent PHCs have regular power supply, and 37.2 percent have functional vehicles. It also reveals that 27.9 percent PHCs have newborn care equipments, and 61.3 percent have functional operation theatre while 47.2 percent PHCs provide referral services for delivery. The DLHS-2007-08 also finds that around 7 out of 10 PHCs have at least 60 percent of essential drugs and two third of the PHCs have at least 60 percent cold storage facility. Survey data shows that in most of the PHCs (90 percent) in the Southern states like Andhra Pradesh, Karnataka and Tamil Nadu have at least 60 percent essential drugs while 5.7 percent PHCs have been providing essential drug facility. This shows that after implementation of the NRHM there is an improvement of health facilities in different health care institutions.

[84] M. Gopinath Reddy; K. Jayalakshmi and Anne-Marie Goetz, "Politics of pro-poor reform in the health sector: Primary healthcare in tribal areas of Visakhapatam", *Economic and Political Weekly*, Vol. XLI, No.5, February 4-10, 2006, pp. 419-426

Nirupam Bajpai, Ravindra H. Dholakia and Jeffrey D. Sachs (2008) have studied the public investment and health care reforms of primary health services in rural India focusing on the states of A.P, Karnataka, Tamil Nadu, Uttar Pradesh (U.P), and MP. They revealed that merely setting up the health care institution is not enough until the provision of higher public investment with accompanied by systematic reform to various health care institutions in the country. They also have found overcrowding and over-utilization of specialty services in District Hospital and CHCs. There are shortfall of general doctors, specialty doctors, nurses and paramedical staff and some extent absenteeism of doctors at the village levels as found in this study, but there is less medical and paramedical staff found while compared to Northern states in India. More focus is required for the development of infrastructures in PHCs level with the required number of human resources, and quality health care provision in all the states apart from higher public health investment[85],[86],[87].

In compliance with the present study, there are some studies conducted after implementation of the NRHM elsewhere in the country which also reached with similar kind of result. The United Nations Population Fund (UNFPA), New Delhi has conducted an assessment of Janani Suraksha Yojana (JSY) in five states namely Bihar, M.P, Orissa, Rajasthan, U.P in 2009.[88] It found that compared to National Family Health Survey (NFHS) III and District Level Household Survey in 2007-08, there is increasing proportion of institutional delivery in all five states. It is clearly showing the effect of JSY scheme that has promoted institutional deliveries. While looking at the socioeconomic condition of the people, it is noticed that Orissa has slightly lower percentage of institutional delivery those living *kuchha* houses, belong to ST community

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[85] Nirupam Bajpai, Ravindra H. Dholakia and Jeffrey D. Sachs, "Scaling up primary health services in rural India: Public investment requirements and health sector reform - Case Studies of Andhra Pradesh and Karnataka", CGSD Working Paper No. 33, Working Papers Series, Center on Globalization and Sustainable Development, The Earth Institute at Columbia University, January 2008, pp. 1-63.

[86] Nirupam Bajpai, Ravindra H. Dholakia and Jeffrey D. Sachs, "Scaling up primary health services in rural Tamil Nadu', Center on Globalization and Sustainable Development, The Earth Institute at Columbia University, 2008, pp.1-65.

[87] Nirupam Bajpai, Ravindra H. Dholakia and Jeffrey D. Sachs, 'Scaling up primary health services in rural India: Public investment requirements and health sector reform - Case studies of Uttar Pradesh and Madhya Pradesh", CGSD Working Paper No. 29, Working Papers Series, Center on Globalization and Sustainable Development, The Earth Institute at Columbia University, November, 2005, pp. 1-65.

[88] UNFPA, *Concurrent Assessment of Janani Suraksha Yojana (JSY) in Selected states*- Bihar, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh, 2009, New Delhi.

and illiterate mothers. In Rajasthan and U.P, lower percentage of institutional deliveries found among the Muslim women.

In addition to the study conducted by UNFPA, there has been a midterm evaluation of NRHM by Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia (2009)[89] on three High Focus states i.e. M.P, Rajasthan and U.P. They have documented the similar result as noticed by the present study. They have discussed on the issues of access to health, service delivery and efficiency of the rural health delivery system under the implementation of the NRHM in five districts namely Sagar district in M.P, Jalore and Chittorgarh districts in Rajasthan; and Sitapur and Azamgarh districts in U.P. Two districts in Rajasthan were selected to know the health condition of the desert people in Jalore district and the health condition of the tribal people in Chittorgarh district. Similarly, two districts were chosen in U.P, to know the health status of the people from Central U.P (Sitapur) and Eastern U.P (Azamgarh) which also gives a statewide representation of U.P. In general they noticed significant increase of the institutional deliveries in all the three states and shortages of human resources in general all the three states and Medical Officers particularly in U.P., They found all the surveyed CHCs in the three states were functioning with a shortage of specialized doctors and are far from meeting the Indian Public Health Standards (IPHS), even after the implementation of the NRHM. A similar result was also noticed at the PHC level in the respective states. Though, the ASHAs play a significant role at the village level under the NRHM, there exists a lack of cooperation and coordination between the health facilities and the district program management units which obstructs the implementation of the NRHM to its fullest. Their study also finds lack of decentralization and not active role played by the VHSC members.[90] Broadly, their study opined the similar results of the studied states as the present study found in Odisha.

[89] Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia, Mid-term evaluation of National Rural Health Mission, CGSD Working Paper No. 37, Center on Globalization and Sustainable Development, The Earth Institute at Columbia University, www.earth.columbia.edu, Accessed June 12, 2011, October 2009.

[90] Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia, Mid-term Evaluation of the National Rual Health Mission, CGSD Working Paper, No. 37, The Earth Institute at Columbia University, October, 2009.

There is yet another study which has been investigated by Kaveri Gill (2009)[91], who has critically evaluated both quantity and quality of services in rural public health care services under the NRHM. She measures the condition of physical infrastructures, a state of human resources, including paramedical staff and quality health care provision. She has also studied the decentralized untied fund, and maintenance of financial grants in the states – Andhra Pradesh, U.P, Bihar and Rajasthan. Her micro level findings from four states reveal many problems in implementation of the Mission and disparities of health services noticed across four states. However, noticed making progress in some fronts like physical infrastructures, availability of drugs, and funding. With regard to human resources, she carefully reported some complexity of structural issues and services and need more investment and training and education to paramedics and medical staff for quality health care, close monitoring and attendance.

The Ministry of Health and Family Welfare, Government of India has completed a nationwide concurrent evaluation of the NRHM in 2009.[92] It has attempted to know how far the NRHM has reached to the rural communities in India. The evaluation study covers 187 districts in 33 states and Union Territories in the country and basically focuses evaluation on Janani Suraksha Yojana (JSY), outcomes of the core strategies of the NRHM like communitization of health services and innovative programs at the community level. It has also studied the functioning of Accredited Social Health Activist (ASHA), Auxiliary Nurse Midwife (ANM) and the status of physical infrastructure and human resources at different health facility levels. The study finds that more than 90 percent respondents reported using the allopathic system of medicine and less than 10 percent of the households use Ayurvedic system of medicine. Further, 35 percent of households have reported availing services from PHCs followed by 21 percent of the Community Health Centers (CHCs). However, use of private nursing home has been

[91] A Primary Evaluation of Service Delivery, under the National Rural Health Mission: Findings from a Study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan, *Working Paper* 1/2009 – PEO, Planning Commission of India, May 2009, pp. 1-92.

[92] "*Concurrent Evaluation of National Rural Health Mission - 2009*", Ministry of Health and Family Welfare, Government of India, National Report, International Institute for Population Sciences, Mumbai, 2009, pp. 1-234.

higher compared to the public health care facilities like District Hospitals (DHs), CHCs and PHCs.

The study reveals that 79 percent of respondents reported have heard of any worker (ANM/MHW/MPHW) and 12 percent of households aware about Village Health and Sanitation Committee (VHSC). Moreover, knowledge of VHSC has been relatively higher in some of the Non-High Focus states like Maharashtra (39%), followed by Kerala (26%). On the other hand, in the states of Jharkhand and Rajasthan less than 5 percent of the households know about VHSC. The study finds that the VHSC has faced various problems in its functioning. The most common problem of VHSC has been that all of them have received funding but the problem lies in the part of the implementation.

Over half of the (nearly 55 percent) respondents have been aware of ASHA, nearly half (49 percent) know that ASHAs provide common medicines free of cost and about two-thirds of the women, have received any service from ASHA. The level of services received from ASHAs have been considerably higher in the High Focus non-North Eastern states (Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, M.P, Odisha, Rajasthan, U.P, Uttarakhand) compared to the Non-High Focus large states (Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, West Bengal). ASHA has performed better in U.P, Odisha, and Uttarakhand. About 41 percent reported that ASHA has discussed with the respondent about JSY and 35 percent discussed about institutional deliveries. Other issues discussed by ASHA have been like personal hygiene, water safety, ante-natal, post natal care and child health care. Most of the women were not aware about the VHSC in their villages. Only 8 percent have been aware about it, and the other those aware of VHSC; 35 percent know that the VHSC has also constructed community toilets, and 17 percent reported that the VHSCs have organized health and nutrition days in the village and just 8 percent reported that it has arranged transport for patients. Only 13 percent of the women have participated in a Village Health and Nutrition Days (VHND) organized in their village and about half of those who have participated received information on nutrition, sanitation, general cleanliness and child immunization at the last VHND they have attended.

Although NRHM has been implemented since 2005 onwards, still over half of the births took place at homes nationally and three-fifths or more among the High Focus

states in India. About one-fifth of the home deliveries have been assisted by a doctor or a health worker. Women in M.P, U.P, and Uttarakhand have been less likely to have received assistance during home delivery either from a doctor or health workers (fewer than 12 percent) compared to those in Chhattisgarh, Jharkhand and Rajasthan (24-29 percent). Over 63 percent of the JSY beneficiaries in Jharkhand and 36 percent in Chhattisgarh have delivered at home while in the remaining states share less than 7 percent of home delivery. Further, about 33 percent of the JSY deliveries in Odisha, and 60 percent in Jammu and Kashmir took place in the district hospital. About 35-38 percent of the deliveries in M.P, Odisha and Rajasthan and 60 percent of them in Uttar Pradesh have taken place in the CHCs. In Bihar, over 68 percent of JSY deliveries have taken place in the PHCs. Over 8 percent of all JSY deliveries were cesarean; varies between 3 percent in High Focus Non-North Eastern states (Bihar, Chhattisgarh, Jammu and Kashmir, Jharkhand, M.P, Odisha, Rajasthan, U.P, Uttarakhand) and 21 percent in the Non-High Focus large states (Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, West Bengal). About 78 percent of the deliveries were conducted in the presence of a doctor; ranging between 73 percent in High Focus Non-North Eastern states and 85 percent the Non-High Focus large states. Nearly 92 percent of the deliveries in Odisha took place in the presence of a doctor while their share has been less than 53 percent in M.P, and 66 percent in Bihar. Advice on postnatal care has been limited national level, as less than half of the women were advised on the same; considerably higher in Non-High Focus states (66-72 percent) than those in High Focus states (40-41 percent). A little over one-third of women have received advice on the use of family planning; ranging between 28-32 percent in the High Focus states in 52-55 percent in Non-High Focus states.

Regarding JSY, the study finds that over 63 percent of the surveyed women are aware of JSY scheme and the majority of them got to know from health personnel. About 49 percent of women learnt about JSY from radio/television/newspaper. Considerably higher percentages of women in High Focus states (60-82 percent) are aware of the JSY compared to 42-46 percent in Non-High Focus states. Almost 95 percent of the women in Rajasthan and 89 percent in Bihar are aware of the scheme. JSY beneficiaries are highest among women from Scheduled Castes (29 percent) followed by other castes (24 percent)

and is least among the Scheduled Tribes (19 percent). Nearly 45 percent of the beneficiaries are motivated by ASHA and another 44 percent by the ANM. The Anganwadi worker motivated about 15 percent of the beneficiaries and family members/relatives and/or neighbors/friends motivated about 30 percent of the beneficiaries while 5 percent reported that they are self motivated. Among the High Focus Non-North Eastern states, ASHA acts as the main motivator in U.P, (82 percent), Bihar (81 percent), and Odisha (74 percent).

Overwhelmingly large number of beneficiaries reported that they did not face any problem in getting the JSY card. The national survey report indicates that large percentage of women reached health facility without any kind of problem while only few 6 percent reported facing of the problem while reaching the hospital. The national survey has also reported that VHSC faces many problems in functioning in the villages as Gram Panchayat reported not receiving funding in proper time and also problems occurs while implementing it. Regarding development of infrastructure, basic facilities and human resources, this report says that in general most of the infrastructures, human resources have been available in the majority of district hospitals in India but infrastructure and human resources are inadequate in both CHCs and PHCs in all the states in India. These are some of the major findings of the national survey on NRHM with regard to JSY, ASHA, and infrastructure, basic facilities and human resources in India.[93]

Noted health experts like Shyam Ashtkar (2008)[94] and Amarjeet Sinha (2009)[95] have come up with a solid observation of the community participation and decentralization process under the NRHM by using the secondary sources. They are also opined same as found in the present study that the NRHM has failed to follow the process of decentralization in the community levels, and also reported a lack of intersectoral coordination in the health care delivery system. Both of them also noticed the negligence of traditional health support which is some of the imperative aspects of the NRHM. Both highlighted the urgent need for an involvement of the local institutions, including the PRIs, under the implementation of the NRHM and argued for the need of training for the

[93] Ibid.
[94] Shyam Ashtkar, "The National Rural Health Mission: A stocktaking", *Economic and Political Weekly*, Vol. XLIII, No. 37, September 13, 2008, pp. 23-26.
[95] Amarjeet Sinha, Discussion on "In defense of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLIV, No. 14, April 04, 2009, pp. 72-75.

medical and paramedical staff, in order to ensure better health provisions and quality services to the rural people.

In a similar fashion, Lucia D' Ambruoso L, et.al (2010)[96], and Srivastava, A, et al. (2010)[97] and Panda, et al. (2010)[98] and Bell and Avan (2010)[99] have studied on quality health care provided to mother and newborn babies under the NRHM. They found that Janani Suraksha Yojana has increased demand for institutional delivery, which scaled up institutional deliveries, but it also developed overburden and raise the poor quality of care from various health service institutions. The effective and timely care during labor and delivery can save both lives of mother and child and can reduce infant and maternal mortality, which was the goal of the NRHM. Hence; the JSY has both positive and unintended negative impact on delivery attendance in health care institutions. It has helped in scaling up institutional deliveries, which reduced the rate of infant and maternal mortality. They have also mentioned the NRHM has created fragmentations in vertical running programs and widespread confusion regarding implementation of other health programs. Apart from that the study has also revealed the existence of the weak health delivery system with a shortage of equipments, buildings, poor infrastructure, and inadequate human resources and under investment.

Yamini Aiyar (2011)[100], has studied on the budget and infrastructures in various health institutions in M.P., U.P, and Jharkhand and argues the significant increase of the budget under the NRHM but still there is a huge shortage of funding, infrastructures and human resources in national level. It is noticed that the budget on NRHM has increased Rs. 10,040 crore in 2004-05 to Rs. 24,494 cores which is more than double in 2010-11. However, she argues still it is inadequate for health development in India as it reached

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[96] Ambruoso, Lucia D', et.al, *Identifying success, challenges and future needs to improve quality of care in maternal and newborn health in India: A stakeholder study*, Public Health Foundation of India (PHFI), New Delhi, and Immpact, University of Aberdeen, Scotland UK, 2010, pp. 1-54.

[97]Srivastava A, et al, *Quality care for mothers and newborns in India: Priority gaps and the road ahead*, Policy Brief, Public Health Foundation of India (PHFI), New Delhi, and Immpact, University of Aberdeen, Scotland UK, November, 2010.

[98]Panda R, et al. Evolution *of quality improvement for maternal and newborn care in India: Lessons for policy*, Policy Note, Public Health Foundation of India (PHFI), New Delhi, and Immpact, University of Aberdeen, Scotland UK, September, 2010.

[99] Bell and Avan, *Developing a framework and instrument to assess the quality of delivery care: A work in progress*, Public Health Foundation of India (PHFI), New Delhi, and Immpact, University of Aberdeen, Scotland UK, September, 2010.

[100] Yamini Aiyar, "Rural health: Still room for optimism", *Live Mint, The Wall Street Journal*, The Centre for Policy Research, New Delhi, February 16, 2011.

only 1.45 percent of GDP, which is substantially lower compared to be other developing countries like Cuba (5.5 percent), Nambia (4.7 percent). Though states like M.P reported spending 93 percent, U.P spends 91 percent and Jharkhand spending 89 percent and Bihar lowest 66 percent under the NRHM, but the expenditures are still limited according to demand. Apart from the low budget, there is a shortfall of 31 percent PHCs, and 53 percent existing PHCs in M.P function without the required number of doctors. The same situation follows in U.P where noticed shortfalls of 16 percent PHCs and 46 percent PHCs have no requisite number of doctors. However, the more worrying situations have been identified in Jharkhand where there has been 60 percent shortfall of PHCs and doctors too have not been found in the present.

Apart from that, the shocking situation in the health sector reported 31 percent of specialty doctors are in position in India. It has further indicated towards an alarming variation among the different states. Both M.P and U.P run shortages of 82 percent and 70 percent of specialist doctors respectively. The shortfall is not only characteristics of the health care system but also due to the absenteeism by doctors, reported a 40 percent at the national level. It is also observed failure of governance system and overall performance from district levels to village levels and reported to be poor in quality. The NRHM has achieved some success as it has helped in scaling up the institutional delivery that declines mortality rate of infants and mothers. Yamini Aiyar also focuses failure of accountability of NRHM (2012)[101] in U.P. It is said that 2.5 percent GDP is expected to achieve under 12th Five-Year Plan and more focus would be given accountability of doctors for quality care and to improve the outcomes.

In an interesting piece of work, Zakir Husain (2011)[102] studied the intervention of the NRHM based on the reports (common review of NRHM) published by the Ministry of Health and Family Welfare, GoI. and the rapid appraisal survey conducted in different districts in India by the different agencies. He finds a similar kind of result agreeing with the present study. He noticed that there are deficiencies in physical infrastructure in the three tier health delivery system, particularly states like, M.P, U.P,

[101] Yamini Aiyar, "Accountability failures mar NRHM" *Live Mint, The Wall Street Journal*, The Centre for Policy Research, New Delhi, March 3, 2012.
[102] Zakir Husain, special article on "Health of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLVI, No. 4, January 22, 2011, p. 53-60.

Rajasthan, Bihar and Odisha, and reported that health provisions in the above said states are not up to the Indian Public Health Standard (IPHS). He also reveals a shortage of equipments, medicines and a deficiency in human resources that affect the health delivery services and reduces the quality of health care. In agreement with the present study findings, his survey too observed a lack of accountability, deficiencies in the proper utilization of the untied fund, and absence of the community monitoring and weakness in the implementation processes of the NRHM.

The National Health System Resource Center (NHSRC, 2011 under the MoHFW, GoI), evaluated the JSY in eight poor health indices states like Bihar, Chhattisgarh, Jharkhand, M.P, U.P, Odisha, Rajasthan, and Uttarakhand in India. The major findings revealed substantial increase of JSY case which also increased institutional delivery and 50 percent of the women who previously had deliveries at home, opted for institutional delivery during their subsequent deliveries. The study also demonstrates equity in access to women into institutional deliveries, given that the representations of SC/ST and BPL in the sample were higher than the population representation. However, 40 percent of deliveries are still conducted at home in most of the districts of the aforementioned eight states, and 7.7 percent to 63 percent of the women who deliver at home come from the SC, ST and BPL categories. The study also found that women who deliver at home had higher proportions of SC/ST and non literate or primary school drop outs.[103]

The Planning Commission (2011)[104] has entrusted an appraisal study of the NRHM to the Population Research Center, Institute of Economic Growth, New Delhi with an objective of evaluation and assessment in the implementation of the NRHM. The study intends to evaluate performance of NRHM in seven states of India such as U.P, M.P, Jharkhand, Odisha, Assam, J&K, and Tamil Nadu. The findings of the study show that, in Odisha 63.7 percent of expectant mothers avail the JSY facilities followed by the states in U.P, (53.7 percent), M.P (77.7 percent), Jharkhand (45.8 percent), Assam (61.9 percent), J&K (44.1 percent) and Tamil Nadu (81.2 percent). The government health care

[103] *Programme Evaluation of the Janani Suraksha Yojana*, National Health Systems Resource Center, Ministry of Health and Family Welfare, Government of India, September, 2011, p. 2.
[104] *Evaluation Study of National Rural Health Mission in 7 States Program*, Programme Evaluation Organization Planning Commission, Government of India, February 2011, pp.1-153.

institutions also provide satisfactory health services after implementation of the NRHM in Odisha 97.5 percent followed by the states in U.P, (88.3 percent), M.P (96.1 percent), Jharkhand (93.1 percent), Assam (92.9 percent), J&K (98.9 percent) and Tamil Nadu (98.1 percent). In the state of Odisha, it is also noticed that 47.4 percent of deliveries still have been conducted at home whereas Tamil Nadu records only 4.2 percent but J&K records the highest 62 percent among the seven states. Similarly in Odisha for the institutional delivery, pregnant women prefer 24.3 percent CHCs, 17.9 percent PHCs, 8.3 percent District Hospital and 1.6 percent prefer private clinics. Regarding awareness about the ASHA, 98 percent women in Odisha are aware and 65.4 percent aware about the program of the NRHM. The health awareness created by the ASHA in Odisha is 98 percent and 100 percent ASHA provides service to the people, it means all the recruited ASHAs perform their functions. Regarding the VHSC, found that it is not playing its roles properly, 35 percent VHSC has received untied funds and only 19 percent have reported about facing problems in the implementation of health related programs under the NRHM.

While discussion on health care facilities of different health care institutions in Odisha, it is noticed 9 out of 10 CHCs covered have reported availability of 24 hour emergency services for normal and assisted deliveries and the bed occupancy rate is below 40 percent in last year in all the CHCs. Diagnostic facilities are reported to be missing in all the 10 CHCs and the specialists/doctors are found to be not in position in most of the CHCs in all the five districts excepting availability of an Obstetrician, and Pediatrician in both the CHCs of Puri viz. Nayahat and Chitana. Availability of specialists/doctors like General Surgeon, Obstetrician, and pediatrician in regular positions are in-place in the CHCs in Puri and Kendrapara. Overall availability of doctors seems to be better in Puri and Kendrapara. In 20 surveyed PHCs of Odisha's 5 districts, 85 percent is functioning in its' own buildings. About the availability of services, in 95 percent PHCs pharmacy and in 50 percent PHCs adequate medicines are available. In the state of Odisha, out of the total 39 surveyed SCs, 100 percent have buildings, but only 54 percent is running in government buildings.

1.4.1 The Research Gaps, and Research Questions

Several studies have been conducted on various aspects of health service delivery system in the country and its utilization. Some of the studies also focus midterm review of NRHM and evaluation of the NRHM in different states and national level. All the pieces of work reviewed in this study have conclusively established poor level of performance of the health care system in the country in general and specific states like Odisha in particular. The public health sector is immensely neglected from both quantity and quality point of view, which need to be addressed seriously. Besides that the policy (NRHM) that has been implemented since 2005 shows positive result of public health delivery which has created a room for hope in the development of health in India.

Looking critically for the three phases of review, we found that compared to first two phases; the last phase from 2006-2012 has achieved some development in the health sector under the implementation of the NRHM. At the same time noticed a number of formidable challenges ahead for the government to intervene seriously as we are far behind in achieving health development at the national level in general and state levels in particular. We also presently face lot of problems in quality of health care services, which can be judged through infrastructure, availability of drugs and equipments, the regular presence of qualified medical personnel and treatment of patients. The quality of health services provided can be assessed along the following dimensions (which are by no means exhaustive): (1) an adequately equipped and easily accessible public health facility, (2) appropriate and timely clinical care and (3) patient satisfaction with health care received and the outcome of treatment. Ultimately, the real test of the quality of health services is how they affect health outcomes, especially in the rural areas. At the least, a primary health service center needs to have the following in terms of infrastructure, availability of electricity, and running water, the presence of a telephone or some means of communication in situations where ambulatory and emergency care may be required. Moreover, the facility needs to have basic drugs and equipment such as a refrigerator, sterilizers, etc.[105]

[105] Nirupam Bajpai and Sangeeta Goyal, "Primary Health Care in India: Coverage and Quality Issues", *CGSD Working Paper*, No. 15, June 2004, Working Papers Series, The Earth Institute at Columbia University.

The quality of health care services provided depends not only on the skills and ability of medical personnel but also the incentives they were given. Even casual observation, especially in rural areas in many parts of the country revealed that often the primary health care facility is not open during the hours and days it is supposed to be functioning or the health workers manning the facility are not available. Delivery of public health service in India is marked by pervasive absenteeism. Therefore, various studies indicate that India's achievements in the field of health have been less than satisfactory and the burden of disease among the Indian population remains high. Deaths related to infant and child mortality, morbidity and maternal mortality affect millions of children and women. Many of these illnesses and deaths can be prevented and/or treated cost-effectively with primary health services provided by the public health system.

The aforementioned studies show the inadequacy of health care provision among the primary health centers in terms of coverage of the population, under-utilization because of the dismal quality of health care. The Primary Health Centers are the major health service institutions in rural areas and most of the rural people depend upon on the primary health care. In primary health services, drugs and equipments are missing or in short, supply, there are shortages of staff and the system characterized by endemic absenteeism on the part of medical personnel due to lack of checks and balances. As the poor are the pre-ponderous users of primary health care facilities, the rich preferring to use private clinics and hospitals, the absence of public primary health services means that many people either forego any medical care altogether or use too little too late or choose to seek expensive and unregulated care in the private sector.

In this context, the researcher raises a few research questions to be focused on this study. The questions are: What are the reasons for not prioritizing the public health in India since independence? Why did the Government of India think to launch a program like NRHM? Does the NRHM achieve the expected outcomes within the targeted period? Are we reaching the target of the Millennium Development Goals (MDGs) by 2015? How far the NRHM would able be to scale up health indicators in the macro (India/Odisha) and micro (District) level? What are the public policy measures require

implementing at the institutional level for the proper health delivery system? Keeping such questions in mind, a firm attempt has been made to debate and critically analyze on such issues in this work.

1.5 Objectives of the Study

A. To critically review the policies on health in India since independence,
B. To study the development of public health delivery system and health care utilization in Odisha,
C. To study the provision for the health care facilities in Kendrapara district of Odisha under implementation of the National Rural Health Mission,
D. To evaluate the role of Accredited Social Health Activist in Janani Suraksha Yojana and institutional delivery under the National Rural Health Mission and,
E. To understand the decentralization of public health management under the National Rural Health Mission.

1.5.1 Significance and Rationality for Selection of the Study

The present study of the NRHM focuses health facilities in general and rural health care in particular for the vulnerable groups i.e. the poor, women, and children. The development of aforementioned group is more important in the context of social and economic development of the country. In India, women constitute 48.46 percent,[106] children in the age group 0-6 constitute 13.12 percent,[107] and both constitute majority of 61.58 percent of the total population of the country. The children are considered as the future citizens and essential input for development of human resources of the country, so the development of children means the prosperity of the nation. Therefore, being a positive attribute of life, providing comprehensive health care services to them are considered the key step towards achieving inclusive growth of the nation. The policy towards providing health services to the rural people through the implementation process of the NRHM has more importance not only on health but also socioeconomic growth of rural people which leads ultimately nation's progress.

[106] Provisional population, Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India, http://www.censusindia.gov.in/2011-prov-results/prov_results_paper1_india.html, Accessed on December 12, 2012.
[107] Ibid

In this context, the selection of Odisha for a case study under the implementation of the NRHM has more significance. Odisha is one of the underdeveloped states in India where 85 percent of the people belong to rural areas.[108] It is also considered one of the poorest states in India as the highest 46.4 percent[109] of its population live in the Below Poverty Line (BPL) compare to national level 27 percent. The state also shows lowest health indicators and weak health infrastructures compare to other states in the country. Besides, it shows the wide prevalence of health inequalities[110] in all over the state. While looking at various health indicators of the state it is found that the highest number of deaths rate 9.5 cases occurred in Odisha as against 7.6 per 1,000 cases of the national average as well as deaths among all the states in India. The rural death is widespread and reached 9.9 cases compared to the national figure 8.1 and followed by 9.8 in Madhya Pradesh, 9.2 in Assam and 9.1 in U.P per 1,000 cases.[111] Odisha stands as the second highest in Infant Mortality Rate (IMR) 75[112] after Madhya Pradesh-76 whereas the national average shows average 58 per 1,000 live births. The state also accounts a record of 91 per 1,000 live births of Under 5 Mortality Rate (U5MR) which is much higher than the national average 77 per 1,000 live births. The state is responsible for the highest number of maternal deaths in its record, having Maternal Mortality Ratio (MMR) 303 compared to national average 254 per one lakh live births. It contributes 24.9 percent maternal deaths at the national level.[113]

The NRHM particularly focuses on the effective functioning of the primary health services and emphasizes for the reduction of IMR and MMR through the process of effective implementation of the Janani Suraksha Yojana and the institutional delivery. As the present study focuses on Odisha, it is found from the estimated data on National Family Health Survey (NFHS)-3: 2005-06 that institutional delivery of Odisha is low a 36 percent compared to the national average 39 percent. Whereas other states such as

[108] Census of India – 2001, The researcher has taken data of Census 2001 into the consideration as the present study was selected much before the publication of Census - 2011data.
[109] The Planning Commission, Press Information Bureau, Poverty Estimates for 2004-05, Government of India, March 2007.
[110] There is a wide prevalence of health inequalities in Odisha with regard to various health indicators and more differences documented from region to region and also inter-region and different district levels.
[111] Op. cit. Registrar General of India, October 2006.
[112] Ibid.
[113] Sample Registration System, *Special Bulletin on Maternal Mortality in India 2004-06*, Registrar General of India.

Kerala secures 99 percent, Andhra Pradesh 64 percent, Tamil Nadu 88 percent, Maharashtra 65 percent which shows high rate of institutional delivery compare to Odisha. The NFHS-3 also figured out about two in every three births in Odisha is delivered at home and it constitutes 63.8 percent delivery at home in Odisha[114] which influences the infant and maternal deaths in the state. So, it shows that delivery at home is widespread all over the state. Aforementioned discussions on various health indicators like death rate, IMR, U5MR, MMR, and rate of institutional and home delivery shows Odisha's poor state of the health situation compared to the national level. As a student of public policy it created interest to select Odisha as a case of study for this work. It also created enthusiasm to know how rural health care system is functioning under the implementation of the NRHM since 2005.

In addition to above all reasons, canvassing the structured schedules and understanding the problem of the study in local language is also a crucial factor for the researcher to opt for field survey research. Being a native speaker of odia language, I have also given little thought to select Odisha for a case of study, so that canvassing structured schedules would not stand as a problem in the field.

Besides that, the literature review also identified persisting health problems in the state. The situation of health in state levels, health problems within the state among in different districts also matter of concern in this study. Odisha is consists of 30 districts and it is very difficult for a researcher to cover all 30 districts within the limited time frame and financial constraints. So, after analyzing various factors and health indicators, Kendrapara district has been chosen for the study. Kendrapara district is one of the districts in Odisha which consists of nine blocks, seven Tahasils and one Sub-division of total having 1,302,005 population, and out of that 1,227,868 (94.3 percent) are rural, and 74,137 (5.7 percent) belongs to urban population.[115] Kendrapara has 267186 (20.52 percent) population belongs to Scheduled Caste (SC) and 6822 (0.52 percent) population belongs to Scheduled Tribe (ST) population. Though the number of SCs and STs are not more compare to other districts but importantly 94.3 percent of its total population live in

[114] National Family Health Survey-3 (2005-06).
[115] Data calculated as per the Census 2001.

rural areas where the NRHM has more importance for implementation as compare to other districts of Odisha.

Prior to launching of the NRHM, the IMR (83) and MMR (367) of Kendrapara district was highest compared to both state (IMR: 75, MMR: 303) and the national (IMR: 58, and MMR 254) average. As a student of public policy it will be challenging to know how new interventions like the NRHM can make the difference to the situation. For example - as far the MMR is concerned while the national average was 254 and that of Odisha's sate average was 303, Kendrapara registered 367 per one lakh live births. It needs to be understood why such high number of women losing their lives? What difference the NRHM made has to be properly studied? Therefore, the researcher has selected Kendrapara district in Odisha for the study.

The institutional delivery of Kendrapara district is low accounted as 42.3 percent[116] and delivery at home also record of 32 percent.[117] It is noticed that during the initial stage of implementation of the NRHM in 2006-07, delivery at home was high as 12454 cases compared to 12227 cases of institutional delivery in Kendrapara.[118] As a result risk factor is more associated with the maternal and child deaths in the district. Such study and analysis enforces the researcher to select Kendrapara district for a case of study.[119]

1.6 Methods of the Study

The present study focuses on implementation of the NRHM in Odisha, and Kendrapara district was taken as a sample district. The data collection and field survey was conducted from November 1, 2010 to April 30, 2011 in Kendrapara. It is a public policy process evaluation study defined as an evaluation of change caused by public health intervention of any government. This is different from the formative/impact/summative evaluation that aims to provide feedback of the improvement/achievement after a long term implementation of the program. There are different types of the respondents covered and interviewed in this study. The types of the respondents covered under the present study include:

[116] District Level Health Survey - 2 (2002-04).
[117] National Family Health Survey-3 (2005-06).
[118] District Health Information Officer (DHIO), Kendrapara, Odisha.
[119] Office of the National Rural Health Mission, Bhubaneswar, Odisha.

A. District and State Nodal Officers of the NRHM

B. Health facilities providers from the public health institutions that includes: Medical Officers In-charge (I/C) of both the Community Health Centers (CHCs), the Primary Health Centers (PHCs), and the Auxiliary Nurse Midwife (ANM) of the Health Sub-Centers (HSCs)

C. The community female health worker known as the Accredited Social Health Activist (ASHA)

D. The mothers of both the beneficiaries of Janani Suraksha Yojana (JSY) scheme and non-beneficiaries of the same scheme under the NRHM who delivered since 2009 to April 30, 2011 the date of data collection of the survey

E. Community leaders such as Sarpanch/Naib-Sarpanch/Ward Member of the village Gram Panchayats and the members of the Village Health and Sanitation Committee.

1.6.1 Study Design and Sampling Procedure

Both qualitative and quantitative research methods are used in this study to know the in-depth of health problems in general and health problems in Kendrapara district in particular. The beneficiaries of the JSY and non-beneficiaries of the same scheme were selected by application of the scientific processes while qualitative methods of in-depth structured schedules were administered to different officer personnel associated with the NRHM. Quantitative data were collected from a sample of 840 mothers (who delivered since 2009 to April 30, 2011 till the date of data collection) from the rural areas of Kendrapara district in Odisha.

As the present study is a case based study of Kendrapara district, the entire district has been covered in the study. For the quantitative survey, this study adopted a four-stage sampling design with the selection of the District Hospital is in the first state, block (nine CHCs), at the second stage, Gram Panchayat (PHCs and Health Sub-Centers-HSC) at the third stage, and villages at the fourth stage and selected at the bottom level. At the first stage of the sampling, Kendrapara district was selected on the basis of various criteria and covered the Health Headquarter Hospital. At the second stage of sampling, all the nine CHCs in nine blocks of the district have been covered. The third stage covers the selected PHCs (on the basis of distance one near and one farthest from the respective selected CHCs) and the selected HSCs have been based on distance criterion (near, medium, and farthest to the respective selected PHC). At the fourth stage villages were covered based on the Headquarter nearest and the farthest village of the respective HSC.

Both from the nearest and farthest villages, sample frame of one ASHA, two members of Village Health and Sanitation Committee (VHSC) and 10 household respondents were interviewed from each respective village of the HSCs.

For the selection of the household respondents in the fourth stage, all the beneficiaries and the non-beneficiaries who delivered from 2009 to till the date of data (April 30, 2011) collection of the study were listed. By using a systematic sampling technique, with a random sampling start 10 eligible mothers (age group between15-45) were selected for the interview from the respective villages. Besides the household interview, ASHA belongs to the same village and two members' one from either chairperson or convenor and another from the members of the VHSC were also interviewed. Apart from them, ANMs, Medical Officer I/C of the CHCs, PHCs, and District Program Manager (DPM) from the District Program Management Unit also were selected for the interview. While taking interviews in this study different set of structured schedules were administered to elicit information regarding implementation of the NRHM. There are seven sets of structured schedules that were used in this study. It is divided into two broad categories. The first category was known as key informants, i.e. District Program Manager (DPM), and Medical Officer in-charge (CHCs and PHCs), ANMs (Health Sub-Centers), the Sarpanch and the Naib-Sarpanch of the Gram Panchayats, Accredited Social Health Activists (ASHAs), and Members of the Village Health and Sanitation Committee (VHSC). The second category was for the individual or household interview, specifically structured for the beneficiaries of JSY (scheme) and non-beneficiaries of the same scheme those who had chosen for delivery at home.

A purposive sampling method was followed to select the CHCs, PHCs and HSCs. As per the sampling strategy, Odisha was selected for the case of study and from the state a district named as Kendrapara was chosen based on several criteria and the researcher covered District Headquarter Hospital (DHH-1), and its nine CHCs. As per the sampling strategy follows from each CHC, two PHCs were selected and accordingly out of nine CHCs, 18 PHCs were selected. Again from each PHC, three HSCs were selected (details and basis of selection mentioned below) and accordingly numbers of total HSCs were 54, but while conducting survey it was found that few PHCs had only one HSC and few had two HSCs whereas other few PHCs had three HSCs or more than that under its

jurisdiction. Accordingly, the covered HSCs were counted to 42 numbers which is 77 percent of the envisaged sample. Under each HSC, two villages were selected and accordingly 84 villages were chosen for the study. Again from each village, one ASHA was selected, so it counted as 84 ASHAs. At the same time, from each village, out of one VHSC, two members were selected for interview and the envisage sample for VHSC members were 168. Further, for household interview, total 840 household beneficiaries/non beneficiaries were selected out of 84 villages. It means from each village, 10 household beneficiaries/non beneficiaries were selected. The details of the sampling sizes and criteria are given below.

A. **District Headquarter Hospital (DHH):** District Headquarter Hospital of Kendrapara district was covered in this study. The information related to health and Family Welfare and information and data related to the NRHM of the district was collected from the District Health Information Officer (DHIO). The structured schedule was canvassed while interviewing the District Program Manager (DPM) to know the overall management and implementation of the NRHM in the district. Observation method was used to know the functional pattern of health care services in the district hospital. Though, inpatients were not included in the interview but the inpatients those who were discharged from the various health service institutions were interviewed at the household levels and the structured interviewed schedule was canvassed to the JSY beneficiaries those who were given birth and experienced about the health care services while they were at DHH. It was covered both JSY beneficiaries those who have been discharged from the DHH recently and those discharged earlier.

B. **Community Health Centre (CHC):** As per the sampling strategy all CHCs were purposefully selected for the interview. All nine CHCs were studied which were functioning in all its' nine blocks in Kendrapara. The rationale behind to cover nine CHCs to know the difference of health care provisions as after the implementation of the NRHM three PHCs were upgraded into CHC. So, it was imperative to know how both the existing CHCs and upgraded PHCs (UGPHCs) were functioning and providing health services. The question arises, whether all CHCs were maintaining the Indian Public Health Standards (IPHS) after implementation of the NRHM. If so,

then what are the differences between UGPHC and existing CHCs with regard to health service set up and other provision of health services? Is the development occurring both infrastructure and human resources or just maintaining the IPHS standards in the paper not in practice? All such issues are carefully observed and also noticed the change that has occurred after the implementation of the NRHM in both the ways like service provider and service receiver. It is also noted that the number of CHCs working as First Referral Units (FRU) as per the norm of the NRHM. The Medical Officer In-Charge of CHCs was interviewed to know about CHCs, its service rendered and development that occurred in post implementation of the NRHM.

C. **Primary Health Centre (PHC):** According to the sampling strategy, the procedure for the selection of PHC was based on geographical distance from the CHC Headquarter. One PHC was selected from the nearest to the CHC headquarter and another one farthest from the CHC. Accordingly, two PHCs were chosen for the study from each CHC and total 18 PHCs were selected from nine CHCs. The structured interview schedules were canvassed to the Medical Officer (MO) I/C of each PHC and direct observation method was followed to verify the opinion and views of the MO I/C of the selected PHC.

D. **Health Sub-Centre (HSC):** As per the sampling strategy 42 HSCs (instead 54 HSCs) were selected from the district. The procedure of selection of HSCs was based on geographical distance criteria excluding the HSC located in the PHC premises. Generally such HSCs manage their offices due to unavailability of HSC buildings/shortage of ANM in the particular HSC/village. During the study, three HSCs were selected from each PHC on the basis of distance criteria: first HSC was nearest, second HSC in the middle, and third HSC farthest from the PHC.

E. **Household and eligible women for the JSY beneficiary and Non-beneficiary:** A sample of 840 households with currently married women (age group in between 15-45) was selected for the study. Two villages were selected from each of the HSC. Altogether, 84 villages were selected from the Kendrapara district. From each village 10 households were selected by adopting a systematic random sampling method. The eligibility criteria for the women selected were that those who had given birth either at home or at health service institutions since 2009 onwards till April 30, 2011.

F. **Accredited Social Health Activist (ASHA):** As per the sampling strategy 84 ASHAs were selected from 84 villages and one ASHA selected per village. Where more than one ASHA was engaged in work in a particular village, the names of ASHAs in the village were arranged in alphabetic order and the first letter available was being selected for the interview.

G. **Village Health and Sanitation Committee (VHSC) Member:** The VHSC is popularly named as Goan Kalyan Samiti (GKS) in Odisha. As per the sample strategy 168 GKS members were selected for the interview. The GKS consists of 10-12 members of each village. So, in that case one member was selected from Gram Panchayat members/President of GKS and another Anganwadi worker/Convener of the GKS selected for the interview. If one of the both categories were not available then in that case either an ASHA who is also a member of GKS or a member of the Self Help Groups in that village who was also a member of the GKS selected for the interview. Two members of each GKS village were selected for the study from total 84 villages. If in case the particular village has no GKS, then the adjacent GKS village was considered.

H. **Survey instruments:** Bilingual interview schedules both in English and Odia were used to collect information during the field survey. Sometimes English structured schedules were used for office personnel associated with the NRHM at the district, the CHCs and the PHCs levels. But only Odia language was used for interviewing the households (JSY beneficiaries/non-beneficiaries), GKS members, ASHAs as well as ANMs. The details of the structured schedules were given in Annexure.

I. **Data processing, validation and data analysis:** The data collected from the field was incorporated into SPSS and based on the requirement, the analysis, both tabulation and cross tabulation work was done and further calculation of various indicators of the NRHM was also generated for interpreting the table while writing the thesis. The coverage of the sample of various types of the respondents are provided in Annexure. In addition to that, secondary data were also collected from a variety of sources which include mainly, relevant books, journals, articles, newspapers, recordings, necessary reports, documents and various web based information as per requirement of the study.

1.7 Outline of the Chapters

The thesis is divided into five chapters including an introduction and conclusion. The chapter one is the introduction chapter and divided into seven sections. The first section examines various health problems of the public health care system in India. The second section elucidates in understanding the concept of health, disease, public health, new public health, and various definitions provided by different scholars. It discusses different approaches on health, and debates on theoretical perspectives of health and disease. The third section debates on the theoretical perspective of health and disease. The fourth section presents the review of the literatures of earlier studies done by different scholars. It helps in understanding the problems of the public health delivery system in the country and gives an opportunity to find out the gaps between earlier studies and the present study. The fifth section presents the objectives of the study, and discusses the significance and rationality for selection of the study. The sixth section outlines the research design and methods for the data collection. The seventh section describes outlines of remaining chapters and deals with the limitations of the study.

The second chapter critically reviews various public health policies and programs in India since independence. It focuses National Health Policy-1983 and 2002, and National Population Policy-2000. It analyses various health programs introduced from time to time in the country through different Five-Year Plans (FYP). This chapter highlights the new health policy initiative in 2005 by the government named as NRHM in the country in general and Odisha as particular. It examines the administrative framework and institutional mechanism for the implementation process of the Mission at the national, state and local levels. It discusses the context of new policy intervention of the NRHM and describes briefly vision, goal and various strategies of the Mission. It discusses the major outcomes of the Mission both at the national and state level. Finally, it focuses the recent (2011) released High Level Expert Group Report on Universal Health Coverage in India.

The third chapter discusses the development of the public health delivery system in Odisha and in Kendrapara district. It is divided into five sections. The first section starts with a brief introduction of health care systems in Odisha and emphasizes the development of health care provision through different health care institutions. The

second section presents health care reforms in the state which includes the development of health care policies, different health care programs and various new steps which have been undertaken by the Government of Odisha for providing better health services to the people. As a part of a new health policy initiative it highlights the Navajyoti program, the Panchabyadhi Chikitsa (treatment for five diseases) Scheme and Infant Mortality Reduction Mission which have been carried out in the state to improve maternal and child health care, to control five common diseases, and reduce the alarming rate of infant deaths respectively in the state. The third section illustrates the major development of health care facilities in the post-NRHM period. The fourth section introduces the Kendrapara district, in a nutshell and it demonstrates the district's administrative structure, institutional arrangement of various health care institutions available in the district to provide health services to the people. The final and fifth section discusses the field survey findings.

The fourth chapter presents the findings of the field study from Kendrapara district. It is divided mainly into three sections. The first section discusses about the role and multiple activities of the Accredited Social Health Activist (ASHA) who is the lynchpin of the NRHM. The second section elaborates the Janani Suraksha Yojana (JSY) in details which has been carried out in Odisha since 2005, under the NRHM. The third section focuses participation of the local community and members of the Panchayat Raj Institutions for development of health delivery system and increasing the utilization of various health care services in the rural areas. It discusses on decentralization of the health care system under the NRHM.

The fifth and final chapter of the thesis presents summary of each chapter and discusses the concluding part of the study. It also mentions some of the major findings of the study and discusses the development that has taken place in health situation of the country after implementation of the NRHM. It finds some of the gaps that hitherto existing in the public health sector particularly in the case of infrastructures and human resources. This chapter highlights a few issues of health policy context while implementing the NRHM and suggested for the development of the few aspects for further strengthening the program. The last part of the chapter addresses some of the

major issues for debates and it also focuses the limitations of the study and completes with emphasizing the need for future research for health development in the country.

1.7.1 Limitations of the Study

The present study is conducted in one district of Odisha which consists of nine blocks. Looking into various goals of the NRHM, the scope of study mainly focuses on two of its goals, firstly reduction of Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR) through the institutional delivery with the provision of cash incentives of Janani Suraksha Yojana (JSY) under the NRHM. Secondly, access to integrated comprehensive primary health services in rural areas. Due to limited financial resources and restrictions of time frame, this study is limited within two important goals of the NRHM. This study is a modest attempt which focuses the process evaluation of the NRHM and looking at the implementation processes of the program on the perspectives of JSY.

Besides, the scope of the present study is wide in nature and deeply focuses on the processes of the implementation particularly the role of ASHA in JSY and institutional delivery under the NRHM which influences the IMR and MMR. The methodology for measurement of IMR and MMR is complex. It calls for larger sample. For example it requires information on pregnancy status, timing of death (during the pregnancy, childbirth, or within 42 days of termination of pregnancy), and cause of death. For an individual researcher it is methodologically a challenging task. In our study, we have selected 840 households with focus on the beneficiaries of JSY under the NRHM. Though the IMR and MMR are linked with the institutional delivery, it may not be possible to extrapolate the data. However, this study may contribute to the District Level Health Survey for the IMR and MMR rather than an alternative.

The study focuses research on micro level policy rather than macro level. More importantly, within the state of Odisha, the study is delimited to one district only. This study covers the entire district that consists of nine blocks with a random sampling method but it could not cover other districts in the state due to constraint of the time frame and shortages of financial resources. Hence, based on the data gathered from one district, no firm generalizations can made regarding the implementation of the NRHM, function and utilization of Primary Health Centers in the rest of the districts in Odisha.

However, as the study is based on an in-depth and intensive survey of a particular district that is figuring out the function and utilization of the District Headquarter Hospital, CHCs, PHCs, and HSCs and changes occurred in health care facilities after implementation of the NRHM. Thus, based on the primary data and other information that are collected from the Office of the Mission Directorate of NRHM, Bhubaneswar, Odisha, and the District Health Information Officer, Kendrapara, and also from other secondary sources, a modest attempt is made to generalize implementation of the NRHM and to explore changes that occurred since seven years. On a methodological note, it may be further emphasized that the present study is based on a survey design with various interview schedules as the primary tool for data collection. So, the study could not focus much on socio-cultural dimensional problems of health which are also major aspect of health to find out from the research. The researcher tries to analyze the policy impact of the NRHM on the health delivery system for the people especially of women and children in rural Odisha in general and in Kendrapara district in particular.

Chapter – 2

Evolution of Policy on Health in India

The present chapter is organized into four sections. The first section gives importance of health which has been depicted in the Indian Constitution for the safeguard of citizens. The second section critically reviews various policies, Five Year Plans, and different programs on health initiated by the Government of India since independence. The third section focuses on new health policy named as National Rural Health Mission (NRHM) which was launched by the Government of India in 2005. It also discusses briefly vision, goal, and various strategies to achieve the expected outcomes of the NRHM. It critically analyses the administrative framework and implementation process of the NRHM at the national, state, and the district levels. This section also presents the evaluation of the Janani Surakhya Yojana (JSY) which is the major component of the NRHM. It also studies the targets of the NRHM by throwing light on the development of infrastructural facilities and human resources in India and in Odisha. The fourth section discusses the recommendations of the High Level Expert Group (2011) on universal health coverage in India, giving a comprehensive idea of universal health policy in the country.

2.1 Introduction

Health is considered as a socioeconomic development of the people and fundamental to national progress. Hence, protection of people's health is recognized by the government as its prime obligation to its citizens. In this regard, the Preamble to the Constitution gives direction to the government to provide social, economic, and political justice, and equality of status and opportunity. Under the term of social justice, one can discuss the question of access to health care facilities in order to improve socioeconomic and health status in India. Health is listed under the category of State list in the Seventh Schedule of the Indian Constitution and some items such as public health, sanitation, hospital management and dispensaries fall in the State list, where there is a direction to each federal state for providing health care facilities to the people. It is necessary to be ensured by the Directive Principle of State Policy (DPSP) that embodied in Part IV of the Indian Constitution which states: the state has to promote the welfare of the people which majorly indicates health as well. Under the DPSP, Article 41 says "*The state shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want"*. The Article 47 of the DPSP directs that "s*tates have to raise the level of nutrition and the standard of living of its people and to the improvement of public health as one of*

its primary duties". Importantly, securing health standards could be claimed under Article 21 of Fundamental Rights which portrays "*protection of life and personal liberty*" in which health fall into a broader perspective. So, improving the public health is the foremost duty of the state to its citizens. Hitherto, health has not been considered on a priority basis in India's public policy agenda for more than six decades of country's independence. In this context, here various health policies and initiatives of the government are critically analyzed and discussed below.

2.2 Health Policy and Health Development in India

Since country's independence there are several Committees appointed by the Government of India (GoI) to examine various issues and challenges which have affected the health sector in the country. The government has broadly appointed twelve major health Committees and two important National Health Policies i.e. National Health Policy 1983 and 2002 apart from National Population Policy 2000. The Committee was set up to study health situation periodical in the country and asked to recommend for future of health development. A critical review has been done on some of the major health Committees, their recommendations and different Five Year Plans (FYP) in the country for future health development.

A. National Health Sub-Committee of National Planning Committee - 1940

The National Health Sub-Committee headed by Col. S.S. Sokhey had presented his interim report on August 30, 1940. His report is considered as "*cornerstone of the scheme for his recommendation*" by the noted health analyst Debabar Banerji (2005). The Committee recommended on the scheme of a community health worker for every 1,000 of the village population. The health workers were provided training in practical, personal hygiene, first aid, and simple medical treatment to serve the village people. More importance was given to the social aspects and implication of both medical and public health services. The Sokhey Committee also recommended a qualified medical doctor for every 1,000 of population and one bed for every 600 of population. The Committee gave importance to both preventive and curative treatments which were needed to suitably integrate and administered by one agency functioning under the state control. It also recommended to integrate the practitioners of the Ayurveda and Unani systems of medicines in the state run health organization by giving them further necessary scientific

training.[1] In this chapter some of the Major Health Committees and their recommendation has been critically reviewed.

B. Health Survey and Development Committee (known as Bhore Committee-1946)

Pre-independent India was witnessing the frenzied situation of public health like a high rate of morbidity and mortality mainly related to child and maternal deaths, deaths from communicable and non-communicable diseases, and other diseases related to hunger and malnutrition etc. were a major concern for policy planners how to control such heavy losses of human resources in the country. It was a challenging task for the newly formed government to deal with the public health situation. During that time, the government constituted a committee named as Health Survey and Development Committee. The Committee was appointed during the British period in October, 1943 to study the existing conditions with regard to health in British India and to make recommendations for future health development of the country. The Committee completed a comprehensive survey of the then existing health conditions and submitted its report in 1946. It had recommended for the creation of a better standard of national health through the development of an organized health service for independent India. Some of the major findings and recommendations of the Bhore Committee 1946 are described below.

The Bhore Committee under the chairmanship of Sir Joseph Bhore found that, the state of the public health during British India was low as was evident from the wide prevalence of diseases and high rates of mortality. The infant mortality during British India (1937) was 162/1,000 live births and maternal mortality was 200,000 annually.[2] The eminent health expert Colonel Sinton estimated that at least 100 million persons suffered from malaria every year in India and the indirect effect of illness due to malaria was between 25-75 million each year as reported in the Bhore Committee Report.[3]

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[1] K. T. Shah (ed.), *National Planning Committee Series* (Report of the Sub-Committee), National Health, Vora and Co., Publishers Ltd., Bombay, 1940, pp. 141-142.

[2] *Report of the Health Survey and Development Committee*, Vol. I, 1946, p. 6.

[3] Ibid.

The Committee identified that, causes for low level of health in India was the result of absence or inadequate provision of fundamental factors like conducive environment, inadequate nutrition etc. As the environmental sanitation was at a low level in most parts of the country, malnutrition and under nutrition reduce the vitality and power of resistance of a large section of the population. At the same time the existing health services were altogether inadequate to meet the needs of the people, while lack of general education and health education made the difficulty of overcoming the indifference and apathy with which the people tolerate the sanitary conditions around them.[4]

The report says, while the extent of permission of hospitals, dispensaries in urban and rural areas varies considerably among the various states in India, the rural population has much less health care facilities than the urban. Also the report mentions that the curative and preventive health services were totally inadequate. There was one doctor for 6,300 population, one nurse for 43,000 population, one health visitor for 4,00,000 population and one midwife for 60,000 populations. Roughly, one-fourth number of doctors were in government service, the rest being mostly settled in urban areas as private practitioners. Some of the important recommendations made by the committee were following[5]:

a. The Bhore Committee also agreed with the recommendations of the Sokhey Committee and emphasized on integration of both preventive and curative health at administrative levels for better health care services. It prescribed provision of health education for creating awareness, local community participation in the different health program, and to bring the health services closer to the people from door to door. It also recommended maximum medical facilities and preventive health provision for rural population.
b. The committee recommended universal coverage of the entire population with free medical services to all without any distinction and collecting of contribution from those who could afford to pay.

[4] Ibid.
[5] Ibid.

c. It talked about giving urgent attention to active participation of local people in health programs to secure their health.
d. The Committee emphasized special provision of certain sections of the people for example women, children, and differently abled.
e. The Committee strictly recommended that no individual be denied adequate medical care, curative and preventive, because of inability to pay for it.
f. Another important recommendation was that the Centre has to take a definite lead in health planning and promoting development of health services. All regional states have to be 'assisted' and 'co-oriented' by the Centre. The Centre would provide grants and technical support and the Ministry of Health would act as the ultimate authority of responsible for all the health services.
g. The Bhore Committee also framed three tier health care system i.e. primary, secondary and tertiary (District) level hospitals. At the periphery will be the primary unit for every 10,000-20,000 population with 75 beds, 6 doctors, 20 nurses, 6 public health nurses and other paramedical and supporting staff. Above the primary unit, there will be a secondary unit which will cover 30 primary units and will have 650 beds with all major specialties and other required medical as well as non-medical staffs. It would function as specialist unit and supervise the work of 30 primary units of health institutions. Above the secondary unit there will be a District Head Quarter Hospital at the district level, consisting of 2500 beds providing completely tertiary health care with available for all kinds of modern medical facilities and it will be responsible for health administration of the entire district. Such health institutions would provide integrated health services of curative, preventive and promotive to the entire population of the district.
h. The Bhore Committee also recommended that at the national level, health care system needs to function with 567 hospital beds, 62.3 doctors and 150.8 nurses per 1,00,000 population.[6]

[6] Ibid.

The Bhore Committee asked to the government to implement the recommendation in its full form with immediate effect. But the then government failed to take optimum measures to ensure good heath for its citizens. Prior to the implementation of the recommendation, the GoI initiated **1st Five Year Plan (FYP): 1951-55**. During 1st FYP more emphasis was given for more medical doctors (11.1 percent increase) and para medical supporting staff. It also suggested for the development of infrastructure i.e. increasing number of hospitals, dispensaries both in urban and rural areas and increasing strengths of hospital beds during 1951-56. Apart from that, allocation was sanctioned for environmental hygiene, safe drinking water supply, adequate nutrition, distribution of medicines and vaccines to control malaria, filariasis, and tuberculosis, leprosy, cancer, and mental diseases.

The Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) in India were very high and estimated 20/1,000 live births and 146/1,000 live births respectively during that time. Hence, both maternal and child health was given more emphasis and kept in the forefront in the planning of health development. During the 1st FYP, the importance was given to family planning, medical education and indigenous systems of medicines i.e. homeopathy and nature cure. A total of 65.3 core was allocated for public health expenditure that is 3.4 percentage of total expenditure on health. A major landmark in the development of health care services in India was the establishment of the Primary Health Centers (PHCs) in October, 1952 and health development was as part of the **Community Development Program** (CDP). It was significant as PHCs were directly putting into practice the concept of community participation and inter-sectoral development for health care. After 1955 the **2nd FYP (1956-60)**[7] was unveiled and more importance was given to expanding the existing health services, and its reach to all citizens of the country. Development of institutional facilities, providing training to technical manpower, control of communicable diseases, and actively campaign for environmental hygiene and family planning were given important during the 2nd Plan. From 1951-1960 the major focus of health sector in India was to manage epidemics and

[7] P. R. Dutt, *Rural Health Services in India: Primary Health Centres*, Central Health Education Bureau, New Delhi, 1965.

mass campaign that was initiated to eradicate various diseases. At the same time techno-centric approach was launched to fight against malaria, smallpox, tuberculosis, leprosy, filaria, and cholera. The total budget allocation for the 2nd Plan was 145.8 crore that was 3.1 percentage of total expenditure on health. It was found that both the Plans did not give importance to rural areas as far as fund allocation was concerned. The urban areas continued to receive a three-fourth of the medical care resources where rural health care was almost ignored under the CDP. After completion of the 2nd Plan the GoI constituted another Committee is known as the Mudaliar Committee to know the status of health development after recommendations of the Bhore Committee were put into practice through the implementation of 1st and 2nd FYP.

C. Mudaliar Committee - 1961

The Government of India appointed another Health Survey and Planning Committee on June 12, 1959 under the chairmanship of A. Lakshmanaswami Mudaliar, named as Mudaliar Committee who had submitted the report in 1961. Some of the major recommendations of the Mudaliar Committee related to primary health, maternal and child health are mentioned below:

a. The Central Government needs to provide financial support for public health programs like safe drinking water supply and sanitation, eradication of communicable diseases, family planning, schemes for providing training for health personnel by setting up All India Health services.

b. Provision of up-gradation and strengthening PHCs with the availability of adequate facilities and resources with full fledged medical personnel as recommended by both Bhore and Mudaliar Committee. The PHC has to provide residential quarters to all medical personnel and each PHC needs to have bed strength of 10 including two beds for emergency cases and it has to serve 40,000 population.

c. The PHC Medical Officers must not allowed to do private practice but given non-practicing plus public health allowances together with residential accommodation. Provision of one unified cadre of Assistant Surgeon in the state to manage rural health centers and also hospitals at higher levels.

d. The Taluk level hospitals have to provide routine medical service with three Medical Officers dealing with medicine, surgery, obstetrics and gynecology services. Out of three medical personnel, one preferably would be a woman medical officer in providing maternity, child health and family planning work. Apart from that good clinical side-room facilities need to be available and one of the three medical personnel provided training in laboratory work. The minimum bed strength of 50 would available at Taluk level hospitals and it needs to serve as a referral center for routine type of cases of two - three PHCs from that area.

e. The District Headquarter Hospital need to play a key position in regard to medical care and need to be expanded and strengthened with specialist facilities. Each District Headquarters Hospital need to be expanded up to 300 - 500 beds of which 75 may be set apart for maternity and 50 for pediatrics. Specialties services in medicine, surgery, obstetrics and gynecology, eye, ear, nose and throat, pediatrics, tuberculosis, and dentistry need to be available. The specialties in medicine surgery, obstetrics and gynecology have the status of a Civil Surgeon.

f. Provision of mobile teams of specialties to cover all areas of the district and to provide necessary supervisory and consultant facilities at the periphery levels. At the same time, they have to provide medical coverage to the rural population through mobile health units in mobile vans and those require hospitalization. Intensive medical care needs to be brought in an ambulance to the Taluk or district level hospitals for emergency treatment.

g. Apart from the provision made in District Headquarter Hospitals and PHCs for maternity beds, wherever possible independent maternity hospital need to be established for the provision of maternity services. Maternity hospitals have to be available in all big towns and cities. All such hospitals and services required to easily available, accessible, and affordable by women in different localities.

h. A planned method of development of maternity homes and maternity hospitals with attached ante-natal clinics and facilities for the system of promoting safe delivery cases and given priority for the maternal and child health.

i. Steps need to be taken for the extension of medical care through the promotion of health insurance schemes.

j. The government needs to encourage the development of medical facilities on co-operative lines as an experimental measure, through suitable subsidies.

The Committee also suggested to the government to implement its recommendation with immediate effect. As a result the government initiated its during implementation of **3rd FYP (1961-65).** The 3rd Plan looks into consideration of the problems affecting health care facilities provided by PHCs, and emphasis was given deal with a shortage of health personnel, delays in the construction of PHCs buildings, residential quarters for medical doctors and paramedical staffs, and adequate training facilities for the different categories of staff needed for the rural health services.[8] During the 3rd Plan in each community development block, one PHC was established and was targeted to establish 4361 PHCs by the end of March 1966. The 3rd Plan also strengthened the PHCs and its early integration with different health programs to control malaria, tuberculosis, etc. It has taken steps to improve the efficiency of PHCs, by providing minimum medical staff, necessary training facilities, and integration of the various activities of PHCs with other health services.[9] After identifying the problem of rural health care, the 3rd FYP focused to bring some of the changes and provide additional facilities to the medical personnel those who were interested to work in rural primary health units. They were provided residential accommodation including other facilities, and provision of additional expenditures for the education of their children. The scholarship was also provided to those students who were ready to serve in rural areas while undergoing training and after graduation agree to serve in rural areas for a certain time. During the 3rd Plan, the GoI constituted another committee named as Chadah Committee to know the health development and especially how to control diseases that was rapidly spreading due to malaria at that time.

D. Chadha Committee - 1963

During 1960s prevalence of malaria was very high so, during that time the GoI constituted a committee under the chairmanship of M.S. Chadha (the then Director

[8]Third Five Year Plans (1961-65), Planning Commission, Government of India, 1961.
[9] Ibid.

General of Health services), popularly known as Chadha Committee (1963). This Committee was constituted to advise GoI for the necessary steps to be taken for controlling malaria and proper management of the National Malaria Eradication Program (NMEP) with the association of functioning of PHCs. The Committee pointed that the maintenance was the responsibility of the general health services that would adequately strengthen particularly, rural health services. And it also suggested that the vigilance operation in the NMEP need to be carried out by basic health workers. They would act as multipurpose workers and perform duties in malaria work, smallpox and other communicable diseases in addition to the duties of family planning and vital statistics of data collected under the supervision of family planning health assistants. Afterwards it was noticed that family planning was neglected and was not given priority. The government was worried about the family planning due to rising of population and constituted Mukherjee Committee in 1966 to review the situation and submit a report.

E. Mukerji Committee - 1966

The Mukerji Committee which was constituted in 1966 reviewed the status of family planning and submitted the report to the government with necessary recommendations. The Committee recommended for provision of separate additional staff for the family planning program and finances for additional staff would be provided by the Centre. There would be a separate cell under the State Secretariat at the state level for dealing exclusively with family planning program. The Committee also strictly advised that family planning assistants were to undertake only family planning duties and suggested to delink the malaria activities from family planning. As a result the family planning program would receive the undivided attention of its staff and function properly. The Committee recommended proper administrative arrangement at the district level with proper coordination with District Civil Surgeon, District Health Officer and District Family Planning Officer. Mukerji Committee recommended basic health services that would be provided at the block level.

F. Jain Committee - 1967

During 1960s there was rapid industrialization and high population growth in India. At the same time, there were a number of medical and public health problems which were creating obstacles in the growth of the country. To deal with such situation

the GoI set up a Committee in August 1966 under the chairmanship of Ajit Prasad Jain to study the public health services. This Committee was called the Jain Committee (1967) and specifically focused to improve the standards of medical care and recommended to establish guidelines for future expansion of medical services. The Committee reviewed health schemes manned by the Central Government and make suggestions for improvement and reduction in government liability. It also advised coverage of health insurance for larger populations. The Committee gave emphasis on enhancement of maternity facilities at each level. This Committee also recommended for user fee to augment resources.

G. Jungalwalla Committee - 1967

The Government of India noticed serious problems with the integration of health services and to provide better arrangement. Again in 1964, the GoI constituted another committee under the chairmanship of N. Jungalwalla, the then Additional Director, General of Health Services. The Committee was asked to look into various problems related to the integration of health services, elimination of private health practice of the doctors within the government services. The Committee submitted the report in 1967 and recommended that country like India needs a service with a unified approach to all problems instead of a segmented approach to different problems. Therefore, both medical care and public health programs need to put under charge of a single administrator. After a detailed discussion of different aspects including the pay, service condition, unification of cadre etc. the Committee recommended few steps to follow for the integration at all levels of health organizations in India i.e. (1) single portal of entry, (2) common seniority, (3) recognition of extra qualifications by provision financial advancement, (4) equal pay for equal work, (5) special pay for specialized work, etc. Regarding private practice, the Committee realized that no government medical officer normally allowed in private practice. So, the private practice by the government doctors was strictly prohibited.

Following with such development GoI implemented **4th FYP (1969-73)** and during this Plan no new policy was formulated rather the same was undertaken for consideration. This Plan focuses more to provide an effective base for health care system in rural areas by strengthening the PHCs that would provide both preventive and curative services as well as function as in-charge for maintenance to control the communicable

diseases like malaria, smallpox, and family planning. During 4th Plan, campaign against communicable diseases was intensified. Both sub-divisional and district level hospitals were strengthened to serve as referral centers for the PHCs. The 4th Plan also strengthens medical and nursing education and training for paramedical personnel to meet minimum technical manpower for the requirements of the services. For the first time family planning was placed as highest priority and primary health care was given a separate allocation for rapid development. After immediate completion of the 4th Plan the GoI constituted another Committee is known as Kartar Singh Committee in 1973 to give a report on the development of health and family planning program in India.

H. Kartar Singh Committee - 1973

The Kartar Singh Committee was constituted in 1973 to study health and family planning program and functioning of PHCs in India. The Committee recommended provision of adequate facilities including human resources, material and fund available to the maximum number of PHCs. Each PHC would cover 50,000 populations with consist of two doctors and one of them would be a female. One doctor has to attend out-patients at the PHC, and the other doctor needs to go out on field visit. He has to extend integrated health, family planning program and nutrition services to the population. Thus, rotation wise each doctor would be attending patients at the PHCs for three days and away on field visits for the next three days per week.

The population in each PHC would be divided into 16 Health Sub-Centers (HSC), and consists of eight Health Workers (four males and four females) would be supervised by a group of two health supervisors (a male and a female), and each HSC would have a population of about 2000-3500 depending on topography and means of communications. Each HSC needs to staff by a team of one male and one female health workers. The Committee recommended amalgamating various categories of peripheral workers into a single cadre of Multi Purpose Workers (MPW) both male and female and, erstwhile, Auxiliary Nurse Midwife (ANM) was converted into MPW (female). The basic health workers, malaria surveillance workers were converted to MPW (male). Except that there would be a male supervisor to supervise the work of three to four male health workers and female supervisor (present Lady Health Visitor) to supervise the work of four female health workers. Among the various terms of reference of the study, the feasibility of

having multi-purpose and bi-purpose workers in the health field and the training of such workers was a new step. In order to reduce the existing shortage of female health workers, ANMs whose job was confined to the PHC headquarters, District Hospitals and at other places need to be withdrawn and posted at HSCs.

The **5th FYP (1974-79),** mainly focused to provide minimum public health care integrated with family planning, nutrition and immunization of children as a 'package program', under the **Minimum Needs Program (MNP)**. For the first time it was acknowledged that IMR was coming down from 146/1,000 live births in 1952 to 129/1,000 live births in 1976. The life expectancy has gone up from 32 years during 1951 to 52 years during 1976-81. The 5th FYP identified the existence of inadequacy of medical institutions, non-functionality of hospital beds, and shortage of other health care facilities in rural areas. The government also acknowledged that urban health services were much expanded at the cost of rural health sectors.[10] Therefore, the rural health care was given priority for further development and more funds was allocated to complete the incomplete buildings and fund was sanctioned for a new construction for rural family welfare planning centers. The 5th Plan had allocated a total amount of Rs. 497.36 crore for public health programs. Due to disparities in the available facilities for PHCs and preventive medicines; medical treatment, family planning between rural areas and urban areas, the MNP was initiated to achieve the following objectives.

a. Establishment of one PHC for each Community Development Block.
b. Establishment of HSC for every 10,000 population
c. Repairing of the buildings including residential quarters of the exiting PHCs and HSCs
d. Provision of drugs at the scale of Rs 12,000 per annum for each PHC and Rs. 2,000 per annum for each HSC
e. Up-gradation of one in every four PHCs to the status of 30 bed rural hospital with specialized services in surgery, medicine, obstetrics, gynecology and anesthesia. It was aimed to establish 101 PHCs, 11036 HSCs and 1293 rural hospitals by the end of the 5th FYP.

[10] Fifth Five Year Plan (1974-79), The Planning Commission, Government of India.

During the 5th Plan, the GoI planned to bring modification in the medical staff pattern and medical education system which would provide basic health care services in rural areas and ensured the effective management of health development. So, it constituted another committee popularly known as Srivastava Committee in 1975.

I. Srivastava Committee - 1975

This Committee was constituted to survey on medical education and support of human resources. It prescribed the steps that were required for the future health development. Some of the steps were given here: (i) reorient medical education in accordance with national needs and priorities and (ii) develop a curriculum for health assistants who would function as a link between medical officers and MPHWs. The Committee recommended (a) creation of cadre of para-professional or semi-professional health workers within the community itself to provide curative, preventive and promotive health services (b) to establish three cadres of health workers namely – multipurpose health workers, health assistance between the community and health Sub-centers, and doctors at PHC levels, (c) systematic development of referral services – at the Primary Health Centers level, as well as the Taluka/Tehsil level, district, regional and medical college hospitals level. This would develop direct links with the community within a total referral services complex. Thus, the linkage could be secured through properly organized internship programs and (d) establishment of Medical and Health Education Commission for planning and implementation. The Medical and Health Education Commission function as the apex coordinating agency for health development with an effective collaboration with the National Councils. As per the recommendation of Shrivastava Committee, in 1977 a major innovative health strategy was launched by creating a cadre in village based health auxiliaries named as the **Community Health Workers**. They were selected by the village people as part time workers and three months training was provided to them on promotive and curative health skills both in allopathy and indigenous systems of medicine.

Afterwards the **6th FYP (1980-85)** was introduced to integrate the problem of public health and proper coordination of activities with different line departments for development of family planning such as maternal and child health. The Minimum Needs Program under health had developed infrastructural facilities for the promotion of family

planning through proper coordination. It was directed to the District Collector to take responsibility to ensure coordination at the district and lower level were carried out properly for the promotion of family planning. The 6th FYP was a landmark in the history of women's development, as it received recognition in the developmental sectors. The issue of women were included as a separate chapter titled 'Women and Development' in which effort was made to expand the minimum health facilities for women related to maternal and child health integrated with family welfare and nutrition. The 6th Plan adopted a multi-disciplinary approach with a three pronged thrust areas such as health, education and employment. Women's employment was generated to increase income level that would result raising the nutrition and child care in the family, also reduce the birth rate and infant mortality rate.

During 6th Plan, health was viewed in its totality, specifically in case of human resource development. The various provisions of the minimum health care system in the rural areas were integrated with family welfare. Significantly, 6th FYP aimed at (i) increasing the accessibility of health services in rural areas, (ii) reduction of regional imbalances, (iii) development of referral services by removal of deficiencies in District/Sub-divisional hospitals, (iv) intensification for control/eradication of communicable diseases especially malaria and smallpox, (v) qualitative improvement in the education and training of health personnel, and development of referral services by providing specialist attention to common diseases in rural areas[11]. But the Minimum Needs Program was the main instrument through which health infrastructure in the rural areas was expanded and further strengthened to ensure primary health services to the rural people. The 6th FYP focused on both horizontal and vertical linkages that to be established among all the interrelated programs, like safe drinking water supply, environmental sanitation, hygiene, nutrition, education, family planning and maternal and child welfare.

This Plan made some necessary changes in public health development "*Health for All by 2000 AD*" enunciated in the Alma Ata Declaration in 1978. As a result the strategy to achieve it had been changed and emphasized was the following:

[11] Sixth Five Year Plan (1980-85), Planning Commission, Government of India.

a. To shift rural based curative and super specialty service and priority was given to all three types of health care i.e. preventive, curative and promotive health care service that would build up starting at the village level;
b. The infrastructure facilities for rural health service would consist of PHC each serving a population of 30,000 and HSC each serving a population of 5,000. The population of 1,000 would form the base unit where there will be trained health voluntarily chosen by the local community;
c. Advanced specialty services would be provided at the CHCs at the block level for a population of one lakh with consists of 30 bedded hospital and a system of referral services of cases from CHCs to the District Hospital/Medical College Hospital;
d. The convergence of various programs such as education, water supply and sanitation, control of communicable diseases, family planning, maternal and child health care, nutrition and school health implemented by different departments/agencies with the health department for optimum result;
e. Provision of adequate medical and para-medical manpower with proper training for meeting the requirements of various programs to prove health service in rural areas;
f. Involvement of local people in tackling the health problems and encouragement for community participation in the health programs to supervise and manage their own health programs in their areas.[12]

J. Mehta Committee - 1983

In 1983, the GoI appointed Mehta Committee under the chairmanship of Shantilal Mehta and the Committee was called "Medical Education Review Committee". The Committee recommended on two aspects i.e. establishment of Universities for Medical Sciences and Health Commission for health administration and research. It identified that lack of availability of trained health manpower and provision of incentives to medical doctors those who were working in rural areas. In spite of recommendation of various health committees and initiative of the government through various policies, programs and mainly through Five Years Plan, the health care system of the country continued to

[12] Ibid.

suffer from several deficiencies, as a result the Planning Commission, Government of India constituted a Working Group on Health under the chairmanship of Shri Kripa Narain (Secretary, Ministry of Health and Family Welfare) on 18th July, 1980. The Group was asked to review the then health status of the country with regard to the health component under the Minimum Needs Programs, shortage of medical staff, and other deficiencies in the health delivery system. It was asked to suggest necessary measures for rectifying the problems and to give Plan outlines for 1980-81 to 1984-85 and strategies to achieve '*Health for All by 2000 AD*'.

To achieve '*Health for All by 2000 AD*', the Committee prescribed integrated development Plan where health would be considered as a core objective of all development. It's recommended for an integrated comprehensive approach towards future health development and a National Health Plan to be based on universal primary health care. It would provide medical services to all sections of the society with special attention to those residing in remote rural, tribal and hilly areas. The public health would focus preventive, promotive and rehabilitative aspects of health care rather than only curative health services. As a result, the National Health Policy (NHP) was evolved by the GoI in 1983.

K. National Health Policy - 1983

The National Health Policy 1983 reflected universal and comprehensive primary health care service. The Bhore Committee had emphasized of providing primary health care for all. Hence, India as a signatory of the Alma Ata Declaration-1978 intends to implement '*Health for All by 2000 AD*' that had redefined the approach to primary health care. The then Ministry of Health and Family Welfare (MoHFW) noticed that the situation was largely replicative in nature of almost wholesale adoption of health development policies and the establishment of curative centers, based on western models. These were found to be inappropriate and irrelevant to the rural health care needs. The hospital based on disease and curative oriented approach towards the establishment of medical services provides benefits to the upper crusts of the society, especially those residing in the urban areas. The then MoHFW noticed that the proliferation of the curative approach had been at the cost of providing comprehensive primary health care services to the entire populations. It had given high emphasis on curative approach and

neglected the preventive, promotive, public health and rehabilitative aspects of health care. The policy makers noted that, the existing approach instead of increasing awareness and building up self-reliance, had tended to enhance dependency and weaken the community's capacity to cope with their problems (GoI, 1983). Taking all these aspects into consideration, the NHP-1983 tried to evolve a fully integrated planning framework, which sought to provide universal, comprehensive, primary health care services, relevant to the actual needs and priorities of the community at a cost which people could afford.

The NHP-1983 aimed at providing the services at nearest areas of facilities and ensuring active participation of the community in the health development process. It was realized that, if the quality of the lives of people needs to be improved, than their health status required to be highly emphasized. The NHP-1983 states that health development is to be viewed as an internal part of overall human resource development. So, proper coordinated approach is sought to be established among the entire health related programs for example, protected water supply, environmental sanitation and hygiene, nutrition, housing and education etc. Therefore, the NHP-1983 stressed that to be successful, it needs to address the problems associated with diseases like poverty, ignorance and superstition.

The NHP-1983 also directed for restructuring the health services on the preventive, promotive and rehabilitative aspects of health care and brought out the need for comprehensive services to reach the population in the remotest of the rural areas. It stated that, the programs will have to be implemented through the full involvement of the communities as it viewed health and human development as a vital component of overall socioeconomic development of the country.

For active community participation, the NHP-1983 planned one PHC for every 30,000 rural population for every community, development block. The NHP-1983 instituted the health guide scheme, under which a volunteer is selected by the community. S/he is responsible for organizing awareness programs for promotive and preventive measures. The scheme ensures that health care does not merely constitute health intervention but also consist of an integrated package of services seeking to tackle the entire range of poor health conditions.

With regards to providing health services the NHP-1983 also clearly suggests infavour of privatization for curative care and involvement of NGOs to expand coverage of services to improve health care access. The NHP-1983 suggests it because the state suffers from a constraint of resources (MoHFW, 1983). The NHP also recommended evolving of a decentralized system of health care and the establishment of a referral system. It also prescribes transfer of knowledge of simple skill-set to village based workers and establishment of a nationwide chain of epidemiological stations make people aware and to achieve '*Health for All by 2000 AD*'.

The Post-NHP period noted to achieve the goal *'Health for All by 2000 AD'* during the **7th FYP (1985-90)** instead of focusing on further health development. For the overall development of health care, due importance was given to both preventive and promotive aspects of health care services. It organized for a comprehensive health care which is easily and widely available, and freely accessible, and generally affordable by the people. It was proposed that, primary health care would continue as the main instrument of action to achieve this goal (MoHFW, 1983). However, keeping the selective health care approach, the 8th FYP adopted a new slogan '*Health for the Underprivileged*' instead of *'Health for All by 2000 AD'*. But the 7th FYP targeted to achieve the goal '*Health for All by 2000 AD*', and more emphasis was given to strengthen the ongoing programs rather than new programs and major emphasis was given to:

a. Continuation of Minimum Needs Program as sheet-anchor for the promotion of primary health care, emphasis on improvement in the quality of health services and reach to all. The priority was given to adequately strengthen infrastructural facilities and the establishment of additional units where they were not available.
b. Serious efforts were taken up for an effective co-ordination, coupling of health and health-related services and other activities, e.g., nutrition, safe drinking water supply, sanitation, housing, education, information, communication and social welfare;
c. Importance of community participation and active participation of voluntary organizations in different programs;
d. Improvement of quality in health and family welfare services, provision of proper education, training, and providing of supplies required and logistics in vulnerable

areas. Supply of adequate drugs, vaccines, and special attention for ensuring production, pricing and distribution of drugs with universal accessibility, availability and affordability;

e. Development of manpower resources with provision of need based training and education which were problem-centric and community-oriented, specifically the full forms PHCs and CHCs for both doctors and paramedical staff;

f. Development of rural health and the three-tier system of HSC, PHC and CHC would be further strengthened by converting the existing maternal and child health (MCH) centers and rural dispensaries into PHCs and Sub-divisional hospitals into CHCs and by setting up new functional units wherever necessary.

L. J. S. Bajaj Committee - 1986

The Government of India implemented the National Policy on Education in 1986 and found essential linkage between health and education. At the same time, it is also noticed that health education at primary and middle school level would ensure the health commitment from the individual to the family and the community. And such issue was more emphasized by J. S. Bajaj Committee in 1986. The Committee recommended (1) establishment of the Education Commission for Health Sciences as a Central organization in the field of professional education, (2) Establishing effective communication between all categories of staff and joint involvement in planning, implementation and management to ensure proper running of different health programs.

Subsequently, India evolved the **8th FYP (1992-97),** but there was no major change in health development till 8th Plan the country. During the 8th Plan, India faced a massive economic crisis and the Plan was pushed forward by two years instead of starting from 1991, it began in 1992. During this Plan it was targeted that health facilities need to reach the entire population by the end of the 8th FYP. And more focus was given to achieve the '*Health for All by 2000 AD*' and priority was given not only high risk vulnerable groups such as mothers and children but also underprivileged (SC and ST) segments of the society. Special attention was paid to '*Health for Underprivileged*' with consistent effort through community based monitoring system and primary health care. Again, the 8th Plan focused on mainly on approach and strategy for development of rural health with consolidation and operationalization rather than major expansion and

optimization of functions of HSCs, PHCs, and CHCs. In order to provide effective rural health to the people, the rural hospitals and dispensaries was modified. These were equipped and staffed and converted into HSC, PHC, CHC, thereby integrated them into the primary health care system. Apart from that, district, state, and national level health information management system were developed to monitor the progress of implementation of MNP.

Simultaneously, new policy like re-organization of Indian Systems of Medicine and Homeopathy (ISM&H) were introduced. The dispensaries in rural areas were developed into ISM&H health centers and made universally accessible, and affordable. Proper mechanism was developed to ensure rural health services to the needs of the rural masses and accountable to the community. The Panchayati Raj system would become an effective instrument for eliciting community participation in the health programs and providing supervision and support to primary health care infrastructure. At the same time, linkages were developed by the Sub-divisional and District level Hospitals provide a referral service. Before, completion of the 8th Plan, the GoI constituted Bajaj Committee in 1996 to study the functions of the public health care system during the 8th FYP.

M. Bajaj Committee - 1996

The Bajaj Committee was constituted under the chairmanship of J.S. Bajaj in 1996 to focus on the public health provision in the entire country. The Committee found that along with the emphasis on consolidation of primary health care, emphasis also needs to give for secondary health services. But optimization of tertiary health service was the key objective of the 8th Plan. The Committee submitted report in 1996, some of its recommendations were:

a. Search for an alternative health care strategies to be undertaken by health implementing agencies through appropriate health service research.
b. Making local units more powerful by giving them enough political, administrative and managerial autonomies for better public health care.
c. Allocation of adequate funds to the Centre, Union Territories and State Directorate of Health Services.
d. Strengthening of the PHC/HSC at the village level and the involvement of PRIs to decide the structure, and give priorities for functioning of health service

institutions depending upon the availability resource. This would ensure involvement of local self-governance in the health delivery system.

e. Establishment of inter-sectoral cooperation and convergence of various departments i.e. rural development, water and sanitation, nutritional programs, urban sanitation, Integrated Child Development Services and Mid-day-meals programs etc. with the health system. It would work under the Ministry of Health and Family Welfare as the nodal agency for better delivery of public health.
f. Supervisory of mechanism from top to bottom for an effective management of various health related programs.
g. Involvement of NGOs through an appropriate action plan with enough funding for better health delivery system.
h. An appropriate budgetary provision in a phase manner to implement the recommendation of the committee during 9th FYP and beyond.

The **9th FYP (1997-2001)** was a unique Plan with regard to health as it adopted some new innovative plans and strategies to implement for health development. This Plan was looking back to Bhore Committee report-1946 and identified the critical gaps till hitherto, to rectify these gaps and made an action that is needed for further development of public health. The 9th Plan made a special action plan to improve health services to meet the increasing health demands among the people. Efforts were taken to improve the functional efficiency of health delivery system by creating functional and reliable health management. Multi-professional education and training was provided for skill up-gradation of all categories of health personnel. Awareness programs were arranged for the community people to increase utilization, accountability and responsiveness towards health services. The 9th Plan also involved the Panchayati Raj Institutions (PRIs) in local health planning, execution and monitoring, and making use of available community resources for the sustainability of public health.

Some of the new initiatives of the 9th Plan was (i) horizontal integration of vertical programs, (ii) development of Disease Surveillance and Response Mechanism with a focus on rapid recognition, (iii) development and implementation of integrated Noncommunicable Disease Control Program, (iv) improvement of Health Management

Information System (HMIS) and the logistics of supplies.[13] Simultaneously, the 9th FYP also intended to improve rural primary health care institutions on priority basis by integrating all HSCs, and PHCs with complete functionality. It also filled up the gaps in CHCs by re-structuring existing block level PHC, Taluk level, Sub-divisional level hospital and establish functional referral linkages with provision of need based manpower on the basis of distances, difficulties and work load.[14] This Plan also implemented strategies to improve health condition in tribal areas by close monitoring, early detection of problems and midcourse correction with an allocation of 100 percent central plan funds. For the first time 9th Plan involved *Nagar Palikas* for effective inter-sectoral coordination and improving community participation in the development of urban primary health. All three kinds of health institutions primary, secondary and tertiary established linkages with *Nagar Palikas,* to strengthen and reorganize and restructure, re-deploy existing manpower and arrange effective referral services for improving urban primary health delivery. The Plan focused to providing need-based, demand-driven high quality and integrated reproductive and child health care system.

During this Plan period, the GoI implemented **the National Population Policy - 2000** to address the unmet needs for health development by providing contraception to meet the reproductive and child health in the country. It also addressed the improvement of health care infrastructure, increase of health personnel to administering family planning services with an integrated health approach through a partnership of the government and with NGOs. However, in order to address the concern regarding the non-attainment of a large number of goals set out in NHP-1983, the GoI felt that it is necessary to review the health system and to formulate a new policy after the 9th Plan. As a result National Health Policy-2002 emerged.

N. National Health Policy - 2002

The National Health Policy-2002 was formulated to address the real problems that India has been facing. This policy planned to maximize the broad-based availability of health services to the citizens. Firstly, it determined to address the gaps between urban-rural divide, infrastructural deficiencies, low budget allocation, and regional differences

[13] Ninth Five Year Plan (1997-2001), The Planning Commission, Government of India.
[14] Ibid.

to ensure more equitable access to health services across the country. Apart from that it aims to provide and achieve an acceptable standard of good health of the entire population. It also focused active participation of the local self-governance for proper public health delivery system.

Mainly, the NHP-2002 enhanced the contribution of private sectors in providing health care to the people. It also noticed budget allocated to public health sector which was very low since few years. The allocation of budget on health as a percentage of Gross Domestic Product (GDP) has declined from 1.3 percent in 1990 to 0.9 percent in 1999. The aggregate expenditure in the health sector was 5.2 percent of GDP in 2002. Out of that about 17 percent of the aggregate expenditure was public health spending, the balance being out of pocket expenditure. The central budgetary allocation for health over this period, as a percentage of the total Central Budget, has been stagnant at 1.3 percent, while that in the states has declined from 7.0 percent to 5.5 percent. This figure shows that reach to the health centers and quality of public health services has been below the desirable standards. The NHP-2002 planned to increase health expenditure from existing 0.9 percent of GDP to 2.0 percent of health expenditure by 2010 and increased share of Central grants to constitute at least 25 percent of total health spending by 2010. It also directs states to increase health expenditure from 5.5 percent to 7 percent of budget and further increased it to 8 percent by the end of 2010. Apart from fund allocation the NHP-2002 prescribed for convergence of all health programs under a single field of administration and tried to reduce inequalities between socially disadvantaged (SCs and STs) groups of the society and allowed the disadvantaged sections of society a fairer access to public health services. It is also recommended for increasing infrastructure, human resources in an ad-hoc post to be provided the minimum standard of patient care. This NHP-2002 emphasized to look public health programs in an innovative way, so that it would provide health care to all the citizens.

The NHP-2002 emphasized involvement of the NGOs and the civil society organizations to enhance the quality of public health programs. In principle, the state would encourage the handing over of public health service outlets at any level of management by NGOs and other institutions of civil society, on an ‘as-is-where-is’ basis, along with the funds earmarked for such institutions.

While looking at the policy document critically, it is noticed that NHP-2002 completely dismantled the entire concept of primary health services, as it was silent on the provision of primary health. It had significantly ignored women and child health. It argued that quantum of budget allocation is very low as allocation on health requires a minimum 5 percent of GDP that was recommended by WHO since long.[15] As a whole, the NHP-2002 has identified many of the gross deficiencies of the then health care scenario, proposed a substantial increase in fund allocation by the Central Government. It also prescribed regulation of the private sector; however it had neglected the objective of the Alma Ata Declaration-1978 and encouraged further privatization in the health sector that was not a welcome step for the country like India. The NHP-2002 strongly argued to implement its recommendation in the 10th FYP.

The **10th FYP (2002-2007),** focused on the reorganization and restructure of the existing public health care system including referral linkages at the primary, secondary and tertiary levels. These institutions would undertake the responsibility of all health problems including communicable and non-communicable diseases. It also called deliverer for reproductive and child health services to the entire population for both rural and urban areas. Apart from that some of the major focuses were:

a. The horizontal integration of all aspects of the current vertical programs including supplies, monitoring, information education communication and motivation (IECM), training, administrative arrangements and implementation. All are integral components of health care system.
b. The emphasis was given for evolving, implementing and monitoring transparent norms for quality of health care and cost of care in different health care institutions.
c. An alternative system of health financing like health insurance was created for the people. This Plan has made health care to be accessible and affordable for all. There is an effective system of disease surveillance and response at the district, state and national level as a part of existing health services.

[15] Amit Sen Gupta, "National Health Policy 2002: A Brief Critique", *The National Medical Journal of India*, Vol. 15, No. 4, 2002, pp. 215-216.

d. The 10th Plan had empowered PRIs to manage the health delivery system. The funds are transferred to PRIs and directed them for health planning and monitoring in their areas. Hence, it would improve accountability, sort out problems such as absenteeism, improve inter-sectoral coordination and convergence of services.
e. Public-Private-Partnership (PPP) in health care was introduced for providing health care for all in an effective manner.

After the 10th Plan, the public health sector has been developed to some extent but the goals of the Plan could not reach the targeted people. Therefore, the **11th FYP (2007-2012)** has restructured policies to achieve a new vision which is based on faster, broad-based, and inclusive growth. The main objective of this Plan was to provide good health to the people and especially, the poor, and underprivileged. The special attention was given to health care of marginalized sections i.e. adolescent girls, women of all ages, children below the age of six, older persons, disabled and primitive tribal groups. The strategy to achieve the objectives of 11th Plan is to adopt a comprehensive approach that encompasses individual health care, provision of public health, sanitation, safe drinking water, and access to food, practice of hand washing, hygiene and feeding practices. The 11th Plan intended to convergence health with other departments and to reduce disparities across regions and communities by ensuring universal access and affordable health care to all. It is targeted to fill the gaps in both infrastructure and human resources. The 11th plan ensures to the people that they would get essential drugs and supplies, vaccines, medical equipment, along with the basic infrastructure like electricity, water supply, toilets, telecommunications, and computers for maintaining records for health development. Direction is given to both the Central and State Governments to increase allocation of budget to be spent during 11th FYP.

Significantly, the Plan introduced a new health scheme that would benefit both individual including five family members and save from exorbitant out of pocket expenses. It would be a cashless transaction for improvement of access to health care and protecting health. To strengthen the public health delivery system, the contribution of the private sector in providing primary, secondary, and tertiary services would be enhanced through different measures including partnership with the government. Good service delivery would ensure active involvement of PRIs, community, and civil society groups.

Access to public health as a right for all the citizens of the country is a major goal of 11th FYP.[16] Some of the major goals of 11th FYP are the following:[17]

a. Reducing Maternal Mortality Ratio (MMR) to 1 per 1,000 live births
b. Reducing Infant Mortality Rate (IMR) to 28 per 1,000 live births
c. Reducing Total Fertility Rate (TFR) to 2.1
d. Providing clean drinking water for all by 2009 and ensuring no slip-backs
e. Reducing malnutrition among children of age group 0–3 to half its present level
f. Reducing anemia among women and girls by 50 percent
g. Raising the sex ratio for age group 0–6 to 935 of 2011–12 and 950 from 2016–17

The 11th Plan tried to improve health equity in both the NRHM and National Urban Health Mission. It also sets targets to increase survival of both mother and child and especially the girl child through gender responsive health care. Most importantly, this Plan intended to help those poor who are in debt crisis and prevent debt due to more expenditure on health by providing health insurances. The 11th Plan also involved PRIs, NGOs, and civil societies in the decentralized health delivery system.[18]

2.3 Need for the National Rural Health Mission

India has a profound socioeconomic gap, increasing inequalities of health, poverty, and dying with emerging threats from cardiovascular diseases, HIV/AIDS, and childbirth related complications in every day. India, in country level faces these formidable challenges including particulars of maternal and child health. It is reported that, 78,000 women die particularly from pregnancy and childbirth related complications and about one million neonatal deaths occur in India every year revealed by UNICEF India representative, Karin Hulshof.[19] Besides that, there are other maladies widespread of health inequalities in different states and particularly in rural areas where the poor, the vulnerable sections like women, and children, and the disadvantaged groups i.e.

[16] Eleventh Five Year Plan (2007-12), Vol. II, Social Sector, Planning Commission, Government of India, 2008, pp. 57-58.
[17] Ibid.
[18] Ibid.
[19] Towards a Healthier India for Mothers and Children. http://www.unicef.org/india/health_4750.htm, Accessed on March 15, 2010

Scheduled Castes (SCs) and scheduled Tribes (STs) were noticed to be more victimized. Since independence, constant attempt by the Government of India through several welfare schemes, various policies, programs and different Five Year Plans have improved the situation and declined the socioeconomic gaps, development of the economy, and health care indicators particularly improvement of life expectancy from 32 years in 1951[20] to 65 years in 2011. But, the pace of improvement in other health indicators i.e. maternal, infant, and child mortality are not yet declined both in the national as well as in different states for example the maternal death is still alarming in the national level 254 per one lakh live births in 2004-06 till the implementation of NRHM and at state levels Uttar Pradesh and Uttarakhand stand as (440), Rajasthan (388), Madhya Pradesh (335), Bihar (312) and Odisha (303) per one lakh live births. Including maternal mortality there are also widely prevalent of Infant Mortality Rate (IMR) in different states like Madhya Pradesh (76), Odisha (75), Uttar Pradesh and Uttarakhand (73), Rajasthan (68) and Bihar (61) per 1,000 live births. A quarter of global unattended deliveries take place in India[21] and data on institutional delivery shows very low rate of 41 percent in India where as Odisha conducts only 39 percent of institutional deliveries.[22] (NFHS-3) 2005-06. These are some of the high focus major states excluding some small states reported at the alarming rate of both IMR and MMR all over the country.

However, while analyzing other multi-factors reasons for health problems, it is noticed that the health delivery system in the country is widely dysfunctional and specifically the primary health services are highly neglected in the rural areas. The accessibility, availability and affordability and quality of health care are seriously paralyzed all over India. And the predicament of health situation became a sideline during liberalization period while implementing the Structural Adjustment Programs (SAP) in the country in 1990s. During this period severe budget cuts were there in the social sector and health as a major social sector neglected extensively from the entire continuum. It is also reported that various social determinants of health i.e. poverty,

[20] Government of India, *Report of the Working Group on Health for All by 2000 A.D.*, Ministry of Health and Family Welfare, Government of India, March 25, 1981, p. 5.
[21] *Maternal and newborn Health: The State of the World's Children 2009*, UNICEF, USA, 2008, p. 51.
[22] National Family Health Survey-3 (2005-06), The Ministry of Health and Family Welfare, Government of India.

proper housing pattern, safe drinking water, sanitation, food and nutrition, and education have not been prioritized during this period. During 1990s, India's continuous inadequate (not even total 1 percent of GDP was spent on health during 1990s) allocation of the budget for public health led the rural poor people to spend more out of pocket expenses on health services from the private health sectors. Such situation is bound to have an impact on cost effectiveness and increased burden on the poor patients specifically in rural areas. It is not favorable for the 68.84 percent of the rural population of the country (among those majorities belong to the BPL category). The continuous reduction of public health spending lead to incapacitated public health provision and inadequate health care facilities which increased burden of disease and mortality. And the burden is more noticed among the poor which forced them to take debt with high interest for covering medical expenditures which pushed them into a vicious circle of poverty.

At the same time, taking the opportunity of public health sector, the private sector made virtual monopoly over ambulatory curative services in both urban and rural areas and cover more than half of the hospital care that reduce access to the public health care system.[23] Now-a-days, the private health care market in India is like in the USA, based on supply-induced demand and keeps growing geometrically, especially with the advance of new technology. The cost of such health service is also increasing, this means that the already existing difficulty in accessing to public health service is getting worse, and not only poor but also the middle classes are getting severely affected.[24] Inaccessibility of medical care in curative, preventive, and promotive aspects are the significant factors of low state of health. The situation urgently noticed that as long as such issues are not addressed righteously, the social ills will continue to take death toll on the public's welfare.[25] Above all, India's unregulated private health policy and monopoly of private markets in one hand and poor quality of public health service, and inadequate resource

[23] Leena V Gangolli, Ravi Duggal, and Abhay Shukla, *Review of healthcare in India*, CEHAT, Mumbai, 2005, p. 3.
[24] Ibid.
[25] Editorial, "Social issues as public health: Promise and peril", *American Journal of Public Health*, Vol. 90, No. 8, August 2000, pp. 1189-1191.

allocation by the government in other hand have declined utilization of public health sector.[26]

It is debated that without addressing such issues, only some kind of health interventions may not bring changes in health care development in the entire country. Hence, the public health sector itself needs recognition and favorable social condition for good health. And health outcomes depend on the reorientation of public health action and implementation of effective policy for the sustainable health delivery system. Therefore, public health as a significant social issue needs special attention for a rapid scale of development. The development of health leads to the advancement of the country and economic growth of the nation. So, in this context the state of public health is a matter of discussion. Such issues became a topic for discussion among the academia, health policy makers, health policy analysts, health professionals, and the civil society organizations since a quite some time. All of them argued that India's public health sector needs a proper focus by the policy planners and the action to be needed urgent basis on the policy agenda for further health development in the country. While discussing and critically looking at health from various angles it is found that importantly, insufficient allocation of budget on health, and lack of political will power of different political parties have put health as a neglected part in the Indian's development policy agenda. Apart from this, India is a signatory of various international conferences i.e. Alma Ata Declaration-1978, International Conference on Population and Development-1994, and Conference on Women and Development-1995. In a latest Declaration of the UNO's Millennium Development Goals (MDGs), the Government of India as a signatory was committed to formulate new health policy and take necessary actions that required to meet the expected outcomes of the MDGs by 2015.

The Government of India is responsible to fulfill the commitment of reaching the targets of the MDGs in one side and the political commitment of the Common Minimum Programs (CMP) on the other side which was promised by the United Progressive Alliance (UPA) earlier. The then UPA Congress Government (2004) launched the National Rural Health Mission (NRHM) in April 12, 2005 at national level and the NRHM was launched in Odisha on June 17, 2005. Under this program the government

[26] Ibid.

had targeted to increase public expenditure on health 2 to 3 percent of GDP and aimed to revitalize the public health in the country within seven years of NRHM from 2005-2012. Initially, special focus was given to 18 states those have weak public health indicators and/or weak health infrastructure which includes eight Empowered Action Group states i.e. Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Uttaranchal, Odisha and Rajasthan, and eight North-East states such as Arunachal Pradesh, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim, Tripura, and two other states such as Himachal Pradesh and Jammu & Kashmir. However, later on the NRHM was extended to rest of the states in the country. The direction was given by the government to the Planning Commission to make necessary arrangement for the allocation of budget through both the 10th and 11th Five Year Plans where health sector would be granted an elephant share for health development apart from separate allocation to public health while implementing the NRHM. The NRHM was initially sanctioned budget outlays of Rs. 6713 crore for 2005-06[27] and targeted to increase an additionally of 30 percent over existing annual budgetary outlays.[28] More focused was given during 11th FYP for general health development under the NRHM.

The NRHM has adopted a comprehensive approach by relating health to the determinants of good health such as provision of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian systems of medicine to facilitate public health care system in the country. The plan of action includes increasing public expenditure on health, reducing regional imbalances in health infrastructure, pooling resources, integration of organizational structures, and optimization of health manpower. It also brings decentralized health program management by the district, community involvement and ownership of assets, direct management of finance at the district and block level, and operationalization of the Community Health Centers into functional hospitals meeting the Indian Public Health Standards in each block.

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[27] *National Rural Health Mission*, National Institute of Health and Family Welfare. http://www.nihfw.org/NDC/DocumentationServices/NationalRuralHealthMission.html, Accessed on April 4, 2012.

[28] *National Rural Health Mission (2005-12), Mission Document*, The Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in/NRHM/Documents/Mission_Document.pdf, Accessed on December 8, 2012.

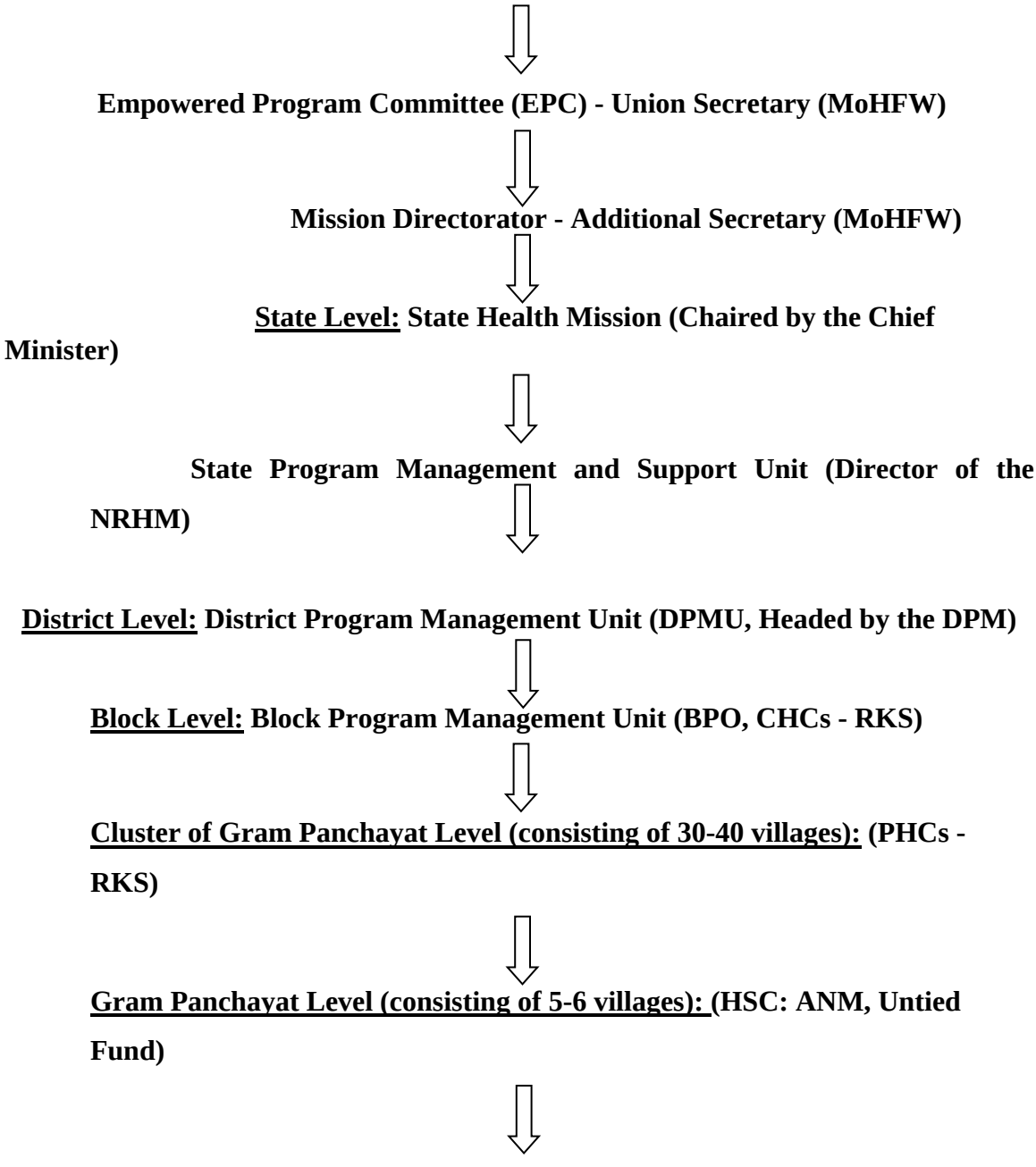
The Government of India also brought about changes in the health sector in its policy framework and its implementation process for advancing the goals and priorities of strategies during the next seven years to meet the reproductive and child health care. The main aim of NRHM is to provide accessible, affordable, accountable, effective and reliable primary health care facilities, especially, to the poor, women children and vulnerable sections of the population i.e. women and children in rural areas. It also aims at bridging the gap in rural health care services through the creation of a cadre of Accredited Social Health Activists (ASHA) and improved hospital care, decentralization of programs at the district level to improve intra and inter-sectoral convergence and effective utilization of resources.

Further, the NRHM targets to provide and amalgamate with the existing programs of health and family welfare including Reproductive and Child Health (RCH) -II, Malaria, Blindness, Iodine deficiency, Filaria, Kala Azar, Tuberculosis, Leprosy and Integrated Disease Surveillance. Further, it addresses the issue of health in the context of sector-wide approach addressing environmental sanitation and hygiene, nutrition and safe drinking water supply as basic determinants of good health in order to maintain greater convergence among the related social sector departments i.e. AYUSH, Women and Child Development, Sanitation, Elementary Education, Panchayati Raj and Rural Development. At the district and village level, the institutional framework of the Total Sanitation Campaign will be integrated with the District Health Mission and Village Health and Sanitation Committee (VHSC). The Mission further seeks to build greater ownership of the program among the community through involvement of Panchayati Raj Institutions, NGOs and other stakeholders at National, state, District and Sub-District levels to achieve the goals of National Population Policy 2000 and National Health Policy 2002.

2.3.1 Implementation of the NRHM: Institutional and Administrative Mechanism

The NRHM is aimed to make necessary improvement in the health delivery system and intended to provide an integrated comprehensive effective primary health services to the people. The Central government has prepared a broad institutional framework for the implementation of NRHM starting from the Central level to the community level. It has adopted a top down approach for the implementation of the Mission.

Figure - 2.1: Institutional Mechanism for Implementation of the National Rural Health Mission[29]



[29] *National Rural Health Mission (2005-12), Mission Document*, The Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in/NRHM/Documents/Mission_Document.pdf, Accessed on December 8, 2012.

A. Administrative mechanism at the Central level

At the Central level, the NRHM has set up a Mission Steering Group (MSG) chaired by the Union Minister for Health and Family Welfare. The MSG is empowered to approve the financial norms of each and every scheme and other components that fall under the NRHM. It has also the power of modification of ongoing schemes and launching of new schemes after reviewing the progressive report of the Mission. The MSG of NRHM comprises three other Ministries namely the Ministry of Rural Development, Panchayati Raj, and Human Resource Development, and Minister of state for Health and Family Welfare as the members of the Steering Group apart from the Ministry for Health and Family Welfare (MoHFW). It also consists of the Deputy Chairman and Member Secretary of the Planning Commission, eight other Secretaries of different Departments and the Directorate General of Health Services, and 4 Secretaries of Health and Family Welfare of 18 high focus states, Secretary (Health and Family Welfare, GoI; as the Convener), Additional Secretary as the Mission Director of NRHM, MoHFW; and ten public health professionals.

Apart from the MSG, there is another Committee named as Empowered Program Committee (EPC). The Union Secretary for Health and Family Welfare is head of the Committee and the EPC is the nodal agency for implementation of NRHM under the overall guidance of the MSG. It is empowered to decide the budget allocation which is approved by the MSG. There is a certain flexibility handed over to the EPC, to change approved budget by the MSG within the range of 25 percent if the EPC found approved amount high.[30]

However, the Centre is not only responsible for budget allocation for the Mission but also rules and regulation for implementation of and setting standards for measuring the performance of NRHM. It has also issued the necessary guidelines to help the regional states, and other stakeholders like NGOs those who have partnered with the state for an effective implementation of NRHM. Apart from that, the Centre also helps to the

[30] National Rural Health Mission: Institutional Setup at State level. http://www.mohfw.nic.in/NRHM, Accessed on December 24, 2012.

states for capacity building, financial resources to carry out reforms and accountability in the health sector. Above all, the Centre intervenes in disease surveillance, monitoring and evaluation of the Mission.

B. Administrative mechanism at the state level

The Centre has vested the responsibility to the different states to execute the NRHM. The Mission has been implemented under the direct guidance of the state Health Mission headed by the Chief Minister of the state. The Minister of Health and Family Welfare, and Principal/Secretary of the Family Welfare, of the State Government are respectively Co-Chairperson and Convener of the State Health Mission. The State Health Mission also consists of other Ministers i.e. AYUSH, Women and Child Development, Medical Education, Public Health Engineering, Water and Sanitation, Panchayati Raj, Rural Development, Social Welfare, Urban Development, Planning, and Finance. The State Health Mission nominates public representatives like MPs, MLAs, Chairmen, Zila Parishad, urban local bodies; and also consists of the official representatives such as Chief Secretaries/Principal Secretaries of different Departments; and nominated non-officials such as representatives of medical associations, health experts, NGOs; and different representatives of the development partners. In the state level, State Health and Family Welfare Society are created and it has been carrying out the implementation of the Mission. The members of the State Health Mission meet once in a six month and discussed policy implementation, reviews the progress of NRHM. Plans for inter-sector coordination and the necessary measures that are required to promote the NRHM. Apart from that, The State Health Mission also comprises of different official Governing bodies and other Committees for proper functioning of NRHM in the state levels.

a. Governing Body

The Governing Body is headed by the Chief Secretary/Development Commissioner. The other members are from Secretaries of Department of Health and other associated Departments of NRHM. The Governing Body has also members from the field of expertise on health, including public health professionals and representative from development partners. They meet once in a six months and discuss about the Annual State Action Plan, institutional reform in the public health sector. They also review on implementation of Annual Action Plan and the development of inter-sectoral

coordination with different departments and stakeholders of NRHM. They prepare the blueprint which would follow up the action of the State Health Mission.

b. Executive Committee

The Executive Committee is headed by the Principal Secretary/Secretary of the Family Welfare along with the Executive Director/Mission Director as the Convener. Apart from that, there are other members of the Committee. The Executive Committee meets once in every month and discusses execution of the approved State Mission Plan of NRHM, detailed expenditures and implementation reviews. The Committee also releases funds for the District Health Societies and finalizes the working arrangement of intra/inter-sectoral coordination of the Mission. The Committee also does follow up on the decisions made by the Governing body.

c. Program Committee for Health and Family Welfare Sector

The Program Executive Committee is headed by the Director of NRHM and the Committee would ensure execution of State Action Plan of NRHM. However, for the convenience of administrative work, planning, and review of each activity of the State Health Mission the state constitutes Program Committees to carry out such responsibilities at the state level.

d. State Program Management and Support Unit (SPMSU)

The role of the SPMSU is important as it acts like the secretariat to the State Health Mission and state society. The SPMSU is headed by the Mission Director/Executive Director. The SPMSU provides technical support to the State Health Mission through professional like MBA, MIS and CA as a specialist and consultant for reproductive and child health and various National disease Control Programs. Only after the sanction of the State Action Plan by the Governing Body of the State Health Society and the District Plans by the Executive Committee, funds are released. However, the responsibility for financial management and preparation of utilization of certificates and audit of the Society is conducted by the SPMSU. The State Health Mission and the state society are closely interlinked with the common secretariat and function for the State Health Mission.

C. Administrative mechanism at the district level

At the district level Zilla Parishad's president acts as a chairperson of the District Health and Family Welfare Society. The Collector is the co-chairperson and chief executive and Chief District Medical Officer acts as a member and Convener of the District Health and Family Welfare Society. The Zilla Swathy Samiti (ZSS) functions as an Executive Body of the District Health Mission. There is a District Program Management Units (DPMU) established at the district level consisting of a District Program Manager (DPM), District Account Manager (DAM), and data assistant officer. The DPMU is solely responsible for the implementation of NRHM/RCH-II and other national health programs at the district levels.

D. Administrative mechanism at the block and the village level

There is a Block Program Management Unit (BPMU) comprising of the Block Program Organizers and Support Machinary. Generally the Unit reports the DPM and Medical Officer In-Charge and mainly responsible for plan preparation at the block and village levels, monitoring and implementation, inter-sectoral coordination, public-private-partnership and training to the ASHAs at the block and the village levels. There is also Rogi Kalyan Samitis/Hospital Management Committee to carry out necessary infrastructural development and provision of facilities to the patients at the CHCs and PHCs levels.

The NRHM has also set up the administrative mechanism at the village level. The Gaon Kalyan Samitis (GKS) /Village Health and Sanitation Committees (VHSC) are formed in the villages and they are responsible for community mobilization, village health and sanitation, preparation of the village health plan and responsible for the community based monitoring of various health programs under the NRHM. Though, in guidelines such rules are prescribed but in practice it is rarely functioning at the village levels. The ASHAs are the active members of all the committees formed in the village levels. They play a significant role under the implementation of NRHM at the grassroots levels.

2.3.2 The NRHM: Vision, Goals, and Strategies[31]

A. Vision of NRHM[32]

a. To provide effective health care to the rural people in India those have weak public health indicators and infrastructure. The NRHM aims to increase public expenditures on health from 0.9 percent to 2-3 percent of GDP, with an improved arrangement for community financing and risk pooling.

b. To undertake the required development of the existing health care system to enable it to function effectively, by increasing budget allocation and promote policies that strengthens public health management and service delivery.

c. To revitalize local health traditions and mainstreaming AYUSH into the public health care system.

d. Effective integration of health through decentralized management at district, block and village level with determinants of health like environmental sanitation and hygiene, nutrition, safe drinking water supply.

e. Addresses interstate and inter district disparities and time bound goals and

f. To improve access to public health by the rural people, especially poor, women, and children to equitable, affordable, accountable and effective primary health care.

B. Goals and expected outcomes of the NRHM[33]

The National Rural Health Mission (NRHM) was launched with a view in bringing about improvement in health care services and health status of the people especially, those who live in rural India. The Mission seeks to provide universal access to equitable, affordable and quality health facilities that is accountable at the same time responsive to the needs of the people. The Mission also targets to reduce child and maternal deaths as well as population stabilization, gender and demographic balance. In

[31] Op.cit. National Rural Health Mission (2005-2012).
[32] Ibid.
[33] Ibid.

this process, the Mission would also aim to achieve some goal set under the National Population Policy (2000), National Health Policy (2002), and the Millennium Development Goals (MDGs). The major goals of NRHM are mentioned below.

a. Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR).
b. Universal access to public health services such as women's health, child health, water, environmental sanitation and hygiene condition, immunization, and nutrition
c. Prevention and control of communicable and non-communicable diseases, including locally endemic diseases
d. Access to integrated comprehensive primary health care
e. Population stabilization, gender and demographic balance
f. Revitalize traditional health practice and brining AYUSH into the mainstream
g. Promotion of healthy lifestyles

The NRHM also adopts some strategies to achieve the goals of the Mission. Some of the strategies of NRHM are illustrated below.

C. The strategies of the NRHM[34]

a. Set up a platform for involving the Panchayati Raj Institutions (PRIs) and the community in the management of primary health care services and health infrastructure. And also providing training that enhances the capacity of PRIs, control and manage public health services.
b. Establish a mechanism to provide flexibility to the states, the community to promote local initiatives and promote access to improve health care at the household level through the female health activists called as Accredited Social Health Activists (ASHA).
c. Health plans for each village through Village Health and Sanitation Committee (VHSC) of the Panchayat.
d. Strengthening Health Sub-Centers, PHCs through provision of required human resources, quality health standards, active community participation and an Untied Fund to enable local planning and action.
e. Provision of 30 to 50 bedded CHC per lakh population for improved curative care to a normative (IPHS) standard.

[34] Ibid.

f. Develop a framework for promoting inter-sectoral convergence for promotive, preventive health care and preparation and implementation of an inter-sectoral District Health Plan prepared by the District Health Mission.
g. Integrating vertical Health and Family Welfare programs at national, state, district and block levels.
h. Forge a partnership between the central, state, the local governments and provide technical support to national, state and district health Mission.
i. Strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision.
j. Promoting the non-profit sector particularly in underserved areas
k. Regulation of private sector including the informal Rural Medical Practitioners (RMP) to ensure availability of quality service to citizens at a reasonable cost.
l. Promotion of Public-Private-Partnerships (PPP) for achieving public health goals, mainstreaming AYUSH.
m. Reorienting medical education to support rural health issues including regulation of medical care and medical ethics.
n. Effective and visible risk pooling and social health insurance to provide health security to the poor by ensuring accessible, affordable, accountable and good quality of health.

D. Expected outcomes of the NRHM at the national level[35]

There are various outcomes which are targeted to achieve under the Mission but the focus area of the present study and the major targets of NRHM are:

1. Reduction of IMR from 58 to 30 per 1,000 live births and MMR from 254 to 100 per one lakh live births and
2. Upgrading all CHCs to Indian Public Health Standards and to increase utilization of First Referral Units from bed occupancy by referring cases of less than 20 percent to over 75 percent.

[35] Ibid.

E. The expected outcomes of the NRHM at community level[36]

The expected outcomes of the Mission at the community level are:

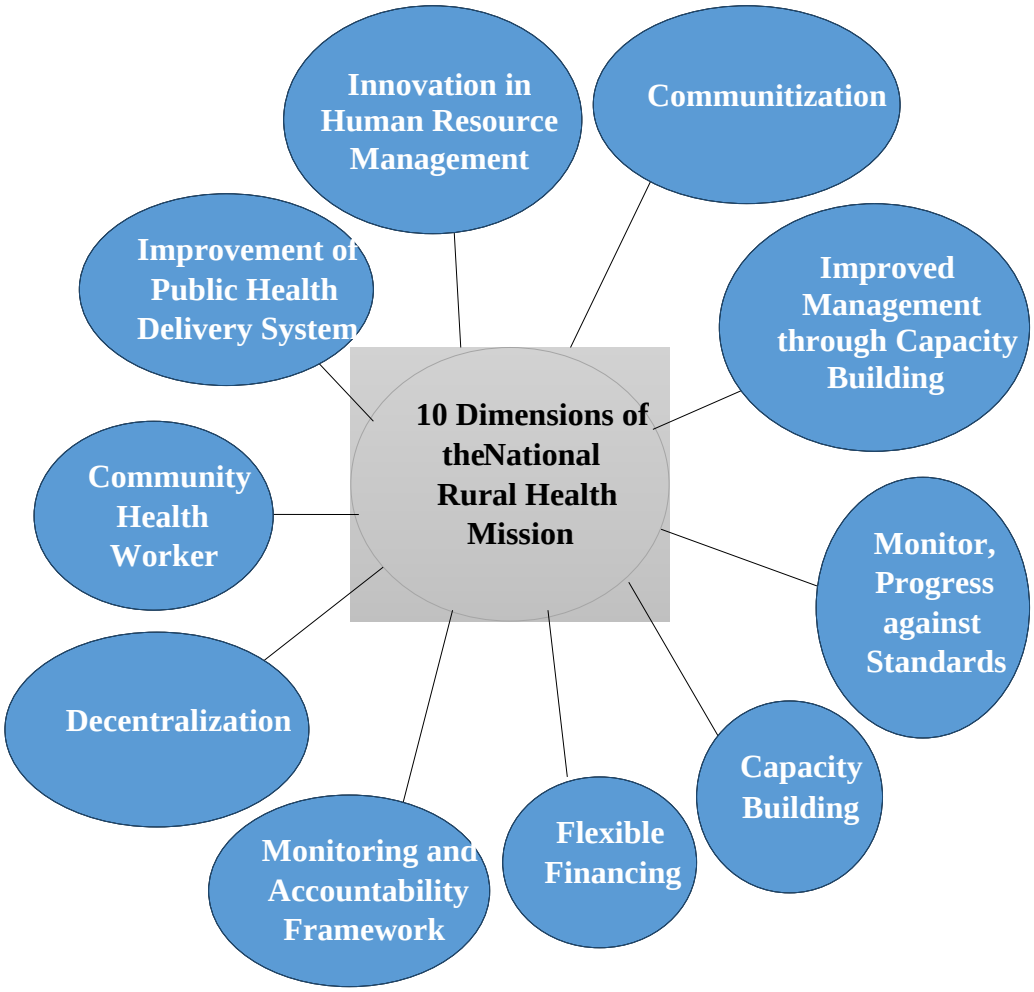
a. Availability of trained community level worker in a village named as ASHA, with a drug kit for generic ailments;
b. Access to good institutional health care through assured availability of doctors, drugs and quality services at PHCs/CHCs level and assured referral-transport-communication systems to reach health centers and access the facilities in time;
c. Improved facilities for institutional deliveries through provision of referral transport, escort and improved hospital care subsidized under the Janani Suraksha Yojana (JSY) to the BPL families.

2.3.3 The NRHM: Addressing the Critical Aspects

The NRHM is a targeted oriented program, expected to achieve certain fixed goals. It aims to make the health delivery system into fully functional and accountable to the community. There are 10 dimensions of the NRHM that are described below.

[36] Ibid.

Figure - 2.2: Dimensions of the National Rural Health Mission



A. Communitization

a. Hospital Management Committee/PRIs at all levels

b. Untied funds for community/PRI bodies

c. Funds, functions and functionaries to local community organizations

d. Decentralized planning, Village Health and Sanitation Committee (VHSC)

B. Improved management through capacity building

a. Block and District Health Office with management skills

b. NGOs in capacity building

c. National Health System Resource Center/State Health System Resource Center continuous skill development support

C. Monitor, progress against standards

a. Setting Indian Public Health Standards (IPHS)

b. Independent monitoring committees at block, district and state levels

D. Capacity building

a. National Health System Resource Centre (NHSRC) at the Central and State levels with an annual corpus support of Rs 15 crore and Rs 1 crore at the Central and State levels respectively.

b. To make health facilities more accountable, their management and control would gradually shift to the PRIs and civil society.

c. The health Sub-Centers are proposed to be placed exclusively under the control of the Panchayats. The PHCs and CHCs are also to be managed by the Panchayat Block Samities (PBS) and by the Rogi Kalyan Samiti (RKS).

E. Flexible financing

According to the provision of NRHM, PHCs are provided Rs. 25,000/- per annum as the untied fund for development of local health needs and Health Sub-Centers are provided Rs. 10,000/- for health care development. Even under the flexible financing, revenue villages are provided Rs. 10,000/- for sanitization of the villages and other health development.

In order to reduce out of pocket expenditure of the rural poor, there is an imperative need for setting up effective risk pooling systems. It is noticed that during 2004-05 household expenditure on health care in India was more than Rs.1,00,000 crore. Most of it was out of pocket expenditure and was incurred during health distress by the unregulated private facilities, leading to poor into the vicious circle of indebtedness and poverty. As a matter of fact, in a country of over a billion people, barely 10 million are covered under the private health insurance schemes. Even if we take into account Social Health Insurance Schemes like Central Government Health Scheme (CGHS), Employees State Insurance Scheme (ESIS) etc., the coverage increases only to 110 million of which only 30 million are poor. In order to reduce the distress of poor households, there is therefore an imperative need for setting up effective risk pool systems. Involvement of NGOs and community based organizations as insurance providers and as third party

administrators can help to generate more confidence in the risk pooling arrangement being pro-people and in the interests of poor households. While the private insurance companies would be encouraged to bring in innovative insurance products, the Mission would strive to set up a risk pooling system where the Centre, States and the local community would be partners.

The NGOs are critical for the success of the NRHM. The Mission has already established partnerships with NGOs for establishing the rights of households to health care. With the mother NGO program scheme, 215 Multinational NGOs covering nearly 300 districts have already been appointed. Their services are being utilized under the RCH-II program. The Disease Control programs, the RCH-II, the immunization and pulse polio program, the JSY make use of partnerships with a variety of NGOs. Efforts are being made to involve NGOs at all levels of the health delivery system. The NGOs would be involved in building capacity at all levels, monitoring and evaluation of the health sector, delivery of health services, developing innovative approaches to health care delivery for marginalized sections. The NGO has now collaborated with the government for health development under the Public-Private-Partnership. The NGOs will help the PHCs to function in a better way as the NGOs itself will fund and receive financial support from the government. It also works together with community organizations and PRIs, and contribute to monitoring the right to health care.

F. Monitoring and accountability framework

The framework proposes accountability at every level through a three pronged process of community based monitoring, external surveys and stringent internal monitoring. The process of community involvement of the health institutions itself would enhance accountability and the Mission would facilitate this process by wide dissemination of the results.

G. Decentralization

NRHM seeks to adopt a convergent approach for intervention under the umbrella of the district plan which seeks to integrate all the related initiatives at the village, block and district levels. The District Health Action Plan would be the main instrument for planning, inter-sectoral convergence, implementation and monitoring of the activities

under the Mission. The District Health Mission under the Zilla Parishad would get the district plan prepared covering health as well as other determinants of health.

H. Community health worker

The ASHA along with Anganwadi Workers (AWW) and with the support from ANM, and Self Help Groups (SHGs) coordinated action at the village level and bring dramatic changes in health status of the community.

I. Improvement of public health delivery system

a. Development of existing infrastructures or renovation of health infrastructure wherever required and starting new construction of buildings;
b. Allocation of budget for up-gradation of District Headquarter Hospitals;
c. Improve service delivery by putting manpower in place that enables health systems at all levels;
d. Innovations in Public-Private-Partnership for service provision, franchising for service providers, licensing and training of Rural Medical Practitioners;
e. Stringent monitoring at all levels, involvement of the PRIs and monitoring by the RKSs would ensure the presence of doctors and paramedical staff in the rural health institutions;
f. Improve manpower availability in rural areas;

J. Innovation in human resource management

a. Employment of more Nurses specifically from amongst local residents
b. 24x7 medical emergency provision of facilities by employing more nurses at PHC, and CHC levels

2.3.4 Expected Outcomes of the National Rural Health Mission in India

A. Development of institutional delivery in India after implementation of the NRHM

The High Focus Non-North Eastern (NE) states consist of 10 states such as Bihar, Chhattisgarh, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh, and Uttarakhand), all these states have alarming rates of health indicators and especially in case of both infant and maternal deaths. Hence, these states give special emphasis to reduce both mortality rates through institutional delivery under the NRHM. The Table-2.1 presents institutional delivery and found that

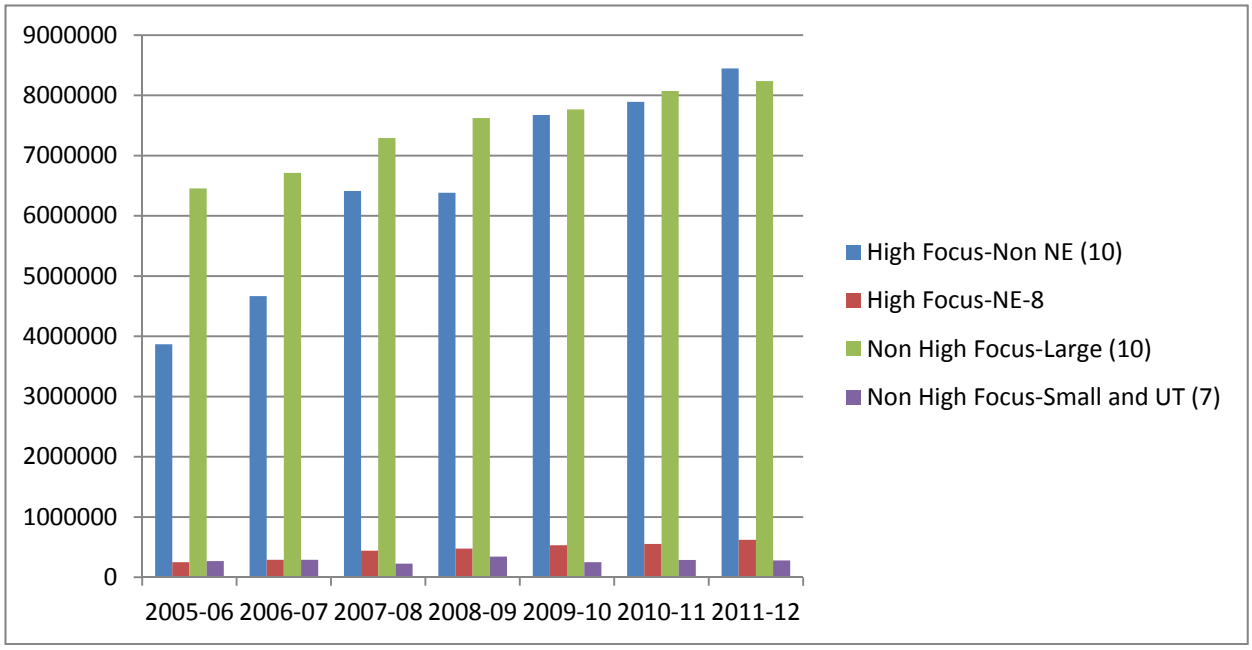
during the implementation of NRHM in the year (2005-06), a number of institutional deliveries was 38.67 lakh and it increased to 84.47 lakh in 2011-12 which is more than double fold increase within six years. But the High Focus North Eastern (NE) states (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura), secured below in health indicators compared to the national average, and the number of institutional delivery is less compared to High Focus Non-North Eastern (NE) states. It was reported 2.50 lakh during 2005-06 and it increased more than 50 percent within four years of time to 5.30 lakh in 2009-10 and it increased to 6.20 lakh in 2011-12 within six years. There is not much ascend of institutional delivery of Non-High Focus Large states like (Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, and West Bengal) while comparing the rate of increase with High Focus Non-NE states and High Focus NE states. The institutional delivery of Non High Focus large states increased from 64.54 lakh to 82.37 lakh within six years from 2005-06 to 2011-12. The rate of increase is also less among the Non-High Focus small states and Union Territories like (Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Delhi, Lakshadweep, and Puducherry). It has increased from 2.67 lakh in 2005-06 to 2.80 lakh in 2011-12. While analyzing the total number of institutional deliveries in India, it was found that there was a remarkable increase from 108.40 lakh in 2005-06 to 175.85 lakh in 2011-12. It shows a steep rise of institutional delivery in the country since the implementation of NRHM (see Table-2.1 and in Figure-2.2 for details).

Table - 2.1: Number of institutional deliveries in India from 2005-06 to 2011-12

Year	India	High Focus-Non NE (10)	High Focus-NE (8)	Non High Focus-Large (10)	Non High Focus-Small and UT (7)
2005-06	10840036	3867554	250367	6454900	267215
2006-07	11959064	4667315	290081	6712143	289525
2007-08	14369678	6411619	441028	7291111	225920
2008-09	14823481	6382044	474609	7624846	341982
2009-10	16222201	7674777	530948	7766150	250326
2010-11	16804718	7892965	551366	8073726	286661
2011-12	17585434	8447219	620911	8237255	280049
Total	**102604612**	**45343493**	**3159310**	**52160131**	**1941678**

Source: Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

Figure - 2.3: Comparison of institutional delivery among the High Focus Non-NE states, High Focus-NE state, Non High Focus - Large state and Non High Focus - Small & Union Territories in India from 2005-06 to 2011-12



Source: Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

B. Institutional deliveries among the High Focus Non-North Eastern states in India

The institutional delivery among the High focus non-North Eastern states such as Bihar (BH), Chhattisgarh (CHTG), Himachal Pradesh (H.P), Jammu and Kashmir (J&K), Jharkhand (JHK), Madhya Pradesh (M.P), Odisha, Rajasthan (RAJ), Uttar Pradesh (U.P), and Uttarakhand (UTK) in India have increased significantly as shown in the Table-2.2 and Figure-2.3. There was a steep increasing of institutional deliveries more than double from 38.67 lakh in 2005-06 to 84. 47 lakh in 2011-12 among all the above states.

However, while analyzing the increasing rate of institutional delivery as a single state, it shows U.P and Bihar are front runners in 2011-12 compared to other states. The U.P has increased from 19.21 lakh in 2005-06 to 28.39 lakh in 2011-12 whereas Bihar raised from 2.37 lakh in 2005-06 to 2011-12 and is more than seven times within six years. The states like Rajasthan, M.P were in third and fourth position whereas Odisha secured the fifth position for the same year. It is found that institutional deliveries in

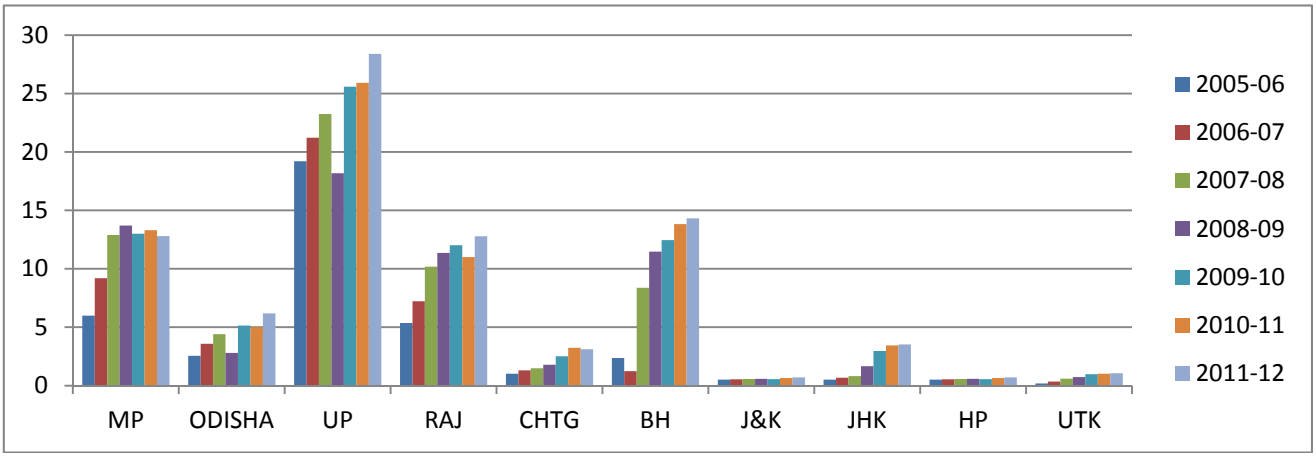
Rajasthan have increased from 5.36 lakh in 2005-06 to 12.79 lakh in 2011-12 whereas M.P increased from 5.99 lakh to 12.80 for the same year and it declined as compared to the last few years. But state like Odisha maintains an uninterrupted increasing except in 2008-09. It has shown equal pace of development which has a significant impact on the reduction of infant and maternal mortality ratio. Remaining states have not shown much development with regards to institutional delivery. It ranges from 0.19 lakh of Uttarakhand in 2005-06 to 3.53 lakh of Jharkhand in 2011-12. Though other states shows development in institutional delivery but number is not much as appreciable as compared to states like M.P, U.P, Rajasthan and Odisha. Odisha shows a steep rise of 2.55 lakh in 2005-06 to 4.40 lakh during 2007-08 but during 2008-09 there was a declined rate to 2.80 lakh. Interestingly, again in 2009-10 onwards, Odisha signifies a rapid increase of institutional delivery from 5.14 lakh in 2009-10 to 6.19 lakh 2011-12. Apart from Odisha; M.P, U.P, Rajasthan, and Bihar also showed the rising share of institutional delivery since 2006-07 to 2011-12. It noticed to be a remarkable impact for reduction of IMR and MMR in these respective states. Therefore, from both Table-2.2 and the Figure-2.3, it can be strongly said that institutional delivery has a tremendous impact for reduction of IMR, CMR and MMR in national level which are shown and followed by the recently released report on Sample Registration System: Rate of IMR, MMR and other health indicators of the Registrar General of India, in October 2012.

Table - 2.2: Year wise number (in lakh) of institutional delivery in High Focus Non- North Eastern states in India from 2005-06 to 2011-12

Year	MP	ODISHA	UP	RAJ	CHTG	BH	J&K	JHK	HP	UTK	Total
2005-06	5.99	2.55	19.21	5.36	1.02	2.37	0.52	0.52	0.52	0.19	38.67
2006-07	9.19	3.58	21.22	7.22	1.31	1.24	0.54	0.68	0.54	0.35	46.67
2007-08	12.90	4.40	23.24	10.18	1.49	8.38	0.57	0.82	0.57	0.6	64.11
2008-09	13.70	2.80	18.18	11.36	1.79	11.47	0.59	1.67	0.59	0.73	63.82
2009-10	13.01	5.14	25.59	12.02	2.51	12.46	0.55	2.96	0.55	0.98	76.74
2010-11	13.30	5.00	25.92	11.00	3.24	13.83	0.65	3.45	0.65	1.02	78.92
2011-12	12.80	6.19	28.39	12.79	3.12	14.32	0.71	3.53	0.71	1.06	84.47

Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

Figure - 2.4: Number (in lakh) of institutional deliveries among the High Focus Non-North Eastern states in India from 2005-06 to 2011-12



Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

C. Development of beneficiaries for Janani Suraksha Yojana in India after implementation of NRHM

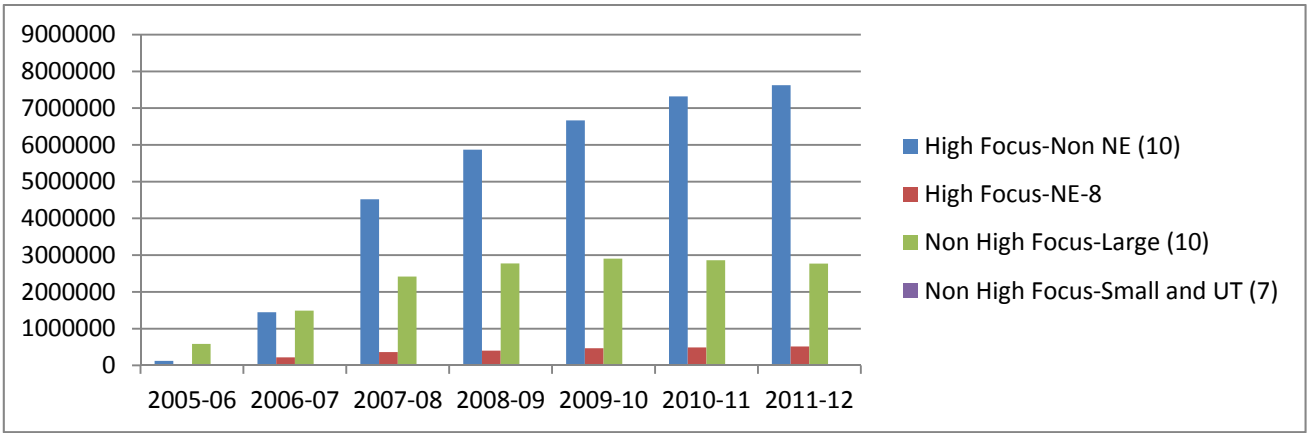
The NRHM focuses both on institutional delivery and beneficiary of JSY cases in the country. The conditional cash incentives are provided to those who belongs to the BPL category. The Table-2.3 present number of JSY cases recorded in India as well as other four categories of the state. It is found that more than five crore beneficiaries of JSY benefited under the NRHM in the country. There is also a higher increase of more than 335 lakh of JSY beneficiaries among the High Focus Non-North Eastern states within six years (2005-06 to 2011-12) in the implementation of the NRHM. Among the High Focus North Eastern states, there is an increase of 24 lakh within six years and an increase of 158 lakh among Non-High Focus large states and 1 lakh 30 thousand beneficiaries of JSY cases increased among the Non-High Focus small states and Union Territories within six years implementation of NRHM. As compared to four categories of states in India, beneficiaries of JSY has increased among the High Focus Non-North Eastern states (see details in Table-2.3). But in India, the number of JSY beneficiaries has increased from7.34 lakh in 2005-06 to 109.37 lakh in 2011-12. It shows around 15 times more increasing of beneficiaries of JSY cases at the national level within six years implementation of NRHM.

Table-2.3: Comparison of JSY beneficiaries in High Focus Non-NE, High Focus-NE, Non High Focus Large, Non High Focus Small & UTs in India from 2005-06 to 2011-12

Year	India	High Focus-Non NE (10)	High Focus-NE (8)	Non High Focus-Large (10)	Non High Focus-Small and UT (7)
2005-06	734446	124020	23040	586420	966
2006-07	3154478	1445580	216928	1488712	3258
2007-08	7308888	4518312	360412	2416498	13666
2008-09	9077353	5871000	401220	2775388	29745
2009-10	10067053	6666404	468013	2903950	28686
2010-11	10696895	7319972	487451	2862867	26605
2011-12	10937383	7624954	513117	2771262	28050
Total	**51976496**	**33570242**	**2470181**	**15805097**	**130976**

Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

Figure-2.5: Comparison of JSY beneficiaries in High Focus Non-NE, High Focus-NE, Non High Focus Large, Non High Focus Small & UTs in India from 2005-06 to 2011-12



Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

D. Cases of Janani Suraksha Yojana among High Focus Non-NE states in India

The NRHM has also brought a remarkable change in Janani Suraksha Yojana (JSY) at the national and particularly in Odisha as the state level. Table-2.4 and Figure-2.5 present the number of JSY beneficiaries among the High focus Non-North Eastern (NE) states in India. It is found that among the High Focus Non-NE states, U.P has achieved 23.27 lakh in 2011-12 from 0.12 lakh in 2005-06. It shows a highly increasing trend within six years implementation of the NRHM whereas Odisha shares 6.34 lakh in 2011-12 and M.P and Rajasthan share less than 11 lakh, but Bihar has increased in a rapid way from 0.89 lakh in 2006-07 to 14.32 lakh in 2011-12. Apart from such states remaining state shares less than 4 lakh of JSY beneficiaries. While during 2007-08, there was a steep increase in cases of JSY in all most all the High Focus Non-NE states. The major states like M.P (11.00), Bihar (8.38), U.P (7.97), and Rajasthan (7.74) have more shares of JSY beneficiaries where as Odisha had only share of 4.90 lakh beneficiaries.

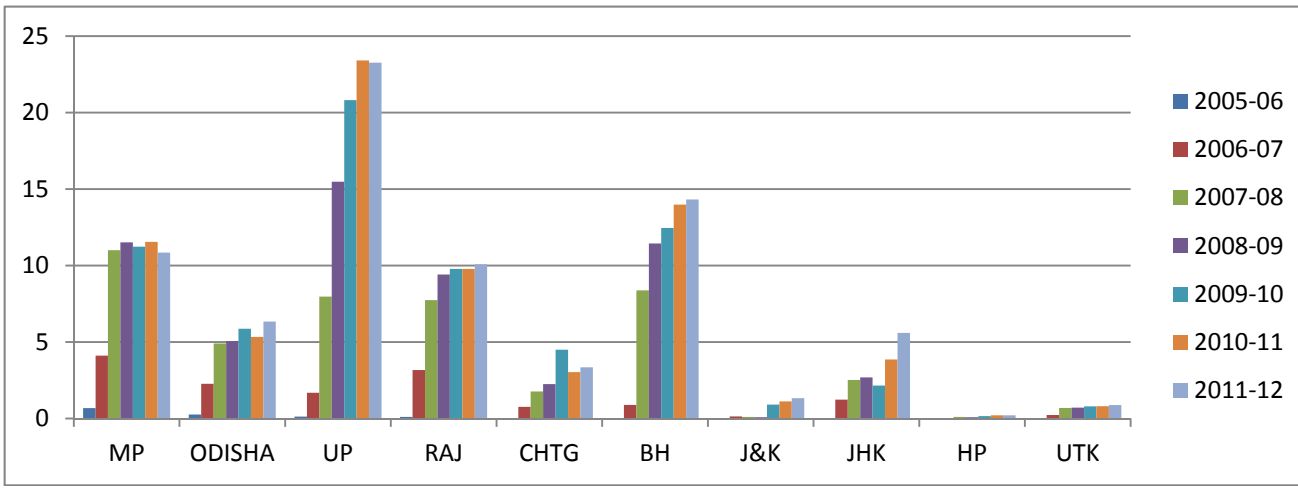
In 2009-10 and 2010-11, states like M.P, Odisha, U.P, Bihar, and Rajasthan have shown a steep rise of JSY cases comparable to the initial period of implementation and other states. In 2011-12, U.P has shared highest 23.27 lakh followed by Bihar - 14.32 lakh and M.P - 10.85 lakh whereas Odisha has only 6.34 lakh of JSY cases. It clearly indicates that, JSY has brought remarkable changes among the High focus Non-North Eastern states in India in the early period of implementation of the Mission and created a massive awareness among the women's community for preferring the institutional delivery irrespective of JSY incentives.

Table - 2.4: Number of beneficiaries (in lakh) of JSY among the High Focus Non- North Eastern states in India from 2005-06 to 2011-12

Year	MP	ODISHA	UP	RAJ	CHTG	BH	J&K	JHK	HP	UTK	Total
2005-06	0.68	0.26	0.12	0.10	0.03	0.00	0.02	0.00	0.01	0.01	1.23
2006-07	4.11	2.27	1.68	3.17	0.76	0.89	0.13	1.23	0.03	0.23	14.5
2007-08	11.00	4.90	7.97	7.74	1.76	8.38	0.10	2.52	0.10	0.69	45.16
2008-09	11.52	5.06	15.48	9.41	2.25	11.44	0.08	2.68	0.08	0.71	58.71
2009-10	11.23	5.87	20.82	9.78	4.49	12.46	0.91	2.15	0.15	0.79	68.65
2010-11	11.55	5.33	23.41	9.78	3.03	13.99	1.12	3.86	0.21	0.80	73.08
2011-12	10.85	6.34	23.27	10.08	3.34	14.32	1.32	5.59	0.21	0.87	79.19

Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

Figure - 2.5: Number of JSY beneficiaries (in lakh) among the High Focus Non-North Eastern states in India from 2005-06 to 2011-12



Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

E. Institutional delivery and JSY beneficiaries recorded in Odisha after implementation of the NRHM

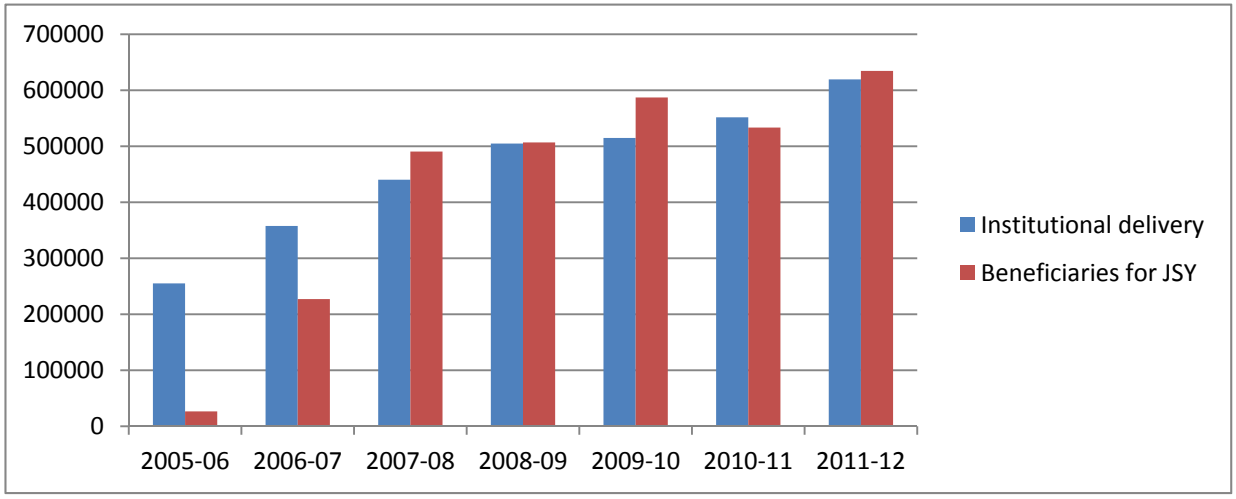
Odisha secures lowest position with regard to various health indicators and mainly of maternal mortality ratio and infant mortality rate as compared to other states in the country. Table-2.5 and Figure-2.6 clearly show number of institutional deliveries as well as the number of beneficiaries of JSY cases in Odisha. It is found that beneficiaries of JSY and cases of institutional deliveries are neck to neck though there are 31,049 cases of differences between the beneficiaries of JSY and institutional delivery out of the total figure since 2005-06 to 2011-12. It is also noticed that all the expectant mothers of Odisha are eligible beneficiaries under JSY once they give birth at a health care facility irrespective of their BPL status. Such decision was taken to improve both infant and maternal deaths due to the alarming rise of both in the state. It is recorded that more than 30.04 lakh expectant mothers are benefitted under the NRHM and more than 29.73 lakh have given birth in a health care facility within six years implementation of the NRHM. The number of institutional delivery of Odisha was 255,000 in 2005-06 and has increased to 619,510 during 2011-12. At the same time only 26,407 mothers were provided cash incentives during 2005-06 and it has increased to 300,4451 cases during 2011-12 through JSY under NRHM in Odisha.

Table - 2.5: Number of institutional deliveries and number of JSY beneficiaries conducted in Odisha from 2005-06 to 2011-12

Year	Institutional delivery	JSY beneficiary
2005-06	255000	26407
2006-07	357661	227204
2007-08	440234	490657
2008-09	504823	506879
2009-10	514792	587158
2010-11	551626	533372
2011-12	619510	634468
Total	**2973402**	**3004451**

Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

Figure - 2.7: Number of institutional delivery and number of JSY beneficiaries of Odisha from 2005-06 to 2011-12



Source: Data calculated from state wise progress as on June 30, 2012, Executive summary on all India health status as on June 30, 2012, NRHM, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in, Accessed on September 13, 2012.

2.3.5 The Impact of the NRHM on the Millennium Development Goals

A. Achievement of the expected outcomes of the NRHM and the MDGs

Table-2.6, Table-2.7, and Figure-2.7, Figure-2.8, and Figure-2.9 present that there are steady decline of infant, child mortality, and the maternal mortality ratio in the country.

Table-2.6: India's target & achievement of both the NRHM by 2012 & MDGs by 2015

Indices	1990	1995	2000	2005	2010	2011	Target of NRHM by 2012	Target of MDGs by 2015
Infant Mortality Rate	80	74	68	58	47	44	30	28
Under 5 Mortality Rate	125	97	85	77	64	NA	NA	42
Maternal Mortality Ratio	437 (1990-91)	398 (1997-98)	301 (2001-03)	254 (2004-05)	212 (2007-09)	NA	100	109

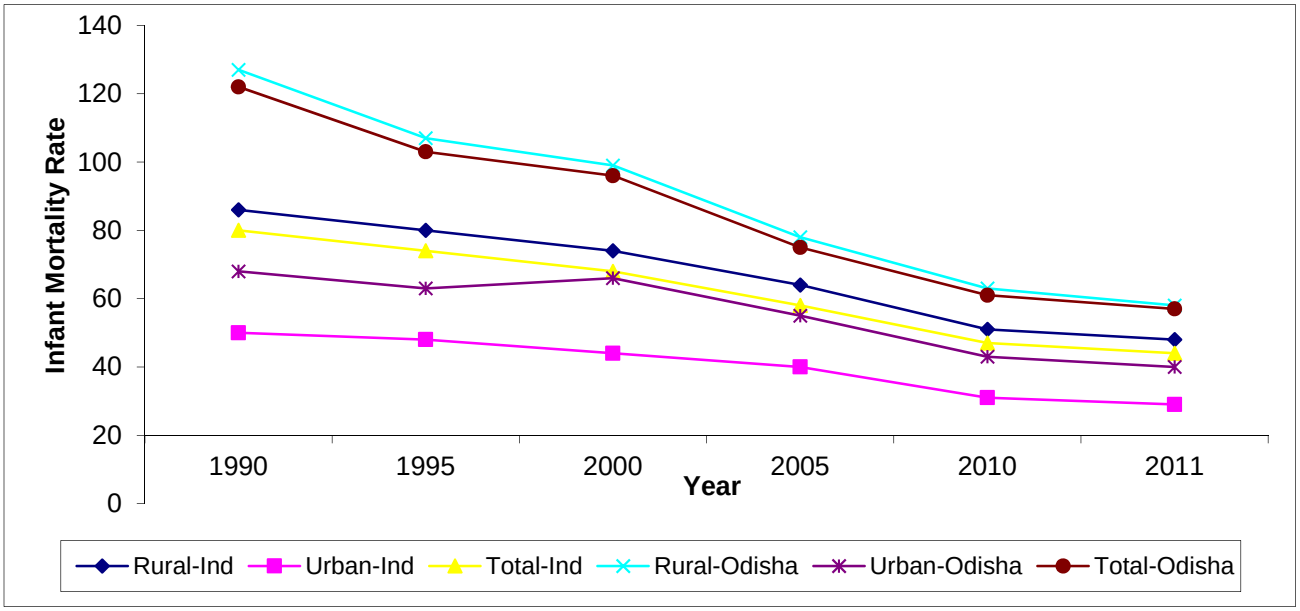
Source: Sample Registration System (SRS), 7th July 2011 and SRS Bulletin-2005, Vol. 41, No. 1, 2006 and SRS-2011, Vol. 47, No. 2, October, 2012, Office of Registrar General, India.

Table - 2.7: Infant Mortality Rate (Total, Rural & Urban) area in India and Odisha since 1990-2011

Infant Mortality Rate in India				Infant Mortality Rate in Odisha		
Year	Rural	Urban	Total	Rural	Urban	Total
1990	86	50	80	127	68	122
1995	80	48	74	107	63	103
2000	74	44	68	99	66	96
2005	64	40	58	78	55	75
2010	51	31	47	63	43	61
2011	48	29	44	58	40	57

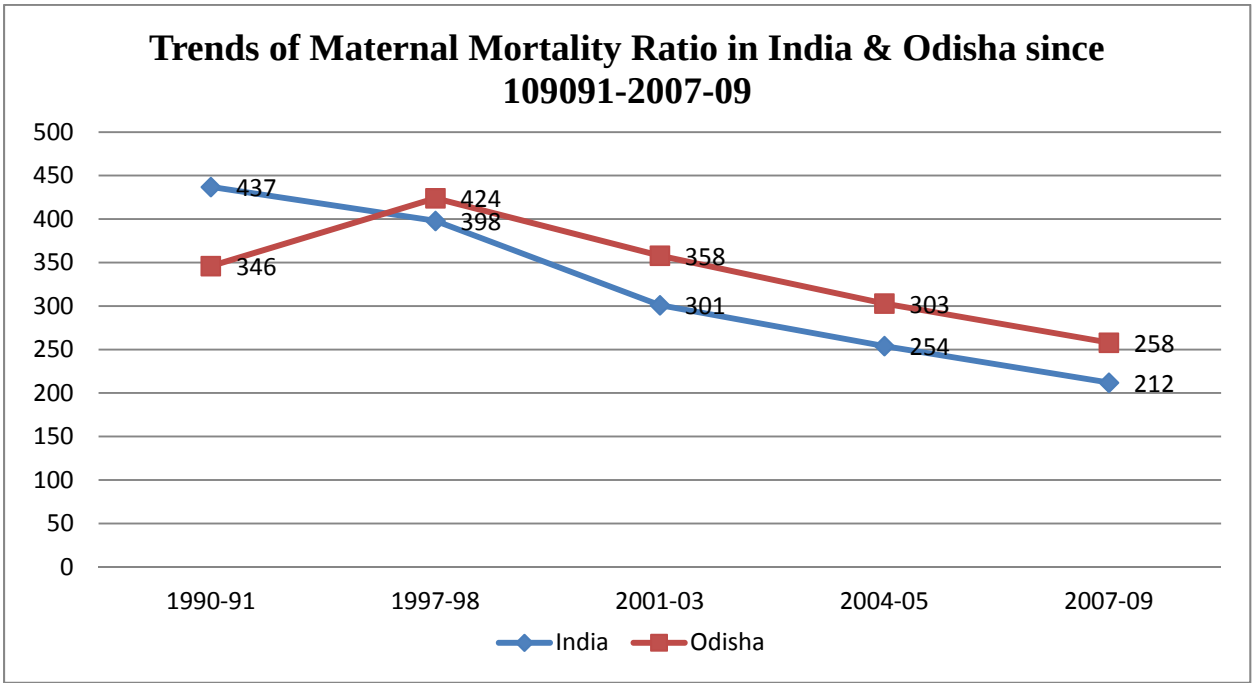
Source: Specific year wise data of Sample Registration System, (1990, 1995, 2000, 2005, 2010), the Register General of India.

Figure - 2.8: Infant Mortality Rate in India and Odisha since 1990-2011



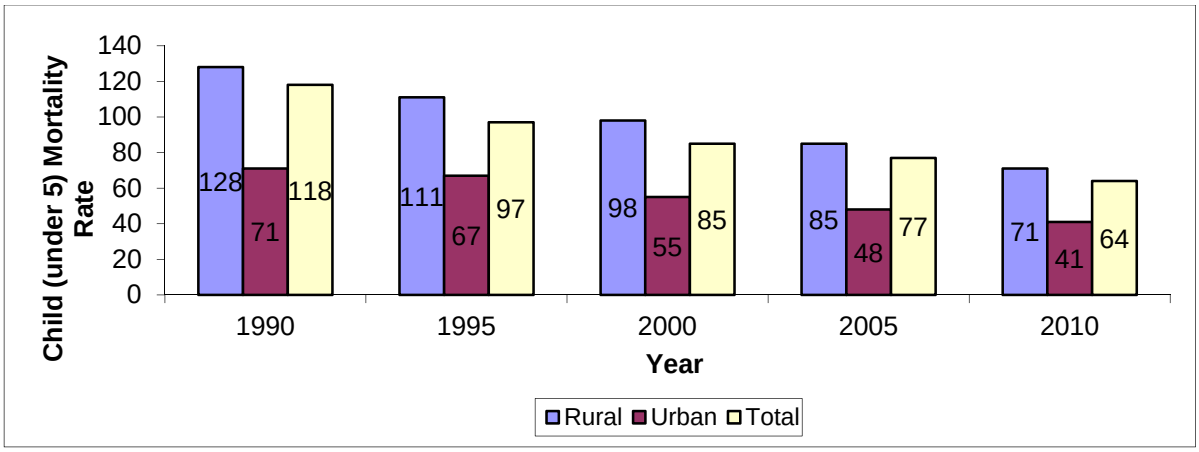
Source: Sample Registration System, Specific year wise data (1990, 1995, 2000, 2005, 2010), the Register General of India.

Figure-2.9: Trends of Maternal Morality Ratio in India since 1997-98 to 2007-09



Source: Sample Registration System, the Register General of India, July 7, 2011.

Figure - 2.10: Child Mortality Rate in India since 1990-2010



Source: Sample Registration System, Specific year wise data (1990, 1995, 2000, 2005, 2010), Office of the Register General of India.

There is much debate and speculation around the world and in India since the implementation of the MDGs and the NRHM in 2000 and 2005 respectively. It is argued whether India would be able to provide all her citizens the universal primary health care services, and would it be able to achieve the expected outcomes of IMR, CMR and MMR at the end of NRHM or MDGs. Now we have completed the target period of NRHM (2005-12) and going to complete period of MDGs (1990-2015) in next three years, but the analysis drawn from the Table-2.6 underlines something interesting. Both have targeted to achieve the expected outcomes in two different periods of time. The NRHM has targeted to achieve the expected outcomes of IMR 30 and MMR 100 by the end of 2012 whereas the MDGs targeted to achieve IMR 28, and U5MR 42 per 1,000 live births and MMR 109 per one lakh live births by the end of 2015. The NRHM has completed seven years (2005-2012) of implementation but according to the recently released (October 2012) data by the Registrar General of India shows that after six years implementation of the NRHM, we were able to achieve IMR 44 in 2011 from 58 in 2005 which is 14 points more than the expected outcome in national level. It is noticed that there was a 5 percent decline of IMR per year. It is also noticed that IMR in rural areas which was alarming 64 in 2005 has come down 16 points to 48 and the urban IMR has fallen to 11 points from 40 to 29 in 2011 in all India level. Though, the pace of reduction rate has been low in rural as well as in urban areas since six years but still it is significant

as it has come down to 16 points and 11 points respectively[37] (see Table-2.6 and Figure-2.7).

While looking at a case of Odisha (see Table-2.7 and Figure-2.7) it is found that decline of IMR from 75 in 2005 to 57 in 2011.[38] It shows a drop by 18 points which is four points more as compared to the national level. Rural Odisha has also seen a significant decline of 20 points in IMR from 78 to 58, and 15 point decline in urban areas (i.e. from 55 in 2005 to 40 in 2011 per 1,000 live births). Apart from that while looking at MMR figure at the national level, we find 42 points dropped within six years from 254 in 2004-06 to 212 per 1,00,000 live births in 2007-09 whereas in Odisha there was a reduction of 45 points of MMR (i.e. from 303 in 2004-06 to 258 live births in 2007-090.[39] It is noticed that comparing the reduction rate of IMR in rural-urban divide of Odisha with the national level also makes a difference. So, it could be said that the implementation of the NRHM in Odisha has a remarkable impact as compared to the national level, particularly due to implementation of Janani Suraksha Yojana and institutional delivery, as both has helped to reduce the IMR and MMR significantly.

However, the expected outcomes of IMR under the NRHM has been achieved in some states like Maharashtra (36 to 25), Tamil Nadu (37 to 22), Punjab (44 to 30), Delhi (35 to 28), and Tripura (31 to 29 since the implementation of the Mission.[40] It is noticed that the majority of the states in the country has not reached the expected outcomes of Mission and the current pace of decline rate is also slow. So, if the declining trend of IMR continues at this pace, we can say that the NRHM would not be able to reach its expected outcomes as targeted by 2012 (as data of 2012 yet to release) in national level. Simultaneously, the declining trend shows that Delhi and Sikkim have reached the targets of the MDGs in India but most of the big states including national level have not met the target of IMR, U5MR as fixed to achieve by 2015. It needs acceleration of the recent rate

[37] Sample Registration System (SRS), SRS Bulletin-2005, Vol. 41, No. 1, 2006 and SRS-2011, Vol. 47, No. 2, October, 2012, Office of Registrar General, India.
[38] Ibid.
[39] Maternal and Child Mortality and Total Fertility Rates, Sample Registration System, Office of Registrar General, India, 7th July 2011.
[40] Sample Registration System Bulletin - 2011, Vol. 47, No. 2, October, 2012, Office of Registrar General, India.

of decline to achieve the target by the MDGs. In the same way the expected target to reach the MMR 100 in 2012 by the NRHM and MMR 109 in 2015 by MDGs are not much easier to meet by the end of the targeted period (as MMR data of 2012 yet to release). But the MMR data 2007-09 shows the declined rate (from 2004-06 to 2007-09) by the few pockets of states such as Maharashtra (from 130 to 104), Tamil Nadu (from 111 to 97), and Kerala (95 to 81) have reached the targets of the MDGs and remaining states yet to reach the targets. It is noticed that there is a decline in the rate of MMR of 5.8 percent per year which is not enough to achieve the expected outcomes of both the NRHM and MDGs in India.

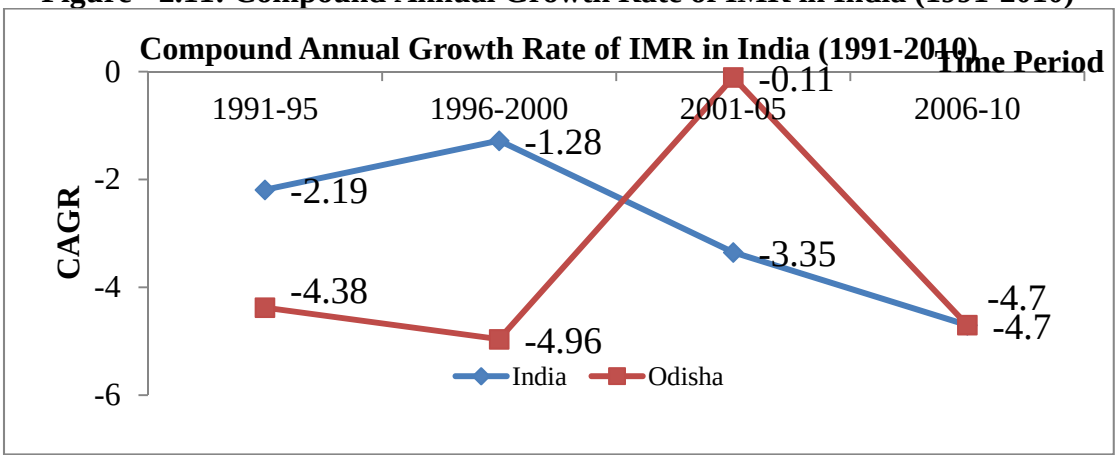
Though, the NRHM has failed to meet the expected outcomes of both IMR and MMR at the national level as well as in Odisha at the state level. But still it has a significant impact on reduction in mortality rates. It has been examined by applying inverse of Amartya Sen's improvement index where the result shows appealing (see Table 2.8, Table 2.9, and Figure 2.10).

Table - 2.8: Compound Annual Growth (CAGR) Rate of IMR in India: 1991-2010

Time Period	CAGR		Inverse of Sen's Improvement Index	
	India	Odisha	India	Odisha
1991-1995	-2.19	-4.38	-153.3	-41.7
1996-2000	-1.28	-4.96	-232	-904.0
2001-2005	-3.35	-0.11	-116.75	-56.8
2006-2010	-4.7	-4.70	-94.3	-77.3

Source: Data culled from the year wise information published by the Registrar General, Government of India.

Figure - 2.11: Compound Annual Growth Rate of IMR in India (1991-2010)



Source: Data culled from the year wise information published by the Registrar General, Government of India.

Table - 2.9: Maternal Mortality Ratio in India from 1997-98 to 2007-09

Time Period	India		Odisha	
	MMR	Difference in MMR	MMR	Difference in MMR
1997-1998	398	---	346	---
1999-2001	327	-71	424	78
2001-2003	301	-26	358	-66
2004-2006	254	-47	303	-55
2007-2009	212	-42	258	-45

Source: Data culled from the year wise information published by the Registrar General, Government of India.

The Figure-2.8 shows that, there is a negative Compound Annual Growth Rate (CAGR) of IMR in India in the post NRHM period (2006-10) which is highest as compared to last two decades (1991-2010). This suggests that due to implementation of the NRHM, there is a declining trend of IMR at the national level which is sharper than the earlier period during 1991-2005. In case of Odisha, the declining trend of IMR post-NRHM period is significantly higher than the immediate five years of pre-NRHM period (2001-05). It may be noted here, when IMR became lower, it becomes more of an achievement to reduce it further. In this regard the inverse of Amartya Sen's improvement index was computed for different time periods to measure the extent of achievements.[41] If the absolute index value is *lower* in period-2 compared to period-1, then it implies that the achievement in period-2 is *superior* to that of period-1. The index takes into account, the increasing marginal difficulty to reduce IMR when it is already low. In other words, it is easier for a country with very high IMR to reduce it substantially in absolute numbers but it's become more difficult for a country having a very low rate of IMR to reduce it further. For instance, if a country's IMR say is 200 it is easier to reduce it to 150 within a five year span, but if a country's IMR is say 60 it would be more difficult to reduce to 10. It can be observed from Table-2.8 which is computed from the inverse of Sen's improvement index during the post-NRHM period (2006-10), in absolute value, is lower than pre-NRHM period.

[41]Inverse of Sen's improvement index is computed as: $1/((X_2-X_1)/X_{max}-X_1))$. Where $X_{2\ is}$ value at the end period and X_1 is value for initial period. X_{max} is the maximum value. In this case it is assumed to be 1000. If the absolute value of the index is high then the achievement is higher.

From the above discussion it is clear that, at national level, implementation of the NRHM has a positive impact on the reduction of IMR. However, this is not much in the case of Odisha. Reduction in IMR in Odisha is observed, was better during 1991-95 and 2001-05 than the post-NRHM period. This suggests that, even though, there is positive impact of the NRHM in reducing IMR at the national level, but it has little impact on the state of Odisha. This indicates that there are some impediments responsible for the speedy decline of IMR in the state. Apart from, socioeconomic status; low literacy rate, lack of awareness regarding various health programs, lack of women empowerment, lack of local governance system and problems in the implementation of the NRHM. However, such an exercise is not possible in case of Maternal Mortality Ratio (MMR) due to lack of relevant data both at national as well as at the state level. But, as it is evident from Table-2.9, that there is no significant difference in the decline of MMR both pre and post implementation period of the NRHM in the country as well as in the state of Odisha.

B. Impact on health infrastructures and Human Resources

The significant method for improving health includes filling of the existing gaps in health infrastructure and human resource facilities; the NRHM is still in progress as it has been extended for next five years till the end of the 12th Five Year Plans (2012-2017). After six years of implementation, the study revealed that change has been noticed both infrastructures wise and in human resources, as compared to pre-implementation of NRHM. But that is not sufficient requirement to achieve the targets. While taking stock of infrastructural facilities in various health care institutions in India in general and in Odisha in particular, it found that there is a huge gap at the national level between the requirement and existence as per 2011 population (provisional) norms. The Table 2.10 presents the picture of the infrastructural gaps at the national and the state (Odisha) level.

Table - 2.10: Health infrastructural position (building) in India and Odisha

(As on March, 2011)

Indicators		**India**			**Odisha**		
		Required	In position	Shortfall	Required	In position	Shortfall
Infrastructure	HSCs	178267	148124	30143	8136	6688	1448
	PHCs	29213	23887	5326	1308	1228	80
	CHCs	7294	4809	2485	327	377	*
	Total	**214774**	**176820**	**37954**	**9771**	**8293**	**1528**

Source: Rural Health Statistics in India-2012, Ministry of Health and Family Welfare, Government of India.

Notes: The requirement is calculated using the prescribed norms on the basis of provisional rural population from Census-2011. All India shortfall is derived by adding state-wise figures of shortfall ignoring the existing surplus in some of the states. * indicates: Surplus

The Table 2.10 presents the health infrastructures (buildings) of different health care institutions in India and Odisha. The country needs 1,78,267 Health Sub-Centers (HSCs), whereas we have 1,48,124 HSCs and there is a need of 30,143 HSCs for the country.[42] In case of Odisha, the situation is similar like India and there are shortages of 1,448 HSCs in the state. At the same time there is also a lack of infrastructure in case of Primary Health Centers (PHCs), there were shortages of 5,326 PHCs at the national level whereas Odisha has shortages of 80 PHCs. The study also found at the national level 2,485 Community Health Centers (CHCs) are required to meet health care needs of the population whereas Odisha reported surplus number of CHCs after implementation of NRHM.

Table - 2.11: Comparison of functioning of building positions of HSCs, PHCs and CHCs pre-(2005) and post-(2011) NRHM in India

(As on March, 2011)

Category		Total number of institutions Functioning	Health institutions functioning in			Buildings under construction	Buildings required to be constructed
			Govt. buildings	Rented buildings	Rent free Panchayat / Vol. Society buildings		
India **2005**	HSC	146026	63901	50338	14295	NA	NA
	PHC	23236	16023	2826	1687	NA	NA
	CHC	3346	2822	5	254	NA	NA
Total		**172608**	**82746**	**53169**	**16236**	**NA**	**NA**
India **2011**	HSC	148124	92867	40133	15124	13279	37775
	PHC	23887	19095	1909	1020	1729	1450
	CHC	4809	4582	123	104	557	129
Total		**176820**	**116544**	**42165**	**16248**	**15565**	**39354**

Source: Rural Health Statistics in India-2012, Ministry of Health and Family Welfare, Government of India.

[42] Government of India, *Rural Health statistics in India-2012*, Ministry of Health and family Welfare Services, pp. 43-46.

Table - 2.12: Comparison of building positions of HSCs, PHCs and CHCs pre-(2005) and post-(2011) NRHM in Odisha

(As on March, 2011)

Category		Total number of institutions functioning	Health institutions functioning in			Buildings under construction	Buildings required to be constructed
			Govt. buildings	Rented buildings	Rent free Panchayat / Vol. Society buildings		
Odisha **2005**	HSC	5927	2542	3385	0	0	0
	PHC	1282	1282	0	0	0	0
	CHC	231	231	0	0	0	0
Total		**7440**	**4055**	**3385**	**0**	**0**	**0**
Odisha **2011**	HSC	6688	3365	2878	445	105	3218
	PHC	1228	1162	66	0	0	66
	CHC	377	377	0	0	0	0
Total		**8293**	**4904**	**2944**	**445**	**105**	**3284**

Source: Rural Health Statistics in India-2012, Ministry of Health and Family Welfare, Government of India.

Table-2.11 and Table 2.12 compare the functioning of HSCs, PHCs and CHCs, at the national and the Odisha as state level both in pre-NRHM (2005) and post-NRHM (2011) period. It is found that at the national level, 176,820 health care institutions are functioning in three levels (HSC, PHC and CHC) of the health system. But among the total number of health institutions 65 percent health care institutions are working in the government provided buildings, 23 percent are functioning in a rented building, 9 percent functioning in rent free either provided by Panchayat building or by voluntary societies (see Table-2.11). Around 9 percent buildings are under construction and 39,354 buildings need to be constructed, to provide a health care by Panchayat delivery at the national level.

In case of Odisha, 8293 health care institutions are functioning and out of that around 59 percent are functioning as the government provided buildings and 35 percent health care institutions functioning at rented buildings and only 5 percent institutions are working in either rent free, Panchayat provided buildings or in voluntary society buildings. Out of 8293 health institutions, 105 institutions are under the construction and about 40 percent building are required to be constructed to provide health care provisions.

It shows Odisha has a huge gap between the requirement and existence of health care institutions.

Apart from that while analyzing the development that took place before implementation of NRHM and afterwards, it is found that in case of Odisha 853 health care institutions are increased at the three tier level, but 146 CHCs and 761 HSCs increased during the implementation of NRHM whereas the numbers of PHCs decreased to 54 compared to pre-implementation of NRHM in 2005 (see Table-2.12); whereas at the national level 4,212 new health institutions are added to function during the NRHM period. More importantly, in tertiary CHC level 1,463 new health care institutions have increased, whereas 651 PHCs increased compared to 2005 during pre-implementation of NRHM (see Table-2.11). Thus, it clearly indicates the development in health infrastructure facilities of different health institutions, though an increasing number of health institutions are not as per requirement.

Table -2.13: Number of Human Resources in different health care institutions in India

Category		Required	Sanctioned	In position	Vacant	Shortfall
HSC	ANM in HSCs	148124	156231	187675	*	*
	Health Worker Male	148124	83241	52215	31026	95909
	ANM at HSCs & PHCs-2011	**172011**	**177103**	**207868**	*	*
	# Total	**468259**	**416575**	**447758**	**31026**	**95909**
	ANM at HSCs & PHCs-2005	169262	139798	133194	6604	36068
	No. of HSCs without ANM/ Health Worker Male (HWM)	148124	Without ANM 4791	Without HWM 72677	without both-2556	--
PHC	Health Assistant Female-LHV	23887	23182	15908	7274	7979
	Health Assistant (Male)	23887	22964	15622	7342	8265
	Allopathic Doctors - 2005	23236	24476	20308	4282	2928
	Allopathic Doctors - 2011	**23887**	**30051**	**26329**	**3722**	*
	Number of AYUSH facility	NA	NA	10978	0	NA
	No. of PHC with two Doctors - 6185					
	No. of PHC with one Doctor - 14852					
	No. of PHC without Doctors - 1099					
	No. of PHC without Laboratory Technicians-7778					
	No. of PHC without Pharmacists - 5640					
	No. of PHC with Lady Doctors - 4983					
CHC	**Category**	**Required**	**Sanctioned**	**In position**	**Vacant**	**Shortfall**
	Surgeons	4809	2182	1018	1164	3791
	Obstetricians&Gynaecologists	4809	1958	1389	569	3420
	Physicians	4809	1437	819	618	3990
	Pediatricians	4809	1731	1041	690	3768
	Radiographers-2011	**4809**	**2806**	**2221**	**585**	**2588**
	# Total	**24045**	**10114**	**6488**	**3626**	**17557**
	General Duty Medical officer	NA	12631	11798	833	NA
	Radiographers-2005	3346	1669	1337	332	2009
	Total Specialties-2005	13384	7582	3550	4032	9834
	Total Specialties-2011	**19236**	**9831**	**6935**	**2896**	**12301**
PHC & CHC	Pharmacists-2005	26582	21072	17708	3364	8874
	Pharmacists-2011	**28696**	**24460**	**24671**	*	**4025**
	Laboratory Technicians-2005	26582	14571	12284	2287	14298
	Laboratory Technicians-2011	**28696**	**16153**	**16208**	*	**12488**
	Nursing Staff-2005	46658	34061	28930	5131	17728
	Nursing Staff-2011	**57550**	**63325**	**65344**	*	*

Source: Rural Health Statistics in India-2012, Ministry of Health and Family Welfare, Government of India. Data presented as per 2011 population norm provisional, and as on March, 2011.
Note - # Total: Indicates calculation of total figures excluding a number of figures of all categories in 2005 and * indicates – Surplus,

Table - 2.14: Number of Human Resources in different health institutions in Odisha

Category		Required	Sanctioned	In position	Vacant	Shortfall
HSC	ANM in HSCs	6688	6688	7035	*	*
	Health Worker (Male)	6688	3011	2206	805	4482
	ANM at HSCs & PHCs-2005	7209	7121	6768	353	441
	ANM at HSCs & PHCs-2011	**7916**	**7442**	**7934**	*****	*****
	# Total	**21292**	**17141**	**17175**	**805**	**4482**
PHC	Health Assistant Female-LHV	1228	1162	920	242	308
	Health Assistant (Male)	1228	NA	0	NA	1228
	Allopathic Doctors-2005	1282	1353	1353	0	*
	Allopathic Doctors-2011	**1228**	**725**	**525**	**200**	**703**
	No. of AYUSH facility	1228	1211	1211	0	17
	No. of PHC with two Doctors	1228	NA	410	NA	818
	No. of PHC with one Doctor	1228	NA	636	NA	592
	No. of PHC without Laboratory Technicians-1228	1228	NA	NA	NA	NA
CHC	Surgeons	377	307	172	135	205
	Obstetricians&Gynaecologists	377	227	125	102	252
	Physicians	377	108	41	67	336
	Pediatricians	377	170	100	70	277
	General Duty Medical Officers - Allopathic	377	367	316	51	61
	Radiographers-2005	231	26	8	18	223
	Radiographers-2011	**377**	**61**	**42**	**19**	**335**
	# Total	**2262**	**1240**	**796**	**444**	**1466**
	Total Specialties-2005	924	496	NA	NA	NA
	Total Specialties-2011	1508	812	438	374	1070
PHC & CHC	Pharmacists - 2005	1513	2040	1984	56	*
	Pharmacists - 2011	1605	1720	1265	455	340
	Laboratory Technicians-2005	1513	344	311	33	1202
	Laboratory Technicians-2011	1605	476	330	146	1275
	Nursing Staff-2005	2899	657	637	20	2262
	Nursing Staff-2011	3867	1230	1046	184	2821
	# Total	**7077**	**3426**	**2641**	**785**	**4436**

Source: Rural Health Statistics in India-2012, Ministry of Health and Family Welfare, Government of India. Data presented as per 2011 population norm provisional, and as on March, 2011.

Note: # Total: Indicates calculation of total figures excluding a number of figures of all categories in 2005. **Note:** Calculation of post for Shortfall = Required post _In position, Vacant = Sanctioned post_In position

While taking stock of human resources of different health care institutions at the national level, in general and the state of Odisha in particular, it is noticed that both at the national level and in Odisha there are a surplus number of ANMs at the HSCs and PHCs in 2011. But during pre-implementation of NRHM in 2005, the vacant and shortfall number was 6,604 and 36,068 respectively at the national level and 353 vacant and 441 shortfall in Odisha. With regard to health worker-male, there is vacancy of 31,026 and a shortage of 95,909 posts in India. In Odisha, 805 seats are vacant and shortage of 4,482 posts of health worker-male. At the national level, 4,791 HSCs are functioning without ANMs, 72,677 HSCs working without a health worker - male and 2,556 HSCs functioning without both of ANMs and health worker male. It shows at the national level there are more shortages of paramedical staff whereas in Odisha the shortage is very less compared to pre-implementation of NRHM.

Coming to primary health centers, it is noticed that apart from paramedical staff, posts more for allopathic doctors were sanctioned in 2011 than required post (see Table-2.13) but in posts are 26,329 whereas the sanctioned post show 30,051 whereas the vacant remain at 3722 posts at the national level. In fact as compared to pre-implementation of NRHM 2005, the number of sanctioned posts for doctors increased to 5,575 in 2011, but vacancy of 3,722 posts remained. In India 23,887 PHCs are functioning at the national level, but only 6,185 PHCs have two doctor facilities, 14,852 have a single doctor facility. It is also noticed that 1,099 PHCs are still functioning without doctors, 7,778 PHCs without laboratory technicians, 5,640 PHCs working without a pharmacist in the country.

Where as in Odisha, out of 1,228 PHCs, 410 PHCs have two doctors in position, and 818 posts are in shortage. In Odisha out of required number 1,228 PHCs, 636 PHCs have single doctor and there is a shortage of 592 posts, 182 PHCs are functioning without a doctor, and 99 PHCs are functioning without a pharmacist.[43] There are also less number of lady doctors found in Odisha to tune of only 99 lady doctors provide service to the people.[44] But it's very important to appoint more lady doctors to the PHCs, under the NRHM which would help increase the number of institutional deliveries as most of the

[43] *Rural Health Statistics in India,* Ministry of Health and Family Welfare, Government of India, 2012.
[44] Ibid.

respondents prefer to have institutional delivery if there would be a lady doctor in either PHCs or CHCs.

Now in the case of Community Health Centers (CHCs), figures are shocking the figure of the specialties (Surgeons, O & G, Physicians, pediatricians, Radiogests etc.) doctors at the national level (see Table-2.13). It is found that out of total required post 24,045 in the country, 42 percent posts (10,114) are sanctioned and out of that 64 percent post (6,488) in position, whereas still around 36 percent (3626) are in vacant and 73 percent (17,557) posts are having shortfall. It is important for allocation of specialty doctor in CHCs levels and while looking total specialty doctor that has been sanctioned at national level, it is found that 19,236 posts are required, out of that only 51 percent (9,831) are sanctioned and out of sanctioned post 70 percent has been filled position, the rest of the posts are vacant (2896) and the shortfall is about (12301) in national level. It is also noticed that out of 12631 sanctioned posts, 93 percent (11798) post of allopathic general duty Medical Officers have served in different CHCs in the country. While looking at the tertiary (CHC level) care in the state of Odisha, it is noticed that out of specialty doctors 1,508 posts required, around 54 percent (812) posts are sanctioned and out of the sanctioned post again 54 percent (438) posts are filled up and 71 (1070) percent posts from the required number remaining as shortfall and 46 percent (374) remain as vacant (see Table-2.13 for details). While comparing to pre-implementation of the NRHM, though a number of the specialty posts have increased but most of the posts are remaining as either vacant or shortfall. If this trend at the state level continue in the future it would be difficult to achieve the expected outcomes at the end of the 12th Five Year Plans. Apart from that there are vacancies and shortages of of pharmacists, laboratory technicians, and nursing staff in Odisha (see Table 2.14) which creates problems while accessing health services in the state.

Hence, we can reach to assess that there is an inadequacy of infrastructure and manpower resources in national level more rather than in the state of Odisha except human resources in various CHCs at the state. Lack of infrastructure and human resources may lead to dysfunction of health delivery system in the country and the state. Availability of appropriate infrastructure and adequately trained human resources are an essential complaint of rural health development but the study finds critical gaps between

the two. It is noticed that demand for health care infrastructures, and current provision of infrastructure and the shortage of human resources created huge gaps between requirement and provision at different levels of health care relating to a healthy state.

It has been observed these are constraints of human resources, practitioners of Indian Systems of Medicine (ISM), Registered Medical Practitioners (RMPs), and other locally available human resource have not been adequately mobilized and integrated into the health service system for which people face a lot of problems when there is a need. As a result some people go to private hospitals where they are forced to pay out of pocket money expenses. Despite the high costs of private hospitals irrespective of the economic condition of the people, people still prefer to go private health sector as they are highly dissatisfied with the public health care system due to poor working conditions, absenteeism of doctors as we found an inadequate number of medical and paramedical staff in HSCs, PHCs and CHCs levels which appear to be the main reasons for low utilization of health care facilities in rural India.

2.4 Report of the High Level Expert Group: Universal Health Coverage in India[45]

The Planning Commission of India constituted the High Level Expert Group (HLEG) in October 2010. This Group studied the need for a Universal Health Coverage (UHC) of India and develop a national framework for providing health care that would be easily accessible and affordable to all. The HLEG has given a broad viewpoint of UHC that would provide, "*a universal entitlement to a comprehensive health security and an encompassing obligation of the part of the state to provide adequate food and nutrition, appropriate medical care, access to safe drinking water, proper sanitation, education, health related information, and other contributors to good health*" . The HLEG also recommended the state needs to be primarily and principally responsible for ensuring and guaranteeing UHC for its people with the provision of the wider determinants of health to effectively guarantee health security. It emphasizes to address mainly two factors i.e. social determinants of health and gender equality that plays a significant role to seek Universal Health Coverage. The HLEG has recommended the following major thrust

[45] *High Level Expert Group Report on Universal Health Coverage for India*, Planning Commission of India, November, 2011, pp. 1-344.

areas that need to develop health provisions to ensure Universal Health Coverage by all the citizens.[46]

A. Health financing and financial protection

Both the Central Government and State Government need to increase public health expenditures from the current level of 1.2 percent of GDP to at least 2.5 percent GDP by the end of 12th FYP and need to increase to 3 percent of GDP by 2022. The HLEG also recommended, the government has to ensure availability of free essential medicines by increasing public health care spending on procurement of drugs.

B. Health service norms

The government has to develop a National Health Package which would be offered as a part of entitlement of every citizen, essential health services at different levels. It also suggests placing of adequate checks and balances for the health care facilities by the recognized private sector. At the same time, the present primary health care needs to re-orient its health care provision, District Headquarter Hospitals needs to be strengthened and to ensure quality of health care provision at all levels of service delivery, equitable access to functional beds guaranteed to the patients while receiving health care from secondary and tertiary levels.

C. Human resources for health delivery system

The government needs to ensure adequate number of trained health professionals and technical supporting staff at different levels in general and especially in primary health care in particular. The HLEG strongly urge to follow WHO norms that prescribe at least 23 health workers per 1,000 population at the health health service level. There is provision that two ASHAs have to work with Anganwadi workers along with their helpers at village level, two ANMs and one male health workers at each Health Sub-Centre level. The provision of an AYUSH pharmacist, additional allopathic doctor, a full time dentist, and a male health worker along with the existing staffs as per the Indian Public Health Standards 2010 norms to ensure that health care needs to be adequately met at primary health care level. In the same way there is necessary by increasing of

[46] Ibid, pp. 3-4.

substantial medical and technical staff in Sub-district, District and Medical college hospital.

D. Community participation and citizen engagement

It is the need of the hour to strengthen institutional mechanisms for community participation and citizens' engagement for making health planning effective. It is also required to involve the communities in decision making on health policies, to review implementation of health programs. It would improve the process of policy formulation; ensure effective implementation, high level of transparency and local accountability. The HLEG also recommended, strengthen the role of civil society and NGOs transforming the Village Health and Sanitation Committee into a Participatory Health Councils for the better health delivery system.

E. Access to medicines, vaccines and technology

The government needs to enforce price controls and price regulation particularly on essential drugs, revise and expand the essential drug list. The government has to strength the public sector to protect the capacity of the domestic drug and vaccine industries to meet the national needs. It is also required to set-up National and State Drug Supply and Logistic Corporations, strengthen the drug regulatory system and need to protect the safeguards provided by the Indian patent law and the TRIPS agreement against the country's arbitrary to produce essential drugs.

F. Management and institutional reforms

It is necessary to introduce all India and state level Public Health Service cadres and specialized state level Health Systems Management cadres in reference to giving attention to public health and strengthen the management of the UHC system. It also needs to develop a national health information technology network based on uniform standards to ensure inter-functions between all health care stakeholders. The HLEG also recommended to the government to ensure strong linkages between management and regulatory reforms and ensure accountability to patients and communities.

There is also required to establish financial and budgeting systems to streamline fund flow. Apart from that recommendation which is given for establishment of various authorities like: (a) National Health Regulatory and Development (NHRDA) that will regulate and monitor the private and public health care providers, as well as will have

powers of enforcement and redressal; (b) National Drug Regulatory Authority (NDRA) to regulate pharmaceuticals and medical devices and provide patients access to safe and cost effective products; and (c) National Health Promotion and Protection Trust (NHPPT), who would play a role in facilitating the promotion of better health culture amongst people, health providers and policy-makers.

G. Social determinant of health

As there is a huge difference among castes, classes and gender gaps, the government need to emphasis on the development of the social determinants of health through various social developmental programs. A strong initiative by the public and private organizations is required for the development of health that would help to build greater health equity. A dedicated social determinants committee needs to be set up at the National, State and District level for universal health coverage.

H. Gender and health

The government needs to take initiatives to improve access to health care delivery for vulnerable groups like – women, and girl child. It is also imperative to recognize and give a central role to the women in health care provision both at home and outside for accessing health care services. It would help to reduce the gender gaps and provide a healthy lifestyle to the specified vulnerable section.

2.5 Summing up

Since independence, the country has implemented various health care policies. The government had appointed the National Health Sub-Committee headed by Col. S.S. Sokhey and the Bhore Committee before independence, they had suggested ways for the development of health in the country. But the then government of independent India could not implement all the recommendations prescribed by them. But interestingly, the government has implemented the same recommendation (community health worker for every 1,000 of the village population) of the National Health Sub-Committee under the NRHM in 2005. Similarly, the government also implemented seriously the recommendation (integration of both preventive and curative health services through primary health centers and the community participation) of the Bhore Committee in 2005. And afterwards the National Health Policy-1983 too emphasized for comprehensive primary health care. The government established the Primary Health

Centre in 1952 which need to be appreciated for the primary health development in the country. But long neglect of the primary health sector in India continued to increase morbidity and mortality rate in the rural areas. Then, the government initiated the NRHM in 2005 to tackle the situation.

The NRHM has shown the changes in health sector particularly in primary health delivery systems in rural India. It has also increased a steep rise of institutional delivery at the national and the state level particularly in Odisha which helped to decline the alarming rate of infant and maternal deaths. However, it is reported that the NRHM has failed to reach the expected outcomes related to maternal and child mortality at the national level by 2012. But, it helped to achieve the targets of the Millennium Development Goals (MDGs) particularly infant mortality rate and improvement of maternal health in some states in India. As the Government of India (GoI) has recently extended the NRHM from 2012 to 2017, then there is an expectation of reaching the targets of the Mission and achieving the targets of the MDGs in India. During this period the GoI is looking forward to meet the remaining challenges such as provision of infrastructural facilities and shortages of medical and paramedical staff at the different national and state levels to provide the primary health care to all the rural people. Further, for more details and the development of rural health particularly in Odisha is presented and discussed elaborately in chapter-3.

Chapter – 3

Health Delivery System in Odisha

This chapter is divided into five sections. The first section presents an overview of the administration and development of the public health care system in Odisha. The second section discusses about the health sector reforms, the health policies, and initiative of various new policies that are undertaken by the Government of Odisha for providing better health services to the people. The third section elaborates on the development of the health sector during the post-implementation period of the National Rural Health Mission (NRHM) in the state. Mainly it touches upon the issues of the health budget, infrastructures and human resources for the advancement of health care provisions in Odisha. Section four gives a broad picture about Kendrapara district and the development of different health care institutions in the district. It also focuses on the services rendered by the three level health care facilities. It discusses the improvement that has taken place in several health care institutions in the district during implementation of the NRHM. The final and the fifth section presents the recent development particularly sanction of human resources under the NRHM in the district besides summarizing the chapter.

3.1 Introduction

Odisha became a separate state in 1936 on the basis of language. Ever since, the health condition of the people has not been up to the mark and their ability to fight preventive diseases, nutritional deficiency, underweight, hunger deaths, infant and maternal deaths, and endemic deaths from various communicable and non-communicable diseases, have been increasing. At the same time it faces other public health challenges like malaria, dengue, tuberculosis, leprosy, respiratory infections, and emerging threats from cardiovascular diseases and HIV/AIDS. It confronts the problem of inaccessibility of health services, particularly rural health, by the massive rural population. The gravity of the health problem reached such a point where controlling public health became a formidable challenge for the state government. Therefore, the Government of Odisha (GoO) attempted to ensure that maximum provisions of health care services to reach the people through various Central schemes and the state's own innovative policies and various programs. But it has suffered a severe setback due to its poor economic condition

(47.3 percent poverty which is the highest in India)[1] and the unequal distribution of wealth prevailing among the different sections of the people.

3.1.1 Profile of the State - Odisha

Orissa was formed on the basis of linguistic difference on April 1, 1936, and was renamed as 'Odisha' on November 1, 2011. The state is located along the Eastern coast of India between 17.15^0 N and 22.45^0 N latitudes and between 81.45^0 E and 87.50^0 E longitudes. The state is bound by Jharkhand in the north, West Bengal in the northeast, Chhattisgarh in the west, Andhra Pradesh in the south and the Bay of Bengal in the east. It lies in a sub-tropical geo-climatic region with vast topographical variations. The northern plateau and upland region is a continuation of the Chottanagpur plateau of Jharkhand. The central tableland in the heart of the state mostly consists of fertile valleys, plains and hilly lands. The Eastern Ghat region of the uplands is dissected by steep-sided mountain ranges with canyons, fertile inter-mountain valleys and high plateau. The coastal belt comprises a diverse spread of marshy deltaic tracts, cultivable alluvial plains, broken hills and undulating tracts ascending the tablelands. The six major rivers (the Mahanadi, the Baitarani, the Subarnarekha, the Budhabalanga, the Brahmani and the Rushi Kulya) that flow through this zone down to the Bay of Bengal not only make this belt very fertile but also increase its irrigation potential manifold.

Odisha is the 9th largest state in India in terms of its physical size. The land area of Odisha is 155,707 Sq. Kms., which is 4.74 percent of the total land area of the country. Odisha is considered as the 11th largest population state in India which stands at 41,947,358 population, out of which 34,951,234 (83.32 percent) constitute the rural and 6,996,124 (16.68 percent) constitute the urban population, signifying an increase of 1.69 percent since 2001. The density of population which was 136 per sq. km. in 2001 has risen up to 269 per sq. km. in 2011. However, it is still below the national average of 382 per sq. Km. According to the provisional report of Census 2011, India demonstrated the decadal growth rate of 17.64 percent as compared to the 21.15 percent of Census 2001. Odisha's decadal population growth rate has declined from 16.15 percent in 1991-2001 to 13.97 percent in 2001-2011. The growth rate of the rural population is 11.71 percent and

[1] This is the tentative poverty estimation, percentage of Poverty Head Count Ratio followed by Tendulkar Committee Methodology for the year 2009-10.

that of the urban population is 26.80 percent. The sex-ratio (i.e. number of females per 1,000 males) in the state has marginally increased from 972 in 2001 to 978 in 2011, which is 38 points more than the national figure. The rural sex-ratio of the state is 987 while the urban sex-ratio stands at 895.[2] The Scheduled Castes (SCs) and Scheduled Tribes (STs) population in the state constitute 22.13 percent and 16.53 percent of the state's total population respectively. Altogether, SCs and STs constitute 38.66 percent of the state's total population. This is comparatively higher than the All India figure of 16.20 percent SC and 8.19 percent ST population (see Table-3.1).[3]

A. Literacy

The total literacy rate of the state has increased from 63.08 percent in 2001 to 73.45 percent in 2011. Alongside the increase in the male literacy rate from 71.28 percent in 2001 to 82.40 percent in 2011 which is more than the national average of 82.12 percent, the female literacy rate has also risen up from 50.51 percent in 2001 to 64.36 percent in 2011. At the same time, the rural literacy rate has increased from 59.84 to 70.78 percent, indicating a decadal increase of 10.94 percent from 2001 to 2011, whereas the urban literacy rate has raised from 80.84 to 86.45 percent. However, the male rural literacy and the female rural literacy rate are 80.41 and 61.10 percent respectively compared to the 91.83 percent male literacy rate and 80.70 percent female literacy rate of urban Odisha.

[2] Census - 2011, Provisional Population Totals, Director of Census Operations, Odisha, 2011, p. 2.
[3] Ibid.

Table - 3.1: Demographic profile of Odisha as compared to India

Sl. No.	Particulars	Odisha	India
1.	Number of Total Population	41,947,358	1,210,193,422
2.	Percentage of Decadal Population Growth	13.97	17.64
3.	Sex Ratio (Per 1000 males)	978	940
4.	Population Density (Persons per sq km.)	269	382
5.	Number of Rural Population	34,951,234	833,087,662
6.	Percentage of Rural Population	83.32	68.84
7.	Number of Urban Population	6,996,124	377,105,760
8.	Percentage of SC Population* (Census-2001)	22.13	36.20
9.	Percentage of ST Population* (Census-2001)	16.53	8.19
10.	Percentage of Literacy Rate	73.45	74.4
11.	Percentage of Male Literacy Rate	82.40	82.14
12.	Percentage of Female Literacy Rate	64.36	65.46
13.	Percentage of Population under BPL(2009-10)	47.3*	32.0*

Source: Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India, Census 2001 and 2011. *Note:* *Indicates tentative poverty estimates, Percentage of Poverty Head Count Ratio by Tendulkar Committee Methodology.

B. Administration and the demographic profile

Administratively, the state is divided into 30 districts, 476 Sub-districts, 58 Sub-divisions/Taluka, 314 blocks, 316 Tahasils, 223 towns (138 towns in 2001) and 51,313 villages (51,349 in 2001) as per Census 2011. There is an increase of 85 towns and a decrease of 36 villages when compared to the 2001 Census. However, there are wide disparities among the districts in the state with respect to demographic features. Odisha is one of the poorest and least developed states in the country in terms of its per capita income, productivity, industrial output, employment, social development and health status. The Census 2001 shows that the total numbers of workers in the state are 142.76 lakh, which constitutes 38.79 percent of the total population of the state. The main workers constitute 67.2 percent of the total population of workers in the state and comprise cultivators (35.8 percent), agricultural laborers (21.9 percent), industry workers (4.2 percent) and other workers (38.1 percent). The proportion of male workers to male population and female workers to the female population in 2001 stood at 52.5 and 24.7 percent respectively. With a per capita income of Rs. 18846/- in 2004-05, Odisha was

considered as one of India's poorest states.[4] The state also has a low population growth rate because of a relatively low fertility rate of 2.37 and a fairly high infant death rate 61[5] and child mortality rate 78 per 1,000 live births [6] in India.

C. Poverty

Poverty is the main stumbling block for the development of Odisha and is closely associated with the lack of economic growth in the state. It is one of the poorest states and also shows one of the highest incidences of poverty (at 57.2 percent in 2004-05[7]) among the major states in the country (The All India average being 37.2 percent).[8] Poverty is more prevalent in the rural areas (60.8 percent) than in the urban areas (37.6 percent)[9]. There are considerable variations within the state itself, with the Coastal areas generally being more developed and having a lower rate of poverty; the Coastal area accounts for 27.1 percent of poverty where as the Southern part and the Northern part account for 72.7 and 59.1 percent respectively of poverty in the state.[10] The interior parts are less developed and have very high rates of poverty in some places. The SCs and STs population constitute 60 percent of the total number of the poor in Odisha, whereas their share of the total population is only 43 percent.[11] A very high percentage of the state's poor exists among the SCs and STs. Among all the social groups, the head count ratio is higher among the STs and they constitute 75.8 percent of the poor alongside the 49.9 percent SCs, when compared to the 33 percent of the OBC group and others in 2004-05.[12] Apart from these, the state depends completely on agriculture and by the year 1999-2000, Odisha's[13] agricultural wages achieved a major source of income for the poor but was still low compared to the national level. Other factors contributing to poverty in Odisha

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[4] *Odisha Budget 2012-13: At a Glance*, Finance Department, Government of Odisha, Bhubaneswar, 2012, p. 389.
[5] *Sample Registration System*, Registrar General India, Vol. 46, No. 1, December 2011.
[6] NFHS 1998-99.
[7] *Economic Survey 2011-12*, Planning and Co-ordination Department, Directorate of Economic & Statistics, Government of Odisha, Bhubaneswar, February, 2012, p. 252.
[8] Ibid (Percentage of Poverty Head Count Ratio for Odisha and India by Tendulkar Committee Methodology).
[9] Op.cit. *Economic Survey 2011-12*, p. 252.
[10] Manoj Panda, "Economic development in Orissa: Growth without inclusion?", *Working Paper*-2008-025, Indira Gandhi Institute of Development Research, Mumbai, November, 2008, pp.12- 13.
[11] Ibid, p. 13.
[12] Op.cit. Manoj Panda, November 2008, p. 12.
[13] A Deaton and J. Dreze, "Poverty and inequality in India: A re-examination", *Economic and Political Weekly*, Vol. 37, No. 36, September 2002.

include high inequality in asset ownership (especially land), significant dependence on forest products, low levels of literacy among women and, until recently, very little private (foreign) investment.

D. Regional disparities

Odisha is a state where 83.32 percent people live in the rural areas.[14] Across these rural areas, inequalities are pronounced between the Coastal areas (that account for 27.4 percent poverty) and the inland areas (the rates ranging from 50 percent in the Northern region to a staggering 83 percent in the Southern region).[15] Considering the poverty rate in the state, the Coastal area has the least poverty ratio which has declined by 17.9 percent from 45.3 percent in 1993-94 to 27.4 percent in 2004-05. The Southern region recorded the highest poverty rate that increased by 3.9 percent from 68.6 percent in 1993-04 to 72.7 percent in 2004-05, while the Northern region witnessed an increase of 13.2 percent from 45.9 percent in 1993-94 to 59.1 percent in 2004-05. In total, the poverty ratio has dropped by 2.9 percent from 1993-94 to 2004-05. Therefore, both the Northern and Southern regions became obstacles for Odisha's socioeconomic development (see Table 3.2). There is lesser poverty among the urban areas (44.7 percent as compared to the 46.9 percent of the rural area) but it is noticeable how instead of decreasing in the urban areas, poverty has increased by 4.1 percent from 40.6 percent in 1993-94 to 44.7 percent in 2004-05. Also, both in the Northern and the Southern regions, the poverty rate has increased by 10.4 percent and 13.2 percent respectively during 2004-05, as compared to 1993-94 (see Table 3.2).

Table - 3.2: Incidence of poverty by region, areas and head count ratio of social groups by region in rural Odisha in 2004-05.

(In %)

Region	Rural		Urban		SC	ST	OBC and Others	All Social Groups
	2004-05	1993-94	2004-05	1993-94				
Coastal	27.4	45.3	44.1	47.2	32.8	67.7	22.4	27.4
Southern	72.7	68.8	55.1	41.9	67.2	82.8	59.6	72.7
Northern	59.1	45.9	42.9	32.5	64.4	72.8	46.0	59.1
Total	46.9	49.8	44.7	40.6	49.9	75.8	32.9	46.9

Source: National Sample Survey (2004-05)

[14] Estimated from the NSSO data 2004-05.
[15] Ibid.

E. Social identity

Odisha has the third highest concentration (after Madhya Pradesh and Maharashtra) of ST population; SC and ST population constitute 16.53 and 22.13 percent respectively of the total population. Poverty among the SC and especially the ST population is strikingly higher than among other population. Thus, while the ST population represents 22.13 percent of the population of Odisha, they constitute more than 40 percent of the total number of poor. The relative disadvantage of the ST population is a remarkably robust feature of the poverty in Odisha. Many social indicators (education, health) for this particular category are considerably worse than the majority of the population. When all taken together, regional and social identity characteristics present a very striking picture, no less than 92.4 percent of the ST population living in the rural areas of the southern region of the state is poor.

F. Human development indicators

While Odisha's human development indicators have improved steadily in recent years, but they still fall behind the national average. The life expectancy is 59.5 for male and 59.6 for female.[16] The maternal mortality ratio was 258 in 2004-06 (much higher than the All India average of 212 per 100,000 live births), whereas the neighboring states of Odisha secure comparatively less (134 in Andhra Pradesh, and 145 in West Bengal).[17] Apart from that, more than half of the children of the state are underweight, and in contrast to other major states there has been little progress in Odisha over the past few decades in reducing child malnutrition rates. According to the NFHS-3 (2005-2006), 44 percent of the children under the age of three are underweight, 38 percent stunted and 19 percent wasted. In addition to that it is reported that in Odisha, BPL families are more in the Southern region where poverty rates are also noticeably higher (72.2 percent as compared to 59 percent of the North and 27.4 percent of the Coast). Both the regions have 66 percent and 62 percent of BPL families in the state. There is considerable variation across the districts in terms of health and education. The Census data shows that the literacy rate has increased from 63.08 percent in 2001 to 74.45 percent in 2011.[18]

[16] *National Health Profile-2010*, Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India.
[17] *Sample Registration System*, Office of Registrar General, India, July 7, 2011.
[18] Census - 2001 and 2011

There is a difference in the sex ratio (978 females per 1,000 males) and a gender disparity in the literacy of 8.04 percent according to the 2011 Census.

3.1.2 Development of Health Delivery System in Odisha

The health delivery system and the provisions of health facilities in Odisha is based on the primary health care approach which operates through the Health and Family Welfare Department, Government of Odisha. The entire state has been facilitated with health institutions like health Sub-Center (SC), Primary Health Center (PHC) named as Primary Health Institutions at the bottom level, The Community Health Center (CHC) and Sub-Divisional Hospital (SDH) both regarded as referral hospitals in the secondary level and the District Headquarter Hospital (DHH) providing health delivery services to the people at the tertiary level. Table-3.3 presents district wise distribution of various health centers in Odisha.

Table - 3.3: District wise distribution of health care institutions in Odisha

(As on March, 2011)

Sl. No	Districts	HSC	PHC	CHC	SDH	DHH	MHU	FRU	Others	MCH
1	Angul	166	31	10	3	1	1	2	3	0
2	Balasore	275	69	15	1	1	0	4	3	0
3	Bargarh	204	46	14	1	1	1	3	2	0
4	Bhadrak	178	50	7	0	1	0	3	3	0
5	Bolangir	226	42	15	2	1	1	4	3	0
6	Boudh	67	12	5	0	1	0	1	2	0
7	Cuttack	332	57	18	2	1	0	4	11	1
8	Deogarh	42	7	4	0	1	0	1	1	0
9	Dhenkanal	167	32	10	2	1	0	2	5	0
10	Gajapati	136	20	8	0	1	2	3	2	0
11	Ganjam	460	89	30	2	1	0	8	9	1
12	Jagatasingpur	189	37	9	0	1	0	3	1	0
13	Jajpur	260	56	12	0	1	0	3	3	0
14	Jharsuguda	66	15	6	0	1	0	2	1	0
15	Kalahandi	242	43	16	1	1	1	3	6	0
16	Kandhamal	172	36	14	1	1	2	3	5	0
17	**Kendrapada**	**227**	**45**	**9**	**0**	**1**	**0**	**3**	**1**	**0**
18	Keonjhar	351	61	17	2	1	2	7	7	0
19	Khurda	202	46	13	0	2	0	3	8	0
20	Koraput	307	48	16	1	1	0	4	3	0
21	Malkangiri	158	25	8	0	1	1	2	4	0
22	Mayurbhanj	589	82	28	3	1	2	5	7	0
23	Nawarangpur	289	39	11	0	1	0	3	2	0
24	Nayagarh	166	37	12	0	1	0	2	9	0
25	Nuapada	95	17	6	0	1	0	1	1	0
26	Puri	241	45	16	0	1	0	3	9	0
27	Rayagada	235	36	11	1	1	0	3	2	0
28	Sambalpur	167	31	11	2	1	0	3	2	1
29	Subarnapur	89	18	6	0	1	0	2	2	0
30	Sundargarh	390	56	20	2	2	1	6	3	0
	Odisha	**6688**	**1228**	**377**	**26**	**32**	**14**	**96**	**120**	**3**

HSC - Health Sub-Center
PHC - Primary Health Center
CHC - Community Health Center
SDH - Sub-Divisional Hospital
DHH - District Headquarter Hospital
MHU - Mobile Health Unit
FRU – First Referral Unit
MCH - Medical College Hospital

Source: NRHM, Health Management Information System (HMIS Portal), Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India. http://nrhm-mis.nic.in/Publications.aspx. Accessed on July 26, 2012.

The state health organizational structure is followed by the Central health organization structure. Table-3.3 presents the district wise distribution of different kinds of health care institutions in Odisha. There are three Medical College Hospitals (MCHs), namely - S.C.B Medical College, Cuttack, M.K.C.G Medical College, Berhampur, and V.S.S. Medical College, Sambalpur. Apart from providing health care facilities, each Medical College has an intake capacity of 150 M.B.B.S students and the S.C.B Medical College, Cuttack has an additional intake capacity of 20 B.D.S students. Other than that, there are four private Medical Colleges, namely Hitech Medical College, Bhubaneswar, Institute of Medical Science, Bhubaneswar, SUM Hospital, Bhubaneswar, Kalinga Institute of Medical Science, Bhubaneswar, each with an intake capacity of 100 students both for M.B.B.S. and B.D.S courses. Odisha also has a Dental College named Gandhi Dental College, Bhubaneswar, having an intake capacity of 50 students. The state has a Government Pharmacy College with an intake capacity of 60 students, and 32 private Pharmacy Colleges with a total intake capacity of 1840 students. Apart from that, there are 12 Nursing Government Colleges and 17 Private Nursing Colleges, having intake capacities of 265 and 480 students respectively. At the same time the state has seven specialization institutions namely Shishu Bhawan, Regional Spinal Injury Centre, State Blood Transfusion Council, State Drug Management Unit, Regional Resource Centre, Acharya Harihar Regional Cancer Centre, and Central Redcross Blood Bank.

The state has 32 District Headquarter Hospitals (DHH) and both Khurda and Sundargarh districts have two DHH each, while other districts have one each. The state also has 26 Sub-Divisional Hospitals (SDH) and 120 other hospitals. In addition to that, there are 377 Community Health Centers (CHCs) functioning at the block levels and 1228 Primary Health Centers (PHCs) providing services at the Panchayat level, and 6688 Health Sub-Centers (HSCs) working at the village levels in the rural areas. Odisha also runs 14 Mobile Health Units (MHUs) and 96 First Referral Units (FRU) across the state.

Recently, the Government of India (GoI) has given permission to open All India Institute of Medical Sciences (AIIMS). It will have 978 beds, 5 super specialty departments, and 18 specialty wards that have been under process to function at Bhubaneswar, the capital of Odisha. The GoI also emphasized on providing both Ayurvedic and Homeopathic health care facilities to the people. In Odisha, there are three

existing Government Ayurvedic Colleges and three Private Ayurvedic Colleges with intake capacities of 30 students each, and four Government Homeopathy Colleges and two Private Homeopathy Colleges with intake capacities of 25 and 30 students respectively. All the above health care institutions provide health delivery services to the people of the state.

3.1.3 Health Care Scenario in Odisha

The health care scenario in Odisha has changed over a period of time and some changes have certainly occurred after the implementation of the NRHM since 2005. One of the major health indicators that were developed by the NRHM is the Maternal Mortality Ratio (MMR), which was 303 per 100,000 live births in 2004-06 and has dropped by 45 points to 258 in 2007-09, making it 46 points more than the national average of 212. However, the status of MMR in Odessa is alarming when compared to its neighboring states like West Bengal (145), Andhra Pradesh (134), and some other southern states like Karnataka (178), Tamil Nadu (97), and Kerala (81). At the same time, Infant Mortality Rate (IMR) has reduced from 75 in 2005 to 61 per 1,000 live births in 2010, but the figure is more disturbing when compared to other High Focus Non-North Eastern states like Bihar (48), Rajasthan (55), Chhattisgarh (51), Uttarakhand (38), Jharkhand (42), and Himachal Pradesh (40).[19] Odisha has the second highest IMR in the country after Madhya Pradesh 62.[20] The Child Mortality Rate 78 per 1,000 live births in 2010 is still high and 19 points more than the national average of 59 (see Table 3.4). Simultaneously, the Crude Birth Rate (CBR) declines by 1.8 per 1,000 live births from 22.3 in 2005 to 20.5 in 2010 while the Crude Death Rate (CDR) is reduced only by 0.9 per 1,000 live births from 9.5 in 2005 to 8.6 in 2010. However, Still Birth Rate (SBR) is 9.0 per 1,000 live births, which is the same as the national average.

Although the above data show a reduction in health indicators, the rate of decline is still very slow when compared to the other states of India (see Table 3.5). Odisha has also obtained the lowest rank in institutional delivery (39 percent)[21] which is lesser than

[19] Odisha is also one of the High Focus Non-Northeastern states. The latter are considered so because of an alarming rate of health indicators on them. However, all the states are given special status during the implementation of the NRHM.
[20] *Sample Registration System*, Registrar General India, Vol. 46, No. 1, December 2011.
[21] National Family Health Survey-3 (2005-06), The Ministry of Health and Family Welfare, Government of India, New Delhi.

the national average of 41 percent. Only 61 percent of the expectant mothers received three antenatal checkups during their pregnancy period and only 45 percent of the people use modern methods of contraception in the entire state, which is also less than the All India figure of 56 percent. Only 52 percent of the children are fully vaccinated.[22]

Table - 3.4: Health profile of Odisha as compared to India

Sl. No.	Particular – Indicators	Odisha	India
1	Life Expectancy Rate at Birth for Male#	59.5	62.6
2	Life Expectancy Rate at Birth for Female#	59.6	64.2
3	Maternal Mortality Ratio (SRS-2007-09)	258	212
4	Total Fertility Rate (SRS - 2010)	2.3	2.5
5	Crude Birth Rate (SRS - 2010)	20.5	22.1
6	Crude Birth Rate Rural (SRS - 2010)	21.4	23.7
7	Crude Birth Rate Urban (SRS - 2010)	15.2	18.0
8	Crude Death Rate (SRS - 2010)	8.6	7.2
9	Crude Death Rate Rural (SRS - 2010)	9.0	7.7
10	Crude Death Rate Urban (SRS - 2010)	6.6	5.8
11	Infant Mortality Rate (SRS - 2010)	61	47
12	Infant Mortality Rate Rural (SRS - 2010)	63	51
13	Infant Mortality Rate Urban (SRS - 2010)	43	31
14	Child Mortality Rate (SRS - 2010)	78	59
15	Neonatal Mortality Rate (SRS - 2010)	42	33
16	Postnatal Mortality*	25.0	18.0
17	Still Birth Rate (SRS - 2003)	9	9
18	Percentage of women received 3 ANC*	61	51
19	Percentage Institutional delivery*	39	41
20	Percentage of contraceptive use modern*	45	56
21	Percentage of Vaccination fully coverage*	52	44

Source: * NFHS-3 (2005-06), and #National Health Profile 2010, Ministry of Health and Family Welfare, Government of India. Sample Registration System, Registrar General of India, Vol. 46, No. 1, December 2011.

[22] Ibid, NFHS-3 (2005-2006).

Table - 3.5: Comparison of health indicators pre and post implementation of the NRHM

Name of the State		Pre-implementation of NRHM-2005			Post-implementation of NRHM-2010		
		Total	Rural	Urban	Total	Rural	Urban
India	CBR	23.8	25.6	19.1	22.1	23.7	18.0
	CDR	7.6	8.1	6.0	7.2	7.7	5.8
	IMR	58	64	40	47	51	31
	MMR	**254** (SRS:2004-06)	---	---	**212** (SRS:2007-09)	---	----
Odisha	CBR	**22.3**	**23.2**	**16.3**	**20.5**	**21.4**	**15.2**
	CDR	**9.5**	**9.9**	**7.0**	**8.6**	**9.0**	**6.6**
	IMR	**75**	**78**	**55**	**61**	**63**	**43**
	MMR	**303**	**---**	**---**	**258**	**---**	**---**
Bihar	CBR	30.4	31.2	23.8	28.1	28.8	22.0
	CDR	8.1	8.3	6.6	6.8	7.0	5.6
	IMR	61	62	47	48	49	38
	MMR	312	---	---	261	---	---
Madhya Pradesh	CBR	29.4	31.6	22.0	27.3	29.2	20.5
	CDR	9.0	9.8	6.1	8,3	9.0	6.0
	IMR	76	80	54	62	67	42
	MMR	335	---	---	269	---	---
Uttar Pradesh	CBR	30.4	31.3	26.5	28.3	29.2	24.2
	CDR	8.7	9.1	6.8	8.1	8.5	6.3
	IMR	73	77	54	61	64	44
	MMR	440	---	---	359	---	---
Rajasthan	CBR	28.6	30.2	23.8	26.7	27.9	22.9
	CDR	7.0	7.2	6.2	6.7	6.9	6.0
	IMR	68	75	43	55	61	31
	MMR	388	---	---	318	---	
Chhattisgarh	CBR	27.2	29.0	20.0	25.3	26.6	18.0
	CDR	8.1	8.4	6.9	8.0	8.4	6.2
	IMR	63	65	52	51	52	44
	MMR	269	---	---	269	---	
Uttarakhand	CBR	30.4	31.3	26.5	19.3	20.2	16.2
	CDR	8.7	9.1	6.8	6.3	6.7	5.1
	IMR	73	77	54	38	41	25
	MMR	440	---	---	359	---	---
Jharkhand	CBR	26.8	28.8	18.7	25.3	26.7	19.3
	CDR	7.9	8.4	5.7	7.0	7.4	5.4
	IMR	50	53	33	42	44	30
	MMR	261	---	---	261	---	---
Himachal Pradesh	CBR	20.0	20.7	13.3	16.9	17.5	11.5
	CDR	6.9	7.1	4.7	6.9	7.2	4.2
	IMR	49	50	20	40	41	29
	MMR	NA	---	---	NA	---	---
Jammu & Kashmir	CBR	18.9	20.2	14.3	18.3	19.5	13.5
	CDR	5.5	5.7	5.0	5.7	5.9	4.7
	IMR	50	53	39	43	45	32
	MMR	NA	---	---	NA	---	---

Source: National Rural Health Mission, Ministry of Health and Family Welfare, Government of India. http://www.mohfw.nic.in/NRHM.htm. Accessed on November 20, 2012.

3.2 Health Sector Reforms in Odisha

The subject of health comes under the State List of the Constitution of India. Therefore, it is the responsibility of each federal state to provide their people with health care facilities. Development of public health, particularly like population control, preventive health like national immunization, national disease programs and research on medical development are under the Concurrent List. So, as per the Concurrent List, India carries the responsibility of funding the medical research and the various national disease control programs that are supposed to be implemented by the federal states. The Government of Odisha (GoO) has been following health care norms, guidelines, and the various policies and programs that are initiated by the Central Government. Since independence in 1947, the GoI has introduced only two major health policies, i.e., the National Health Policy in 1983 and 2002, apart from the National Population Policy in 2000, both of which were also implemented by the states as part of their policy direction of the Centre. However, for the development of health in Odisha, a new health policy named Orissa State Integrated Health Policy (OSIHP) was implemented by the Government of Odisha in 2002.

This policy emphasizes the gradual improvement of the health sector through several factors including different developmental and educational interventions, economic improvement and provision of better health delivery services. It focuses a comprehensive, planned development of the entire health sector including public, private, and voluntary, Allopathic, Ayurvedic and Homeopathy system of medicines. It also addresses key determinants of health like nutrition, drinking water supply, hygiene and sanitation in order to improve and access health services. The OSIHP-2002 was a set of guidelines towards materializing the Orissa Vision-2010 by accumulating various strategies and operations of plans that are formulated for the development of health. The policy addresses the improvement of health status of the people and the making of the health delivery system socially equitable, available, accessible, and affordable to all. Some of the major approaches of the Integrated Health Policy are documented below.[23]

[23] Policy Document, *Orissa State Integrated Health Policy 200,* Government of Odisha, Bhubaneswar.

A. Participation of the local communities

Involvement of local communities and stakeholders in the decision-making process, planning and implementation of various programs that increases ownership and can harness creative energies and resources: human, material and financial towards the achievement of targeted goals.

B. Public health and determinants (societal) approach

It addresses the determinants of health such as provision of nutritious food supply, safe drinking water, hygienic and sanitation, to reduce transmission of communicable diseases, and risk factors for diseases. The public health aims to protect, promote, restore and improve the health of all through a collective societal action.

C. The primary health care approach

This approach addresses people and various departments to work together for the development of the health care system. It emphasizes upon the principles of inter-sectoral coordination at all levels, especially at the district, sub-division and village levels. It addresses community participation, involvement of Panchayati Raj Institutions (PRI), health committees and other institutionalized mechanisms for equitable distribution of health care. Importantly it recognizes health as a human right and that social justice lies in health care. **D. Health financing, management and administration**

It is the critical support system for health care development. The state needs to allocate more funds for provision of better health delivery system. It also requires proper health management and administration with transparency, accountability and responsiveness to the people.

E. The pro-poor approach

This is a good initiative of the government in a state like Odisha where a high out-of-pocket expense for treatment is incurred by all sections of the community. As it is evident from a variety of investigations that unless the state takes adequate care to protect the poor and the vulnerable sections from the adverse economic effects of diseases, any serious effort at sustainable socioeconomic development would have no long-standing impact. Therefore, the policies and strategies need to address on this issue in every possible situation which would indirectly help for sustainable human development.

F. Core components

The policy on Integrated Health Policy - 2002 aims to reduce disparities on four parameters. First, from the (Koraput-Bolangir-Kalahandi) KBK region; second, from the disadvantaged groups (SCs and STs); third, gender disparity; and fourth, from the vulnerable sections, i.e., persons with disability, elderly persons, and women and children. It also tries to reduce rural-urban disparities in health indicators. This policy tries for resource mapping of public/private, civil society, and donor inputs followed by integrating planning that would help avoid wastage of funds.

G. Quality care

This policy emphasizes on enhancing quality care and patient satisfaction by defining standards of care for each level of health institutions. It also gives quality assurance mechanism and certification which would be established with the help of public, voluntary and private sectors. It includes accreditation, repeat registration, patient's charters, grievance redresses systems and legal measures. The health policy also emphasizes on good governance, internal institutional audit mechanisms, involvement of local representative and civil society groups to improve quality and accountability in the health care delivery system.

H. Reorganization within organizational components

To run the health system in a better way there will be changes in the organizational set-up and the different components of developing health care financing, health management and administration, strategic planning, partnerships, inter-sectoral coordination, proper education for health personnel, alongside changes in national drug policy etc.

I. Role of Panchayati Raj Institution

As per the 73rd and 74th Constitutional Amendments, all the development initiatives, including health, were undertaken by involving the PRIs (rural and urban) for good governance and proper implementation of public health programs. The OSIHP-2002 also invites the direct involvement of PRIs in its policy implementation process in a more transparent manner that would ensure better outcomes of the various health programs.

J. Public health and medical care

The major focus area is the development of public health and medical care by establishing coordination between various departments like education, food, water supply

and sanitation. It also tries for population stabilization, control of communicable and non-communicable/infectious diseases, proper treatment and facilities for mental health, health promotion, proper care of the health of women and children. Apart from the Integrated Health Policy-2002, The Ministry of Health and Family Welfare Department, Government of Odisha, also focuses on the development of health under the **Vision for 2010.** Some of the major health initiatives under the Vision-2010 are illustrated below.

a. Panchabyadhi Chikitsa scheme: This is a health care initiative by the Government of Odisha to control five deadly diseases namely, malaria, diarrhea, leprosy, acute respiratory infection and scabies which are commonly prevalent in the state, To manage and control these diseases, provision has been made by the State Government to provide quick treatment and distribute medicines to patients free of cost. It also has a great impact on the disadvantaged categories of people like the SCs and the STs in the tribal belts of Odisha. What makes them more precarious is that often newborns and mothers become victims of malaria and acute respiratory infection. Such a scheme has created awareness among communities and given the opportunity to avail and utilize health services from the public health care system. This scheme has been found to have had positive impacts on the remote rural parts of Odisha.

b. Infant Mortality Reduction Mission: The Infant Mortality Rate of Odisha has remained high as compared to the other states of India. It is documented that about 60 percent of infant deaths occurred during antenatal period (first four weeks of births). Most of the infant deaths have been recorded due to pre-maturity, low birth weight, respiratory infections, diarrhea and malnutrition. The government has taken several strategic interventions to reduce the IMR but the outcome of the interventions was marginal. As a result, in 2001 the government implemented '*Infant Mortality Reduction Mission*' to focus more on interventions that address the determinants of infant mortality. At the same time, capacity building and motivational training was provided to frontline workers and doctors to vigilantly focus on child and maternal care under the Reproductive and Child Health (RCH)-II and during the implementation of the NRHM.[24]

[24] Government of Odisha, Department of Health and Family Welfare. http://www.orissa.gov.in/health_portal/index.html, Accessed on February 20, 2012.

c. Navajyoti scheme: The highest infant deaths with the IMR as 61 per 1,000 live births are documented in Odisha. After relentless efforts by the Centre and State, the IMR still continues to be the highest in the country. As a part of the health policy effort, the Government of Odisha launched the "*Navajyoti Scheme*" in 2004 in collaboration with the UNICEF-India. It is a strategy to improve both maternal and child health care with special focus on the prevention of morbidity and reduction of infant mortality. This scheme interlinks with earlier interventions of the government schemes along with a holistic approach to reach the expected outcome. It is found that out of the 30 districts of Odisha, 14 districts such as Rayagada, Malkangiri, Nabarangpur, Koraput, Kalahandi, Nuapada, Subarnapur, Phulbani, Boudh, Bolangir, Sundergarh, Deogarh, Keonjhar and Gajapati are identified with the highest number of infant deaths where the IMR is above the state average. The '*Navajyoti Scheme'* was launched in these 14 districts, and stringent action has been taken to implement the program including giving enough focus to bring awareness among the people in these districts, to make use of the scheme. Some of the strategies under the '*Navajyoti scheme'* are:[25]

a. Creating awareness in the mother and in the other family members on neonatal and maternal care;
b. Home-based essential newborn care;
c. Identification of high risk babies;
d. Improvement of service delivery system for maternal and neonatal care at the village, block and district levels through existing health care institutions such as PHC, CHC, First Referral Units and District Head Quarter Hospitals;
e. To ensure 100 percent quality care starting with three antenatal checkups/early registration within 12 weeks/TT immunization as per the schedule/identification and referring of complications of pregnancy;
f. Improved use of Insecticide-treated-Bed-net by pregnant women and newborns, and improved coverage of malaria chemoprophylaxis;
g. Prevention and management of infections with immunization, early diagnosis and treatment of diseases using standard case definition;

[25] Department of Health and Family Welfare, Government of Odisha, December 22, 2004, pp. 6-7.

h. Community awareness of birth preparedness/complication; readiness with full involvement in pregnancy and newborn care;
i. Capacity building of functionaries on quality care service delivery.

d. Public Private Partnership (PPP) - Handing over PHCs to the NGOs: This scheme was initially experimented in Odisha in 1997, as the government found it difficult to provide health personnel to some of the single doctor PHCs of the remote rural locations. Therefore, the government had taken an initiative, on an experimental basis, by handing over a few PHCs to interested NGOs for proper management and functioning of the former. The study found that in the initial stages, funding became a major problem as the NGOs faced a shortage of funds, but later on, with financial support from the state government and other external agencies, a few hospitals showed successful functioning. The Government of Odisha also contracted 32 PHCs under PPP. The present study includes two PHCs in Kendrapara district, namely: Talchua and Light House, which are managed completely by the NGOs with the support of the Government of Odisha. The study found that one PHC (Talchua) functions better than the government-run PHCs even though the other one (Light House) was found to have no regular doctor, since the doctor there does not stay either in the hospital premises or in the same village. He visits the PHC only twice a week, as a result of which the people who depend on that PHC face a lot of problems and are compelled to go to the other health care facility. Apart from that, the PHC has no electricity and is managed by a solar cell that provides no certainty of power supply creating dissatisfaction among the expectant mothers who choose not to visit the PHC when they undergo their labor pain. So, it is evident that the PHC Light House is not functioning well compare to the PHC Talchua.

3.3 Development of Health Care Services in Post-Implementation of the NRHM

A. Health care expenditures for health development

Health is considered as a state subject and the state has to allocate the required amount of expenditure for health care services. The Central Government provides funding for national health goals like population control, immunization and other centrally sponsored schemes. There was a serious crisis of fund allocation on health during the 1990s, when India adopted the economic reform in the country and implemented the Structural Adjustment Programs (SAP). As a result, there was a huge

cut in budget allocation by the Central Government as well by the state of social services and a reduction in expenditure on social sectors. During that time, the public expenditures on health as a percentage of GDP was very low and it was stagnant for the last two decades. The health expenditure was 0.9 percent in the 1990s and increased to 1.2 percent of GDP in 2010.[26] This reform adversely affected poor people and the vulnerable sections in the state while accessing health services.

Table-3.6 presents the public health expenditure during post-implementation of the NRHM in the state. It shows that during 2005-06, the total expenditure on health had been Rs. 14708.77 core and had increased to double within the next five years reaching upto Rs 33967.73 crore in 2010-11. Simultaneously, the total health and family welfare expenditure has also increased by more than a double from Rs. 467.02 crore in 2005-06 to Rs. 1272.35 crore in 2010-11. However, the total expenditure on health as a percentage of the total expenditure has not increased significantly. It has increased from 3.17 percent in 2005-06 to 3.74 percent in 2010-11, by a mere 0.57 percent within five years of the implementation of the NRHM. It has been declining from 3.74 percent in 2010-11 to 3.64 in 2011-12 and again 3.68 percent in 2012-13. This indicates that either the state has been negligent in allocating more funds on health during the above-mentioned period or it is unable to spend the allocated funds within the financial year.

Table - 3.6: Odisha's public health expenditure during post-implementation of NRHM

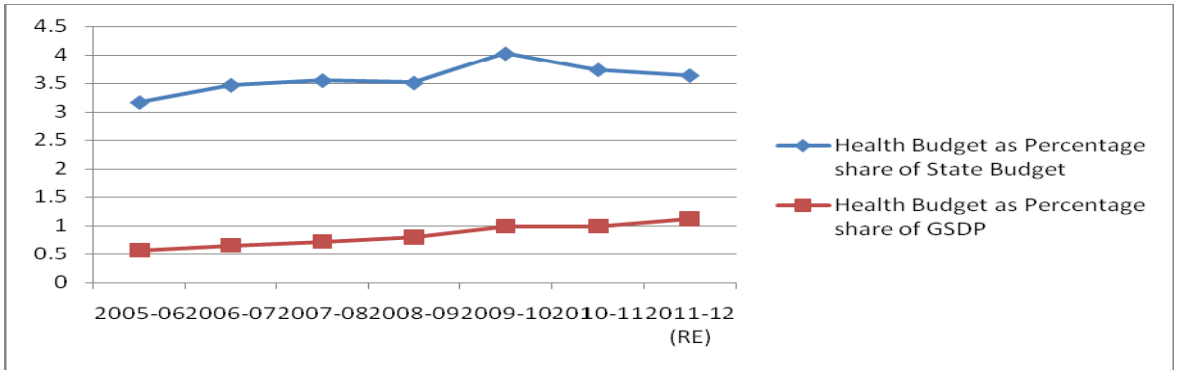
(Rs. in crore)

Year	Total Expenditures (Revenue + Capital)	Total Health & Family Welfare Expenditures (Revenue + Capital)	Total Health Expenditure as Percentage of Total Expenditure (Revenue + Capital)	Health expenditure as Percentage share of GSDP*
2005-06	14708.77	467.02	3.17	0.56
2006-07	17495.25	607.18	3.47	0.65
2007-08	20999.36	746.59	3.55	0.72
2008-09	25430.25	894.57	3.51	0.80
2009-10	29051.95	1170.86	4.03	0.99
2010-11	33967.73	1272.35	3.74	0.99
2011-12 (RE)	42519.18	1549.54	3.64	1.12
2012-13 (BE)	48834.96	1797.67	3.68	NA

Source: Odisha Budget (2011-12 & 2012-13), Finance Department, Government of Odisha.

[26] M.Gobind Rao and Mita Choudhury, "Health care financing reform in India", *Working Paper* No-2012-100, National Institute of Public Finance and Policy, March, 2012, pp. 1-34.

Figure - 3.1: Total expenditures on health as percentage share of state budget and percentage share of GSDP in Odisha



Source: Odisha Budget, Finance Department, Government of Odisha.
Note: * GSDP up to 2003-04 is in 1993-94 prices and afterwards it is in 2004-05 prices

Figure-3.1 presents the trend of health expenditure as a percentage share of the Gross State Domestic Product (GSDP) and the total health expenditure. It shows a gradual increase of health expenditure as a percentage share of GSDP from 0.56 percent in 2005-06 to 1.12 percent in 2011-12. At the same time, the total health expenditure as a percentage share of the state budget is seen to be simultaneously increasing from 3.17 percent in 2005-06 to 4.03 percent in 2009-10 and then decreasing from 3.74 percent in 2010-11 to 3.64 percent in 2011-12 and even lesser in 2012-13. It shows that in spite of the considerable attention that is being paid with regard to fund allocations as a part of the implementation of the NRHM, trends of expenditure are on a decline, as we infer from figure 3.1. However, the Orissa State Integrated Health Policy-2002 directs the State Government to spend a minimum of 5-6 percent share of the state's total budget and a minimum of 2 percent of GSDP instead of 1.12 percent for the development of health. Hence, low budget allocation of health forces rural people to spend more out of their own pockets.

Table - 3.7: Management of fund under the NRHM by Odisha from 2005-06 to 2011-12

(As on December, 2012, Rs. in crore)

Year	India	Allocation for Odisha	Fund release	Expenditure from released fund	Percentage of release against allocation	Percentage of expenditure against release
2005-06	4433.75	198.29	206.43	135.39	104.1	65.6
2006-07	5774.32	284.88	220.18	199.19	77.2	90.4
2007-08	8508.86	383.52	387.16	295.07	100.9	76.2
2008-09	9625.09	392.88	388.05	334.05	98.7	86.0
2009-10	11470.21	457.57	470.19	646.75	102.7	137.5
2010-11	12871.22	494.10	549.44	664.12	111.2	120.8
2011-12	13877.70	568.52	611.55	551.08	107.5	90.1

Source: State wise progress of the National Rural Health Mission, Ministry of Health and Family Welfare, Government of India.
http://www.mohfw.nic.in/NRHM.htm, Accessed on December 4, 2012.

It is also evident from Table 3.7 that Odisha is unable to spend the entire amount of funds allocated by the Central Government under the NRHM in each financial year. During 2005-06, the Centre released Rs. 206.43 crore whereas the state spent only 65.6 percent of the total released fund. Similarly, in 2007-08 and 2008-09 too, the state was unable to spend 100 percent of the fund (see Table 3.7). As a result, the Centre sometimes allots a lesser share to the state than its due share in the following financial year or asks the state to return the unutilized amount to the Centre. This shows Odisha's incapability in utilizing funds in each financial year as well as indicates a failure in the administrative machinery and health management of the state. The underutilization of funds and the underdevelopment of the health sector in Odisha cause dissatisfaction among the people who are kept from accessing proper health services. This has also been observed in some of the respondents while interviewing them.

At the district (Kendrapara) level, the district has received enough funds under the NRHM. During 2006-07, the district received Rs. 14575385.00 and in 2007-08, it received Rs. 40483985, while during 2008-09 the amount has been decreased due to unspent fund of the previous year (2007-08) and received Rs. 39828180.00. But it has again increased during 2009-10 to Rs. 49868000.00 as the expenditures have increased due to increased number of demands for Janani Suraksha Yojana and institutional

delivery in the district and development for health services under the NRHM.[27] But during the year 2012-13, the budget has been sanctioned to 2571.80 Lakh for Kendrapara district.[28]

Table - 3.8: Expenditures on health of Odisha from 2005-06 to 2012-13

(Rs in crore)

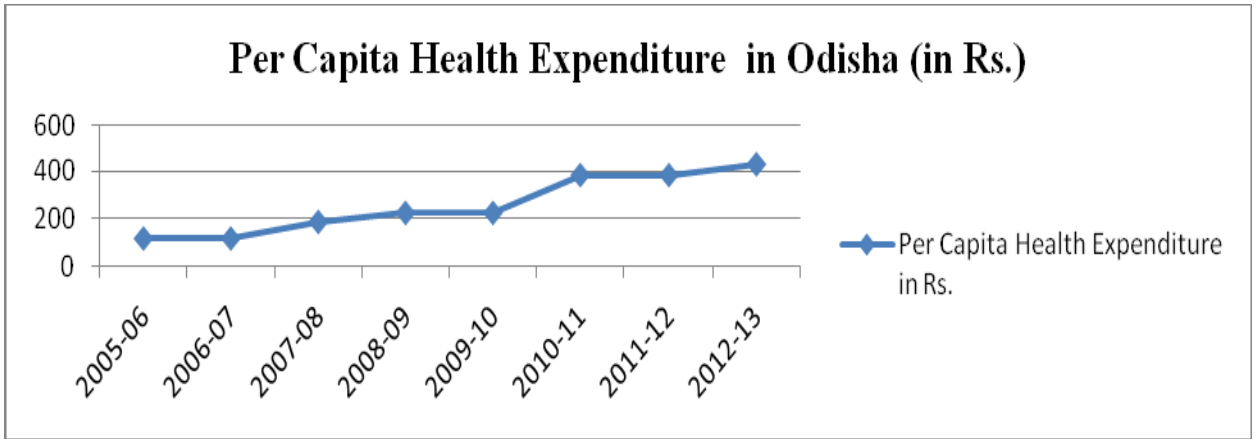
Year	Total Expenditures (Revenue + Capital)	Total Health & F.W. Expenditure (Revenue + Capital)	Primary Health (Rural Health) & F.W. Expenditure (Revenue + Capital)	Primary Health & F.W. Expenditure as Percentage of Total Health Expenditure (Revenue + Capital)	Primary Health & F.W. Expenditure as Percentage of Total Expenditure (Revenue + Capital)	Per Capita Health Expenditure (in Rs.)
2005-06	14708.77	467.02	271.68	58.17	1.85	118.83
2006-07	17495.25	607.18	218.87	36.05	1.25	118.83
2007-08	20999.36	746.59	301.41	40.37	1.44	188.06
2008-09	25430.25	894.57	429.41	48.00	1.69	225.33
2009-10	29051.95	1170.86	580.64	49.59	2.00	225.33
2010-11	33967.73	1272.35	627.29	49.30	1.85	382.94
2011-12	42519.18	1549.54	693.34	44.74	1.63	382.94
2012-13	48834.96	1797.67	812.70	45.21	1.66	428.72

Source: Odisha Budget at a Glance (2011-12 and 2012-13), Finance Department, Government of Odisha, March 2011 and March 2012.

Table-3.8 shows expenditures and per capita health expenditure of the state from 2005-06 to 2012-13. It shows that there is a gradual increase of total expenditure on health from Rs. 14708.77 crore in 2005-06 to Rs. 33976.73 crore in 2010-11 and to Rs. 48834.96 crore in 2012-13. At the same time, a total health and family welfare expenditure also increased from Rs. 467.02 crore in 2005-06 to Rs.1272.35 crore in 2010-11 and to Rs. 1797.67 crore in 2012-13. In the same manner, primary health and family welfare expenditure also increased from Rs. 271.68 crore to Rs. 627.29 crore in 2009-10 and again to Rs. 812.70 crore in 2012-13. This shows that, health expenditure of Odisha has increased gradually instead of substantially, for the health care development. Needless to mention, the rural health care expenditure has also increased. This definitely has an impact on health care services and in the reduction of morbidity and mortality in the state.

[27] The District Account Manager (DAM), District Program Management Unit of the NRHM, Kendrapara.
[28] Program Implementation Plan-2012-13, Kendrapara, Mission Directorate, NRHM, Department of Health and Family Welfare, Government of Odisha.

Figure - 3.2: Per capita health expenditure in Odisha



Source: Odisha Budget At a Glance (2011-12 and 2012-13), Finance Department, Government of Odisha, March 2011 and March 2012.

Considering the percentage of the primary health and family welfare expenditure to the total health expenditure, there has been a nominal increase from 2005-06 onwards. It has increased from 40.37 percent in 2007-08 to 45.21 percent in 2012-13, which means that there has been an increase of a mere 4.84 percent in five years of implementation of the NRHM. However, the primary health and family welfare expenditure as percentage of the total expenditures show an irregular picture. It does not show a systematic trend for allocation of funds for health. But, there is a definite increase in per capita health expenditure in the state from 2005-06 to 2012-13. Figure-3.2 shows an increase in per capita health expenditure by Rs. 264.11 within five years from Rs. 118.83 in 2005-06 to Rs. 382.94 in 2010-11 and to Rs. 428.72 in 2012-13. If we analyze the per capita health expenditure since 2005 (Rs. 118.83) to 2012 (Rs. 428.72), we would find an increase of Rs. 309.89 within a span of seven years. This shows a developing trend in the per capita health expenditure of the state, even though it is still very low when compared to the other states of India.

B. Health facilities: Survey on stock of infrastructure

Various studies show that the health care facilities available in different health institutions of Odisha are not up to the mark. There exist gap between health care demands and the facilities provided by the different health institutions. The data collected in the present study also shows the same result. Although it has been proposed that the

implementation of the NRHM would improve health care infrastructures and the required number of human resources for it, alongside other facilities, it is found that even after seven years (2005-2012) implementation of the NRHM, the government has unable to provide the required number of health infrastructures and manpower resources for the provision of quality health services, especially for the poor, women and children. It is noticed that even though the state has 6688 Health Sub-Centers (HSCs) and all of them are functioning, but only 50.3 percent of the HSCs are functioning properly in the government provided buildings, 43 percent functioning in the rented buildings, and only 6.6 percent functioning in the rent free/Panchayat/voluntary society. We required more than 3323 new HSC buildings as per the population norms of Census-2011, but only 105 new HSCs buildings are under construction while 3218 additional HSC buildings need to be constructed (see Table-3.9).

Table - 3.9: Health infrastructure of HSCs, PHCs and CHCs in Odisha

(As on March, 2011)

Sl. No.	Type	Total number of functioning	Govt. building	Rented building	Rent free/ Panchayat/ Voluntary Society building	Building under construction	Building required to be constructed
1	HSCs	6688	3365	2878	445	105	3218
2	HSC Tribal areas	2689	1235	1345	109	100	1354
3	PHCs	1228	1162	66	0	0	66
4	PHCs Tribal areas	422	371	51	0	NA	NA
5	CHCs	377	377	0	0	0	0
6	CHCs Tribal areas	139	139	0	0	0	0

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India.

A similar problem exists in health care facilities in the tribal areas. Odisha has a largest number of ST population which constitute 16.53 percent of the state's total population. But it is reported that HSCs which are allocated in the tribal belts not enough for their requirement. Out of the 2689 HSCs that are functioning in the tribal belts of the

state, only 45.9 percent are working in the government provided buildings, 50 percent functioning in the rented buildings, and a mere 4 percent functioning in the rent free/Panchayat/voluntary society buildings. Still 100 HSC buildings are under construction and 1354 building are yet to be constructed to possibly meet the requirements of health care facilities in the tribal regions (see Table-3.9).

There is also a shortage of infrastructure at the Primary Health Center (PHC) level and 66 buildings are yet to be constructed for the purpose of meeting the demands of the people. Out of the total 1228 PHCs, 94.6 percent PHCs are functioning at the government buildings, and 5.4 percent PHCs are functioning in rented buildings while more than 6 percent PHCs are still required to meet the infrastructural requirements facilities for providing primary health service in rural Odisha. Apart from that, there are 377 CHCs functioning in the state and 36.8 percent of them are functioning in the government provided buildings of the tribal areas (see Table-3.9).

Table - 3.10: Health infrastructural position of HSCs, PHCs & CHCs in Odisha

(As on March, 2011)

Sl. No	Category	Required	Sanctioned	In position	Vacant	Shortfall
1	Health Sub-Centre	7283#	7283#	6688#	595#	595#
		8136	NA	6688	NA	1448
2	HSC in Tribal areas	2866	NA	2689	NA	177
3	PHC	1308	NA	1228	NA	80
4	PHC in Tribal areas	429	NA	422	NA	7
5	CHC	291#	291#	231#	61#	61#
		327	NA	377	NA	$
6	CHC in Tribal areas	107	NA	139	NA	$
7	DHH	30	32	32	0	$

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India. *Note:* # - Data as on 2009, NA – Not available, $ - Surplus.

Looking at the infrastructural facilities as per the population norms of Census 2011, it is noticeable that there is a shortage of infrastructures right from the HSCs to the CHCs. Table-3.10 shows that Odisha required 8136 HSCs, out of which 6688 HSCs are functioning while there is a shortage of 1448 HSCs. There exists a similar situation in the tribal areas where the required numbers of HSCs are 2866, while 2689 HSCs functioning

and noticed a deficit of 177 HSCs. The shortages of infrastructure in the HSCs make the rural people more panicky when they fall sick or need urgent health attention. A similar situation also drives rural masses to agony when they visit the PHC. The PHC provides the basic health care facilities in the rural areas. It is the first meeting point of the village people with a doctor for their health care necessities. On taking a look at the infrastructure at the PHC level, we find that 1308 PHCs are required while 1228 PHCs are functioning and there is a shortage of 80 PHCs. Considering the situation of the CHCs, it is revealed that in 2009, 291 CHCs were required and sanctioned while only 231 CHCs were in position, the rest 61 were vacant and short. Yet as per the 2011 data, Odisha has a surplus number of CHCs functioning all over the state. District Hospitals are also adequate in number in the state and both Khurda and Sambalpur districts have two District Hospitals each, while the rest of the districts have one each (see Table-3.10).

C. Health care facilities: Survey on human resources

Health care facilities with regard to human resources have seen a change after the implementation of the NRHM in 2005. The provision of human resources, like female health workers for HSCs, is presently more than required. There is a necessity of 6688 female health workers but 7035 female health workers are presently in position. However, there is a shortage of 4482 male health workers in total in various HSCs. We need 6688 male health workers in the HSCs but only 3011 posts have been sanctioned out of which 2206 posts are in position and 805 posts are still vacant. This means that only 33 percent posts are in position and 67 percent posts are lying vacant. A similar problem persists in want of male health workers in the different HSCs in the tribal areas where only 35.4 percent posts are filled up and there exists a shortage of 64.5 percent of the required number of male health workers (see Table-3.11). Table-3.11 also presents the human resources required for the PHC levels. It shows that there is a surplus of ANMs in general for the PHCs, as in position posts are more than sanctioned position ones though it still is lesser than the required number of posts. There are 21 vacant posts, three of which pertain to the ANMs in the tribal regions. Looking at the status of the Lady Health Visitor (LHV) both in non-tribal and tribal areas, this study finds that there is a shortage of 25 percent in the non-tribal areas and of 68.7 percent in the tribal areas in Odisha.

Table - 3.11: Provision of Human Resources of HSCs, PHCs, & CHCs in Odisha

(As on March, 2011)

Sl. No	Category	Required	Sanctioned	In Position	Vacant	Shortfall
Health Sub-Centers (HSCs) level						
1	ANM	6688	6688	7035	$	$
2	Male Health Worker	6688	3011	2206	805	4482
3	Male Health Worker in tribal areas	2689	1270	954	316	1735
Primary Health Centers (PHCs) level						
4	ANM	7916	7442	7934	$	$
5	ANM at PHCs in tribal areas	3111	3093	3090	3	21
6	Health Assistant (Female)	1228	1162	920	242	308
7	Health Assistant (Female) in T.A	422	158	132	26	290
8	Health Assistant Male#	1228	NA	0	NA	1228
9	Doctors	1228	725	525	200	703
10	Doctors in tribal areas	422	416	296	120	126
Community Health Centers (CHCs)						
11	Surgeons	377	307	172	135	205
12	Surgeons in tribal areas	139	73	38	35	101
13	Obstetricians & Gynaecologists	377	227	125	102	252
14	Obstetricians & Gynaecologists in T.A	139	122	40	82	99
15	Physicians	377	108	41	67	336
16	Physicians in tribal areas	139	44	15	29	124
17	Pediatricians	377	170	100	70	277
18	Pediatricians in tribal areas	139	86	23	63	116
19	Total Specialties	1508	812	438	374	1070
20	Total Specialties in tribal areas	556	325	116	209	440
21	General Duty Medical Officers	NA	367	316	NA	NA
22	Radiographers	377	61	42	19	335
23	Radiographers in tribal areas	139	23	14	9	125
Both PHCs and CHCs levels						
24	Pharmacists	1605	1720	1265	455	340
25	Pharmacists in tribal areas	561	555	538	17	23
26	Laboratory Technicians	1605	476	330	146	1275
27	Laboratory Technicians in tribal areas	561	181	152	29	409
27	Nursing Staff	3867	1230	1046	184	2821

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India. *Note:* # As on data 2009, $-Surplus, LT-Laboratory Technicians, T.A-Tribal Areas, NA-Not available.

The sanctioned number of post for the male health assistant is 1228, out of which all of the posts are lying vacant in the PHCs. While verifying positions of medical doctors in the PHCs, Table-3.11 shows that out of the 1228 required number of posts, only 59 percent is sanctioned, and out of the sanctioned posts, only 72.4 percent is in position while the other 27.6 percent remain vacant. There is an overall shortage of 57.2 percent in the state. At the same time, tribal people suffer around 30 percent of this shortage of doctors' in their respective areas. So, it could clearly be argued that if 57.2 percent of the posts of doctors lie vacant in the different PHCs, how would the PHCs deliver health services to the people in a state where more than 83 percent of the people depend upon primary health services? The study also found a shortage of both infrastructure and human resources in various health care institutions in the tribal areas. These shortages have resulted in not able to provide proper health services to the people and to lessen the morbidity and mortality rate in the state.

Table-3.11 also presents the status of CHCs in the state. It shows that there are heavy shortages of medical personnel in each and every CHC, in terms of all four kinds of specialty posts such as surgeons, obstetricians and gynecologists, physicians, and pediatricians. A total of 377 surgeons are required in the different CHCs but only 81 percent of the posts are sanctioned, out of which 56 percent is in position, 35 percent is vacant and 54.3 percent remains as a shortage. Table-3.11 also shows the position for obstetricians and gynecologists. Out of 377 posts, only 60.2 percent posts are sanctioned and out that only 55 percent are in position, while 27 percent lies vacant and 66.8 percent remains a shortage. Here, it could be argued that although the NRHM significantly focuses on the reduction of the MMR and the IMR, how would it reduce them if there is such a high shortage of obstetricians and gynecologists in the various CHCs in the state? The data also revealed a huge 89.1 percent vacancy in the posts of physicians alongside a 73.4 percent shortage in the posts of pediatricians in the various CHCs. While analyzing the data, an overall shortage of 71 percent was found of all specialties existing in the different CHCs. The tribal regions also give a gloomy picture of similar shortages in human resources which rose up to 79.1 percent. There is also an acute 88.8 percent shortage of radiographers, 21 percent of pharmacists, 79.4 percent of laboratory

technicians and 73 percent of nursing staff in the different CHCs of Odisha (for details see Table-3.11).

D. Health facilities: Survey on basic health care provision

The survey also looked into other facilities available in different health delivery services. Table-3.12 presents basic health care facilities provided by the HSCs in the state. It has been found that only 50.3 percent of the HSCs provide residential quarters for the ANMs near the health institutions out of which 79.8 percent of the quarters are occupied by the latter, while the rest of the quarters remain unoccupied because of unavailability of water and problems related to electricity and so on. Some of the quarters are not suitable for living because they are older buildings or lack sufficient security. The study shows that 34 percent of the HSCs are functioning without regular water supply, 12.3 percent of them are not electrified, and 4.5 percent is functioning without health workers. It also found that 2.7 percent of the HSCs have a communication problem. They are either connected by *kuchha* roads or proper communication is not available. They are also not accessible for motorbikes in all seasons (see Table-3.12).

Table - 3.12: Basic health care facilities provided by HSCs in Odisha
(n=6688, As on March, 2011)

Sl. No	Health care facilities at HSCs	Number of HSCs	In %
1	With ANMs quarters	3365	50.3
2	With ANMs living in HSCs quarters	2685	79.8
3	HSCs Without regular water supply	2277	34.0
4	Without electricity supply	825	12.3
5	Without all weather motorable approach	182	2.7
6	Without Health Worker (Female) /ANMs	385	5.7
7	Without Health Worker (Male)	1641	24.5
8	Without HW (F) /ANM and HW (M)	228	3.4

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India.

The study focuses more on the basic facilities provided by the PHCs, and documented that there is not a single PHC that has the minimal facility of four beds, operation theatres, computer facility and a laboratory technician. Providing water facilities itself pose as a major problem in the PHCs and 24.8 percent of the PHCs are functioning without a regular water supply, 17.8 percent without electricity, around 23 percent without a doctor, and 8 percent without a pharmacist. However, 73.8 percent

PHCs have labor rooms, but a mere 7.6 percent have telephone facility. It is noticed that only 1.6 percent of the PHCs provide referral facility, 33.3 percent function with the provision of two types (Allopathic and Ayurvedic) of doctors, 51.7 percent with Allopathic, and 20.4 percent with lady doctors. The study also reveals that only 89.2 percent of the PHCs have registered for the Rogi Kalyan Samiti (see Table-3.13).

Table - 3.13: Basic health care facilities provided by PHCs in Odisha

(n=1228, As on March, 2011)

Sl. No	Facilities at PHCs levels	Number of PHCs	In %
1	With one doctor (Allopathic)	636	51.7
2	With two doctors (Allopathic and Ayurvedic)	410	33.3
3	With a lady doctor (Allopathic & Ayurvedic)	251	20.4
4	Without doctor	282	22.9
5	Without lab technicians	1228	100.0
6	Without pharmacist	99	8.0
7	With labor rooms	906	73.8
8	Without regular water supply	305	24.8
9	Without electricity supply	218	17.8
10	With telephone facility	93	7.6
11	With referral transport facility	20	1.62
12	With all weather motorable approach	6	0.5
13	With registered Rogi Kalyan Samiti	1098	89.2
14	With operation theatres	0	0.0
15	With at least 4 beds	0	0.0
16	With computer facility	0	0.0

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India.

While studying the functions of the Community Health Centers, it was found that there exists a lack of basic facilities like infrastructure and human resources in the CHC levels as per the Indian Public Health Standards (IPHS). Although, the NRHM focuses more on both the facilities because the CHCs function as secondary/referral health units where all kinds of specialty health care are supposed to be available, yet six years (till the time of data collection) of implementation of the NRHM in Odisha revealed that all kinds of specialty health care in all the CHCs is still a distant dream. This study also investigates the basic facilities provided by the CHCs (see Table-3.14) and found that only 13. 5 percent of the CHCs function with four specialty doctors. Only 15.9 percent of the CHCs have 30 bedded facilities, 1 percent have a stabilization unit for newborn care, and 16.7 percent have functional X-ray machines. Importantly, all the CHCs have a labor

room facility, laboratory facility, referral transport facility, drug stores; 77.4 percent have operation theatres, and 54.1 percent have a new born corner facility. Looking for other infrastructural facilities, it was found that 70.5 percent CHCs provide residential quarters to specialty doctors inside the medical campus and 61.2 percent of the CHCs have been up-graded as per the IPHS (see Table-3.14).

Table - 3.14: Basic health care facilities provided by CHCs in Odisha

(n=377, As on March, 2011)

Sl. No.	Facilities at CHCs levels	Number of CHCs	In %
1	Functioning with 4 specialties doctors	51	13.5
	With at least 30 beds	60	15.9
2	With functional labor rooms	377	100.0
3	With a functional laboratory	377	100.0
4	With operating theatres	292	77.4
5	With functional X-ray machine	63	16.7
6	With the functional stabilization unit for newborn	4	1.0
7	With facilities for newborn corner	204	54.1
8	With referral transport facility	377	100.0
9	Provide allopathic drugs for common ailments	377	100.0
10	Selected for up gradation as per IPHS	231	61.2
11	Provide quarters for specialty doctors	266	70.5
14	Provide AYUSH drugs for common ailments	314	83.2

Source: Rural Health Statistics in India-2011, Ministry of Health and Family Welfare, Government of India.

3.4 Administrative Structure and Functioning of Health Services in Kendrapara District

Kendrapara district is one of the coastal districts in Odisha. It is located in between 20° 20’ N to 20° 37’ N latitudes and 86° 14’E to 87° 01’E longitudes. It was carved out of the erstwhile district of Cuttack vide Notification No-DRC-44/93-14218 dated March 27, 1993, the Government of Odisha. The district is surrounded by four other districts, namely Cuttack district in the West, Jagatsinghpur district in the South, and Jajpur and Bhadrak districts in the North. The entire eastern part of the district is surrounded by the Bay of Bengal and the coastal line of the district covers around 48 Km. starting from the mouth of the river Dhamra of Bhadrak district to the PHC Light House of Mahakalpada block. Apart from the sea belt, there are three rivers that contribute to the fertility of the soil of Kendrapara, Brahmani, Baitarani and a tributary of Mahanadi. Kendrapara district is 85 Km. away from Bhubaneswar, the state capital.

The district of Kendrapara occupies 2644 Sq. Kms. of land which is 1.69 percent of the total land area of the state, and has a population of 545 lives per Sq. Km. The district has a quite balanced sex ratio of 1,006 females per 1,000 males. It consists of nine blocks, 230 Gram Panchayats, 1579 Revenue villages, and nine ICDS blocks. This district has five seats in the Assembly Constituency and one seat for the Parliamentary Constituency. Table-3-15 presents a detailed profile of the district.

Table - 3.15: Administrative profile of Kendrapara district

Sl. No.	Particulars		Information
1	Geographical Area (Sq. Km)		2644
2	Number of Tahasils		9
3	Number of Blocks		9
4	Number of Town & Urban Areas	Municipality - 1	Kendrapara
		NAC - 1	Pattamundai
5	Electorate Seats of Assembly & Parliament	Number of Assembly Constituencies - 5	Kendrapara, Patkura, Rajnagar, Mahakalpada, and Aul
		Number of Parliamentary Constituency - 1	Kendrapara
6	Number of Gram Panchayat		230
7	Number of Revenue Village		1579
8	Number of Villages:1540	Inhabited	1407
		Uninhabited	133
9	Number of Households		2,71,475
10	Number of ICDS Blocks		9
11	Number of Anganwadi centers		1883
12	Population	Total	1,439,891 (3.43 % of total population of the state)
		Rural	13,56,351 (94.2 % of the district population)
		Urban	83,540 (5.8 % of the district population)
		Population per Sq. Km	545
		Sex Ratio per 1,000 Male	1,006
		Percentage of SC population	20.05 % to total population*
		Percentage of ST population	0.5 % of total population*
13	Literacy Rate	Total	85.93%
		Male	92.45%
		Female	79.51%

Source: Ministry of Home Affairs, Office of the Registrar General and Census Commissioner, Census-2001 and 2011, Note* - Indicates data of the Census - 2001.

According to Census 2011, the population of the district stands at 1,439,891, which is 3.43 percent of the total population of the state of Odisha. Kendrapara has the 14th largest population in the state with 1540 villages consisting of 2,71,475 households. About 0.5 percent of the state's total population belongs to the Scheduled Tribes (STs) and 20.05 percent to the Scheduled Castes (SCs). The district has one of the highest SC populations and is one of the least urbanized districts in the state (only 5.8 percent of the total population which is 83,540 dwell in the urban areas) and has 1 municipality and one Notified Area Council (NAC). The majority of the people (94.2 percent which is 13, 56,351) belong to the rural areas. The literacy rate of Kendrapara, however, is as high as 85.93 percent (female literacy rate being 79.51 percent and the male literacy rate being 92.45 percent).

3.4.1 Institutional Arrangement and Health Delivery System in Kendrapara District

Regarding the health care institutions of Kendrapara district, it is found from the Table-3.16 that the district has a number of health care facilities available to the people.

Table - 3.16: Health institutions in Kendrapara district

Sl. No	Particulars	Information
1	District Headquarter Hospital (DHH)	1
2	Area Hospital	1
3	Community Health Centers (CHCs)	6
4	Upgraded Primary Health Centers (UGPHCs)	3
5	Single Doctor Primary Health Centers	44
6	Health Sub-Centers (HSCs)	227
7	Ayurvedic Dispensaries	19
8	Homeopathy Dispensaries	16
9	Unani Dispensary	1
10	First Referral Units	3
11	Rural Family Welfare Centers	9
12	Post Partum Centers	2
13	Leprosy Eradication Units	2
14	TB Units	3
16	Number of Beds in Hospital	268
17	Number of Doctors per one lakh Population	8
18	Number of Beds per one lakh Population	21
19	Private Nursing Home/Clinics	9
20	Rural Family Welfare Centers	9
21	Urban Family Welfare Centers	1
22	District Training Centre	1

Source: District Health Information Officer (DHIO), Kendrapara, Odisha.

The Kendrapara district has (as shown in Table-3.16) a District Headquarter Hospital (DHH), an area hospital, six Community Health Centers (CHCs), three Upgraded Primary Health Centers (UGPHC-considered as CHCs), 44 single doctor Primary Health Centers and 227 Health Sub-Centers (HSC), facilitating the access to health care for the entire population of the district. Apart from the above-mentioned health institutions, the district also has 19 Ayurvedic Dispensaries, 16 Homeopathy Dispensaries, an Unani Dispensary, three First Referral Units (FRUs), and nine Rural Family Welfare Centers. It also has other health care institutions of both public and private organizations

3.4.2 The Health Sub-Centers

The Health delivery system in the country is divided into a three-tier system. The HSC occupies the lowest rung as the most peripheral and the first crucial contact point between the primary health care system and the rural community. A HSC is staffed by a female health worker, popularly known as Auxiliary Nurse Midwife (ANM) and one male health worker, commonly known as a Multi Purpose Health Worker (MPHW). The ANM is in-charge of the HSC and she performs multiple tasks including antenatal care, provide skilled attendance at home deliveries, post-partum care, contraceptive advice, newborn care, registration of births, immunization, providing Vitamin A to children, control of diseases, and maintaining medical birth and death records. She coordinates with the Anganwadi Workers (AWW), the Accredited Social Health Activists (ASHAs), the Village Health and Sanitation Committee (VHSC), and the Panchayati Raj Institutions (PRIs), etc. She conducts health awareness programs and supervises work of ASHAs at the village level. The ASHAs are also inducted to reduce the workload of the ANMs, who are heavily tasked as they serve more than the estimated size of the population at the HSC levels. An ANM has a vital role in the health care system as she provides free maternal and child health services within the HSC area.

The present study focuses on the NRHM, and one of the core strategies of the NRHM is to strengthen the HSCs. It is therefore necessary to mention here that the roles and functions of the HSCs and the ANMs have become even more crucial as part of the health delivery system under the NRHM. This study highlights three broad issues related to the HSCs and the ANMs: (a) background of the ANMs, including education and skills,

(b) status of the HSCs including transport coverage, (c) Infrastructure, including other amenities as outlined under the NRHM.

A. Background of ANMs

While analyzing the background of the ANMs, as given in Table-3.17, it is observed that while 57.14 percent of the ANMs have had 10 years of education (SSC/Matriculation), only 12 percent of them have completed their intermediate education and under graduation. About 19 percent have received a nursing degree and newly recruited under the NRHM are from different blocks of Kendrapara district. It is found that 71.42 percent of the ANMs have more than ten years and 24 percent have less than five years of service experience. About 5 percent have completed five years or more than five years of service. It was also found that 40.5 percent of the ANMs stay at their official residence provided to them while about 60 percent prefer to stay either out of the HSC village or at their own residence (see Table-3.17).

Table - 3.17: Characteristics of ANMs in HSCs in all blocks in Kendrapara district

n=42

Sl. No.	Name of the Blocks	Educational level of ANMs				Duration of services completed by ANMS			Number of ANM staying at the official residence/ HSC's village	Percentage of ANMs staying at the official residence
		SSC	+2	B. A	Nursing	Less than 5 years	5 years or more	10 years or more		
1	Aul	3	0	0	1	1	0	3	2	50
2	Derabis	6	0	0	0	0	0	6	4	67
3	Garadpur	3	0	1	0	1	0	3	1	25
4	Kendrapara	3	1	1	0	1	0	4	3	60
5	Mahakalpada	2	0	1	1	2	0	2	1	25
6	Marsaghai	4	0	0	1	1	0	4	1	20
7	Pattamundai	2	1	1	0	1	1	2	1	25
8	Rajkanika	0	3	0	2	2	0	3	1	20
9	Rajnagar	1	0	1	3	1	1	3	3	60
	Total ANMs = 42	**24**	**5**	**5**	**8**	**10**	**2**	**30**	**17**	**40.5**

Table - 3.18: Distance and accessibility of HSCs in all blocks in Kendrapara district

(n=42)

Sl. No	Name of the Blocks	Mean distance of the Health Sub-Centre (Km.)				Accessibility of HSCs by type of transport				Number of HSCs
		To the nearest village	To the farthest village	To the nearest PHC	To the nearest CHC	Own/ Private vehicle	Jeep	Bus	Inaccessible	
1	Aul	0.5	5.2	2	15	Yes	Yes	No	No	4
2	Derabis	0.5	4.5	1	18	Yes	Yes	No	No	6
3	Garadpur	0.5	5	2	20	Yes	No	No	No	4
4	Kendrapara	0.5	5	2	12	Yes	Yes	No	No	5
5	Mahakalpada	1	6	2	9	Yes	No	No	No	4
6	Marsaghai	0.5	4.8	1	11	Yes	Yes	No	No	5
7	Pattamundai	1	3.5	2	16	Yes	No	No	No	4
8	Rajkanika	2	4.6	2.5	10	Yes	Yes	No	No	5
9	Rajnagar	2	5.2	3	12	Yes	No	No	No	5

B. Transport coverage of the HSCs

The present study surveys communication and transportation facilities from the nearest and the farthest villages to the HSC. Table-3.18 shows that the distance between most of the villages and their nearest HSCs ranges from 0.5 Km. to 2 Km., and the farthest distance from the villages to HSCs ranges from 3.5 Km to 6 Km. A number of the HSCs are situated within 1 to 3 Km. from the PHCs, and within 9 to 20 Km. distances from the CHCs. All the HSCs of Garadpur block are situated within a distance of 20 Km. from the CHC headquarter named Patkura. Some of the HSCs of Pattamundai block are located at about 16 Km. from the CHC headquarter named Pattamundai. At times of emergency, it becomes very difficult for the people to reach the CHCs in order to access the specialty care, particularly of obstetric and gynecological services, due to the long distance from the residential localities. It was also found that all the HSCs are connected by *kuchha* roads on which only private vehicles (two wheelers) could be used. Some of the HSCs in Garadpur, Mahakalpada, Pattamundai and Rajnagar blocks are connected by small roads that are unusable by four wheelers. Thus, it becomes extremely difficult to shift by carrying expectant mothers from their homes to the HSCs on two wheelers. Only a few blocks such as Aul, Derabis, Kendrapara, Marsaghai and Rajkanika are connected by concrete roads where four wheelers could be used to reach the HSCs. Therefore, quite evidently, communications and transportations have become the major obstacle to

accessing the health delivery service, particularly from the HSCs located in the few blocks of Kendrapara district

C. Infrastructure and other amenities

Table-3.19 presents a clear picture of the various infrastructural and other amenities available at different HSCs in Kendrapara district, Odisha.

Table - 3.19: Percentages of Health Sub-Centers and their building status

Sl. No.		Particular	Number of HSCs	(n = 42) In %
1	Functioning of HSC	HSC functions in a government building	21	50
		HSC functions in the PHC building	9	21.4
		HSC functions from ANM's home	7	16.7
		HSC functions of the school building	1	2.4
		HSC functions in donating house	1	2.4
		HSC functioning in youth club	1	2.4
		HSC functions from individual house	2	4.8
2	Status of HSC building	HSC in functioning condition	15	35.7
		Non existence HSC building	13	31.0
		HSC completely damaged	8	19.0
		HSC partly damaged	3	7.1
		HSC under construction	2	4.8
		Completed construction building not handed to ANM	1	2.4
3	Residential facilities	Residential facilities available in HSC building for ANMs	16	38.1
		ANMs stay in HSC building	15	35.7
		No residential facilities available	25	59.5
		ANM stays in PHC building	1	2.4
4	Reason for not staying in HSC building	Life security problem	13	31.0
		Water and electricity problem	29	69.0
		No residential facilities available and lives with family	25	59.5
		Own resident nearby HSCs	19	45.2
		The resident is not suitably constructed for the stay	14	33.3
		Non-availability of educational facilities for their children	1	2.4

One of the key components of the NRHM is to strengthen the existing HSCs by providing untied funds (10,000 per annum), supply for essential drugs (allopathic medicines) and also to create new Health Sub-Centers or upgrade the existing centers. Table-3.19 shows that half of the HSCs function in the government-provided Sub-Centre buildings and that 21.4 percent of them function in the PHC buildings while 16.7 percent HSCs function in the ANM's home. Therefore, 16.7 percent of the ANMs manage Sub-Centre office work from their home; they do not come to the Sub-Centre villages for their official work. It was also found that 2.4 percent of the HSCs function in school buildings, and an equal percentage of them function in donated houses and youth clubs and 4.8 percent of the HSCs function from the individual houses in the village.

While looking at the health care provisions mentioned to be provided under the NRHM, we find that none of the HSCs in Kendrapara district comply with the prescribed provisions under the NRHM. The study found (see Table-3.19) that 50 percent of the HSCs have no government building to provide health care facilities on the premises of the HSC. This creates difficulties for the ANMs in providing basic health care facilities to the villagers as they do not reside/work in the HSC village itself. It is found that only 35.7 percent of the HSCs are functioning condition, 31 percent of the HSCs do not have a building at all, 19 percent is completely damaged, and 7.1 percent of the HSCs are partly damaged. Later on when the NRHM came into force, only 4.8 percent of the HSCs are selected for construction. Out of that, even though the constructions of 2.4 percent of the HSCs are completed, due to the nexus between the local political leaders and the construction contractors, they are not handed over to the ANMs for the commencement of official work.

Apart from that, only 38.1 percent of the HSCs have residential facilities and out of that only 35.7 percent are occupied by the ANMs. It was also found that 59.5 percent of the HSCs do not have proper residential and other kinds of amenities necessary for the purpose of staying at the Sub-Centers quarters, as a result of which the ANMs prefer to stay either in their homes with their family members or outside the Sub-Centre villages. There are certain reasons behind the ANMs not prefer for staying in the HSC buildings. Some of the major reasons as cited by the ANMs themselves are: life security problem (31 percent), water and electricity problem (69 percent), no residential facilities available

(59.5 percent), own residence located nearby the HSCs (45.2 percent), residences not suitably constructed (33.3 percent) and unavailability of proper educational facilities for their children at the HSC village or nearby it (2.4 percent). So, it was found that even though the government provides residential quarters to the ANMs in the Sub-Centers villages, due to the lack of proper residential amenities, the latter prefer to stay either in their own homes or in nearby towns. As a result of this, village people fail to access health services during emergencies. Consequently, such a situation pushes rural people, particularly the women and the children, into a worse condition during urgent need.

D. Basic health care facilities

The NRHM focuses on providing all round facilities at the HSCs levels. The present study finds that there are huge gaps between policy guidelines of the NRHM and their implementation. Although huge funds have been pumped up by the Central Government for the construction of the new buildings, renovation and other provision of basic facilities at Sub-Centre levels, and in spite of there being a huge demand, they haven't been turned into practice. While conducting the field study, a question was asked regarding the availability of the basic amenities at the HSC levels, but the responses from the ANMs regarding health care facilities in the entire HSCs of Kendrapara district were not satisfactory. Availability of the basic amenities are in a poor condition. Table-3.20 presents the details of the basic amenities available at the Sub-Center levels in Kendrapara district.

Table - 3.20: Percentage of HSCs functioning with lack of basic amenities

(n=42)

Sl. No	Facilities not available	Number of HSC	(In %)
1	No water facilities at all	2	4.8
2	No over tank (storage) water	22	52.4
3	No pipe water supply	38	90.5
4	No bore well/tube well	29	69.0
5	No regular electricity supply	29	69.0
7	No sewerage facilities	19	45.2

It was found that many of the HSCs are functioning in a poor condition in terms of basic amenities. The study noticed that there are no facilities of water supply in 4.8 percent of the HSCs, no overhead tank water facilities in 52.4 percent of them, no pipe water supply in 90.5 percent of the HSCs, no bore well/tube well and electricity in 69

percent of the HSCs, and no sewerage system in 45.2 percent of them. However, transport is a major problem in reaching the HSCs, particularly at night time. The situation is more deplorable in the remote rural areas. The difficulty arises at night when a pregnant woman undergoes her labor pain. Sometimes the situation may go out of control. The mother or the child may die while shifting her to the nearby health care institution. In such a situation, people approach an unskilled traditional *Dai* who conducts deliveries at the village level. People also believe that the life of both the mother and the child is in God's hand. Thus, it is documented that most of the HSCs in Kendrapara are still deficient in basic amenities.

E. Availability of human resources

The main objective of the NRHM is to focus on minimum provision of human resource to each and every HSC. While conducting field survey it was found that (see Table-3.21) all the 42 HSCs have ANMs and out of them, 10 ANMs are recruited on a contractual basis. It is also noticed that even though Multi Purpose Health Workers (MPHW) -male have been sanctioned for all the 42 HSCs, less than half of the HSCs (31 percent) do not have even a single MPHW-male. Only 69 percent of the HSCs have MPHW-male, out of which 64.3 percent is recruited on a contractual basis.

Table - 3.21: Percentage of HSCs available with Human Resources

(n=42)

Sl. No.	Category	Sanctioned	In position		Contractual		Shortage	
			No.	(In %)	No.	(In %)	No. (%)	(In %)
1	ANM	42	42	100.0	10	23.8	0	0
2	MHW (Male)	42	29	69.0	27	64.3	13	31.0

a. Delivery related facilities in Health Sub-Centre levels

Reduction of child and maternal mortality is one of the major goals of Janani Suraksha Yojana under the NRHM. Table-3.22 presents the provisions of delivery facilities in Kendrapara district with respect to service delivery and other related health facilities. It shows that 95.2 percent of the HSCs do not have separate patient examination rooms and only 4.7 percent of the HSCs have separate patient examination rooms. Similarly, out of the 42 HSCs covered in the survey, 2.38 percent (only single HSC) has a

separate labor room, which means that 97.62 percent do not have the facility of a separate labor room. More than half (66.7 percent) of the HSCs have neither regular electricity supply nor water supply (61.9 percent), 59.5 percent of the ANMs do not stay in the Sub-Centre villages at night. The survey also reveals that there are no arrangements available for transportation of the referral cases during an emergency, particularly at night. Thus, the non-availability of patient examination rooms, labor rooms, and lack of a system for referral facilities during night time immensely dissuade pregnant women from delivering at the health facilities. Most of the deliveries, therefore, are conducted by the untrained *Dai*s in the villages; that there remains a high risk for both mother and child is needless to mention.

Table - 3.22: Percentage of HSCs with non-availability of specific medical room

(n=42)

Sl. No	Non-availability of services	Number of HSCs	In percentage
1	Non-availability of separate patient examination room	40	95.2
2	No separate labor room	41	97.6
3	No power supply-labor room	28	66.7
4	No water supply-labor room	26	61.9
5	ANM not staying at night	25	59.5

F. Antenatal care, deliveries under the Janani Suraksha Yojana

The Antenatal Care (ANC) is an important factor for pregnant women. It has been accounted that on an average, a HSC registers about 11 cases in a month and the majority of these cases are registered within the first trimester of the pregnancies. The minimum number of ANC cases registered in a month ranges from 31 in Pattamundai block to 120 in Aul block. A similar case is observed of the Janani Suraksha Yojana (JSY) which turned into a birth delivery (see Table-3.23). The minimum number of JSY cases have given birth 23 in Rajkanika block and maximum reported 83 cases in Aul block. According to the finding, Derabis accounted for 92.4 percent, Pattamundai 89.2 percent, Marsaghai 86 percent, and Garadpur 84.7 percent of the cases under the JSY delivery registered within three months in nine blocks out of the ANC recorded cases. All the blocks registered more than 60 percent of the JSY delivery cases except Rajnagar and Mahakalpada which registered 52.1 percent and 59.2 percent of the cases under JSY delivery respectively.

Table - 3.23: Percentage of JSY cases that resulted into birth out of registered cases

Sl. No	Name of the Blocks	Number of ANC registered in last 3 months	JSY case resulted to birth out of registered cases in last 3 months	In %
1	Aul	359	250	69.4
2	Derabis	171	158	92.4
3	Garadpur	111	94	84.7
4	Kendrapara	147	109	74.1
5	Mahakalpada	135	80	59.2
6	Marsaghai	121	104	86.0
7	Pattamundai	93	83	89.2
8	Rajkanika	103	69	67.0
9	Rajnagar	188	98	52.1

G. Untied funds

The NRHM focuses on strengthening the existing health facilities by providing Rs. 10,000/- as an untied fund to each HSC. This fund is directly transferred to the joint account operated by the ANM and the village Sarpanch. The field survey explored the use of the untied fund (see Table-3.24) for the developmental activities of the HSCs.

Table - 3.24: Types of utilization of untied fund by the ANMs

(n=42)

Sl. No	Name of the Blocks	Percentage of fund received the & expenditure in 2009-10		Percentage of fund received & expenditures in 2010-11		The percentage of expenditures by different heads/items in the year of 2010-11					
		2009-10	2009-10	2010-11	2010-11	Purchase of drugs/ equipments	Spent on health camp/ Referral / water in summer	Paying of power/ phone bills	Purchasi-ng of furniture/ stationary	Repairing/ Renovation	No. HSCs
1	Aul	75.0	75.0	100.0	100.0	50.0	10.0	0	40.0	0	4
2	Derabis	100.0	80.0	100.0	80.0	30.0	10.0	10.0	0	30.0	6
3	Garadpur	100.0	100.0	100.0	100.0	30.0	10.0	10.0	40.0	10.0	4
4	Kendrapara	100.0	100.0	100.0	100.0	30.0	10.0	0	50.0	10.0	5
5	Mahakalpada	75.0	75.0	100.0	25.0	10.0	5.0	0	10.0	0	4
6	Marsaghai	80.0	80.0	100.0	100.0	30.0	20.0	0	50.0	0	5
7	Pattamundai	100.0	80.0	50.0	50.0	20.0	10.0	0	20.0	0	4
8	Rajkanika	100.0	100.0	100.0	100.0	25.0	10.0	5.0	50.0	10.0	5
9	Rajnagar	80.0	80.0	100.0	100.0	0	20.0	10.0	60.0	10.0	5

The above data shows that out of nine blocks in Kendrapara district, only three blocks (33.3 percent), that of Garadpur, Kendrapara, and Rajkanika have received 100 percent untied fund during 2009-10 and 2010-11. All the three blocks have also spent the complete fund during the same financial years. But the ANMs of Mahakalpada block mentioned that during the financial year 2009-10, she had received 75 percent of the untied fund and had spent the entire amount. However, during 2010-11, she received 100 percent of the fund, yet was able to spend only 25 percent of it due to the lack of proper cooperation of the village Sarpanch. Other blocks such as Aul, Derabis, Marsaghai, Pattamundai and Rajnagar spent the untied fund as and when they received it. On being asked about the utilization of the fund, most of the ANMs shared that a major amount of the fund, which is around 30-50 percent, is spent on purchasing of drugs, equipments, while around 40-60 percent spent on the purchasing of furniture/stationary items and around 10-20 percent of the amount spent on organizing health awareness camps, referral cases, and providing drinking water during summers for passers-by on the roads. The pattern of expenditure remains the same for most of the blocks but the share and percentage of each item of expenditure varies for one block to another.

H. Difficulties of utilizing the untied fund

While analyzing collected data on the utilization of the untied fund (Table-3.25) and the difficulties that ANMs face, it was found that the majority of the ANMs agreed upon the fact that they do face certain problems while managing the untied fund. While conducting field survey question was asked on the utilization of untied fund for the year 2010-11, the ANMs were asked whether they faced any kind of difficulties while managing/operating the untied fund in their respective HSCs. The ANMs belonging to the Aul block said that they never faced any sort of difficulties of having a joint account. The Sarpanch belonging to all the Gram Panchayats of the Aul block are much more cooperative with their ANMs. However, several other blocks of Kendrapara still face certain difficulties of having a joint bank account.

Table - 3.25: Difficulties reported by ANMs on utilization of untied fund

(n=42)

Sl. No	Name of the Blocks	Percentage of ANMs of the following blocks face difficulties in withdrawing the Untied Fund during the year 2010-11						Total No.
		Sarpanch asks ten percentage	Sarpanch not cooperative	Non-availability of Sarpanch when needed	Medical staff asks percentage	Problem with signature to withdraw money	Difficult of having joint account	ANMs per HSC
1	Aul	0	0	0	0	0	0	4
2	Derabis	66.6	66.6	66.6	33.3	83.3	83.3	6
3	Garadpur	25.0	25.0	100.0	0	100.0	100.0	4
4	Kendrapara	40.0	40.0	80.0	0	100.0	80.0	5
5	Mahakalpada	25.0	25.0	25.0	0	25.0	75.0	4
6	Marsaghai	100.0	80.0	100.0	40.0	80.0	100.0	5
7	Pattamundai	50.0	50.0	75.0	25.0	100.0	75.0	4
8	Rajkanika	40.0	60.0	40.0	20.0	20.0	20.0	5
9	Rajnagar	100.0	100.0	80.0	0	80.0	80.0	5

They confront several obstacles starting with cash withdrawal to spending the amount. About 67 percent of the ANMs belong to the Derabis block shared that their Sarpanch demands for a certain percentage of the fund in exchange for enabling the withdrawal of the money. They would often refuse to cooperate, or be unavailable on purpose when needed. Most of the times, when the ANMs need to withdraw money, the Sarpanch will be unwilling to sign, which is mandatory for a joint account. ANMs belonging to Garadpur and Marsaghai said that they always face difficulties of having a joint account. All the ANMs belonging to Garadpur and Marsaghai complained about the non-availability of the Sarpanch and problems concerning signature while withdrawing money when in need. ANMs belonging to Derabis (83.33 percent), Kendrapara and Rajnagar (80 percent), Mahakalpada and Pattamundai (75 percent) have complained that they deal with a lot of problems due to the joint accounts. They also revealed that generally the Sarpanch creates problems while giving signature. It was also found that 83.33 percent of the ANMs belonging to Derabis block, 100 percent of them from Garadpur, Kendrapara, and Pattamundai block, 80 percent from Marsaghai and Rajnagar block agreed that the Sarpanch causes problems while giving signature for withdrawing

money. Most of the Sarpanches belonging to Derabis, Marsaghai and Rajnagar blocks ask for a minimum of 10 percent of the entire amount of Rs. 10,000 per annum. If the demanded percentage is not given to them, they refuse to cooperate with the ANMs on spending the untied fund for any kind of developmental activities of the HSCs.

Table - 3.26: Percentage of ANMs faced difficulties while utilizing the untied fund in 2010-11

(n=42)

Sarpanch asks percentage	Sarpanch not co-operative	Non-availability of Sarpanch when needed	Medical staff asks percentage	Problem with signature to withdraw money	The difficulty faced with joint accounts	Difficult for mutual agreement to spend money
52.4	52.4	64.3	14.3	66.7	69.0	59.6

The field study also showed that more than 60 percent of the ANMs from Derabis and Rajnagar block, 80 percent from Marsaghai block, and all the ANMs from Rajnagar block reported that their Sarpanch did not cooperate with them on the operationalizing of the untied fund. Above all, it also shows that the Medical Officer In-charge (belonging to Derabis, Marsaghai, Pattamundai and Rajkanika block) also demands a certain percentage of money to put their signature while giving clearance to the expenditure bills. It becomes very difficult to come to a mutual consensus with the Sarpanch about how to spend the untied fund for health care development in the particular rural areas. The overall difficulties faced by the ANMs are presented in Table-3.26. It was found that 52.4 percent of the ANMs complained that the Sarpanch demanded for a certain percentage of the fund as a condition for signing in withdrawal form. More than 60 percent of the ANMs revealed the non-availability of the Sarpanch in times of need, and their unwillingness to sign on the withdrawal form as difficulties of having a joint account. Another difficulty faced by the ANMs (59.6 percent of them) is to reach a mutual agreement with the Sarpanch on how to spend the money during each financial year.

3.4.3 The Primary Health Centers

The Primary Health Centre (PHC) is the first contact point between the village community and the medical health officer. The PHCs are envisaged to provide integrated preventive, curative, promotive, and family welfare health services to the rural people. During the implementation of the NRHM, primary health care received the central

attention of the public health delivery system. It caters to a population of 30,000 in the plain areas and that of 20,000 in the hill/tribal/difficult areas. The PHCs provide basic health care facilities and are maintained by the State Government. However, there are some basic facilities that are required in order to avail the health care facilities from the PHCs. One such basic facility is the accessibility criteria.

Table-3.27 gives information about the distance and accessibility of health services of the surveyed PHCs using public transport. It was found that the average distance one has to travel in order to reach the PHCs from the nearest HSC is about 4 Km. by public transport. The distance ranges from 1 to 10 Km. The longest distance from the nearest HSC to a PHC is 10 Km. is the Light House PHC of Mahakalpada block. It takes a minimum of 10 minutes to reach the PHCs using private transport (as public transport unavailable) from the nearest HSC and a maximum of 45 minutes from the farthest HSC. The minimum distance from the nearest HSC to a PHC is one Km. and this is the Alapua PHC of Pattamundai block; it takes 10 minutes if one uses public transport to reach and access the health services. It was also found that some of the PHCs namely Harianka of Derabis block, Kalapada of Kendrapara block, Kurutunga of Marsaghai block and Kandiahat of Rajkanika block are 5 Km. away from their respective nearest HSCs, implying that it would take at least 25 minutes to reach them. Similarly, the PHC-Nankar of Marsaghai block is 7 Km away from the nearest HSC and would take a minimum of 30 minutes to reach.

While travelling from the PHCs to their nearest CHCs, it was found that the minimum distance separating the two health institutions ranges between 5 to 7 Km., the maximum being 32 Km. It takes a minimum of 15 minutes and a maximum of 100 minutes to reach a PHC from its nearest CHC of Kendrapara district. The average distance from a PHC to its nearest CHC is 18 Km. and it takes around 50 minutes to reach. It was also discovered that the minimum distance from the nearest PHC to the District Head Quarter Hospital is 10 Km. (Santhapura PHC of Derabis block and Chandanpur PHC of Kendrapara block). The maximum distance from the farthest PHC to the District Head Quarter Hospital is 85 Km. (which is Talchua PHC of Rajnagar block).

Table - 3.27: Distance and accessibility of Community Health Centers and District Headquarter Hospital from the Primary Health Centers in Kendrapara district

Sl. No	Name of the Block/CHC	Name of the Nearest (N) & Farthest (F) PHC from CHCs	Distance to travel PHC to nearest HSC in Km.	Time taken to travel PHC from nearest HSC (in minutes)	Distance of PHC from the nearest CHC	Time taken to reach CHC from PHC (in minutes)	Distance to reach DHH from PHC (in K.M.)
1	Aul UGPHC	Mahu (N)	2	12	15	45	49
		Palim (F)	3	15	30	90	68
2	Derabis CHC	Santhapura (N)	4	20	20	60	10
		Harianka (F)	5	25	25	70	45
3	Garadpur/ Patkura UGPHC	Korua (N)	3	15	12	30	50
		Tendakuda (F)	4	20	22	65	17
4	Kendrapara/ Indupur CHC	Chandanpur -N	3	15	8	20	10
		Kalapada (F)	5	25	15	45	27
5	Mahakalpada CHC	BijayaNagar-N	2	12	10	30	27
		Light House -F	10	45	32	100	55
6	Marsaghai CHC	Kurutunga (N)	5	25	5	15	12
		Nankar (F)	7	30	18	50	32
7	Pattamundai UGPHC	Sanajharia (N)	3	15	13	40	33
		Alapua (F)	1	10	30	90	23
8	Rajkanika CHC	Koilipur (N)	2	12	17	45	75
		Kandiahat (F)	5	25	25	70	33
9	Rajnagar CHC	JNPur Sasan-N	2	12	7	20	53
		Talchua (F)	4	20	28	80	85

A. Infrastructure and other amenities of the Primary Health Centers

Table-3.28, Table-3.29, Table-3.30 and Table-3.31 show the percentage of physical infrastructure and other amenities provided by the different PHCs in Kendrapara district. The availability of infrastructure and other amenities in different PHCs of the district is inadequate. Out of 18 surveyed PHCs, the Indian Public Health Standards (IPHS) facility has been carried out only for 22 percent of the PHCs, namely, Santhapura, Chandanpur, Kurutunga and Talchua. Only 6.38 percent of the PHCs, namely, Aul, Patkura, and Pattamundai are being up-graded as per the IPHS standards to UGPHCs. All the surveyed PHCs are functioning from the government buildings. About 39 percent of the PHCs have government residential quarters available for doctors and 55.5 percent of the residential quarters available for other medical supporting staff (Table-3.28). The

supply of electricity is available in all parts of the PHCs, except the one PHC of Light House in Mahakalpada block, and the functioning of the solar cell system in the rest of the PHCs is accompanied by standby facilities (inventor) in times of crisis of electricity (Table-3-29).

All the PHCs are not connected to pipe water supply; 28 percent have such facilities while 72 percent of the PHCs have provisions of drinking water in waiting areas for patients. There is not a single PHC functioning with full bed strength. Each PHC has 1-3 functional beds, except PHC Korua of Patkura block and PHC Bijaya Nagar of Mahakalpada block. Only 39 percent of the PHCs are functioning on 24x7 basis, and 44.4 percent of the PHCs have functional labor rooms. There is not a single PHC which has an operation theatre. Only 22.2 percent of the PHCs, namely, Santhapura of Derabis block, Tendakuda of Patkura block, Chandanpur of Kendrapara block, and Kurutunga of Marsaghai block, are provided with basic obstetric services for pregnant women (Table-3.30). The functional vehicle/Ambulance facilities are available in six PHCs (those of Palim of Aul block, Santhapura of Derabis block, Chandanpur of Kendrapara block, Kurutunga of Marsaghai block, Kandiahat of Rajkanika block and Talchua of Rajnagar block) for the purpose of shifting pregnant women in cases of emergency from the PHCs to the CHCs or the District Head Quarter Hospital. All the other PHCs are provided with OPD rooms and waiting rooms for patients, except Korua of Patkura block and Bijaya Nagar of Mahakalpada block.

A major problem prevailing in all the PHCs is that they often don’t have public toilet facilities. Only a handful of the PHCs are provided with functional public toilets (those of Santhapura of Derabis block, Chandanpur of Kendrapara block, Kurutunga and Nankar of Marsaghai block, Alapua of Pattamundai and Talchua of Rajnagar block (Table-3.31). It was also found that only a few PHCs have provided suggestion/complaint boxes for public feedback (those of Mahu of Aul block, Chandanpur of Kendrapara block, Kurutunga of Marsaghai block, and Kandiahat of Rajkanika block).

Table - 3.28: Infrastructural and service facilities available in Primary Health Centers

Sl. No	Name of the Block/CHC	Name of the Nearest (N) & Farthest (F) PHC from CHCs	IPHS facility available Yes (√) / No (×)	Functioning in a government building Yes (√) / No (×)	Residential quarters available for doctors Yes (√) / No (×)	Did doctors stay at PHC's quarters Yes (√) / No (×)	Residential quarters available for staff Yes (√) / No (×)
1	Aul UGPHC	Mahu (N)	×	√	√	√	×
		Palim (F)	×	√	×	×	×
2	Derabis CHC	Santhapura (N)	√	√	√	×	√
		Harianka (F)	×	√	√	√	√
3	Garadpur/ Patkura UGPHC	Korua (N)	×	√	×	×	√
		Tendakuda (F)	×	√	√	√	√
4	Kendrapara/ Indupur CHC	Chandanpur (N	√	√	×	×	√
		Kalapada (F)	×	√	×	×	×
5	Mahakalpada CHC	BijayaNagar-N	×	√	×	×	×
		Light House-F	×	√	√	√	√
6	Marsaghai CHC	Kurutunga (N)	√	√	√	√	√
		Nankar (F)	×	√	√	√	√
7	Pattamundai UGPHC	Sanajharia (N)	×	√	×	×	×
		Alapua (F)	×	√	×	×	×
8	Rajkanika CHC	Koilipur(N)	×	√	×	×	×
		Kandiahat(F)	×	√	×	√	√
9	Rajnagar CHC	JNPur Sasan-N	×	√	×	×	×
		Talchua (F)	√	√	√	√	√

Table - 3.29: Infrastructural and service facilities available in Primary Health Centers

Sl. No	Name of the Block/CHC	Name of the nearest & Farthest PHC from CHCs	Electricity connection in all parts Yes (√) / No (×)	Standby facility available Yes (√) / No (×)	Having pipe water supply Yes (√) / No (×)	Drinking water facility in waiting areas Yes (√) / No (×)	Having a number of functional beds
1	Aul UGPHC	Mahu- (N)	√	√	×	√	1
		Palim (F)	√	√	√	√	1
2	Derabis CHC	Santhapura (N)	√	√	×	√	2
		Harianka (F)	√	√	√	√	1
3	Garadpur/ Patkura UGPHC	Korua (N)	√	√	×	√	0
		Tendakuda (F)	√	√	×	√	1
4	Kendrapara/ Indupur CHC	Chandanpur- N	√	√	×	√	2
		Kalapada (F)	√	√	×	×	1
5	Mahakalpada CHC	BijayaNagar-N	√	√	√	×	0
		Light House-F	×	×	×	×	1
6	Marsaghai CHC	Kurutunga (N)	√	√	√	√	3
		Nankar (F)	√	√	×	√	1
7	Pattamundai UGPHC	Sanajharia (N)	√	√	×	×	2
		Alapua (F)	√	√	×	√	1
8	Rajkanika CHC	Koilipur(N)	√	√	×	√	1
		Kandiahat(F)	√	√	√	√	2
9	Rajnagar CHC	JNPur Sasan-N	×	√	×	×	1
		Talchua (F)	√	√	×	√	4

Table - 3.30: Infrastructural and service facilities available in Primary Health Centers

Sl. No	Name of the Block/CHC	Name of the PHC (nearest & Farthest PHC from CHCs)	Functioning into 24X7 basis Yes (√) / No (×)	Having functional labor room Yes (√) / No (×)	Having an operational theatre Yes (√) / No (×)	Providing basic obstetric service Yes (√) / No (×)
1	Aul UGPHC	Mahu (N)	×	×	×	×
		Palim (F)	×	×	×	×
2	Derabis CHC	Santhapura (N)	√	×	×	√
		Harianka (F)	×	×	×	×
3	Garadpur/ Patkura UGPHC	Korua (N)	√	√	×	×
		Tendakuda (F)	√	√	×	√
4	Kendrapara/ Indupur CHC	Chandanpur-N	×	√	×	√
		Kalapada (F)	×	×	×	×
5	Mahakalpada CHC	BijayaNagar-N	×	×	×	×
		Light House -F	×	×	×	×
6	Marsaghai CHC	Kurutunga (N)	√	√	×	√
		Nankar (F)	√	×	×	×
7	Pattamundai UGPHC	Sanajharia (N)	×	√	×	×
		Alapua (F)	×	√	×	×
8	Rajkanika CHC	Koilipur (N)	×	×	×	×
		Kandiahat (F)	√	√	×	×
9	Rajnagar CHC	JNPur Sasan-N	×	×	×	×
		Talchua (F)	√	√	×	×

Table - 3.31: Infrastructural and service facilities available in Primary Health Centers

Sl. No	Name of the Block/CHC	Name of the Nearest (N) & Farthest (F) PHC from CHCs	Having a functional Ambulance for referral cases Yes (√) / No (×)	OPD room/ cubicles exist Yes (√) /No (×)	Availability of waiting room for patient Yes (√) / No (×)	Functional public toilet Yes (√) / No (×)	Existence of suggestion or complaint box Yes (√) / No (×)
1	Aul UGPHC	Mahu (N)	×	√	√	×	√
		Palim (F)	√	√	√	×	×
2	Derabis CHC	Santhapura (N)	√	√	√	√	×
		Harianka (F)	×	√	√	×	×
3	Garadpur/ Patkura UGPHC	Korua (N)	×	×	×	×	×
		Tendakuda (F)	×	√	√	×	×
4	Kendrapara/ Indupur CHC	Chandanpur (N	√	√	√	√	√
		Kalapada (F)	×	√	√	×	×
5	Mahakalpada CHC	BijayaNagar-N	×	×	×	×	×
		Light House-F	×	√	√	×	×
6	Marsaghai CHC	Kurutunga (N)	√	√	√	√	√
		Nankar (F)	×	√	√	√	×
7	Pattamundai UGPHC	Sanajharia (N)	×	√	√	×	×
		Alapua (F)	×	√	√	√	×
8	Rajkanika CHC	Koilipur (N)	×	√	√	×	×
		Kandiahat (F)	√	√	√	×	√
9	Rajnagar CHC	JNPur Sasan-N	×	√	√	×	×
		Talchua (F)	√	√	√	√	×

B. Human resources

The implementation of the NRHM has played a significant role in the provision of human resources in various health service institutions. The PHCs have developed from a single norm Allopathic doctor of the Medical Officer In-Charge (MO, I/C) to a double norm (both Allopathic and Ayurvedic) doctor. Apart from the provision of human resources, the NRHM has also laid emphasis on development of infrastructure, availability of medical equipments and the regular supply of required quantities of medicines to each and every PHC in the country. Earlier, the state of Odisha used to be far behind in its provisions of public health care but after the implementation of the NRHM, it has developed health functions at the PHC level. The district of Kendrapara

too has paid attention to this. This survey found that apart from the two PHCs of Kalapada of Kendrapara block and Alapua of Pattamundai block, all the other remaining PHCs that are covered under the study, have both Allopathic and Ayurvedic doctors. However, the PHC Kalapada of Kendrapara block has been functioning for six months without a doctor while the PHC Alapua of Pattamundai block has been functioning without a doctor since 2010. It was also reported by the people of both the areas that they suffer a lot of health problems due to the absence of a doctor for a longer period now. The people belonging to the PHC Kalapada informed that they are forced to travel a distance of 27 Km. in order to reach the District Headquarter Hospital (DHH) to avail health care facilities, while the people of Alapua PHC mentioned that they face yet more difficulties in accessing health care services as they have to cross a river for the purpose. For quite a few years now, people of both these regions have been demanding appointments of new doctors but no doctor has been appointed yet; Apparently, a doctor of the Alapua PHC had been sanctioned but did not join the post because of the prevailing communication problems. A few PHCs are still functioning with a single doctor (Allopathic). However, all the 16 PHCs have AYUSH doctors, out of which 5 are working as MO I/C. Other PHCs are functioning with allopathic doctors as Mo I/C.

The NRHM focuses on the recruitment of doctors and paramedical staff in each and every health care institution, yet after the completion of seven years, the NRHM, which has a fixed timeline for achieving the targets of the Mission, has been unable to even fill up the vacant posts, particularly of the paramedical staff in different health institutions in the Kendrapara district of Odisha. The survey report shows that 72 percent of the PHCs have even no single staff nurse (a provision that is indispensable for each PHC), and some of the PHCs function with absolutely no medical or paramedical staff. There are other PHCs like Mahu of Aul block that does not have any other paramedical staff except a doctor and a pharmacist. A similar case is reported at Kalapada PHC of Kendrapara block, where except a pharmacist and laboratory assistance, there isn't any other paramedical staff. At Alapua PHC of Pattamundai block too, the situation is similar, where except a pharmacist and an ANM, no doctors or paramedical staffs are present. The PHCs Koilipur of Rajkanika block and Jagannathpur Sasan of Rajnagar block also have a shortage of paramedical staff. The PHC Koilipur has a single doctor and a

pharmacist apart from an ANM and the PHC Jagannathpur Sasan has a doctor and a laboratory assistant. Remaining posts remain vacant. Only three out of 18 PHCs, namely, Light House on Mahakalpada block, Kandiahat of Rajkanika block and Talchua of Rajnagar block have a laboratory technician while 83.3 percent of the PHCs don't have laboratory technicians. The posts of Lady Health Visitor (LHV) are also vacant in 61 percent of the PHCs and only 39 percent of the health institutions have a LHV. All the PHCs are running without a Block Health Education and Information Officer (BHEIO) and posts of statistical assistants, except PHC Talchua of Rajnagar block. So, from Table-3.32 it is clear that most of the paramedical posts including the staff nurses are vacant. Hence, various PHCs are functioning without adequate medical health personnel. In this situation, it is difficult to provide quality health services to the people. These are some of the major problems prevailing in the Kendrapara district.

Table - 3.32: Human Resources available with surveyed PHCs n=18

Sl. No	Name of the category		Medical Officer I/C Male (M) / Female (F)		Phar-macist	Staff Nurse	ANM	Lab Assistant	Lab Technician	LHV	BHEIO	Stat. Assi-stant
	Name of the Block/CHC	Name of the Nearest (N) & Farthest (F) PHC from CHC	M / F	AYUSH/Allopathy								
1	Aul UGPHC	Mahu (N)	M	Allopathy	1	0	0	0	0	0	0	0
		Palim (F)	M	AYUSH	1	0	2	0	0	0	0	0
2	Derabis CHC	Santhapura (N)	M	Allopathy	1	0	1	1	0	0	0	0
		Harianka (F)	M	Allopathy	1	0	1	0	0	1	0	0
3	Garadpur/ Patkura UGPHC	Korua (N)	M	AYUSH	1	1	2	0	0	1	0	0
		Tendakuda (F)	M	Allopathy	1	2	1	0	0	0	0	0
4	Kendrapara/ Indupur CHC	Chandanpur-N	F	AYUSH	1	1	1	0	0	1	0	0
		Kalapada (F)	0	No Doctor	1	0	0	1	0	0	0	0
5	Mahakalpada CHC	Bijaya Nagar (N)	M	Allopathy	1	1	1	0	0	1	0	0
		Light House (F)	M	Allopathy	1	0	1	1	1	0	0	0
6	Marsaghai CHC	Kurutunga (N)	M	AYUSH	1	2	1	0	0	1	0	0
		Nankar (F)	M	Allopathy	1	0	1	0	0	1	0	0
7	Pattamundai UGPHC	Sanajharia (N)	M	Allopathy	1	0	0	1	0	0	0	0
		Alapua (F)	0	No Doctor	1	0	1	0	0	0	0	0
8	Rajkanika CHC	Koilipur (N)	F	Allopathy	1	0	1	0	0	0	0	0
		Kandiahat (F)	M	Allopathy	1	0	1	0	1	1	0	0
9	Rajnagar CHC	JNPur Sasan (N)	M	AYUSH	1	0	0	1	0	0	0	0
		Talchua (F)	M	Allopathy	1	0	1	0	1	0	0	1
	Total CHC-9	PHC-18	16	Allopathy	18	7	16	5	3	7	0	1

Apart from that, the doctor or the MO I/C was asked about their perceptions regarding the impact of the NRHM on the enhancement of awareness among the villagers towards health care services. Nearly 77.8 percent of them rate impact of the NRHM on spreading awareness among the villagers towards health care services as good, 16.7 percent rate as very good and 5.6 percent as excellent. About 67 percent of them have rated the quality of health services as well and have contended that the quality of health services has been improved as compared to the pre-implementation of the NRHM and 22.2 percent have rated it as very good while 5.6 percent have said that the quality of health services is not good enough but fair. A same percent of them, however, have rated it as rather poor (Table-3.33).

Table - 3.33: Perception of the M.O In-Charge on development of health services provided by the PHCs during post implementation period of NRHM

(n=18)

Perception of Mo I/C	Rate awareness of village people towards the health care services		Rate the health care services in terms of quality	
	Response	In %	Response	In %
Excellent	1	5.6	0	0
Very Good	3	16.7	4	22.2
Good	14	**77.8**	12	**66.6**
Fair	0	0	1	5.6
Poor	0	0	1	5.6

3.4.4 The Community Health Centers

The Community Health Center (CHC) constitutes the third tier in the network of the rural health services system. It functions as the referral center for four PHCs and provides specialty health services to the rural people in the areas of medicine, surgery, pediatrics and gynecology. Apart from providing services to the out-patients, it also renders services to the inpatients with 30 bed facility, operation theatres, labor rooms, X-ray machines, pathological laboratories, standby generators, etc. It caters to a population of 1,20,000 in the plain areas and that of 80,000 in the hill/tribal/difficult area. It is also maintained by the State Government.

A. Accessible to the Community Health Centers

Table-3.34 presents the accessibility of the surveyed CHCs by public transport in Kendrapara district. The average distance separating the CHCs from their nearest PHCs is 12 Km. The farthest PHC is around 16 Km away. This varied from the highest distance

of 32 Km., of the PHC Light House on Mahakalpada block, to the lowest distance of 5 Km., of the Kurutunga PHC of Marsaghai block. It takes around 100 minutes to reach CHC Mahakalpada and around 15 minutes to reach the CHC Marsaghai using public transport. The minimum distance from a CHC (this being the Indupur CHC of Kendrapara block) to the DHH is 12 Km. which takes around 30 minutes to traverse. The maximum distance from a CHC to the DHH is 60 Km. (this is the Rajkanika CHC of Rajkanika block) and it takes three hours to reach the DHH using public transport (bus). It was also found that around 50 percent of the CHCs are situated within 40 Km. or more from the DHH. Due to an insufficient number of ambulances that run between the CHCs and the DHH, patients face a lot of problems in reaching the DHH in times of urgency. At the same time, it is difficult to travel by public transport and to reach the DHH on time as this takes a lot of time due to the bad condition of the roads.

Table - 3.34: Distance and accessibility from CHCs to District Headquarter Hospital

Sl. No	Name of the category		Distance to travel CHC from the nearest & furthest PHC (in K.M.)	Time taken to reach CHC from nearest PHC by public transport (in minutes)	Distance of CHC from the DH (K.M.)	Time taken to reach DH from CHC (in hours & minutes)
	Name of the Block/CHC	Name of the Nearest (N) & Farthest (F) PHC from CHC				
1	Aul UGPHC	Mahu (N)	15	45	40	2 hours
		Palim (F)	30	90		
2	Derabis CHC	Santhapura (N)	20	60	14	40 minutes
		Harianka (F)	25	70		
3	Garadpur/Patkura UGPHC	Korua (N)	12	30	40	2 hours
		Tendakuda (F)	22	65		
4	Kendrapara/ Indupur CHC	Chandanpur (N)	8	20	12	30 minutes
		Kalapada (F)	15	45		
5	Mahakalpada CHC	Bijaya Nagar (N)	10	30	28	1 hour 30 minutes
		Light House (F)	32	100		
6	Marsaghai CHC	Kurutunga (N)	5	15	15	45 minutes
		Nankar (F)	18	50		
7	Pattamundai UGPHC	Sanajharia N)	13	40	20	1 hour
		Alapua (F)	30	90		
8	Rajkanika CHC	Koilipur (N)	17	45	60	3 hours
		Kandiahat (F)	25	70		
9	Rajnagar CHC	JNPur Sasan (N)	7	20	45	2 hours 15 minutes
		Talchua (F)	28	80		

B. Infrastructure facilities in the Community Health Centers

Table 3.36 gives the details of the infrastructural facilities of the CHCs

Table - 3.35: Infrastructure facilities in the Community Health Centers

(n=9)

Sl. NO.	Name of infrastructural facilities	Response: Yes (√) / No (×)	Number of CHCs	(In %)	Name of CHC
1	Hospital upgraded as per IPHS standard	√	3	33	Aul, Patkura and Pattamundai
2	Is it UGPHC	√	3	33	Aul, Patkura and Pattamundai
3	24 hours water supply	√	9	100	All
4	Having pipe water supply	√	2	22	Kendrapara, Marsaghai
5	Regular water supply to O.T	√	9	100	All
6	Regular electricity supply	√	9	100	All
7	Standby facility available	√	9	100	All
8	Drinking water available in waiting areas	√	9	100	All
9	Functional ambulance	√	9	100	All
10	Blood bank/blood storage unit	×	9	100	All
11	Functional public utility (toilet)	√	9	100	All
12	Separate functional public utility (toilet) Male/Female	√	8	88.8	All CHCs except Marsaghai
13	Providing surgery facility	×	9	100	All
14	Having functional labor room	√	9	100	All
15	New born care corner (NBCC)	√	2	22	Aul & Pattamundai
16	Functional 30 beds	√	2	22	Aul & Mahakalpada
17	Emergency/causality room	√	9	100	All
18	JSY benefits displayed	√	1	11	Marsaghai
19	OPD room/Cubicles exist	√	9	100	All
20	Suggestion/Complainant box	√	9	100	All
21	Waiting room for patient	√	9	100	All
22	Intensive Care Unit	×	9	100	All
23	Biomedical waste disposed through incinerator	√	9	100	All
24	Quarters available medical staff	√	9	100	All

The normal infrastructures and other amenities such as water supply, regular electricity, standby facility (generator/invetor), drinking water, ambulance facility, public toilet, labor room, OPD, causality, waiting room and residential quarters are available in

all the surveyed CHCs. But the major infrastructural developments under the NRHM such as the opening of the Blood bank facility, surgery facility, and the ICU facility that are followed by the IPHS not available in a single CHC in Kendrapara district. It was found that 33 percent of the CHCs have been upgraded as per the IPHS standards but in reality they have just been upgraded from the PHCs to UGPHC. About 89 percent of the CHCs have separate public toilet facilities while 22 percent have piped water, newborn care and 30 beds facilities. This means that 78 percent of the CHCs neither have the full strength of 30 beds facilities nor newborn care facility. Only 66 percent of the CHCs contain 16 bed facility and 11 percent of the CHCs are equipped with 20 bed facility. It was also noticed that only 11 percent of the CHCs have displayed the JSY benefit list on their notice boards.

C. Provision of human resources at the Community Health Centers

The provisions of human resources in the CHCs of Kendrapara district are not adequate. Table-3.36 presents the details about human resources. It shows that 88.8 percent of the CHCs have gynecologists but the posts of Anesthetist are vacancies in all the CHCs. At the same time, 77.7 percent of the posts of pediatrician, 55.5 percent of those of General Physician, 44.4 percent of General Surgeon are vacant in different CHCs in the Kendrapara district. Investigating into the posts of Radiologists, it was observed that 55.5 percent of the CHCs do not have a Radiologist. Looking at the overall vacancies among the doctors, it was found that out of 55 sanctioned posts, only 25 posts are filled up, which means that 45.45 percent of the posts for doctors are in position while 54.54 percent are still vacancies in the district. While looking at the availability of paramedical staff in the CHCs, it was found that both the posts of Pharmacists and that of the ANMs are available in all the CHCs. With regard to the posts of staff nurses, it was noticed that except CHC Patkura, the other CHCs have successfully filled up the allocated posts of staff nurse. There was just one remaining vacant post in CHC Garadpur. The posts of Ophthalmic Assistant have been sanctioned for 55.6 percent of the CHCs, while for the remaining 44 percent; they are yet to be sanctioned. The post of single LHV is provided in few CHCs, namely, Derabis and Kendrapara while the rest of the CHCs were not provided sanctioned LHV posts. The posts of paramedical staff are remaining as vacant in most of the CHCs (see details in Table-3.36).

Table - 3.36: Availability of Human Resources in the Community Health Centers

Type of staff	Aul UGPHC			Derabis CHC			Garadpur/ Patkura UGPHC			Kendrapara/ Indupur CHC			Mahakalpada CHC			Marsaghai CHC			Pattamundai UGPHC			Rajkanika CHC			Rajnagar CHC		
Medical staff	S	IP	V	S	IP	V	S	IP	V	S	IP	V	S	IP	V	S	IP	V	S	IP	V	S	IP	V	S	IP	V
General Physician	1	0	1	1	0	1	1	1	0	1	1	0	1	0	1	1	0	1	1	1	0	1	1	0	1	0	1
General surgeon	2	2	0	1	0	1	1	0	1	1	0	1	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0
Gynecologist	1	1	0	1	1	0	1	1	0	1	0	1	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0
Pediatrician	1	1	0	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	1	0	1	0	1	1	0	1
Anesthetist	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1
Radiologist	1	1	0	1	0	1	1	1	0	1	0	1	1	1	0	1	0	1	1	0	1	1	0	1	1	1	0
Total	**7**	**5**	**2**	**6**	**1**	**5**	**6**	**3**	**3**	**6**	**1**	**5**	**6**	**3**	**3**	**6**	**2**	**4**	**6**	**4**	**2**	**6**	**3**	**3**	**6**	**3**	**3**
Paramedical & supporting staff																											
Pharmacist	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0
ANM	2	2	0	1	1	0	2	2	0	1	1	0	1	1	0	2	2	0	1	1	0	1	1	0	2	2	0
Staff Nurse	4	4	0	4	4	0	2	1	1	4	4	0	5	5	0	5	5	0	6	6	0	5	5	0	5	5	0
Ophthalmic Assistant	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0	1	0	1
LHV	4	4	0	4	3	1	3	3	0	4	3	1	1	1	0	3	3	0	1	1	0	4	4	0	4	4	0
LT	1	0	1	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	2	2	0	1	1	0
Dresser	7	7	0	4	4	0	4	4	0	4	2	2	1	0	1	1	0	1	3	3	0	3	3	0	4	4	0
OT Attendant	1	1	0	1	1	0	0	0	0	0	0	0	2	2	0	1	0	1	1	1	0	1	1	0	1	1	0
BEE	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0
Ambulance Driver	2	2	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	1	0
Registration Clerk	1	1	0	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0
Total	**24**	**23**	**1**	**19**	**18**	**1**	**16**	**15**	**1**	**17**	**14**	**3**	**16**	**15**	**1**	**18**	**16**	**3**	**18**	**18**	**0**	**22**	**21**	**1**	**22**	**21**	**1**

Note: S = Sanction, IP = In position, V = Vacancy, LT = Laboratory Technician, LHV = Lady Health Visitor, BEEO = Block Education Extension Officer

D. Outcomes of health services of the Community Health Centers

Table-3.37 presents the average daily OPD attendance and the number of institutional deliveries that were conducted during the last three months, apart from the total record of performing institutional delivery cases both in 2008-09 and 2009-10 by the different CHCs in Kendrapara district. The average daily OPD attendance in the CHCs varies from 30 (CHC Mahakalpada) to 250 (CHC Rajkanika), which is the highest in a day in Kendrapara district. Nearly 45 percent of the CHCs, namely, Aul, Marsaghai, Pattamundai, and Rajnagar have a record average of 200 OPD attendances per day whereas Garadpur, Derabis and Kendrapara CHC have recorded 86, 70 and 50 attendances per day, respectively.

Table - 3.37: Average service outcomes by the Community Health Centers

Sl. No	Name of the Block/ UGPHC/CHC	Average daily OPD attendance	JSY deliveries conducted in last 3 months	Total institutional delivery in 2008-09	Total institutional delivery in 2009-10
1	Aul UGPHC	200	389	1677	2090
2	Derabis	70	144	969	665
3	Garadpur/ Patkura UGPHC	86	224	699	1010
4	Kendrapara/ Indupur	50	66	506	411
5	Mahakalpada	30	300	819	1214
6	Marsaghai	200	74	373	444
7	Pattamundai UGPHC	200	205	1142	1365
8	Rajkanika	250	284	1566	1207
9	Rajnagar	200	424	3070	1835

While looking at the JSY deliveries that were conducted in the last three months, it was found that CHC Rajnagar has conducted the highest number of JSY cases (424 cases) whereas CHC Kendrapara conducted the lowest number of JSY cases (66 cases). Three CHCs, namely Rajkanika, Garadpur and Pattamundai have conducted 284, 224 and 205 JSY deliveries respectively, whereas CHC Mahakalpada has conducted 300 cases of JSY deliveries (which is the third highest among the nine CHCs). Both Kendrapara and Marsaghai CHCs have conducted only 66 and 74 JSY deliveries respectively. Table-3.37 presents the total number of institutional deliveries conducted in two periods of time, that

is, 2008-09 and 2009-10. While comparing the institutional delivery rates of the nine CHCs/blocks of the year 2008-09, it was found that CHC Rajnagar had conducted 3070 delivery cases which is the highest, while CHC Marsaghai had conducted 373 delivery cases which is the lowest among all the CHCs. Three CHCs, namely, Aul (1677), Rajkanika (1566) and Pattamundai (1124) had also conducted a considerable number of institutional deliveries. The data of 2009-10 revealed that the number of institutional deliveries has increased. CHC Aul had conducted 2090 delivery cases, which is 413 more than the previous year of 2008-09. Pattamundai had also conducted 1365 delivery cases which found 223 cases more than its previous year's record. CHC Garadpur (311 cases increased) and CHC Mahakalpada (395 cases increased) recorded 1010 and 1214 of JSY delivery cases respectively. Thus, this survey shows a steep rise in the number of institutional deliveries in the different CHCs/blocks of Kendrapara district. On the contrary, however, both CHC Rajkanika (1207 cases) and CHC Rajnagar (1835 cases) had recorded a decline in their numbers, that of 359 and 1235 of JSY delivery points as compared to the previous year of 2008-09.

3.4.5 The District Headquarter Hospital

A. Physical infrastructure at the District Headquarter Hospital

The District Headquarter Hospital (DHH) is one of the tertiary hospitals based at the district headquarter level. All kinds of specialty health care facilities are available at the DHH. It is one of the referral units to provide specialty health services to the people. Table-3.38 presents the infrastructural facilities of the DHH, Kendrapara. The DHH has all kinds of health services available, including blood transfusion facility but there is no Intensive Care Unit (ICU) service. Apart from that, there is a shortage of residential facility due to which all staff members (medical and paramedical) do not enjoy the provisions of residential quarters. However, new buildings for both medical purposes and residential purposes are under construction.

There are 18 posts for medical doctors but only 15 posts are in position while the remaining three posts lying vacant. Table-3.39 gives a detail of human resources of the DHH, Kendrapara. While conducting field surveys at the DHH, it was found that even though 78 posts are sanctioned for paramedical staff, only 70 posts are filled up and the other 8 posts, namely, head clerk-2, Junior Clerk-1, Assistant Matron-1, Statistical

Assistant-1, Nursing Sister-1, Assistant Investigator-1, and Tech Store Keeper-1 were lying vacant as of the time of data collection. Some of the additional staff was provided under the NRHM. But the two posts of the Deputy Manager of Child Health and Work Consultant are yet to be filled up.

Table - 3.38: Infrastructural and service facilities available at District Headquarter Hospital

Sl. No.	Name of infrastructural facilities	Response: Yes (√) /No (×)
1	Hospital upgraded as per IPHS standard	√
2	IPHS facility carried out	√
3	24 hours water supply	√
4	Having pipe water supply	√
5	Having an overhead Tank facility	√
6	Regular water supply-Operation Theatre	√
7	Regular electricity supply	√
8	Standby facility (generator) available	√
9	Drinking water available in waiting areas	√
10	Functional ambulance (Janani Express)	√
11	Blood bank/blood storage unit	√
12	Functional public utility (toilet)	√
13	Separate functional public utility (toilet) Male/Female	√
14	Providing surgery facility	√
15	Cold chain facility	√
16	Having functional labor room	√
17	New born care corner (NBCC)	√
18	Functional 165 beds	√
19	Emergency/causality room available	√
20	OPD room/Cubicles exist	√
21	Suggestion/Complainant box	√
22	Waiting room for patient	√
23	Intensive Care Unit	×
24	Biomedical waste disposed through incinerator	√
25	Quarters available for Medical & Paramedical staff	√

Table - 3.39: Human Resources in District Headquarter Hospital

Sl. No	Type of staff			
Medical Doctors		**Sanction**	**In position**	**Vacant**
1	Total Doctors	18	15	3
Paramedical/supporting staff				
2	Head Clerk	2	0	2
3	Senior Clerk	2	2	0
4	Junior Clerk	3	2	1
5	V. S. Clerk	1	1	0
6	Pharmacists	3	3	0
7	Radiographer	2	2	0
8	Laboratory Technician	5	5	0
9	Staff Nurse	19	19	0
10	M.P.H.S. (F) /LHV	1	1	0
11	M.P.H.W (F)	5	5	0
12	Assistant Matron	1	0	1
13	Nursing Sister	3	2	1
14	Tech Store Keeper	1	0	1
15	Driver	2	2	0
16	Peon	1	1	0
17	Attendant	14	14	0
18	Washer man	1	1	0
19	Sweeper	8	8	0
20	Stenographer	1	1	0
21	Cook	1	1	0
22	Statistical Assistant	1	0	1
23	Statistical Investigator	1	0	1
	Total	**78**	**70**	**8**
Post of staff sanctioned under the provision of the NRHM				
24	District Program Manager (DPM)	1	1	0
25	District Account Manager (DAM)	1	1	0
26	District Health Information Officer	1	1	0
27	District ASHA Coordinator	1	1	0
28	Hospital Manager DH	1	1	0
29	Deputy Manager of Child Health	1	0	1
30	Computer Assistant: immunization	1	1	0
31	Work Consultant	3	2	1
32	Staff Nurse	8	8	0
	Total	**18**	**16**	**2**

B. Service outcome of institutional delivery at the District Headquarter Hospital

There has always been a chaotic situation and a rush of patients in the DHH, Kendrapara, for any sort of treatment because multiple kinds of specialty facilities are available there. People from all over the district visit this hospital particularly for institutional deliveries as doctors here are on duty round the clock. But it has been, noticed that an adequate number of beds are not available specifically for the labor ward. The DHH has only 165 functional beds, which are not enough for all the patients coming from different parts of the district. When I visited the DHH, I noticed that there aren't sufficient bed facilities for the JSY cases, as a result of which sometimes pregnant women are forced to sleep on the floor before and after the delivery (pictures are enclosed in Annexure). This creates a risky situation for both the mother and the newborn baby because there are very high chances of infection. Table-3.40 gives an account of the institutional delivery (JSY) cases that were conducted at the DHH, Kendrapara. It was found that the highest numbers of institutional deliveries (7906 cases) were conducted during 2007-08, which has slowly declined to 6453 in 2008-09, to 6075 in 2009-10, and further to 5563 during 2010-11.

Table - 3.40: Institutional delivery at District Headquarter Hospital from 2007-08 to 2010-11

Particulars	2007-08	2008-09	2009-10	2010-11
Institutional delivery	7906	6453	6075	5563

Table: 3.41 Number of Institutional and Home delivery, and JSY beneficiaries in Kendrapara district and in Odisha since 2006-07 to 2010-11

Year	Delivery recorded in Odisha		Delivery recorded in Kendrapara district		JSY beneficiaries	JSY beneficiaries
	Institutional	Home	Institutional	Home	Odisha	Kendrapara
2006-07	357661	415075	4421	6667	227204	4421
2007-08	411774	260981	15155	3001	490657	18297
2008-09	455982	206678	15852	714	506879	17859
2009-10	546003	157793	16654	489	587158	16834
2010-11	506892	127821	16383	317	533372	16246
Total	2278312	1168348	69299	11188	2345270	73657

The reasons behind the declination of institutional deliveries include unhygienic conditions of labor rooms, shortage of infrastructural facilities, especially which of obstetric and gynecological wards and labor rooms, shortage of hospital beds, shortage of obstetricians and gynecologists etc. Expectant mother and their families prefer private hospitals to the DHH, Kendrapara. Looking at the overall institutional delivery status and that of the JSY beneficiaries of the district, it was found that institutional deliveries and JSY beneficiaries have undergone an increase over a period of time as the number of deliveries conducted at home has declined accordingly as presented in Table-3.41. It shows that the number of institutional deliveries during 2006-07 in the district was 4421 as against the number of births at home which was 6667, and that the former has increased by more than three times reaching 15155 in 2007-08, followed by yet another steep rise to 15852 in 2008-09 and to 16654 in 2009-10. However, the data shows a fall of 271 cases of institutional delivery later on when it came down to 16383 in 2010-11.

At the same time, cases of JSY beneficiaries in Kendrapara district had gone up to 18297 in 2007-08 but afterwards there had been a decline to 17859 in 2008-09, to 16834 in 2009-10 and to 16246 in 2010-11. The declined rate of JSY cases shows that till 2009-10, the incentives for JSY beneficiaries those who had given birth at home were given Rs. 500/-. But later on, from 2010-11 onwards, the JSY cash incentive was denied to those who had given birth at home, because of reported cases of child deaths in some blocks in the district. It was decided JSY cash incentives would only be given to those who gave birth at a health care facility. As a result of this, some people began preferring delivery at home once again as they found institutional deliveries were much more expensive. The JSY cash incentives were not enough to meet all the expenditures at the hospital.

If we look at the case of delivery at home, we would (Table-3.41) find a steadily declining trend. During 2006-07, the number of births conducted at home in Kendrapara district was 6667 which declined by more than its half within a year and reached 3001 in 2007-08. Since then, however, there has been a slow decline till 2010-11. It has declined from 3001 in 2007-08 to 714 in 2008-09, 489 in 2009-10, and 317 in 2010-11. This gradual decline in the rate of deliveries at home shows that people slowly preferred institutional delivery which is evidence of the development and change in socioeconomic

and cultural mindset of the people. Apart from the district information, here is presented the status of institutional delivery block wise (see Table-3.42) of Kendrapara district.

Table - 3.42: Number of institutional deliveries conducted block wise of Kendrapara district from 2008-09 to 2010-11

Sl. No.	Name of the block/CHC	2008-09	2009-10	2010-11
1	Aul	1855	2092	2212
2	Derabis	758	665	713
3	Garadpur/Patkura	624	1010	816
4	Kendrapara/Indupur	331	441	421
5	Mahakalpada	945	1214	1019
6	Marsaghai	373	444	772
7	Pattamundai	1683	1671	1441
8	Rajkanika	1314	1207	1303
9	Rajnagar	1516	1835	2123
10	District Hospital	6453	6075	5563
	Total	**15852**	**16654**	**16383**

It was also noticed in different blocks that institutional delivery has gradually been encouraged in all the blocks of Kendrapara district. In 2008-09, Aul block recorded 1855 cases of institutional delivery which went up by 237 cases in 2009-10 to reach 2092 which again increased by 120 cases to reach 2212 in 2010-11. Likewise, there was a gradual increase of institutional delivery in Rajnagar block; 1516 cases were recorded in 2008-09 which increased by 319 cases reaching 1835 in 2009-10 within a year. There had been an increase of 607 cases of institutional delivery from 2008-09 to 2010-11, increasing the number to 2123 in 2010-11 (see Table-3.42). An increase in institutional deliveries has also been recorded in Garadpur block from 624 in 2008-09 to 1010 in 2010-11 and in Mahakalpada block from 945 in 2008-09 to 1214 in 2009-10. In the rest of the blocks, there has been a gradual increase but the rate of increase has not appreciable as in Aul and Rajnagar blocks. This shows that the NRHM has brought about a developmental change in the mindset of the rural people for safe and secure institutional delivery, which is far better for ensuring safe motherhood.

C. Survey of human resources in Kendrapara district

Table-3.43 presents the status of human resources in various health care institutions in Kendrapara district. It was found that there exist 45 percent vacancies for medical staff in the district even after the completion of six years of the NRHM. Even though time bound of the NRHM was extended from 2012 to 2017 (the 12th Five Year Plan), the vacancies for medical staff at the district hospital still remain empty. It was found that out of the 117 posts sanctioned for doctors; only 54.70 percent (64 posts) is filled while the remaining 45.30 percent (53 posts) is lying vacant. Among them, the number of vacant posts for the class-I junior general doctors are the highest, which is 21 (48 sanctioned, 27 in position, 21 vacant). It was also noticed that even though 18 posts have been sanctioned for Class-I Senior General doctor, only 10 posts are in position while the remaining 8 posts still vacant. There are 12 posts sanctioned for Class-I Senior Specialist out of which 6 posts have been filled up while the other 6 remain vacant. Concerning the class-I junior specialist doctors, out of the 28 sanctioned posts, only 15 are in position with 13 still in vacant. Looking at the status of the paramedical and other supporting staff of the district, it was found that out of 948 sanctioned posts, 90.50 percent of the posts are in position and around 10 percent still remain as vacant. The additional posting and the vacant position of the medical and paramedical staff in Kendrapara district is given in Table-3.44.

Table - 3.43: Availability of Human Resources in Kendrapara District

Sl. No	Type of staff Medical staff	Sanction	In position	Vacant
Category of the post-Doctors				
1	Jt. DHS Level-I (CDMO)	1	1	0
2	Jt. DHS Level-II General	4	2	2
3	Jt. DHS Level-II Specialist	6	3	3
4	Class-I Senior General	18	10	8
5	Class-I Senior Specialist	12	6	6
6	Class-I Junior Specialist	28	15	13
7	Class-I Junior General	48	27	21
	Total Doctor Position	**117**	**64**	**53**

Paramedical and supporting staff		Sanction	In position	Vacant
8	Principal Tutor	1	1	0
9	Sister Tutor	2	1	1
10	Food Inspector	1	0	1
11	MEIO	1	0	1
12	Head Clerk	2	0	2
13	Senior Clerk	6	6	0
14	VS Clerk	11	10	1
15	Statistical Asst.	8	3	5
16	Para Medical Asst.	1	0	1
17	Pharmacists	57	56	1
18	MPHS (M) SI	51	44	7
19	LHV	37	35	2
20	Staff Nurse	55	52	3
21	Junior Clerk	16	13	3
22	BEE	9	9	0
23	Asst. Matron	1	0	1
24	Nursing Sister	3	2	1
25	Male Health Worker	121	109	12
26	Female Health Worker	272	254	18
27	Ophthalmic Assistant	3	3	0
28	Radiographer	3	3	0
29	Laboratory Technician	17	17	0
30	Non Medical Supervisor	4	1	3
31	Health Assistant	5	0	5
32	Stenographer	1	1	0
33	Para Medical Worker	9	7	2
34	Superior Field Worker	2	1	1
35	Statistical Investigator	1	0	1
36	PHN	4	4	0
37	Driver	16	14	2
38	Senior Helper	17	13	4
39	Watchman	2	2	0
40	Attendant	123	119	4
41	Cook	11	9	2
42	Peon	17	17	0
43	Sweeper	44	40	4
44	St. Bearer	2	1	1
45	Insect Collector	2	1	1
46	Kitchen Servant	3	3	0
47	Lady peon	1	1	0
48	Helper	1	1	0
49	Washer man	2	2	0
50	*Dai*	3	3	0
Total	**Paramedical staff**	**948**	**858**	**90**
	Grand Total	**1065**	**922**	**143**

3.5 Development of Human Resources under the NRHM in Kendrapara District

The provisions of new allotment of medical, paramedical and supporting staff are sanctioned under the NRHM. Table-3.44 shows that both Ayurvedic and Homeopathic doctors are sanctioned for both the CHCs/UGPHCs and the PHCs. A total of 53 doctors have been sanctioned, out of which 48 posts have been filled up while 5 posts are still lying vacant. While checking upon the paramedical and other supporting staff it was found that out of the 47 posts sanctioned for staff nurse, 33 are in position while 14 are still vacant. It was also found that 61 additional ANMs are sanctioned; out of which 32 are in position while 29 posts are vacant. Both female and male health workers are considered as active wheels for providing health care facilities in remote rural areas where district medical teams and doctors rarely visit. They also play a very significant role in providing immunization and in motivating expectant mothers to go for institutional delivery. They act like guide; they protect and promote for safe motherhood in rural areas. Therefore, it has been carefully studied that even after the allotment of some new posts to fill the earlier vacant positions, the government has not taken serious steps to provide human resources to the district and that the district health department is functioning with inadequate medical and paramedical staff.

Table-3.44: Medical and Paramedical and other supporting staff sanctioned under the NRHM in Kendrapara

Sl. No	Medical Doctors	Sanction	In position	Vacant
1	Ayurvedic Doctors (CHC/UGPHC)	5	3	2
2	Homeopathic Doctor (CHC/UGPHC)	4	4	0
3	Ayurvedic Doctors (PHC)	23	21	2
4	Homeopathic Doctor (PHC)	21	20	1
		53	**48**	**5**
Paramedical and supporting staff				
5	Staff Nurse	47	33	14
6	Additional ANM	61	32	29
7	Laboratory Technician	3	2	1
8	Block Accountant-Cum-Data Asst.	9	9	0
9	Pharmacist-cum-Logistic Manager	1	1	0
10	Ophthalmic Assistant	4	4	0
11	DPMU Accountant	1	1	0
12	Office Assistant	1	1	0
13	System-in-charge cum DEO	1	1	0
14	Area Hospital Accountant	1	1	0
15	Cold Chain Mechanic	1	1	0
	Total	**183**	**134**	**49**

3.6 Improvement of Health Indicators under the Implementation of the NRHM

The NRHM has changed various health indicators appreciably in Kendrapara district. Table-3.45 presents the improvement of various health indicators under the implementation of the NRHM in district, state and at the national level. Most importantly, the major target of the NRHM, the Maternal Mortality Ratio (MMR) and Infant Mortality Rate (IMR) has declined rapidly in the district. The MMR has decreased by 91 points from 367 in 2004-06 to 276 per one lakh in 2010-11 at the district, and 26 points at the state (from 303 in 2004-06 to 277 in 2010-11) and 42 points (from 254 in 2004-06 to 212 in 2007-09) at the national level.

The IMR data shows 19 points reduction from 83 in 2005 to 64 per 1,000 live births in 2010 however; there is a significant declining of 22 points in terms of Under 5 Mortality Rate (U5MR) from 92 in 2005 to 70 per 1,000 live births in 2010 in Kendrapara district. Table-3.45 also shows there is 14 points declining of IMR at the state and 11 points reduction at the national level compared to 2005 (for details see Table-3.45). At the state level, the U5MR also decreased 13 points and at the national level it declined 18 points from 2005 to 2010.

Table-3.45: Achievements of health indicators under the NRHM from 2005-2010

Indicators	Year	Kendrapara	Odisha	India
Infant Mortality Rate (IMR)	2005	83	75	58
	2010	64	61	47
Under 5 Mortality Rate (U5MR)	2005	92	91	77
	2010	70	78	59
Maternal Mortality Ratio (MMR)	2005	367	303	254
	2010	276	258	212**
Institutional delivery	2005	42.3	36	39
	2010	65.8	71.3	47*
Institutional delivery availed though JSY	2005	68.3	40.3	52.7
	2010	93.4	94.4	81.5#
Minimum three Antenatal Care	2005	53.6	62	52
	2010	75.5	76	75
Full Immunization	2005	61	52	44
	2010	96.2	94	87

Source: Note* - The District Level Health Survey (DLHS-3): 2007-08, #-The Concurrent Evaluation of NRHM-2009, National Report, IIPS, Mumbai, May 2011; ** - Sample Registration System, Registrar General of India, July 7, 2011; 2005: NFHS-3 (2005-06); 2010: Annual Health Survey 2010-11, Vital Statistics Division, Office of the Registrar General and Census Commissioner, India.

The NRHM tries to achieve the IMR and MMR through the JSY scheme and the institutional delivery. It is found that the expectant mothers have availed facilities of JSY significantly 93.4 percent in Kendrapara, 94.4 percent in Odisha and 81.5 percent at the national level in 2010. The institutional delivery also improved from 42.3 percent in 2005 to 65.8 percent in the district, from 36 percent in 2005 to 71.3 percent in 2010 in Odisha whereas at the national level there is little improvement from 39 percent in 2005 to 47 percent in 2007-08. Similarly, there is also improved by taking minimum three antenatal care by the pregnant women in the district (75.5 percent), state (76 percent) and at the national (75 percent) level in 2010 compared to a district (53.6 percent), state (62 percent) and at national (52 percent) in 2005. The NRHM also reached significant improvement in full immunization of the children and it achieved 96.2 percent in 2010 from 61 percent in 2005 in the district, 94 percent in the state, and 87 percent at the national level in 2010 from 52 percent, and 44 percent respectively in 2005.

3.6.1 Summing up

The government of Odisha has taken several initiatives in policy level to provide health care services to the people. The most important step that the government has taken was the *Panchabyadhi Chikitsa scheme* which significantly focuses five deadly diseases such as malaria, diarrhea, leprosy, acute respiratory infection and scabies that were commonly prevalent in the state. This program has the ability to bring awareness among the rural people and also reported well utilized by them. Besides that, the *Navajyoti scheme* (a strategy to improve both maternal and child health care) has improved the situation in some extent but it has definitely developed effectively during the post-implementation period of the NRHM. The Mission has significantly improved the rural health delivery system particularly helping in improving the provision of health delivery and reduction of both infant and maternal mortality in the state. Though, the NRHM has not able to bring all round improvement of health care facilities in different levels specifically development of infrastructures and provision of human resources in the state level but certainly it has achieved the improvements of the health care situation in the rural areas compared to the pre-implementation period of the NRHM.

Importantly, the study identified the state's incapacity to spend the amount allocated by the Government of India under the NRHM from time to time. It leads a

major problem of receiving a lesser amount from the Centre in the next financial year which creates the formidable challenges for the state to meet all the health care requirements of the people. Thus, it shows the ill-functioning of the administrative machinery of Odisha while the state is undergoing various health problems particularly disturbed by the alarming rate of morbidity and infant and maternal mortality. So, it is important for the state to utilize the allocated funds in a proper manner with the specific time frame for further receiving of fund from the Centre. This chapter has presented the health delivery system in the state as well as in Kendrapara district and the improvement of the health care system under the NRHM. As the NRHM particularly emphasizes for the reduction of infant and maternal deaths through the help of Accredited Social Health Activists (ASHAs) under the scheme of Janani Suraksha Yojana (JSY), so, such vital issues relating to the role of ASHA and JSY are addressed and focused thoroughly in the next chapter-4.

Chapter – 4

Role of Accredited Social Health Activist in Janani Suraksha Yojana: A Study of Kendrapara District

This chapter is classified into three sections. The first section begins with a brief introduction of the Accredited Social Health Activist (ASHA), who is the lynchpin of the National Rural Health Mission (NRHM). It mainly discusses the ASHA's decisive role in creating awareness on basic health among the rural people and motivating them towards choosing for the institutional delivery in order to ensure safe motherhood. It also highlights the challenges faced by the ASHA for an effective implementation of the NRHM. The second section focuses on Janani Suraksha Yojana (JSY) and how it has been successfully implemented in Kendrapara district, Odisha. It significantly highlights the institutional delivery and the various reasons behind practicing of delivery at home in certain parts of the district. The third section critically analyzes the decentralization of rural health services, which has been emphasized under the NRHM for the improvement of the health delivery system prevalent in the rural areas.

4.1 Introduction

One of the key components of the NRHM is to appoint a trained community female health worker popularly known as ASHA in each and every village of the country. The strategy is that the ASHA would work in the villages and act as a mediator between the rural community and the public health institutions. She plays a significant role in achieving the goals of the NRHM and in the development of national health. People from the villages, especially those belonging to the vulnerable groups of the society, such as the poor, the women and children call the ASHA for any kind of health related problems. She plays a pivotal role in the development of the practice of institutional delivery and delivery under JSY, which has reduced the infant mortality rate and the maternal mortality ratio in the country. The ASHA is popularly considered as a ray of hope for the expectant mothers in remote rural areas. As per the guidelines for the selection of ASHA, she belongs to primarily be a resident of the same village where she is supposed to work, preferably unmarried/widowed/divorced and within the age group of 25-45 years and having an education of at least till the eighth standard. However, she would be chosen through a rigorous selection process involving various community groups, Anganwadi institutions, Self Help Groups, the Village Health and Sanitation Committee (VHSC) Gram Sabha, block nodal officer, and the district nodal officer. Presently, 1407 ASHAs are working in Kendrapara district whereas in Odisha 40562 ASHAs involved under the NRHM.

4.1.1 ASHAs: Profile

The profile of the ASHA is given in Table-4.1. A look at the age distribution shows that 19 percent of the ASHAs in the district of Kendrapara are below 30 years, 71.5 percent within the age group of 31-40 years, 8.4 percent within 41-50 years, and 1.1 percent belonging to the age group of 51 and above. While conducting the interviews, it was found that the majority of the ASHAs (73.8 percent) had received education up to the ninth class, 16.6 percent of them had passed the matriculation, 4.8 percent had completed intermediate studies and a same percentage had completed their under graduation. Regarding their marital status, it was found that a majority of the ASHAs (90.5 percent) are already married, while 1.2 percent of them are unmarried, and 8.3 percent are either widowed or divorced. The distribution of the ASHAs by the social groups show that 33.3 percent of them belong to the general category, 40 percent belong to the Other Backward Classes (OBCs) and 21.4 percent belong to the Scheduled Castes (SC) while 1.2 percent hail from the minority (Muslim) community. ASHAs were also studied religion wise and it was found that a majority of them (98.8 percent) are Hindus, and 1.2 percent Muslim.

Table - 4.1: Background and social characteristics of the ASHAs

Sl. No.	Characteristics	Category	Number of ASHA	n=84 In %
1	Age group	Below 30 years	16	19.0
		31-40 years	60	71.5
		41-50 years	7	8.4
		Year 51 & above	1	1.1
2	Education	5^{th} class – 9^{th} class	62	73.8
		Matriculation	14	16.6
		Intermediate	4	4.8
		Under Graduation	4	4.8
		Unmarried	1	1.2
3	Marital status	Married	76	90.5
		Widowed/Divorced	7	8.3
4	Caste/Tribe	General	28	33.3
		OBC	37	40.0
		SC	18	21.4
		Minority Muslim	1	1.2
5	Religion	Hindu	83	98.8
		Muslims	1	1.2

4.1.2 Selection and Appointment of the ASHA

The process of selection of the ASHA is a rigorous task. Table-4.2 presents a different type of process involved in the selection of the ASHAs. On being asked about the process of selection, they responded saying that there is no single process for the selection and multiple selection methods/processes are generally followed in order to select them. The ASHAs are also selected by the recommendation process; a majority of them (79.8 percent) by the recommendations of the ANMs, 76.2 percent by that of the SHGs, 26.2 percent by the village Sarpanch, 45.2 percent by the village Ward members, 44 percent by the Anganwadi workers, and 1.2 percent by the village health workers. Apart from that, 35.7 percent of the ASHAs revealed that their names were decided by the villagers in a meeting while 9.5 percent of them were selected through the Gram Sabha. A very nominal 1.2 percent of the ASHAs said that they were elected through a process by voting, and 6 percent of them said that they were selected through a lottery system.

Table - 4.2: Selection process for the appointment of the ASHAs

Sl. No.	Selection of ASHA	Number of ASHA said yes	n=84 In %
1	Through voting system	1	12
2	Through a lottery system	5	6.0
3	Recommendation of Auxiliary Nurse Midwife	67	79.8
4	Recommendation of Anganwadi worker	37	44.0
5	Recommendation of Self Help Group	64	76.2
6	Recommendation of Health worker	1	1.2
7	Recommendation of Ward member	38	45.2
8	Recommendation of Villagers in meetings	30	35.7
9	Recommendation of Sarpanch	22	26.2
10	Selection through Gram Sabha	8	9.5

4.1.3 Role of the ASHA: The Lynchpin of the NRHM

The ASHAs assign multiple tasks which particularly include assisting expectant mothers to the health care institutions for safe delivery. Some of the key roles of the ASHAs are mentioned in the next page.[1]

[1] ASHA - Accredited Social Health Activist, The Ministry of Health and Family Welfare, Government of India, Source: http://mohfw.nic.in/NRHM/asha.htm. Accessed on September 25, 2012.

A. As a part of capacity building, the ASHAs have to undergo a series of training envisaging a total period of 23 days divided five sessions. This provides her with the knowledge and skills necessary for performing specified roles in health development programs of the NRHM at the village level.
B. Apart from this training, she would be provided with a drug kit to deliver first-contact health care to the rural people. Every ASHA is expected to participate in each public health program that is arranged in her village. She will act as a promoter of good health practices and a provider of basic medicines for curative care.
C. She will act as an information provider in the village community on determinants of health, i.e., the basic practice of maintaining sanitation and hygiene, nutrition, maintaining a healthy life style and good health practices by utilizing available health care facilities, including family welfare services and so on. She will also perform the function of convincing people to construct toilets.
D. She will play an active role as a village counselor to expectant mothers on the issues of birth preparedness, the importance of safe delivery, and child care for newborn babies including breast feeding, complementary feeding, and immunization.
E. She will spread awareness among people and encourage them to use proper contraception, and avoid common infections including reproductive tract infections and sexually transmitted diseases.
F. The ASHA will mobilize the community and facilitate their access to health care services available at nearby health institutions like the HSCs/PHCs/CHCs. She will also help expectant mothers get facilities of both Ante Natal Check-up (ANC) and Post Natal Check-up (PNC), including supplementary nutrition and other health services provided by the government for the benefit of pregnant women.
G. The ASHA will act as a deport holder for the provision of essential medicines for women, like oral rehydration therapy, chloroquine tablets, iron folic acid tablet, disposable delivery kits, oral pills and condoms, etc.
H. The ASHA will also assist pregnant women to avail institutional delivery in the health care institution and as a part of her post-natal services helps mother and also child in getting universal immunization.

I. For performing the aforementioned activities with utmost professionality, ASHAs would be provided with additional performance-based incentives.

The ASHAs are very active in their duties as they are considered as hope by both mother and child. Table-4.3 presents various activities of the ASHAs. While conducting interviews of the ASHAs, it was found that a majority 77.3 percent of them has been providing service to the people since 5-6 years now, 19 percent since 2-4 years and only 3.5 percent for one year.

Table - 4.3: Activities of ASHA under the NRHM

Sl. No.	Particulars of ASHA	Type of work	Number of ASHA	n=84 In %
1	Years of service by ASHA	1 year	3	3.5
		2-4 years	16	19.0
		5-6 years	65	77.3
2	The population served by ASHA	Below 500 population	1	1.1
		501-1000 population	34	40.4
		1001-2000 population	48	57.1
		2001-2500 population	1	1.1
3	Number of villages served by ASHA	1 village	67	79.7
		2 villages	12	14.2
		3 villages	5	5.9
4	Days of training	Less than 10 days	1	1.2
		11-20 days	15	17.9
		21-30 day	67	79.8
		Days 31 & above	1	1.1
		Received incentives for attending the training	84	100.0
5	Basic training and provision formalities	Training given for 1-5 Modules	68	80.9
		Training given for 1-2 Modules	16	19.0
		Issued uniform/identity card	84	100.0
		Issued drug kit to ASHA	84	100.0
		Drug kit contains ORS, Iron tablets, Oral Pills and Condoms	84	100.0
6	Distance	Less than 0.5 Km 3 villages	10 minutes	3.6
		1-2 Km 79 villages	30 minutes	94.0
		3-4 Km 2 villages	40minutes	2.4

Although the guidelines say that the ASHAs would provide service for a population of 1,000 but, field findings show that a majority (57.1 percent) of the ASHAs provide service for a population of 1,001-2,000, while 40.4 percent of them serve a population of 501-1,000 and only 1.1 percent of the ASHAs served 2,001-2,500 people as well as a below 500 population in their respective areas. Regarding the number of villages they serve, they reported that it ranges from 1 to 3 villages and is also based on

population norms. It was noticed that a majority of them (79.7 percent) work for one village, 14.2 percent work for two villages and 5.9 percent of the ASHAs provide service to three villages.

The ASHAs also provide training programs regarding reproductive health and public health issues. Table-4.3 presents that among the ASHAs, 79.8 percent had attended 21-30 days of training, around 18 percent had attended 11-20 days training, and 1.2 percent mostly including those who had been newly appointed had attended less than 10 days of training. All the ASHAs who attended training programs are provided with an incentive of Rs. 100 per day. Regarding the training program, about 81 percent of the ASHAs said that they have completed 1-5 modules of training session and 19 percent have completed 1-2 modules of training session. After their training programs, all of them are provided with a special uniform, identity cards and drug kit. The drug kit contains different types of medicines, such as oral rehydration salt powder, paracetamol tablets, iron and folic acid tablets, iron syrup, vitamin A tablets, antiseptic solution, oral pills, and condoms. To provide such medicines to the people, the ASHAs have to visit from door to door in the villages. It was noticed that the minimum distance an ASHA has to traverse from her house to the villages she serves is 0.5 Km. and the maximum is 3-4 Km. It was also noticed that 3.6 percent of the ASHAs work within 0.5 Km (same/nearest village) and it takes them 10 minutes to reach the village. A majority of the ASHAs (94 percent) travels around 1-2 Km. Which takes them a minimum of 30 minutes to reach the furthest village while 2.4 percent reported travel around 3-4 Km. which takes them around 40 minutes to reach their furthest village from their house. They generally prefer to go on foot but sometimes they use bicycles which are provided to them by the district health department in order to cut down on the time taken to reach the villages. Apart from the above services the ASHAs also perform a significant role in the improvement of health in the rural areas. Some of the major roles are discussed below.

4.1.4 Awareness about the Basic Health Services

The ASHA creates health awareness among the rural people. While conducting surveys, it was found (see Table-4.4) that awareness about the initiation of breastfeeding was very high, and 94 percent of the ASHAs reported that breast feeding needs to be initiated within 30 minutes of delivery.

Table - 4:4: ASHA's awareness about basic health activities

Sl. No.	Particulars of ASHA	Type of work	Response (Yes) by number of ASHA	n=84 In %
1	Awareness about breast feeding	Within 30 minutes of delivery	79	94.0
		Within one hour of delivery	6	7.1
		Child exclusively breastfeed	84	100.0
2	Steps to prevent diarrhea	Hand washing practices before food	72	85.7
		Use safe drinking water	82	97.6
		Keeping of food items in a covered container	72	85.7
		Proper disposal of garbage	42	50.0
3	Symptom of acute respiratory infection/ pneumonia	Problem/Increasing of breathing	63	75.0
		In drawing of chest	34	40.5
		Blue color of the baby	18	21.4
		Vomiting	47	56.0
		High/low fever	46	54.8
		Inability to drink/suck milk	48	57.1
4	Creating awareness for sanitation among the communities	Creates awareness about sanitation among the community	44	52.4
		Help in arranging the removal of solid waste/garbage from villages	67	79.8
		Help in removal of water logging	61	72.6
		Help for the construction of toilets	65	77.4
		Health, hygiene & nutrition	45	53.6
5	Type of work carries out in the villages	Mobilize the community to access health service	63	73.8
		Accompany the expectant mother for delivery	76	90.4
		Accompany ANM & help to organize various health activities	84	100.0
		The availability of medicines at home to give the needy people	58	69.0
		Household visit to attend immunization/ANC/PNC session	71	84.5
		Attend meetings in the VHSC & other group meetings of SHGs	48	57.1
		Providing DOTS	56	66.7

At the same time the awareness about the symptoms of Acute Respiratory Infection (ARI)/Pneumonia is universally lower among the ASHAs. Table-4.4 presents the identical symptoms of ARI/Pneumonia, and found that 75 percent of the ASHAs agreed that the major symptoms of ARI/Pneumonia are the problem/increasing of breathing. The other two most common symptoms that were also reported are: the

drawing of the chest (40.5 percent) and the inability to drink/suck milk (57.1 percent). Some of the ASHAs also reported vomiting (56 percent) and low/high fever (54.8 percent). The ASHAs have also created awareness about hygiene and sanitation in the villages. The study finds that 53.6 percent of the ASHAs created awareness about health, hygiene, and about nutrition among the community while 52.4 percent of them told the community about sanitation. In a particular activity, they also helped in arranging the removal of solid waste/garbage from the villages and 79.8 percent of the ASHAs participated actively in it.

It was also found that, 72.6 percent of the ASHAs helped in the removal of stagnant water in their respective villages as they had to make sure that no cases of malaria is reported in their villages. They facilitated the construction of toilets as reported by 77.4 percent of the ASHAs. They are also responsible for mobilizing the community to access health services and 73.8 percent of the ASHAs helped the community in this regard. It was noticed that 90.4 percent of the ASHAs accompany the expectant mothers up to the health service institutions for institutional delivery. In addition to that, every ASHA helps the ANMs out with their overburdened tasks, like organizing health and nutrition day at the Anganwadi centers, immunization, health camp etc. Regarding the provision of medicines, 69 percent of the ASHAs shared that they made medicines available in their homes for distribution among the needy people, 84.5 percent of the ASHAs reported that they visited households to attend immunizations to the children, and also for antenatal and postnatal sessions in the villages. Only 57.1 percent mentioned that they organized various meetings conducted at the village level or by the SHGs. The ASHAs are also assigned to provide DOTS to the people. Around 67 percent of the ASHAs are involved with the distribution of DOTS to those suffering with tuberculosis. Surprisingly, it was noticed that some of the ASHAs were not able to perform their tasks properly including by creating sanitation and hygiene as due to some kinds of social taboos (hierarchies in the caste system etc.) and they were not allowed to play an active role in a few villages.

4.1.5 Institutional Delivery and Delivery at Home

While looking at the ASHA's other activities, it was noticed that they facilitated the registrations of JSY cases for institutional delivery. To know their performance, data have been collected on the number of expectant mothers who have been facilitated for

registration during the last three months from the time of data collection. It was found that (see Table-4.5), 66.6 percent of the ASHAs reportedly registered 1-5 JSY cases, 25 percent of them registered 6-10 JSY cases, 6 percent of the ASHAs mentioned having registered11-20 JSY cases while 1.2 percent of the ASHAs reported 21-31 cases and above during the last three months in Kendrapara district.

Table - 4:5: Percentage of ASHA helps for registration for JSY and number of institutional deliveries recorded out of registration

Sl. No.	Particulars of ASHA	Number of cases	Response (Yes) by number of ASHA	n=84 In %
1	Number of JSY cases registered by ASHA in last three months	1-5	56	66.6
		6-10	21	25.0
		11-20	5	6.0
		21-30	1	1.2
		31 & above	1	1.2
2	A number of institutional deliveries done out of registered cases in last three months	1-5	56	66.6
		6-10	21	25.0
		11-20	3	3.6
		21-30	1	1.2

Regarding the number of institutional deliveries that have occurred as a result of this registration in the last three months, it has been observed that around 67 percent of the ASHAs reported that around 1-5 women gave institutional deliveries, 25.0 percent of the ASHAs reported 6-10 institutional deliveries, 3.6 percent of them reported 11-20 expectant mothers who chose institutional delivery and 1.2 percent of the ASHAs reported 21-30 women giving institutional delivery during the last three months.

Apart from this, this study has made of whether the ASHAs accompanied the expecting mothers to the health care facilities and remained with them till they got discharged. Table-4.6 presents the places of delivery where expectant mothers give birth. A majority (72.6 percent) of the ASHAs reported that they accompany the pregnant women in most of the delivery cases to the District Headquarter Hospital, Kendrapara. 58.3 percent of the ASHAs mentioned that they prefer to take expectant mothers to the CHCs while 36.9 percent of them said that they preferred to take them to the PHCs for institutional delivery if cases were expected to be normal deliveries and if there were no complications associated with the mother. Only 2.4 percent of the ASHAs said that they

had to finally shift the expecting mothers to the private nursing homes when cases were denied by the doctor of the CHCs/DHH due to the rise of a complex situation at the last moment or on being requested by the family members of the pregnant women.

While discussing with the ASHAs, some of them reported that even after all the necessary steps and the financial facilities provided by the government, deliveries at home are still widely practiced in some parts of Kendrapara district. They were also asked about the reasons responsible for these occurring deliveries at home even after the implementation of the JSY under the NRHM. They replied saying that (see Table-4.6), there are several reasons responsible for this. All of them mentioned that one of the major causes is the lack of appropriate facility available nearby in the villages due to which sometimes the expectant mothers hesitate to go all the way up to the health care institutions for their delivery. The majority of the ASHAs (77.4 percent) expressed that delivery at home is less expensive and people often avoid going to the health care institutions as they don't have enough money to spend for an institutional delivery.

Table - 4:6: ASHA's help in performing institutional delivery in different health institutions and percentage of ASHA expressed reasons for Home delivery

Sl. No.	Particulars	Place of delivery	Response (Yes) by number of ASHA	n=84 In %
1	Place of institutional delivery supported and accompanied by ASHA	District Headquarter Hospital	61	72.6
		CHC	49	58.3
		PHC	31	36.9
		Unavailability of appropriate facility nearby the villages	84	100.0
		Delivery occurred on the way to hospital	3	3.6
		No transport available when required immediately	43	51.2
2	Reason for home delivery	Home delivery is less expensive	65	77.4
		Indifferent behavior of medical doctor and paramedical staffs	10	11.9
		Home delivery is more convenient	23	27.4
		Family/Cultural/Social reasons	5	6.0
		Fear of sutures/Cesarean	11	13.1
		Unaware about the JSY scheme	3	3.6

The ASHAs also said that the provision of cash transfer to the expectant mothers is Rs 1400/- which is not sufficient for purchasing the necessary drugs and other associated costs for conducting an institutional delivery. They have to spend much more at a health care facility and it is difficult for them to arrange so much money immediately. As a result most of the poor pregnant women still prefer delivery at home rather than institutional delivery even though the latter is considered as safe and secure for both mother and child. More than half of the ASHAs (51.2 percent) have mentioned that transportation facilities are not available immediately in the rural areas in times of need. Hence, sometimes delivery occurs at home while trying to arrange for a vehicle with no time left to shift the woman to the hospital. 3.6 percent of the ASHAs also said that, while taking the expectant mothers to the health institutions, sometimes delivery occurs on the way due to the delay in arranging for the vehicle. Among the ASHAs, 27.4 percent reported that delivery at home is more convenient, 11.9 percent said that due to the indifferent behavior of the medical and paramedical staff, expectant mothers are often unwilling to go to the health care institutions, 13.1 percent reported that some of the pregnant women feel the fear of sutures/Cesarean while 6 percent mentioned that due to the restriction imposed by their families or some cultural or social reasons, they are not permitted to give birth at the health care institutions. This particularly happens among the Muslim communities due to their cultural stringencies. Interestingly, 3.6 percent of the ASHAs, however, contended that some people are still unaware of the JSY scheme and therefore, they prefer to give birth at home (see Table-4.6).

4.1.6 Effective Implementation of the NRHM: Challenges Ahead

The ASHAs are certainly interested to work towards an effective implementation of the NRHM but the kind of challenges they face are quite difficult to overcome. Though they were promised of being provided with performance-based incentives, such heavy loaded health activities starting from immunization to accompanying expectant mothers to the health care facilities and staying with them till they are discharged from the health institutions made them feel extremely overburdened. They said that they carried out the work assigned to them as they feel that it is a kind of service to the community. Hence, incentives are very important for the ASHAs as they don’t have a permanent job as well as a fixed salary system. But the question arises as to whether they receive their monetary incentives on time? Are they happy with their incentives or not?

What are the problems they commonly face regarding their receiving of the incentives? What type of additional support do they require for an effective implementation of the NRHM? All such questions are discussed during the study (see Table-4.7 and Table-4.8). It was found that each of them receives nearly Rs 501 -750 every month. This was reported by a majority (69 percent) of the ASHAs. Only 31 percent reported that they receive around Rs 751-1,000/- per month. On being asked about whether they are happy with such an amount of incentive or not, only 33.3 percent answered in the affirmative while a majority (66.7 percent) expressed their dissatisfaction. However, most of them (88.1 percent) revealed that they received their due incentives on time while 11.9 percent complained about not receiving their incentives on time.

Table - 4.7: Average money received by ASHA per month for her work

	Incentive money: Amount receives & happy with incentives & timely receive incentives	**Number of ASHA Responded Yes**	**n=84 In %**
	Incentive money Rs. 501-750	58	69.0
	Incentive money Rs. 751-1000	26	31.0
	Happy with above Rs. Yes	28	33.3
	Not happy with above Rs. No	56	66.7
	Received incentive in-time-Yes	74	88.1
	Not received incentive on-time	10	11.9

Table - 4.8: Work wise incentive money received by ASHA

Sl. No.	**Incentive money**		**Number of ASHA said Yes**	**n=84 In %**
1	JSY incentives	Rs 350	63	75.0
		Rs 600	21	25.0
2	Sterilization	Rs 150	84	100.0
3	VHND	Rs 50	84	100.0
4	Immunization	Rs 50	2	2.4
		Rs 75	16	19.0
		Rs 100	2	2.4
		Rs 150	64	76.2
5	Sector meeting	Rs 100	10	11.9
		Rs 150	74	88.1

Note: This Table presents different types of incentives as paid to ASHAs in their respective areas and four types of work they were associated with. The Incentives vary as decided by particular areas as per number of ASHAs involved in duties.

Table-4.8 presents the kind of incentives the ASHAs receive by performing different types of tasks. It was found that they received incentives for their various activities, such as accompanying the beneficiaries of the JSY to the hospitals, permanent family planning, attending and performing duties on the village health and nutrition day, conducting immunization, antenatal care, and attending sector meetings every month. It was also noticed that the majority of the ASHAs said that they received Rs. 350/- for assisting the beneficiaries of the JSY to the hospitals, while 25 percent of them said they received Rs 600/- for the same work. While conducting field survey it was noticed that there are different rates of incentives received by the ASHAs according to the number of ASHAs working in a particular locality. All the ASHAs mentioned that they received Rs. 150/- for sterilization and Rs. 50/- for attending the Village Health and Nutrition Day. They received different incentives of Rs. 50/-, Rs. 75/- and Rs. 150/- for the same task of immunization as revealed by 2.4 percent, 19 percent and 76.2 percent of the ASHAs respectively. For attending a sector meeting, each ASHA receives Rs. 100/- as revealed by 11.9 percent of them, and Rs. 150/- according to 88.1 percent in different areas.

Table - 4.9: Types of cooperation and difficulties faced by ASHA while on duty

Sl. No.	Categories	Number of ASHA said Yes	n=84 In %
1	Proper co-operation from PRI & VHSC	82	97.6
2	Face any sort difficulties while working	57	67.9
3	Funds not available in time	10	11.9
4	Adequate training is not provided	8	9.5
5	Delay in the supply of drugs	45	53.6
6	Behavior of staff not appropriate	15	17.9
7	Inadequate facilities for institutional delivery	1	1.2

Table - 4.10: The kind of support ASHA needed for implementing NRHM effectively

Sl. No.	Categories	Number of ASHA said Yes	n=84 In %
1	More training is to be arranged for ASHAs & community members	21	25.0
2	ASHA needs a fixed remuneration	84	100.0
3	Payment need to be given timely	84	100.0

Table - 4.11: ASHA's views on institutional delivery and major highlights of NRHM

Sl. No.	Categories	Number of ASHA said Yes	n=84 In %
1	Funds & facilities are available under JSY	49	58.3
2	Better facilities are available for PHCs/CHCs for referring patients	45	53.6
3	Transport facilities are available	11	13.1
4	Decentralization	1	1.2

The ASHAs were also asked about the type of difficulties they generally faced while performing their duties (see Table-4.9). A majority of them (97.6 percent) reported that they got the proper coordination from the members of the Panchayati Raj Institutions (PRIs) and the Village Health and Sanitation Committee (VHSCs). However, around 68 percent of them complained that they did face different kinds of problems. More than half (53.6 percent) of them mentioned delay in the supply of basic drugs, indifferent behavior of the medical and paramedical staff and inappropriate facilities in the health institutions (as reported by around 18 percent of the ASHAs) as some of the problems they generally faced quite often. Around 12 percent of them reported the unavailability of funds on time while 9.5 percent complained about the lack of adequate training to carry out the various activities under the NRHM. If such difficulties could be overcome, they would certainly perform much better. Most importantly, 1.2 percent of the ASHAs reported that the facilities provided under the promotion of institutional delivery are not adequate due to which sometimes expectant mothers are not interested to go for institutional delivery.

The ASHAs have assured that if they were to be provided with all kinds of support and other facilities, they would perform their activities in a much more effective manner (see Table-4.10). They are interested in playing a significant role in providing better health services to the rural people. Among them, 25 percent of the ASHAs asked for more training for themselves and for the other community members in order to ensure an effective health care delivery system in the rural areas. All the ASHAs (100 percent) demanded for a fixed remuneration and timely payment, as they were not satisfied with the kind of incentives they received at the moment. Finally, on being asked about the reasons behind the increase in institutional deliveries, (see Table-4.11) 58.3 percent of

them cited the cash provision for institutional delivery and the present health care facilities available at the PHCs as reasons that have encouraged institutional deliveries. Also, the CHCs and the DHH are major reasons for the increase in institutional deliveries. They also said that a referral facility system (as told by more than half of the ASHAs which is 53.6 percent), the provision of transport facilities (said by 13.1 percent of the ASHAs), and community participation and decentralization of the health service delivery system (according to 1.2 percent) have considerably attracted people making them visit the health care institutions and avail the health services after the implementation of the NRHM.

4.2 Implementation of the Janani Suraksha Yojana in Kendrapara District

The Janani Suraksha Yojana (JSY), a 100 percent Centrally sponsored program, is one of the most important flagship programs of the Government of India (GoI) under the NRHM. It is a modified program of the National Maternity Benefit Scheme (NMBS) of 1995 that was carried out under the Reproductive and Child Health (RCH-II) program. The JSY is a safe motherhood intervention under the NRHM being implemented with the objective of promoting institutional delivery among the poor expectant mothers. This scheme provides the conditional cash assistance to the eligible pregnant women which integrate with antenatal care during pregnancy, institutional care during delivery and immediate post-partum care after discharge from the health care institutions. Such health services are provided to the expectant mothers through health service centers by establishing a system of properly coordinated care by a field level health worker called the ASHAs and an Auxiliary Nurse Midwives (ANMs).

The JSY scheme aims at reducing the overall Maternal Mortality Ratio (MMR) and Infant Mortality Rate (IMR) in the country by encouraging institutional delivery and providing cash assistance to the Below Poverty Line (BPL) families. The benefits under the scheme are extended to all respondents of the age of 19 years and above, up to two live births from the BPL families of 18 low performing states, namely, the 8 Empowered Action Group (EAG) states of Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Rajasthan, Bihar, Jharkhand, Odisha and the eight North-East states of Arunachal Pradesh, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim, and Tripura, and the other two states of Himachal Pradesh and Jammu and Kashmir (also considered as Low Performing States-LPS). The remaining states in India are considered

as High Performing States (HPS). The cash assistance through the JSY is provided to the pregnant women even after the third live birth if the mother chooses to undergo sterilization in the health care institution where she delivered the baby, immediately after the delivery. The benefit would also be available to pregnant respondents falling in the above category even if they have not registered under the JSY previously but are in need of institutional care for delivery. The details of the financial assistance under the JSY are presented in Table-4.12.[2] However, Odisha provides the cash incentives of the JSY under the NRHM to all pregnant women who have given birth at a health care institution irrespective of their/family's BPL status, as Odisha is considered as the most alarming state with regard to infant and maternal deaths.

Table - 4.12: Provision of financial packages for ASHA under the NRHM

Category of State	Rural areas			Urban areas		
	Assistance package to Mother	Assistance package for ASHA	Total incentives in Rs.	Assistance package to Mother	Assistance package for ASHA	Total incentives in Rs.
Low Performing States (LPS)[3]	1,400	600	2,000	1,000	200	1,200
High Performing States (HPS)[4]	700	200	900	600	200	800

Source: Janani Suraksha Yojana-Guidelines for Implementation, MoHFW, GoI.

***** (In LPS and HPS, BPL) pregnant respondents, who are of 19 years and above age and prefer to deliver at home are entitled to cash assistance of Rs. 500 per delivery up to two live births. But in 2010, Rs. 500 was denied to pregnant women to encourage institutional delivery due to the critical situation that arises during delivery at home in Odisha. In LPS - All births, delivered in a health care facilities: Government or Accredited private health institutions are provided financial incentives under the JSY whereas in HPS financial assistances are given up to two live births only.

The package for the ASHA, as provided in the scheme, includes the referral transport assistance for the ASHA along with the expectant mothers to go to the nearest health center. It is also mandatory for the ASHA to stay with the pregnant women in the health care facility till she gives birth and is discharged from the health care institution. In

[2] *Janani Suraksha Yojana-Guidelines for Implementation*, Ministry of Health and Family Welfare, Government of India, pp. 1-3.

[3] Low Performing States (LPS) includes: Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Odisha, Rajasthan and Jammu and Kashmir.

[4] High Performing States (HPS) includes remaining states in India excluding the list of low performing states.

case of a Caesareans section, the First Referral Units/Community Health Centers would provide emergency obstetric services. Where government specialists are not available in a health center, assistances up to Rs. 1500/- per case would be provided for hiring the services of private experts to carry out the surgeries either in a government medical facility or in a private hospital.[5] In this situation, this chapter presents the findings from the field regarding the implementation of the JSY under the NRHM in Kendrapara district, emanating from 840 respondents (mothers who are both JSY beneficiaries and non-beneficiaries).

4.2.1. Background and Characteristics of the Respondents

The background and characteristics of the respondents, both JSY beneficiaries (those who have received the JSY incentives for institutional delivery) and non-beneficiaries (those who gave birth at home and have not received the JSY incentives), are included in this study which was carried out in the rural areas of Kendrapara district. Odisha is one of the High Focus states in India where all the pregnant women are provided with the conditional cash assistance scheme irrespective of their financial status. The pregnant women from both APL and BPL categories fall under the JSY scheme, which is certainly not treated in the same manner in Odisha as compared to all the other states in the country. It depends on the pregnant women as to whether they would like to avail the JSY facilities or not with respect to their economic conditions, as they sometimes feel that giving birth at a health care institution is more expensive. Hence, a few expectant mothers do not go to the health institutions as they cannot afford the cost of institutional delivery. In such cases, they prefer to go for delivery at home, irrespective of the state's support for institutional delivery. On the other hand, the rich prefer to go to the private nursing homes.

Table-4.13 presents the backgrounds and other characteristics of the respondents who have given birth either in the health care institutions or at home. However, it was found that the percentage of cases belonging to the JSY beneficiaries is more, and is constituted by 32.9 percent from among the general categories, 31.3 percent from among the OBCs and 31.7, 1.5 and 2.6 percent from the SCs, STs, and the Minority communities respectively.. The study also finds that the respondents are predominantly Hindus (97.1 percent), 2.7 percent are Muslims and 0.2 percent are Christians.

[5] Ibid, p. 4.

The majority of the respondents (see Table-4.13), and more than half of them belong to the age group of 25-29 years, 23.7 percent of them to the age group of 20-24, and 22.5 percent in the age group of 35-39. The average age of the respondents are 29.5 years. Table-4.13 shows that 91.3 percent of the respondents are educated and among them, 13.1 percent have completed their education up to primary school, 19.1 percent up to middle school, a majority which is 46.3 percent have completed their matriculation, 9.7 percent up to intermediate, and a 3.1 percent are undergraduates and above. While looking at the economic status of the respondents, it was found that 45 percent of them belong to BPL category while 55 percent belong to APL category. It was also found that 36.4 percent of the households consist of five members, and on an average, each family has six members (Table-4.14).

Table -4.13: Background and other characteristics of the Respondents

Sl. No.	Characteristics	Age group	Number of Respondents	n=840 In %
1	Age group	15-19	10	1.2
		20-24	199	23.7
		25-29	424	50.5
		30-34	189	22.5
		35-39	17	2.0
		40-45	1	0.1
		Average age group - 29.5		
2	Caste	General	276	32.9
		OBC	263	31.3
		SC	266	31.7
		ST	13	1.5
		Minority	22	2.6
3	Religion	Hindu	816	97.1
		Muslims	22	2.7
		Others	2	0.2
4	Education	Illiterate	73	8.7
		Up to Primary (Till 5^{th} class)	110	13.1
		Middle class (6^{th} -7^{th} class)	161	19.1
		High school (8^{th} -10^{th} class)	389	46.3
		Intermediate	81	9.7
		Under Graduate & above	26	3.1
5	BPL list	BPL status	378	45.0
6	APL list	APL status	462	55.0

Table - 4.14: Composition of family members of the Respondents

Sl. No.	Family size	Number of the Respondents	n=840 In %
1	Having 3-4 members	6	0.7
2	Having only 5 members	306	36.4
3	Having only 6 members	293	34.9
4	Having 7-10 members	206	24.5
5	11 & above	29	3.5
	Average	**6**	**0.7**

4.2.2 Household Amenities of the Respondents

Household amenities are vital factors for good health and a healthy lifestyle. Various studies reveal that most of the rural areas are prone to ill health as the household amenities are not conducive to good health. Table-4.15 shows that a majority of the households (67.4 percent) live in *Kuchha* houses, 14.6 percent in semi-*pacca* and 18 percent live in *pacca*.

Only 64.5 percent of the households have electricity connections while 35.5 percent of the households depend on kerosene oil to light up their houses. It was noticed that 94.3 percent (according to Census-2001, 94.19 percent as per Census-2011) of the population of Kendrapara district belongs to the rural areas. They have major problems while accessing the basic amenities. Among the respondents, only 1.1 percent has access to piped water supply facilities, 78.8 percent of the households depend on the public hand pump for drinking water, and 14.2 percent of the households have their own hand pump system. It was also found that only 22.3 percent of the households have toilet facilities while majorities of the households (76.2 percent) use open space for toilets, 1.5 percent of the households use common toilets. Most of the households (97.7 percent) do not have a proper sewerage system and they use open paths for drainage. It has often been argued that households having covered drainage system have several health advantages. For instance, a covered sewerage system keeps the surroundings clean and prevents the spreading of mosquitoes as well as various mosquitos' related diseases like malaria and dengue. Only 0.5 percent of the households have a covered sewerage system. This shows the lack of proper sanitation in the rural areas of Kendrapara district which is perilously exposed to various health problems.

Table - 4.15: Household amenities of the Respondents

Sl. No.	Characteristics	Type	Number of Respondents said (Yes)	n=840 In %
1	Housing	Kuchha	566	67.4
		Semi-Pacca	123	14.6
		Pacca	151	18.0
2	Lighting	Electricity	542	64.5
		Kerosene	298	35.5
3	Drinking water	Tap	9	1.1
		Own well	50	6.0
		Own hand pump	119	14.2
		Public hand pump	662	78.8
4	Availability - toilet	Exclusive	187	22.3
		Open space	640	76.2
5	Sewerage system	Covered path	4	0.5
		Open path	821	97.7
		No system	15	1.8

4.2.3 Awareness about the NRHM, ASHA, and JSY

Presently, the JSY is a well known health program functioning in every part of rural Odisha. But it was found (see Table-4.16) from the field survey that a majority of the respondents (59.4 percent) were not aware about the NRHM. Only 40.6 percent of the respondents were aware of the NRHM, out of which 14 percent belonged to the age group of 25-29 and had an educational qualification of 5^{th} to 10^{th} class. So, it is clear that education plays a significant role in creating awareness about health programs, seeking health information, and decision making in order to access the health care facilities in times of need. Around 21 percent of the respondents of the age group of 25-29 were more aware about the NRHM, irrespective of their education. Apart from being aware of the NRHM, all the respondents (100 percent) were aware about the ASHA (Table-4.17), and 98.2 percent of them knew that there was at least one ASHA who had been active in their village. Table-4.18 presents that 76.2 percent of the respondents said that they knew about the JSY from the ASHAs followed by only 2.7 percent of the respondents who knew from the health personnel (ANMs/Doctors), 11 percent from the television, and the remaining 10.1 percent from either the Radio or relatives/friends/meetings at Goan Kalyan Samiti (GKS) etc. However, it is noticed that the ASHA plays a significant role in

creating awareness about the JSY among the respondents whereas the other sources have a limited role in it.

Table - 4.16: Percentage of Respondents aware about the NRHM

Age group	Illiterate	Less than 5th class	5th -10th class	Intermediate	Under Graduation	Total heard NRHM	n=840 In %
18-19	0	0	2	0	0	2	0.23
20-24	1	2	65	6	3	77	9.16
25-29	8	7	**118 (14%)**	28	13	174	20.71
30-34	2	5	48	15	7	77	9.16
35-39	2	1	6	1	0	11	1.30
Total	**13**	**15**	**239**	**50**	**23**	**341**	**40.56**

Table - 4.17: Percentage of Respondents aware about the ASHA

Sl. No.	Awareness	Number of Respondents said (Yes)	n=840 In %
1	Awareness of ASHA	840	100.0
2	**One** ASHA active in the villages	825	98.2
3	**Two** ASHAs active in the villages	13	1.6
4	**Three** ASHAs active in the villages	2	0.2

Table -4.18: Percentage of Respondents aware about the JSY

Sl. No.	Source of information	Number of Respondents said (Yes)	n=840 In %
1	TV	92	11.0
2	ASHA	640	76.2
3	Radio/TV/ASHA	50	6.0
4	ANM/Doctor/AWW	23	2.7
5	Relatives/Friends	18	2.1
6	Meeting at GKS	2	0.2
7	Not remember properly	5	0.6
8	Do not know	10	1.2

Source: Data computed from the field study information

Table - 4.19: Percentage of Respondents heard about the JSY

Sl. No.	When	Number of Respondents heard about JSY	n=840 In %
1	Before being pregnant	339	40.3
2	During pregnancy	487	58.0
3	Not remember	14	1.7

Table - 4.20: Percentage of Respondents aware about the JSY, GKS, & activities of the ASHA

Sl. No.	Awareness activities	Number of Respondents Said (Yes)	n=840 In %
1	Awareness of JSY	830	98.8
2	ASHA carries a drug KIT	818	97.4
3	ASHA gives common medicines free of cost	796	94.8
4	Discussion of common health problem & awareness	788	93.8
5	Recipient of JSY incentives	719	85.6
6	Awareness of Goan Kalyan Samiti	185	22.0

It is also noticed that 58 percent of the respondents came to know about the JSY when they got pregnant whereas 40.3 percent of them knew about it before getting pregnant (see Table-4.19). The study (see Table-4.20) also finds that a majority of the respondents (97.4 percent) know that the ASHA carries a drug KIT, 94.8 percent know that she also provides common medicines free of cost, and 93.8 percent of the respondents shared that the ASHA discusses about common problems of health and awareness with them. Only 22 percent of the respondents know about Village Health and Sanitation Committee (VHSC) which is also called the Goan Kalyan Samiti (GKS) in Odisha. The GKS plays a significant role in improving and maintaining village health and sanitation but people are not well aware of its the functions in the Kendrapara district. Table-4.20 presents that 85.6 percent of the respondents have received the JSY incentives. About 14.4 percent of them don't avail the JSY incentives as they have chosen delivery at home. The respondents who had given birth, however, (98.8 percent) know about the JSY.

Table-4.21, gives information about the facilitation of the ASHA for providing the JSY cards, and about 3.1 percent of the JSY beneficiaries who had faced difficulties in getting JSY cards. It is also noticed that 92.7 percent of the respondents received JSY cards from the ASHAs while 95 percent received them from the ANMs. While conducting the field survey, it was found that around 97 percent of the respondents shared that they did not face any sort of difficulty in getting the JSY card. Apart from that, very few respondents (0.2 percent) complained about the non-availability of cards

while 0.5 percent said that the ANM asked for bribes in exchange of the card. It is also identified from 0.4 percent respondents that the formalities to be fulfilled for getting the cards are cumbersome. Sometimes the ANMs/ASHAs do not distribute cards to the expectant mothers as there remains a possibility of the card getting lost before the beneficiary is admitted for institutional delivery.

Table - 4.21: Percentage of Respondent's opinion on facilitation by ASHA

Sl. No.	Characteristics	No. of Respondents said (Yes)	n=840 In %
1	ASHA's facilitated for JSY card	779	92.7
2	ANM distributes JSY card to JSY beneficiary	798	95.0
3	Difficulties in procuring JSY card	26	3.1
Reason for difficulties			
4	No difficulties faced	814	96.9
5	Card were not available	2	0.2
6	Asked pay money for JSY card	4	0.5
7	Formalities are too cumbersome	3	0.4
8	JSY card not given as they may lose	17	2.0

4.2.4 The Janani Suraksha Yojana: Motivation, Places and Stages of Registration

Motivation for institutional delivery is a significant factor for ensuring a safe motherhood and reducing both infant and maternal mortality. Table-4.22 gives information regarding the motivation of the respondents to prefer institutional delivery. It was found that all the respondents were motivated to go for the JSY registration and wished to give birth at a health care institution. Among the respondents, a majority (64.6 percent) of them are motivated by the ASHAs while 31 percent are motivated by the ANMs. Apart from that, the others who have played the role of a motivator include the medical doctors (0.8 percent), the Anganwadi workers (0.8 percent), the female health workers (0.2 percent), and family members/relatives/friends (2.5 percent). The "availability of money under the JSY" and the "availability of transport assistance" under the NRHM are considered as the main motivators for choosing institutional delivery but the field report suggests that it is not a significant motivational factor for institutional delivery. The important factors are that the "*institutional delivery is safe delivery*" said by 82.3 percent and it is better for both the mother and the newborn, shared by 82.7 percent

respondents which motivated to them for delivery at health care institutions. At the same time, a “referral slip to the JSY beneficiary” and “previous child born in the hospital” are also not major factors that determine the giving of births in the health care institutions. Hence, the ASHA’s motivations, institutional delivery as safe delivery and good for both mother and newborn, have emerged as the significant motivational factor for institutional delivery.

Table -4.22: Percentage of Respondents motivated for the JSY Registration

Sl. No.	Characteristics	Number of JSY beneficiary said (Yes)	n=840 In %
1	Total number of JSY beneficiaries motivated	840	100.0
2	ASHAs	543	64.6
3	ANMs	260	31.0
4	Doctors	7	0.8
5	Anganwadi Workers	7	0.8
6	Female Health Workers	2	0.2
7	Family Members/ Relatives/Friends	21	2.5
8	Referral slips given to a JSY beneficiary by ASHA	27	3.2
9	Availability of Money under JSY	284	33.8
10	Institutional delivery is safe delivery	691	82.3
11	Better care for both mother and newborn	695	82.7
12	Availability of transport assistance	86	10.2
13	Previous child was born in the hospital	20	2.4

Table - 4.23: Percentage of Respondents registered through various health centers

Sl. No.	Place of registration	Number of JSY beneficiaries being registered	n=840 In %
1	Health Sub-Centers	178	21.2
2	PHCs	166	19.8
3	CHCs	2	0.2
4	District HHH Hospitals	9	1.1
5	Anganwadi centers	404	48.1
6	At home with ASHAs	19	2.3
7	Panchayat offices	49	5.8
8	Other places	10	1.2
9	Not remember	3	0.4

The pregnant women are reluctant to go to distant places for registration and for this reason, the facilities are provided to the pregnant women nearer to their houses. These places are shown in Table-4.23, which presents the registration of the expectant mothers, and notices that 21.2 percent of them registered in the Health Sub-Centers, 19.8 percent at the PHCs, 0.2 percent at the CHCs, 1.1 percent at the District Headquarter Hospitals, 48.1 percent at the Anganwadi centers, 2.3 percent in their own homes brought around by the ASHAs, 5.8 percent at the Panchayat offices by the ANMs and 1.2 percent in other places.

Table - 4.24: Percentage of Respondents registered during the stages of pregnancy

Sl. No.	Month of registration	Number of Respondents being registered	n=840 In %
1	First trimester	251	29.9
2	Second trimester	506	60.2
3	Third trimester	83	9.9

Table-4.24 presents the percentage distribution of the JSY beneficiaries by stages of pregnancy as were registered under the scheme. The Table-4.29 shows that about 30 percent of the respondents were registered during the first trimester, 60 percent during the second trimester and the remaining 10 percent were registered during the third trimester.

4.2.5 Advice Received from ASHAs/ANMs during the Antenatal Period

The ASHAs and the ANMs have a significant role to play in advising the expectant mothers about regular and timely food habits, the ANC check-ups, dangerous signs of pregnancy, delivery care that includes proper rest, breastfeeding, newborn care, family planning if they have had more than two children, places to go for check-ups during pregnancy, the expected date for delivery as well as the place of delivery. They also suggest places of referral in case of complications identified earlier during check-ups, so that the expectant mother would not face any kind of delivery related complications during pregnancy and while attending health care facility for the delivery. Apart from that, the ASHA helps in arranging a vehicle for transport which is to be used to reach the health care institution. The ASHA also accompanies the beneficiary of the JSY to the health institution and stays with the expectant mother till she gets discharged from the health facility. Table-4.25 shows that 10.4 percent of the respondents said that

they were advised about the date of next check-up, 1.4 percent told about place of next check-up, 27.5 percent about expected delivery, 26 percent were advised about the expected date and place of delivery, 28.7 percent about their next check-up and expected delivery, and 6 percent about the place of referral in case of complications in future.

Table - 4.25: Percentage of Respondents registered for the ANC under JSY

Sl. No.	Register with ASHA for Antenatal Check-up	Number of expectant mothers registered	n=840 In %
1	Date of next check up	88	10.4
2	Place of next check up	12	1.4
3	Date of expected delivery	231	27.5
4	Expected date and place for delivery	218	26.0
5	Next check up & expected delivery	241	28.7
6	Place referral for complication	50	6.0

4.2.6 Delivery Place and Duration of Stay by the Beneficiaries of the JSY

Table-4.26 presents a selection of places for the delivery by the JSY beneficiaries in Kendrapara district. It shows that the beneficiaries of the JSY select various health service centers for institutional delivery.

Table - 4.26: Delivery place & type of delivery conducted in health service institutions

Sl. No.	Place of delivery	Number of expectant mothers being given birth	n=840 In %
1	District Headquarter Hospital	279	33.2
2	Community Health Centers	243	28.9
3	Primary Health Centers	167	19.9
4	Government Medical College, Cuttack	16	1.9
5	Nursing Home/Private Hospital	14	1.7
6	Total delivery in government hospitals	705	83.9
7	Total institutional delivery cases	719	85.6
8	Home	121	14.4
9	Normal	789	94.0
10	Cesarean	51	6.0

It was found (from Table-4.26) that most of the delivery cases of the JSY beneficiaries are conducted both at the District Headquarter Hospital (DHH) and the Community Health Centers (CHCs). It was reported that the DHH is the front runner in

conducting deliveries, and 33.2 percent of the deliveries are conducted at the DHH while about 29 percent are conducted at the CHC levels and 20 percent at the PHC levels. Some of the complicated cases (around 2 percent) are referred to the Government Medical College, Cuttack. It has been documented that an overwhelmingly large proportion (about 84 percent) of the beneficiaries of the JSY prefer the government hospitals for institutional delivery and only 1.7 percent normally choose nursing homes or private hospitals. If we look at the institutional delivery cases which were conducted at both the government and the private hospitals, it accounted for 85.6 percent, which is a good step towards the reduction of both infant and maternal mortality cases particularly in Kendrapara district. The reduction rates of both the child and maternal mortality of the district also contribute to the reduction of the IMR and the MMR of the state. Delivery at home, however, is still persistent in some blocks of the district and accounts for 14.4 percent. Therefore, the JSY has undoubtedly helped in increasing the number of institutional deliveries in Kendrapara district, and in subsequently reducing the IMR and the MMR in the district as well as in a High Focus state like Odisha.

The type of delivery (normal/Caesarean) is important for the expectant mother. Table-4.26 shows the type of deliveries that the respondents have undergone. This was done to find out their access to the services as well as the quality of services available to the respondents at the time of delivery. It was noticed that 94 percent of the deliveries are conducted as the normal delivery and 6 percent of the deliveries are conducted as Caesarean, which is considerably lower in Kendrapara district.

Table - 4.27: JSY beneficiaries stay in health care institutions after the delivery

Sl. No.	Types	Number of Respondents agreed	n=840 In %
1	Home delivery	121	14.4
2	Few hours	365	43.5
3	One day	205	24.4
4	More than one day & less than one week	96	11.4
5	More than one week	53	6.3

Table-4.27 gives a percentage of the JSY beneficiaries who stay at the health care institutions after the conduction of their delivery. It was found that out of 719 mothers who had opted for institutional delivery, 43.5 percent is advised to stay in health care

institution for a few hours (up to 8 hours) after the delivery, 24.4 percent is advised to stay back for 24 hours after the delivery. The doctors advised 11.4 percent of the mothers to stay more than a day but less than a week, and 6.3 percent was advised to stay for more than a week after the conduction of their deliveries because they were undergoing major Caesarean section.

4.2.7 Institutional Delivery from 2006-07 to 2010-11 in Kendrapara District

During the District Level Household Survey (DLHS)-2 (2002-04), Odisha had accounted for only 34.4 percent of the institutional deliveries, and the rest 64.4 percent of deliveries in the state were conducted at home. Overall, the state recorded 43.5 percent safe deliveries. Kendrapara district recorded 42.3 percent of institutional, 57.7 percent of delivery at home, and 53 percent safe delivery.[6] However, institutional delivery in Odisha has increased from 34.4 percent in 2002-04 (DLHS-2) to 44 percent in 2007-08, deliveries at home have dropped from 64.4 percent in 2002-04 to 54.6 percent in 2007-08. The safe delivery also increased from 40.3 percent in 2002-04 to 50.9 percent in 2007-08 at the state level.[7] At the district level, institutional deliveries have increased from 42.3 percent in 2002-04 to 46.9 percent in 2007-08 as recorded in the DLHS-3 (2007-08). As a result of this, the IMR has also decreased from 75 (2005) to 61 (2010) per 1,000 live births in the state.[8] The field data given in Table-4.28 and Figure-4.1 show some interesting results at the district level. It was reported that 4421 institutional deliveries and a same number of JSY beneficiaries occurred in Kendrapara district during 2006-07, the initial period for the implementation of the JSY. However, the numbers of deliveries conducted at home were 6667, which was 2246 more than the corresponding number of institutional deliveries. Within a year of the implementation of the NRHM, during 2007-08, the number of deliveries conducted at home had declined by more than its half and had reached 3001, while there was a steeper rise in institutional deliveries that had increased by more than three times and reached 15155 in 2007-08. The number of JSY beneficiaries had also increased by more than four times and reached 18297 in

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[6] "Reproductive and Child Health, District Level Household Survey-2002-04, DLHS-2" *Orissa*, Government of India, Ministry of Health and Family Welfare, International Institute for Population Sciences, Mumbai, and TNS India Pvt. Ltd., New Delhi, p. 79.

[7] "District Level Household and Facility Survey-2007-08", *Fact Sheet Orissa*: *Orissa Key Indicators*, Government of India, Ministry of Health and Family Welfare, International Institute for Population Sciences, Mumbai,

[8] SRS Bulletin, Sample Registration System, Registrar General of India, Vol. 46, No.1, December, 2011.

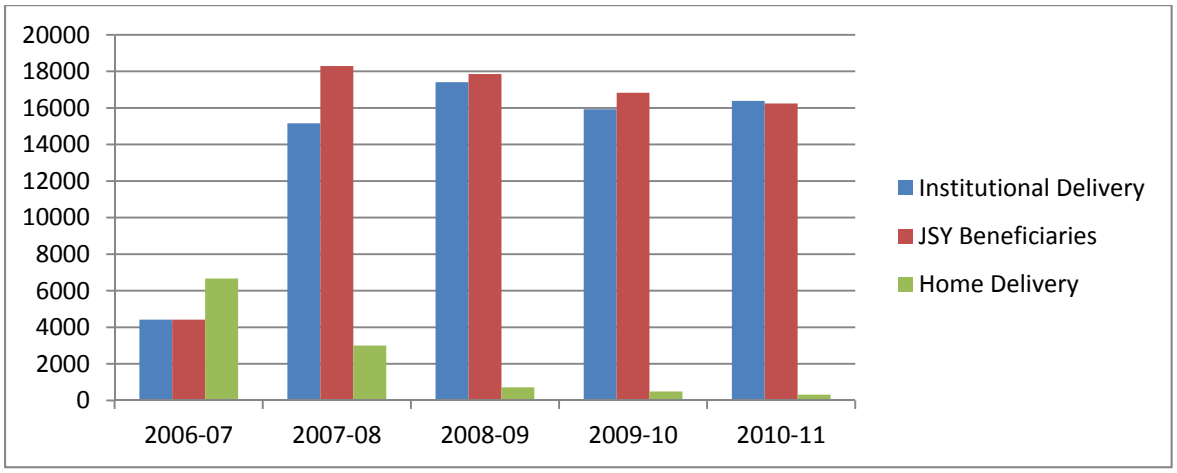
Kendrapara district in 2007-08. Afterwards, however, it has not shown any such appreciable change either in institutional deliveries or in the number of JSY cases.

Table - 4.28: Record of institutional deliveries, deliveries at home and cases of JSY beneficiaries in Kendrapara district from 2006-07 to 2010-11

Year	Institutional	JSY beneficiaries	Home
2006-07	4421	4421	6667
2007-08	15155	18297	3001
2008-09	17411	17859	714
2009-10	15929	16834	489
2010-11	16383	16246	317
Total	69299	73657	11188

Source: DHIO, Kendrapara district, and Office of NRHM, Bhubaneswar, Odisha.

Figure- 4.1: Record of institutional deliveries in Kendrapara district from 2006-07 to 2010-11



Source: DHIO, Kendrapara district and Office of NRHM, Bhubaneswar, Odisha.

Table - 4.29: Record of total infant and maternal deaths reported in Kendrapara district from 2006-07 to 2012-13

Year	Total infant deaths	Total maternal deaths
2005-06	571	16
2006-07	442	14
2007-08	544	23
2008-09	452	16
2009-10	382	11
2010-11	443	20

Source: DHIO, Kendrapara district and Office of NRHM, Bhubaneswar, Odisha.

The Table-4.28 shows that it was only marginally increased up to 17411 institutional deliveries and 17859 JSY cases during 2008-09. However, after 20008-09, both institutional delivery and delivery at home declined again and reached 15929 institutional deliveries and 16834 JSY cases in 2009-10. Further, there was a rise in institutional deliveries to 16383 and in JSY cases to 16246 in 2010-11. But interestingly, the number of deliveries at home has reduced drastically from 6667 in 2006-07 to 317 in 2010-11. Though, delivery at home has declined in Kendrapara district, it is not reflected in either institutional or the JSY cases. It may be included here that institutional deliveries are conducted by both government and private health care institutions and institutional deliveries conducted private health care institutions are included in this study.

The second part of the Table-4.29 shows reported death cases of the IMR and the MMR in Kendrapara district. It shows that during the implementation of the NRHM, the IMR in the district was reported in 571 cases in 2005-06 but within five years it declined 128 cases to 443 in 2010-11. But the MMR has rather increased 4 points from 16 cases to 20 cases within five years from 2005-06 to 2010-11. Though the reported cases of IMR have fallen into 128 points within five years, but the MMR has increased by 4 points within the same period. So, it shows that the impact of the NRHM on the reduction of the IMR, particularly in Kendrapara district, has been much appreciable. However, it has shown little increasing of the MMR in the district. The reason is not easy to understand within the process of implementation of the NRHM as deaths are not confined within the system of the NRHM as it goes beyond the capacity of the implementation processes as it includes a multi-dimensional factors starting from time of transportation of the pregnant women from her home to the health care institution, complexities associated during the time of birth, and economic capacity to shift the women due to the complexities noticed in the later stage of the delivery. It also depends on the educational qualifications, health awareness, and empowerment of the expectant mothers which are vital factors influences from the beginning of the antenatal care to the delivery at the health care facility. The community participation and local political involvement and their mobilization towards development of the health care system also play a significant role for proper health delivery system.

4.2.8 Mode of Payment and Timings of Receipt of the JSY Incentives

Table-4.30 presents the mode of payment of the JSY beneficiaries under the scheme. Earlier, money was directly given to the beneficiaries but due to malpractices, the cheque began to be issued to the JSY beneficiary directly. It is noticed that incentives were not given to 14.4 percent of the cases of delivery at home. Only those beneficiaries who had given birth in the health care institutions were given the incentives. Accordingly, 28.5 percent of the respondents were given JSY incentives by doctors, 47.3 percent by staff nurses, 7.6 percent by the ASHAs, and 0.5 percent by the pharmacists. Those who had given birth in nursing homes were not covered under the JSY cash incentive scheme. Table-4.31 shows that 33.4 percent of the beneficiaries received cheques from the District Headquarter Hospital (DHH). It signifies that a number of beneficiaries chose the DHH for their deliveries instead of any other health care institution. It was also noticed that 27.6 percent of the beneficiaries received cheques from the CHCs, and 21 percent from the PHCs.

Table-4.30: Percentage of JSY beneficiaries received JSY incentives from staff

Sl. No.	Cheque given by	No. of Respondents said (Yes)	n=840 In %
1	Home delivery not received	121	14.4
2	Doctor	239	28.5
3	Staff nurse	398	47.3
4	ASHA	64	7.6
5	Pharmacist	4	0.5
6	Nursing home delivery	14	1.7

Table - 4.31: Percentage of JSY beneficiaries received JSY cheque

Sl. No.	Cheque received from	No. of Respondents said (Yes)	n=840 In %
1	Home delivery not received	121	14.4
2	Dist. Headquarter Hospital	281	33.4
3	CHC	232	27.6
4	PHC	176	21.0
5	Govt. Medical College	16	1.9
6	Nursing home delivery	14	1.7

Table-4.32 gives information about the distribution of the JSY cash incentive (cheque) in terms of receiving and its time. It shows that 78 percent of the JSY beneficiaries have

received cheques in only one go whereas 6 percent said that they received the cheque after visiting the health care institutions a number of times. Incentives were not given to those who had given birth in nursing homes and other private health service institutions. The second part of the Table-4.32 (time of receiving of the incentives) presents that out of 86 percent of the JSY beneficiaries who had given birth in health institutions, 29 percent had received the incentives immediately after their delivery, 43.9 percent had received it after being discharged from the hospital, 9.4 percent had received it within one week after delivery, and 0.6 percent had received the incentives after one month of the delivery.

Table - 4.32: Percentage of Respondents received cheque for the institutional delivery

Sl. No.	Received incentives (Cheque)	No. of Respondents said (Yes)	n=840 In %
1	Home delivery not received	121	14.4
2	In one go	655	78.0
3	Number of times	50	6.0
4	Nursing home not received	14	1.6
	When received incentives	**No. of Respondents said (Yes)**	**n=840 In %**
5	Home delivery not received	121	14.4
6	Immediately after delivery	244	29.0
7	After discharge from hospital	369	43.9
8	Within one week after delivery	79	9.4
9	I don't, my husband knows	8	1.0
10	After one month	5	0.6
11	Nursing home delivery not received	14	1.7

4.2.9 Difficulties to Reach the Health Service Institutions

Though, the NRHM focuses on quality health care, there are some obstacles on its path which require the attention of the government. Otherwise the huge amounts of money that the NRHM pumps towards the development of rural health would be a distant dream for the rural people. It is found from the field study in Kendrapara district, from most of the rural villages in Odisha, the immediate transport facilities are not available at night for the purpose of reaching the hospitals even if they wished to give birth in the

health care institutions. The same problem has been noticed from Kendrapara district. There are transportation problems mainly in the two blocks namely Mahakalpada and Pattamundai in Kendrapara district that create major problems for pregnant women on their way to the health institutions. Transport is not available for 68.5 percent of the expectant mothers when they need to reach the hospitals for institutional delivery. There have been some instances observed from the field when there was no time to shift the woman to the hospital as some of them got their labor pain quite soon and gave birth at home. It was also found that for some of the expectant mothers, when they were shifted from the Kendrapara District Headquarter Hospital to the SCB Medical College, Cuttack, their babies died at the last moment on the way. Such incidents happen because of denial by the doctors at the last moment and their advising the family members to shift the woman to the Medical College, Cuttack when her condition became very critical. Therefore, it is extremely crucial to improve the condition of the transportation system (increase Ambulance services) at the district level for a prompt shift to higher health care facility in case of emergency identified at the last moment.

4.2.10 Reasons for Choosing Delivery at Home

There have been some cases of delivery at home documented from Kendrapara district, Odisha. It was found that 14.4 percent (121 cases) of these deliveries recorded as delivery at home out of the total envisaged sample (840 cases) in Kendrapara district (see Table-4.33).

Table - 4.33: Percentage of Respondents choosing for delivery at home

Sl. No.	Reasons for delivery at home	Types of reason of delivery at home out of 121 cases	n=121 In %
1	Delivery at home more convenient, comfortable and provides privacy	111	91.7
2	Can't afford as hospital delivery more expensive	87	71.9
3	No transport available during that time	83	68.5
4	No problem during first child	44	36.3
5	Indecent behavior of staff	34	28.0
6	Fear of suture and Cesarean	33	27.2
7	Nobody was at home	32	26.4
8	Delivery happened suddenly	25	20.6
9	Social and cultural barrier	3	2.4

Even though the government has made provisions of conditional cash assistance for institutional deliveries, delivery at home has been still noticed in a few blocks, such as Rajnagar, Rajkanika, Marsaghai, and Mahakalpada in Kendrapara district. There were also a few cases of child deaths among these above mentioned block where the cases of delivery at home found which increased the number of infant deaths in the district as well as in the state. During the field study the reasons behind delivery at home were reported and it was noticed that out of the 121 cases of delivery at home, 91.7 percent shared that they found it more convenient than institutional delivery, 71.9 percent mentioned that institutional delivery is more expensive and cannot be afforded by the poor. There were also complaints (68.5 percent) regarding the unavailability of vehicles for transport when labor pain started, 36.3 percent said that they did not face any kind of problems while giving birth to their first child, and 28 percent said that the indecent behavior of the medical staff had sometimes forced the expectant mother to choose delivery at home. Aside from that, 27.2 percent of the mothers had a fear of suture and Caesarean, 26.4 percent shared that nobody had been available at home when they undergone labor pain and decided to come health care institution, and 20.6 percent expressed that their delivery occurred so suddenly that they got no time to go to the health care institutions. Even today, a few (2.4 percent) mothers say that they were forced to give birth at home due to various social and cultural barriers.

4.2.11 Quality of Health Services Developed under the NRHM

The NRHM focuses on the quality of health care to be provided through the different health service institutions like the HSCs, the PHCs and the CHCs, in the rural areas. Table-4.34 presents the information related to the quality of health services received by the beneficiaries of the JSY when they were admitted to the health care institutions and provided health services including institutional delivery. The NRHM talks about the provision of Janani Express that facilitates the transportation of the expectant mothers from their houses to the health care institutions. Table-4.34 presents that 88.5 percent of the respondents said that transportation was arranged by their family members to reach the health care institutions. The ASHAs arrange only for 10.9 percent of the expectant mothers to reach the health care institutions. At the same time, some of the medical personnel also arranged ambulances for 0.6 percent of the JSY beneficiaries, and this was particularly for referral cases. Moreover, it was also noticed that 87.2

percent of the beneficiaries used private vehicles to reach the health care institutions. The Janani Express (Ambulance meant to carry expectant mothers to the health care institution) was used only by about 11.4 percent of the JSY cases to reach the health care institutions. It was also found that 1.4 percent of the JSY beneficiaries of Mahakalpada block in Kendrapara district used private motor boats as a mode of transport to reach the health care institutions, as the river divides the village from the PHCs. There is no bridge for crossing the river, and there are no roadways connecting the villages with the health care institutions.

Table - 4.34: Quality of health services provided under NRHM in Kendrapara district

Sl. No.	Quality of health services		Number of Respondents said "Yes"	n=840 In %
1	Transport arrangement	Family members arranged	636	88.5
		ASHA arranged	79	10.9
		Medical personnel arranged for referral case	4	0.6
2	Mode of transport	Janani expresses (Ambulance for pregnant respondents)	82	11.4
		Private vehicle	627	87.2
		Private motor boat	10	1.4
2	Waiting time till attend by any paramedical personnel	Immediately attended care	567	78.9
		Less than 30 minutes	108	15.0
		More than 30 minutes	44	6.1
3	Skilled personnel attendant of delivery case	Doctor	265	36.9
		Nurse	351	48.8
		Pharmacist and Nurse	13	1.8
		Doctor and Nurse	90	12.5
4	Satisfied with the available services	Satisfied	651	90.5
		Not satisfied	68	9.5

***Note:** Table-7.34 represents percentage data from 719 respondents of JSY beneficiaries as out of 840 samples 121 respondents were belong to home delivery and such questions were not asked because they were not experienced with institutional delivery and other health services associated with delivery at a health care facility. So, for accuracy of data analysis the percentage is calculated out of 719 respondents from the study.

Nearly ten villages under the PHC of Light House on Mahakalpada block in Kendrapara district are covered by sea water on one side and the river on the other side.

The PHC of Light House is managed by the Private-Public-Partnership (PPP) model but due to the absenteeism of the medical doctor, the pregnant women are never ready to give birth there. Only a few delivery cases are conducted by the staff nurse of the concerned PHC at the houses of the JSY beneficiaries. At the same time, there are also various persistent problems including no electricity supply as the PHC is run with the help of a solar cell, no ambulance facilities to immediately shift the women to the nearest hospital. Also, in case the condition of the expectant mother deteriorates later, it is almost impossible to shift her elsewhere as the villages are entirely surrounded by water (both the sea and the river) It is also difficult to arrange for a boat immediately to shift the expectant mothers to the nearest health care institution. Such adverse and inadequate conditions force the expectant mothers to opt for delivery at home.

In this locality therefore, delivery at home quite prevalent as compared to the other blocks, as the majority of the people belong to the fishermen community and are economically backward. The conditions of the nature in this particular locality are not favorable for the development of their economic status. It was found that a small *kuchha* roadway extending up to 12 Kms. connect this place to the PHC of Ramnagar, where a doctor is available who conducts deliveries, but due to the lack of communication problems, it becomes very difficult for the people to reach the health care institution on this road, though it could nevertheless be possible to reach the PHC well in advance of the delivery date. But, the family members of the expectant mothers are often unwilling to take such a decision in order to ensure her safety. It also becomes very difficult to carry her on a bicycle or on motor bikes along the narrow *kuchha* road, where risk factors may arise due to the poor condition of the road.

They use the boat from their villages to the health care institutions but sometimes the water level of the river is not deep enough to keep the boat afloat. So, the timings of the tide also play a crucial role. If the water level is high enough due to high tide in the river, only then it is possible to use the boat as a mode of transport to carry the expectant mother to the health care institution, otherwise it becomes very difficult. People of that particular region often call it the curse of nature on their destiny as there has never been a certainty as to whether the newborn baby would be alive after birth or not. Sometimes, well to do families shift the expectant mothers to the nearest health service center or their relative's/parent's house 2-3 months before the expected date of delivery. But this is not

possible for all families because people from that particular area mostly belong to the fisherman community and is economically poor. Therefore, a maximum number of deliveries at home occur in that particular region. Regarding attending the health service centers it was told by the JSY beneficiaries that sometimes after reaching the health care institution they were not attended to immediately. Table-4.34 shows that 78.9 percent of the beneficiaries shared that they were attended immediately after they reached the health service centers, 15 percent said that they were attended within less than 3o minutes, and 6.1 percent complained that the medical personnel took more than 30 minutes to attend to them. It was also asked of the JSY beneficiaries as to who had attended them once they reached the health service centers. To this, a majority of them (around 49 percent) said that the nurses had attended to them, 36.9 percent reported that doctors had attended to them, and 12.5 percent of the cases that were more complicated said that both doctors and nurses attended to them. However, 1.8 percent was attended by the pharmacists and nurses alone.

Although, the NRHM focuses on institutional deliveries by skilled medical personnel, 13.7 percent of the deliveries are still attended by *Dais*[9] in the remote rural areas. Such cases were recorded in the two blocks of Mahakalpada and Pattamundai of the Kendrapara district. While analyzing the patients' satisfaction with the provision of the services by the different health care institutions in different blocks of Kendrapara district, it was found that 90.5 percent of the JSY beneficiaries were satisfied with the kind of services they received on being admitted to the health care institutions. Only 9.5 percent of the JSY beneficiaries was not satisfied with the current provision of health care services (see Table-4.34). While making inquiries about the dissatisfaction of the beneficiaries with the health care services, the reason was identified as most of the JSY beneficiaries expressed that the medical staffs were rude, and health care services were not hygienically meted out. There were also other problems, reportedly, poor quality of services, unavailability of beds and so on. Some of them also told that medical (doctor) and paramedical staff asked for bribes before delivery and before handing over the JSY incentives (cheques). Some instances came to the researcher that doctor/staff nurse takes Rs. 50/- to Rs. 200/- as bribe while handing over the JSY incentive cheque to the beneficiaries.

[9] Dais are considered traditionally locally untrained woman who conduct deliveries at the village levels.

After the implementation of the NRHM, steps were taken for the all round development, beginning with the development of infrastructure and increasing the number of human resources. But while looking at the health care institutions of Kendrapara district, it is found that all round development as per the Indian Public Health Standards (IPHS) has not taken place in each and every aspect of the different health service centers. However, to know the impact of the NRHM on the provision of services, the question was asked as to how many of the JSY beneficiaries were satisfied with the provisions of the new health services provided under the NRHM. The study found (see Table-4.35) that about 98 percent of the JSY beneficiaries were satisfied with the kind of services provided under the Mission. Only 2.3 percent of the JSY beneficiaries were not satisfied. The referral system of the NRHM also satisfied with 97. 1 percent of the JSY beneficiaries as they agreed that the referral system is a good provision in the health care system under the NRHM especially for the development of child and maternal health.

Table - 4.35: Percentage of Respondent's opinion on health services under the NRHM

Sl. No.	Quality of health services		Number of Respondents Agree /Disagree	n=840 In %
1	Satisfaction with new service	Agree	821	97.7
		Disagree	19	2.3
	Referral visit for treatment	Agree	816	97.1
		Disagree	24	2.9
	Availability of doctors	Agree	543	64.6
		Disagree	293	34.9
2	JSY benefits both mothers & child	Agree	791	94.2
		No idea	49	5.8
3	Rate of present health services	Excellent	8	1.0
		Very good	45	5.4
		Good	314	37.4
		Fair	290	34.5
		Poor	151	18.0
		Very poor	20	2.4
		Do not know	12	1.4

After the implementation of the NRHM, doctors are found available particularly during office hours when people visit the heath service centers for any sort of health related problems. This would not be so earlier. It was found that a majority of the

respondents (94.2 percent) said that the JSY is extremely beneficial for both mother and child in the rural areas, particularly in Kendrapara district. Odisha is a state where a record number of infants and maternal deaths documented every year. After the implementation of the NRHM, there has been a noticeable reduction in MMR in Kendrapara district though reported cases of infant deaths were a little high in the district since implementation of the NRHM.

The question was asked to the respondents regarding health service provisions under the NRHM and the majority of the respondents (97.1 percent) agreed that the new health provisions under the Mission provide better health services to the rural people. This study consisting of nine blocks of Kendrapara district contended that the provisions of the government health service delivery system have changed the health care services in the district, even though a few health centers are still functioning with a shortage of human resources and a lack of infrastructural facilities. Table-4.35 shows that 37.4 percent of the respondents agreed that the present medical facilities provided by the government health care institutions are better than before, 34.5 percent said that the health service is fair enough, while 18 percent agreed that the health services have not yet improved and are still in a poor condition. Only 5.4 percent said that the health care facilities are very good while one percent of the respondents rated them as excellent.

4.3 Decentralization of the Health Delivery System in Kendrapara District

The 73rd and 74th Constitutional Amendments have empowered the local political bodies (Panchayati Raj Institutions-PRI) to function actively towards the improvement of the delivery of social services since 1993. Since then, it has been observed that there has been a less than an adequate decentralization process involved in the functioning of the local governments. As a result, at the grassroots level, social development schemes have been unable to reach the targeted sections and achieve success irrespective of the implementation of different pro-poor developmental programs in the rural areas by both the Central Government and the State Government. After experiencing the failures of various developmental programs, the Government of India (GoI) has prioritized the involvement of the PRIs and the local community while implementing the flagship program of the NRHM from the village to the district levels. As a part of the strategy, the local communities are involved in the implementation processes of the various programs of the NRHM. Therefore, communitization is an innovative and a key strategy under the

NRHM that helps ensure that the program of the NRHM reaches into the communities in the rural areas. It includes an active involvement of the PRI at the village level, of the Rogi Kalyan Samiti (RKS) at the primary (Primary Health Centre-PHC) level, the Community Health Centers (CHC) at the secondary level, and a District Headquarter Hospital (DHH) at the tertiary level. There is a new formed health committee at the village level named as the Village Health and Sanitation Committee (VHSC) which is also called the Gaon Kalyan Samiti (GKS) in Odisha. As per the guidelines of the NRHM, the PRI has a crucial role to perform in the GKS for an effective and people-centric health care delivery at the village level.

4.3.1 The Rogi Kalyan Samiti

The Rogi Kalyan Samiti (RKS: Patient Welfare Committee) is a registered society under the NRHM to provide sustainable quality health care in the rural areas with accountability, transparency and community participation. The RKS consists of members from the PRIs, NGOs, local elected representatives and medical officials from the PHCs/CHCs/DHH levels. It gives full accountability to the public sector for the proper functioning and management of the DHH/SDH/CHC/FRU/PHC. The RKS prescribes, generates and uses the funds for proper functioning and provision of quality health services in the health care institutions. It utilizes all the assets of the government, imposes user fees, and has the freedom to decide the quantum on fee structures to be collected from the patients. Apart from the funds provided by the government under the NRHM, the RKS generates funds from donations, user fees, and grants from the government as well as from other donor agencies. The funds generated by the RKS are made available to the public and spent by the executive committees constituted by the RKS.

4.3.2 Registration of the Rogi Kalyan Samiti

The present study covers a District Headquarter Hospital, nine CHCs and eighteen PHCs. All of such health institutions have been registered under the RKS. Only the DHH generates funds by introducing various user fees and most of the CHCs never generate funds out of any kind of services except user fees. The two CHCs of Mahakalpada and Patkura generate funds from the facilities of X-Ray while the other two CHCs of Derabis and Pattamundai generate funds from the utilization of the Ambulance facilities. However, none of the 18 PHCs generate any kind of fund. As per the provisions of the NRHM, the PHCs are provided with an untied fund of Rs. 25,000/- per annum for the

development of local health needs, and with an Annual Maintenance Grant of Rs. 50,000/- for the improvement and maintenance of the physical infrastructures of the health centers. All the PHCs utilize money out of such funds provided to them for different developmental activities. As per the provisions of the NRHM, all the CHC/Upgraded PHC/Area Hospitals are provided with an untied fund of Rs. 50,000/- per annum for the development of local health needs, and with Rs. 1 lakh as RKS grant for patient welfare. Each Sub-Divisional Hospitals/District Headquarter Hospitals are provided with an Annual Corpus Grant of Rs. 1 lakh and RKS grants amounting to Rs 5 lakh. So, the SDH and the DHH have to utilize the above mentioned funds for the development of the health care institutions and other health facilities. And RKS funds were utilized properly in most of the PHCs and also noticed few PHCs did not utilize the fund properly as per the guidelines of RKS in Kendrapara district.

4.3.3 Role of the Gram Panchayat for Health Service Development

As per the Constitutional Amendments, the Gram Panchayat has been empowered to develop plans, policies, and is responsible for the implementation of different welfare programs including health, for better scope for socioeconomic development at the village level. The three tier system of the PRIs that have been established from the village to the district levels has a significant role in the implementation of socioeconomic development programs in their respective areas. The NRHM has also given an opportunity to involve the PRI in health development in the rural areas as well as in the district level health development in the country. The PRIs are involved at the village level for proper utilization of the untied fund and they are also part of RKS Committee and decide how to spend RKS fund both at the Sub-Center levels as well as PHC levels. At the block level the PRI and at the district level the Zilla Parishad is involved in proper management of the RKS fund and the Annual Corpus Grant. This survey covered 43 Gram Panchayats in the Kendrapara district of Odisha. Most of the Gram Panchayat villages are located within a km. of the Health Sub-Centers and within a distance of 5 Km. from the PHCs in the district.

4.3.4 Village Health and Sanitation Committee: Framework and Guidelines

The implementation framework of the NRHM provides for the orientation of all community level leaders and the formation of the Village Health and Sanitation Committee (VHSC). The VHSC is named as the Gaon Kalyan Samiti (GKS) in Odisha.

The GKS is a simple and effective management structure at the lowest level comprising local representatives from the village, which is envisaged as a facilitating body for all village level development programs and which reflects the aspirations of the local community.[10]

It is constituted at the revenue village level with a representation by 50 percent of women members; and each hamlet within a revenue village has to be represented so as to ensure the representation of the needs of the weaker sections, particularly the SCs, STs, and the OBCs. The constitution of the GKS says that the GKS will be headed by the Ward Member of the village and an Anganwadi Worker (AWW) of the village would act as its Convener. At least 30 percent representation has to be made from the non-governmental sector; representation has also to be made for women's Self Help Groups (SHGs) etc. These provisions are made so that the committee can undertake women's health activities more effectively.[11] Presently, 1353 GKSs have been formed and functioning in Kendrapara district whereas the target for formation of the GKS is yet to achieve 1407 in coming years and in Odisha 44,999 GKS have been working against the target of formation 47,528. [12]

4.3.5 Role and Responsibilities of the Rogi Kalyan Samiti

1. To involve the community in the planning and implementation of health and other allied activities at the village level.
2. To create awareness about maternal and child health services, family planning services, adolescent health, health and hygiene, environmental sanitation etc.
3. To initiate action for the management of health related issues and problems at the local level.
4. To undertake the above activities, the GKS shall receive funds from various sources. The role of the GKS members would be to prioritize activities from the approved list and implement the same through different persons.

[10] Guidelines for Gaon Kalyan Samiti, Mission Directorate, National Rural Health Mission, Department of Health and Family Welfare, Government of Odisha, p. 1.
[11] Ibid
[12] National Rural Health Mission, Department of Health and Family Welfare, Government of Odisha. http://www.nrhmorissa.gov.in/gks.html, Accessed on February 18, 2013.

4.3.6 Approved Activities of Gaon Kalyan Samiti[13]

A. Each Gaon Kalyan Samities (GKS) constituted and registered shall be provided with a grant of Rs. 10, 000/- by the Health and Family Welfare Department, Government of India under the NRHM.

B. The intention of this untied grant is to enable local action and to ensure that public health activities at the village level receive prior attention.

C. The various activities which would be undertaken by the GKS include the following subject to the prescribed expenditure limits.

D. Preparation of the village health plan and related activities: Expenditure in this regard is to be limited to Rs. 500/- . Other expenditure and formats to be supplied by the NRHM.

E. Promotion of any village level public health activity like cleanliness, sanitation, school health activities etc. The expenditure to be limited to Rs. 200/- per month.

F. Disinfecting water sources such as wells in the village, promoting activities relating to mosquito eradication. The expenditure in this regard is to be limited to Rs. 200/- per month for purchasing sanitary kits.

G. Organization of the health fair, children's health fair, camp for the handicapped etc. Expenditure to be limited up to Rs. 1,000/-. This includes organizing expenses, hiring of medical personnel, prizes, medicines etc.

H. Providing emergency health services to the old, infirm, destitute, orphan or handicapped persons belonging to poorer households of the village viz. hiring a vehicle, buying medicine, hiring doctors to provide the services. The expenditure is to be limited to Rs. 250/- per case with an upper limit of Rs. 1,000/- during this year under normal circumstances.

I. Creating awareness about good sanitary practices amongst adolescent girls and mothers, group meetings and discussions can be held. The expenditure to be limited to Rs. 100/- per month.

J. Promotion of the use of safe and clean drinking water and conducting water quality survey etc. The expenditure to be limited to Rs. 500/- per village per year for activities such as cleaning and repairing the water tank, tube well etc.

[13] Ibid, pp. 2-3.

K. Encouraging people to adopt right health practices instead of depending on quacks and untrained health care providers. The expenditure to be incurred on group meetings, wall paintings, creating a GKS board is limited to Rs. 1,000/- per year.

L. Discussing and analysis of every maternal death and neonatal death that occurs in the village and suggesting necessary actions to prevent such deaths and to get them registered in the Panchayat. The expenditure in this regard should be on activities relating to meeting expenses, limited to Rs. 100/-.

M. The payment of Rs. 100/- to the Anganwadi Workers and Rs. 50/- to the ASHAs in every meeting shall also be met out of the above fund with due approval of the GKS members.

N. Any other health related activities that are necessary for the village, with the approval of the GKS.

O. It may be noted here that the GKS cannot spend more than 25 percent of the funds at one go except during emergency and with the due approval of the GKS members.

4.3.7 Background and Profile of the Gaon Kalyan Samiti Members

The GKS plays a significant role in the sanitization and the improvement of the health care system in the villages.

Table - 4.36: Background and profile of the Gaon Kalyan Samiti members

Characteristics	Category	Number of GKS member	n=168 In %
Age group	25-30	28	16.7
	31-40	97	57.8
	41-50	37	22.0
	51-60	5	3.0
	61 and above	1	0.5
Caste	General	89	53.0
	OBC	51	30.4
	SC	28	16.7
Education	Up to 5th class	11	6.6
	6th -10th class	107	63.7
	Intermediate (+2)	31	18.4
	Graduation (+3) and above	19	11.3
Designation of the respondents	GP members & President of GKS	30	17.9
	AWW and Convener of GKS	54	32.1
	ASHA and member of GKS	32	19.0
	SHG members & member of GKS	52	31.0

During the field survey, 84 villages and 84 GKS were covered under the study. The study found that the selection of the GKS members is done as per the GKS guidelines under the NRHM, Government of Odisha. Table-4.36 presents the background and characteristics of the GKS members.

Table-4.36 shows that a majority of the members (57.8 percent) are from the age group of 31-40, 22 percent from the group of 41-50, and 16.7 percent group from 25-30. It also presents that a majority of them (53 percent) belongs to the general category, 30.4 percent to the OBCs and 16.7 percent come from the SCs. While looking at their educational qualification it was noticed that a majority (63.7 percent) of them had completed matriculation, 18.4 percent had completed intermediate and only 11.3 percent had completed their under graduation. Table-4.35 mentions the designations of the GKS members. It was found that around 18 percent of them are Gram Panchayat members who are acting as Presidents of the GKS, 32.7 percent are Anganwadi Workers who have taken the responsibility of a Convenor of the GKS, 31 percent are SHG members who are also members of the GKS while 18.4 percent are ASHAs acting as members of the GKS.

4.3.8 Awareness of the Gaon Kalyan Samiti Members about the NRHM

It is important to know whether the GKS members are well aware about the NRHM as they are supposed to play a significant role in the development of the health care system in the rural areas. So, in this context, both education and age are combined as a crucial factor of the study. The study found that (see Table-4.37), 43 percent of the GKS members were aware of the NRHM who belong to the age group of 31-40, and among whom a majority (24.4 percent) has had an education of 6^{th} to 10^{th} standards. It was also found that 15.4 percent of the GKS members belonging to the age group of 41-50, have also studied till 6^{th} to 10^{th} standards (9.5 percent) and are aware of the NRHM. It was however noticed that 28 percent of the GKS members are not aware about the NRHM. It is also found that 15 percent of them belong to the age group of 31-40 out of which, 10.1 percent have completed 6^{th} to 10^{th} standards. So, as a result of this analysis it has been noticed that the two age groups of 31-40 and 41-59 having the same educational qualification (6^{th} to 10^{th} classes) are more aware of the NRHM as compared to the other age groups and educational qualifications.

Table - 4.37: Percentage of the GKS members' awareness about the NRHM

n=168

Age group	>5th class said Yes	6th-10th class said Yes	+2 said Yes	+3 said Yes	Percentage of GKS member aware of NRHM	>5th class said No	6th-10th class said No	+2 said No	+3 said No	Percentage of GKS member not aware of NRHM
25-30	0	12	4	3	19 (11.3%)	1	6	1	1	9 (5.3)
31-40	4	41	15	12	72 (43.0)	3	17	5	0	25 (15.0)
41-50	2	16	6	2	26 (15.4%)	0	11	0	0	11 (6.5)
51-60	0	3	0	1	4 (2.3)	0	2	0	0	2 (1.2)
Total	6	72	25	18	121 (72%)	4	36	6	1	47 (28%)

4.3.9 Formation, Joining and Receiving Funding of Gaon Kalyan Samiti

Although, the NRHM was started on April 12, 2005, the actual implementation process was initiated in 2006 in Odisha. During that time, the GKS was not formed. The formation of GKS was started only in 2008 in Kendrapara district. While conducting this field survey it was noticed that 31 percent of the members joined the GKS in 2008 (Table-4.38), 68.5 percent joined in 2009 and less than 1 percent joined in 2010. The GKS members received the grants of Rs 10,000 per annum from the government in the year 2008 as confirmed by 24.4 percent of the GKS members. In the year 2009, all the GKSs of different Gram Panchayats were formed and they duly received the fund as confirmed by 74.4 percent of the GKS members (Table-4.39). In 2010, 1.2 percent of the GKS members duly received the fund.

Table - 4.38: Year of formation and joining as the GKS member

Sl. No.	Year of formation	Number of GKS member	n=168 In %
1	2008	52	31.0
2	2009	115	68.5
3	2010	1	0.6

Table - 4.39: Year of receiving the Gaon Kalyan Samiti Fund

Sl. No.	Year of received fund	Number of the GKS member received funding	n=168 In %
1	2008	41	24.4
2	2009	125	74.4
3	2010	2	1.2

4.3.10 Utilization of Gaon Kalyan Samiti Fund

Table-4.40 presents how the GKS fund has been utilized in the villages since 2008 after they received the money. Here, Table-4.40 presents the views of four kinds of GKS members, namely, the GKS Convenor (an Anganwadi worker who maintains the records of the GKS), a Gram Panchayat member (President of the GKS), the ASHA, and the SHGs members (those who acts as members of the GKS). Most of the times, the Gram Panchayat members were found absent in the villages, as they remained busy with various works related to the Gram Panchayat, so the interviews of either the SHG members or the ASHAs were taken into account in order to know the facts about the utilization of the GKS fund.

Table - 4.40: Utilization of Gaon Kalyan Samiti Fund

Sl. No.	Type of utilization	Number of GKS member said: Yes	n=168 In %
1	Cleaning pond	113	67.3
2	Cleaning & bleaching tube well	151	89.9
3	Cleaning road	95	56.5
4	Health wall for awareness	158	94.0
5	Conducting health fair	23	13.7
6	Emergency help to needy people	108	64.3
7	Purchasing of weight machine	141	83.9
8	Purchasing of furniture	151	89.9
9	Purchasing of mosquito net	66	39.3
10	Purchasing umbrella, torch, water bottle for ASHA	16	9.5
11	Giving ASHA prize	24	14.3
12	Remuneration to ASHA & AWW	131	78.0

Table-4.41 presents that the GKS funds are utilized for accomplishing a number of tasks. The funds are utilized for sanitization of the villages, awareness of the people through health wall (94 percent of the GKS members said), for cleaning and bleaching of the tube wells (as shared by 90 percent members), cleaning of the ponds (67.3 percent members reported), cleaning of roads (56.5 percent members revealed), and providing emergency help to the needy people of the villages (64.3 percent members mentioned). Apart from that, a majority of the members (around 90 percent) also reported the utilization of funds for purchasing furniture such as chairs, tables, mats, buckets, mugs, etc. while around 84 percent reported that they purchased weighing machines and BP

instruments (Sphygmomanometers) that are required for pregnant women and children. It was found that only a few members (13.7 percent) reported spending of funds for health fairs at the Gram Panchayat level, 39 percent reported spending on purchasing mosquito nets and 78 percent mentioned that funds are utilized for providing both the ASHAs and the AWWs with remunerations.

Table - 4:41 Adequacy of GKS fund to make the village more sanitized

Characteristics	Number of GKS member said (Yes)	n=168 In %
GKS fund adequate to meet demand	21	12.5
GKS fund shortage to meet all the requirements needed	147	87.5

Table - 4.42: Additional fund needed to meet the shortage of work in the villages

Sl. No.	Additional funding	Number response of GKS member	n=168 In %
1	>10000	4	2.4
2	10000-15000	15	8.9
3	15000-20000	53	31.5
4	20000-25000	22	13.1
5	25000-30000	50	29.8
6	30000 & above	3	1.8

While asking them regarding the adequacy of funds (see Table-4.41) needed to meet all their demands, they said that it becomes very difficult to manage within the amount of Rs 10,000/- per annum. As the prices of all commodities, including labor cost, has been rising up, more funds are required to fulfill at least to some extent the needs of the people as well as make the villages properly sanitized. Table-8.6 presents that 87.5 percent of the members reported that the amount received from the GKS per annum is not enough. They demanded provisions of more funding from the GKS as the current provision of Rs 10,000/- per annum is inadequate. Nobody including the local political leaders and the news media pays attention to the improvement of the sanitation and hygiene of the villages. The problem certainly exists more in the rural areas as compared to the urban areas. They also reported that it is difficult to fulfill the guidelines of the GKS provided to them with the little amount that is allocated. Again, the question was posed to them as to what additional amount of money would be required in order to meet the minimal demands. Around 30 percent of the GKS members reported that a minimum

of Rs. 25,000 to Rs. 30,000/- additional funding is required to meet the shortages while 31.5 percent said that Rs. 15,000 to Rs. 20,000/- additional funding is necessary for the purpose (see Table-4.42).

4.3.11 Functioning of the GKS in various Blocks in Kendrapara District

Presently, there is a total of 1353 Gaon Kalyan Samities, in nine blocks in Kendrapara district (see Table-4.43) and 1353 bank accounts have been opened to deposit the GKS fund into their accounts. Out of these nine blocks, the Rajnagar block has the highest number (212) of GKSs formed of 224 villages while the Mahakalpada block has the lowest number (103) of GKSs formed of 191 villages. Kendrapara block, however, has a maximum (181) number of GKSs formed of 136 villages, which means that each village has more than one GKS as per the population and the existence of more number of revenue villages in this block. So, as compared to the other blocks, the block of Kendrapara receives more funds for sanitation of the villages. As a whole, the Kendrapara district covers 1407 villages with 1353 GKS since 2006 till the date of data collection.

Table - 4.43: GKS is functioning in various blocks in Kendrapara district

Sl. No.	Name of the block/ CHC	Number of Villages	Formed	Account opened
1	Aul	134	128	128
2	Derabis	172	169	169
3	Garadapur/Patkura	134	130	130
4	Kendrapara/Indupur	136	181	181
5	Mahakalpada	191	103	103
6	Marsaghai	108	134	134
7	Pattamundai	142	142	142
8	Rajkanika	166	154	154
9	Rajnagar	224	212	212
	Total	**1407**	**1353**	**1353**

4.3.12 Role of the Gaon Kalyan Samiti in the Implementation of the NRHM

While analyzing the role of the GKS under the NRHM, it has been noticed that a majority (98.2 percent) of the GKS members reported that they basically mobilized communities for the sanitization of the villages, and made them aware so that they utilize the health care provisions in the nearby health service centers, and if required take help from the GKS for their health problems (see Table-4.44). Among the GKS members, 19

percent reported that they assure the people that the ANM would visit their villages regularly and the villagers should ask her for any kind of health needs, especially regular pre and post ANC check-up. Most of the members (93.5 percent) said that they seriously undertook the proper functioning of the GKS, while 63.7 percent said that they were also involved in the selection of the ASHAs in the villages. Table-4.45 presents the functioning of the GKS in some particular villages. It has been reported that 34. 5 percent of the members shared that the GKS has created awareness among the community people for better health care, 48.8 percent said that they themselves are also equally responsible for the preservation of hygiene in their villages. More importantly, only 12.5 percent of the members are aware that they have to create awareness about the benefits of institutional delivery in the villages.

Table - 4.44: Role of the GKS members for implementing the NRHM

Sl. No.	Characteristics	Number of GKS members said (Yes)	n=168 In %
1	Mobilizing Community	165	98.2
2	Ensuring regular visits of ANM	32	19.0
3	Proper functioning of GKS	157	93.5
4	Selection of ASHA	107	63.7

Table - 4.45: Percentage of GKS member's response on how GKS works in the villages

Sl. No.	Type of major role	Number of GKS members said (Yes)	n=168 In %
1	Aware community for better health care	58	34.5
2	Keeping village more hygienic	82	48.8
3	Making aware of women and family members regarding institutional delivery	21	12.5
4	GKS is controlled by political leaders	4	2.4
5	No idea	3	1.8

4.3.13 The Decision Making Process of the GKS in Implementation of the NRHM

This section is important, as a decision making process ultimately ensures the outcome of health development through the GKS. When the question was asked to the GKS members about whether the decisions they take are decentralized or not, most of them (65.5 percent) answered in the negative and opined that there is no need on their parts to take some decisions as they are already formulated and prescribed in the

guidelines under the NRHM, which they are merely expected to follow. Only 34.5 percent of the GKS members reported that the decisions are taken in a decentralized manner (see Table-4.46). So, in this context it could be argued that the GKS has no power of taking any kind of decision while implementing the NRHM and carrying out its various activities, and in the utilization of the GKS funds in order to mete out proper sanitation and other health care services at the village level.

Table - 4.46: Percentage of GKS members agreed for decentralized decisions

Sl. No	Response of GKS member: Yes/No	Number of GKS members	n=168 In %
2	Yes	58	34.5
3	No	110	65.5

To know about the details regarding the decision making process involved in the utilization of the GKS fund under the NRHM, both age and educational qualification of the GKS members are combined (see Table-4.47). The analysis shows that 34.5 percent of the GKS members agreed that decisions are taken in a decentralized manner. Out of them, 16.7 percent were from the age group of 31-40 who agreed for decentralized decision-making and among whom a majority (19 members or 11.3 percent) had completed at least ten years of education. However, a majority of the GKS members (65.5 percent) contended that a decentralized process is not involved while taking the decisions for the utilization of the GKS funds as part of the implementation of the NRHM. And among them a majority (40.4 percent) belongs to the age group of 31-40 and 23.2 percent have completed at least ten years of education. So, it could easily be argued that the decision making process, that is supposed to be undertaken for the purpose of the development of health and the utilization of the GKS funds, was not undertaken so in a proper decentralized manner. Again only 34.4 percent agreed to a decentralized decision making process while 65.5 percent did not agree to a decentralized decision making process, irrespective of age and education, while implementing various activities concerning the development of health in the villages under the NRHM. Therefore, we could reach the argument that, in practice while implementing and utilizing the GKS funds under the NRHM, the decisions that were taken by the GKS members were not based on decentralized processes. It was also found that the GKS members completely followed the guidelines that have been prescribed for them, while

implementing and utilizing the funds of the GKS under the NRHM. Therefore, most of the members from the GKS complained that it is not necessary to take decisions, as the Centre has already given its Central guidelines to follow. Even though one principle of the guidelines says that "*any other health related activities that are a need for the village, with the approval of the Samiti",* in practice, it does not often work out this way due to the lack of funds and of mutual agreement, that is needed by the GKS in order for it to reach a decision.

Table - 4.47: Percentage of GKS members agreed for decentralized decision of GKS including the age and education group

n=168

Age group	>5th class Said Yes	6th-10th class Said Yes	+2 Said Yes	+3 Said Yes	Total Number & Percentage of GKS member **agrees** for decentralized decision	>5th class Said No	6th-10th class Said No	+2 Said No	+3 Said No	Total Number & Percentage of GKS member **not agree** for decentralized decision
25-30	2	9	3	2	16 (9.5%)	0	9	2	2	13 (7.7%)
31-40	2	**19**	4	3	28 (16.7%)	4	**39**	16	9	68 (40.4%)
41-50	1	10	1	0	12 (7.1%)	1	17	5	2	25 (15.0 %)
51-60	0	2	0	0	2 (1.1%)	1	2	1	1	4 (2.3%)
Total	**5**	**40**	**8**	**5**	**58 (34.5%)**	**6**	**67**	**24**	**14**	**110 (65.5%)**

3.4.14 Problems and Recommendations for the GKS

Most of the GKS members complained that meetings are not conducted as per the guidelines, even though they are conducted monthly, as reported by 85.7 percent of the members (see Table-4.48). Only 1.8 percent said that the meetings are conducted quarterly, 0.6 percent reported that they were conducted annually whereas 2.4 percent said that the meetings happen twice every month. Among them, 9.5 percent complained that meetings are not conducted regularly and decisions are taken within the Samiti members only without involving others. They also shared that a lot of problems persist among the Samiti members and on being asked about how they thought they could overcome such problems, they suggested that (see Table-4.49) in order to manage an organization, proper relations and coordination is necessary. This was reported by 60.7 percent of the members, while 31.5 percent of them said that mutual understanding is most important for the purpose of running the GKS smoothly and only 7.7 percent of the members suggested that good management also plays a vital role in an effective policy

implementation. A majority of them supported the opinion that transparency is necessary as only two persons are bestowed with the responsibility of fund expenditure. Also, so far there has not been any audit of the expenditure amount. Although 4.2 percent of the members reported that there had been an internal audit, 95.8 percent of them brought to notice that no internal audit was ever done for the past few years' expenditure of the GKS funds (Table-4.50).

Table - 4.48: Regularity of meeting of GKS

Sl. No	Time period	Response of GKS members	n=168 In %
1	Monthly	144	85.7
2	Quarterly	3	1.8
3	Annually	1	0.6
4	Not Regularly Conducted	16	9.5
6	Twice in a month	4	2.4

Table - 4.49: Requirement for proper management of GKS

Sl. No.	Time period	Number of Response by GKS members	n=168 In %
1	Proper relation & coordination necessary	102	60.7
2	Good management is vital	13	7.7
3	Mutual understanding is important	53	31.5

Table - 4.50: Audit for the GKS fund

Sl. No.	Response by GKS member: Yes/No	Number of responses by GKS members	n=168 In %
1	Yes	7	4.2
2	No	161	95.8

4.3.15 Opinion of the GKS Members on Functioning of the GKS in the Villages

Though the GKSs of different villages work differently, when their views were sought together for consideration regarding the functioning of the GKSs in their respective villages, the majority (91.1 percent) of them reported (see Table-4.51) that there is a definite impact on the functioning of the GKSs on their villages and that it is certainly making the villages more sanitized. Only 8.9 percent of them disagreed with this. Finally, a question was posed to them about the rate at which the GKSs are running

in their villages. A majority of the members (63.7 percent) rated it as 'good' (see Table-4.52), 14.9 percent as 'fair', 6.5 percent as 'very good', while only 3 percent rated it as 'excellent', 4.8 percent as 'poor', and 7.1 percent of them reported that the GKS is not working properly.

Table - 4.51: Response of GKS members regarding sanitization of their villages

Sl. No.	Category	Number response by GKS member	n=168 In %
1	Agree	153	91.1
2	Disagree	15	8.9

Table - 4.52: Rate in functioning of GKS

Sl. No.	Type of rate	Number response by GKS member	n=168 In %
1	Excellent	5	3.0
2	Very good	11	6.5
3	Good	107	63.7
4	Fair	25	14.9
5	Poor	8	4.8
6	Not working properly	12	7.1

4.3.16 Suggestions by the GKS Members for Better Health Services

The rural health care system has not been satisfactory as most of the GKS members reported during the survey period. Some of the GKS members also complained that the health care system in rural India is not quality wise up to the mark as the private health care system has entered into the market and reported to be providing better health services than the government hospitals. So, a question was posed asking how the rural health care system can function in a proper way. They suggested that the government has to make sure that there is an availability of proper infrastructure, manpower resources, i.e., doctors and other paramedical staff, and an adequate supply of medicines at the PHC level. Table-4.53 presents that majority (97 percent) of the GKS members expressed that as the NRHM focuses more on the health of mother and child, and is spending more amounts of money for it, it need to make sure that at least one gynecologist (female) and a staff nurse is posted in each PHC and the CHC levels. Rural people expressed discomfort to visit health care institutions where male gynecologists are posted which is

understandable. Construction of roads and provisions of running the Janani express across each village is necessary (agreed to by all members) in order to transport the pregnant women to the health facilities, as they are often not able to find a vehicle in an emergency. Around 99 percent of the members contended that free regular health visits to the villages by the ANMs is necessary for the development of health conditions. Most of them also said that a supply of basic medicines to the ASHAs would make them accessible by the village people whenever there is a need. It is also important to make people more aware of various health issues and problems, and it is the responsibility of the health department of the district to conduct various health camps/health fairs in the villages as was suggested by 90 percent of the GKS members of Kendrapara district, Odisha.

Table - 4.53: Type of service required for better health care system under NRHM

Sl. No.	Type of service	Number of GKS members said (Yes)	n=168 In %
1	Availability of proper infrastructure at PHCs	168	100.0
2	Availability of doctors and medicines at PHCs	168	100.0
3	Providing gynecologist and staff nurse at PHCs	163	97.0
4	Providing Janani express to each village	168	100.0
5	Free regular health visits must be done by ANM	166	98.8
6	Stock of medicine with ASHA	168	100.0
7	Conduct of health fairs by health department	151	89.9

4.3.17 Summing up

The NRHM has an enormous contribution towards the development of the primary health care system in Odisha. After the implementation of the NRHM in the state and particularly in Kendrapara district, rural health delivery has definitely become more functional as compared to the pre-implementation of the NRHM in 2005. The ASHA has also played a significant role in providing health care services, especially for expectant mothers in the district. It has been documented in the present study as well as some other studies that the ASHAs are very popular in Odisha. It has been observed that 100 percent of the pregnant women are aware of the ASHA. As a community level health activist, the ASHA not only creates general awareness about health issues among the women's community but also guides them through antenatal care to delivery at the health care

facility. She also provides them with post-partum care immediately after their discharge from the health care institutions with the proper guidance of the ANMs. The ASHAs are the driving force behind the steep increase of institutional delivery cases and the rapid decline in infant and maternal deaths in Kendrapara district. Importantly, 76.2 percent of the respondents said that the ASHA spreads awareness in the women's community about institutional delivery and the JSY. As a result of this and as the present study found, 85.6 percent of the deliveries conducted in Kendrapara are institutional deliveries and deliveries conducted at home have declined to a mere 14.4 percent. The ASHAs have motivated 64.6 percent of the expectant mothers to register with the JSY. The findings noted that from 2006-07 to 2010-11, there has been more than a three fold increase in institutional deliveries, from 4421 cases recorded in 2006-07 to 16383 cases in 2010-11. At the same time, the number of reported cases of maternal deaths also declined from 72.25 percent in 2006-07 to 58.70 percent in 2009-10.

The study found out that 97.7 percent of the respondents expressed their satisfaction with the health care facilities provided under the NRHM and 94.2 percent respondents have revealed that the cash assistance under the JSY has been beneficial for both mother and child, and 37.4 percent of them rated the present provisions of health services as 'good'. Focusing on the decentralization of the health service system, it was noticed that most of the 65.5 percent respondents agreed that the health care development that has taken place at the village level is not based on community participation or any such process of decentralization. Therefore, the emphasis on a decentralized health management does need to be re-looked at the policy level for an inclusive development in the health sector. Therefore, merely discussing about decentralization may not achieve health care development in primary health at the village level as was duly found in this study. A strong will of the people and the participation of the local community, including the active role of the Panchayati Raj Institutions at the grassroots level, are required for that purpose.

Chapter – 5

Summary, Conclusions and Recommendations

This chapter brings together the main conclusions and the final analysis of the implementation of the National Rural Health Mission (NRHM) emerging from this study. It gives a summary of the study. It discusses the strengths and the weaknesses of the interventions. Some recommendations are made for strengthening the NRHM, marking possible areas of research.

5.1 About the Study

The NRHM is one of the major interventions planned by the Government of India (GoI) in 2005 as part of the Common Minimum Program. It is designed to cover both curative and preventive aspects of public health in a span of seven years with a provision for services that are accessible, affordable and accountable along with quality health care. It is seen as a boost to the health sector in rural areas in general to focus on vulnerable groups: the poor, women and children in particular. Initially it is confined to 18 states (Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh, and Uttarakhand, and 8 North Eastern states and the Jammu and Kashmir, and Himachal Pradesh with poor health indices and weak health infrastructures.[1] When it started showing positive results, was extended to the whole country. The objectives of the NRHM essentially include:[2]

a. Reduction of the Infant Mortality Rate and the Maternal Mortality Ratio (MMR).
b. Access to an integrated comprehensive primary health care and universal access to public health services particularly health for women, and children.
c. Prevention and control of communicable and non-communicable diseases, including local endemic diseases, stabilization of the population, gender and demographic balance.
d. Revitalization of traditional health practices and the bringing of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) into the mainstream and the promotion of healthy lifestyles.

[1] *Mission Document on National Rural Health Mission (2005-12)*, The Ministry of Health and Family Welfare, Government of India, http://www.mohfw.nic.in/NRHM/Documents/Mission_Document.pdf, Accessed on December 8, 2012, p. 2.
[2] For details see Chapter-2, pp. 99-105.

The present study titled “Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District”, is a process evaluation of the NRHM. It is a modest attempt at analyzing a micro level policy implementation of the major issues relating to the NRHM, in a selected district in Odisha. Prior to launching of the NRHM, the IMR (83) per 1,000 live births and MMR (367) per one lakh of Kendrapara district was highest compared to both state (IMR: 75, MMR: 303) and the national (IMR: 58, and MMR 254) average. As a student of public policy it will be challenging to know how new interventions like the NRHM can make the difference to the situation. For example - as far the MMR is concerned while the national average was 254 and that of Odisha’s sate average was 303, Kendrapara registered 367 per one lakh live births. It needs to be understood why such high number of women losing their lives? What difference the NRHM made, has to be properly studied? Therefore, the researcher has selected Kendrapara district in Odisha for the study. It is divided into five chapters. The objectives of the study are:

a. To critically review the policies on health in India since independence,
b. To study the development of public health delivery system and health care Utilization in Odisha,
c. To study the provision of the health care facilities in Kendrapara district of Odisha under implementation of the National Rural Health Mission,
d. To evaluate the role of Accredited Social Health Activist in Janani Suraksha Yojana and institutional delivery under the National Rural Health Mission and,
e. To understand the decentralization of public health management under the National Rural Health Mission.

This study uses different sampling methods such as simple random, systematic random, and purposive sampling methods adopted for eliciting information from different stakeholders i.e. the beneficiaries and non-beneficiaries of JSY, members of the Village Health and Sanitation Committee (VHSC, named as Gaon Kalyan Samiti-GKS in Odisha), the Chief Medical Officer (CDMO), District Headquarter Hospital, Kendrapara; District Program Manager (DPM), ASHA, ANM of the Health Sub-Centers (HSCs), the Medical Officers of Primary Health Centers (PHCs), and Community Health Centers

(CHCs). The total sample size in this study is 1163. Table - 5.1 gives an overview of the sample.

Table - 5.1: Sample: An overview

Category	Name of the Category	Total Envisaged
Beneficiary	Beneficiaries of the Janani Suraksha Yojana (JSY)	840
Monitoring team	Members of the Gaon Kalyan Samiti (GKS)	168
	District Program Manager (DPM)	1
Health facilitator	Accredited Social Health Activist (ASHA)	84
	Auxiliary Nurse Midwife (ANM) of Health Sub-Center	42*
	Medical Officer In-charge of Primary Health Centers	18
	Medical Officer In-charge of Community Health Centers	9

Note* - Number of Health Sub-Centers (HSCs) covered during the field survey instead of covering envisaged sample size 54 HSCs (18x3=54, three HSCs from each PHCs).

The structured interview schedules are administered to all the selected respondents. The distance criterion is the basis for selection of health centers. The data from the field was conducted from November 1, 2010 to April 30, 2011 in the district of Kendrapara in Odisha. The researcher made use of structured schedules which were already generated by the Ministry of Health and Family Welfare, Government of India and used for the data collection at the national level. The researcher modified some questions suitable to the needs of the study, and administered seven sets of structured schedules in the field area of Kendrapara district. The present study focused on two out of the four objectives of the NRHM. The two objectives are (1) target to reduce the Infant Mortality Rate (IMR) and the Maternal Mortality Ratio (MMR) through institutional delivery and Janani Suraksha Yojana, and (2) Access to an integrated comprehensive primary health care with universal access to public health services, such as women's health, and child health. Both health indicators i.e. infant mortality rate and maternal mortality ratio are important aspects of human development. The key findings cover the following areas.

5.2 Major Findings of the Study

A. Appreciable achievement: The study shows the overall success of the interventions of the NRHM in Kendrapara district, Odisha. It found that 85.6 percent beneficiaries of the JSY are benefited after implementation of the NRHM in Kendrapara. Such a result is also supported by the Ministry of Health and Family Welfare (Concurrent Evaluation of the NRHM-2009 and the National Health System Resource Center in 2011) and by Odisha Annual Health Survey: 2010-11. It also documented in other studies [Program Evaluation of the JSY, NHSRC (MoHFW)-2011; Health Information Management System: 2011-12 of Kendrapara district]. These findings also in broad agreement with other studies (UNFPA-2009, and Planning Commission-2011) which reported an average 72.4 percent in institutional delivery of Odisha. The present study also reveals an interesting finding that over 20 percent of women who had previously delivered at home opted for the institutional delivery under JSY after implementation of the NRHM.

B. Rapid progress in maternal and child health: The study shows that after implementation of the NRHM, Kendrapara district registered a rapid progress in terms of saving lives of mothers, infants and children. With regards to Maternal Mortality Ratio (MMR), it shows Kendrapara achieved declining of 91 points deaths from 367 in 2004-06 to 276 per one lakh live births in 2010-11 which is the highest decline comparable to state (26 points from 303 in 2004-06 to 277 in 2010-11). It shows the infant mortality rate also reduced 19 points from 83 in 2005 to 64 in 2010 and Under 5 Mortality Rate fall down 22 points from 92 in 2005 to 70 in 2010. This is a major achievement of the NRHM.

C. Apprehensions about institutional delivery: About 14.4 percent of those who had deliveries at home were not able to access services under the NRHM as they found reported that delivery at home is convenient (91.7 percent), institutional delivery is more expensive and need more out-of-pocket expenses (72 percent of the respondents said), unavailability of transportation (68.5 percent said), and there were no complexities during the first birth (36.3 said) and other similar reasons. The study also found those who prefer delivery at home. Among them 44 percent belongs to SCs, 22.3 percent from OBCs and only 2.4 percent from STs and remain from other categories. Those who are OBCs, most of them fall into the below poverty line and mainly depend on the agriculture. These

categories prefer for delivery at home instead of going for the safe institutional delivery. It is noticed from some of the remotest rural areas in Kendrapara district.

D. Social background: The study found that among the social category of the respondents, 31.7 belongs to SCs, 31.3 percent belongs to OBCs, 2.6 percent and 1.5 percent belongs to the minority and STs respectively and the rest constitute others. The majority of the respondents 50.5 percent fall into the age groups between 25-29 and 22.5 percent between the age group of 30-34. Among the total respondents, 46.3 percent were educated upto 10^{th} class and 19.1 percent upto 7^{th} class. The study found that 31 percent basically depends on both cultivation and wage labor where as 18 percent depends on particularly cultivation and 23.8 percent depends on private job. Among them majority 55 percent belongs to above the poverty line and 45 percent fall into the below poverty line in Kendrapara district (for the details see chapter-4, pp. 220-222).

E. Pivotal role by ASHA: The present study found significant role played by ASHA for the development of institutional deliveries under the JSY. It noticed overwhelmingly 100 percent respondents are aware about the ASHA and 98.8 percent knows about the JSY scheme which is beneficial for safe motherhood. As expected, the NRHM brought a phenomenal change in health facilities where 98 percent of the respondents were satisfied with new services available in different health institutions after implementation of the NRHM. The ASHAs are involved in generating health awareness among the women, involved in immunization, and accompanied the expectant mothers to the health facility for safe delivery. It is noticed that 81.3 percent expectant mothers accompanied by the ASHAs to the health care facility. Therefore, ASHA is considered a linchpin of the NRHM.

F. Lack of decentralization: The NRHM focuses on decentralization of health delivery system but the study found lack of community participation and also the members of PRIs in the implementation process. It is noticed from the GKS members that the functions of the GKS are more centralized than decentralized, as reported by the 65.5 percent of the respondents in Kendrapara district. Therefore, centralized policy prescriptions need to be re-looked and revised at the policy for the further development of health at the grass-root level.

G. Utilization of funds: There is an annual provision of fund Rs. 10,000/- for the development of Health Sub-Centers and Rs. 10,000 of funds sanctioned annually to the villages and utilized through the involvement of the Gaon Kalyan Samiti for the improvement of sanitation in the villages. The researcher found cases of mis-utilization of funds at the village levels, as well as at the Health Sub-Centers in Kendrapara district. At the village level there is no proper utilization of fund due to lack of community participation. At the Health Sub-Centers level there is problem of utilization of fund due to lack of cooperation and coordination of the village Sarpanch with the ANM as this fund can be withdrawn and utilized with joint signatures of both.

H. Develop infrastructures and increased load of out-patients: The study found that implementation of the NRHM improved the infrastructure facilities, ensured availability of medical doctors, paramedical staff, and medicines to the people both at PHCs and CHC level. It helped to increase the number of out-patients at both levels and found more number of daily outpatients increased from 40 to 250 at the CHC levels in Kendrapara district.

I. Problems of HSCs: The study found that the NRHM has brought changes in the public health delivery at PHCs and CHCs level in Kendrapara district. The development has been noticed in terms of infrastructure, human resources, and other health facilities in both primary and tertiary levels. However, the Health Sub-Centers (HSCs) are yet to develop as expected. Most of them lack in terms of facilities including availability required medicines and infrastructures. The HSCs have not reached expected improvements including efficiency of health facilities by the ANMs as visualized under the NRHM.

J. Augmenting institutional capacities for quality health care: The study focuses for institutional capacities for quality health care under the NRHM and noticed the lack of quality services. The researcher noticed that expectant mothers are still hesitant to avail the health care facilities from the government hospitals and are opting for private hospitals even though it is beyond their economic capacities. Sometimes, lack of quality health services de-motivates expectant mothers to opt for institutional delivery and prefer to have delivery at home. Therefore, there is an urgent need to strengthen institutional

capacities of various health centers particularly in the PHCs, CHCs and District Hospitals to ensuring quality health services.

K. Lack of transportation: The study found that due to lack of proper transport facilities, pregnant women are sometimes forced to deliver at their homes. The provisions for quick and accessible services especially for the expectant mothers are felt necessary. The researcher found the referral services need to be developed and it is also necessary to provide quick services, so that the lives of both mother and child could be saved. It is noticed from this study that due to the delay of the referral services in the process of shifting too much time is lost and on the way many babies died. Particularly referral cases from the District Headquarter Hospitals to the higher levels of hospital are imperative.

L. Need for posting of lady doctors: Most surprisingly the researcher observed and noticed from the household respondents as well as members of the Gaon Kalyan Samiti that out of 18 surveyed PHCs only two PHCs had lady doctors and remaining were positioned by the male doctors. At the CHC levels, most of the gynecologist posts were positioned by male doctors and surprisingly, the gynecologist post in one of the CHCs of Indupur in Kendrapara block was remaining vacant till the time of the visit. As a result, most of the household respondents (mothers) expressed discomfort to visit particularly PHCs and performing of deliveries by the male doctors which is understandable. In fact, the researcher surprised why the government is reluctant to post lady doctors in the government hospitals which also violates gender rights and comfort of the expectant mothers. Therefore, the study found though the government spends crore of rupees for the implementation of the NRHM but could not ensure so far availability of female doctor/ gynecologist in the rural health care institutions which had a negative impact.

M. Need to follow medical ethics: The researcher found about 10 percent of the household respondents were not satisfied with the current provision of health services. While making inquiries, it is found that some of the medical doctors and paramedical staff behave with patients rudely and also used slang during deliveries. Besides that, some of the doctors and staff asked for bribes before performing the delivery and before handing over the JSY incentive (cheque) to the beneficiary. Such activities create force women not to visit the government hospitals for the institutional delivery.

N. Overall assessment of the NRHM and the MDGs: The NRHM as a policy initiative served vibrancy in terms of its reach. Before launching of the NRHM the study area recorded 83 of infant deaths in 2005 and after five year implementation of the NRHM it found decreasing by 19 points and reached to 64 per 1,000 live births in 2010. The Under 5 Mortality Rate (U5MR) also declined by 22 points from 92 in 2005 to 70 per 1,000 live births in 2010. Similarly, the Maternal Mortality Ratio (MMR) also declined 91 points from 367 in 2004-06 to 276 per one lakh live births in 2010-11 in Kendrapara district. It shows that after implementation of the NRHM, the situation rapidly changed to a large extent though lot remains to be done.

While looking at the state level, it found that the IMR has declined 18 points from 75 in 2005 to 57 in 2011.[3] The U5MR also fall down to 13 points from 91 in 2005 to 78 per 1,000 live births in 2010 in Odisha whereas at the national level the U5MR has come down to 18 points from 77 in 2005 to 59 per 1,000 live births in 2010. India achieved IMR 44 in 2011 from 58 per 1,000 live births in 2005 which shows 14 points more than the expected outcome of the NRHM at the national level (NRHM targets of reaching the IMR 30 per 1,000 live births). Besides that, the MMR figure at the national level shows decline of 42 points within six years from 254 in 2004-06 to 212 per one lakh live births in 2007-09 (whereas the NRHM targets of reaching the MMR 100 per one lakh live births). In terms of MMR Odisha shows a reduction of 45 points (3 points more compared to the national level) from 303 in 2004-06 to 258 in 2007-2009.[4]

Above discussion shows that in terms of achievements in major health indicators like IMR, and MMR, Odisha achieved more than the national level. It is documented that India may achieve the targets (IMR 28 per 1,000 live births and MMR 109 per one lakh live births) of the MDGs by 2017 as the NRHM has been extended five years from 2012-2017. The study found that the implementation of the NRHM in Odisha has an appreciable improvement as compared to the national level particularly in terms of IMR, U5MR, MMR and institutional delivery through JSY which definitely helped in saving the lives of mothers and children significantly in the state and at the district level.

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[3]Ibid.

[4]Maternal and Child Mortality and Total Fertility Rates, Sample Registration System, Office of Registrar General, India, 7th July 2011.

5.3 Summary of the Study

The study is divided into five chapters including an introduction and conclusion. The first chapter starts with the introduction, and it discusses different problems in the health sector in India. It takes note of theoretical debates on the need for the provision for public health by the state and tries to understand the concept of health and new public health which contextualizes the NRHM. It also presents the review of literature which covers before and after launching of the NRHM. This chapter focuses the objectives of the study and discuses rationality behind for the selection of the study. It presents the methodology, study design and sampling procedures to carry out the field work. Finally, the first chapters discuss the outlines of the other chapters and completes with the limitation of the study.

The second chapter reviews various health policies starting with the National Health Subcommittee headed by Col. S.S. Sokhey in 1940 and subsequently followed by other health Committee known as the Health Survey and Development Committee-1946 (popularly known as Bhore Committee). The study notes that the country has initiated many health care policies. Many are either not implemented or neglected or kept in abeyance. For example the National Health Subcommittee headed by Col. S.S. Sokhey-1940 and the Bhore Committee-1946. But could not be implemented and only recently the GoI has implemented seriously the recommendation of Col. S.S. Sokhey that there is a community health worker for every 1,000 of the village population, and the integration of both preventive and curative health services through Primary Health Centers and the community participation. It took more than 67 years to implement one recommendation of a Committee. The Bhore Committee-1946 got included in the NRHM in 2005. The National Health Policy-1983's recommendations on comprehensive primary health care received same support after the NRHM was launched. The survey notes that the Government of India (GoI) appointed twelve health Committees including two major National Health Policies, such as the National Health Policy in 1983 and 2002, (apart from the National Population Policy-2000) to look into the issues of health and its related aspects. This chapter also discusses the policy initiatives under the different Five Year Plans including the latest: NRHM in 2005. This chapter concludes with a discussion on the report of the High Level Expert Group on Universal Health Coverage of India, 2011.

The third chapter focuses on the study of the sample state - Odisha, and attempts a survey of reforms undertaken by the Government of Odisha and the new initiatives for providing better health care services to the people, including programs like the *Navajyoti programs*,[5] and the *Panchabyadhi Chikitsa Scheme.*[6] Apart from that, it also discusses the initiative of the Infant Mortality Reduction Mission which is carried out in the Odisha to reduce the alarming rate of infant deaths besides mentioning the current status of the NRHM. It gives a broad picture of the administrative structures and institutional arrangements for providing health care facilities in Kendrapara district followed by the major findings from the field survey. Interestingly the present study noticed changes with regard to the status of the infrastructural facilities compared to the pre-implementation period-2005 of the NRHM. However, the development that took place after the implementation of the Mission has in fact provides some kind of infrastructural facilities to the people, but not been up to the demand according to the Census-2011 and the quality of care according to the Indian Public Health Standards (IPHS). While taking stock of the infrastructural (number of health care institutions) facilities in three levels (primary, secondary and tertiary) of the health care institutions in India in general and the state of Odisha in particular, it is found that, India still has an overall shortage of 18 percent health care institutions whereas Odisha achieved shortages of health institutions as 16 percent at the state level.[7]

The third chapter also focuses details with regard to human resources (medical and paramedical staff) in the health care institutions, and found that 12 percent of the posts of allopathic doctors in the PHC levels are lying vacant at the national level, as against a 27.6 percent vacancy and 57 percent shortage of the same post in Odisha. In the

[5]The Navajyoti scheme is a strategy to improve both maternal and child health care with special focus on the prevention of morbidity and reduction of infant mortality in 14 districts namely Rayagada, Malkangiri, Nabarangpur, Koraput, Kalahandi, Nuapada, Subarnapur, Phulbani, Boudh, Bolangir, Sundergarh, Deogarh, Keonjhar and Gajapati which are identified with the highest number of infant deaths and the IMR is above the state average. The initiative is taken to implement this program with focus to bring awareness among the people in these districts and to make use of the scheme.

[6]The Panchabyadhi Chikitsa scheme is an initiative by the Government of Odisha to control five deadly diseases, namely, malaria, diarrhoea, leprosy, acute respiratory infection and scabies, which are commonly prevalent in the state. To manage and control these diseases, initiatives have been undertaken by the State Government to provide quick treatment and distribute medicines to the patients free of cost.

[7] *Rural Health Statistics in India*, Ministry of Health and Family Welfare, Government of India, 2011.

case of the CHCs, one would be surprised looking into the status of human resources at the national and the state level.

At the national level, there is only 36 percent attendance of doctors, 15 percent vacancy and 64 percent shortage in the specialty category of doctors, whereas in Odisha, there is a 29 percent attendance, and 25 percent vacancy and 71 percent shortage of specialty posts.[8] Therefore, we can reach an assessment that though the NRHM has improved and provided both infrastructures and human resources both at the national and the state level but according not yet increased the number of human resources according to the population norm of the recent Census 2011, hence, there is an inadequacy in the infrastructure and a shortage of human resources in India and particularly in Odisha at all the three tiers of the institutional levels. The present study also analyses the recent Census data on population and accordingly the requirement of the health care facilities. The analysis revealed that the NRHM yet to provide and fulfill the new demand of health care needs of the people. As the population increased, hence so many vacancies developed which need to fill up urgent basis for provision of health care services. The availability of appropriate infrastructure trained human resources inadequate number is essential for sustaining the momentum in rural health but the present study shows considerable gap between the two.

Chapter four presents the significant role and responsibilities of ASHA for implementation of the Janani Suraksha Yojana (JSY) at the grassroots level. Their task begins with the antenatal care, advice mainly to the women on health awareness, healthy lifestyle, and ways to achieve a safe motherhood. They accompany the expectant mothers from the home of the JSY beneficiaries to the health service centers for institutional delivery. They also perform postpartum care with the help of the ANMs after the mothers discharged from the health care institutions. The ASHA made efforts to motivate and follow the strategies to mobilize the community in participating the health care programs. They are considered the lynchpin of the NRHM. It has been observed that 100 percent of the pregnant women are aware of the ASHA. The ASHAs are the driving force behind the steep increase of institutional delivery cases and the rapid decline in infant and maternal deaths in Kendrapara district. Importantly, 76.2 percent of the respondents said

[8] Ibid.

that the ASHA spreads awareness in the women's community about institutional delivery and the JSY. As a result of this and as the present study found, 85.6 percent of the deliveries conducted in Kendrapara are institutional deliveries and deliveries conducted at home have declined to a mere 14.4 percent. The ASHAs have motivated 64.6 percent of the expectant mothers to register with the JSY. The findings noted that from 2006-07 to 2010-11, there has been more than three folds increase in institutional deliveries, from 4421 cases recorded in 2006-07 to 16383 cases in 2010-11. At the same time, the number of reported cases of maternal deaths also declined from 72.25 percent in 2006-07 to 58.70 percent in 2009-10. The study found out that 97.7 percent of the respondents expressed their satisfaction with the health care facilities provided under the NRHM and 94.2 percent respondents have revealed that the cash assistance under the JSY has been beneficial for both mother and child.

The role of the PRIs in the implementation of the village health and sanitation under the NRHM is also covered in this chapter. Focusing on the decentralization of the health service system, it was noticed that most of the 65.5 percent respondents agreed that the health care development that has taken place at the village level is not based on community participation or any such process of decentralization. Therefore, the emphasis on a decentralized health management does need to be re-looked at the policy level for an inclusive development in the health sector. Therefore, merely discussing about decentralization may not achieve health care development in primary health at the village level as was duly found in this study. After the implementation of the NRHM in the state and particularly in Kendrapara district, rural health delivery has definitely become more functional as compared to the pre-implementation of the NRHM in 2005.

5.4 Perspective on Related Studies

Quite a few studies took place on implementation of the NRHM. The researcher selected 10 major studies for the review, five studies conducted by the institutions and five by the individuals. It follows a brief review of implementation of the NRHM. The institutional studies are [PACS[9] (2007), MoHFW (2009), UNFPA (2009), NHSRC (2011), Planning Commission (2011)] and several individual scholars taken interest in

[9] PACS [Poorest Areas Civil Society, supported by Department for International Development (DFID), UK].

this area, they are: [Shyam Ashtkar (2008), Amarjeet Sinha (2009), Nirupama Bajpai, Jeffery D. Sachs and Ravindra H. Dholakia (2009); Kaveri Gill (2009); Zakir Husain (2011)]. It would be useful for recap of these in this context.

A. Institutional level

The Poorest Areas Civil Society (PACS, 2007) conducted a study of the NRHM in nine states in India such as Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Himachal Pradesh, Andhra Pradesh, Assam and Odisha. The study selected three districts of each state on the basis of one well-performing, one medium-performing and one poor-performing for the field study. The identification was based on detailed district level analysis and it focuses on the process for the implementation of the NRHM, its' early impact and the role of PRI's, communities and ASHA in three levels: Center (Mission Director, NRHM; Joint Secretary I/C and Deputy Director, NRHM), State (Mission Director, Secretary of MoHFW) and at the district (3-CHCs, 3-PHCs and 3-HSCs, CDMO, DPM) levels. In Odisha, Jagatsinghpur, Jharsuguda, and Malkanagiri districts were chosen for the study. The study reports a quantum jump to availability of medicines and provision for maintenance of public health institutions. The study also noticed an appreciable increase of numbers of people to avail benefits under the NRHM.[10]

The Ministry of Health and Family Welfare (MoHFW, 2009) had conducted the concurrent evaluation in 187 districts from 27 states and six UTs. According to the sampling strategy, from each selected district covers, one District Hospital, 2 CHCs, 4 PHCs and 12 HSCs, 24 villages, 12 GPs, 24 ASHAs with 1,200 heads of the household and 1,200 currently married women (age 15-49 years). The PHCs were selected from those under the respective selected CHCs, HSCs were selected from those under the selected PHCs. Along with that five inpatients and five out patients were also interviewed to know their opinion of health services through exist interviews at the health facility levels. From each respective HSCs, two villages were selected and from each respective village, 50 households and an ASHA were selected for the study. The study focuses on the objectives of the NRHM. As the present study conducted by the researcher

[10] Implementation of National Rural Health Mission An Initial Review, Report from the PACs, New Delhi, 2007

focuses particularly on JSY, and ASHA so, emphasis was given on two particular aspects. At the national level, over half of women (nearly 55 percent) were aware of ASHA, and 74 percent of the women were motivated by ASHA in Odisha for the JSY scheme and at the national level 63 percent of the women among the interviewed were aware of JSY of the health personnel. Overwhelmingly, the study found that 92 percent of safe deliveries in Odisha took place in the presence of a doctor whereas same delivery was reported 53 percent in M.P and 66 percent in Bihar.[11]

The United Nations Population Fund (UNFPA, 2009)[12] had conducted a study in five large states like Bihar, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh. Five districts were selected randomly from each state and thus, 25 districts were selected among the five states whereas one additional district was selected from U.P. So, total six districts were selected from U.P because population size of the state and have better sample spread. Both quantitative and qualitative research methods were followed in this study. For the quantitative survey the study adopted three stage sampling design with the selection of the districts being the first stage, villages the second stage and respondents at the third stage in each of the states.

In the first stage of sampling, in each state, all the districts were listed in descending order of their achievement in the JSY (JSY beneficiaries as percentage of the rural female population). This list of districts was then divided into five equal female population size strata. One district was selected randomly from each stratum. Thus five districts were selected for the study in each state with an exception of U.P where six districts were selected. In the second stage of sampling, all the villages in the selected districts were listed in descending order of their population size. Then 12 villages were selected through probability proportional to the population size (PPS) technique in four states while in U.P, 10 villages were selected from the six districts. For the selection of respondents in the third stage, all the households in the selected villages were listed and a sampling frame of mothers who delivered in the one year prior to the survey (January to December 2008) was listed and using a systematic sampling technique, with a random

[11] Concurrent Evaluation of National Rural Health Mission-2009, National Report, IIPS, Mumbai, 2011, pp. 1-276.
[12] Concurrent Assessment of the Janani Suraksha Yojana in Selected States: Bihar, Madhya Pradesh, Odisha Rajasthan and Uttar Pradesh, UNFPA-India, New Delhi, 2009, pp. 1-68.

start, 20 eligible mothers were chosen for the study. In case the selected village had more than 200 households, then segmentation exercise was carried out.

Besides them, ASHAs, ANMs, and other stakeholders such as heads of PHCs, CHCs, government hospitals and accredited private hospitals, district and state JSY nodal officers were also interviewed. The field work was conducted between December 2008 and January 2009 in each of the states. The study finds that 94.9 percent of the JSY beneficiaries in Rajasthan awareness about JSY scheme followed by 86.7 percent in M.P, 80.2 percent in Odisha, 78.6 percent in Bihar and 75.9 in U.P. Though, they were more aware about the JSY scheme but the study shows the less number of institutional deliveries conducted in the above mentioned states. In this regard both M.P and Odisha recorded the highest level 72.8 percent of institutional deliveries. But for the JSY beneficiaries M.P. remained on the forefront and achieved 68 percent, whereas Odisha achieved 67.1 percent, Rajasthan 52 percent and Bihar 41.3 percent followed by U.P 37 percent. Regarding the ASHA's advice to the pregnant mothers, it was reported that, 91 percent of the mothers were given advice by the ASHAs in Odisha for safe delivery followed by Bihar (74 percent), M.P (36 percent), U.P (84 percent) and Rajasthan (64 percent). The reasons for not delivering in a health care facility were found to be 'convenience of delivering at home and normalcy of pregnancy in the states like U.P and Rajasthan. In Bihar and Odisha, along with these two reasons, the institution being far off was also mentioned by 25 percent of the respondents for not choosing for safe delivery in a health care facility. These were the some of the major findings from the study.

The National Health System Resource Center (NHSRC, 2011 under the MoHFW, GoI), evaluated the JSY in eight poor health indices states like Bihar, Chhattisgarh, Jharkhand, M.P, U.P, Odisha, Rajasthan, and Uttarakhand in India. The study adopted comparative case study approach and conducted in two phases. The first phase adopted a form of rapid appraisal based upon analysis of secondary sources of data drawn from records available in the districts, supplemented by visits to a sample of health institutions, interviews with medical doctors, ASHAs and beneficiaries and focus group discussion with communities. The second phase was a cross sectional survey of women who delivered in the last year and were JSY beneficiaries and aimed at studying the experiences of pregnancy and delivery at the health care institutions. The 1st phase data

were collected from January to May 2010 and the second phase from May to October 2010, after five year implementation of the NRHM. The major findings revealed substantial increase of JSY case which also increased institutional delivery and 50 percent of the women who previously had deliveries at home, opted for institutional delivery during their subsequent deliveries. The study also demonstrates equity in access to women into institutional deliveries, given that the representations of SC/ST and BPL in the sample were higher than the population representation. However, 40 percent of deliveries are still conducted at home in most of the districts of the aforementioned eight states, and 7.7 percent to 63 percent of the women who deliver at home come from the SC, ST and BPL categories. The study also found that women who deliver at home had higher proportions of SC/ST and non literate or primary school drop outs.[13]

The Planning Commission (2011)[14] has entrusted an appraisal study of the NRHM to the Population Research Center, Institute of Economic Growth, New Delhi with an objective of evaluation and assessment in the implementation of the NRHM. The study intends to evaluate performance of NRHM in seven states of India such as U.P, M.P, Jharkhand, Odisha, Assam, J&K, and Tamil Nadu. The sampling design for each district envisages selection of District Hospital, two CHCs, four PHCs with two each in the selected CHCs, eight SCs with two each in the selected PHCs, eight villages with one each under selected SCs, ASHAs in the selected villages, and 200 households. The study covers health care institutions of total 37 DHs, 74 CHCs, 148 PHCs, 296 SCs, and 296 villages stretched over 37 districts over 7 states in India. The selection of 25 households for the household survey in each selected village was based on identification of five households under each of the following reasons: households having lactating women, households having pregnant woman, households with children1-5 years, households having utilized family planning services and households with at least one chronic disease patient. Thus, overall 7400 households from 296 villages selected over 37 districts in the seven selected states are covered under the study. The structured schedules are canvassed to elicit the information.

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[13] *Programme Evaluation of the Janani Suraksha Yojana,* National Health Systems Resource Center, Ministry of Health and Family Welfare, Government of India, September, 2011, p. 2.

[14] *Evaluation Study of National Rural Health Mission in 7 States Program,* Programme Evaluation Organization Planning Commission, Government of India, February 2011, pp.1-153.

The findings of the study show that, in Odisha 63.7 percent of expectant mothers avail the JSY facilities followed by the states in U.P, (53.7 percent), M.P (77.7 percent), Jharkhand (45.8 percent), Assam (61.9 percent), J&K (44.1 percent) and Tamil Nadu (81.2 percent). The government health care institutions also provide satisfactory health services after implementation of the NRHM in Odisha 97.5 percent followed by the states in U.P, (88.3 percent), M.P (96.1 percent), Jharkhand (93.1 percent), Assam (92.9 percent), J&K (98.9 percent) and Tamil Nadu (98.1 percent). In the state of Odisha, it is also noticed that 47.4 percent of deliveries still have been conducted at home whereas Tamil Nadu records only 4.2 percent but J&K records the highest 62 percent among the seven states. Similarly in Odisha for the institutional delivery, pregnant women prefer 24.3 percent CHCs, 17.9 percent PHCs, 8.3 percent District Hospital and 1.6 percent prefer private clinics. Regarding awareness about the ASHA, 98 percent women in Odisha are aware and 65.4 percent aware about the program of the NRHM. The health awareness created by the ASHA in Odisha is 98 percent and 100 percent ASHA provides service to the people, it means all the recruited ASHAs perform their functions. Regarding the VHSC, found that it is not playing its roles properly, 35 percent VHSC has received untied funds and only 19 percent have reported about facing problems in the implementation of health related programs under the NRHM.

While discussion on health care facilities of different health care institutions in Odisha, it is noticed 9 out of 10 CHCs covered have reported availability of 24 hour emergency services for normal and assisted deliveries and the bed occupancy rate is below 40 percent in last year in all the CHCs. Diagnostic facilities are reported to be missing in all the 10 CHCs and the specialists/doctors are found to be not in position in most of the CHCs in all the five districts excepting availability of an Obstetrician, and Pediatrician in both the CHCs of Puri viz. Nayahat and Chitana. Availability of specialists/doctors like General Surgeon, Obstetrician, and pediatrician in regular positions are in-place in the CHCs in Puri and Kendrapara. Overall availability of doctors seems to be better in Puri and Kendrapara. In 20 surveyed PHCs of Odisha's 5 districts, 85 percent is functioning in its' own buildings. About the availability of services, in 95 percent PHCs pharmacy and in 50 percent PHCs adequate medicines are available. In the

state of Odisha, out of the total 39 surveyed SCs, 100 percent have buildings, but only 54 percent is running in government buildings.

B. Individual studies

Noted health experts like Shyam Ashtkar (2008)[15] and Amarjeet Sinha (2009)[16] have come up with a solid observation of the community participation and decentralization process under the NRHM by using the secondary sources. They are also opined same as found in the present study that the NRHM has failed to follow the process of decentralization in the community levels, and also reported a lack of intersectoral coordination in the health care delivery system. Both of them also noticed the negligence of traditional health support which is some of the imperative aspects of the NRHM. Both highlighted the urgent need for an involvement of the local institutions, including the PRIs, under the implementation of the NRHM and argued for the need of training for the medical and paramedical staff, in order to ensure better health provisions and quality services to the rural people.

There is another study investigated by Kaveri Gill (2009)[17], who critically evaluates both quantity and quality of services in rural public health care services under the NRHM. She measures the condition of physical infrastructures, human resources including paramedical staff and quality health care provision in four states namely Andhra Pradesh, U.P, Bihar and Rajasthan. She studied in the decentralized process involved under the NRHM and specifically management of the untied fund, and maintenance of financial grants in the aforementioned states. Her micro level findings from above four states reveal many disparities of health services and problems in the implementation of the untied fund. However, some progress has been noticed in particular aspects like physical infrastructures, availability of drugs, and funding for health development under the NRHM. With regard to human resources, she carefully reported some complexity of structural issues and services which needs more investment,

[15] Shyam Ashtkar, "The National Rural Health Mission: A stocktaking", *Economic and Political Weekly*, Vol. XLIII, No. 37, September 13, 2008, pp. 23-26.
[16] Amarjeet Sinha, Disscussion on "In defence of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLIV, No. 14, April 04, 2009, pp. 72-75.
[17] A Primary Evaluation of Service Delivery, under the National Rural Health Mission: Findings From a Study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan, *Working Paper* 1/2009 – PEO, Planning Commission of India, May 2009, pp. 1-92.

training, and education to medical staff in the provision of quality health care, close monitoring and attendance.

Another midterm evaluation study was conducted by Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia (2009) on the issues of access to health, service delivery and efficiency of the rural health delivery system under the implementation of the NRHM in five districts namely Sagar district in M.P, Jalore and Chittorgarh districts in Rajasthan; and Sitapur and Azamgarh districts in U.P. Two districts in Rajasthan were selected to know the health condition of the desert people in Jalore district and the health condition of the tribal people in Chittorgarh district. Similarly, two districts were chosen in U.P, to know the health status of the people from Central U.P (Sitapur) and Eastern U.P (Azamgarh) which also gives a statewide representation of U.P. In general they noticed significant increase of the institutional deliveries in all the three states and shortages of human resources in general all the three states and Medical Officers particularly in U.P., They found all the surveyed CHCs in the three states were functioning with a shortage of specialized doctors and are far from meeting the Indian Public Health Standards (IPHS), even after the implementation of the NRHM. A similar result was also noticed at the PHC level in the respective states. Though, the ASHAs play a significant role at the village level under the NRHM, there exists a lack of cooperation and coordination between the health facilities and the district program management units which obstructs the implementation of the NRHM to its fullest. Their study also finds lack of decentralization and not active role played by the VHSC members.[18] Broadly, their study opined the similar results of the studied states as the present study found in Odisha.

In an interesting piece of work, Zakir Husain (2011)[19] studied the intervention of the NRHM based on the reports (common review of NRHM) published by the Ministry of Health and Family Welfare, GoI. and the rapid appraisal survey conducted in different districts in India by the different agencies. He finds a similar kind of result agreeing with the present study. He noticed that there are deficiencies in physical infrastructure in the

[18] Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia, Mid-term Evaluation of the National Rual Health Mission, CGSD Working Paper, No. 37, The Earth Institute at Columbia University, October, 2009.
[19] Zakir Husain, special article on "Health of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLVI, No. 4, January 22, 2011, p. 53-60.

three tier health delivery system, particularly states like, M.P, U.P, Rajasthan, Bihar and Odisha, and reported that health provisions in the above said states are not up to the Indian Public Health Standard (IPHS). He also reveals a shortage of equipments, medicines and a deficiency in human resources that affect the health delivery services and reduces the quality of health care. In agreement with the present study findings, his survey too observed a lack of accountability, deficiencies in the proper utilization of the untied fund, and absence of the community monitoring and weakness in the implementation processes of the NRHM.

As the most of the studies show similar kind of findings as the researcher found in the present study, therefore it can strongly argued that the NRHM has improved particularly in JSY and institutional deliveries as well as in some aspects including the infrastructures and human resources but yet the NRHM also been lagging behind in some other aspects like decentralization in decision making process, lack of cooperation and coordination with parallel departments which would help further development of health sector particularly in the rural areas in the country. Therefore, such crucial issues need to address for further development of the NRHM.

5.5 Policy Recommendations

A. The study strongly recommends that avenues for the community participation may be enhanced and begin with the association of the PRI members for a better decentralized management, including planning, implementation and monitoring of the health delivery services under the NRHM. In this regard the Central Government guidelines should focus active involvement of the local communities in the implementation process to achieve the goals of the Mission in the rural areas. As it is a Center specific program, the Central Government must persuade the State Governments to implement the program as it is their own health initiative to expedite the outcomes of the Mission.

B. It recommends for a district level health plan (micro-level planning) to be implemented effectively for strengthening the health related initiatives.

C. The present study recommends developing the infrastructure facilities and the provision of required number of manpower resources of each and every health

care institution for a quality health delivery system which will help to achieve the goals of the NRHM.

D. It is crucial to develop a helpline system for the transportation facilities (Ambulance/Janani Express) to carry pregnant women to the nearest health care institution from their homes, preferably a separate nodal agency such as a community group, the NGOs or the civil society organizations to monitor the demands.

E. Priority may be accorded for strengthening the facilities of the Referral Service Centers both at the Community Health Centers and the District Headquarter Hospitals to lever the complex cases of the institutional deliveries instead of referring the expectant mothers to the higher level hospitals at the last moment where there is a possibility of death either the baby or sometimes the expectant mother.

F. Conduction of regular monitoring and checkups of the pregnant women during the antenatal and the postpartum period by the ANMs is important for a safe motherhood.

G. It is recommended for the fund management that may be ensured through timely release, proper monitoring, external audit system, and smart regulation.

H. This study recommends for the capacity building exercises which may be undertaken for the PRI members and Village Health and Sanitation Committee members in order to equip them for proper planning, implementation, regulation and overall management of health delivery in the rural areas.

I. In addition to PRI functionaries for the management of the untied fund at the health Sub-Center levels, it is recommended that the community may be involved from various sections and associations of the society for the better utilization of health services.

J. Medical and paramedical staff may be given an orientation to provide the quality health care services and mandatory to follow the medical ethics while performing the institutional delivery and providing treatments to the people.

K. The study strongly recommends posting of lady doctors at the PHCs level and female gynecologist at the CHCs levels from the comfort of the pregnant women

which would also help to attract them for institutional delivery and provide them safe motherhood.

5.6 Issues for Debate

The NRHM has been highlighted as one of the largest public health programs in the world. It is also considered as a target oriented program aimed at revitalizing a long neglected primary health service delivery system in the country. But, there is also an ongoing debate among the academics, policy planners and health analysts about whether the NRHM is going to achieve its goals by the end of the Mission period. A part of the academia discussion on various issues that are interlinked with the implemented policy, one of the issues under discussion is about the place of health in our Constitution. Health is categorized in the State list instead of in the concurrent list; and the program of the NRHM was introduced by the Central Government who also prescribed the guidelines for the implementation of the NRHM. The centralized policy stands as a problem for policy implementation and service delivery that directly influence the expected outcomes of the Mission.[20] The other problem is with the political set up which also influences the Mission outcomes. The political set up at the Centre and the State also comes to the arena of discussion; the political parties leading the government in the respective states also somewhere or the other take less interest in the outcomes of the NRHM. Yet, such barriers need to be removed in order to provide seamless service and achieve better outcomes. The political parties who come to power in the regional states have to have genuine concern for the proper implementation of the Mission. Here, power politics play a significant role, as the impediments to change are more often found to be more political than technical. Unless and until the political parties in power strongly attempt to implement the NRHM seriously, the outcomes of the NRHM would not be achieved within the target period. Apart from this, regarding the outcomes of the Mission in different states of India, it is clearly observed that there are other associated problems with the Mission such as non- utilization of funds, improvement of service delivery, lack of contribution from the local governments and also for the local community influenced by the local political parties. Why is it so when the policy guidelines are the same and the allocation of funds fixed according to population norms? We need to think over such

[20] K.S. Jacob, "For a new and improved NRHM', *The Hindu*, August 8, 2011.

matters and have discussions with the various political platforms for better policy implementation and outcomes of the NRHM.

As it is noticed that some state have very weak health indicators and found less investment in the health sector. It is also documented weak health policies in the state which affect health development. Therefore, the guidelines need to be changed as per the requirements of the state as the same central policy norm is not equally applicable for all the federal states of India in allocating funds under the Mission. Though the Centre follows the population norm for allocating the budget, it is inappropriate to ignore other influencing indicators such as education, housing pattern, food, communication facilities, and employment, which affect the health outcomes. So, in this context, the governance structures of the NRHM need to be addressed with other vital issues carefully. Therefore, it is imperative for the Ministry of Health and Family Welfare to have a critical look and understanding of the current public health demand, policy and other programs running at both the national and state levels.

At the same time, the NRHM which conducts impact evaluation on the basis of finance, infrastructure, and human resources to know the functioning of NRHM is not adequate to study. It has to go beyond the typical evaluation process and has to look at more in depth way including socioeconomic status and social determinants of health. So, there is a need to shift over to the indicators of efficient functioning like, health education, cultural change by creating health consciousness, economic development through various income generating activities etc., which have significant impact on health outcomes. The initial high rate of infant and maternal mortality tended to reduce rapidly with the early inputs but requires fully functional, efficient and effective systems for sustained results. Otherwise the successful outcome of the NRHM may get reversed once the government stops showing interest in continuing the program.

Apart from that, the foremost aspect of the NRHM is its engagement of the local community and the PRI members into the mainstream implementation of the Mission. When the NRHM focuses on the active involvement of the local community to establish a large scale development in the health sector, then more training for capacity building is needed at the community level for an effective communitization of public health services. It may be a major challenge for the government but involving such members into the

local health planning is vital for the development of health services. While conducting the field survey, it was noticed from various blocks of Kendrapara district that there are instances of malpractice in the execution of the policy for Village Health and Sanitation at the grassroots levels. This directly influences the outcomes of the Mission. So, to bring about and maintain more transparency and accountability, there is an urgent need for remaking institutional arrangements which calls for a debate at the policy planning level.

Above all that, the Ministry of Health and Family Welfare has to discuss and meticulously work with other departments such as education, rural development, and food supplies etc. for better results of the NRHM. The other departments influence different social determinants of health such as safe drinking water, sanitation, nutrition, food, housing pattern, education and employment which have a strong impact on good health. Therefore, strong convergence, close and regular coordination with such departments and other welfare programs are crucial for reducing poverty, social exclusion and gender discrimination, all of which also have a significant impact on health.

There is a provision of cashless treatment under the Janani Shishu Suraksha Karyakram launched on June 1, 2011. Under this program, free health care including Caesarean section and other related expenses are provided to the mothers. This will fail to be successful with the little allocation of funds in the process of combining two projects aiming at to achieve the same goals. More discussions at policy level would enable better planning for the new program. However, looking into the mismanagement of the funds for the JSY scheme under the NRHM in the different states, one can see the lacuna in the governance system. Such issues require serious addressing among the personnel of the governing mechanism who need to find out a path for good management within the system. The present study also found a lack of accountability, responsiveness and transparency in the implementation of the various programs under the NRHM, particularly that of the Village Health and Sanitation. The funds that are allocated for the development of the Village Health and Sanitation are mis-utilized, under-utilized and sometimes not utilized at all. The same case also identified at different Health Sub-Centers while utilizing untied fund. The audit system of the NRHM involved at the state and district levels are not equipped enough to bring about a good outcome, as more problems are associated with the village and block levels. Therefore, checks and balances

are imperative for better health management in a country like India where millions of people depend of various social welfare schemes and programs implemented by the government.

5.7 Limitations of the Study

The present study has been conducted in one district (Kendrapara) of Odisha which consists of nine blocks. The scope of the present study mainly focuses on two of the various goals of the NRHM, which are, (a). Reduction of the Infant Mortality Rate (IMR) and the Maternal Mortality Ratio (MMR), (b). Facilitation of the access to an integrated comprehensive primary health care with universal access to public health services, such as women's health, child health. The study focuses the Janani Suraksha Yojana and institutional delivery through which the NRHM intends to decrease the IMR and MMR in district, state and at the national level. Though the IMR and MMR are linked to institutional delivery but due to methodological limitations the household data cannot be converted to proportion rate of both the indicators. Due to financial and time constraints this study could not focus other objectives of the NRHM.

The NRHM is a national flagship program and has been implemented in various states of India including Odisha. But, as the scope of the present study is wide in nature and deeply focuses on the reduction of the IMR and the MMR, and on the access to the integrated primary health service, it has studied all the aspects related to these particular goals of the NRHM. It has focused the research on micro level rather than on a macro level. Again within Odisha, the study is confined to one district only, which is divided into nine blocks using random sampling method generalization drawn is based on limited study. But based on the primary data and other information that have been collected from the Office of the Mission Directorate of National Rural Health Mission, Bhubaneswar, Odisha, and from other secondary sources, an attempt has been made to give an overview of the implementation of the NRHM along with an assessment of the reduction of the IMR and the MMR and generally the health of women and children in the study areas. As the study is based on an in-depth and intensive survey of a particular district, it figures out the functions and the utilization of the District Headquarter Hospital, the CHCs, the PHCs, and the HSCs, and the changes that have occurred in the health care facilities after the implementation of the NRHM. On a methodological note, it may be further

emphasized that the present study is based on a survey design with various interview schedules as the primary tool for data collection. It could not focus much on socio-cultural dimensional problems of health which are also major aspects of health to be found out through research.

5.8 Future Research

This study attempted to evaluate the implementation process of the NRHM at policy level, analyzed its impacts and identified the gaps in health policy research. According to the Constitution of India, the public health, sanitation, hospital and dispensaries fall under the state list. However, the NRHM is one of the flagship programs of the Centre. Simultaneously, the mechanism involved with the implementation of the NRHM and the timeline of the program raise questions of sustainability of the health indicators and persistence of the health care systems in the different states of the country. As the NRHM is the largest nationwide public health programs as well as an initiative towards the provision of universal primary health services in the country, once the program concludes it would remain an issue as to whether such interventions can be sustained, as the monetary incentives etc. cannot be continued beyond certain time limits. Further research is obviously required in order to study the public policy perspectives on health, particularly on the NRHM, as it has been now extended for the next five years. It is also imperative to study the changing nature (changing dimensions of the governance system/party system who would be in power) of policy discourse in the context of democratic electoral politics and its intervention in health policy.

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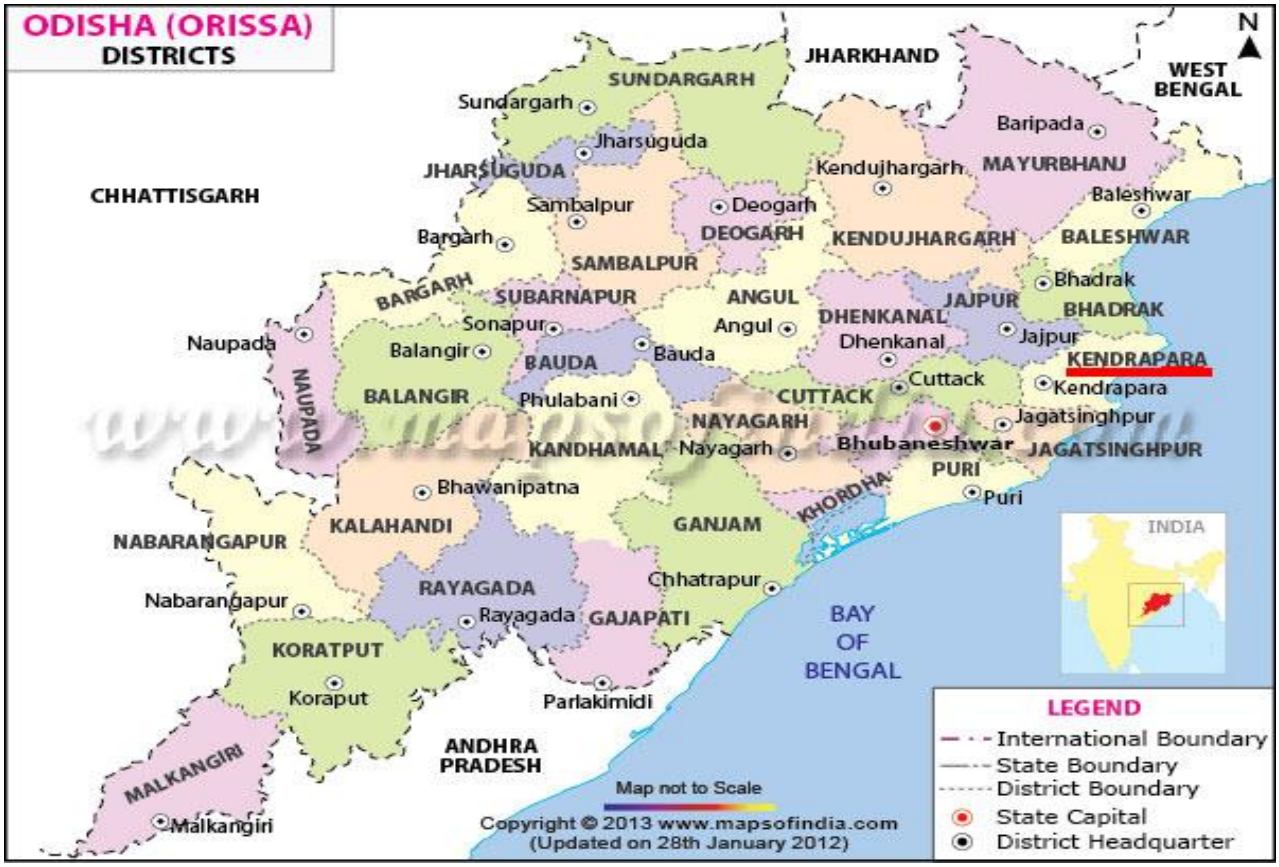
www.nrhmorissa.gov.ins

Appendix-1


ODISHA (ORISSA)
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Sundargarh
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Sambalpur
Deogarh
DEOGARH
Bargarh
SAMBALPUR
BARGARH
SUBARNAPUR
Sonapur
Naupada
NAUPADA
Balangir
BALANGIR
BAUDA
Bauda
Phulabani
KANDHAMAL
Bhawanipatna
KALAHANDI
NABARANGAPUR
Nabarangapur
RAYAGADA
Rayagada
KORATPUT
Koraput
MALKANGIRI
Malkangiri
ANDHRA PRADESH
Parlakimidi
GAJAPATI
GANJAM
Chhatrapur
KHORDHA
Puri
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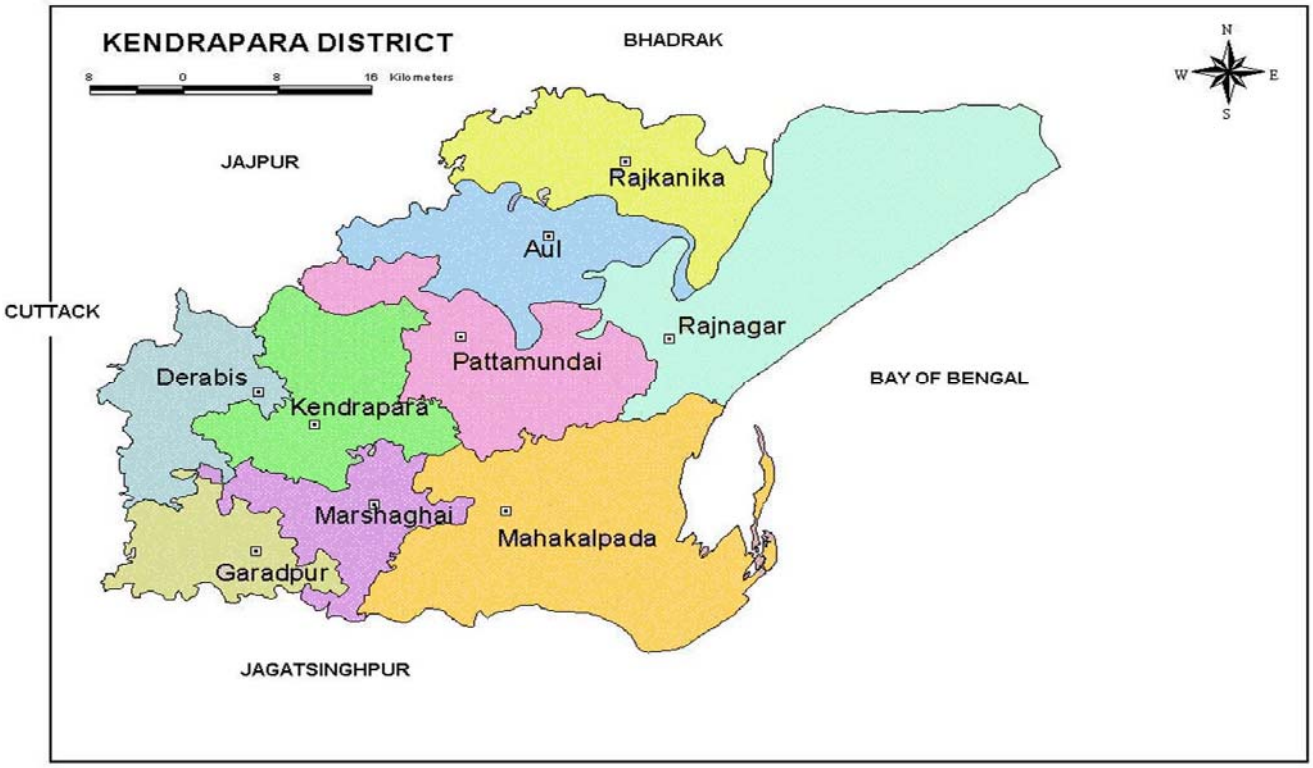
Bhubaneshwar
NAYAGARH
Nayagarh
CUTTACK
Cuttack
ANGUL
Angul
DHENKANAL
Dhenkanal
JAJPUR
Jajpur
Baripada
MAYURBHANJ
Kendujhargarh
KENDUJHARGARH
Baleshwar
BALESHWAR
Bhadrak
BHADRAK
KENDRAPARA
Kendrapara
Jagatsinghpur
JAGATSINGHPUR
BAY OF BENGAL
INDIA
LEGEND
International Boundary
State Boundary
District Boundary
State Capital
District Headquarter
Map not to Scale
Copyright © 2013 www.mapsofindia.com
(Updated on 28th January 2012)


KENDRAPARA DISTRICT
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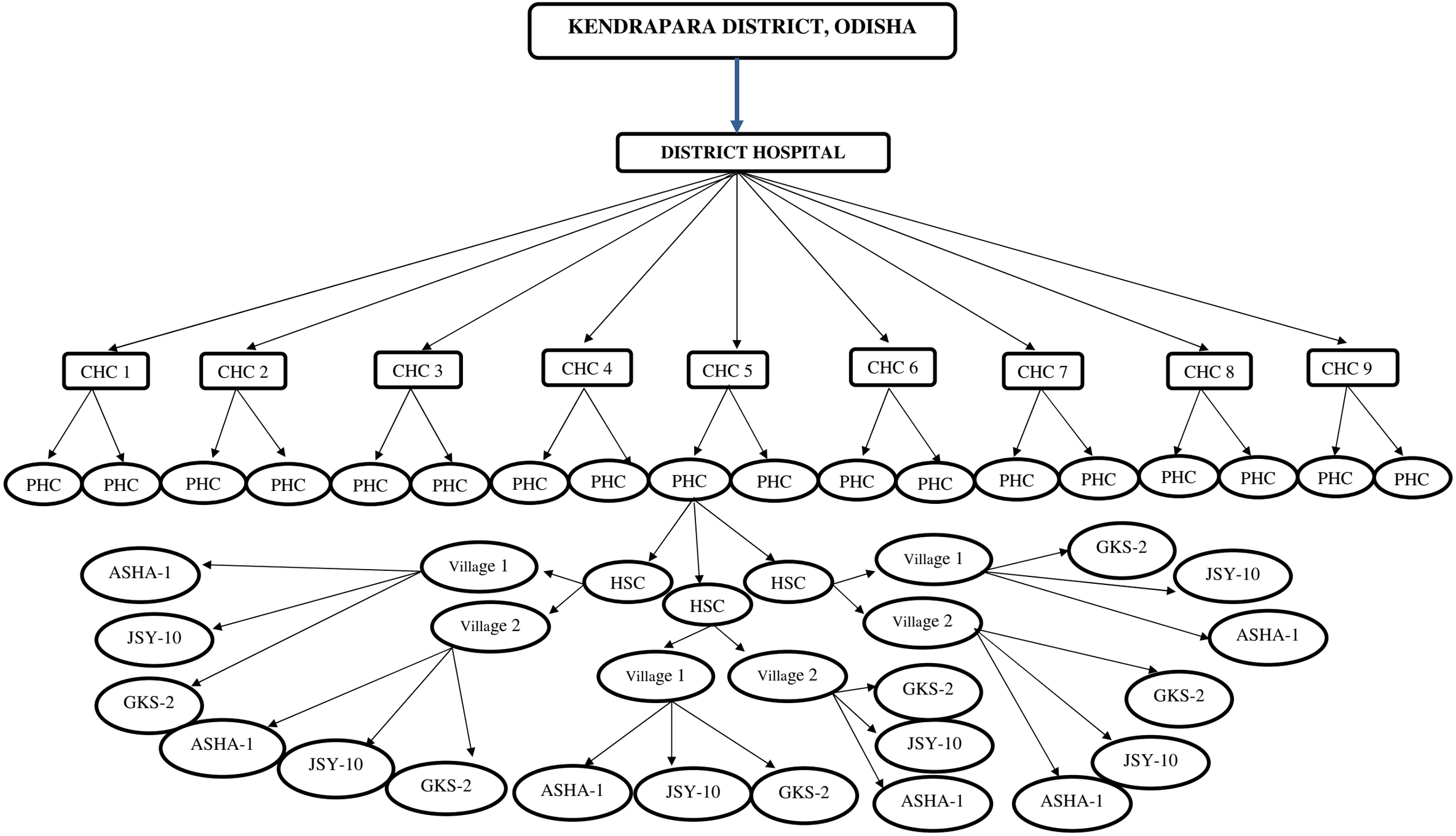
JAGATSINGHPUR


KENDRAPARA DISTRICT, ODISHA
DISTRICT HOSPITAL
CHC 1
CHC 2
CHC 3
CHC 4
CHC 5
CHC 6
CHC 7
CHC 8
CHC 9
PHC
HSC
Village 1
Village 2
ASHA-1
JSY-10
GKS-2

Appendix-3

Sample: An overview

Category	Name of the Category	Total Envisaged
Beneficiary	Beneficiaries of the Janani Suraksha Yojana (JSY)	840
Monitoring team	Members of the Gaon Kalyan Samiti (GKS)	168
	District Program Manager (DPM)	1
Health facilitator	Accredited Social Health Activist (ASHA)	84
	Auxiliary Nurse Midwife (ANM) of Health Sub-Center	42*
	Medical Officer In-charge of Primary Health Centers	18
	Medical Officer In-charge of Community Health Centers	9

Note* Indicates number of Health Sub-Centers (HSCs) covered during the field survey instead of covering envisaged sample size of 54 HSCs. There are shortages of 12 HSCs out of envisaged sample, because each PHC does not have always three HSCs under its jurisdiction. Therefore, the researcher is able to cover only 42 HSCs.

Appendix - 5

Health Service Scenario before implementation of the National Rural Health Mission in 2005

Improvement of the health services after the implementation of the NRHM

ପ୍ରାଥମିକ ସ୍ୱାସ୍ଥ୍ୟକେନ୍ଦ୍ର

PUBLIC PRIVATE PARTNERSHIP
GRAM-UTTHAN

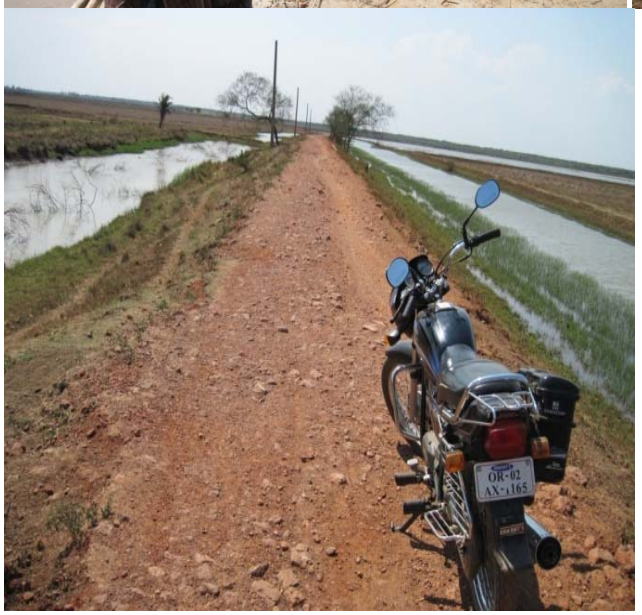
ପ୍ରସବ କକ୍ଷ

ଜନନୀ ସୁରକ୍ଷା
ଏକ୍ସପ୍ରେସ
ଗ୍ରାମ-ଉତ୍ଥାନ

PHC N BATICHAR UNDER PPP

Lack of bed facility due to steep rising of institutional delivery at district Hospital

Communication and habitation is a major problem in some part of the remote rural areas



Annexure – 1

Glossary

Antenatal Care (ANC): It is the monitoring methods and procedures for pregnant women that are routine in societies with good quality health care services and systems. These include assessing the mother's health and obstetric fitness, at least three antenatal checkups, tetanus immunization and iron, folic acid supplementation during pregnancy for an effective in preventing anemia among the pregnant women, checking hemoglobin level, renal function etc. and monitoring the health and development of the fetus. The aim of the antenatal care is to achieve at the end of a pregnancy a healthy mother and a healthy newborn baby.

Birth Rate: The number of live births in a defined administrative jurisdiction, in a calendar year divided by the mid-year population of the jurisdiction, with the customary multiplier of 1,000 to produce a whole number rather than a decimal or fraction.

Child Mortality Rate/Under5 Mortality Rate: The mortality rate in children aged from 1 to 4 years. Alternatively, it is the probability of dying children between the first and fifth birthday. It is expressed as a rate per one thousand live births.

Community Health Center (CHC): The CHC is the third tier network of rural health services system. It functions as the referral center for four Primary Health Centers and provides specialty health services to the rural people in the areas of medicine, surgery, pediatrics and gynecology. Apart from providing services to the out-patients, it also renders services to the inpatients with 30 beds facilities, operation theatre, labor room, X-ray machine, pathological laboratory, standby generator, etc. It covers 1,20,000 population in the plain areas and 80,000 in the hill/tribal/difficult area. It is established and maintained by the government of the concerned State.

Disability-adjusted life-years (DALYs): It is measured overall disease burden of any country, expressed as the number of years lost due to ill condition of health, disability or early death. It is very commonly used in the field of public health and particularly while assessing health impact of any program.

Death Rate: The frequency with which death occurs among the population in a geographical area within one year. It is calculated number of deaths per 1,000 estimated population in one year.

Fertility Rate: The number of live births during a year per 1,000 female population in reproductive aged group between 15-49 years at the midpoint of the same year.

Health expenditures: Health expenditure covers the provision of preventive and curative health services, public health affairs and services, health applied research, and medical supply and delivery systems, but it does not include provision of water and sanitation.

Infant Mortality Rate (IMR): The UNICEF defines the IMR as the probability of dying between birth and age 1 year, expressed as a rate per 1,000 live births. In other words, it is calculated the proportion of live born infants dying before reaching their first birthday.

$$\textbf{Measuring IMR} = \frac{\text{Number of infant deaths during time period}}{\text{Number of live births during time period}} \times 1{,}000$$

Maternal Mortality Ratio (MMR): The World Health Organization defines the MMR as the number of maternal deaths occur in a specified time period (in a calendar year) per 1,00,000 live births. A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

$$\textbf{Measuring MMR} = \frac{\text{Number of maternal deaths}}{\text{Number of live births during time period}} \times 1{,}00{,}000$$

Maternal and Child Health: The term maternal and child health refers to the promotive, preventive, curative, promotive and rehabilitative health care for both the mother and child which includes the sub-areas of maternal health, child health, family planning and health aspects care of children. The emphasis is on promoting and protecting health: monitoring growth and development, advising on infant feeding, nutrition counseling throughout childhood, ensuring that infants and small children receive vaccination, etc.

Neonatal Mortality Rate: It is defined by number of newborn child deaths per 1,000 live births occurring within 28 completed days of birth in a given year.

Neonatal mortality: It is the probability of a newborn dying between birth and the first 28 completed days of life.

Population health: Population health describes the state of health, and public health is the range of practices, procedures, methods, institutions, and disciplines required to

achieve it. The term also is used to describe the academic disciplines involved in studies of the determinants and dynamics of health status of the population. Population health is influenced by physical, biological, behavioral, social, cultural, economic, and other factors.

Postnatal Mortality Rate: It is defined by the number of deaths of children per 1,000 live births between 28 days and one year of age in a given year.

Primary Health Center (PHC): The PHC is the first contact point between the village community and the medical health officer. The PHCs are envisaged to provide an integrated preventive, curative, promotive, and family welfare health services to the rural people. It provides basic health care facilities and covers 30,000 population in the plain area and 20,000 population in the hill/tribal/difficult area. It is established and maintained by the government of the concerned State.

Primary health care: Essential health care that is technically valid, economically feasible and socially acceptable. Primary health care includes eight essential elements: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.

Public health expenditures: The annual public health expenditure as a proportion of the national health expenditure. The size of the public expenditure on health care goods and services in a given national economy, at a given period in time, usually a year, expressed as a percentage of the corresponding national health expenditure. It represents the governmental share, not limited to the ministry of health, of the total annual expenditure for covering the provision of preventive and curative health services, public health affairs and services, health applied research, and medical supply and delivery systems, excluding the provision of water and sanitation.

Sub-Center (SC): The SC occupies the lowest rung, as the most peripheral, and the first crucial contact point between the primary health care system and the rural community. A Sub-Centre is staffed by a female health worker, popularly known as Auxiliary Nurse

Midwife (ANM) and a male health worker, commonly known as a Multi Purpose Health Worker-male (MPHW). The ANM is in-charge of the SC. The SCs are provided with basic drugs for minor ailments needed for taking care of essential health of the people. The SCs are assigned tasks relating to interpersonal communication in order to bring about behavioral change and provide services in relation to maternal and child health, family welfare, nutrition, immunization, diarrhea control and control of communicable disease programs. It covers 5,000 population in the plain area and 3,000 population in the hill/tribal/difficult area.

Total health expenditures: Annual national health expenditure as a proportion of the gross domestic product. The value of the sum of public and private expenditures on health care goods and services in a given national economy, at a given period in time, usually a year, expressed as a percentage of the corresponding gross domestic product.

Annexure – 2

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for District Programme Manager

General Information (Information to be collected from the DPM)

a. Name of the Respondent: _____, Designation of the Respondent: _____
b. Age: ____, Education: _____
c. Name of the Village: _____, GP: _____, Block:_____
d. Managed by: Panchayat/District Municipality/District Administration: _____

1. Human Resource

Name of the position	Sanctioned position	Filled	Vacant Post	Date of joining (month and year)	Filled through fresh recruitment or by deputation
District Program Manager					
District Accounts Manager					
District Data Manager					

2. Financial and Physical Progress

Financial year	Budgeted amount sanctioned	Budget Expenditure	Budget unspent
2005-06			
2006-07			
2007-08			
2008-09			
2009-10			

3. Could you please share with me the detailed breakup of the budgeted amount and expenditure incurred under various heads?

Q.NO	Question Column	Response Column
4	How do you get the funds for the NRHM?	
5	Can you please share with me the physical progress of the program from 2005 to 2010 (up to December)?	
6	How do you use the funds available under flexi pool/ untied funds?	
7	There is a provision of receiving annual corpus grant of Rs 1 lakh and Rs 5 lakhs for RKS respectively of Sub-divisional Hospital/District HQ. Hospital, How did you spend that amount?	

	Monitoring	
8	On which indicators do you monitor the program?	
9	Are there any monitoring guidelines/formats sent from the State?	Yes----------1 No----------2
10	If yes, can you please share it with me?	
11	Do you receive any feedback from the State on the reports that you send to them?	Yes----------1 No----------2
	Issues and suggestions	
12	What challenges are you facing in implementing the program in your district?	
13	Do you have any suggestions on how these challenges can be dealt with?	
14	What is your views/opinion regarding the NRHM, is it really developing health care facilities in Orissa?	
15	How do NRHM be more developed/what changes do you want bring in policy level?	
16	**Remarks/observations/suggestion from Respondents**	

Annexure – 3

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for CHC

General Information (Information to be collected from the Medical Officer I/C)

a. Name of the Respondent: _____, Designation of the Respondent: _____
b. Age: ____, Caste: SC/ST/OBC/General: _____, Education: _____
c. Name of the Village: ____, GP: ____, Block: ____, Name of the UGPHC/CH
d. Managed by: Panchayat/District Municipality/District Administration: _____

Q. No	Question column	Response column
1	How much population is served by the CHC?	
2	What is the distance and how much time take to travel to CHC in public transport/ from patient's house?	
3	Is this an upgraded PHC/CHC?	Yes…….1 No……..2
4	Which is nearest PHC in the coverage area from the CHC?	
5	Which is farthest PHC in the coverage area from the CHC	
6	Distance from District HQ. Hospital from CHC (in Kms.)	
7	Distance of CHC from the main road (in Kms.)	<0.5 Km…….1 0.5 – 1 Km…….2 > 1 Km……...3
8	Has the IPHS facility survey been carried out in the CHC	Yes…….1 No……..2
9	Private sector health facility in the area (Encircle all applicable options)	Private laboratory……..1 Hospital/Nursing home……..2 Charitable hospital…….3 Hospital run by NGOs……...4
	Other framework, functional and structure related issues	
10	Is the CHC functioning on 24x7 basis?	Yes……1 No…….2
11	Timings for OPD from Morning: ------ & Afternoon: -----	
12	Is CHC functioning as a First Referral Unit (FRU) (with facility for caesarian section, blood transfusion 24x7 basis and facilities for emergency treatment of sick neonatal child)	Yes……1 No…….2
13	Does it have AYUSH doctor providing services?	Yes……1 No…….2
14	How much amount of financial power is delegated to Medical Officer In-charge (Rs.)	Rs…….
15	Are the funds being electronically transferred from the district?	Yes……1 No…….2
16	Has the Rogi Kalyan Samiti (RKS) formed?	Yes……1 No…….2
17	If Yes, has the RKS been Registered?	Yes……1 No…….2

18	How do RKS generate resources? (Encircle all applicable options)	Donation……..1 User fees……..2 State allocation……3 GOI allocation…….4 Other innovative means (through arrangements like PPP, outsourcing of services etc.)…5 Others (specify)……6
19	How is the money generated used (Encircle all applicable options)	Retained within the facility for local use……...1 Retained but not used……..2 Transferred to district A/C…...3 Others (specify)……...4
20	How feedback is taken for grievance redressal by RKS? (Encircle all applicable options)	Social audit……..1 Public Scrutiny action taken…2 No feedback mechanism……..3 Others (specify)……...4
21	Has the Citizen's charter been publically displayed?	Yes……1 No…….2
22	Whether all standard treatment guidelines and protocols available in the PHC?	Yes……1 No…….2
	Infrastructure Status: (Information to be collected from MO I/C and supplemented with physical verification by interviewer)	
23	Status of CHC Building?	Own government building…….1 Rented premises…….2 Other rent-free building……3
24	Does the building have compound wall fencing with gate?	Yes…….1 No……..2
25	Status of cleanliness of cleanliness of area surrounding the CHC compound	Good……...1 Fair……..2 Poor……3
26	Status of cleanliness of Compound/Premises	Good……..1 Fair…….2 Poor……3
27	Status of cleanliness of OPD	Good……..1 Fair…….2 Poor……3
28	Status of cleanliness of Room/Wards	Good……..1 Fair…….2 Poor……3
29	Prominent display boards regarding service availability in local language	Yes……..1 No……...2
30	Pharmacy for drug dispensing and drug storage	Yes……..1 No……...2
31	Separate public utilities (toilets) for males and females	Yes……..1 No……...2
32	Suggestion/Complaint box	Yes……..1 No……...2

33	OPD rooms/cubicles	Yes……..1 No……...2
34	Waiting room for patients	Yes……..1 No……...2
35	Does the waiting room have adequate sitting place?	Yes……..1 No……...2
36	Is drinking water available in the waiting area?	Yes……..1 No……...2
37	Emergency room/casualty	Yes……..1 No……...2
38	Separate wards for males and females	Yes……..1 No……...2
39	No. of beds for Male	
40	No. of beds for Female	
	Water supply facilities	
41	Source of water	Piped……..1 Bore well/hand pump/tube well….2 Well……3 Others (Specify)…….4
42	Whether overhead tank and pump exist	Yes……..1 No……...2
	Sewerage System	
43	Type of sewerage system	Soak pit……1 Open drain……...2 Connected to municipal sewerage..3 Others (specify)……..4
	Waste disposal	
44	How the waste material is being disposed?	Buried in a pit……....1 Collected by an agency……..2 Incarnation…….3 Thrown in open…….4
	Electricity supply	
45	Is there regular electric supply in all parts of the CHC?	In all parts……1 In some parts…….2 No regular electric supply…….3
46	Standby facility (generator etc.) available in working condition	Yes……..1 No……...2
	Vehicle Facilities	
47	Is CHC providing Ambulance services	Yes……..1 No……...2
48	If Yes, Number of ambulance sanctioned	
49	Number of ambulance running	
	Diet provision	
50	Is a Kitchen available in the CHC?	Yes……..1 No……...2
51	If not, whether diet is provided to patients by outsourcing?	Yes……..1 No……...2

52	Is cold chain available (observer to verify)	Yes……..1 No……...2
53	If available, is it working condition?	Yes……..1 No……...2
	Which of these communication facilities are there (observer to verify)	
54	Telephone	Yes……..1 No……...2
55	Personal computer	Yes……..1 No……...2
56	Internet connection	Yes……..1 No……...2
	Residence Facilities for Staff	
57	No. of staff quarters available for Doctors	
58	No. occupied out of above	
59	Main reasons for non-occupancy (Encircle all applicable options)	Dilapidated condition…….1 Insecurity……2 Lack of electricity & water supply.3 Own accommodation/arrangement.4 Others (specify)……..5
60	Number of staff quarters available for other staffs	
61	No. Occupied out of above	
62	Main reasons for non-occupancy (Encircle all applicable options)	Dilapidated condition…….1 Insecurity……2 Lack of electricity & water supply..3 Own arrangement……..4 Other (specify)……...5

Human Resource

63	**Category: Medical Doctors**	**Numbers**			
		Sanctioned	**Regular in Position**	**Contractual Recruited**	**Total in Position**
	General Surgeon				
	Physician				
	Obstetrician/Gynecologist				
	Medical Officer trained with short term obstetrics course				
	Pediatrician				
	Anaesthetist				
	Medical Officer trained with short term Anesthesia course				
	General Duty Medical Officer				
	Eye Surgeon				
	Public Health Nurse				
64	**Supporting Staff**	**Sanctioned**	**Regular In position**	**Contractual Recruited**	**Total In position**
	Lady Health Visitor (LHV)				
	Block Extension Educator(BEE)				
	ANM				
	Staff Nurse				

	Dresser				
	Pharmacist/Compounder				
	Laboratory Technician				
	Radiographer				
	Ophthalmic Assistant				
	Statistical Assistant/Data entry operator				
	OT attendant				
	Ambulance Driver				
	Registration Clerk				

	Operation Theatre, Labor room & Diagnostic facilities (information to be collected from MO In-charge & supplemented with physical verification by interviewer)	
	Operation Theatre	**Response column**
65	Is Operation theatre available?	Yes……1 No……2
66	If operation theatre is available are surgeries being carried out in the operation theatre?	Yes……1 No……2
67	Major surgeries conducted: 2008-09	
68	Minor surgeries conducted: 2008-09	
69	If operation theatre is available, but surgeries are not being conducted there, then what are the reasons for the same (Encircle all applicable options)	Non availability of doctor/Anesthetist/staff…….1 Lack of equipment/poor physical state of the operation theatre……...2 No power supply in the OT……..3 Others (specify)……4
70	Is Operation theatre used for obstetric/Gynecological purpose	Yes……1 No……2
	Type of Surgery	
71	Caesarean section (No of performed cases in 2008-09)	
72	No C-section deliveries for JSY card holders	
	Labour Room facilities	
73	Is labor room available?	Yes……1 No……2
74	Are deliveries carried out in the labour room?	Yes……1 No……2
75	Number of deliveries in 2008-2009	
76	If labour room is available, but deliveries are not being conducted, the reasons for the same? (Encircle all applicable options)	Non-availability of doctors/staff……..1 Poor condition of the labour room……2 No power supply in the labour room……3 Others (specify)……....4
77	Are separate areas for septic and aseptic deliveries available?	Yes……1 No……2
78	Is new born care available?	Yes……1 No……2

Labour Room Outcomes		Number carried out in 2009-2010 (to be verified by the interviewer from the medical register)			
79	Total Institutional Deliveries				
80	Deliveries carried out 8 PM to 8 AM				
81	Institutional Deliveries for JSY Card holders				
82	No. of neonates resuscitated				
	Availability Services				
83	Specialist services available	Yes……..1 No……...2			
84	Medicine	Yes……..1 No……...2			
85	Surgery	Yes……..1 No……...2			
86	Obstetric & Gynecology	Yes……..1 No……...2			
87	Pediatrics	Yes……..1 No……...2			
88	Emergency Services (24Hrs)	Yes……..1 No……...2			
89	Does CHC have a mobile medical unit?	Yes……..1 No……...2			
90	Is there emergency care for sick children?	Yes……..1 No……...2			
91	Whether full range of family planning services including Laparoscopic ligation available?	Yes……..1 No……...2			
92	Are there safe abortion services?	Yes……..1 No……...2			
93	Are there any laboratory test outsourced to private lab/hospital?	Yes……..1 No……...2			
94	Is there blood storage facility?	Yes……..1 No……...2			
95	If Yes, No. of cases given blood transfusion in last 3 months				
96	What is the bed occupancy rate in the last 12 months?				
97	Average daily OPD attendance male, female & children				
100	Out of the total OPD attendance, specify the referred cases from PHC/SHC				
101	**Service Outcome (Information to be collected from Statistical Assistant) Data for last 3 months if report is available photocopy to be obtained otherwise to be verified from the medical register.**				
	Indicator	SC	ST	Others	Total
102	Total ANC Registration				
103	Total JSY cases registered				
104	1st Trimester Registration				
105	ANC given 3 checkups as per RCH schedule				
106	Out of above, the number of JSY beneficiaries				
107	No. of pregnant women identified & attended with OC?				
108	Out of these,How many have been referredfromPHC/SC				
109	Total institutional deliveries				
110	Number of JSY cases (out of total institutional cases)				

Annexure – 4

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for Primary Health Centres (PHC)

General Information (Information to be collected from the Medical Officer In-Charge)

a. Name of the Respondent: _____
b. Designation of the Respondent: _____, Age: ____, Education: _____
c. Name of the Village: _____, GP: _____, Block: _____
d. Name of the PHC: _____, Name CHC under which PHC comes: _____
e. Managed by: Panchayat/District Municipality/District Administration: _____

Q.No	**Questions Column**	**Response Column**
1	How much population is served by the PHC?	
2	How many HSCs come under the PHC?	
3	Distance & time taken to travel by using public transport	
4	Which is the nearest HSC in the coverage area of PHC?	
5	Which is the middle HSC in the coverage area of PHC?	
6	Which is the farthest HSC in the coverage area of PHC?	
7	Which is the nearest CHC?	
8	How much distance from District Hq. Hospital?	
9	How much distance from the main road t the PHC?	<0.5 Km…….....1 0.5 – 1 Km…….....2 > 1 Km…….....3
10	What is the mode of transport available to reach the CHC from PHC (Encircle all applicable options)?	Ambulance……...1 Bus……...2 Private Jeep/Other vehicle……3
11	What are the private sector health facilities available in the PHC village? (Encircle all applicable options)	Private lab…….....1 Private hospital/nursing home…..2 Charitable hospital…….....3 Hospital run by NGO…….....4
12	Has the IPHS facility survey been carried out in PHC?	Yes……1 No……2
13	Is the PHC equipped to provide Basic Obstetric Services?	Yes…….....1 No……2
	Other framework and structure related issues	
14	Is the PHC functioning into 24x7 basis? (have single MO & 3/more ANMs/Staff Nurses working round ‘O’clock)	Yes…….1 No……...2
15	Who is available at night in the health centre?	Doctor……1 ANMs/Nurse…….2 Others specify…….. …….3
16	How many outdoor patients (OPD) visit the health facility per day?	
17	Does it have AYUSH doctor providing services?	Yes…….1 No……...2

18	Does the medical team visit the villages at regular intervals?	Yes……..1 No……2
19	Does it have Homeopathy doctor providing services?	Yes…….1 No……..2
20	How much amount of financial power is delegated to MO I/C?	Rs.....
21	Are the funds being electronically transferred from the district?	Yes…….1 No……..2
22	Has the Rogi Kalyan Samiti been formed?	Yes…….1 No……2
23	If Yes, has the RKS been Registered?	Yes…….1 No……2
24	Is any health facility staff a member of the 'RKS'?	Yes…….1 No……2
25	How do RKS generate resources? (Encircle all applicable options)	Donation……1 User fees……2 State Allocation…….3 Maintenance Grant……4 Other innovative means through arrangements like PPP, outsourcing of services etc.)…5 Others (specify)…….6
26	What is the frequency of RKS meetings?	----------per year
27	Is display board put up in PHC showing number of members, number of meetings of RKS etc?	Yes…….1 No……..2
28	How did you take decision in spending money of RKS fund?	
29	Did RKS receive any fund?	Yes…….1 No……..2
30	How is the money generated used (Encircle all applicable options)	Retained within the facility for local use…….1 Retained but not used……2 Transferred to district accounts3 Others (specify)…….4
31	How long has the RKS been functioning?	
32	In your perception is the RKS playing any effective role?	Yes…….1 No……..2
33	Improvement of health facility infrastructure	Yes…….1 No……..2
34	Improvement of health related equipments	Yes…….1 No……..2
35	How much funds, the 'RKS' receives per annum?	Amount (Rs.) _____ per year
36	Improvement of lodging/boarding facilities to patients and their relatives	Yes…….1 No……..2
37	Improvement in support services like cleaning, laundry, diagnostic, ambulatory, waste disposal etc	Yes…….1 No……..2

38	How feedback is taken for grievance redressed by RKS? (Encircle all applicable options)	Social audit……1 Public Scrutiny of action taken2 No feedback mechanism……3 Others (specify)……..4
39	Is there any audit of the fund?	Yes…….1 No……2
40	Major Heads under which the funds are spent with amount as per last year accounts	
41	Has the Citizen's charter been publicly displayed?	Yes…….1 No……..2
42	Whether all standard treatment guidelines and protocols available in the PHC?	Yes…….1 No……..2
43	Are the funds adequate to meet all needs?	Yes…….1 No……..2
44	If, no what is the shortfall?	Rs._____ per year
45	How do you utilise the untied funds? (Encircle all applicable options)	Maintenance……1 Seeking services from private doctors…….2 Repairs/Renovation……..3 Buying equipments…….…..4 Buying medicines…….5 Hiring contractual staff……7
46	Since when did you start receiving the Untied funds?	
47	What has been the proportion of Untied funds used?	During 2005-06 _____%, 2006-07 _____%, 2007-08 _____%, 2008-09 _____, and 2009-10 ____
48	If the untied funds are not fully used, what are the reasons?	
49	How do you receive funds under NRHM? From the District?	Yes…….1 No……..2
50	Directly from the State?	Yes…….1 No……..2
51	What is the frequency of receiving funds?	(Monthly/Quarterly/Half Yearly/Annually/Irregular)
52	Is there any delay in getting funds for NRHM? How much? Rs. _____	Yes…….1 No……..2
	Infrastructure Status: (Collected from Medical Officer I/C & Interviewer has to verify)	
53	What is the status of building?	Own government building…....1 Rented premises…….....2 Other rent-free building…….....3
54	Does the building have compound wall fencing with gate?	Yes…….1 No……..2
55	What is the status of cleanliness of area surrounding PHC compound	Good……..1 Fair…….2 Poor…….....3
56	What is status of cleanliness of Compound/Premises	Good……..1 Fair…….2 Poor…….....3

57	What is status of cleanliness of OPD	Good……..1 Fair…….2 Poor……3
58	What is status of cleanliness of Room/Wards	Good……..1 Fair…….2 Poor……3
59	Is there prominent display boards regarding service availability in local language	Yes…….1 No……..2
60	Is there pharmacy for drug dispensing and drug storage	Yes…….1 No……..2
61	Is there separate public utilities (toilets) for males and females	Yes……..1 No……2
62	Is there suggestion/complaint box	Yes……..1 No……2
63	Is there OPD rooms/cubicles	Yes……..1 No……2
64	Is there waiting room for patients	Yes……..1 No……2
65	Is drinking water available in the waiting area?	Yes……..1 No……2
66	No. of beds: Males and No. of beds: Female	
67	How often are the linen (bed sheets, covers, etc) washed?	_____(times per week)
68	How often are the linen (bed sheets, covers, etc) replaced by new ones?	_____(times per year)
	Water Supply	
69	What is the source of water	Piped…….1 Bore well/hand pump/ tube well……2 Other……. 3
70	Whether overhead tank and pump exist	Yes……..1 No……2
71	What is the type of sewerage system	Soak pit…….1 Open drain……2 Connected to Municipal Sewerage……..3 Others (specify)…….4
	Waste disposal	
72	How the waste material is being disposed?	Buried in a pit……1 Collected by an agency……..2 Thrown in open……..3
	Electricity	
73	Is there regular electric supply in all parts of the PHC?	In all parts…….1 In some parts…….2 No regular electric supply…….3
74	Is the standby facility (generator etc.) available in working condition	Yes……..1 No……2
	Vehicles	
75	Is PHC providing vehicle for referral transport?	Yes……..1 No……2

76	If yes, then number of vehicle	No of Vehicle…….…….2 Vehicle available but not in running condition……3
	Which of these communication facilities are there (Interviewer has to verify)	
77	Do you have telephone facility?	Yes……..1 No……2
78	Do you have personal computer?	Yes……..1 No……2
79	Do you have Internet connection?	Yes……..1 No……2
	Residence facilities for Staff	
80	Is there govt. quarters available for Doctors?	Yes……..1 No……2
81	No. occupied out of above	
82	What are the main reasons for non-occupancy (Encircle all applicable options)	Dilapidated condition……1 Insecurity……2 Lack of electricity & water supply……3 Own arrangement……4 Others (specify)……..5
83	No. of staff quarters available for other staffs	
84	No. Occupied out of above	
85	Do you have main reasons for non-occupancy (Encircle all applicable options)	Dilapidated condition……1 Insecurity……2 Lack of electricity & water supply……..3 Own arrangement…….4 Others (specify)……5
	Labour Room	
86	Is labor room available in the PHC?	Yes……..1 No……2
87	Are deliveries carried out in the labour room?	Yes……..1 No……2
88	Number of deliveries in 2008-2009 (to be verified from the records)	
89	If labour room is available, but deliveries are not being conducted, the reasons for the same? (Encircle all applicable options)	Non-availability of doctors/staff……...1 Poor condition of the labour Room……...2 No power supply to labour room…….....3 Others (specify)……4
90	Are separate areas for septic and aseptic deliveries available?	Yes……..1 No……2

	Labour Room Outcomes				**N0. carried out in 2009-2010 (to be verified from the records)**
91	Total Institutional Deliveries				
92	Deliveries carried out from 8 P.M. to 8 A.M.				
93	Institutional Deliveries for JSY card holders				
94	Number of neonates resuscitated				
	Is new born care available?				Yes……..1 No……2
	Human Resource		Numbers		
95	Category	Sanctioned	In position (Regular)	Contractual Recruited	Total in position
	Medical Officer				
	Medical Officer AYUSH				
	Pharmacist				
	Staff Nurse				
	ANM				
	Lab Assistant				
	Lab Technician				
	Lady health visitor				
	Block health Education and Information Officer (BHEIO)				
	Statistical Assistant				
96	What is your perception, after implementation of NRHM in Kendrapara? Do you think JSY has been made significant improvement in maternal and child health?				
97	How do you rate awareness of village people towards the health care services here?				Excellent…….1 Very Good……..2 Good……...3 Fair……..4 Poor…….5 Very poor……6
98	How would you rate the health care services in terms of quality?				Excellent…….1 Very Good……..2 Good……...3 Fair……..4 Poor…….5 Very poor……..…6
99	In your opinion, will the situation improve, if management and oversight functions are shifted to: V.P/District Panchayat/District Administration?				Yes……..1 No……2
100	Any other remarks or suggestions for improvement of services by observer which have not been captured in the question above but relevant.				

Annexure – 5

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for ANM and Health Sub-Center (HSC)

General Information (Information collected from the ANM)

a. Name of the ANM: _____, Age: ___, Education:_____
b. Name of the Village: _____, GP:_____, Block: _____
c. Name of the Health Sub-Center where posted _____
d. Name of the PHC under which SC comes _____
e. Date of joining as a ANM _____, Years of service completed _____

Q. No	Question Column					Response Column & Code No
1	How many villages are served by your HSC?					
2	How many villages served by your HSC have ASHAs in position?					
3	How many villages served by your HSC have VHSC?					
4	Is the HSC building belongs to owned/rented?					Yes----------1 No----------2
5	If yes, how many rooms?					
6	How much distance from the nearest village to the HSC?					---------- Km.
7	How much distance from the farthest village to the HSC?					---------- Km.
8	How much distance from the HSC to the nearest PHC?					---------- Km.
9	How much distance from the HSC to the nearest CHC?					---------- Km.
10	Is the HSC located in the centre of the village?					Yes----------1 No----------2
11	What is the mode of transport available to reach the HSC from the farthest village? (Encircle if all applicable options)					Bus----------1 Jeep----------2 Own/Private transport----------5 Inaccessibility/No transport----6
12	How many ASHA working in the HSC area?					
13	Has IPHS facility survey been carried out in the HSC?					Yes----------1 No----------2
	Human Resources					
14	Category	Sanctioned	In position	Shortage	Contractual	Total
	ANM					
	Male Health Worker					

	Infrastructure status	
15	Where is the HSC functioning?	Government building----------1 Functioning at PHC building----2 Functioning from ANM's home-3 Functioning from schoolbuilding4 Functioning in donated house----5 Functioning in youth club -------6 Functioning from own home-----7
16	What is the status of the HSC building?	HSC in functioning condition --1 Non existence HSC building----2 Completely damaged----------3 Partly damaged----------4 Under construction----------5 Construction completed but not handed to the ANM----------6
17	Is there residential facility available in the HSC?	Yes----------1 No----------2
18	If yes, is the ANM residing in the premises of HSC?	Yes----------1 No----------2
19	Whether ANM staying in the HSC village?	Yes----------1 No----------2
20	If the residence is available and the ANM is not staying then give reasons why ANM is not staying? (Encircle all applicable options)	Life security problem----------1 Water and electricity problem---2 No residential facilities available and lives with family----------3 Own resident nearby HSCs------4 Resident is not suitably constructed for stay----------5 Non-available of education ------6
21	Has HSC compound wall/fencing?	Yes----------1 No----------2
22	How is the condition of the floor?	Floor is in good condition------1 Floor coming off in few places-2 No proper flooring----------3
23	How is the cleanness (observe)?	Good----------1 Fair----------2 Poor----------3
24	What is the source of water?	Piped----------1 Bore well/tube well----------2 Well----------3 Others (specify)----------4
25	Whether overhead tank (storage) water?	Yes----------1 No----------2
26	What is the type of sewerage system?	Soak pit----------1 Connected to sewerage line----2 Open drain----------3 No system----------4
27	Is there regular electricity supply in the SC?	Yes----------1 No----------2

28	If yes, is it	Provided by the Government ----1 Provided by Gram Panchayat---2 Taken by SC own----------3
29	How the waste material is being disposed?	Buried in a pit----------1 Collected by an agency---------2 Thrown in open----------3
30	What are the other health facilities nearby?	Private Nursing Home----------1 Charitable hospitals----------2 Rural Medicine Practicenor ----3
	Infrastructure Status	
31	Is there separate patient examination room available?	Yes----------1 No----------2
32	Is there labour room separately available?	Yes----------1 No----------2
33	If, yes, whether the deliveries conducted?	Yes----------1 No----------2
34	If yes, give the number of deliveries conducted during 2009-10 (to be verified from the medical Register)	
35	If labour room is available, but deliveries are not conducted there, then what are the reasons for the same?	ANM not staying at night time--1 No water supply to labour room-2 No power supply to labour room3 Any others (specify)----------4
	Janani Suraksha Yojana (JSY)	
36	Do you know JSY?	Yes----------1 No----------2
37	Are you aware that which women become eligible under the JSY scheme?	Yes----------1 No----------2
38	How do you facilitate JSY cases? (Encircle all applicable options)	Getting registered----------1 Filling up the case card----------2 Arranging transport ----------3 Certificate/Documents----------4 Counseling for family members-5 Any others reason (specify)-----7
39	Whether issuing the JSY card to the registered pregnant women eligible for benefits under the JSY scheme?	Yes----------1 No----------2
40	How many cases of JSY have you registered in last 3 months?	
41	How many of JSY cases resulted to institutional deliveries out of the last three months?	
42	Is Micro Birth Planning being done? (Observer to verify)	Yes----------1 No----------2
43	Do you think the demand for institutional delivery is increased after implementation of JSY scheme?	Yes----------1 No----------2
44	If no, give reasons? (Encircle all applicable options)	Facility is far off----------1 Transport is not available-------2 Social & cultural reasons -------3 Fear of surgeries/sutures ------4 No proper behavior by Doctors--5 Any other reason (specify)------6

45	Are the names of JSY beneficiaries displayed in the Sub-Centre?	Yes----------1 No----------2
46	How do you ensure registration of all newborns? (Registration with concerned Birth & Death Registration Authority) (Encircle all applicable options)	Counseling the family members-1 Filling up the required forms---2 Giving information to the revenue functionaries----------3 Revenue functionaries----------4 Any other reason (specify)-----5
47	Do you face any difficulties during Birth Registration?	Yes----------1 No----------2
48	If yes, please specify (Encircle all applicable options)	Facility not available----------1 Nearby----------2 Forms not available----------3 Any other reason (specify)-------4
	Cash Incentives under Janani Suraksha Yojana (JSY)	
49	How much incentive is given for Institutional delivery?	Rs.
50	How much incentive is given for Home delivery?	Rs.
51	How much money is provided for transporting the delivery patient?	Rs.
52	How much amount is given to ASHA for a delivery case?	Rs.
53	How are the funds being paid to beneficiaries?	Cash----------1 Cheque----------2 Vouchers----------3
54	What is the average time taken after birth for JSY payment to beneficiary?	Less than 1 week----------1 1-2 weeks----------2 More than 2----------3
	Provision of Untied fund	
55	Whether ANM is aware of Untied fund being provided under the NRHM?	Yes----------1 No----------2
56	Whether any Untied fund received so far?	Yes----------1 No----------2
57	How much money is given to your HSC under NRHM? _____per annum.	Rs. ----------
58	If yes, how much grant you have been received & spent during 2009-10?	Rs. ----------
59	Grants received (Rs)	Rs. ----------
60	Grants spent (Rs)	Rs. ----------
61	How has the grant been spent? (Encircle all applicable options)	Purchasing of drugs/equipments-1 Arranging health camp/referral cases/sanitation/water insummer2 Paying of power/telephone bills-3 Purchasing furniture/stationary-4 In repairing and renovation-----5 Any other reason (specify)------7
62	What percentage of Untied fund was spent by you in 2005-06? __2006-07? __2007-08? __2008-09 __ and_ 2009-10?	

63	Do you think Rs. 10,000 is adequate for Untied fund?	Yes----------1 No----------2
64	How much is adequate?	Rs. --
65	Is the ANM having a joint account?	Yes----------1 No----------2
66	If yes, who is the other account holder?	Sarpanch----------1 ASHA----------2 AWW----------3 Medical Officer----------4 VHC member----------5
67	How do you decide about spending the funds? (Encircle all applicable options)	Consult the Village Sarpanch/GP members ----------1 Consult the VHSC----------2 Decided on my own----------3 Any other reason (specify) ------4
68	What are the difficulties faces by you while jointly operating the account and utilising the Untied fund? (Encircle all applicable options)	Sarpanch asks percentage--------1 Sarpanch not co-operative--------2 Non-available of Sarpanch when needed----------3 Medical staff ask percentage---4 Problem with signature to withdraw money----------5 Difficulty faced with joint account----------6 Difficult for mutual agreement to spend money----------7 Any other reason (specify)-------8
69	Is there any register to record the decision taken to spend this amount?	Yes----------1 No----------2
70	Is there any written record of transactions being carried out on Untied funds?	Yes----------1 No----------2
71	Has Sarpanch/others ever reviewed the expenditure records?	Yes----------1 No----------2
	ASHA Selection	
72	Are you involved in the selection of ASHA in your area?	Yes----------1 No----------2
73	How often do you meet the ASHAs of your area? (Encircle all applicable options)	Weekly----------1 Fortnightly----------2 Monthly----------3 Occasionaly----------4
74	Do you feel ASHA has reduced your work load?	Yes----------1 No----------2
75	How do you feel ASHA is contributing to NRHM? (Encircle all applicable options)	Mobilising community to avail health services----------1 Identifying and accompanying complicated delivery cases-----2 Providing health information---3 Acting as depot holders--------4 Providing new born baby care-5

	Service Delivery	
76	Do you conduct deliveries?	Yes----------1 No----------2
77	Do you conduct deliveries at home?	Yes----------1 No----------2
78	Do you conduct deliveries at HSCs?	Yes----------1 No----------2
79	If yes, how many deliveries did you conduct in a month, on an average?	
80	Where do you send the complicated delivery cases?	Dai----------1 DHH----------2 CHC----------3 PHC----------4 Higher health facility----------5 Any other reason (specify)------6
	Investigator's Notes/Observations	
81	Need information about regularity and punctuality of doctors/nurses; their behaviour with patients, patients behaviour with the doctors, nurses and others etc.	
82	According to you what are the facilities you need to require from the HSC for better health care provision?	
83	Any other remarks or suggestions for improvement of services by the observer regarding the functioning of ANM/SC which may not have been captured in the questions above.	

Annexure – 6

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District
Questionnaire for ASHA

General Information

a. Name of the ASHA: _____, Age: _____
b. Name of the Village: _____, GP: _____, Block: _____
c. Name of the CHC/PHC/SC (under which posted): _____
d.Year of joining as ASHA: _____
e. Years of service worked as ASHA: _____

Q. No.	Questions	Responses
1.	What is the marital status?	Unmarried----------1 Married----------2 Widowed----------3 Divorced/separated----------4
2.	What is the educational qualification?	Less than 8th class----------1 8th Pass----------2 9th Pass----------3 10th ----------4 +2 pass or higher----------5
3.	Which social category do you belong?	SC----------1 ST----------2 OBC----------3 General----------4
4.	Do you work for the same village/village Panchayat where you stay?	Yes----------1 No----------2
5.	How many population served by you?	
6.	No of villages/habitation served by you	
7.	Distance of the farthest village/habitation from her home	--------Km.
8.	How were you selected as ASHA? (Encircle all applicable options)	Through voting system----------1 Through lottery system----------2 Recommendation of ANM----------3 Recommendation of AWW----------4 Recommendation of SHGs----------5 Recommendation of Health worker----------6 Recommendation of ward Member----------7 Recommendation of villagers in meeting---------8 Recommendation of Sarpanch----------9 Selection through Gram Sabha----------10

	Training	**Responses**
9.	Have you undergone ASHA training programme?	Yes----------1 No----------2
10.	How many days of training did you receive?	----------Days/Month/Year
11.	Has the training been carried out on (Encircle all applicable options)	Module 1----------1 Module 2----------2 Module 3----------3 Module 4----------4 Module 5----------5
12.	Was the training been given to you useful in solving your doubts, troubles & helpful for improving knowledge & skills?	Yes----------1 No----------2
13.	Did you receive any compensation/incentives for attending the training?	Yes----------1 No----------2
14.	If yes, how much?	Rs.----------
15.	Do you receive regular "on job training" at your village?	Yes----------1 No----------2
	Roles & Responsibilities	
16.	What role do you play for improving the sanitation of the area? (Encircle all said applicable options)	Create awareness-community for sanitation------1 Help in arranging removal of solid waste---------2 Help in removal of water logging----------3 Facilitating construction of household toilet-----4 Community health, hygiene & nutrition----------5 Others (specify)----------6
17.	Have you been given a drug kit?	Yes----------1 No----------2
18.	Does your drug kit contain? ORS, Iron tablets, Oral Pills, Condoms?	Yes----------1 No----------2
19.	Are you a DOTS provider?	Yes----------1 No----------2
20.	Do you escort/accompany pregnant women to the nearest health facility?	Yes----------1 No----------2
21.	How do you carry out your work? (Encircle all applicable options)	Mobilise community for access health service---1 Accompany the expectant mother for delivery--2 Accompany ANM for various activities----------3 Supplies medicines to the needy people----------4 Household visit for immunisation/ANC/PNC----5 Organise/attend meetings of VHSC & other group meetings of the SHG----------6 Provide DOTS----------7
22.	**ASHA's Performance & Awareness**	**Responses**
23.	Do you make aware pregnant women for birth preparedness such as breast feeding, complementary feeding, contraceptives use, family planning measuring & safe delivery?	Yes----------1 No----------2

24.	According to you when should the Breast feeding be initiated? (Encircle all applicable options)	Within 30 minutes of delivery----------1 Within one hour of delivery----------2 Others (specify)----------3
25.	Till what age child should be exclusively breast fed?	6 Months----------1 One year----------2 Two year----------3 Don't know----------4 Others (specify)----------4
26.	According to you what are important steps to prevent diarrhea? (Encircle all applicable options)	Hand washing practices before food----------1 Use safe drinking water----------2 Keeping of food items in a covered containers---3 Proper disposal of garbage----------4 Do not know----------5 Others (specify)----------6
27.	How do you identify a case of ARI/pneumonia? (Encircle all applicable options)	Problem/Increasing of breathing ----------1 In drawing of chest----------2 Blue colour of the baby----------3 Vomiting----------4 High/low fever----------5 Inability to drink/suck----------6 Don't know----------7 Others (specify)----------8
28.	Do you manage/inform the SC/PHC/CHC about birth & deaths in the village & also outbreak of health problem/disease	Yes----------1 No----------2 Not required----------3
29.	Number of children with diarrhea given ORS	
30.	Accompanied Institutional deliveries cases	
31.	Number of Oral Pills distributed	
32.	Number of Malaria patients given drugs	
33.	Number of new pregnancies identified	
34.	Number of group meetings like Mahila Mandal arranged	
35.	Number of Health & Nutrition days arranged	
	Janani Suraksha Yojana (JSY)	
36.	How many JSY cases have you facilitated in last three months?	
37.	How many of these cases resulted in Institutional delivery?	
38.	Usually where do you take women for delivery?	District Head Quarter Hospital----------1 CHC----------2 PHC----------3 Private hospitals----------4 Govt. accredited hospitals----------5 Clinic run by NGOs ----------6

39.	What is the amount given for transport	Rs----------
40.	What is the amount of cash incentive given to the JSY beneficiaries under JSY scheme?	Rs----------
41.	Home delivery	Rs----------
42.	According to you, what are the reasons for women to deliver at home despite cash assistance paid under JSY? (Encircle all applicable options)	Appropriate facility is not available nearby-------1 Transport not being available when required-----2 More expensive than home delivery----------3 Indifferent behaviour of medical staff----------4 Home delivery is more convenient----------5 Family/Cultural/Social reasons----------6 Fear of stitches/caesarean----------7 Unaware about the JSY scheme----------8 Others (specify)----------9
43	How many JSY cases do you accompanied in last three months?	
	Payments & Cash Incentives	**Response Category**
44	Do you receive any performance based incentive?	Rs
	How much money incentive on an average are you getting per month?	Rs.
45	For which activities do you get performance based incentive?	ANC----------1 Check up by doctor----------2 Institutional Delivery----------3 PNC----------4 Immunisation of Children----------5 Family Planning----------6
46	Who gives you incentive money?	ANM----------1 MO of CHC/PHC----------2 Gram Panchayat Sarpanch----------3 Accountant /Clerk/BPO/ ----------4
47	How much money are you given to accompanying a mother (JSY beneficiary) to a health facility?	Rs.
48	How much money did you receive as incentives per month?	Rs.
49	Do you receive your incentives in time?	Yes----------1 No----------2
50	How do you get this money?	In Cash----------1 By Cheque/Draft----------2 Transfer to Account----------3
51	Are you happy with the incentives given under the programme?	Yes----------1 No----------2
	Coordination with Others	
52	Do you receive proper support from the ANM or the Anganwadi workers?	Yes----------1 No----------2
53	If yes, on what activities	Refilling drug kits----------1 On the job training----------2 Guidance regarding: Use of various medicines---3

54	Are you actively involved with the local Panchayati Raj Institution (PRI)/Village heath committee (VHC) in your village?	Yes----------1 No----------2
55	Do you receive proper support from the PRI and VHC for your responsibility as an ASHA activist?	Yes----------1 No----------2
56	Do you have any sort difficulties while working?	Yes----------1 No----------2
57	What are the difficulties faced by you in implementing programme activities under NRHM? (Encircle all applicable options)	Funds not available in time----------1 No adequate training----------2 Delayed in supply of drugs----------3 Behaviour of staff & health facilities is not appropriate----------4 Inadequate facilities for Institutional delivery----5
58	What kind of support do you required to enable to implement the programme more effectively? (Encircle all applicable options)	More training is to be arranged for ASHA & Community Members----------1 ASHA should be paid a fixed remuneration------2 Payment should be made timely----------3 Others (specify)----------4
59	Is there increase in the institutional deliveries in last two-three years?	Yes----------1 No----------2
60	Has your work as ASHA enhanced your status in the village?	Yes----------1 No----------2
61	Has your work as ASHA enhanced your status in the family?	Yes----------1 No----------2
62	Is your family supportive of your work towards the community?	Yes----------1 No----------2
63	If no, why	Very less time available for the family----------1 Payment is quite less----------2 Working at odd hours is also required----------3 Community does not consider it as good work---4 Any others (Specify)----------5
64	Would you motivate others to become ASHA?	Yes----------1 No----------2
65	According to you what are the major highlights of NRHM? (Encircle all applicable options)	Funds & facilities are available under JSY-------1 Better facilities available for referred patients----2 Transport facilities are available----------3 Decentralisation & community empowerment---4
66	Is NRHM is helpful for the development of health of both women and children	Yes----------1 No----------2
67	What are your suggestions/comments for better health care facilities to rural vulnerable group particularly women and children?	

Annexure – 7

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for JSY Beneficiary

General Information

a. Name of the Beneficiary: _____, Age: _____
b. Caste: SC/ST/OBC/General: _____, Education: _____, Religion: _____
c. Name of the Village: _____, GP: _____, Block:_____
d. Name of the CHC/PHC/HSC (under which beneficiaries benefited): _____
e. Number of family members_____
f. Poverty status: APL/BPL _____

Information on Household Members

S.L. N0	Head of the Household (HH)	Relation with Head of HH.	Sex (M/F)	Age	Educational qualification	Marital status	Main activity
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Information on Household Amenities:

Q.No	Questions	Responses
1.	What is the main source of light?	Electricity ----------1 Kerosene ----------2
2.	What is the type of house?	Kuccha ----------1 Semi-Pacca----------2 Pacca ----------3 Others (specify)----------4
3.	What is the main source of drinking water?	Tap----------1 Own/Public Well----------2 Own/Public Hand pump----------3
4.	What type of facility for latrine and toilet?	Exclusive----------1 Common----------2 Open space----------3

5.	What is the Sewerage system?	Underground----------1 Covered path----------2 Open path----------3 No system----------4
	Questions on Programme Intervention	**Responses**
6.	Have you heard of NRHM?	Yes----------1 No----------2
7.	Have you heard of ASHA?	Yes----------1 No----------2
8.	How many ASHAs are active in your village?	Number--------
9.	Does ASHA carry a kit?	Yes----------1 No----------2
10.	Does ASHA provide common medicines free of cost, if needed by you?	Yes----------1 No----------2
11.	Does ASHA activist discuss the common problems of health & awareness programmes? (Hand washing, safe disposal of garbage, toilets, safe drinking water, & regarding-maternal care etc.)	Yes----------1 No----------2
12.	Is there any Village Health & Sanitation Committee (VHSC) in your village?	Yes----------1 No----------2 Do not know----------3
13.	Are you aware/know there is a programme called JSY scheme?	Yes----------1 No----------2
14.	If yes, how did you get to know regarding JSY scheme? (Encircle all applicable options)	Radio/TV/ News paper----------1 Pamphlets----------2 Hoarding at SC/PHC----------3 ASHA----------4 ANM----------5 Anganwadi worker/Centre----------6 Doctors----------7 NGOs/SHGs----------9 Relatives/Friends----------10
15.	Are you or any one in your household is a beneficiary of JSY scheme?	Yes----------1 No----------2 If answer is No, then stop the interview
16.	Where was the last delivery conducted?	Government Hospital----------1 At Home----------2
17.	When did you/household member hear about the JSY scheme?	Before being pregnant----------1 During pregnancy----------2
18.	Who registered you for the JSY scheme?	Doctor----------1 LHV----------2 ANM----------3 FHW----------4 Anganwadi worker----------5 ASHA worker----------6 Others (specify)----------7

19.	Whether you know the stage of pregnancy when you were registered under the JSY scheme?	Yes----------1 No----------2
20.	If yes please mention the month of pregnancy when you are registered under JSY scheme?	1st----------1 2nd----------2 3rd----------3 4th----------4 5th----------5
21.	Where were you registered?	District/Sub-District Hospital----------1 CHC----------2 PHC----------3 SC----------4 Anganwadi Centre----------5 At Home----------6 Pvt. accredited hospitals----------7 Others (specify)----------8
22.	Did you get the JSY card?	Yes----------1 No----------2
23.	Did ASHA worker facilitate in getting the JSY card?	Yes----------1 No----------2
24.	Did you face any difficulties in procuring JSY card?	Yes----------1 No----------2
25.	If yes, then specify…	Cards were not available----------1 Formalities for making card were too cumbersome----------2 Was asked to pay money for the care----------3 Others (specify)----------4
26.	Did ASHA worker provide you with any specific help during your last pregnancy?	Yes----------1 No----------2
27.	Did you receive advice on any of the following at least once during pregnancy from the ASHA worker? (Encircle all applicable options)	Diet----------1 Danger signs----------2 Delivery care----------3 Breast-feeding----------4 Newborn care----------5 Family planning----------6 Others (specify)----------7
28.	Did you register with ASHA for Antenatal check-up?	Yes----------1 No----------2
29.	If yes, How many times?	---------Times
30.	During the antenatal period, were you told about the following by Doctors/ANM/ASHA? (Encircle all applicable options)	Date of next check-up----------1 Place of next check-up----------2 Date of expected delivery----------3 Place of delivery----------4 Place of referral, if complications arise---------5
31.	Are you aware that government is providing 24x7 hospital facilities through your SC/PHC/CHC?	Yes----------1 No----------2

32.	Where did the delivery take place? **(Place of institutional delivery)**	District/Sub-Divisional hospital----------1 CHC----------2 PHC----------3 SC----------4 NGO hospitals----------5 Private hospitals----------6 Private hospitals accredited by the Govt.--------7
33.	If **home delivery** then, what were the reasons for opting home delivery, in spite of incentives being available under JSY scheme? (Encircle all applicable options)	Home delivery is more convenient----------1 Fear of stitches/caesarean----------2 Indifferent behaviour of medical/Paramedical staffs----------3 Cultural/social reasons----------4 Transport not being available----------5 Can't afford----------6 Others (specify)----------7
34.	What is was the type of delivery?	Normal----------1 Caesarean----------2
35.	Who has attended the delivery?	Dai----------1 Nurse----------2 Doctor----------3 Others (specify)----------4
36.	How many days/hours did you stay in hospitals/were you discharged?	-----Hours -----Days
37.	Did you pay for anything to anybody for institutional delivery in the hospitals?	Yes----------1 No----------2
38.	If yes, how much?	Rs---------
39.	How much did you spend for delivery?	Rs---------
40.	Did you get any cash incentives under JSY for delivering baby in the hospital?	Yes----------1 No----------2
41.	If yes, ho much?	Rs -------
42.	Did you receive money in one go or installments?	In one go----------1 Gone many time to receive money ---------- 2
43.	When did you receive the money?	Immediately after the delivery----------3 After discharging from the hospital----------4 Within a week after the delivery----------5 Don't know/Husband knows----------6 Not received yet----------7
44.	Who gave the cash incentives?	Doctors----------1 LHV----------2 ANM----------3 FHW----------4 Anganwadi worker----------5 ASHA----------6 Others (specify)----------7
45.	Where was the money received from?	District/Sub-District Hospital----------1 CHC----------2 PHC----------3 SC----------4 Private hospitals----------6

46.	Is it cash payment/cheque?	Cash/Cheque, Amount Rs._____?
47.	Did you face any difficulty in getting money?	Yes----------1 No----------2
48.	If yes, what was the difficulty faced?	Was asked to pay bribe----------1 When paid by cheque/draft----------2 Others (specify)----------3
49.	Did you receive post natal care after discharging from the hospitals?	Yes----------1 No----------2
50.	Do you feel JSY is beneficial for you and good for the safe motherhood?	Yes----------1 No----------2
51.	Did ASHA or health personnel give you any referral slip to help access delivery services?	Yes----------1 No----------2
52.	Did you face any difficulties in reaching the health institutions?	Yes----------1 No----------2
53.	If yes, then please specify? (Encircle all applicable options)	It was late in the night----------1 Did not have sufficient money----------2 Transport was not immediately available-------3 Male members in the household were not present----------4 ASHA was not readily available----------5 Others (specify)----------6
54.	What was the distance to the ultimate place of delivery from your residence?	---------KM
55.	What was the mode of transport used to reach the ultimate place of delivery?	Government Ambulance----------1 Private Vehicle----------2 Vehicle arranged by local health----------3
56.	Who facilitated in arranging the transport?	ASHA----------1 ANM----------2 Family members----------3 Others (specify)----------4
57.	Ho much assistance did you receive towards transport under JSY?	Rs----------
58.	What was the total amount spent towards transport?	Rs----------
59.	Who accompanied you to the health institution?	ASHA----------1 ANM----------2 Relatives----------3 Others (specify)----------4
60.	What was the waiting time at the facility until someone attended to you?	___Hrs ____Mints
61.	**Patients satisfaction on health system**	**Responses**
62.	Were you satisfied with the services available at the hospital?	Yes----------1 No----------2
63.	If yes, then how much?	Satisfied----------1 Some what satisfied----------2 Not satisfied----------3

64.	If no, why?	Staff was rude----------1 Facility was not clean----------2 Poor quality of services----------3 Others (specify)----------4
65.	Do you visit to the government CHC/PHC/SC in town for referral of any health related problems?	Yes----------1 No----------2
66.	When you visit hospitals, is the doctor available during that time?	Yes----------1 No----------2
67.	Is there any improvement in your access of services from government health facilities?	Yes----------1 No----------2
68.	On the whole, how do you rate the government medical facilities available to you?	Excellent----------1 Very good----------2 Good----------3 Fair----------4 Poor----------5 Very poor----------6
69.	What type of facilities do you need from the government run hospital for better health care delivery system?	
70.	Suggestion/Comments for the improvement of health care system in area?	

Annexure – 8

Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

Questionnaire for members of Village Health and Sanitation Committee/Gaon Kalyan Samiti

General Information (Information to be collected from VHSC/GKS)

a. Name of the Respondent: _____, Designation of the Respondent: _____

b. Age: ____, Sex: _____, Caste: SC/ST/OBC/General: _____ Education: _____

c. Name of the Village: _____, Gram Panchayat: _____, Block: _____

d. Managed by: Panchayat/District Municipality/District Administration: _____

Q.NO	Question Column	Response Column
1.	Are you a VHC/VHSC/PRI/RKS/GKS member?	Yes……..1 No……2
2.	When did you join as a member?	-------Date,----Month, -----Year
3.	Are you aware of a program called NRHM or Rashtriya Grameen Swasthy Mission?	Yes……...1 No……2
4.	Were you given any orientation about the program by the health department workers or officials?	Yes……1 No…….2
5.	If yes, how many days/months?	
6.	What is your role in the program? (Encircle all applicable options)	Mobilising Community……...1 Ensuring regular visits of ANM…..2 Selection of ASHA…….3 Proper functioning of SHC…….4
7.	Is there any amount given to your sub-center under NRHM?	Yes……1 No…….2
8.	If yes, how much per annum? Rs….	Rs……
9.	Have you received the **Untied fund** for your sub-enter so far?	Yes……1 No…….2
10.	If yes, when did you receive and how much?	
11.	If yes, have you opened a bank account?	Yes……1 No…….2
12.	Is it a joint account?	Yes……1 No…….2
13.	How much of the untied fund was used in 2005-06? ____ % 2006-07? ____ % 2007-08? ____ % and 2008-09? 2009-10	
14.	Do you feel through NRHM the government has decentralized decision making?	Yes……1 No…….2
15.	Do you feel more empowered after the launch of NRHM?	Yes……1 No…….2
16.	How often the meeting of VHSC members held?	Weekly/Monthly/Quarterly//Annually

17.	Where are the meetings generally held? (Encircle all applicable options)	Sarpnach's house……1 Panchayat office……..2 Health facility……..3
18.	Who calls the meeting?	
19.	Do you feel that NRHM has improved the health service delivery in your area?	Yes……1 No…….2
20.	Where do you look for further information about NRHM?	
21.	What is the role of ASHA in VHC?	
22.	What is the role of ANM in VHC?	
23.	In your perception do you think there are interlinks in functions of ANM, ASHA, and AWW?	Yes……1 No…….2
24.	What interlinks?	
	Role as Gaon Kalyan Samiti (GKS) Member	
25.	Are you a member of GKS at the PHC/CHC/District level Hospitals?	Yes……1 No…….2
26.	What is the composition of GKS?	
27.	How did you take the decision of spending money?	
28.	What in your opinion is the function of GKS?	
29.	Addressing complaints of the patients	Yes……1 No…….2
30.	Improvement of health facility infrastructure	Yes……1 No…….2
31.	Improvement of health related equipments	Yes……1 No…….2
32.	Improvement of lodging/boarding facilities to patients and their relatives	Yes……1 No…….2
33.	Improvement in support services like cleaning, laundry, diagnostic, ambulatory, waste disposal etc.	Yes……1 No…….2
34.	What is the frequency of GKS meetings?	_____ per year?
35.	When was the last meeting held?	
36.	Does the 'GKS' generate any funds?	Yes……1 No…….2
37.	If yes, Amount: _____ (Rs.) per year	Rs……..
38.	Is there any audit of the fund?	Yes……1 No…….2
39.	Is it Internal or External audit?	
40.	Tell me some major heads under which the funds are spent with amount as per last year's accounts	
41.	Are the funds adequate to meet all needs?	Yes……1 No…….2
42.	If no, what is the shortfall?	Rs…….per year
43.	What is the role of Village Health Committee/Village Health and Sanitation Committee?	
44.	Remarks/suggestion from Respondent	
45.	Remarks/observation from the Investigator	

A Synopsis Submitted to the University of Hyderabad in Partial Fulfillment of the Requirements for the Award of the Degree of Doctor of Philosophy in Political Science

Title - Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

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Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District

1.1 Introduction

Health is one of the important issues of development in the social sector and considered as a major input for the socioeconomic development of the people. It is regarded as fundamental to the national progress. Post globalized societies are considering social sector is an inseparable component of economic growth. Being an important component of the social sector, health calls for policy recognition. Studies conducted by eminent scholars like Amartya Sen (2004)[1], Debabar Banerji (2002[2], 2005)[3], Imrana Qadeer (1995)[4], Ashish Bose (2007)[5], Peter Berman, and Rajeev Ahuja (2007)[6], and K. Seeta Prabhu (2001)[7] show how this sector is neglected and unable to meet the demands of the people and need for strengthening the health care systems. Moreover, it is imperative to focus on the health sector as India's Health Development Index always received added urgency due to our consistently poor performance and it oscillated between 126-136 in the global rankings.[8]

The National Rural Health Mission (NRHM) is one of the major interventions planned by the Government of India (GoI) in 2005 as part of the Common Minimum Program of the United Progressive Alliance (UPA) and has been seen against the background discussed above. It is considered as one of the major flagship programs of the UPA Government intended to achieve the targets listed below under the objectives of the NRHM and the Millennium Development Goals (MDGs). The NRHM is designed to cover both curative and

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[1] Sudhir Anand; Fabienne, Peter; and Amartya, Sen (eds.), *Public Health, Ethics and Equity*, Oxford University Press, New Delhi, 2004.

[2] Banerji, Debabar, "Repairing the Damage to the Public Health System of India", *Health for the Millions*, Vol. 33, No. 6, February-March 2002, pp. 7-12.

[3] Banerji, Debabar, Perspectives on "Politics of Rural Health in India", *Economic and Political Weekly*, Vol. XL, No. 30, July 23-29, 2005, pp. 3253-3258.

[4] Imrana Qadeer, "Primary health care-A paradise lost", *IASSI Quarterly*, Vol. 14, No. 1 and 2, 1995, pp. 1-20.

[5] Bose, Ashish and Mithu, Adhikary, Special edition on "Making Our Rural Health Care Delivery System Truly Functional From Rhetoric to Reality", *Health for the Millions*, Vol. 32, No. 4 & 5, October 2006 - January 2007.

[6] Berman, Peter and Rajeev Ahuja, "Increased Health Care Spending in India: Opportunities and Risks", *Health for the Millions*, Vol. 33, No. 6, April-May 2008, pp. 16-19.

[7] K. Seeta Prabhu, *Economic Reform and Social Sector Development: A Study of Two Indian States*, Sage Publication, New Delhi, Thousand Oaks, London, 2001, pp. 231-237.

[8] India-Country Profile: Human Development Indicators, http://hdrstats.undp.org/en/countries/profiles/IND.html, Accessed on April 5, 2013.

preventive aspects of public health in a span of seven years (2005-12) with a provision of services that are accessible, affordable and accountable along with quality health care. It is seen as a boost to the health sector in rural areas in general to focus on vulnerable groups: the poor, women and children in particular. Initially it is implemented and confined to 18 states (Bihar, Jharkhand, Madhya Pradesh (M.P), Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh (U.P), and Uttarakhand, and 8 North Eastern states and the Jammu and Kashmir (J&K), and Himachal Pradesh (H.P) with poor health indices and weak health infrastructures.[9] When it started showing positive results, it is extended to the whole country.

As a piece of policy evaluation research it is proposed to study the processes of implementation of the NRHM in a selected district. As a student of the public policy discipline, it is a modest attempt in understanding public policy intervention in the health system in India. It may be stated that the objectives of the NRHM include:

A. Reduction of the Infant Mortality Rate and the Maternal Mortality Ratio (MMR).

B. Access to an integrated comprehensive primary health care and universal access to public health services particularly health for women, and children.

C. Prevention and control of communicable and non-communicable diseases, including local endemic diseases, stabilization of the population, gender and demographic balance.

D. Revitalization of traditional health practices and the bringing of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) into the mainstream and the promotion of healthy lifestyles.

The above goals are sought to be achieved by 2012 and recently the duration is extended up to 2017. There are not many studies on the NRHM. The selected few studies are reviewed and presented here.

1.2 Review of Literature

The review of literature is divided into two categories i.e. individual and institutional. The individual includes studies by Shyam Ashtkar (2008), Amarjeet Sinha (2009), Nirupama Bajpai, Jeffery D. Sachs and Ravindra H. Dholakia (2009); Kaveri Gill (2009); and Zakir Husain (2011)

[9] *Mission Document on National Rural Health Mission (2005-12)*, The Ministry of Health and Family Welfare, Government of India, http://www.mohfw.nic.in/NRHM/Documents/Mission_Document.pdf, Accessed on December 8, 2012, p. 2.

A. Individual studies

The health experts like Shyam Ashtkar (2008)[10] and Amarjeet Sinha (2009)[11] have particularly focus on the decentralization processes of the NRHM and both of them opined that the community participation and decentralization process under the NRHM is not found in the implementation process of the Mission. It is reported a lack of inters-sectoral coordination in the health delivery system. Both of them also noticed the negligence of traditional health support which is some of the imperative aspects of the NRHM. Both highlighted the urgent need for an involvement of the local institutions, including the PRIs, under the implementation of the NRHM and argued for the need of training for the medical and paramedical staff, in order to ensure better health provisions and quality services to the rural people.

There is another study investigated by Kaveri Gill (2009)[12], who critically evaluates both quantity and quality aspect of health services in rural areas under the NRHM. She measures the physical infrastructures and manpower resources involved under the implementation processes of the NRHM. She evaluates the quality health care provision in four states namely Andhra Pradesh (A.P), U.P, Bihar and Rajasthan. She focuses on the decentralization process involved under the NRHM. At the same time she highlights the management of the untied fund, and maintenance of financial grants in the aforementioned states. Her micro level findings from above four states reveal many disparities of health services and problems in the implementation of the untied fund. However, some progress has been noticed in particular aspects like physical infrastructures, availability of drugs, and funding for health development under the NRHM. With regard to manpower resources, she carefully reported some complexity of structural issues and service issues that needs further consultation.

The implementation of the NRHM, was also evaluated by a midterm study conducted by Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia in 2009 on the

[10] Shyam Ashtkar, "The National Rural Health Mission: A stocktaking", *Economic and Political Weekly*, Vol. XLIII, No. 37, September 13, 2008, pp. 23-26.
[11] Amarjeet Sinha, Disscussion on "In defence of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLIV, No. 14, April 04, 2009, pp. 72-75.
[12] A Primary Evaluation of Service Delivery, under the National Rural Health Mission: Findings From a Study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan, *Working Paper* 1/2009 – PEO, Planning Commission of India, May 2009, pp. 1-92.

issues of access to health, service delivery and efficiency of the rural health delivery system under the implementation of the NRHM in five districts in M.P, two districts in Rajasthan; and two districts in U.P. In general they noticed significant increase of the institutional deliveries in all the three states and shortages of manpower resources in general all the above states and Medical Officers particularly in U.P, They also noticed surveyed CHCs in the three states were functioning with a shortage of specialized doctors and are far from meeting the Indian Public Health Standards (IPHS), even after the implementation of the NRHM. A similar result was also noticed at the PHC level in the respective states. Though, the ASHAs play a significant role at the village level under the NRHM, but she faces a lack of cooperation and coordination between the health facilities and the district program management units which obstructs the implementation of the NRHM to its fullest. Their study also finds lack of decentralization.[13] Broadly, their study opined the similar kind of findings with the states as the present study found in Odisha.

In an interesting piece of work, Zakir Husain (2011)[14] studied the intervention of the NRHM based on the reports (common review of NRHM) published by the Ministry of Health and Family Welfare, GoI. and he conducted the study with a rapid appraisal process in different districts in India by the different agencies. He finds a similar kind of result agreeing with the present study. He noticed that there are shortages of in physical infrastructure in the three tier health delivery system, particularly states like, M.P, U.P, Rajasthan, Bihar and Odisha, and reported that health provisions in the above said states don't meet the Indian Public Health Standard (IPHS). He also reveals a shortage of equipments, medicines and a deficiency in human resources that affect the health delivery services and reduces the quality of health care. In a broad agreement with the present study, his survey too observed a lack of accountability, deficiencies in the proper utilization of the untied fund, and absence of the community monitoring and weakness in the implementation processes of the NRHM.

Besides these, the researcher also selected five studies conducted by different institutions namely Poorest Areas Civil Society (2007), Ministry of Health and Family

[13] Nirupam Bajpai, Jeffrey D. Sachs and Ravindra H. Dholakia, Mid-term Evaluation of the National Rual Health Mission, CGSD Working Paper, No. 37, The Earth Institute at Columbia University, October, 2009.
[14] Zakir Husain, special article on "Health of the National Rural Health Mission", *Economic and Political Weekly*, Vol. XLVI, No. 4, January 22, 2011, p. 53-60.

Welfare (2009), United Nations Population Fund (2009), National Health System Resource Center (2011), Planning Commission, GoI (2011). The reviewed are presented below.

B. Institutional level

The Poorest Areas Civil Society (PACS, 2007) conducted a study of the NRHM in nine states in India such as Bihar, Jharkhand, M.P, Chhattisgarh, U.P, H.P, Andhra Pradesh, Assam and Odisha. The study selected three districts of each state on the basis of one well-performing, one medium-performing and one poor-performing for the field study. The identification was based on detailed district level analysis and it focuses on the process for the implementation of the NRHM, its' early impact and the role of PRI's, communities and ASHA in three levels: Center (Mission Director, NRHM; Joint Secretary I/C and Deputy Director, NRHM), State (Mission Director, Secretary of MoHFW) and at the district (3-CHCs, 3-PHCs and 3-HSCs, CDMO, DPM) levels. In Odisha, Jagatsinghpur, Jharsuguda, and Malkanagiri districts were chosen for the study. The study reports a quantum jump to availability of medicines and provision for maintenance of public health institutions. The study also noticed an appreciable increase of numbers of people to avail benefits under the NRHM.[15]

The Ministry of Health and Family Welfare (MoHFW, 2009) had conducted the concurrent evaluation in 187 districts from 27 states and six UTs. According to the sampling strategy, from each selected district covers, one District Hospital, 2 CHCs, 4 PHCs and 12 HSCs, 24 villages, 12 GPs, 24 ASHAs with 1,200 heads of the household and 1,200 currently married women (age 15-49 years). The PHCs were selected from those under the respective selected CHCs; HSCs were selected from those under the selected PHCs. Along with that five inpatients and five out patients were also interviewed to know their opinion of health services through exist interviews at the health facility levels. From each respective HSCs, two villages were selected and from each respective village, 50 households and an ASHA were selected for the study. The study focuses on the objectives of the NRHM. As the present study conducted by the researcher focuses particularly on JSY and ASHA so, emphasis was given on two particular aspects. At the national level, over half of women (nearly 55 percent) were aware of ASHA, and 74 percent of the women were motivated by ASHA in Odisha for the JSY scheme and at the national level 63 percent of the women among the interviewed were

[15] Implementation of National Rural Health Mission An Initial Review, Report from the PACs, New Delhi, 2007

aware of JSY of the health personnel. Overwhelmingly, the study found that 92 percent of safe deliveries in Odisha took place in the presence of a doctor whereas same delivery was reported 53 percent in M.P and 66 percent in Bihar.[16]

The United Nations Population Fund (UNFPA, 2009)[17] had conducted a study in five large states like Bihar, M.P, Odisha, Rajasthan and U.P. Five districts were selected randomly from each state and thus, 25 districts were selected among the five states whereas one additional district was selected from U.P. So, total six districts were selected from U.P because population size of the state and have better sample spread. Both quantitative and qualitative research methods were followed in this study. For the quantitative survey the study adopted three stage sampling design with the selection of the districts being the first stage, villages the second stage and respondents at the third stage in each of the states.

For this study ASHAs, ANMs, and other stakeholders such as heads of PHCs, CHCs, government hospitals and accredited private hospitals, district and state JSY nodal officers were also interviewed. The study finds that 94.9 percent of the JSY beneficiaries in Rajasthan awareness about JSY scheme followed by 86.7 percent in M.P, 80.2 percent in Odisha, 78.6 percent in Bihar and 75.9 in U.P. Though, they were more aware about the JSY scheme but the study shows the less number of institutional deliveries conducted in the above mentioned states. In this regard both M.P and Odisha recorded the highest level 72.8 percent of institutional deliveries. But for the JSY beneficiaries M.P. remained on the forefront and achieved 68 percent, whereas Odisha achieved 67.1 percent, Rajasthan 52 percent and Bihar 41.3 percent followed by U.P 37 percent. Regarding the ASHA's advice to the pregnant mothers, it was reported that, 91 percent of the mothers were given advice by the ASHAs in Odisha for safe delivery followed by Bihar (74 percent), M.P (36 percent), U.P (84 percent) and Rajasthan (64 percent). The reasons for not delivering in a health care facility were found to be 'convenience of delivering at home and normalcy of pregnancy in the states like U.P and Rajasthan. In Bihar and Odisha, along with these two reasons, the institution being far off was also mentioned by 25 percent of the respondents for not choosing for safe delivery in a health care facility. These were the some of the major findings from the study.

[16] Concurrent Evaluation of National Rural Health Mission-2009, National Report, IIPS, Mumbai, 2011, pp. 1-276.

[17] Concurrent Assessment of the Janani Suraksha Yojana in Selected States: Bihar, Madhya Pradesh, Odisha Rajasthan and Uttar Pradesh, UNFPA-India, New Delhi, 2009, pp. 1-68.

The National Health System Resource Center (NHSRC, 2011 under the MoHFW, GoI), evaluated the JSY in eight poor health indices states like Bihar, Chhattisgarh, Jharkhand, M.P, U.P, Odisha, Rajasthan, and Uttarakhand in India. The study adopted comparative case study approach and conducted in two phases. The first phase adopted a form of rapid appraisal based upon analysis of secondary sources of data drawn from records available in the districts, supplemented by visits to a sample of health institutions, interviews with medical doctors, ASHAs and beneficiaries and focus group discussion with communities. The second phase was a cross sectional survey of women who delivered in the last year and were JSY beneficiaries and aimed at studying the experiences of pregnancy and delivery at the health care institutions. The major findings revealed substantial increase of JSY case which also increased institutional delivery and 50 percent of the women who previously had deliveries at home, opted for institutional delivery during their subsequent deliveries. The study also demonstrates equity in access to women into institutional deliveries, given that the representations of SC/ST and BPL in the sample were higher than the population representation. However, 40 percent of deliveries are still conducted at home in most of the districts of the above mentioned eight states, and 7.7 percent to 63 percent of the women who deliver at home come from the SC, ST and BPL categories. The study also found that women who deliver at home had higher proportions of SC/ST and non literate or primary school drop outs.[18]

The Planning Commission (2011)[19] has entrusted an appraisal study of the NRHM to the Population Research Center, Institute of Economic Growth, New Delhi with an objective of evaluation and assessment in the implementation of the NRHM. The study intends to evaluate performance of NRHM in seven states of India such as U.P, M.P, Jharkhand, Odisha, Assam, J&K, and Tamil Nadu. Overall 7400 households from 296 villages selected over 37 districts in the seven selected states are covered under the study. The structured schedules are canvassed to elicit the information.

[18] *Programme Evaluation of the Janani Suraksha Yojana*, National Health Systems Resource Center, Ministry of Health and Family Welfare, Government of India, September, 2011, p. 2.

[19] *Evaluation Study of National Rural Health Mission in 7 States Program*, Programme Evaluation Organization Planning Commission, Government of India, February 2011, pp.1-153.

The findings of the study show that, in Odisha 63.7 percent of expectant mothers avail the JSY facilities followed by the states in U.P, (53.7 percent), M.P (77.7 percent), Jharkhand (45.8 percent), Assam (61.9 percent), J&K (44.1 percent) and Tamil Nadu (81.2 percent). The government health care institutions also provide satisfactory health services after implementation of the NRHM in Odisha 97.5 percent followed by the states in U.P, (88.3 percent), M.P (96.1 percent), Jharkhand (93.1 percent), Assam (92.9 percent), J&K (98.9 percent) and Tamil Nadu (98.1 percent). In Odisha, it is also noticed that 47.4 percent of deliveries still have been conducted at home whereas Tamil Nadu records only 4.2 percent but J&K records the highest 62 percent among the seven states. Similarly in Odisha for the institutional delivery, pregnant women prefer 24.3 percent CHCs, 17.9 percent PHCs, 8.3 percent District Hospital and 1.6 percent prefer private clinics. Regarding awareness about the ASHA, 98 percent women in Odisha are aware and 65.4 percent aware about the program of the NRHM. The health awareness created by the ASHA in Odisha is 98 percent and 100 percent ASHA provides service to the people, it means all the recruited ASHAs perform their duties. Regarding the Village Health and Sanitation Committee (VHSC), found that it is not playing its roles properly, 35 percent VHSC has received untied funds and only 19 percent have reported about facing problems in the implementation of health related programs under the NRHM.

Overall, the aforementioned studies noted problems of the health delivery system before implementation of the NRHM and noticed some extent improvements which have taken place in implementation period of the NRHM.

1.3 Objectives of the Study

The present study “Implementation of the National Rural Health Mission in Odisha: A Case Study of Kendrapara District”, is an attempt at evaluating the processes of implementation of the NRHM at a micro level policy of the major issues relating to the NRHM, in a selected district of Odisha. It is divided into five chapters including the introduction and conclusion. The first chapter mainly focuses on problems of the study, debates on theoretical perspectives of health and diseases, review of literatures, research questions, objectives and methods of the study. It also discusses the outlines of the other chapters. The second chapter critically analyzes policies on health since independence in India. It discusses about the NRHM and its various dimensions besides the development and

outcomes of the NRHM at the national and state levels. The third chapter broadly talks about different institutional set up of public health care systems in Odisha and in Kendrapara district. It specifically discusses health policy initiative of the Government of Odisha and its effective implementation. The fourth chapter focuses on the processes of the NRHM and discusses field survey conducted in Kendrapara district and documented the findings of the study. The fifth chapter highlights, the summary, conclusions, and gives some recommendations for further strengthening the program. The objectives of the study are:

A. To critically review the policies on health in India since independence,
B. To study the development of public health delivery system and health care utilization in Odisha,
C. To study the provision for the health care facilities in Kendrapara district of Odisha under implementation of the National Rural Health Mission,
D. To evaluate the role of Accredited Social Health Activist (ASHA) in Janani Suraksha Yojana (JSY) and institutional delivery under the National Rural Health Mission and,
E. To understand the decentralization of public health management under the National Rural Health Mission.

1.4 Sample, Data Sources and Methods

This study uses different sampling methods such as random sampling, systematic random and purposive sampling methods by using seven sets of the structured schedules for eliciting information from different respondents. These include 840 household beneficiaries and other official personnel associated with the implementation process of the NRHM. The total sample size in this study is 1162. Table - 5.1 gives the distribution of the sample.

Table - 5.1: Sample: An overview

Category	Name of the Category	Total Envisaged
Beneficiary	Beneficiaries of the Janani Suraksha Yojana (JSY)	840
Monitoring team	Members of the Gaon Kalyan Samiti (GKS)	168
	District Program Manager (DPM)	1
Health facilitator	Accredited Social Health Activist (ASHA)	84
	Auxiliary Nurse Midwife (ANM) of Health Sub-Center	42*
	Medical Officer In-charge of Primary Health Centers	18
	Medical Officer In-charge of Community Health Centers	9

Note* Indicates number of Health Sub-Centers (HSCs) covered during the field survey instead of covering envisaged sample size of 54 HSCs. There are shortages of 12 HSCs out of envisaged sample, because each PHC does not have always three HSCs under its jurisdiction. Therefore, the researcher is able to cover only 42 HSCs.

The structured interview schedules are administered to the selected respondents by the researcher himself. The distance criterion is the basis for selection of health centers. The data was collected between November 1, 2010 to April 30, 2011 in Kendrapara district, Odisha. The researcher made use of seven sets of instruments generated by the Ministry of Health and Family Welfare, Government of India. The researcher of course modified some questions suitable to the needs of the study. The present study concentrated on two out of the four main objectives of the NRHM. These are (1) target to reduce the Infant Mortality Rate (IMR) and the Maternal Mortality Ratio (MMR) through Janani Suraksha Yojana and the institutional delivery and (2) Access to an integrated comprehensive primary health care with universal access to public health services, such as health of women and children. The major findings of the study are as follows:

1.5 Major Findings of the Study

1. **Appreciable achievements**: The study shows the overall success of the interventions. It particularly helped in reduction of both IMR and MMR in Kendrapara district. The IMR has improved to 64 in 2010 from 83 per 1,000 live births in 2005. The MMR also declined 91 points from 367 in 2004-06 to 276 per one lakh live births in 2010-11. The study found that 85.6 percent beneficiaries of the JSY are benefited by the NRHM in Kendrapara. Further, it noticed over 20 percent of women who had previously delivered at home opted second delivery under the JSY scheme. The study noticed an encouraging trend of the institutional delivery those who availed through the JSY in the district which has improved from 68.3 percent in 2005 to 93.4 percent in 2010. Similarly, taking of three minimum antenatal care also found enhanced from 53.6 percent in 2005 to 75.5 percent in 2010. The full immunization for children increased from 61 percent in 2005 to 96.2 percent in 2010 in the district under the implementation of the NRHM. The details are mentioned in chapter-3, pp. 208-209.
2. **Apprehensions about institutional delivery**: About 14.4 percent did not avail the benefits of JSY under the NRHM. They preferred delivery at home because of most of giving birth at home is more convenient as said by 91.7 percent of the non-beneficiaries. They also shared other reasons for delivery at home, some of these are the institutional delivery is more expensive and need more out-of-pocket expenses (said by 72 percent), unavailability of transportation (68.5 percent), and during the

first birth no complexities were noticed by 36.3 percent mothers. The study also noticed those who normally prefer delivery at home. Among them 44 percent belongs to SCs, 22.3 percent from OBCs and only 2.4 percent from STs and remaining from other categories. Those who are OBCs, most of them fall into the below poverty line which enforce them to go for delivery at home instead of preferring for the safe institutional delivery. Particularly they are hailed from the remote rural areas of Kendrapara district.

3. **Pivotal role by ASHA**: The present study found significant role played by ASHA for the development of institutional deliveries under the JSY. It noticed overwhelmingly that 100 percent respondents are aware about the ASHA and 98.8 percent knows about the JSY scheme which is beneficial for safe motherhood. As expected, the NRHM brought a rapid change in institutional delivery and it improved from 42.3 percent in 2005 to 65.8 percent in 2010 excluding the improved health care facilities where 98 percent of the respondents were satisfied with new services available in different health institutions after implementation of the NRHM.
4. **Lack of decentralization**: The NRHM focuses on decentralization of health delivery system but the study found lack of community participation and involvement of members of Panchayat Raj Institutions in the processes for implementation of the NRHM. It is noticed from the GKS members that the functions of the Gaon Kalyan Samiti (GKS) are more centralized than decentralized, as reported by the 65.5 percent of the respondents in Kendrapara district.
5. **No proper utilization of funds**: The researcher found cases of mis-utilization of Rs. 10,000 GKS funds allocated to the villages for the purpose of sanitization of the village. At the same time, it is noticed that the Rs. 10,000 untied funds sanctioned to the Health Sub-Centers in every village for the provision of supplying of medicines, used for the referral cases, renovations of the buildings and other facilities under the NRHM. But the study found funds are not utilized effectively. The researcher noticed a lack of coordination and cooperation from the village Sarpanch creates problems while utilizing the GKS funds as Sarpanch is a part of joint account of the untied fund for details sees chapter-4, pp. 260-263).

6. **Load of patients**: The surveyed PHCs, CHCs and the District Headquarter Hospital (DHH) show that at the CHC levels, the numbers of daily out patients have increased from 30 in Mahakalpada block to 250 in Rajkanika block. At the same time, all the CHCs in the district were seen to be improving the infrastructure during the implementation period of the NRHM.
7. **Problems of HSCs:** The study found that the NRHM has brought changes in the public health delivery in Odisha in general and Kendrapara district in particular. The development has been noted both in the PHCs and the CHCs, apart from the District Headquarter Hospitals. However, the HSCs are to yet develop as expected. Most of them lack in terms of facilities including availability of required medicines and infrastructure in most of the HSCs. The HSCs have not reached expected levels of efficiency as visualized under the NRHM.
8. **Augmenting institutional capacities for quality health care**: The study focuses on institutional capacities for quality health care under the NRHM and noticed the lack of quality services. The researcher noticed that expectant mothers are still hesitant to avail the health care facilities from the government hospitals and are opting for private hospitals though it is beyond their economic capacities. Sometimes, lack of quality health services de-motivates expectant mothers to opt for institutional delivery and prefer to have delivery at home.
9. **Lack of transportation**: The study found that due to lack of proper transport facilities, pregnant women are sometimes forced to deliver at their homes. The provisions for quick and accessible services are necessary. The quick referral services are needed to attend the complicated cases and to save the lives of both mother and child. It is noticed from this study that due to delay in accessing referral services some unexpected developments happened. Particularly referral cases from the District Headquarter Hospitals to the higher level seem necessary.
10. **Need for posting of lady doctors:** Most surprisingly the researcher observed and noticed from the respondents that out of 18 surveyed PHCs only two PHCs had lady doctors and remaining were positioned by the male doctors. At the CHC levels, most of the gynecologist posts were positioned by male doctors and surprisingly, the gynecologist post of the CHC Indupur of Kendrapara block was remaining vacant till

the date of data collection. As a result, most of the women expressed discomfort to visit particularly PHCs for performing of deliveries by the male doctors which is understandable.

In fact, the researcher surprised why the government is reluctant to post lady doctors in the government hospitals which also violates gender rights and comfort of the expectant mothers. Therefore, the study found NRHM could not ensure so far availability of female doctor/gynecologists in the rural health care institutions which had a negative impact for the attraction for the institutional delivery.

11. **Need to follow medical ethics:** The researcher found about 10 percent of the household respondents were not satisfied with the current provision of health services. While making inquiries, it was found that some of the medical doctors and paramedical staff behave with patients rudely and also used slang during deliveries. Besides that, some of the doctors and staff asked for bribes before performing the delivery and before handing over the JSY incentive (cheque) to the beneficiary. Such activities sometimes create force the pregnant women not to visit the government hospitals for the institutional delivery.
12. **Overall assessment of the NRHM and the MDGs:** The NRHM as a policy initiative shows vibrancy in terms of its reach. Before launching of the NRHM, the study area recorded the IMR 83 per 1,000 live births and MMR 367 per one lakh live births. After the introduction of the NRHM, the situation changed to a large extent though lot remains to be done. While the national average of the IMR is 47 in 2010, and Kendrapara recorded 64 per 1,000 live births in 2010. It shows 19 points of IMR declined in Kendrapara in 2005 compared to the national level 11 points declined during the same time. Similarly the MMR also falls down 91 points in Kendrapara (from 367 in 2004-06 to 276 per one lakh in 2010-11) whereas at the national level shows 42 points declined from 254 in 2004-06 to 212 in 2007-09. The state average also shows encouraging trend in declining of both the IMR (IMR from 75 in 2005 to 61 in 2010 per 1,000 live births) and MMR (from 303 in 2004-6 to 258 in 2007-09).

    This shows that India has achieved both the health indicators in some extent to reach the expected outcomes of the IMR and MMR at the national level. The pace of declining of both indicators if continue in this trend it would not be easy to achieve the

goals of the MDGs by 2015 (for details see chapter-2, pp. 119-123), however the implementation of the NRHM may help to achieve targets of the MDGs by 2017 (as the NRHM has been extended from 2012-2017) if there would be proper initiative of structural and administrative changes at the policy as well as implementation levels.

It is also found that the NRHM in Odisha has an appreciable impact as compared to the national level, particularly due to implementation of JSY as it helped to reduce the IMR and MMR significantly in the state as well in the district. Perhaps better monitoring would have ensured greater success as such policy is intended for making a difference. The Mission mode in which it is organized shows that given the political will the NRHM and MDGs will achieve the target before 2017.

1.6 Conclusion

The study broadly shows that there is a noticeable change in rural health delivery system in Kendrapara district after seven years implementation of the NRHM. It is noticed that ASHA's assistants to the expectant mothers and cash assistance of the Janani Suraksha Yojana under the NRHM have resulted in a steep rise in demand for the institutional deliveries which provided a safe motherhood and a decline in cases of deliveries at home. The study shows ASHA's popular engagement under the NRHM, she has enlightened the rural people particularly women about health care and then entitlement for the institutional delivery as a women's health right. This health awareness and understanding of health as a basic right further helped in reducing the alarming rate of both IMR and MMR at the district and at the state level;

The study found encouraging trends through the different activities of ASHAs but did not notice such practice among the local community members which is significant for the improvement of health in rural areas. Though, the NRHM intends to popularize the decentralization of health care management at the grassroots level but the researcher found less involvement of the community. Besides that, the study noticed lack of local political will and active participation of the political leaders under the process of implementation of the NRHM. The local political institutions for example the Gram Panchayat and the involvement of the local political leaders need to ensure that the program reaches to the targeted population otherwise it would be not easy for the implementing nodal agency to make sure that the NRHM achieve its expected goals.

In fact, the NRHM has achieved substantial progress irrespective of above mentioned difficulties but the encouraging trend shows rapidly decline of the IMR and MMR in Kendrapara and in Odisha. At the national level, a few states like, Tamil Nadu, Tripura, Delhi, Punjab, Maharashtra have already reached the expected goal of IMR (30 per 1,000 live births) under the NRHM and the target of the IMR under the MDGs (IMR target to reach 28) in India. However, the majority of the states in India are yet to reach the expected goals of the NRHM by 2017. The study also identified certain types of deficit which still need urgent attention of accountability at the institutional and administrative levels, besides the participation of the local community at the grassroots level in terms of policy planning and implementation. Therefore, health care remains a policy challenge and the NRHM has yet to go a long way.

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