PART-I

INTERNSHIP REPORT

1.1 INTRODUCTION TO ORGANIZATION AND ITS PROFILE

PUBLIC HEALTH FOUNDATION OF INDIA

The Public Health Foundation of India is a large-scale, autonomously governed, public private initiative, launched by the Honourable Prime Minister of India, Dr. Manmohan Singh on March 28, 2006 to strengthen India's public health workforce capacity to address India's critical public health challenges by effectively planning, implementing and managing the country's massive health care structures and systems. The Foundation is managed by a fully empowered, independent Governing Board that is represented by stalwarts from across multiple constituencies, including senior government officials, eminent Indian and International academic and scientific leaders, civil society representatives and corporate heads. The President is Prof. K. Srinath Reddy, a cardiologist and epidemiologist who brings in a broad range of public health experience at national and global levels. The concept enjoys wide support nationally and internationally. Working closely with the Central and state governments across the country and international partner institutions across five continents, PHFI is working towards education, training, research, policy and advocacy efforts and communication, cutting across major disciplines of public health. Many initiatives at the organization have been strengthened by strong links and support from government agencies in policy and programmes alike. With the Ministry of Health and Family Welfare as the nodal agency; state governments, the Prime Minister's Office, the Planning Commission, Department of Science & Technology and Finance Ministry have extended their support. Government officers have also been seconded to engage and work collaboratively with the PHFI team to develop solutions for the health sector. PHFI partners with the World Bank, WHO, United Nations agencies, national and international NGOs and 65 schools of Public Health from around the world.

THE GENESIS OF PHFI

The Public Health Foundation of India (PHFI) was conceptualised as a response to emerging public health challenges in India. In the inception of this unique public private partnership lies recognition that meeting the shortfall of health professionals is imperative for a sustained and holistic response to India's public health challenges. The foundation of PHFI's endeavours is the belief that health care in India ought to be addressed not only from the scientific perspective of what works, but also from the social perspective of who needs it the most, and that health systems performance needs to be assessed on the attributes of access, affordability, adequacy, appropriateness, efficiency, cost-effectiveness and equity. PHFI emerged as a concept in the mid-2000s and has gradually shaped into a dedicated mission with extraordinary national intent, aimed at propelling India, and therefore the region, towards better public health outcomes. The idea of PHFI as an institution was developed under the leadership of Mr. Rajat K. Gupta, Former Managing Director of McKinsey & Company, the Ministry of Health & Family Welfare, Government of India and Prof. K. Srinath Reddy, Former Head of Department Cardiology at the All India Institute of Medical Sciences and was collaboratively evolved in consultation with multiple constituencies, including State and Central Governments in India, Indian and international academia, multi- & bilateral agencies and civil society groups.



The challenge of speedily and steadily improving performance on health indicators confronts our country. Beyond the numbers, India's population needs to be assured of readily accessible, easily affordable and qualitatively adequate health services. Coupled with this is the human resource crisis resulting from a severe shortfall in skilled health personnel, especially in underserved areas. The WHO launched the Health Workforce Decade (2006-2015) and Human Resources for Health have been discussed as a key theme in the World Health Report, 2006, titled: 'Working Together for Health.' The report highlighted the growing challenge of maintaining 'the needed numbers, quality, mix and distribution of personnel to meet the healthcare needs of the population.' Clearly, there are multiple stresses and strains on the goal of medical education to produce health personnel capable of managing common problems in realistic health care settings. Adding to the complexity of the challenge is India's rapid health transition, where it is confronted both by an unfi nished agenda of eliminating infectious diseases, nutritional defi

ciencies, unsafe childbirth and the challenge of emerging and re-emerging diseases as well as escalating epidemics of non communicable diseases. This composite threat to the nation's health and development needs a concerted public health response that can ensure delivery of cost-effective interventions for health promotion, disease prevention and affordable diagnostic and the therapeutic health care. Health care reform, guided by a paradigm shift from an exclusive focus on clinical medicine to a concerted public health response, encapsulating health promotion, disease prevention and affordable diagnostic and therapeutic health care for all, is an inescapable imperative.

Central to this shift is the growth of public health as an academic and practical discipline. Public Health as a formal discipline should ideally integrate streams of knowledge from diverse disciplines, integrating learnings and perspectives from life sciences, especially human biology; quantitative sciences such as epidemiology, biostatistics and demography; social and behavioural sciences including economics, health promotion and communications; political science and humanities, especially health inequities, human rights, gender and ethics; and elements of management. Public health aims to focus on and influence the multiple determinants of health at the population level (economic, social, behavioural and biological) and to undertake and evaluate multi-sectoral interventions to positively infl uence those determinants. It also involves the study of health systems, their structure and management practices as channels for delivery of health services. While the specifi c applications of such knowledge would vary across different areas of medicine and public health, a broad array of disciplines must inform and infl uence the totality of their precept and practice to advance global health. This, holistic approach is thus far, nascent in India, causing impediments to access, availability and quality of health care provided by professionals. Presently, graduates from the few public health schools in India are insuffi cient, in numbers or limited in exposure to multi disciplinary learning. The resultant shortfall of professionals with inter-disciplinary orientation, relevant knowledge and skill-sets has inhibited opportunities for multi-sectoral public health action and a broader understanding of health issues. Health professionals with such multidisciplinary trainingcould, ideally, supplement and enhance the strength of medical doctors, nurses and health workers while enhancing both the effi ciency and equity perspectives of health systems. Knowledge and application of diverse disciplines shall enable the establishment of synergistic links in designing and delivering health care services across the board. Public health education, in India, must be reconfi gured to enable the attainment of this vision



PHFI'S VISION

- Establishing a network of new institutes of public health over the next 6-8 years;
- Assisting the growth of existing public health training institutions/departments and facilitating their evolution into major institutes of public health;
- Establishing a strong national research network of public health and allied institutions which would undertake policy and programme relevant research that will advance public health goals in prioritized areas- with suitable international partnerships wherever useful and appropriate;
- Engaging public health expertise to collectively undertake analytical work for generating policy recommendations related to public health action, in not only the health sector but also in all other sectors which impact the health of the people, and developing a vigorous advocacy platform to effectively communicate these recommendations to policy makers and other relevant stakeholder groups (including civil society organizations which represent the interests of people's health);
- Facilitating the creation of an independent accreditation body for degrees in public health which are awarded by training institutions across India.

GOVERNING BOARD

Chairperson

Mr Rajat K Gupta
Former Managing Director, McKinsey & Company and Chairman, Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)

Members

- **Dr A K Shivakumar**
  Adviser UNICEF and Member of National Advisory Council
- **Dr Amartya Sen**
  Professor of Economics and Philosophy, Harvard University
- **Dr Anil Seal**
  Director, Cambridge Commonwealth Trust and Cambridge
- **Mr Ashok Alexander**
  Director, Avahan - India AIDS Initiative, Bill and Melinda Gates Foundation
- **Dr David Lynn**
  Head of Strategic Planning & Policy, The Wellcome Trust, UK
- **Mr Gautam Kumra**
  Director, McKinsey & Company
- **Mr Harpal Singh**
  Chairman, Fortis Healthcare Ltd
- **Mr J V R Prasada Rao**
  Regional Director, UNAIDS/ RST, Thailand
- **Dr James Curran**
  Former Chair - Association of Schools of Public Health (ASPH), USA;
  Dean, Rollins School of Public Health, Emory University, USA
- **Dr K Srinath Reddy**
  President, PHFI,
  Former HOD, Cardiology, All India Institute of Medical Sciences (AIIMS)
- **Ms Kathy Cahill**
  Director, Global Health Strategies, Bill and Melinda Gates Foundation

- **Ms Kiran Malhotra**
  Chairperson, AKM Systems Pvt Ltd

- **Dr Lincoln Chen**
  President, China Medical Board

- **Ms Mirai Chatterjee**
  Co-ordinator for Social Security, Self Employed Women's Association (SEWA)

- **Mr Montek Singh Ahluwalia**
  Deputy Chairman, Planning Commission, Government of India

- **Mr Mukesh D. Ambani**
  Chairman and Managing Director, Reliance Industries Limited

- **Dr Purnendu Chatterjee**
  Chairman, The Chatterjee Group

- **Dr R K Srivastava***
  Director General Health Services, Ministry of Health and Family Welfare, Government of India

- **Dr Raghunath A Mashelkar**
  Bhatnagar Fellow, National Chemical Laboratory, India

- **Mr Raj Mitta**
  Chairman, Essential Value Associates Pvt Ltd

- **Dr Ravi Narayan**
  Community Health Adviser (SOCHARA),
  Council Member, Global Forum for Health Research

- **Ms Rohini Nilekani**
  Chairperson, Akshara Foundation, Arghyam Trust, Pratham Books

- **Mr Shiv Nadar**
  Founder, HCL

- **Ms Sujatha Rao**
  Secretary, Ministry of Health and Family Welfare, Government of India

- **Mr T K A Nair***
  Principal Secretary to the Honorable Prime Minister of India

- **Dr Tim Evans**
  Assistant Director General - Evidence and Information for Policy, World Health Organisation (WHO)

- **Mr Uday Nabha Khemka**
  Vice Chairman, Sun Group

1.2 TASKS PERFORMED IN THE ORGANIZATION

Although childhood and infant mortality in India has reduced substantially during the last decade, the rate of neonatal mortality is still high. Nearly two-thirds infant deaths each year occur within the first four weeks of life, and about two-thirds of those occur within the first week. Thus, the first days and weeks of life are critical for the future health and survival of a child.

Newborn care often receives less-than optimum attention. It is now well known that the newborns themselves require special attention separate from that of their mothers to assure a healthy start to life. The immediate causes of newborn death include infection, birth asphyxia, complications related to premature birth, and congenital anomalies. Most of the neonatal deaths can be prevented with simple, cost-effective solutions that do not depend on highly trained provider or sophisticated equipment.

Effective Newborn care is a crucial challenge that is faced by every health care setting dealing in maternal and child health. Training of Doctors, Nurses and ANMs in low resource settings is an urgent need. A key component is to equip the staff with appropriate knowledge and skill to improve the quality of service delivery. **The Ministry of Health and Family Welfare is addressing this through the launch of the Navjaat Shishu Suraksha Karyakram (NSSK)**. A simple and scalable training module on Basic Newborn Care and Resuscitation has been developed for this programme.

This programme provides evidence-based knowledge in improving newborn heath especially care at birth. The health provider after training will furnish all the required care at birth, identify and manage common complications, stabilize (if necessary) and refer/transfer newborns needing additional interventions.

India’s Infant mortality is a staggering 2.1 million per annum and contributes to nearly 21 per cent of the global burden of infant deaths. The rate of decline of Infant mortality rate in India over a period of time has slowed down. During the decade 1980 to 1990 Infant mortality rate declined by as much as 34 points, however during the decade 1990 to 2000 Infant mortality rate declined by just 12 points.

The major reason for this situation is the very slow decline in the neonatal mortality which accounts for 2/3rds of all infant mortality. Neonatal mortality world over is around 37 % of all under five mortality whereas in India this is around 50% of all under 5 deaths, which means that the proportion of U5 deaths by neonatal causes is disproportionately high in India.

The important causes of neonatal deaths is birth asphyxia and along with serious infections results in more than 50 % of all neonatal deaths. If infant mortality has to be brought down than it becomes important that these major causes of neonatal deaths are addressed.

The Government of India keeping this in mind has developed a program on “Basic Newborn Care and Resuscitation” which would address these causes in a large way. This program is timely and certainly would have a significant contribution in bringing down neonatal mortality and other serious long term morbidities like neuro-developmental sequelae in survivors of asphyxiated newborn babies. With more and more deliveries occurring at health care institutions as a result of the Jannani Suraksha Yojna, it becomes important that the large number of health professionals attending to births, are trained in the simple procedure of resuscitation and basic newborn care.

PHFI is working on the operations research project on “The assessment of the Navjaat Shishu Suraksha Karyakram in high focus states of Madhya Pradesh and Rajasthan. My role in the organization is as a Research Associate for the NSSK project. The capacity involves working into the various domains of Health Systems Research, data collection, analysis, interpretation and report drafting. During the tenure, I would be working solely into the assessment of the NSSK project into the chosen districts in each state, Chhatarpur in Madhya Pradesh and Nagaur in Rajasthan. The work involves travel to the study sites for data gathering, monitoring the training programs being implimented at the districts, and related communications between the various health care providers at the district.

The exposure has taught me immensely the application of the basic Research Methodology studied theoretically in the course modules. It has educated me into developing and drafting the various tools for data capturing, analysis and interpretation of the findings and working them down as a report. The experience has been a great learning experience and is helping me achive my professional objective, to be able to work in the organization with veracity, coordination and a creative problem solving approach leading to task completion and an intellectual nourishment of me as an individual.”

PART-II

DISSERTATION

INTRODUCTION

Promotion of maternal and child health has been one of the most important objectives of the Family Welfare Programme in India. The current Reproductive and Child Health Programme (RCH) was launched in October 1997. The RCH Programme incorporates the components covered under the Child Survival and Safe Motherhood Programme and includes an additional component relating to reproductive tract infection and sexually transmitted infections. The need for bringing down maternal mortality rate significantly and improving maternal health in general has been strongly stressed in the National Population Policy 2000. This policy recommends a holistic strategy for bringing about total intersectoral coordination at the grass root level and involving the NGOs, Civil Societies, Panchayati Raj Institutions and Women's Group in bringing down Maternal Mortality Ratio and Infant Mortality Rate.

India demonstrates high rates of maternal, newborn, infant and child mortality. It bears a substantial share of global mortality and malnutrition burden, which implicates a strong need to progress so as to achieve the Millenium Development Goals. India has shown slow or no progress in the recent years, with major inequities being economic, social, gender and geographic. Neonatal Mortality Rate is one of the indicators in determining the health status of a nation. Millenium Development Goals 4 and 5 emphasise on improvements in child health, with lowering in the number of Infant and Maternal mortality rates. Every year around 4 million children die in the first month of their life. India ranks 49th in the Global platform in the under-five mortality ranking, with a rate of 72.[1] Nearly 75% of neonatal deaths occur in first seven days of life. Most of them are preventable, if evidence based practices are followed by all healthcare professionals.[2] The World Health Organization (WHO) estimates that, in addition to more than 3 million stillbirths worldwide each year, nearly 4 million infants die in their first month of life. [3]

[1] UNICEF Report: "The State of the World's children 2009", Maternal and Newborn health.

[2] http://www.newbornwhocc.org/essential_newborn_nursing_training-2010.htm

[3] http://www.dnaindia.com/health/report_newborn-care-training-in-developing-countries-reduces-stillbirths_1349434

LITERATURE REVIEW-

A review of ages at death during the first 28days reveal that two-thirds of deaths occur in the 1st week of life, and two-thirds of these within the 1st 2 days of life.[4] Thus almost 45% of neonate deaths take place within 48 hrs of birth. The major causes of deaths during this period are birth asphyxia and trauma, problems related to low birth weight (LBW), such as hypothermia, respiratory problems, feeding and peripartum haemorrages and malformations. Most of these problems occur due to inadequate care during the antenatal period and during labour. Although a significant proportion of women would be categorised as high risk and identified for institutional delivery, yet over 75% of all births take place in the community, usually through unskilled birth attendants. There is little or no postpartum care to the mother and the child.

Several initiatives have been taken by the Government of India aiming to provide better health care facilities and aid in good health to both the mother and the child. The Reproductive and Child Health program runs exclusively in providing all the interventions in improving the related determinants of Maternal and Child health, which aims at reducing maternal mortality to less than 100 by the 2010. The major interventions includes essential obstetric care and the RCH Programme aims at providing at least 3 antenatal check ups during which weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis as well as anaemia management are provided to the pregnant women. Under the RCH Programme emergency obstetric care, 24-hour delivery services at primary health centres and safe abortion services are also provided. The overall perinatal mortality rate (PMR) in India is still over 50 per 1000 and has shown virtually no decline during the past decade. The causes of perinatal deaths suggest poor health of mother and poor health facilities and are hence potentially preventable. Various studies have shown that PMR can be significantly reduced within a short span of time. The registration of vital statistics continues to be highly unsatisfactory especially in rural areas.[5] To prevent infant mortality and secure good health of the new mother, neonatal

[4] Base line survey of Multi centric homebased intervention project of Indian Council of Medical Research, ICMR

[5] Bhave SA, Trends in perinatal and neonatal mortality and morbidity in India. Indian Pediatr. 1989 Nov;26(11):1094-9.

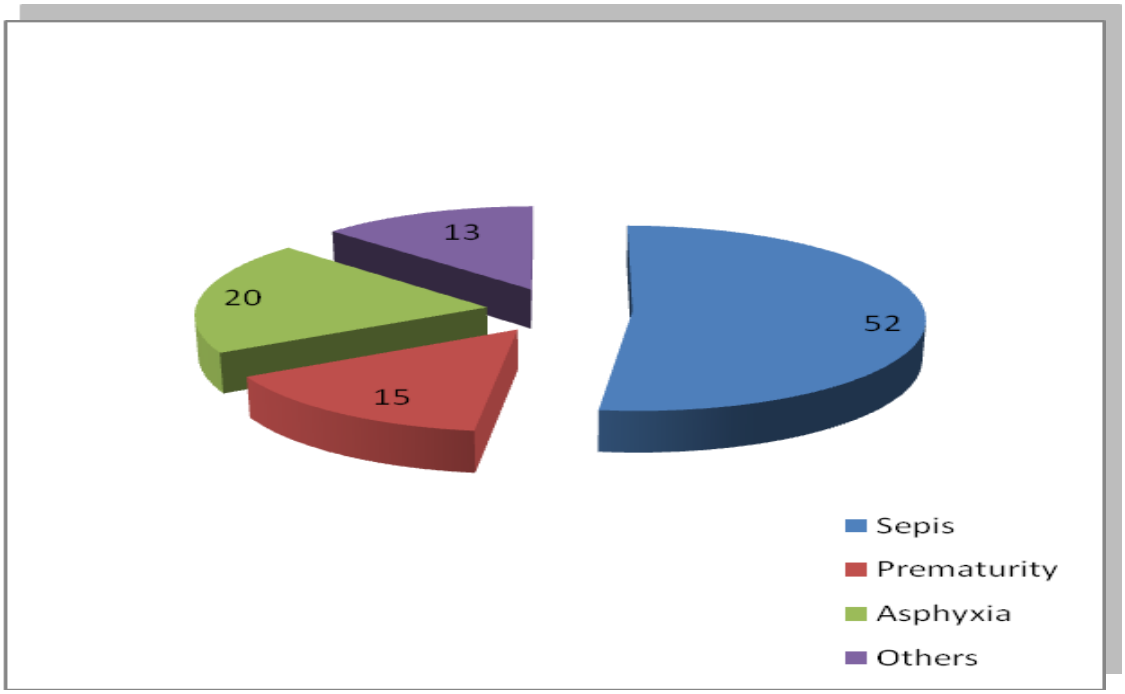
healthcare becomes very important. The Government's commitment to this goal is reflected in the Constitution and the Tenth Five-Year Plan, as well as its ratification of the Convention on the Rights of the Child. UNICEF has given its support to the government's Reproductive and Child Health II (RCH II) and National Rural Health Mission (NRHM), with the launch of the Integrated Management of Newborn and Childhood Illness (IMNCI). Although the infant mortality rate (IMR) in India has been reduced by 50% over the past century, it compares poorly with the developed countries and with some developing countries. The observed fall in IMR has been the result of change in postneonatal mortality with the result that neonatal deaths now account for over 60% of all infant deaths.

TABLE 1 INDIA'S CHILD SURVIVAL CHALLENGE*

BIRTH RATE 25 (2002)	2.7 Crore neonates to take care of.
U5MR 72 (2006)	25 lakhs die before completing five years.
IMR 56 (2006-07)	16 lakhs die before completing 1 year.
NMR 39 (2004)	11 lakhs die before 4 weeks of age.

* Source UNICEF India Statistics.

(http://www.unicef.org/infobycountry/india_statistics.html)



Source: Teaching Aid, Essential Newborn care, WHO, India

FIGURE-1

CAUSES OF NEONATAL DEATHS

Only 2 WHO regions account for more than 70% of all under five deaths: 42% in the African region and 29% in South-East Asian region. Only 6 countries account for 50 % of all child deaths, (2002 data), i.e. India, Nigeria, China, Pakistan, Ethopia, DR Congo. The major causes of Under-5 Mortality include: Malnutrition, Pneumonia, Diarrhoea, Malaria, Measles and HIV/AIDS. Malnutrition contributes to more than half of all Under-5 deaths.

India's share of the global burden of births & child deaths

- **Live Births** ~ 20%
- **Child Deaths** ~ 20%
- **Infant Deaths** ~ 24%
- **Neonatal Deaths** ~ 30%

FIGURE-2

Source: Global trend of neonatal, infant and child mortality, Dr Kanupriya Chaturvedi, Dr SK Chaturvedi

Possible existing solutions to combat these problems would include:

i. Skilled Care: Skilled care during pregnancy, childbirth and post-natal period.

ii. Infant Feeding: Exclusive breastfeeding, complimentary feeding and micronutrients.

iii. Vital Vaccines: Measles and tetanus Immunization and other conventional and new vaccines.

iv. Combatting Diarrhoea: low osmolarity ORS and Zinc, antibiotics for dysentry.

v. Treating Pneumonia and Newborn Sepsis: Prompt treatment with appropriate antibiotics.



FIGURE-3 REPRODUCTIVE AND CHILD HEATH CARE PROGRAMS.

In 1990, the National Neonatology Forum (NNF) launched the introduction of the Neonatal Resuscitation Programme (NRP) with the help of the American Academy of Pediatrics and American Heart Association in India. In 1997, a network of 14 medical colleges was established by the NNF. The NRP certification course was taught to two pediatric faculty members in each of these hospitals and they, in turn, trained the physicians and nurses who were involved in caring for infants at birth in their respective institutions. Subsequently, an evaluation of the impact of this education and training was conducted. The results demonstrated that the introduction of the NRP resulted in increased awareness and documentation of birth asphyxia, an increased use of bag and mask ventilation, and a significant decline in asphyxia-related deaths (Deorari et. al,2000).

The Child Survival & Safe Motherhood (CSSM) program launched in 1992 focused on supply of indigenously manufactured neonatal care equipment and on-site training of medical and paramedical personnel and follow-up (National Neonatology Forum and Save the Children/US:2004). The package of services under CSSM included :

- Resuscitation of asphyxiated newborns
- Prevention of hypothermia
- Prevention of infections
- Exclusive breastfeeding
- Referral of sick newborns



FIGURE-4 COMMUNITY OUTREACH PROGRAMS

Thus, it can be observed that a lot needs to be done to overcome the existing burden of Maternal and Child Health Status. Population specific interventions need to be instituted, as perceptions and behaviours of stakeholders, the health facilities and various risk factors, may vary among rural, tribal, urban slum and urban communities, and over the vast spread geographic locales of India.

STATE PROFILE OF UTTARAKHAND-

The State of Uttaranchal, now called Uttarakhand, was created on 9th November 2000 by combining the districts of Uttarkashi, Chamoli, Rudraprayag, Pauri, Tehri, Dehradun, Pithoragarh, Champawat, Nainital, Almora, Bageshwar, Hardwar and Udham Singh Nagar. The districts have been grouped into two distinct divisions on the basis of homogeneity, contiguity and socio-cultural affinity. These are the Garhwal Division and the Kumaon Divison. Uttaranchal has a population of 8.5 million. The state has 13 districts, 49 *tehsils*, 95 blocks, and 16,414 villages with about 78% of the population of

the state living in rural areas. About 36% of the state's population is younger than 15 years and only 5% is aged 65 or above[6].

The overall literacy rate is as high as 72%. The state, being a hilly one, is the most sparsely populated state in the country with a population density of 159 per sq. kms. The poor road connectivity, difficult hilly terrain (93% of area in hills), small scattered settlements lack of infrastructure and humanpower contribute to problems of access to health service delivery. Given the poor paying capacity and scattered location of settlements in hilly districts, the population is almost entirely dependent on the public health delivery system while the presence of the private sector tends to be concentrated in the plains.

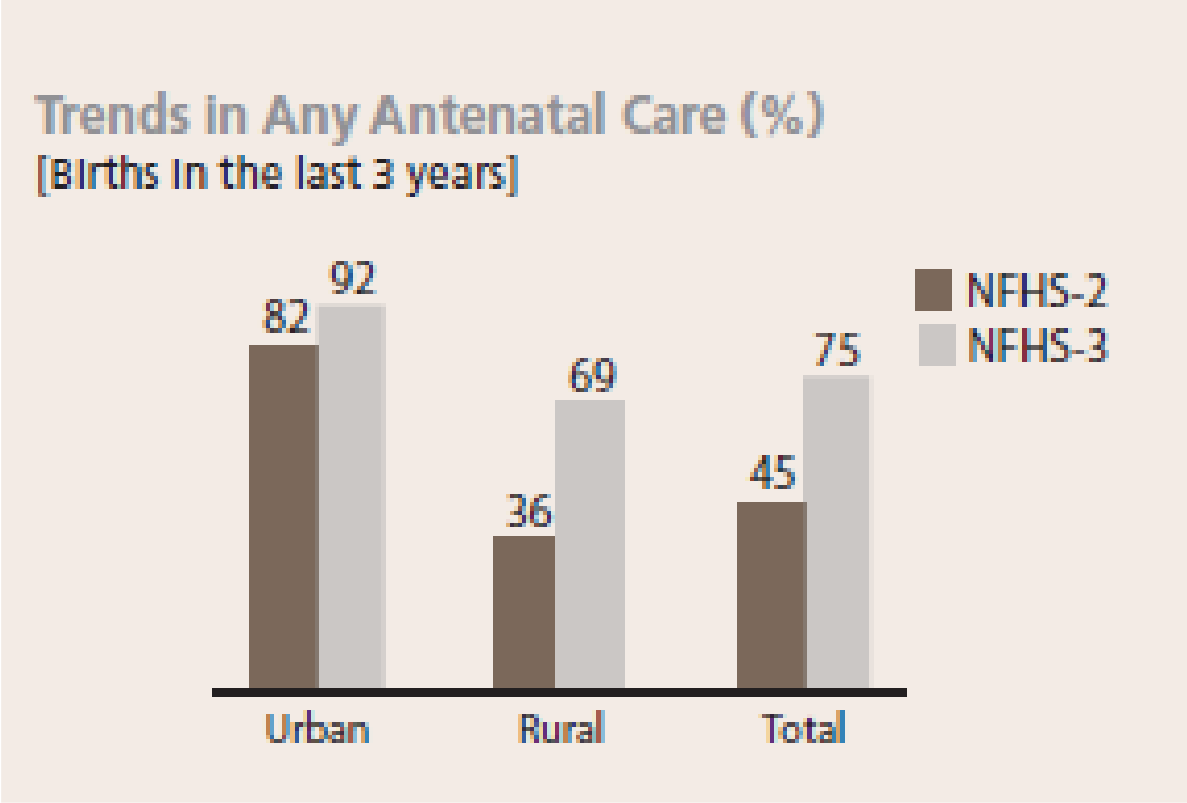


FIGURE-5 ANTE-NATAL CARE **Source NFHS-3 2005-06**

[6] NFHS-3 data, 2005-06

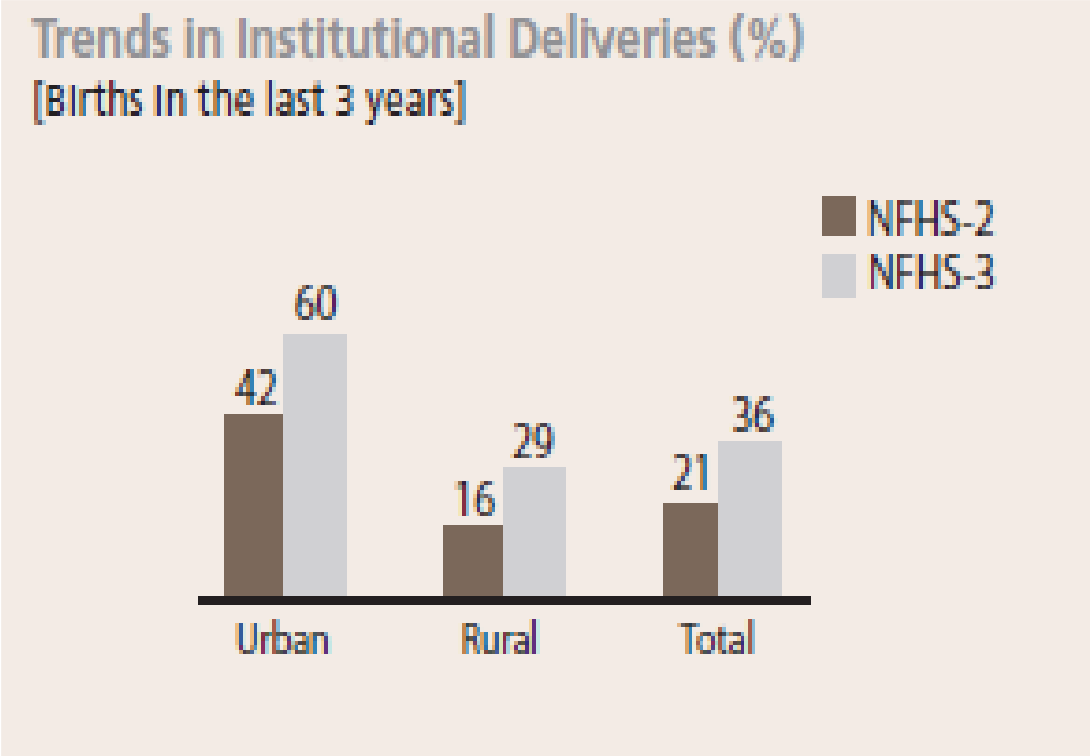


FIGURE-6 INSTITUTIONAL DELIVERIES **Source NFHS-3 2005-06**

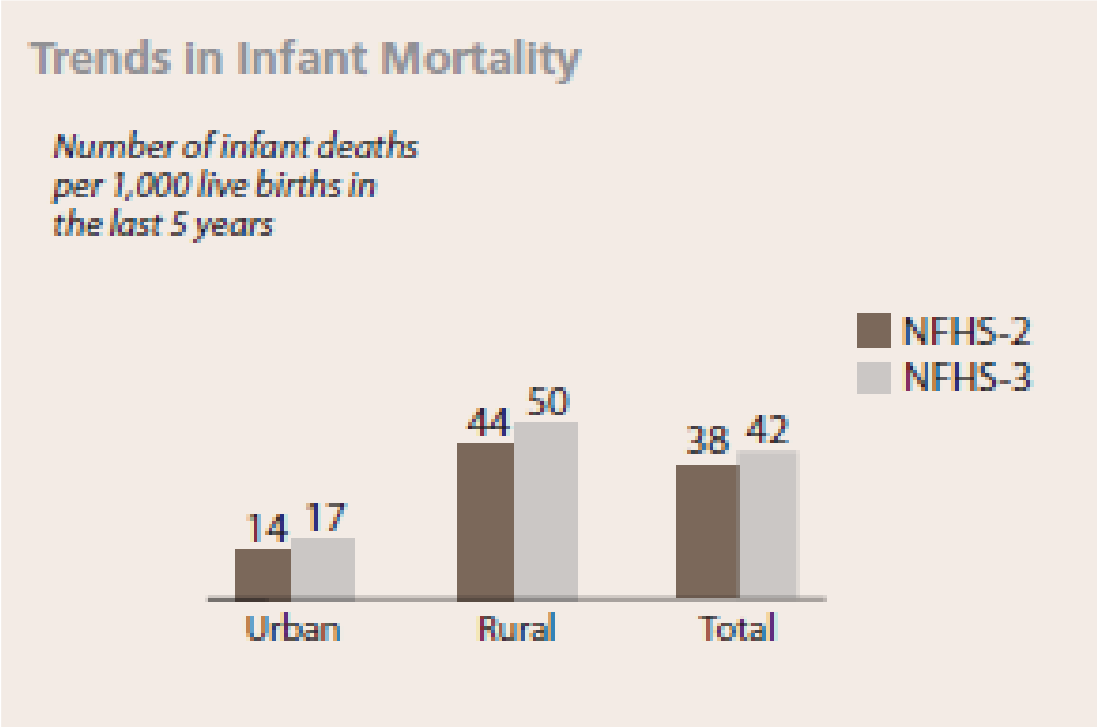


FIGURE-7 INFANT MORTALITY **Source NFHS-3 2005-06**

AIM OF THE STUDY-

The study aims to understanding the various Maternal and Child Health initiatives in the district by assessing the facilities and services delivered at the District Hospital **(Doon Mahila Hospital)**, Dehradun.

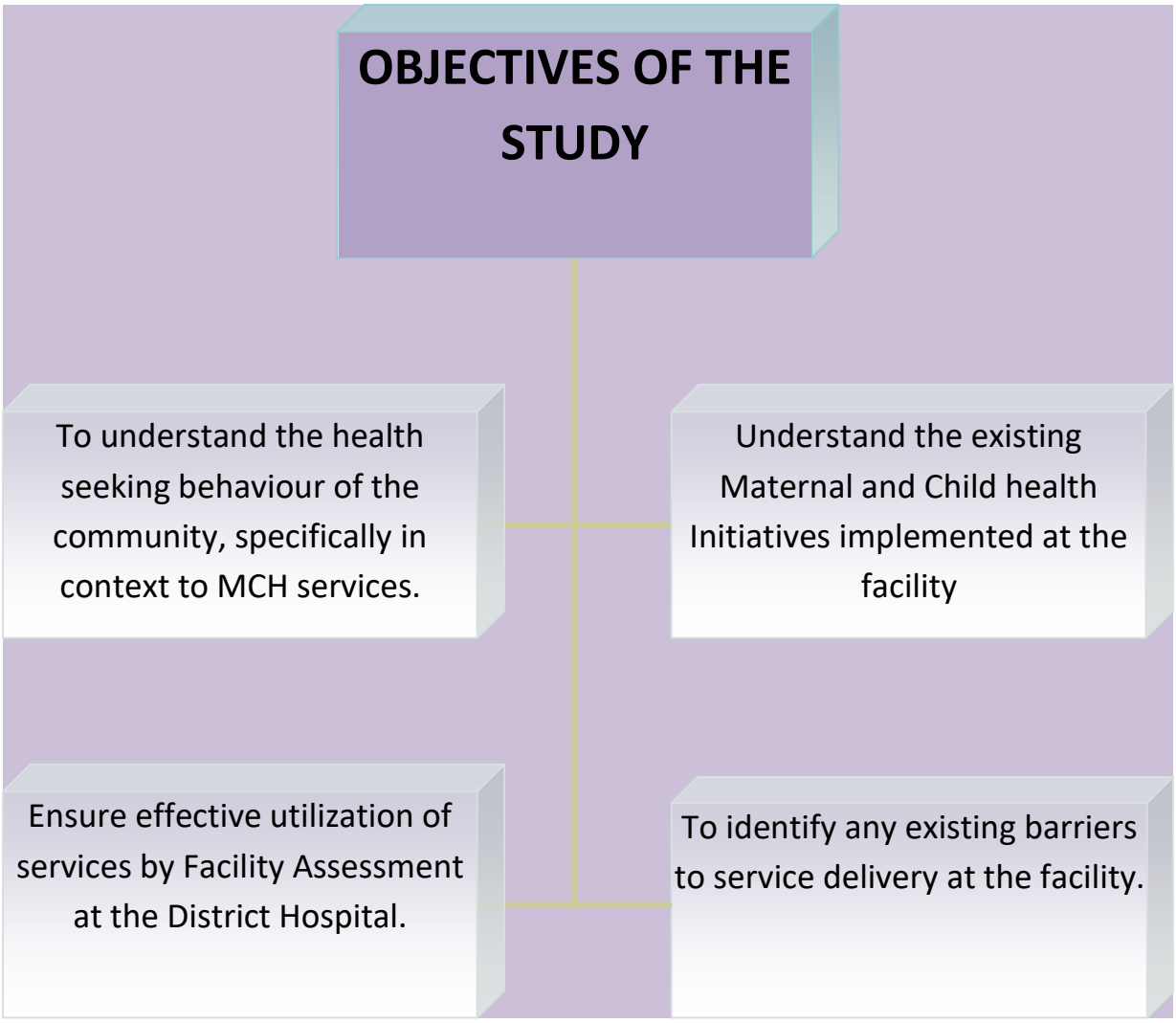


FIGURE- 8 STUDY OBJECTIVES

METHODOLOGY

STUDY AREA

Doon Mahila Hospital, (District Hospital), Dehradun was identified as the health facility under study.

DATA COLLECTION PROCESS

Step 1

Identify the target population:

Pregnant women, Post Natal women, New borns, Infants. Other Stakeholders: CMO, DPM, Gynaecologists, Paediatrician, Nurses, ASHA workers.

Step 2

Make a list of the prospective sample from the target population, identified for data gathering.

Step 3

Data collection from within the facility, with the various data collection tools, developed for the study.

DATA MANAGEMENT AND ANALYSIS:

Textual data was explored to generate categories and explanations, based on which respective codes were developed. Indepth interview analysed through report summaries.

FIGURE-9 STUDY METHODOLOGY





SELECTION OF STUDY AREA:

The study was carried out between Feb' 10 – April' 10, in the **"Doon Mahila Hospital"** of the Dehradun district in Uttarakhand. It runs exclusively as a separate facility to cater to the Maternal and Child Health needs within the district as well as the state. The city of Dehradun is the provisional capital of the Uttarakhand State, and the Head quarters for the Dehradun district. The facility was therefore identified as it is the major Government facility within the state to address to the MCH needs.

Most of the data was gathered from within the facility, from the In-patients and the Out-patients Departments. The selection of the sample was on the basis of availibilty of the patients in the respective wards. The clients for Exit-Interviews were selected from: a) The Ante-Natal ward, b) The Post-Natal ward, c) The Out-Patients Department, d) The Immunization Clinic.

The selected samples in the various groups were comparable as the purpose of admission and the services availed by the respective group at the facility were the same.

In depth interviews were carried out with the other stakeholders to understand the services delivered at the facility and their level of understanding of the Maternal and Child health.

The various stakeholders included the Chief Medical Officer of the district, the District Program Manager, Gynaecologist, Paediatrician, Nursing staff of the Labor Room and New born Care Unit and ASHA workers.

DATA COLLECTION:

The study used qualitative methods for data collection. The tools were designed so as to understand the maternal and child care practices from mothers, the level of training and delivery of care at the facility, perception of the family in terms of the MCH services. An overall Facility Assessment was carried out to appriciate the various services delivered in the Hospital. The Ante-natal and Post-natal clients were interviewed to comprehend their level of knowledge in terms of New born care. In depth interviews were carried with the diverse levels of Health care providers at the facility, across the hierarchy.

INFORMATION GATHERING:

a) Respondents and Sample Size:

For gathering the information to fulfill the study objectives, the sample comprised of the following groups:

- Pregnant mothers visiting the facility for Ante Natal care:

Exit interviews were carried out with 10 ANCs, to assess the various antenatal, intrapartum and postnatal practices they followed. Also to help appraise the services delivered at the facility.

- Post Natal Clients admitted after delivery:

  Exit interviews were carried out with 10 PNCs, admitted post delivery, to assess the various antenatal, intrapartum and postnatal practices they followed. This would also give an insight of their first hand experience witnessed at the facility.

- Health care Providers:

  Included the Chief Medical Officer of the district, the District Program Manager Gynaecologist, Paediatrician, Nursing staff of the Labor Room and New born Care Unit, Anganwadi workers and ASHA workers.

b) Areas of Enquiry:

In order to understand the maternal and newborn care practices in the district, information was gathered from all the categories of repondents described above. The areas of enquiry among each category were:

- Pregnant Women:

  The pregnant women visiting the facilty for routine Ante Natal Care were selected and 10 such clients were interviewed. After the general questions related to identification and education status, other questions envisaging details associated with the scheduled practices at the facility were asked. These included the number of Ante Natal checkups, immunization status of the mother, knowledge regarding care of the newborn, breastfeeding practices etc. Questions related to the satisfaction of clients in terms of quality of services delivered, the attitude of the healthcare providers, any suggestions for surther improvements etc were also addressed.

- Post Natal Women:

  The women who had delvered at the facility and were admitted post-birth were selected and 10 such clients were interviewed. General questions included the identification details, education status and the total number of pregnancies. The clients were asked whether they received the ante-natal care and checkups. The details regarding who conducted the delivery were asked so as to know the level of skill amongst the health care providers and also to make an estimate of the services offered. Other questions addressed to the newborn health and care, like did the child cry immediately after birth, what was the first feed given to the child, cord care, training of mother in breastfeeding practices etc.

- In Depth interviews with the Health care providers:

  The health care providers across the hierarchy from the level of the District Chief Medical Officer to the Nursing staff dealing with the Maternal and Child Health care practices, ASHA workers at the field level, were interviewed to have an understanding of their perspectives in the MCH services. Top managerial and administrative levels provided inputs regarding the various governmental efforts to strengthen these services. The impacts of the several National Health Programs, with special mention of the achievements post the NRHM.

  Those involved in direct care of the mother and child, i.e. the gynaecologists, paediatricians, staff nurses at the Labor room and the New born care unit, Anganwadi orkers and ASHA workers were interviewed for their role in providing the care. They provided inputs related to their practices, knowledge, skill and understanding of the MCH services.



TABLE- 2 STAKEHOLDERS AND STUDY TOOLS

TOOLS→ FACILITY/ INTERVIEWEE↓	**FACILITY ASSESSMENT**	**EXIT INTERVIEWS**	**INDEPTH INTERVIEWS**	**TOTAL**
DH	1	-	-	**1**
POST-NATAL CLIENTS	-	10	-	**10**
ANTE-NATAL CLIENTS	-	10	-	**10**
CMO	-	-	1	1
MO (OBG)	-	-	1	**1**
MO (PAED)	-	-	1	**1**
NURSING STAFF	-	-	2	**2**
ASHA Workers	-	-	2	**2**
TOTAL	**1**	**20**	**7**	**28**



RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

The results and discussion is divided into the following 3 sections:

I. **FACILITY ASSESSMENT**

II. **EXIT INTERVIEWS WITH ANTE NATAL AND POST NATAL CLIENTS**

III. **INDEPTH INTERVIEWS WITH THE VARIOUS HEALTH CARE PROVIDERS**

I. FACILITY ASSESSMENT

The Doon Mahila hospital caters a vast population which is inclusive of residents of dehradun district as well as those of the surrounding area, as Saharanpur in Uttar Pradesh, Paonta in Himachal Pradesh etc. The average admissions per month were around 1600, with an average monthly OPD of 9000. There are 111 beds in the facility which exclusively cater to the Maternal and Child health needs of the district. The number of deliveries conducted last month were 691, which gives a rough estimate of the work load at the facility.

The hospital is equipped with Emergency Obstetric Care, and any services not within the purview of the hospital are referred to higher centres like Medical College, Jolly Grant, Dehradun. There is provision of the hospital ambulance and the 108 service, which accesses to mobile ambulances on call. Essential newborn care includes the components of Resuscitation, Hypothermia, Infection control and Breastfeeding. All the services are available on 24x7 basis.

TABLE-3 MEDICAL STAFF STATUS

CATEGORY	SANCTIONED	IN POSITION
Paediatrician	2	2
Obstetric and Gynaecologist	4	4
Medical Officers	6	4
Anaesthetist	2	2
Radiologist	1	1
Pathologist	1	1
Others (SMO, CMS,)	8	6

TABLE-4 PARAMEDICAL STAFF STATUS

CATEGORY	SANCTIONED	IN POSITION
Assistant Matron	1	1
Staff Nurse	38	31
ANM + Health Workers	3	3
Ward Aayas	18	18
Pharmacist	6	8
Laboratory Technicians	2	2
Class IV	31	23

TABLE-5 RECORD KEEPING REGISTERS AT THE FACILITY

S.No	TYPE OF REGISTER	AVAILABLE (Y/N)	UPDATED (Y/N)
1.	OPD REGISTER	Y	Y
2.	ADMISSION REGISTER	Y	Y
3.	MATERNITY REGISTER	Y	Y
4.	INDIVIDUAL CLIENT REGISTER	N	-
5.	NEWBORN REGISTER	N	-
6.	LABOUR ROOM REGISTER	Y	Y
7.	OPERATION REGISTER	Y	Y
8.	DEATH REGISTER	Y	Y
9.	STOCK REGISTER	Y	Y
10.	OTHERS (Specify)	-	-



TABLE-6 INFRASTRUCTURE AT THE FACILITY

S.No	INFRASTRUCTURE	Y/N
CLIENT AREA		
1.	BUILDING (MAINTAINENCE, ELECTRICAL FITTINGS, LEAK PROOF, FUNCTIONAL)	Y
2.	WAITING AREA	Y
3.	EXAMINATION AREA	Y
4.	WARDS	Y
5.	OPERATION THEATRE	Y
6.	LABOUR ROOM	Y
7.	NEONATAL RESUSCITATION ROOM	Y
8.	TOILETS	Y
9.	OTHERS (Specify)	-
NON-CLIENT AREA		
1.	WASTE DISPOSABLE SITES	Y
2.	STORES	Y
3.	PHARMACY	Y
4.	WATER SUPPLY TYPE: (PIPE LINE/ JET PUMP)	Y PIPE LINE

TABLE-7 DRUGS/VACCINES/ LABORATORY SERVICES

S.No	DRUGS	Y/N
1.	**ANTIBIOTICS**	
	a) Amoxicillin	Y
	b) Ampicillin	Y
	c) Benzyl penicillin	Y
	d) Ceftriaxone	Y
	e) Gentamicin	Y
	f) Amikacin	Y
	g) Penicillin G	N
2.	**STEROIDS**	Y
3.	**EMERGENCY DRUGS**	
	a) Adrenaline	Y
	b) Aminophylline/ deriphylline	Y
	c) Calcium gluconate	Y
	d) Dextrose (25%)	Y
	e) Saline ampules 20-25 ml	Y
	f) Distilled water	Y
	g) Inj. Adrenaline	Y
	h) Inj. Naloxone	Y
	i) Soda bicarb ampules	Y
4.	**IV FLUIDS**	
	a) Glucose 5 %	Y

	b) Normal saline/ Ringer's lactate	Y
5.	**ANTICONVULSANT**	
	a) Phenobarb	N
6.	**VACCINES**	
	a) TT	Y
	b) OPV	Y
	c) BCG	Y
	d) DPT	Y
	e) MEASLES	Y
	f) VIT A	Y
	g) DT	Y
	h) OTHERS (Specify)	-
7.	**OTHERS**	
	a) VIT K INJ	Y
	b) OTHERS (Specify)	-

S No	**TESTS/SERVICES**	**Y/N**
1.	Blood sugar (dextrose sticks)	Y
2.	Serum Bilirubin	Y
3.	Haemogram	Y
4.	PCV	Y
5.	Blood group	Y
6.	Blood Storage Capacity	Y

TABLE-8 NEWBORN CARE UNIT

S.No	EQUIPMENT/FACILITY	AVAILABLE (Y/N)	FUNCTIONAL (Y/N)
1.	Newborn Corner	Y	Y
2.	Hand-washing facility	Y	Y
3.	Clean towels	Y	Y
4.	Clean cord tie	Y	Y
5.	Sterile cord cutter	N (Scissors)	-
6.	Infant weighing scale	Y	Y
7.	Wall clock	Y	Y
8.	Dedicated surface for the baby	Y	Y
9.	Overhead light source	Y	Y
10.	Overhead radiant heater	Y	Y
11.	Heater/blower	Y	Y
12.	Self inflating bag with reservoir	Y	Y
13.	Face masks (2 sizes, 0-1)	Y	Y
14.	Suction Apparatus	Y	Y
15.	Suction catheters	Y	Y
16.	Endotracheal tubes	Y	Y
17.	Oxygen Supply	Y	Y
18.	Cups & spoons for feeding	N	-
19.	Nasogastric/Orogastric tubes	Y	Y
20.	Other methods of feeding (Specify)	-	-

21.	Neonatal/infant I.V. sets	Y	Y
22.	Paediatric infusion set	Y	Y
23.	Infusion pumps	Y	Y
24.	Syringe drivers	Y	Y
25.	Weighing scales	Y	Y
26.	Thermometers	Y	Y
27.	Blood pressure instrument	Y	Y
28.	Pulse oxymeter	Y	Y
29.	Phototherapy	Y	Y
30.	Incubator / hot cot	Y	Y
31.	Others (Specify)	-	-

The review of the facility assessment depicts the well-equipped status of the district hospital, both in terms of infrastructure and staffing. Contrary to the general belief that Government Hospitals lack the adequate work force and the necessary support staff, this facility exhibited well-positioned, skilled and qualified staff at all cadres. This could be a leading cause to the high patient traffic the hospital witnessess. The patient satisfaction levels can also be contributed to effective and efficient functioning of the facility.

II. EXIT INTERVIEWS

1. ANTE-NATAL CLIENTS INTERVIEW:

The ante natal clients selected for the study at the Doon Mahila Hospital were interviewed with an aim to understand the current practices and the status of service delivery at the hospital site. Also to have an understanding of the availability of the services delivered and accessed by the various clients. A total of 10 ante-natal clients who had come for routine checkups were interviewed.

The profile of the interviewed ANCs was as follows:

TABLE- 9 PROFILE OF ANCs IN THE STUDY

FACTORS		N=10
MATERNAL AGE (IN YEARS)	Below 18	0
	18-23	4
	24-29	4
	30 & Above	2
MATERNAL EDUCATIONAL STATUS	Illiterate	3
	Upto Class 5	2
	Class 5 To Class 12	3
	>Class 12	2
DISTANCE OF TRAVEL TO THE FACILITY	< 5 kms	3
	5-10 kms	5
	>10 kms	2

The mean age of the Ante natal clients was 23 yrs. Seven out of ten clients were educated. Eight out of the 10 clients stayed at a distance of 10 kms from the health facility, while 2 had to travel longer distance to avail the services. None of the clients interviewed was informed about the expected date of delivery. However, they knew their Date of Last Menstrual Period, (DLMP), and thus had an idea of when the child was expected. 7 out of the 10 clients were primi-gravida, 2 had a child each before this one, and 1 had a still birth previously.

TABLE- 10 ANC CHECK UPS

FACTORS		N=10
NUMBER OF ANTE-NATAL CHECKUPS	First	0
	1-3	4
	3-6	4
	More than 6	2
	Does Not Know	0
PREFERENCE OF FACILITY FOR CHECKUP	Govt. Doon Mahila Hospital	7
	Private Facility	3
CHOICE OF FACILITY FOR DELIVERY	Govt. Doon Mahila Hospital	6
	Private Facility	4

Almost all the ante natal clients were regularly visiting the health facility for their checkups. They were well motivated and the role of ASHA could also be distinctly observed. 7 of the clients visited the Government Doon Mahila Hospital for their checkups while 3 had visited other private facilities. 6 planned to deliver their child at the present facility.

TABLE- 11 SERVICES AVAILED

FACTORS		N=10
SERVICES PROVIDED AT THE FACILITY	Yes	7
	No	3
VACCINATION STATUS	TETANUS TOXOID	9
	IRON/ FOLIC ACID	9
	CALCIUM	8

7 clients were satisfied with the facilities available at the hospital, while 3 felt the need to visit some other private facility. 9 of the clients had been vaccinated with Tetanus Toxoid and were taking Iron Folic Acid tablets, 8 were having Calcium suppliments.

TABLE- 11 ANC TRAINING

FACTORS		N=10
TRAINED ABOUT BREASTFEEDING	Yes	2
	No	8
TRAINED ABOUT HOW TO KEEP THE BABY WARM	Yes	0
	No	10

The clients were not trained about the breastfeeding practices and as how to keep the baby warm. Only 2 clients knew how to breastfeed the newborn, from their previous experience. Regarding the availability of drugs and vaccines at the facility, almost all the clients were satisfied. They did not face any major problems with their current pregnancy, however some complained of pain in abdomen, nausea, vomiting etc. The satisfaction level of the clients was high, almost all appreciated the clinical and the nursing staff at the facility. Only 2 out of the 10 clients complained for seeking privacy during medical examination and politeness by the staff.

2. POST-NATAL CLIENTS INTERVIEW:

The post natal clients selected for the study at the Doon Mahila Hospital were interviewed with an aim to understand the current practices of service delivery, who conducted the delivery at the facility and care of the mother post birth at the hospital site. Also to have an understanding of the care of the newborn and practices following the child-birth.

TABLE- 12 PNC PROFILE

PARENT PROFILE		**N=10**
MATERNAL AGE (IN YEARS)	Below 18	0
	18-23	4
	24-29	5
	30 & Above	1
	Does Not Know	0
MATERNAL EDUCATIONAL STATUS	Illiterate	2
	Upto Class 5	3
	Class 5 To Class 12	1
	>Class 12	4
	Does Not Know	0
DISTANCE OF TRAVEL TO THE FACILITY	< 5 kms	2
	5-10 kms	7
	>10 kms	1

The mean age of the Post natal clients was 25. 8 out of 10 clients were educated. 9 out of the 10 clients stayed at a distance of 10 kms from the health facility, while 1 had to travel longer distance to avail the services. 6 out of the 10 clients had delivered their first child, 3 had their second child, and 1 had her second pregnancy and the first child. Her earlier pregnancy resulted in a still birth.

TABLE- 13 CHECK UPS

FACTORS		N=10
NUMBER OF ANTE-NATAL CHECKUPS	1-3	5
	3-6	4
	More than 6	1
	Does Not Know	0
FACILITY FOR CHECKUP	Govt. Doon Mahila Hospital	8
	Private Facility	2
WHO CONDUCTED DELIVERY	Doctor	10
	Staff Nurse/ ANM/ Others	0

All the 10 post natal clients had visited some health care facility for their ante-natal checkups, 8 of which had visited the Doon Mahila Hospital. 2 seeked some private advice but later chose to deliver at this facility. All the deliveries were conducted by the Gynaecologist positioned at the facility. There was not a single case of delivery handled by the Nursing or other paramedic staff alone.

TABLE- 14 CARE OF CHILD

QUESTION		N=10
DID THE CHILD CRY IMMEDIATELY AFTER BIRTH	Y	8
	N	2
IF N, WHAT WAS DONE?	Airway Cleared/ Baby Resuscitated	1
	Baby Stimulated, (Slapped at back, Tapped and flickered)	1

8 out of the 10 neonates delivered cried immediately after birth. However 2 neonates did not cry and were therefore further intervened. 1 was cleared for airway secretions and resuscitated, since it showed difficulty in breathing and 1 was stimulated by slapping its back to make it cry.

TABLE- 15 BREASTFEEDING PRACTICES

FACTORS		N=10
FIRST FEED TO THE BABY	Colostrum	6
	Ghutti/ Honey/ Gur etc	4
WHEN WAS THE FIRST BREASTFEED GIVEN	Immediately after birth	5
	1-4 hrs after birth	3
	4-12 hrs after birth	2
	>12 hrs after birth	0
TRAINED ABOUT BREASTFEEDING BY THE STAFF	Y	8
	N	2

TABLE 16- CARE OF NEONATE

BABY BATHED SOON AFTER BIRTH	Y	0
	N	10
ANY MEDICINE/OINTMENT/ OTHERS APPLIED TO CORD	Y	0
	N	10
VACCINATION OF THE BABY	BCG	8
	OPV	8
	HEPATITIS- B	0

6 clients had fed their newborn with colostrum, while 4 had fed them with some ghutti in the form of honey/gur etc. All the 10 clients had initiated breastfeeding, with 5 of them starting

immediately after birth. 8 clients reported to have been trained by the hospital staff regarding breastfeeding practices and how to feed their newborn. Since the newborn was still within the facility, it was not bathed yet. The mothers were adviced by the hospital staff to keep their child wrapped in warm clothes/ blankets to prevent hypothermia.

The cord was cleanly cut with the help of scissors and tied with a cord clamp. No ointment/ betadine etc was applied at the cord, and the mothers were also strictly adviced not to apply anything on the cord. 8 neonates were vaccinated with BCG and OPV. Vaccination against Hepatitis B was not available at the facility.

TABLE- 17 AVAILABILITY OF SERVICES

FACTORS		N=10
ALL DRUGS AVAILABLE AT THE FACILITY	Y	8
	N	2
ANY SPECIFIC PROBLEM/ COMPLAINTS	Y	7
	N	3

The clients were satisfied with the services delivered at the facility. Only 3 complained of some minor problems like not being attended to, and rudeness by the nursing staff. However, all of them were satisfied with the availability of the Doctors and the Nursing Staff round the clock at the facility.

III INDEPTH INTERVIEWS

INDEPTH INTERVIEW WITH THE CHIEF MEDICAL OFFICER:

The Chief Medical Officer of the district is mainly involved in providing the administrative support to the existing health fraternity and also to execute the programs formulated at the centre to the district level. He is the main person responsible to implement the various health policies at the district and also to account for the correct and judicious usage of the same. He exercises the power to control, observe, monitor and supervise the functioning of the various health departments within the district.

While discussing the various aspects of the Maternal and Child Health initiative undertaken within the district, the CMO elaborated the different MCH programs that are being put into operation at the district. He credited the Janani Suraksha Yojna (JSY Scheme) for the marked difference it produced in the number of Institutional Deliveries and Maternal Mortality. The number of Institutional Deliveries had shown a discernable increase post implementation of the JSY scheme. There has also been a decrease in the Maternal Mortality Rates and Infant mortality Rates. People have become more aware of the health facilities and now prefer to choose them. Moreover, getting a monetory benefit has also led to the sudden rise. He discussed the role of the several health professionals involved in the process, and credited each one in the line for their distinct and divergent responsibilities. He also mentioned the various IMNCI initiatives in the district and how they had helped in improving the neonatal and Child health situations.

The Newborn and Child health programs are functioning as per the norms of the National Rural Health Mission (NRHM). The Immunization status has shown an increase, with more and more people visiting the Immunization camps and clinics. There has been a constant increase in the health status of the population at large, and the extent of awareness is to be credited for the same. Various NGOs are also functional and working towards the benefit of the community. There has been constant support from both the centre and the state to help move such initiatives.

On commenting upon the facilities and services available in the district, he said that the District Hospital is well equipped with the latest tecnologies and equipments. They were using the available funds to upgrade and maintain the available equipments. A Neonatal Intensive Care Unit has been set up at the Doon Mahila Hospital, which is equipped to handle the essential emergency newborn care. Well qualified staff is available to handle the neonates and the infants.

The Maternal health issues were also being well managed at the District hospital. There is availability of competent medical and paramedical staff to cater for the existing needs. He also mentioned that on an average, the paying capacity of the people in the district was good, and many chose to prefer private facilities for the required services. However, the population catered by the District Hospital was inclusive of all Socio-Economic cadres. Also the area covered by the

facility was not limited to the city of Dehradun, but also included the adjoining places from the states of Uttar Pradesh and Himachal Pradesh.

Academically, the Chief Medical Officer has done his Post Graduation in Anaesthesia, and therefore had to review the entire NRHM document before taking the current position. He also stated that Uttarakhand being a hilly state, some stations in the district are relatively hard, and therefore, there is resource crunch at these settings. Dehradun being the state capital is well favored to be picked up as the station of choice. Therefore, there are almost no vacant positions at this facility. However, the CHCs which lie in the outer or at a height, find it difficult to staff the required positions.

INDEPTH INTERVIEW WITH THE DISTRICT PROGRAM MANAGER:

The District Program Manager is the key person appointed for the management of the various health programs initiated under the NRHM. Known to have brought about a renewed emphasis on strengthening the public health systems, NRHM is working on to achieve the goal of health for all. Across the country the Janani Suraksha Yojna has seen unprecedented number of women accessing institutions in the public sector for delivery services. It has played a large part in empowering and enabling pregnant women to access facilities for safe delivery.

The DPM expressed his interest and keenness in the National Programs and being the prime person to be involved in its implementation within the district, he was in the best position to answer to the exact state of affair. He threw light on many managerial issues and challenges faced by the district in carrying forth the stated plans by the centre.

His main concern was the status of the ASHA workers in the district. According to the JSY scheme, the ASHA are given certain incentives based upon their performances. Since her entire work is credited based upon incentives, there has been a sense of demotivation and unwillingness in performance. The ASHA workers, of lately were seeking some minimal fixed monthly based honorarium along with these incentives. This would help them work with spur and motivation which would result in high performances in the health indices.

He also commented upon the selection procedure of the ASHA workers. According to NRHM, the ASHA was to be a local woman from the community not working under any capacity, and therefore, to be able to deliver her maximum to the services as desired. However, after the first round of selection process, at a particular block in the district, 38 out of the 45 selected ASHA were working as Anganwadi workers. There is no ASHA facilitator in the district to directly monitor and supervise the working of ASHAs. In 2009-10, an NGO called OPEN was selected to function as the District ASHA resource centre. It is catering to the training needs of ASHA.

The DPM also stated how various responsibilities and tasks were automatically being added to the capacity of DPM. There are many positions under the NRHM, which have not yet been

allocated in the district, for instance, there is provision of a Nodal Officer, which is not present at the Dehradun district. So forcidly, these services are expected to be operated by the DPM office. Also, the DPM office is responsible to provide for all the reports related to NRHM, to ensure the smooth operation of services. He also made a brief mention, of how his post being a contractual one, comes in way of performance of key activities. There is limited cooperation by the CMO office and most in-service positions look at the DPM office as being of less relevance, despite their key responsibility.

On mentioning about the MCH services at the district, and primarily at the study facility, he stated the smooth and efficient performance delivered. He too, like the CMO, complimented the Doon Mahila Hospital for its well qualified staff and an equipped facility. Most of the local population had increasingly started to avail Government facilities. There was more trust and compliance among the patients and the staff, post NRHM.

INDEPTH INTERVIEW WITH THE MEDICAL OFFICERS:

Two Medical Officers were interviewed for the study purpose, working in the capacity of Gynecologist and Paediatrician.

Gynaecologist:

The MO (OBG) was posted for a shift of 8 hours at the facility, with timely rotations. These 8 hours of duty were exclusively spent to cater the needs of the Labour room. The MO was involved in conducting smooth and safe deliveries of the various clients that seek the services from the facility.

The vigilance and acumen of the MO was to be complimented. She was very efficiently managing the heavy inflow of the delivery cases, and attending each one with equal care and perseverance. She expressed concern over the emergency cases that reached the hospital at the n^{th} hour and thus complicating the chances of a safe delivery. However, her team was well versed and skilled enough to tackle such difficult situations and only a minimal number of cases needed to be referred to higher centres.

There was provision of Caesarean delivery and the Operation Theatre was well equipped for the same. The MO also expertised in the optimal capacity to cater for such needs. The facility also provided for sterilization procedures and insertion of IUDs. The Blood Bank facilities were present in case of Operation. The number of deliveries per month were as high as 600.

Daily OPDs were conducted at the facility, from 8am to 2 pm. There are 4 Gynaecologists and 4 Medical Officers who are rotationally posted at the OPDs and the IPDs. The OPDs attend to varied cases ranging from ante-natal care to RTI/STI cases, Immunization cases, etc.

Paediatrician:

Addressing to the urgent need to attend to the Neonates and Infants, the Paediatrician at the facility emphasised on the various services available at the facility. He mentioned about the newly set up Neonatal care Unit, which was equipped with Phototherapy, Radiant Warmers, Resuscitation devices and other essential machinaries. The Neonatal Care Unit was closely attached to the labour room, to meet the urgent need of sending a newborn for intensive care.

The Child health needs were catered by the adjacent District Hospital and this facility exclusive looked after the Maternal and Infant health services. There is provision of admissions of the serious and difficult cases. There are 2 Paediatricians in position at the facility

Every neoborn is provided with appropriate care and support from the moment of birth. This includes initiation of breastfeeding, keeping the baby warm, identifying illness or risk, including low birth weight, resuscitation when indicated, and access to referral care at the institution. Proper hygiene and cord care is initiated. Zero day immunization of the newborn with OPV, BCG and Hepatitis B is delivered. There is also provision of management of sepsis, which accounts to be a leading cause of death to the neonates.

INDEPTH INTERVIEW WITH THE NURSING STAFF:

The nursing staff was well trained and skilled to provide for maximaum support to the Medical doctors. A total of 31 Staff nurses (positioned at various levels), are working at the facility. At a time there are 2-3 Nurses available at the labour room, to attend to the patient and assist the doctors as they handle any case.

The Nursing staff is well versed with the delivery maneovers and expertise in handling the cases. In case the doctor is not available at the labour room, the nurses are competent enough to undertake the delivery on their own.

She keeps a record of the cases, with their essential details and the result of labour. She also assists in conducting minimal physical examinations like body weight, blood pressure, injections if required. There are several record keepings at the labour room, which include Stock register, Death register, Delivery register etc, which are all maintained and updated by the sister-in-charge.

She is also a key person addressing to the needs of the clients post-delivery. The admitted patients are in constant touch with the nurses, while the doctor is available only during their

routine round. Thus, she directly relates to the condition of the clients after they have delivered, and is also the best source to provide constant updates.

INDEPTH INTERVIEW WITH THE ASHA:

The ASHA or the Accredited Social Health Activist plays a key role in implementing the various schemes launches under the umbrella of NRHM. She is the direct link between the clients and the provider and is responsible in building community's awareness of their health care entitlements. She also helps in facilitating the community's access to the essential health services, and in delivering preventive, promotive and first point contact curative care.

On intervening with the role of ASHA at the field level, she briefed that they are trained to provide a limited package of first contact care for mothers and newborns, in addition to preventive and promotive services. This enables a better realization of the continuum of care. Provision of essential newborn care for the normal baby, whether delivered in an institution or home is well within the purview of a trained and skilled ASHA.

Their main concern was focussed on the incentives and honorarium they received for their services. They wanted a fixed-packaged salary per month along with the incentives, which would motivate their further performances. Also, they expressed how they faced family resistance and difficulties in providing the required care, as their families looked low upon their role, more so because of the compensations they received.

CONCLUSION

Maternal health is important to communities, families and the nation due to its profound effects on the health of women, immediate survival of the newborn and long-term well-being of the children, particularly girls and the well-being of families. Maternal death and illness have cost implications for family and the community because of high direct and indirect costs, the adverse impact on productivity and the tremendous human tragedy that every maternal or child death represents[7].

Every year, in India, 28 million pregnancies take place with 67000 maternal deaths[8], 1 million women left with chronic ill health, and 1 million neonatal deaths[9].

The National Rural Health Mission has enabled several innovations to promote people's access to services. The Janani Surakhsa Yojna, for instance, has enabled unprecedented increases in Institutional deliveries across the country. It has played a large part in empowering and enabling pregnant women to access facilities for safe delivery. The need for care does not cease after childbirth and the emphasis in planning should be on a continuum of care approach that enables care in pregnancy, delivery, for the newborn and post partum care through a well-planned and effectively executed strategy.

The Doon Mahila Hospital is a district level hospital run by the Government of Uttarakhand, addressing specifically to the needs of Maternal and Child health issues. It is a 111 bedded facility, well euipped with pertinent amenities and work force to cater to the need. The facility has implimented the various National Health Programs under the umbrella of NRHM, with the schemes finding good acceptance by both the staff and the clients.

The staff was well versed with their related skills and duty, and thus could attend to the high traffic of patients with legitimate calibre. The patient satisfaction levels at the facility were considerably high, which reflected upon the performance of the hopital and its staff. As compared to other Government facilities, this hospital was relatively clean and well maintained. The cleanliness was done on routine basis and the staff employed for this purpose followed the schedule well. There was proper control and supervision by the Chief Medical Superintendent and higher authorities to ensure smooth and stable operation.

At the district level, the higher administrative levels were seen to be well known and observant to the various health facilities. Dehradun, being the state capital, enjoyed the previlege of being

[7] Operational guidelines on Maternal and Newborn Health, National Rural Health Mission

[8] Sample Registration Survey, 2004-06, Government of India

[9] State of the World's Children, UNICEF, 2009

the central and eminent health facility option by the population of the state at large. This was one of the main factors for the effective functioning of the facility and higher client satisfaction rates.

The link between the various levels of health care providers was also well established with the CMO also being aware of the problems being faced at the level of ASHA workers etc. There was relative transparency among the various operations at the district, the DPM also being highly resourceful and committed. The DPM specifically, had intense knowledge of his related field, could identify well with the community and ensured smooth flow of implimented Health reforms. He formed the direct link between the community and the CMO office, being able to put forth the prevailing issues at the grass root level.

There were also certain issues of concern related to the services delivered to the Ante-natal and Post-natal clients, with a few reflecting how the Government facility did not provide them with adequate privacy and comfort. Though at large, the clients seemed to be satisfied, a few objected on the attitude and rudeness displayed by the attending staff, particularly at the nursing level. There was a low level of motivation among the ASHA workers, who are being credited for the succcess of the JSY scheme, in terms of honorarium benefits and compensations.

Overall, the facility proved to be working at ease and could be adapted as a workable model district hospiltal for the other district of the state to identify, learn and relate with.

LIMITATIONS OF THE STUDY

1. The small sample size for interviewing the antenatal and the postnatal clients due to availability of time and access was one of the main limitations of the study.

2. The study focusses elaboratively on the Maternal and Newborn care issues, and limited observations could be made in terms of Child health issues.

3. Being the state capital, the study at the Dehradun district cannot relate to the actual scenario in the state of Uttarakhand, which has relatively tough stations, situated at heights, facing issues related to resource crunch.

4. At large, the population that accessed the services was from a low to medium socio-economic cadre, and so their observations would not depict the ground reality, and the situations faced by the Below Poverty line group.

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ANNEXURE

ANNEXURE-1

Assessment of Maternal and Child Health Services at District Hospital, Dehradun, Uttarakhand

Facility Assessment Schedule (District Hospital)

SECTION A

STATE/DISTRICT INFORMATION

Person contacted for information(with designation):

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……..

A.1 Name of the State:

……
……

A.2 Name of the District:

……
……...

A.3 Name of Facility:

……
……...

SECTION B

FACILITY RELATED INFORMATION

Person contacted for information(with designation):

……..

……
……..

B.1 Population covered by the facility:

…….

B.2 Number of Admissions/month:

……...

B.3 Number of Outpatients/month:

…….

B.4 Total Number of beds at the Facility:

……...

B.5 Number of beds alotted for Maternity Services:

…….....

B.6 Number of deliveries last month(Mar 10):……...

B.7 Does the facility provide Emergency Obstetric Care:

…….

B.8 If yes, Complete (C) or Partial (P)

…….

B.9 If No, where are the patients referred to:

……

Name of Site:

……

Type of Facility (Govt/Pvt):

……

How far from this facility:

……

B.10 Is transport for referral services available:

……

How:

……

Time taken (Avg):

……

Availability (24x7):

……

B.11 Does the site provide Essential Newborn Care:

……

B.12 If Yes, Type of care:

S.No	Type of Care	Yes/No
1.	Resucitaion	
2.	Hypothermia	
3.	Infection Control	
4.	Breastfeeding	

B.13 If No, where are the patients referred to:

……

Name of Site:

……

Type of Facility (Govt/Pvt):

……

How far from this facility:

……

B.14 Is transport for referral services available:

……

How:

……

Time taken (Avg):

……

Availability (24x7):

……

B.15 Availability of Emergency Newborn Care: (24hrs/Time Bound)

……

B.16 Availability of Essential Newborn Care: (24hrs/ Time Bound)

……

SECTION C

STAFF STATUS

Person contacted for information(with designation):

……..

……

……..

CATEGORY	SANCTIONED	IN POSITION
MEDICAL		
PAEDIATRICIAN		
OBS & GYNAE		
MEDICAL OFFICER		
OTHERS (Specify)		
PARAMEDICS		
SISTER/SISTER IN CHARGE		
STAFF NURSE		
ANM		
DAI		
OTHERS (Specify)		

Others (Specify)		

SECTION D

RECORDS/ DATA COLLECTION REGISTERS

Person contacted for information(with designation):

……..

…….

……..

S.No	TYPE OF REGISTER	AVAILABLE (Y/N)	UPDATED (Y/N)
1.	OPD REGISTER		
2.	ADMISSION REGISTER		
3.	MATERNITY REGISTER		
4.	INDIVIDUAL CLIENT REGISTER		
5.	NEWBORN REGISTER		
6.	LABOUR ROOM REGISTER		
7.	OPERATION REGISTER		
8.	DEATH REGISTER		
9.	STOCK REGISTER		
10.	OTHERS (Specify)		

SECTION E

NEWBORN CARE SERVICES

Person contacted for information(with designation):

……..

……

……..

S.No	SERVICES PROVIDED TO NEONATES	YES/NO
1.	TREATMENT FOR RESUSCITATION	
2.	TREATMENT FOR ASPHYXIA	
3.	MANAGED FOR HYPOTHERMIA	
4.	MANAGED FOR SEPTICIMIA	
5.	MANAGED FOR JAUNDICE	
6.	MANAGED FOR CONVULSIONS	
7.	MANAGED FOR PREMATURITY/LBW BABIES	
8.	OTHERS (Specify)	

SECTION F

INFRASTRUCTURE

Person contacted for information(with designation):

……..

…….

……..

S.No	INFRASTRUCTURE	YES/NO
CLIENT AREA		
1.	BUILDING (MAINTAINENCE, ELECTRICAL FITTINGS, LEAK PROOF, FUNCTIONAL)	
2.	WAITING AREA	
3.	EXAMINATION AREA	
4.	WARDS	
5.	OPERATION THEATRE	
6.	LABOUR ROOM	
7.	NEONATAL RESUSCITATION ROOM	
8.	TOILETS	
9.	OTHERS (Specify)	
NON-CLIENT AREA		
1.	WASTE DISPOSABLE SITES	
2.	STORES	

3.	PHARMACY	
4.	WATER SUPPLY TYPE: (PIPE LINE/ JET PUMP)	

SECTION G

DRUGS/VACCINES

Person contacted for information(with designation):

……..

…….

……..

S.No	DRUGS	YES/NO
1.	**ANTIBIOTICS**	
	h) Amoxicillin	
	i) Ampicillin	
	j) Benzyl penicillin	
	k) Ceftriaxone	
	l) Gentamicin	
	m) Amikacin	
	n) Penicillin G	
2.	**STEROIDS**	
3.	**EMERGENCY DRUGS**	
	j) Adrenaline	
	k) Aminophylline	
	l) Calcium gluconate	
	m) Dextrose (25%)	
	n) Saline ampules 20-25 ml	

	o) Distilled water	
	p) Inj. Adrenaline	
	q) Inj. Naloxone	
	r) Soda bicarb ampules	
4.	**IV FLUIDS**	
	c) Glucose 5 %	
	d) Normal saline/ Ringer's lactate	
5.	**ANTICONVULSANT**	
	b) Phenobarb	
6.	**VACCINES**	
	i) TT	
	j) OPV	
	k) BCG	
	l) DPT	
	m) MEASLES	
	n) VIT A	
	o) DT	
	p) OTHERS (Specify)	
7.	**OTHERS**	
	c) VIT K INJ	
	d) OTHERS (Specify)	

SECTION H

LABORATORY SERVICES

Person contacted for information(with designation):

……..

……

……..

S No	TESTS/SERVICES	YES/NO
7.	Blood sugar (dextrose sticks)	
8.	Serum Bilirubin	
9.	Haemogram	
10.	PCV	
11.	Blood group	
12.	Blood Storage Capacity	
13.	Others (Specify)	

SECTION I

NEWBORN CARE EQUIPMENTS/FACILITY

Person contacted for information(with designation):

……..

…….

……..

S.No	EQUIPMENT/FACILITY	AVAILABLE (Y/N)	FUNCTIONAL (Y/N)
5.	Newborn Corner		
6.	Hand-washing facility		
7.	Clean towels		
8.	Clean cord tie		
9.	Sterile cord cutter		
10.	Infant weighing scale		
11.	Wall clock		
12.	Dedicated surface for the baby		
13.	Overhead light source		
14.	Overhead radiant heater		
15.	Heater/blower		
16.	Self inflating bag with reservoir		
17.	Face masks (2 sizes, 0-1)		
18.	Suction Apparatus		

19.	Suction catheters		
20.	Endotracheal tubes		
21.	Oxygen Supply		
22.	Cups & spoons for feeding		
23.	Nasogastric/Orogastric tubes		
24.	Other methods of feeding (Specify)		
25.	Neonatal/infant I.V. sets		
26.	Paediatric infusion set		
27.	Infusion pumps		
28.	Syringe drivers		
29.	Weighing scales		
30.	Thermometers		
31.	Blood pressure instrument		
32.	Pulse oxymeter		
33.	Phototherapy		
34.	Incubator / hot cot		
35.	Others (Specify)		

Any other issues during the visit:

……
……
……
……
……..

Date: …… **Name & Sign of Investigator:**

……

…….....

ANNEXURE-2

Assessment of Maternal and Child Health Services at District Hospital, Dehradun, Uttarakhand

EXIT INTERVIEW OF THE ANTE NATAL CLIENTS AT THE FACILITY

Date: …….. **Investigator**: …….

Time: …… Form No: ……....

Namaskar. I am ……., from Public Health Foundation of India(PHFI), New Delhi. I am here to enquire about new born care rendered in the government health facilities in this district. Your participation and cooperation in this endeavour will be critical in successfully carrying out the study. The study aims to strengthen the newborn care services in your area. As your inputs are crucial for the same, if you could spare some of your valuable time for interview. Participation in this survey is voluntary. It will take 20-30 minutes to take your interview. Your responses will be kept confidential and you may decide to stop your participation at any time.

SECTION A

STATE/DISTRICT INFORMATION

A.1 Name of the State:

……
……

A.2 Name of the District:

……
……...

A.3 Name of Facility:

……
……...

SECTION B

IDENTIFICATION DETAILS:

B.1 Respondent's Name:

……
…….

B.2 Address:

……
……..

B.3 Age (In Yrs):

……
……..

B.4 Distance of Travel (To the Health Facility):

……

SECTION C

RESPONDENT'S DETAILS:

C.1 Education Level:

……
…….....

0: Illiterate

1: Upto 5 Yrs of Schooling

2: 5-12 Yrs of Schooling

3: >12 Yrs of Schooling

C.2 Expected date of delivery (EDD):
…….…….

C.3 No. of living Children:
……
…...

C.4 No of Children died in the past during 1st month of life & cause of death:

……
……
…….

C.5 How many ante-natal check ups have you received? (Including this one)

……
…….

C.6 Where do you go for the check up (Facility):

1. Govt. (DH/CHC/PHC/OTHERS):
……..

……
…….

2. Private. (Specify):
……
……

……
…….

C.7 Where do you plan to deliver your child,
(Facility)?.....……

1. Govt. (DH/CHC/PHC/OTHERS):
……..

……
……

2. Private. (Specify):
……
……

……
…….....

C.8 Do you get the required services at the facilities you visit? (Y/N)
…….....

C.9 If No, What do you do to fill the gap/need?

……
……
…….

C.10 How many vaccines/medicines (TT, IFA, Ca) have you had till date?

……
……
…….

C. 11 Are you trained about breastfeeding by the facility staff?

……
……..

C.12 Are you trained about how to keep your baby warm?

……
…….

C.13 Are all the vaccines/drugs available at the facilty during your visit or are you asked to purchase something from outside?

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……
…….

C.14 Are you facing any problems during the pregnancy?

……
……
……....

C.15 Are you satisfied with the services offered at this facility?

If Y , Why

……
…….....
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.....
.....

If N, Why

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…….

ANNEXURE-3

Assessment of Maternal and Child Health Services at District Hospital, Dehradun, Uttarakhand

EXIT INTERVIEW OF THE POST NATAL CLIENTS AT THE FACILITY

Date: …….. **Investigator**: …….

Time: …… Form No: ……....

Namaskar. I am ……., from Public Health Foundation of India(PHFI), New Delhi. I am here to enquire about new born care rendered in the government health facilities in this district. Your participation and cooperation in this endeavour will be critical in successfully carrying out the study. The study aims to strengthen the newborn care services in your area. As your inputs are crucial for the same, if you could spare some of your valuable time for interview. Participation in this survey is voluntary. It will take 20-30 minutes to take your interview. Your responses will be kept confidential and you may decide to stop your participation at any time.

SECTION A

STATE/DISTRICT INFORMATION

A.1 Name of the State:

……
……

A.2 Name of the District:

……
……...

A.3 Name of Facility:

……
……...

SECTION B

IDENTIFICATION DETAILS:

B.1 Respondent's Name:

……
…….

B.2 Address:

……
……..

B.3 Age (In Yrs):

……
……..

B.4 Distance of Travel (To the Health Facility):

……

SECTION C

RESPONDENT'S DETAILS:

C.1 Education Level:

……
…….....

0: Illiterate

1: Upto 5 Yrs of Schooling

2: 5-12 Yrs of Schooling

3: >12 Yrs of Schooling

C.2 Total No of Pregnancies (Including this birth):
…….

C.3 No. of living Children:
……
…...

C.4 No of Children died in the past during 1st month of life & cause of death:

……
……
…….

C.5 Did you (mother) receive any antenatal check up?

……
…….

C.6 If Yes, where (Facility):

1. Govt. (DH/CHC/PHC/OTHERS):
……..

……
…….

2. Private. (Specify):
……
……

……
…….

C.7 Who conducted your delivery?
……

1. Family Members/Neighbours/Untrained Birth Attendant

2. Trained Birth Attendant

3. ANM/ Nurse

4. Doctor (Allopathy)

5. Others (Specify)

C.8 Did the child cry immediately after delivery? (Y/N)
……....

C.9 If No, What was done to make him/her cry?

……
……
…….

C.10 What was the first feed given to the baby?

……
……
…….

C. 11 Were you trained about breastfeeding by the facility staff?

……
……..

C.12 When was the first breastfeed given to the baby?

……
……....

C.13 Was the baby bathed soon after birth? (Y/N)

……
…….

C.14 What was done to keep the baby warm?

……
…….

C.15 What care was done to take care of the cord stump of the healthy baby?

(Probe: If anything was applied on the cord, what was applied, reason given)

……
……
…….

C.16 Was the baby provided any Vaccination/Immunization Drop? If Yes, What?

……
……
…….

C.17 Were all the drugs available at the facilty during your admission or were you asked to purchase something from outside?

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……
…….

C.18 What was your duration of stay in the facility?

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……...

C.19 Did you face any problem during your stay in the facility (Specify)?

……
……
…….

C.20 Were you referred to some other facility, in case the treatment was not available at this facilty? If yes, where?

……
…….....

ANNEXURE-4

Assessment of Maternal and Child Health Services at District Hospital, Dehradun, Uttarakhand

Form No: ……. Date: ……

Time: ……

INDEPTH INTERVIEW WITH CHIEF MEDICAL OFFICER (CMO)

State: .....

District: .....

Name of the facility: .....

Name of person: .....

Post held: .....

Date: .....

Name of Interviewer: .....

CONSENT

" Namaskar, I am ..... from Public Health Foundation of India (PHFI). I am here to do a survey for my internship project on "Assessment of Maternal and Child Health Services at Doon Hospital, Dehradun". This includes an assessment of healthcare facilities at the hospital. I would greatly benefit from your knowledge, experience and leadership in this field. I would also appreciate your time in helping me understand the current levels of district program implementation. The results of this study will be used as a part of Dissertation work for IIHMR, New Delhi. Your responses will be kept confidential and you may choose to stop your participation at any time.

Do I have your agreement? ..... (Write Yes or No)

A. IDENTIFICATION DETAILS:

Respondent's Name:

.....

Total yrs of experience in services: .....

No of yrs working In-Charge at this facility: .....

Primary area of Professional interest:

…….

Q.1 **Please tell me about some health programmes related to Maternal and Child health which have been implemented in your district?**

(Probe for: RCH-I, CSSM, NNF etc. and the activities done under these programmes.)

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……

Q.2 Are there newborn / child health activities being implemented under the RCH – II programme at your facility? If yes, what are these activities and their potential for improving newborn health?)

(Probe for: various components of RCH particularly related to newborn and maternal care.)

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Q.3 **Is your district equipped to provide services for newborns?**

(Probe for: availability of the trained staff, equipments, the type of cases seen, whether cases are referred one, if so referred by whom etc.)

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……

Q. 4 Is your district equipped to provide services Maternal care?

(Probe for: availability of the trained staff, equipments, antenatal care, postnatal care, no. Of deliceries, the type of cases seen, whether cases are referred one, if so referred by whom etc.)

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Q. 5 What efforts have been made for strengthening of MCH services in your district?

(Probe for: the manpower / supplies / training undertaken under RCH. Enquire about the status of facility level health societies, upgradation of facilities for antenatal, postnatal, emergency obstetric and newborn care etc.)

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……

Q. 6 Is there some mechanism to monitor the Newborn Care being provided in your district?

(Probe for : information on number and type of cases managed, referred, monitoring indicators viz. monthly report, review meetings and feedback, if any etc).

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……
……
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……

Q. 7 Do you face some problem in providing MCH services at your district?

(Probe for: gaps in relation to manpower, training, funds, supplies and other resources and the efforts that have been made to overcome the same?)

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……
……
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……

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……

Q. 8 How do you visualise the role of the private sector in the delivery of MCH services?

(Probe for : Public Private Partnership, the role of RMP's, Dai's, AYUSH providers, the extent to which these can be involved in promoting newborn care and under what conditions?)

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……
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……
……

Q. 9 Are there some IEC activities which are being taken up at your district to generate awareness about MCH services?

(Probe for: display materials, posters, wall writings, inter personal communications, group discussions etc. and effectiveness of these media).

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Q. 10 Do you have any new idea / suggestion to improve MCH?

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