Rural Health Practitioners : Augmenting Sub-Center Service Delivery in Assam

Ministry of Health and Family Welfare
Government of India, New Delhi

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RURAL HEALTH PRACTITIONERS

Augmenting Sub-Center Service Delivery in ASSAM

NHSRC

NATIONAL HEALTH MISSION

राष्ट्रीय स्वास्थ्य मिशन

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FOREWORD

Innovations in educational strategies are crucial to address the shortage of skilled health workforce that results in poor coverage of the underserved and rural population. Recently on 13th November 2013 the Cabinet approved the introduction of Bachelor of Science (Community Health) course in India. Thereafter the Ministry of Health & Family Welfare (MoHFW) has recommended the states to roll out the BSc (CH) course towards creation of a mid-level health professional cadre known as "Community Health Officers" to be deployed at Sub Centers (SCs). States like Chhattisgarh and Assam have already benefited from this initiative.

In 2005 itself, the Assam Government initiated the Diploma in Medicine and Rural Health Course (DMRHC) with legal support under "Assam Health Regulatory Act" to augment service delivery in sub centers. As of March 2013; the National Rural Health Mission (NRHM), Assam had deployed these diplomats "Rural Health Practitioners (RHP)" across 370 sub centers in 27 districts.

This is the first ever assessment of the RHP model which corroborates the replication of a similar model across the country as approved by the Cabinet. The study undertaken by the National Health Systems Resource Center (NHSRC) documents the process of implementation of RHP model, assesses its outcome in terms of range, quantum and quality of health care service delivery and identifies areas for improvement.

The study shows that over the last three years, the performance of Sub Centers with RHPs has improved with respect to Out Patients and Institutional Deliveries as compared to Sub Centers without RHPs. Some of the key challenges include lack of adequate referral transport; housing and promotion avenues for RHPs. The ANMs who worked with RHPs and the community served by them have provided positive feedbacks regarding the initiative. Study findings strongly suggest replication of RHP model in other states for improved health care systems provided supervisory and support mechanisms are streamlined.

I truly acknowledge and appreciate the contribution made by NHSRC for undertaking this endeavour in collaboration with Regional Resource Center for North East States (RRC-NES), Guwahati and Population Research Center (PRC), Guwahati.

(Dr. Vishwas Mehta)
Joint Secretary to the Govt. of India
Ministry of Health & Family Welfare

Acknowledgement

The NHSRC expresses profound gratitude to the Secretary, Ministry of Health & Family Welfare and the Additional Secretary cum Mission Director, National Health Mission (NHM) for providing an opportunity to study the "Role of Rural Health Practitioners towards Augmenting Sub Center Service Delivery in High Focus Districts of Assam".

Currently Assam is the only state in the country where this 3½-year course is being implemented. Therefore, this evaluation process has been a learning experience for the entire team.

The Research Team at NHSRC, consisting of Dr. Dilip Singh Mairembam, Dr. Suchitra Lisam, Mr. Prankul Goel and Mr. Nishant Sharma, developed a comprehensive study design and was actively involved at every step of the research.

We are thankful to Dr. Anupama Hazarika for her constant support in the process of data analysis. We are highly indebted to Dr. Rajani Ved and Dr. Krishna D. Rao, for providing their valuable inputs to the study report. We acknowledge the crucial role of Regional Resource Center for North-East States and Population Resource Center Guwahati in coordination of the study including primary data collection. The sincere efforts put in by the Supervisors and Investigators in the difficult terrains of the State is commendable.

We appreciate the kind cooperation and the assistance provided by the NHM Assam including the District and Block Program Management Units of the eight high priority districts. They facilitated the collection of necessary information and shared their perspectives on the RHP model. NHSRC also recognizes the sincere efforts of the faculty of Johrat Rural Health Institute for their insight into the 3½-year course and S.G. Computer Technology in supporting the process of data transcription and quantitative analysis of primary data.

We remain highly indebted to the hundreds of Rural Health Practitioners (RHPs) and Auxiliary Nurse Midwives (ANMs) working in the remote sub centers of Assam who responded to the long questionnaires, shared their experiences, views and perceptions that have been instrumental in the qualitative aspect of this study.

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List of Abbreviations

ANM	Auxiliary Nurse Midwife
ANC	Ante-Natal Care
AWW	Anganwadi Worker
ASHA	Accredited Social Health Activist
BPM	Block Program Manager
BCG	Bacillus Calmette Guerin
CHC	Community Health Center
CHMO	Chief Health Medical Officer
CRM	Common Review Mission
DPT	Diphtheria Pertussis Tetanus
GPE	General Physical Examination
HIV	Human Immunodeficiency Virus
HLEG	High Level Expert Group
SC	Health Sub Center
IDSP	Integrated Disease Surveillance Program
IFA	Iron Folic Acid
IPHS	Indian Public Health Standards
JSY	Janani Suraksha Yojana
LHV	Lady Health Visitor
MO I/C	Medical Officer in-charge
MMR	Maternal Mortality Rate
MPW	Multi-Purpose Worker
MTP	Medical Termination of Pregnancy
NACP	National AIDS Control Program
NBCP	National Blindness Control Program
NLEP	National Leprosy Eradication Program
NVBCP	National Vector Borne Control Program
NCD	Non- Communicable Diseases
NE-RRC	North East –Regional Resource Center
NHSRC	National Health Systems Resource Center
NRHM	National Rural Health Mission
ORS	Oral Rehydration Solution
PHC	Primary Health Care
PRI	Panchayati Raj Institution
RCH	Reproductive and Child Health
RHP	Rural Health Practitioners
RNTCP	Revised National TB Control Program
SBA	Skilled Birth Attendant
STI	Sexually Transmitted Diseases
TBA	Traditional Birth Attendant

Executive Summary

Shortage and skewed distribution of heath workers still remains a major factor in responding to the challenge of improving accessibility of health care services and coverage for rural and underserved population. Moreover, the inadequate availability of skilled professional in these areas results in poor health outcome, as informal practitioners are the only care providers. Educational strategy is one of the WHO recommendations to tackle the acute crisis of lack of skilled workforce in the rural and remote areas in the long run. State governments have devised educational strategies with an aim to admit only students who are likely to serve in under-services areas and mold education to retain the commitment.

States like Chhattisgarh and Assam introduced the three years course to train medical professionals for serving in rural areas. In Chhattisgarh, almost 100% of Primary Health Centers (PHCs) became functional after deployment of 1391 Rural Medical Assistants (RMAs) by 2010. On similar lines, the Assam Government started the Diploma in Medicine and Rural Health Course (DMRHC) in September 2005 to strengthen human resources available in Sub Centers (SCs) and augment service delivery.

Study Objectives:

The study provides a comparative analysis of health status trend among studied districts before and after deployment of Rural Health Practitioners (RHPs) at SCs. Secondly; a comparative performance of SCs with and without RHPs in these districts is ascertained. Third, an understanding of changing trend in ranges, uptake and quality of health services in SCs with RHPs and without RHPs is achieved. Fourth, the perspectives of RHPs towards DMRHC, beneficiaries' and community's views about services, RHPs attitude and lastly government official's take on DMRHC and service delivery are captured. Finally, key areas for improvements of program and service delivery are gathered through these sources of information.

Methodology:

The study used a mixed method approach using variety of data sources. Reports collated at the State Level for 2010-11, 2011-12 and 2012-13 were utilized to assess the performance of sub centers with RHPs. Semi structured, open-ended questionnaires were used for the RHP, ANM, MPW and beneficiaries' interview at the sub centers, and officials at the state and district headquarters. Structured questionnaire, consisting of open-ended questions were used to conduct group discussions in the community.

High Focus Districts where RHPs were posted were purposively selected. From these 14 districts, 8 districts were chosen - Jorhat, Nagaon, Darrang, Nalbari, Goalpara Karimganj, Cachar and Hailakandi

From a total of 140 RHPs positioned at sub centers in these districts, a sample size of 93 respondents was chosen, out of which 2 dropped out due to constraints. All ANMs and MPW (M) present in the sub centers of the 91 selected RHPs were included in the study. Altogether a total of 389 respondents were interviewed including 20 district and 4 state level officials.

In addition to this, 20 group discussions were held with respective communities served by Sub centers, faculty and students from Jorhat Medical Institute.

Roll Out of RHP Course:

The Assam Rural Health Regulatory Act was passed in 2004 to establish an authority for regulation and registration of Diploma Holders in Medicine and Rural Health Care (DMRHC) and their practice of medicine

in rural areas. Jorhat Rural Medical Institute started the first batch of DMRHC in September 2005, and 98 students underwent the training. Candidates having rural background with 10+2 (Physics/Chemistry/ Biology); 50% pass mark for general candidates and 45% for reserved category are eligible for application. Subjects taught in 1st year, 2nd year and 3rd years are pre-clinical, para-clinical and clinical respectively, after which they undergo an internship of six months.

Deployment of RHPs:

After the first batch passed out in September 2008, the Government of Assam in April 2010 deployed 86 RHPs in SCs of high focus districts (HFDs) to provide comprehensive health care services. These RHPs provided all the essential services (preventive, promotive,curative and emergency care) as envisaged in IPHS in addition to National Health Program. As of March 2013; RHPs have been deployed in 370 out of 5610 SCs, across all 27 districts.

Comparative Performance Analysis of Sub Centers with and without RHPs:

There has been remarkable increase in a range of services; primarily in the provision of ambulatory care, institutional deliveries and family planning services, since the RHPs joined the sub centers. SCs with RHPs (370/5610) contributed 69% of total OPD cases treated at all SCs across the state in 2010-11; and this share has increased to 79% of total OPD cases in 2012-13. Contribution of SCs with RHPs towards cumulative number of institutional deliveries by SCs in respective districts has remarkably increased from 10% in 2010 to 61% in 2011-12 and then jumped to 93% in 2012-13.

Service Delivery by RHPs: All RHPs exclusively provided OPD services on working days in a week (Monday to Saturday) with an average daily OPD caseload of 25-30. Nearly 40% of them had provided ANC services on all days of the week while 39.6% to 41.8% of them had conducted institutional deliveries.

Perceptions of RHPs:

Print media was the major source of information about the course. Interest for serving community and good job perspectives remained the main reason for pursuing the course among RHPs. Many of them had an opinion that DMRHC was similar to MBBS course in terms of subjects and contents taught; notable differences was the lack of Forensic Medicine, Major Surgery, Dermatology & Psychiatry and relatively shorter duration of course. Few wanted an extension of the course duration and internship period. However, majority of the respondents considered that the course was suitable and sufficient for serving in rural health settings. Most felt that the internship program was very helpful in delivering their routine duties. Merit based recruitment was adopted. Most of the RHPs responded that current posting was located outside their home-district and State Government has not provided any residential facility or quarter. There were no promotion avenues for the post. Main treatment provided was symptomatic management of minor ailments (common cold, fever, diarrhea etc.) and NCD (diabetes, hypertension etc.) and few provided treatment for communicable diseases. Main challenges faced by RHPs were location of SC, lack of accommodation and referral transport facilities, which requires attention and remedial measures.

Beneficiaries'/ Community's perspectives:

After posting of RHPs at SCs; provision of ANC/PNC services have become more systematic and are available everyday. SCs have now the capacity to conduct institutional deliveries and besides common ailments, RHPs manage accidental & emergency cases like burns etc. The medicines' availability status has improved considerably and RHPs have managed to gain people's confidence. The Infant and Maternal related illnesses and deaths have decreased since the RHPs could identify danger signs and refer to higher centers. People are increasingly availing the Family Planning and Immunization services. The RHPs are also able to screen patients before making referrals to district hospitals, thereby reducing the caseloads of hospital doctors.

Perspectives of Faculties/Students:

Faculty and students commented that the current Diploma course should be upgraded to a Bachelor's degree course to facilitate interested students in their pursuit for a Master's degree. Increasing the internship period from 6 months to 1 year was suggested.The lack of adequate faculty, especially the senior teacher positions, has hampered the teaching program. Faculty Development Programs and CME for RHPs are required. Creation of regular cadre will help chart out a career progression that would help in sustainability of the model.

Perspectives of Government Officials:

Overall it is a good model as people's perceptions towards service delivery in sub centers has changed dramatically. People's perception about ranges and quality of services has changed after deployment of RHPs with SCs showing remarkable increase in OPD case load and initiation of institutional deliveries. Many officials felt that the RHP model could be scaled up provided they receive adequate trainings and are well equipped to deliver quality health care services. Few felt that due recognition of DMRHC by MCI would tremendously boost the RHP's morale and help in scaling up the model.

RECOMMENDATIONS:

Upgrade the Diploma Course into Bachelor's Degree Course: The conversion of the Diploma course to a Bachelor's degree would help in up-gradation of the course and also enhance the scope for increased uptake to bridge the gap of skilled professionals in rural and remote areas. A Bachelor's degree would also facilitate interested students to pursue a Master's degree for professional progression.

Review of Internship Period: The internship duration may be reviewed so that the duration gets extended by another 6 months, which would help them in honing their practical skills.

Revision of roles and responsibilities of RHPs: RHPs should be made the overall in-charge of SCs. Appropriate skills must be imparted so that they are able to act as a team leader with adequate authority. Relevant support system should also be established for this. They should also be able to supervise the ANM in delivery of services, especially immunization, adolescent health and family planning.

Development of career pathways: A regular cadre for RHPs may be created and renamed as Community Health Officer (CHOs) for sustainability of the program and retaining them in health system for improved health status. A career pathway with promotion lines should be in place for upgrading their position, provided they acquire higher qualifications in public health.

Development of Integrated Training program for RHPs: A customized integrated training package should be developed for RHPs, which addresses all aspects of health care services along with a focus on IEC/ BCC, leadership and program managerial issues.

Preferential Selection of candidates for admission: Current eligibility criteria for candidates belonging to minorities /hailing from inaccessible or conflict prone/specific parts of districts may be relaxed.

Creation of an enabling environment for RHPs: There should be provision for residential quarter or rental arrangement so that RHPs stay close to their work place. For this, power should be effectively decentralized to Gram Panchayat for overall selection, supervision and monitoring of functionality of SCs on relevant issues. Community monitoring would pay off in the long run.

01
CHAPTER

Introduction

1.1 BACKGROUND

In the public health sector there is an increasing realization about the need to address and adequately respond to the acute shortage and uneven distribution of skilled health workforce in the rural areas. As per 2001 Census, there were around 2.2 million health workers in the country, which works out to only 100 skilled service providers (doctors, nurses and midwives) per 100,000 population. The international norm is 228 per 100,000 population, based on what is needed to achieve a minimum 80% coverage rate of deliveries by skilled birth attendants or for measles immunization.[1]

Majority (70%) of health workers is employed in the private sector and 60% of these health workers reside in urban areas. The density of health workers per 10,000 population in urban areas is almost four times that of rural areas.[2] The density of allopathic physicians in urban and rural areas is 11.3 and 1.9 respectively, reflecting the higher proportion of physicians reporting insufficient qualifications in rural areas if the estimate of the proportion of unqualified allopathic physicians were applied as per National Sample Survey (NSSO) on Employment and Unemployment[3].

With the launch of NRHM in 2005, around 1 lakh additional skilled health workers have been deployed across the country but these numbers are not significant to fill the huge gap in human resource, particularly the underserved and difficult to reach areas. The crisis still exists of ensuring availability of skilled workforce in the underserved rural and remote areas. Educational strategy is one of the WHO recommendations to tackle the acute crisis of lack of skilled workforce in the rural and remote areas in the long run. The adoption of targeted admission policies with a rural background in medical education program and courses for various health disciplines was recommended in order to increase the likelihood of graduates choosing to practice in rural areas.[4]

One of the measures under NRHM, to address the problem of attraction of doctors and nurses to rural postings and to retain them was to devise educational strategies with an aim to admit only those students who are likely to serve in under-serviced areas and mold education to retain the commitment.[5]

In several states, preferential selection of workers with rural backgrounds for medical education was carried out based on belief that these health workers tend to serve and remain in their native areas. Chhattisgarh which had the lowest human resource

densities in India, and perhaps one of the lowest in the world had introduced the three years course to train medical professionals to serve in rural areas by the end of 2002 so as to address the acute crisis of shortage of physicians.

By 2008 the state government had selected and deployed 225 RMA (Rural Medical Assistants) in most PHCs; 2 RMA per PHCs in all 11 identified districts in the most remote and difficult areas of Chhattisgarh to provide health services. As of June 2010, 834 RMAs (including 400 women RMAs) had been placed in Primary Health Centers (PHC) in Chhattisgarh. In 2008, paramedical staff for want of MBBS doctors managed 50% of PHCs; in 2010 this had changed for the better, as 700 odd PHCs were staffed with RMAs[6]. In 2010, most PHCs had been made functional with deployment of 1391 RMAs and all vacant posts had been filled up. The preliminary report on assessment of professional skills of RMA in comparison with other alternatives was positive. [6]

These 3 year graduates were considered as the best option to be placed in SC (Sub Centers) in additional to ANMs considering the cost factor and availability of such human resource in remote areas thereby upgrading the SC to an independent, fully functional curative unit in addition to preventive and promotive roles[6].

The Government of Assam initiated a similar three years course with legal support for providing health services at SC as per IPHS norms, whereby institutional delivery services could be assured at SCs. Their placement at SCs was more acceptable to the medical community as well.

The three-year RMA program in Chhattisgarh and three year Rural Health Practitioners (RHP) course in Assam were initiatives that, with modification and an appropriate policy framework, are under process to be scaled up for implementation throughout the country to make trained personnel available where there are no doctors.

1.2 STUDY RATIONALE

There is a close correlation between the skewed distribution of achievements in key health indicators and the density of skilled health workforce available in states[11]. The same pattern of achievements would also be seen in population stabilization where most of the states with better densities of skilled health workforce have achieved replacement rates of fertility while few states lags far behind.[11]

The number of sanctioned posts and availability of Rural Health Practitioners (RHPs) has been increasing since the year 2009-2010 when the RHPs were deployed at sub centers for the first time in the state. In the last three years, there has been increase of 262 numbers of RHPs, which is an increase of 284% respectively.

But no study has been carried out to understand the effectiveness of the RHPs in Assam with regard to provision of services to rural population. There is a need to document the actual implementation, trainings, deployments, transfers and postings, roles and responsibilities of RHPs towards health service delivery, training imparted viz. requirements, support structure, issues, constraints in functioning of sub centers and their feedbacks.

Understanding this model in the context of strengthening sub centers would be particularly helpful in informing policy reforms or in formulation of policy responsive to the needs of the rural population.

1.3 STUDY OBJECTIVES

1.3.1 To understand the trend in the health status of the studied districts before and after the deployment of RHPs (Rural Health Practitioners) at sub centers.

1.3.2 To examine and compare the performance of sub centers with RHPs to those sub centers without RHPs in the selected 8 districts in Assam.

1.3.3. To examine the trend in ranges and types of health services, uptake and quality of health care services provided (i.e. OPD/ANC cases, institutional delivery, newborn care, immunization, FP and other primary curative services etc) before and after deployment of RHPs at these sub centers.

1.3.4 To understand the perspectives and views of the beneficiaries, community/PRI with regard to the ranges and quality of the health care services provided before and after deployment of RHPs at these sub centers.

1.3.5 To understand the perceptions and views of the key informants i.e. state, district officials under the Department of Health and Family Welfare, Government of Assam and service providers i.e. RHP, ANM with regard to health service delivery.

1.3.6 To provide recommendations to improve the RHP initiative in Assam.

02 CHAPTER Methodology

2.1 STUDY DESIGN & INSTRUMENTS FOR DATA COLLECTION

The study used a mixed method approach using variety of data sources.

Quantitative Method: Reports collated at the State Level for 2010-11, 2011-12 and 2012-13 were chosen to assess the performance of sub centers with RHPs.

Qualitative Method: Semi structured, open-ended questionnaires were used for the RHP and ANM interviews.

Tools for Data Collection included:

a. Semi-structured questionnaires for in-depth interviews of service providers i.e. Rural Health Practitioners (RHPs), Auxiliary Nurse Midwife (ANM)/ Multi-purpose Worker (MPW) and beneficiaries at the sub centers.

b. Semi-structured questionnaire was developed for key informant's interviews of state and district officials.

c. Structured questionnaire, consisting of open-ended questions used to conduct group discussions in the community.

2.2 STUDY SAMPLE

Sampling Frame: Administratively, Assam is divided into three regions namely Upper Assam, Lower Assam and Barak Valley and four zones - Upper Assam, Central Assam, Lower Assam, and Barak Valley/ Hills. There are 27 districts in Assam, out of which 14 are high focus districts. There are 7 districts in Upper Assam, 6 districts in Central Assam, 6 districts in Lower Assam and 5 districts in Barak Valley. Each of these districts is further divided into administrative blocks. In the year 2010-11, during the development of the study design protocols, the State had positioned 140 RHPs in sub centers across all these districts. These RHPs were our sampling frame.

Sample Size: From a total of 140 RHPs positioned at the sub centers, at 90% confidence levels, 10% margin of error and 50% response distribution, a sample size of 93 was calculated. Due to certain constraints 2 respondents dropped out and 91 respondents were included in this study.

Stratified random sampling was used for data collection, and the sample chosen was pro-high focus districts.

District Selection: All districts with RHPs posted in the study were selected for this dataset; the districts with no RHP were excluded from the study. These districts were then stratified into High Focus Districts and Non-High Focus Districts. Only High Focus Districts were chosen and the rest excluded from the study.

These 14 high focus districts were graded on the basis of 3 key RCH performance indicators - percentage (%) of pregnant women having 3 ANC check up; percentage (%) of institutional delivery and percentage (%) of immunized children less than 1 year for measles against estimated live births.

These performance indicators were graded on points based on percentage ratings and sum was considered to arrive at the final ranking.

Table 2.1: Grading Criteria for High Focus Districts

Sr. No.	Type of key RCH performance indicator	Range of percentage		
1.	% of pregnant women with 3 ANC check up against estimated pregnancies	≥80%	≥60%-<80%	<60%
	Point Given	3	2	1
2.	% of immunized children less than 1 yr against estimated live births	≥80%	≥60%-<80%	<60%
	Point Given	3	2	1
3.	% of institutional deliveries against estimated deliveries	≥60%	≥40%-<60%	<40%
	Point Given	3	2	1

From these 14 districts, 8 were selected through a process of simple random sampling so that poor, average and good performing districts were represented - Jorhat, Nagaon, and Darrang in Upper Assam Region, Nalbari and Goalpara in the Lower Assam Region and Karimganj, Cachar and Hailakandi in the Barak Valley/ Hills region.

Selection of Blocks: All administrative blocks in the

Table 2.2: Ranking of High Focus Districts based on 3 key RCH Indicators

District	% of Pregnant Women with 3 ANC checkup against estimated pregnancies (Oct'11-Sep'12)	Point Given	District	% of institutional deliveries against estimated deliveries (Oct'11-Sep'12)	Point Given	District	% of immunized children less than 1yr against estimated live births (Oct'11-Sep'12)	Point Given	Total
NC Hills	47.15	1	NC Hills	45.47	1	NC Hills	70.35	2	4
Nalbari	58.48	1	Nalbari	37.86	1	Nalbari	71.60	2	4
Bongaigaon	59.33	1	Bongaigaon	56.69	1	Bongaigaon	71.80	2	4
Karbi Anglong	55.10	1	Karbi Anglong	59.81	1	Karbi Anglong	80.07	3	5
Karimganj	72.02	2	Karimganj	35.36	1	Karimganj	78.00	2	5
Jorhat	60.32	2	Jorhat	64.61	2	Jorhat	70.50	2	6
Kokrajhar	64.76	2	Kokrajhar	64.81	2	Kokrajhar	75.00	2	6
Darrang	69.68	2	Darrang	58.72	1	Darrang	84.27	3	6
Nagaon	66.95	2	Nagaon	65.70	2	Nagaon	85.32	3	7
Goalpara	77.72	2	Goalpara	77.68	2	Goalpara	87.82	3	7
Cachar	78.32	2	Cachar	69.86	2	Cachar	81.99	3	7
Dhubri	82.46	3	Dhubri	45.18	1	Dhubri	88.92	3	7
Hailakandi	82.75	3	Hailakandi	54.81	1	Hailakandi	89.02	3	7
Dhemaji	81.79	3	Dhemaji	88.20	3	Dhemaji	81.29	3	9

selected district were chosen for this study.

Selection of Sub Centers: In all blocks the sub centers with presence of RHP for a period of more than 1 year was selected; the rest were excluded from the study. These sub centers were divided further into easy to access, difficult to access, extremely difficult to access. The ones, which were extremely difficult to access due to insurgency and security issues, floods, were excluded from the study.

Selection of RHP: A total of 93 RHPs were selected from the sub centers with RHPs through simple random sampling. 27 RHPs were selected from sub centers of Upper Assam Region, 27 RHPs from Lower Assam region and 39 RHPs from the Barak Valley region. But during the qualitative study 2 Respondents out of 27 in Upper Assam Region were not found. Thus, a total of 91 RHPs were finally included in this study.

Selection of ANMs: All ANMs present in the sub centers of the 91 selected RHPs were included in the study.

Total Number of Respondents: Altogether a total of 389 respondents were interviewed i.e. 91 RHPs, 108 ANMs & 166 patients from Sub Centers, 20 district officials and 4 state level officials. 4 key state officials were interviewed including the Mission Director of NRHM, Assam to gain insights and their perspectives about the RHP scheme, level of implementation, challenges and way forward.

In addition to this, 20 group discussions with respective community served by sub centers were held. Faculty and students from Jorhat Medical Institute were also interviewed.

2.3 LIMITATIONS OF THE STUDY

Due to constraint of time and resources, discussions with members of VHND committee, AWW and supervisors of RHPs namely MO in-charge of PHC, BMHO officials etc. could not be held. In the field level, we could not collect the detailed records of services provided in respective sub centers with RHPs. Notwithstanding these limitations, we have tried to present a rich mix of both qualitative and quantitative information. Qualitative information primarily emerged from the discussions with RHPs which touched upon issues related to the RHP course, support mechanism, working environment and career progression etc. and took their invaluable suggestions on areas for improvement of functioning of sub centers.

03 CHAPTER

Study Findings

3.1 IMPLEMENTATION PROCESS OF THE 3-YEAR RHP COURSE IN ASSAM

As a response to the lessons learnt from Chhattisgarh state, Assam government had acted cautiously and took a strategic approach to replicate the similar 3 years course under different contexts. The Assam Legislative Assembly passed the Assam Rural Health Regulatory Act in the year 2004 which provides for the establishment of a regulatory authority (i.e. Assam Rural Health Regulatory Authority) in the State of Assam whose brief is to regulate and register the Diploma Holders in Medicine and Rural Health Care (DMRHC) and their practice of medicine in rural areas (those areas which are not included in a Municipal Corporation, a Municipal Board or a Town Committee or any other area notified as urban area) and also to regulate opening and running of Medical Institutes for imparting education and training for the course of DMRHC.

The Act came out in the Assam Gazette Extraordinary on 18 September 2004, with the prime objective of:

(a) Opening of Medical Institutes for imparting education and training for the course of DMRHC.

(b) To regulate and register the diploma holders in DMRHC.

In light of the above Act, the Jorhat Rural Medical Institute started the DMRHC course.

The Act defined "Rural Health Practitioners" as a holder of the diploma in Medicine and Rural Health Care who has registered himself with the Authority and obtained a certificate and a registration number. The Authority consists of following members i.e. Director of Medical Education (Chairman), Assam, an officer of the Directorate of Health Services, one principal of the Medical college, three medical practitioners of repute, Principals of Regional Nursing, Dental Colleges and medical institutions, officer of Health & Family Welfare Department not below the rank of Deputy Secretary, Joint Director of Medical Education, Deputy Director of Directorate of Medical Education.

The Act states that every person who has been enrolled in the State Register of RHP shall be eligible to practice medicine and Rural Health Care in rural areas of the State of Assam provided that no RHP shall use the word "Doctor" or "Dr." before and after his name and he/she shall only be identified as RHP.

Prohibition of practice at any place whether rural or urban in the state of Assam is enforced to any graduate of DMRHC whose name is not enrolled or has been cancelled or removed from State Register of RHP; any person who contravenes the provisions is punishable with imprisonment upto 6 years or fine upto Rs.30,000/- or both.[9]

Powers and Functions of Rural Health Practitioners as per the Act: The RHP shall be eligible to practice Medicine and Rural Health Care subject to the following conditions:

(a) They treat only those diseases and carry out those procedures outlined in the rules (Annexure 1)

(b) They shall prescribe only those drugs as outlined in rules, they shall not carry out surgical procedures, invasion, investigation or treatment, "Medical Termination of Pregnancy"etc.but shall confine themselves to such medical treatment and perform such minor surgery as may be prescribed

(c) They shall practice only in rural areas as defined in the Act

(d) They may issue illness and death certificates

(e) They shall not be eligible for employment in Hospitals, Nursing Homes and Health establishments in urban areas as General Duty Physicians involved in patient care, OPD, Emergency and indoor services.

Roll Out of RHP Course and Initial Deployment of RHPs: For the first time in April 2010, the State Health government deployed 92 RHPs at sub centers in high focus districts to provide health care services. And as of March 2013, RHPs have been deployed in 370 sub centers.

3.2 TRAINING INFRASTRUCTURE AND NATURE OF THE DMRHC

The Medical Institute Jorhat: The Institute was established in September 2005 and initially located in the premises of JDS Civil Hospital, Jorhat until it got its own building in January 2011. The Jorhat Rural Medical Institute started the first batch of the Diploma in Medicine and Rural Health Course (DMRHC) in September 2005, the practical training for the course took place at the Jorhat Civil hospital, Jorhat, of which 98 students were selected on merit basis, and had undergone the DMRHC training. The first batch had passed out in September 2008. The full fledged institute with all facilities has been functioning since 2011. The 3-storied building comprises of the following infrastructure:

- 3 lecture halls having a capacity of 100 seats each and audio-visual teaching facility
- 3 laboratories for anatomy & pharmacology / biochemistry, physiology & community medicine-I / pathology, microbiology & community medicine-II
- 1 demonstration hall
- 2 students' common room
- 1 library
- 1 establishment hall
- 6 teacher's rooms including that of the principal and vice-principal

The top floor of the building is proposed to have a conference hall, 3 demonstration rooms, 1 museum and a few teachers' room.

In addition there is a girls' hostel, which currently provides accommodation to 83 students.There is also a proposal to construct a 250-bedded boys' hostel.

Selection of Students: The selection committee consists of the Director Medical Education (Chairman), Deputy Director (Member Secretary) and Principal among others. Necessary qualification is 10+2 (Physics/Chemistry/Biology) with 50% pass mark for general candidates and 45% for reserved category.The candidates should belong to rural areas with 2 general seats allocated to each district and a total of 47 seats kept for reserved candidates.

At the time of study, 3 batches of students had been pursuing the course:

- 1st year (2012 batch): 100 students
- 2nd year (2011 batch): 96 students
- 3rd year (2010 batch): 94 students

Faculty Status: The sanctioned posts of faculty at the Jorhat Rural Medical Institute include the following

- Principal (rank of Associate Professor of Medical College): 1
- Vice-Principal (rank of Assistant Professor of Medical College): 1
- Senior Teacher (rank of Registrar of Medical College): 11
- Junior Teacher (rank of Registrar of Medical College): 13

But currently the staff comprises of Principal, Vice-Principal and only 13 Junior Teachers. All the Senior Teacher posts are lying vacant due to inability to find specialists for the positions.

Curriculum of DMRHC: The subjects taught in the 1st year (pre-clinical) are Anatomy, Physiology, Biochemistry and Community Medicine-I. In the 2nd year (para-clinical) Pathology, Microbiology, Pharmacology and Community Medicine-II are taught. The 3rd year (clinical) syllabus consists of Medicine, Pediatrics, Obstetrics & Gynecology, Surgery & allied subjects. Since there are no dedicated textbooks for the course, the students use MBBS textbooks. The internship duration is of six months, which the students undergo in the Jorhat Medical College Hospital.

Classes are held from 9:00 AM to 4:00 PM and theory & practical classes are held in the institute building. Bedside clinical classes are conducted in different departments of Jorhat Medical College & Hospital under the guidance of respective faculty members and honorary teachers of the medical college. The students are taken for periodic field visits to the nearby villages for exposure to public health related issues in the rural communities.

Output of Jorhat Rural Medical Institute:

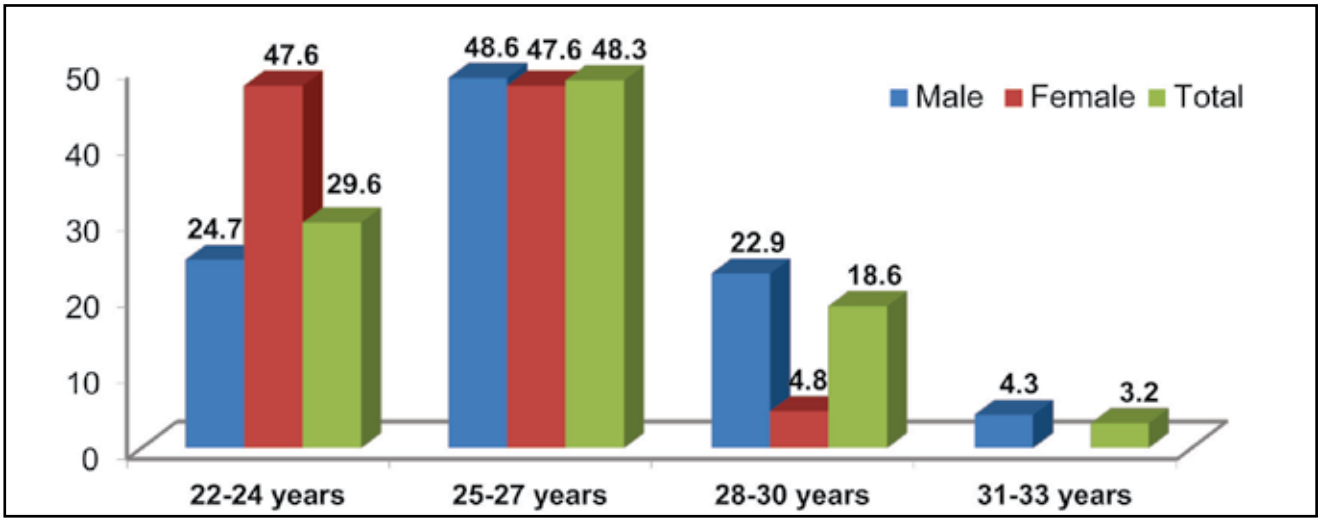
- 2005 batch: 92 students pass outs
- 2006 batch: 91 students pass outs
- 2007 batch: 85 students pass outs
- 2008 batch: 90 students pass outs
- 2009 batch: 83 students awaiting results

All the students who have passed out from the institute have been employed under the NRHM as Rural Health Practitioners (RHPs) at different sub centers in the remotest areas of Assam.

3.3 SOCIO-DEMOGRAPHIC PROFILE OF RHPs

3.6.1 Age and Sex distribution of respondents/ surveyed RHPs: Significantly higher proportion of the respondents/surveyed RHPs was males (76.9%) than that of the females (23.1%). Almost half of the RHPs (48.3%) were in the age group of 25-27 years. A half of the male RHPs were in the same age group of 25-27 years while the female RHPs were equally represented in the age group of 22-24 years and another half in 25-27 year.

Chart 3.1: Age and Sex Distribution of RHPs, N=91



3.6.2 Educational and Salary Level: A large proportion (89%) of RHPs had passed higher secondary while hardly 11% of them had obtained graduations before joining the course. Almost all RHPs (98.9%) received a salary ranging from Rs.10,000/- to Rs.20,000/- on monthly basis.

As per review of government documents, the starting salary of a RHP contracted under NRHM is fixed at Rs. 20,000/- per month

3.4 PERFORMANCE ANALYSIS OF DISTRICTS/SUB CENTERS WITH AND WITHOUT RHPs

In 2009-10, 92 RHPs got deployed at sub centers for the first time in the state, which increased to 370 in 2012-13.

The high focus districts have been given priority and selection of SCs for RHPs has been made on the basis of geographical spread, remoteness and availability of adequate infrastructure.

We observed that analysis of HMIS over a three years period from April 2010 till March 2013 shows an increasing trend in the percentage of mothers who had at least 3 ANC visits during the last pregnancy across 7 HFDs out of 14 HFDs in the state. In the other 7 HFDs, there was a fluctuating trend over the same period for the same performance indicator as shown in Table 3.1 below.

Table 3.1: Changing trend in key performance indicators for rural population before and after RHP deployment across HFDs including studied districts

Districts	Pregnant women registered for ANC				Mothers who had at least 3 Ante-Natal care visits during the last pregnancy (%)			
	Before RHP#	After RHP*			Before RHP#	After RHP*		
		2010-11	2011-12	2012-13		2010-11	2011-12	2012-13
Nagaon	40.4	98%	89%	98%	46.5	61%	72%	70%
Jorhat	46.7	88%	118%	88%	54.6	78%	71%	79%
Hailakandi	42.3	107%	79%	80%	52.3	**70%**	**72%**	**81%**
Golapara	42.0	49%	118%	111%	33.3	68%	67%	76%
Nalbari	43.7	78%	98%	98%	49.0	**68%**	**74%**	**76%**
Cachar	38.8	132%	81%	115%	51.1	53%	64%	58%
Darrang	43.7	94%	120%	121%	39.6	67%	65%	68%
Karimganj	36.2	108%	108%	64%	42.8	**58%**	**59%**	**105%**
Bongaigaon	35.8	180%	108%	104%	33.2	59%	59%	72%
Dhemaji	26.8	94%	97%	95%	28.3	**82%**	**87%**	**90%**
Dhubri	17.2	113%	118%	119%	18.9	**66%**	**71%**	**80%**
Karbi Anglong	33.1	101%	112%	103%	37.5	**54%**	**60%**	**63%**
Kokhrajhar	20.3	91%	102%	92%	25.3	**68%**	**68%**	**70%**
NC Hills	33.1	89%	109%	DNA	21.9	51%	56%	DNA

#Source: DLHS-3 (2007-08); * Source: HMIS, 2010-11; 2011-12; 2012-13

Table 3.2: Distribution of Sub Centers and Availability of RHPs at SC across all districts

District	2008-09		2009-10		2010-11		2011-12		2012-13	
	Total SC		Total SC	RHP SC	Total SC	RHP SC	Total SC	RHP SC	Total SC	RHP SC
Baksa	159		157	16	157	22	157	11	157	11
Barpeta	264		264	0	264	0	264	3	264	3
Bongaigaon	58		87	0	87	0	61	13	66	13
Cachar	269		269	2	269	6	270	11	270	11
Chirang	76		76	20	76	20	76	2	76	2
Darrang	163		163	0	163	4	170	8	170	9
Dhemaji	98		98	2	98	3	98	7	98	8
Dhubri	246		246	10	246	18	246	19	246	28
Dibrugarh	240		231	0	231	0	231	3	231	52
Goalpara	151		151	0	151	6	151	16	151	19
Golaghat	144		144	0	144	0	144	6	144	5
Hailakandi	105		105	6	105	16	105	13	105	7
Jorhat	142		143	1	143	3	144	9	144	12
Kamrup Metro	52		51	0	51	0	51	3	51	2
Kamrup Rural	298		280	0	280	0	280	10	280	22
Karimganj	217		217	6	217	17	221	18	221	22
Karbi Anglong	103		145	11	145	24	152	21	152	22
Kokhrajhar	163		159	6	159	19	159	18	159	21
Lakhimpur	156		156	0	156	0	156	8	156	12
Morigaon	125		123	0	123	0	123	10	123	11
Nagaon	368		349	0	349	4	357	8	357	23
Nalbari	121		121	0	121	4	121	11	121	10
NC Hills/Dima Hasao	65		65	6	65	9	65	7	65	6
Sivasagar	222		219	0	219	0	219	6	219	7
Sonitpur	281		279	0	279	0	277	4	277	13
Tinsukia	164		164	2	164	2	164	7	164	12
Udalguri	142		142	4	142	4	142	8	142	6
	4592		**4604**	**92**	**4604**	**181**	**4604**	**260**	**4609**	**370**

Before deployment of RHPs by the State Government i.e prior to 2008-09, there was no record about provision of OPD services in these sub centers as the monitoring of services in sub centers started from 2009-10 onwards with deployment of RHPs.

The trend in the number of OPD cases treated at sub centers with RHP & Non-RHP in the past three years period (April 2010 till March 2013) is given in Table 3.6 and Chart 3.1 below.There has been an increasing trend in the number of OPD cases treated at RHP sub centers over the years compared sub centers without RHPs from 2010 till 2012. However in 2012-13 there has been decrease in the number of OPD cases at RHP sub centers as compared to those without RHPs and the reasons need to be explored.

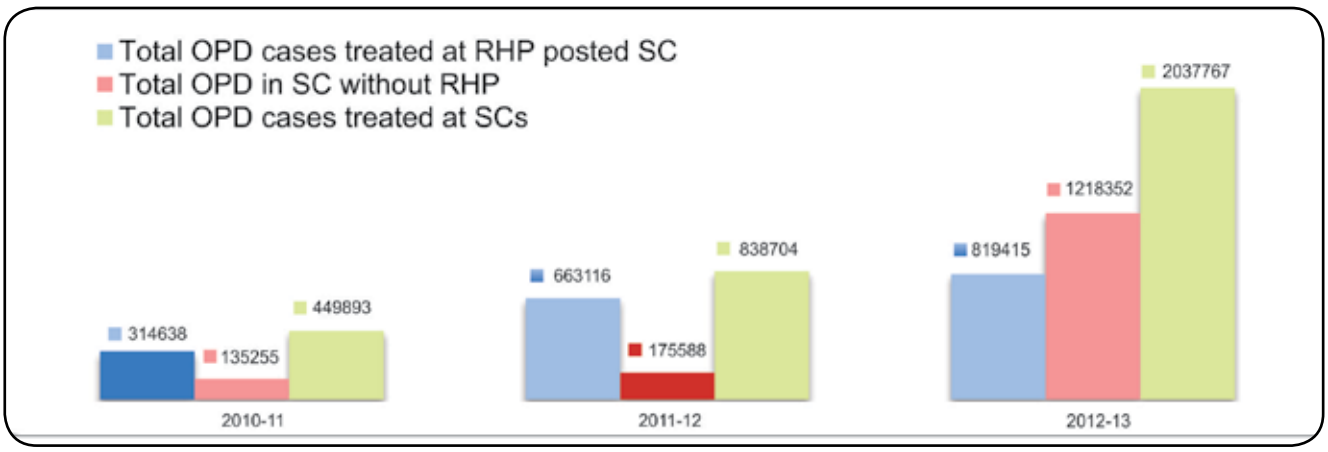
The number of OPD cases treated by RHPs posted sub centers in 2010-11 was 314638 while in sub centers without RHPs; the number of OPD cases treated was 135255. Sub centers with RHPs contributed 69% of the total OPD cases treated at all sub centers across the state in the year 2010-11; while in 2011-12; the contribution was 79% of the total OPD cases; while in 2012-13; proportion of contribution has fallen down to 40%.

Except in Dibrugarh, the average monthly OPD cases in an RHP SC are far more than that of a Non-RHP SC. The highest average monthly OPD in an RHP SC is 518 during 2012-13 in Hailakandi District.

Table 3.3: Comparative Analysis of OPD performance of Sub Centers with and without RHPs

District	2010-11		2011-12		2012-13	
	Average Monthly OPD		Average Monthly OPD		Average Monthly OPD	
	RHP SCs	Non-RHP SCs	RHP SCs	Non-RHP SCs	RHP SCs	Non-RHP SCs
Baksa	54	1	173	3	261	23
Barpeta		0	178	1	287	32
Bongaigaon		11	303	11	380	25
Cachar	212	3	276	4	365	22
Chirang	0	0	75	5	346	8
Darrang	149	2	239	2	374	31
Dhemaji	298	0	199	2	234	32
Dhubri	181	12	345	9	232	13
Dibrugarh		0	73	1	7	21
Goalpara	302	2	226	3	208	24
Golaghat		0	102	2	219	37
Hailakandi	107	0	308	0	516	20
Jorhat	196	1	159	1	179	17
Kamrup Metro		0	42	1	252	19
Kamrup Rural		0	289	1	132	39
Karimganj	133	12	240	5	229	21
Karbi Anglong	42	6	135	3	168	19
Kokhrajhar	81	9	207	6	128	35
Lakhimpur		0	251	0	123	36
Morigaon		0	158	10	276	25
Nagaon	106	1	231	2	133	2
Nalbari	256	6	209	7	352	23
NC Hills/Dima Hasao	67	2	105	0	119	60
Sivasagar		2	233	4	166	34
Sonitpur		0	32	2	81	18
Tinsukia	315	0	112	7	127	19
Udalguri	180	0	161	3	267	22
State Average	**145**	**3**	**213**	**3**	**185**	**24**

Chart 3.2: Trend in the OPD cases treated at SCs with RHPs and SCs without RHPs over the past 3 years (2010-11, 2011-12, 2012-13)



After the deployment of RHPs, deliveries at sub centers started taking place. In September 2011, 291 deliveries were conducted in 69 sub centers, which rose to 665 in 155 sub centers during January 2012.

The trend in institutional deliveries conducted at RHP sub centers and non-RHPs sub centers in the past three years period w.e.f. April 2010 till March 2013 is given in Chart 3.3. It is observed that there has been a significant increasing trend in the number of deliveries conducted at RHP sub centers over the past years as compared to those sub centers without RHPs, starting from the year 2011 onwards till 2013.

The number of institutional deliveries conducted by RHP sub centers in 2010-11 was 247 while in sub centers without RHPs; the number of deliveries conducted was 2037, contributing only 10% of the total deliveries conducted at all sub centers across the states in the year 2010-11.

This trend however has changed. In 2011-12 the sub centers with RHPs contributed 61% of the total sub center deliveries and in 2012-13; the proportion of contribution has increased significantly to 93%.

Table 3.4: Comparative Analysis of ID performance of Sub Centers with and without RHP

Districts	2010-11		2011-12		2012-13	
	No. of IDs per year		No. of IDs per year		No. of IDs per year	
	RHP SCs	Non-RHP SCs	RHP SCs	Non-RHP SCs	RHP SCs	Non-RHP SCs
Baksa	5	7	218	33	690	0
Barpeta	0	0	24	5	230	0
Bongaigaon	14	108	399	69	558	0
Cachar	0	21	162	52	376	0
Chirang	0	0	36	15	139	29
Darrang	0	20	97	17	515	
Dhemaji	12	0	147	54	573	24
Dhubri	6	603	589	854	1087	300
Dibrugarh	0	0	0	28	72	34
Goalpara	27	0	689	6	1050	4
Golaghat	1	71	33	78	147	0
Hailakandi	0	0	59	0	300	0
Jorhat	34	5	73	1	351	0
Kamrup Metro	0	0	7	9	26	0
Kamrup Rural	16	0	189	27	298	89
Karimganj	0	387	225	378	692	53
Karbi Anglong	19	177	318	74	741	1
Kokhrajhar	45	550	473	171	381	6
Lakhimpur	31	0	355	41	650	305
Morigaon	0	0	69	168	272	0
Nagaon	0	16	61	42	1172	9
Nalbari	13	31	74	121	231	0
NC Hills/Dima Hasao	4	0	14	0	67	0
Sivasagar	0	41	29	250	92	1
Sonitpur	0	0	9	76	155	0
Tinsukia	4	0	32	87	386	1
Udalguri	17	0	98	59	312	0
TOTAL	**247**	**2037**	**4478**	**2786**	**11563**	**856**

Chart 3.3: Trend in deliveries conducted at RHP sub centers and non-RHP sub centers over the past 3 years (2010-11, 2011-12, 2012-13)

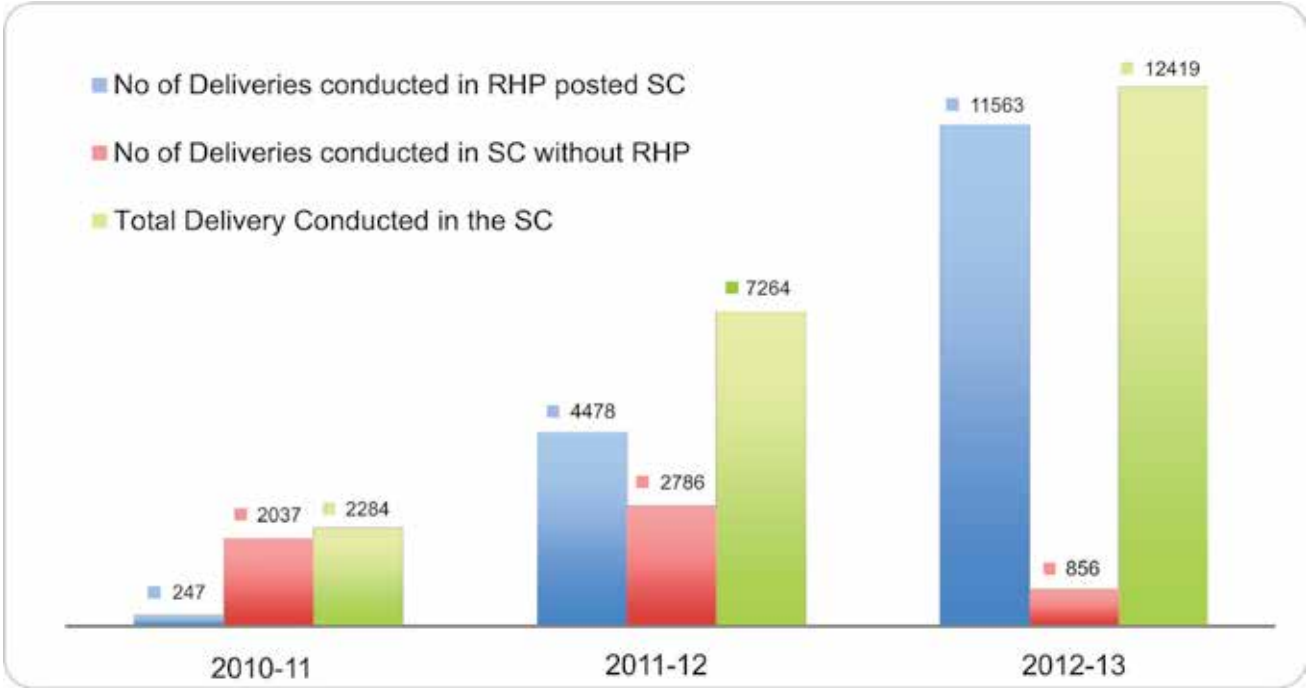
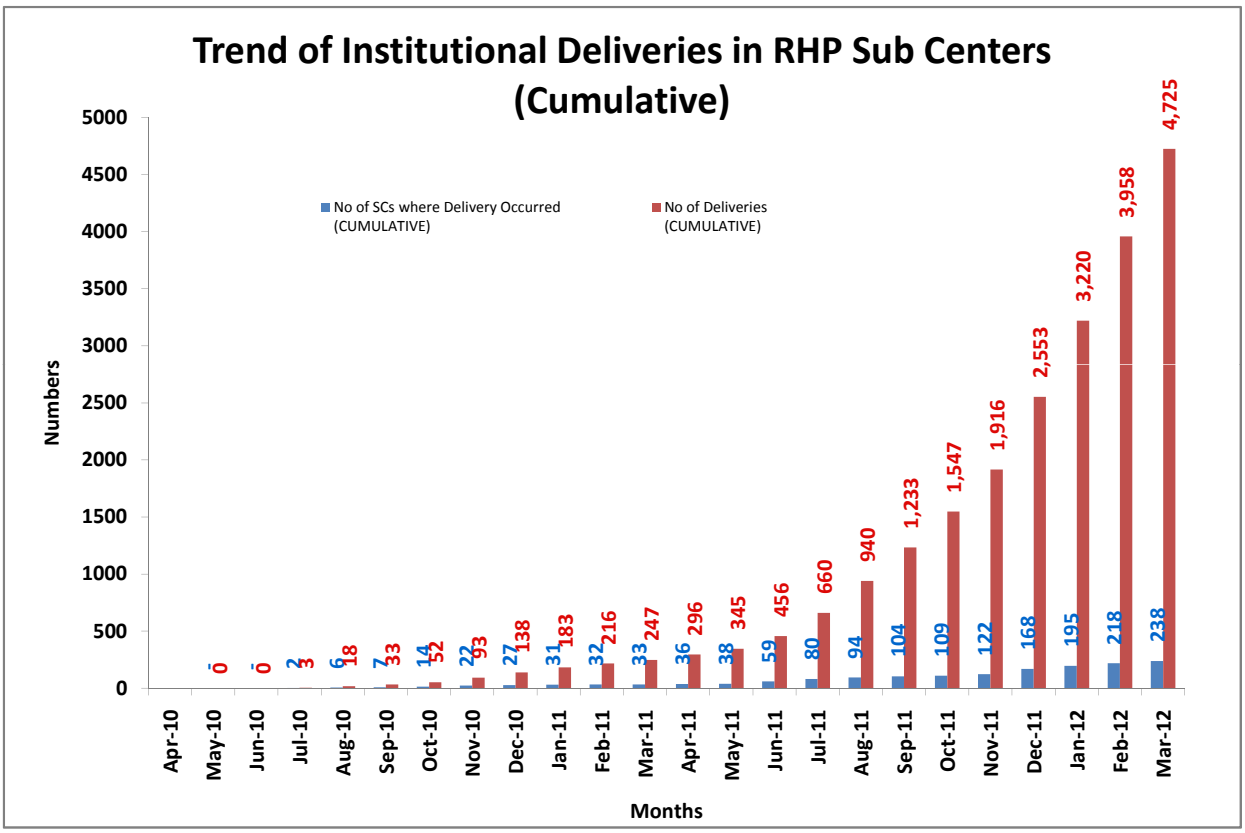


Chart 3.4: Month-wise trend of deliveries conducted by RHPs at Sub Centers



3.5 SERVICE DELIVERY AT SUB CENTERS

Provision of OPD services: RHPs responded that they were engaged in various activities at health facilities. Under provision of OPD services, care was provided for four broad categories of cases namely minor ailments, communicable diseases, non-communicable diseases and emergency cases. Substantial number (95.6%) of RHPs stated that they provided symptomatic management of minor ailments (common cold, fever, diarrhea etc.); and 94.5% of them had provided non-communicable diseases (diabetes, hypertension etc.) while 39.6% of them responded that they treated communicable diseases (TB, Malaria etc.) as well.

Minor surgical procedures like stitches for cuts & injuries, incision and drainage of abscesses were done by RHP alone and the number of minor surgeries was 7-8 in the last quarter.

Table 3.5: Categorization of OPD cases managed by RHPs

Type of response	Categorization Of OPD cases			
	Minor Ailments	Communicable Diseases	Non-communicable diseases	Emergency Cases
Yes	87 (95.6%)	36 (39.6%)	86 (94.5%)	0
No	4 (4.4%)	55 (60.4%)	5 (5.5%)	88 (96.7%)

Provision of ANC services: Under ANC services provided by RHPs, we broadly classified the activities as (i) conducting Physical Examination (ii) laboratory investigations and (iii) specific services. Majority (94.5%) of RHPs stated that they conducted physical examinations during ANC check up. Physical examination conducted by RHPs comprised of lower abdominal examination, identifying signs of anemia etc. 79% of RHPs conducted laboratory services i.e. routine blood and urine tests for pregnant women while 54.9% of them were involved in provision of other ANC related services i.e. distribution of IFA tablets and giving T.T injections.

Table 3.6: Types of ANC services provided by RHPs

Type of response	Types of ANC services		
	Physical Examination	Lab investigation	Services Provided
Yes	86 (94.5%)	72 (79%)	50 (54.9%)
No	2 (2.2%)	15 (16.5%)	17 (18.7%)

Institutional Deliveries: Majority (94.5%) of RHPs responded that they conducted institutional deliveries at health facilities.

Quality of Services: Though 94.5% of the RHPs conduct deliveries, only 19.8% of them used partograph during labor. Majority (92.3%) had identified and referred high-risk pregnant women to higher health facilities. Home deliveries were reported by 13.2% of RHPs.

Table 3.7: Deliveries' related response by RHPs

Type of response	Deliveries related Indicators			
	Conduct ID	Use of Partograph	Identification and referral of high risk women	Home deliveries
Yes	86 (94.5%)	17 (19.8%)	84 (92.3%)	12 (13.2%)
No	5 (5.5%)	69 (80.2%)	5 (5.5%)	79 (86.8%)

3.6 DAILY ACTIVITIES AT SUB CENTERS

Day-wise activities of RHPs showed that almost all RHPs (97.8% to 100%) had provided OPD services on all days of the week from Monday to Saturday. Nearly 40% of them had provided ANC services on all days of the week while 39.6% to 41.8% of them had conducted institutional deliveries.

3.7 TRAINING RECEIVED BY RHPs

Of the total 91 RHPs interviewed, only 44 RHPs (48.4%) said that they had received some sort of in-service training since they had been posted at the sub-center. 66 (72.5%) RHPs said that they felt the need for further trainings to update their current levels of knowledge and skills.

Some of the responses of RHPs about the type of trainings required are given below:

- "I need training on IUCD to improve my skills"
- "I need to be trained on IUCD, RNTCP"
- "I need training on Non-Communicable Disease"
- "I need trainings on NSSK, IMNCI, Copper T, F-IMNCI, S.B.A Training Needed"
- "More trainings are required mainly for revision, getting up-to-date information and to enhance relevant knowledge"

Table 3.8: Daily activities of RHPs (N=91)

Weekdays	OPD	Minor Surgery	Visits to another SC	ANC	ID	PNC	FP	Record Maintenance
Monday	90 (98.9%)	9 (9.9%)	NA	36 (39.6%)	36 (39.6%)	31 (34.1%)	2 (2.2%)	28 (30.8%)
Tuesday	91 (100%)	9 (9.9%)	NA	38 (41.8%)	36 (39.6%)	32 (35.2%)	1 (1.1%)	27 (29.7%)
Wednesday	89 (97.8%)	7 (7.7%)	1 (1.1%)	37 (40.7%)	37 (40.7%)	32 (35.2%)	21 (23.1%)	20 (22%)
Thursday	90 (97.8%)	7 (7.7%)	NA	36 (39.6%)	36 (39.6%)	31 (34.1%)	1 (1.1%)	23 (25.3%)
Friday	90 (98.9%)	8 (8.8%)	1 (1.1%)	37 (40.7%)	34 (37.4%)	30 (33%)	2 (2.2%)	23 (25.3%)
Saturday	90 (98.9%)	8 (8.8%)	NA	34 (40.7%)	34 (37.4%)	31 (33%)	4 (2.2%)	22 (25.3%)
Sunday	1 (5.6%)	1 (5.6%)	NA	2 (11.1%)	15 (83.3%)	1 (5.6%)	1 (5.6%)	NA

Table 3.9: Daily activities of ANMs (N=108)

Weekdays	OPD	ANC	Immunization	Outreach services	ID/HD	PNC	FP	VHND	Record maintenance	Home visits
Mon	5 (56%)	7 (7.7%)	1 (1.1%)	25 (27.5%)	9 (9.9%)	6 (6.6%)	2 (2.2%)	NA	9 (9.9%)	38 (41.8%)
Tue	65 (71.4%)	16 (17.6%)	2 (2.2%)	15 (16.5%)	11 (12.1%)	6 (6.6%)	3 (3.3%)	NA	8 (8.8%)	20 (22%)
Wed	14 (15.4%)	4 (4.4%)	78 (85.7%)	10 (11%)	6 (6.6%)	3 (3.3%)	24 (26.4%)	3 (3.3%)	NA	1 (1.1%)
Thu	46 (50.5%)	5 (5.5%)	1 (1.1%)	27 (29.7%)	6 (6.6%)	5 (5.5%)	1 (1.1%)	NA	7 (7.7%)	32 (35.2%)
Fri	59 (64.8%)	15 (16.5%)	1 (1.1%)	21 (23.1%)	9 (9.9%)	9 (9.9%)	2 (2.2%)	NA	6 (6.6%)	12 (13.2%)
Sat	48 (52.7%)	7 (7.7%)	10 (11%)	40 (22%)	5 (5.5)	4 (4.4%)	6 (6.6%)	NA	3 (10%)	15 (16.4%)
Sun	1 (1.1%)	1 (1.1%)	2 (2.2%)	NA	1 (1%)	1 (1.1%)	1 (1.1%)	NA	NA	NA

3.8 MONITORING AND SUPERVISORY SUPPORT TO RHPs

Type of Supervisor: Majority (54.9%) of RHPs responded that Sub-Divisional Medical & Health Officer (SDMHO) was the immediate supervisor. 23% cited Block Program Manager (BPM), while hardly 10% of RHPs stated that the PHC In-charge supervised them. 2% of them said their immediate supervisors were both the SDMHO and BPM.

Frequency of Supervisory Visits: 34.7% of RHPs responded that the immediate supervisor visited the health facility at least once in month. 18.7% of them stated that frequency of visits was once in 90 days, while 13.2% of RHPs said that visits were made once in 60 days.

Table 3.10: Distribution of frequency of supervisory visits to sub centers

Frequency of visits, N=78	No. / Percentage
Every 15 days	3 /3.3%
Once in 30 days	34 / 34.7%
Once in 60 days	12/ 13.2%
Once in 90 days	17/ 18.7%
Others	18/ 19.8%

Type of Supervisory Support: 78 RHPs (85.7%) stated that they received technical and/or managerial support from their immediate supervisor during their visits. Of these 78 respondents, 76 (97.4%) of them found the support helpful in delivering their routine activities. 79 (86.8%) of them attended review meetings organized at block /district level. While a majority of them (81%) said that sub-center performance was reviewed in these meetings, 15.2% of them felt that focus was mostly on program planning and management while 3 (3.8%) of them felt it was only about disease control program.

3.9 CHALLENGES FACED BY RHPs

86 RHPs (94.5%) felt that lack of residential quarters in and around the facilities was one of the major challenges. Non-availability of referral transport facilities was cited as another challenge by 84 RHPs (92.3%). The third challenge was the location of facilities as stated by 47 RHPs (51.6%). 87.9% (80 RHPs) said that lack of good coordination and support from health staffs of higher health facilities was another challenge that they faced.

However, a majority (60.4%) of them responded that drug supply was regular with only few instances of drug stock out.

Location of Posting Place: The RHPs interviewed in Hailakandi and Karimganj gave varied responses when asked about the location of the sub centers and problems faced in communication.

When asked for comments on their posting place, a 26 year old male RHP posted at one of sub-center in Hailakandi district said that *"The local people are illiterate and aggressive; this place is so far away from my home and home district. There is no residential facility at the sub center for me."*

- "The district and this sub-center are very far from my home district, here the locals do not understand Assamese, and so I face a lot of problem in communication. Also they are very reluctant to rent their house to outsiders like us"
- "This area is far away from home and no rented house is available in surrounding villages"
- "This sub-center is located very far away from my home; and it is not a good place to stay. The dialect used is very different from Assamese, so there is lot of problem in oral communication with patients and community."

However, the RHPs from Jorhat district had a different story to tell as far as location of their postings was concerned.

- "I sometimes feel very much insecure due to the interior location of this center, which is at the border area of Nagaland."

- "The sub-center was submerged three times due to flood since I got posted here. So, definitely the location of this center is a big problem"
- "I faced challenges in conducting deliveries due to lack of running water supply and generator"
- "The location of posting is too far away from my hometown"

"We do not have any Grade-IV cleaning staff and there are no residential quarters and store room for medicines etc. There is lack of water supply and referral transport provisions. One MPW is posted here but no extra room and furniture to provide services. Proper labor room is also required for hygienic delivery"

3.10 AREAS FOR IMPROVEMENTS IN SERVICE DELIVERY

Majority of RHPs (93.4%) stated that physical infrastructure including availability of residential quarters or arrangements for accommodation top the areas for improvements in health facilities.

70 RHPs (76.9%) of them stated that additional human resource was required i.e. full time sweeper and/or security guard to resolve the issues around cleanliness, hygiene and to address the security concerns faced by female RHPs and female health worker (ANM).

- "Delivery related equipment like Baby Warmer, Oxygen Cylinder and two-bed labor room should be provided"
- "For safety and security purposes, one 4th Grade employee should be appointed"
- "Necessary delivery equipment should be provided"
- "Quarter should be provided to the RHP for 24x7 hours service delivery."
- "Scope for knowledge utilization - there should be a provision for the RHPs to work at higher facilities; so that they get an opportunity to manage various other diseases, which would help them to remember what they had learned"

"The higher authorities should visit our sub-center for observation of overall performance and give advice for further improvement of services. We want our status as M.O and Dr. Prefix. The Government should give proper facilities to deliver our services. We are conducting deliveries without proper facilities e.g.- Radiant Baby Warmer, O2 Cylinder, Residential Facilities for staying, generator for 24 hours electricity, and adequate support staff. We are also facing problems regarding lab services, medicine dispensation etc. That is why we have requested higher authorities to post one Lab Technician and one Pharmacist at our Sub-Center"

- "Provide running water, continued electricity supply, provision for extra OPD Room and Labor Room, adequate furniture. Post Pharmacist, another regular ANM, sweeper. Ensure availability of one extra delivery bed, Suction Machine, Oxygen Cylinder, BP Instruments, Glucometer, drugs that are related to delivery, baby warmer, adequate

Table 3.11: Distribution of RHPs by their responses on areas for improvements in service delivery

Areas for Improvement, N= 91	Number	Percentage
Physical Infrastructure	85	93.4
Water/electricity	44	48.4
Referral & transport	29	31.9
Drug supply	10	11
Training required & staff coordination	22	24.2
Manpower	70	76.9
Others	9	9.9

delivery instruments. Additional trainings required for RHP about New Born Care, Copper-T Insertion etc."

- "We need more manpower, at least 2 Nurses, Sweeper and Chowkidar; the S.C fund has not been released till now; There is currently no OPD Table, Patient-Examination Bed, Saline Stand, BP Apparatus, Stethoscope, Weighing Machine, no Running Water Facilities, no Electricity Facility, no Boundary Wall, no Staff Quarter, no Patient Waiting Room."

04 CHAPTER

Stakeholders' Perception

4.1 PERCEPTION OF STATE AND DISTRICT GOVERNMENT OFFICIALS ON THE RHP MODEL

RHP Model:

Overall officials commented that the RHP model is a good initiative for providing health care in rural areas of the state. The most important change has been the people's perceptions towards the sub centers. There has been a positive impression about range and quality of services after deployment of RHPs, who act as a bridge between the MBBS doctor available at the PHCs and frontline health worker i.e. ANM at sub centers.

There has been remarkable increase in the number of OPD cases and initiation of institutional deliveries at sub centers after placement of RHPs. It has made a big difference in sub centers located in remote, interior and difficult areas that has no access to proper health care services. The influence of informal non-qualified care providers among the illiterate villagers has been decreasing with the availability of RHPs and adequate supply of drugs.

Many of the officials felt that RHP model could be scaled up provided they are well trained and fully equipped to deliver services as prescribed. Few of them felt that since knowledge imparted to RHPs is not comprehensive; regular refresher and CME would be required.

Selection, Recruitment, Posting and Transfer of RHP:

Based on the merit lists of candidates in the DMRHC and the available place of postings in sub centers, which are published in NRHM website; the candidates are called in and selected through counseling sessions in which candidates choose the place of posting from lists of vacancies and appointment letter is generated on the spot. Few RHPs have been transferred based on mutual consent basis. This system has built confidence among candidates regarding transparency in the recruitment process.

The priority of postings is based on the geographical accessibility (i.e. difficult, most difficult and inaccessible areas) and particularly in high focus districts in the state.

As of March 2013; 370 RHPs have been registered and posted under NRHM at the sub centers. Two more medical institutes - one at Silchar and one at Barpeta are under construction for starting the DRMHC.

Strategy for retention of RHPs in current facility:

Currently, there is no retention strategy in place for RHPs; though steps are being undertaken in positive directions. Residential quarters are being proposed in PIP 2013-14 and installation of solar facilities in sub centers with no electricity facilities is being planned.

Trainings imparted to RHPs:

One-day induction training program covering various RCH components i.e. Child Health, Maternal health, Family Planning and other innovative schemes under NRHM was imparted to RHPs at the time of deployment.

Impact of RHPs in public health functioning:

After RHPs have been posted, OPD caseload and institutional deliveries in sub centers have increased substantially. All the 3 interviewed state officials felt that RHPs have made a positive impact on health status of the rural population.

HMIS reported 19,68,793 OPD cases and 12,684 institutional deliveries conducted in sub centers in the last 3 years since deployment of RHPs in April 2010.

Challenges in service delivery & Strategies to tackle the challenges:

(a) Restrictions in prescribing medicines beyond the list of medicines allowed as per "Assam Rural Health Regulatory Authority Act 2004".

(b) Lack of residential accommodation.

(c) 24 hours power supply in sub centers.

(d) Lack of access to safe drinking water.

Some of the strategies identified to tackle the challenges are listed as follows:

(a) MCI recognition for the DMRHC course is needed

(b) Residential quarter to be provided. In terms of other infrastructure support, solar facilities for uninterrupted power supply along with provision of lifesaver water filter were suggested.

c) A Refresher training program in Child health, Maternal Health, Family Planning and administrative procedures etc. Three days integrated Training Program to cover all programmatic, technical areas under NRHM may be provided. SBA training has been planned for RHPs for better delivery outcome and care.

4.2 PERCEPTION OF FACULTY AND STUDENTS ABOUT THE COURSE:

During interaction with the faculty and students, the following felt-needs emerged:

(a) The current Diploma Course should be upgraded to a Bachelor's Degree Course to facilitate interested students in their pursuit for a Master's Course.

(b) Standard textbooks should be formulated and printed in consultation with the Assam Rural Health Regulatory Authority under the supervision of the Srimanta Sankardeva University of Health Science.

(c) The internship period should be increased from 6 months to 1 year.

(d) Lack of adequate faculty, especially the senior teacher positions, is hampering the teaching program and there is a need to expedite the recruitment process or provide provisions for promotion of the existing junior teachers.

(e) Faculty Development Programs for ongoing up-gradation of knowledge and skills.

(f) Urgent need to construct hostels for boys, quarters for faculty and increase the capacity of the girl's hostel to 150 beds.

(g) There should be Continuing Medical Education Programs and Refresher Trainings for the RHPs posted in the field.

(h) The State Government should consider creating a cadre in the regular services to absorb the contractual RHPs in the long run as well as frame a proper map for career progression path and further education.

4.3 PERCEPTION OF RHPs ABOUT THE DMRHC

Source of Information and reasons for pursuing the RHP course:

Majority (86.8%) of the RHPs heard about the course through print media while 35.2% of them heard it from their friends and relatives. Very few (2.2%) heard it on TV.

Various reasons were cited by RHPs for pursuing the RHP course:

(a) Majority of them (67%) wanted to serve the rural community

(b) 23% of them considered it as a good job opportunity

(c) 18.7% of them thought that it improved their social status

(d) 12% of them felt that it would provide an opportunity to work near to their own hometown.

Curriculum:

On being asked about the RHP course curriculum, majority mentioned about the duration of course including internship, the subjects taught in different years of study etc. Some of them compared the course with MBBS course, highlighting the main differences in subjects taught etc.

- "The duration of DMRHC is 3½ years. Subjects are similar to MBBS but the duration is less. In 1st year, the papers are Comumminity Medicine Part 1 Biochemistry, Physiology & Anatomy. In 2nd year, the papers are Comumminity Medicine Part-II, Pathology, Medicine, Embryology, Ophthalmology, ENT, Dermatology. In 3rd year, I studied Medicine, Ophthalmology, ENT, Surgery, Obstetric and Gynecology, Orthopedics. Practical sessions are there for all the subjects".

On asked about the course, a 27-year-old RHP responded "The course curriculum is similar to MBBS except major Surgery skill and Forensic Medicine. The 3-year course is compact and subjects taught are adequate, but the volume of the whole course is quite large. Internship duration of 6 months - 5 month at Jorhat Medical College and 1 month at State dispensary - may be increased"

- "Compact course of Medical Science and is almost equal to MBBS but Forensic Medicine and Major Surgery has not been included in the course for Rural Health Care; the course curriculum is helpful for delivering services meant for rural population at sub centers"
- "The course lacks Forensic Medicine and Major Surgery while everything else is equal to MBBS; the course is compact though subjects like Dermatology and Psychiatry would have been added"
- "The Course is very concise, needs some elaboration"; "Sufficient for serving in rural areas"

Summary of Responses: Similar responses were obtained across majority of respondents about the overall course curriculum and duration of course. Many opined that RHP course was more or less similar to MBBS course in terms of subjects and contents taught; the only major differences was the lack of few subjects namely Forensic Medicine, Major Surgery, Dermatology and Psychiatry and shortening of course by 2 years. Few of them suggested that duration of course might be extended with elaboration on Community Medicine, as well as addition of Dermatology and Psychiatry. However, majority responded that the RHP course was suitable and sufficient for serving in rural health settings.

A 26 year old lady RHP said "The course lacks Forensic Medicine and Major Surgery; it should have more intensive study on Community Medicine. It is a compact course as compared to MBBS, almost covering the syllabi of Medical and Health Care Service; I studied at JMC and the doctor of Civil Hospital taught us the subjects, and we felt the lack of permanent senior faculty. Hostel facilities were not adequate for both male and female students".

Helpfulness of RHP course in conducting their daily duties:

- "Helpful but needs more extended study. Higher Study / Bachelor Course on Rural Health Care needed has demanded by the RHP Association, but no action taken up by the Government".
- "Gynecology, Medicine Part helps in conducting my duties".

- Another RHP responded, "Medicine Part helps a lot in conducting my current duties, except one cancer case which I could not diagnosed"
- "Medicine and Obstetric & Gynecology was helpful. Pharmacology drugs reaction was also helpful"
- "It taught us more than we needed to know in order to conduct our duties".
- "Overall and ultimately I find it helpful, but we needed higher study. The Study prospect is limited right now"

Out of total 91 RHPs; 69 (75%) of them responded that the course duration of 3 and half years including internship was adequate. 84 (92.3%) of RHPs felt that the course contents were sufficient to deliver their daily activities at health facilities.

Summary of Responses: Similar responses were observed among majority of respondents who mentioned that Medicine, Obstetric and Gynecology theory and practical skills were helpful in conducting their duties at sub centers though they faced constraints in detecting and managing skin related diseases, performing surgical procedures and detecting cancer cases.

Some of the RHPs commented on the deficiencies in the course, which they observed after having worked at sub centers. A 32 year old male RHP who joined in 2011 said "Well and good for mostly Medicine related diseases. But not in surgical cases; also not helpful in detecting and treating any dermatological diseases"

Internship:

The individual's feedbacks on internship and its duration were sought and responses were put as verbatim. Some of the responses from RHPs are as follows:

- "Overall the internship was good and helpful, but we needed higher study. Presently, the study prospect is very limited".
- "Need some more time particularly for Community Medicine part";
- "The internship period was not sufficient. It should be for 1 Year"
- "Need some more time of internship, so that practical knowledge increases"
- "Sufficient if and only if they have to serve at rural areas".

Out of total 91 RHPs, 90 (98.9%) of them felt that internship duration of 6 months was not sufficient enough to properly skill them to perform all the required tasks at sub centers. Significant number of RHPs i.e. 88 (96.7%) found the course helpful in conducting the current duties.

Summary of Responses: Majority mentioned that the internship program was very helpful in delivering their routine duties. They opined that current duration of 6 months is not sufficient and may be extended to another 6 months so that practical skills and knowledge enhances on subjects namely Medicine, Obstetrics and Gynecology and Surgery for better delivering of services in remote and rural areas.

One RHP who joined the services in April, 2010 said "The internship period of 6 months was not sufficient to fully equip us to conduct our routine work at sub centers; it should be a minimum of 1 year period with more emphasis on medicine, obstetrics and surgery"

Mode of selection:

All the RHPs responded that the merit based selection considering the aggregate score of 12th standard board examination was the only method of selection for the course.

Method of recruitment:

Majority i.e. 84 (92.3%) of them responded that recruitment to the post was merit based while 13 (14.3%) of them stated that campus recruitment was conducted. 48 (52.7%) RHPs responded that the current facility was their first posting.

Period of working as RHP:

Of these 48 RHPs; 1 (2%) of them joined in 2009; 19 (39.5%) of them had been posted at the current facility since 2010 (January to December) while 24 (50%) of them had been working since 2011; 4 (8.3%) of them joined in 2012.

Location of sub centers, availability of residential facility & promotion avenues for RHPs:

50 (54.9%) of the RHPs responded that the current facility was not located in their respective home-district. 90 (98.9%) of them said that the state government did not provide any residential facility or quarter to them. 87 (95.6%) of them responded that there were no promotion avenues for the post.

When asked about his experiences regarding residential facilities, a 29-year-old male RHP said *"The government did not provide any residential quarter in the sub-center compound or in any government premise for us to stay. Therefore, we have to make our own arrangements and rent a house close to the center, which creates lot of problems for us. In the first place, the locals are not willing to rent us any place/house in this Muslim dominated conflict area and even when they do, they charge extra amount for outsiders like us. Moreover, there is language and dialect barrier between the locals, patients and us, who are mostly from Upper and North Assam region"*

4.4 ANMS' PERSPECTIVE

Background of ANMs:

All the ANMs were chosen from the SCs where they were co-located with RHPs. Of the 108 ANMs interviewed, more than half (58, 53.7%) of them were contractual employees while 50 (46.3%) belonged to regular cadre. Many of them (41, 38%) had been working for the past 5-10 years in the same position.

Changes in the functioning of sub centers after joining of RHPs:

Out of 108 ANMs interviewed, majority i.e. 77 (71%) of them mentioned that they had dispensed medicines prescribed by RHPs towards provision of OPD services at sub centers. Only 7.4% of ANMs had a role in treatment of minor ailments and none of them were involved in treatment of emergency OPD cases. In terms of provision of ANC services, majority of ANMs interviewed i.e. 94 (87%) conducted general physical examination (GPE) of antenatal cases while 61% of them said that they were involved in conducting deliveries in sub centers. Of the 66 ANMs who responded about use of partograph during labor, none of them had used it.

A large proportion of ANMs (95%) were involved in immunization; 93% of them conducted post natal follow up visits, while 82.4% of them were involved in family planning activities.

Substantial number of ANMs i.e. 45 (90%) out of 50 respondents said that they conducted hemoglobin tests for antenatal cases particularly and 88% of them conducted VHND sessions in the community.

Table 4.1: Role of ANMs in provision of services

Role of ANMs in provision of OPD services, N=108					
Maintain OPD record,	Dispensing medicines,	Treatment of minor ailments	Treatment of CD	Treatment of NCD	Treatment of Emergency OPD cases
Y=34; (31.4%) N=74	Y=77; **(71%)** N=31	Y=8; (7.4%) N=100	Y=2; (1.8%) N=106	Y=13; (12%) N=95	Y=0; N=108
Role of ANM in provision of ANC services/ID, N=108					
GPE	Lab services	Provision of IFA tablets/T.T	ANC registration	ID	Use of partograph, N=66
Y=94; (87%) N=14	Y=9; (8.3%) N=99	Y=9; (8.3%) N=99	Y=25; (23%) N=83	Y=66; (61%) N=42	Y=0; N=66
Role of ANM in provision of other services, N=108					
Identification and referral of high risk cases, N=66	Home deliveries	PNC visits	Duration of stay (hrs), N=100 a. <6 hrs b. >6hrs	Immunization	Family Planning
Y=0 N=66	Y=23; (21.2%) N=85	Y=100; (92.5%) N=8	a, Y=0 b, N=100	Y=101; (93.5%) N=7	Y=91;(82.4%) N=17
Role of ANM in doing the laboratory tests, VHND, N=50					
Overall lab tests, N=108	Urine tests	Hb tests	Pregnancy test	Malaria test	VHND, N=108
Y=50; (46%) N=58	Y=14; (28%) N=36	Y=45; (90%) N=5	Y=20; (40%) N=30	Y=15; (30%) N=35	Y=96; (88.8%) N=12

Out of 108 ANMs interviewed, majority i.e. 88 (81.4%) of them mentioned that they received support from RHPs in dispensing of medicines towards provision of OPD services at sub centers. In terms of provision of ANC services, majority of ANMs interviewed i.e. 98 (90.7%) said that RHPs assisted in doing the general physical examination (GPE) of antenatal cases and the same number said that RHPs conducted the deliveries in sub centers.

Table 4.2: Support of RHPs in provision of services

Support of RHPs in provision of OPD services, N=108					
Maintain OPD record	Dispensing medicines	Treatment of minor ailments	Treatment of CD	Treatment of NCD (Hypertension, DM)	Treatment of Emergency OPD cases
Y=41; (37.9%) N=67	Y=88;(81.4%) N=20	Y=9; (8.3%) N=99	Y=2;(N=1.8%) N=106	Y=1 (0.9%) N=107	Y=0 N=108
Support of RHPs in provision of ANC services, ID, N=108					
GPE	Lab services	Provision of IFA tablets/T.T	ANC registration	ID	Use of partograph, N=98
Y=98; (90.7%) N=10	Y=11;(10.1%) N=97	Y=4; (3.7%) N=104	Y=22; (20.3%) N=86	Y=98; (90.7%) N=10	Y=0; N=98
Support of RHPs in provision of other services, N=108					
Identification and referral of high risk cases, N=98	Home deliveries	PNC visits	Duration of stay (hrs), N=104	Immunization	Family Planning
Y=4; (4%) N=94	Y=13; (12%) N=95	Y=104; (96.2%) N=4	Y=0 N=104	Y=100; (92.5%) N=8	Y=101;(93.5%) N=7
Support of RHP in doing the laboratory tests, VHND, N=81					
Overall lab tests, N=108	Urine tests, N=81	Hb test	Pregnancy test	Malaria test	VHND, N=108
Y=81; (75%) N=27	Y=16;(19.7%) N=65	Y=39; (48%) N=42	Y=20;(24.6%) N=61	Y=5; (6.2%) N=76	Y=97; (89.8%) N=11

There was increase in uptake in almost all services provided at sub centers after joining of RHPs as reflected in table 3.16. Almost all, 104 (96.3%) of ANMs mentioned that OPD case loads has increased after joining of RHPs. 96 (88.9%) ANMs said that institutional deliveries have started in sub centers and numbers are increasing.

The ANMs feel that home deliveries have shown a decreasing trend subsequently.

Table 4.3: Change in service delivery (load) after joining of RHPs

Changes in service delivery (load) after joining of RHPs, N=108	Increase uptake	Decrease uptake	Remained same
OPD	104 (96.3%)	0	4 (3.7%)
ANC	104 (96.3%)	0	4 (3.7%)
Institutional delivery	96 (88.9%)	5 (4.6%)	3 (2.8%)
Home deliveries	3 (2.8%)	83 (76.9%)	17 (15.7%)
PNC	96 (88.9%)	2 (1.9%)	6 (5.6%)
Immunization	81 (75%)	2 (1.9%	19 (17.6%)
Family Planning	55 (50.9%)	6 (5.6%)	42 (38.9%)
Laboratory services	52 (48.1%)	11 (10.2%)	40 (37%)
Community processes including VHND, N=103	68 (63%)	1 (0.9%)	34 (31.5%)

Differences in knowledge/skills after having worked with RHPs:

Of the 108 ANMs interviewed, 102 (94.4%) of them responded that their knowledge and skills have improved after having worked with RHPs. Of these 102 ANMs, 71 (69.9%) of them got involved in management of OPD services, 51 (50%) of them got involved in conducting ANC check up, 69 (67.9%) of them started conducting deliveries either along with RHPs or sometimes without RHPs.

ANM's perceptions about the improvement in quality of services after joining of RHPs:

28 (25.9%) ANMs mentioned that there has been improvement in quality in providing delivery services and 13 (12%) of them responded that drug availability has improved after joining of RHPs.

4.5 BENEFICIARIES' PERCEPTION

A total of 166 beneficiaries (those who visited sub-centers for availing services) across 91 sub centers in 8 High Focus Districts were interviewed to document their perspectives on various issues pertinent to sub centers, service providers and service delivery.

Location of Sub Centers:

Of the 166 respondents, 150 (90.4%) felt that sub centers were strategically located in terms of geographical accessibility. 60 (36.1%) out of 150 respondents felt that they faced problems in accessing services from the sub centers, while the rest (54.8%) did not face any issues related to access.

Of the 166 beneficiaries, 23 (13.9%) of them had come to the sub-center for the first time while 142 (85.5%) were old patients

Denial of service:

Majority of them (150, 90.4%) did not face any sort of denial for services from the staff while 5 (3%) of them did face denial of services for various reasons.

Experience of beneficiaries on type of services availed:

48.2% of beneficiaries commented that they were given adequate information on the kind of services sought by them though majority (54.8%) stated that laboratory services available were poor.

Table 4.4: Experience of beneficiaries on infrastructure and service delivery

Infrastructure and service delivery, N=166	Very good	Good	Average	Poor	Very poor
Availability of sufficient information,	31 (18.7%)	80 (48.2%)	40 (24.1%)	1 (1.2%)	NA
Availability of lab service	2 (1.2%)	6 (3.6%)	49 (29.5%)	91 (54.8%)	11 (6.6%)
Promptness at medicine distribution center	13 (7.8%)	49 (29.5%)	69 (36.7%)	32 (19.3%)	3 (1.8%)
Availability of drugs at center	1 (0.6%)	51 (30.7%)	60 (36.1%)	44 (26.5%)	4 (2.4%)
Overall satisfaction with services	27 (16.3%)	56 (33.7%)	61 (36.7%)	15 (9%)	1 (0.6%)
Experience of previous visit on time spent on counseling, health check up	19 (11.4%)	54 (34.3%)	49 (29.5%)	28 (16.9%)	NA
Behavior and attitude of staffs	49 (29.5%)	95 (57.2%)	16 (9.6%)	1 (1.2%)	NA

Of the 89 beneficiaries who responded on waiting time at sub centers, 33 (19.9%) had to wait for a maximum of 5 minutes to avail services, while 24 (14.5%) of them had to wait for a duration of 5-10 minutes. 21 (12.7%) of them responded that were attended to immediately. 11 (6.6%) of them said that the staff attended to their needs within 10-30 minutes of waiting at reception.

On their previous visit, a majority of beneficiaries (141, 84.6%) mentioned that RHP provided the service, 20 (12%) said that ANMs had attended to their concerns while 2 (1.2%) of them said that MPWs had provided the service.

78 (47%) beneficiaries said that the attitude of RHPs towards them was very positive while 70 (42.2%) of them said that attitude of ANMs towards them was very positive. 25 (15%) of them said that attitude of both RHPs and ANMs was neutral towards them.

Majority i.e. 141 (84.9%) of beneficiaries said that RHPs provided the necessary service on the day of their visit to the sub center while 20 (12%) said that ANMs had attended to their needs.

Table 4.5: Attitude of service providers towards patients

Type of service provider	Very positive	Somewhat positive	Neutral	Somewhat negative
RHP	78 (47%)	57 (34.3%)	25 (15.1%)	1 (0.6%)
ANM	70 (42.2%)	60 (36.1%)	25 (15.1%)	4 (2.4%)

Table 4.6: Type of service provider who provided the service during the beneficiaries' day of visit, N=166

Type of service provider	Number	Percentage
RHP	141	84.9%
ANM	20	12%
MPW	2	1.8%

Table 4.7: Type of service provided by RHPs (N-166): Response of beneficiaries

Types of services provided	Number	Percentage
OPD	95	57.2%
ANC	60	36.1%
ID	28	16.8%
PNC	19	11.4%
Family Planning	20	12%
Laboratory Services	23	13.8%
Medicine Dispensation	8	4.8%

Table 4.8: Knowledge and skill of RHPs (N-166): Response of beneficiaries

Level	Very Good	Good	Average	Poor
Number	34	90	36	0, missing=6
Percentage	20.4%	54.2%	21.6%	

Majority of beneficiaries (95, 57.2%) said that RHPs had provided OPD service on the day of their visit to the center while 60 (36.1%) of them said that RHPs provided ANC check-up. Significantly 16% of them said that institutional delivery was being conducted at the center. Only 4.8% of them said that RHPs dispensed the medicines on their day of visit.

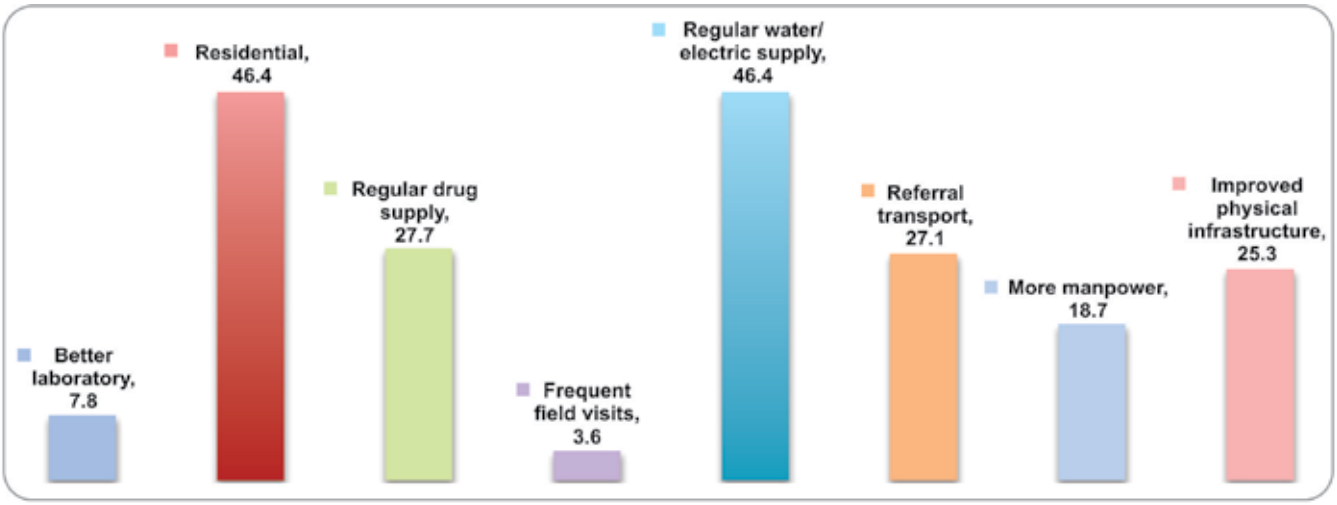
90 (54%) beneficiaries said that the knowledge and skill levels of RHPs was good, while 36 (21.6%) of them commented that their knowledge and skill was average.

Suggestions for Improvement of Service Delivery at Sub Centers:

46.4% of beneficiaries felt that provision of residential facility for RHPs and ANMs along with availability of regular water and electricity supply at sub centers were the top priorities to improve the functioning of sub centers. 27.1% of them suggested that other priority areas were to improve the drugs and logistics supply to ensure regular arrangements for referral transport systems.

Nearly 20% of them suggested that more staff were required to manage the center and 8% felt that laboratory services needs to be strengthened.

Chart 4.1: Respondent's suggestions for improving service delivery at SCs (N=166)



4.6 COMMUNITY'S PERCEPTION

A total of 21 Group discussions were held in 7 districts. The group was heterogeneous in nature comprising of both genders, different castes, social/marginalized groups, ASHAs, PRI and at least 2 women having a child up to 2 years of age.

Changes in terms of service delivery at the sub-center after joining of RHPs:

Prior to the RHPs, the sub centers were only a center for vaccination and ANC/PNC services but with the introduction of RHPs, diagnosis and treatment of common ailments are also being carried out. The RHPs are also managing accidental & emergency cases like burning, etc. RHPs are able to identify danger signs and refer the complicated cases. Some also added that availability of medicines has improved now.

Apart from the regular OPD services, many also reiterated that ANC/PNC services are now more systematic. Sub centers have now the capacity to conduct institutional deliveries. Home visits have also increased after the advent of RHPs. Absenteeism of staff has also reduced in the Sub centers where RHPs have been posted.

Some of the flood prone areas in Nagaon are frequently under the threat of waterborne diseases. Sub centers with RHPs are more equipped to handle the aftermath and alleviate the threat by providing health services to the diseased. It was also reported that RHPs have added to the awareness of rural population in Family Planning services and vaccination by providing counseling services to the people.

Outcome of services/treatment received from Sub-center before and after joining of RHPs:

Erstwhile, community people had to travel to far-located BPHCs and CHCs for the treatment of common ailments like RTI, Malaria etc., but now such services are all available at the sub centers. RHPs have been able to gain people's confidence, which is quite evident from the increasing OPD cases and Institutional deliveries over the last few years. Infant and Maternal mortalities have been reduced since the RHPs are able to identify danger signs and refer infants and mothers timely. The community increasingly avail ANC, PNC, immunization and family planning services at the sub centers.

Activities/tasks performed by different staff in Sub Centers:

OPD: In addition to clinical examination and prescription of medicines, RHP also maintains registers. ANM dispenses medicines and provides supportive services such as administering injections. MPW visits the field, prepares and brings the slides for laboratory investigation.

ANC: RHP primarily does the clinical examination while ANMs does the physical examination such as measuring height, weight, blood pressure, etc. in addition to administering TT injections. MPW does laboratory investigations such as Hb estimation, urine test and HCG test, etc.

Institutional deliveries: RHPs conduct institutional deliveries in the sub center while the ANMs and MPWs assisted in the same.

Home deliveries: ANMs in only a few sub centers reported of having conducted home deliveries. Most of them undertake home visits to provide PNC services where home deliveries have been done.

Outreach services: A few RHPs reported of organizing health camps while others reported of assisting Mobile Medical Units. Some RHPs also reported of doing no outreach service. ANM does the vaccination and counseling on family planning and commonly prevalent diseases in addition to providing PNC services. MPW does the screening of non-communicable diseases.

VHND: RHPs visited the VHNDs once in a while and gave advice to the pregnant women on ANC, nutrition and other health tips. ANMs motivated the pregnant women to improve nutrition and adopt family planning methods. MPW helped the ANMs in conducting VHNDs.

Laboratory tests: MPWs primarily performed all laboratory tests. They also made blood slides from the suspected cases during field visits and examined them in the sub center.

Others: RHPs advised the eligible couples on Family Planning methods.

Perception of community towards the services delivered by the sub center staff:

OPD: In addition to examining the patients and prescribing them medicines, RHPs also explain and educate people about their illness. RHPs also maintain the registers, while the ANMs dispense medicines prescribed by the RHPs.

ANC: RHPs conducts clinical examination systematically. Physical examination such as Height, Weight, BP Monitoring etc. was done by ANMs.

Institutional deliveries: RHPs conduct all the normal deliveries and give necessary advice on the same. ANMs assist them in these activities.

Home deliveries: Barring a few, none of the RHPs conduct home deliveries. However, some ANMs were reported to have conducted home deliveries.

Community/Home visits: RHPs conduct health camps in the community on nutrition and sanitation practices wherein the ANM assist them. Apart from this, ANMs also do community visits for doing ANC/ PNC and vaccination. MPW does the screening of non-communicable diseases during his visits.

VHND: Few RHPs participated in the VHNDs and educate the mothers on nutrition and sanitation practices, while ANMs assisted them in the same apart from organizing the whole event.

05 CHAPTER

Discussions

The RHP model, which was rolled out 3 years back, has shown improvements in the functioning of sub centers on various parameters as reflected in the study findings. However, there are areas of key concerns, which need to be addressed in context to the findings.

5.1 DEFICIENCIES IN RHP COURSE, CURRICULUM AND DURATION:

The existing course curriculum suited the requirements of RHP to conduct their daily activities at sub centers, though a significant proportion of RHPs were of the opinion that there needs to be more teaching on Medicine, Gynecology, both theory and practical. Most of them felt that the duration of internship needs to be extended by another 6 months since they picked up most of the skills during this hands-on learning period.

5.2 WEAK CAPACITY BUILDING AND SUPPORTIVE SUPERVISION:

The trainings imparted to RHPs is not adequate to fully equip them with technical and practical skills to carry out their routine as well as any other emergency duties in a proper manner without compromising the quality of services. Majority of them did not receive any training related to maternal and child health, family planning and diseases control programs.

5.3 IMPROVED ACCESSS AND UTILIZATION OF SERVICES:

The study has showed that there has been remarkable increase in the range of services, primarily cases treated in the OPD and institutional deliveries since the introduction of RHPs at sub centers. Majority of RHPs had conducted institutional deliveries at their health facilities. Sub centers with RHPs provided a wide range of services i.e. OPD (symptomatic treatment of minor ailments, diagnosis, referral and treatment of communicable diseases, screening and treatment for non-communicable diseases, management of emergency cases, minor surgical procedures etc.), ANC services (GPE, distribution of iron folic acid tablets, TT injections, urine/hemoglobin tests etc.), institutional deliveries, immunization service, outreach services i.e. VHND, home visits for PNC, FP counseling and provision of condoms, contraceptives etc.

All RHPs exclusively provided OPD services on working days in a week (Monday to Saturday) with an average daily OPD caseload of 25-30. Nearly 40% of them had provided ANC services on all days of the week while 39.6% to 41.8% of them had conducted institutional deliveries.

Sub centers with RHPs contributed 69% of the total OPD cases treated at all sub centers across the states in the year 2010-11; while in 2012-13; these sub centers with RHPs contributed 79% of the total OPD cases. However, the OPD caseload treated at sub centers with RHPs had decreased in 2012-13.

The contribution of sub centers with RHPs towards cumulative number of institutional deliveries by sub centers in respective districts has remarkably increased from a mere 10% in 2010 to 61% in 2011-12 and 93% in 2012-13. Majority of RHPs had conducted institutional deliveries at health facilities. This is reflective of the confidence and perception of patients to visit and access the services provided by RHPs.

5.4 INFRASTRUCTURE GAPS AND OTHER SUPPORT SYSTEM:

The gaps in physical infrastructure in terms of lack of adequate beds, labor room, furniture, basic amenities including regular water and electric supply had affected the service delivery to some extent.

5.5 POTENTIAL FOR SCALING UP THE RHP MODEL AND REPLICATION IN OTHER STATES:

Across all HFDs wherever RHPs had been deployed, the number of cumulative OPD cases and institutional deliveries also have remarkably increased in all sub centers having RHPs. Taking the perspective of beneficiaries' into account backed by secondary data, the sub centers with RHPs indeed showed a huge difference in terms of accessibility to all kinds of preventive, primary health care services. In addition to these, beneficiaries feel that the quality of services with respect to OPD, ANC and deliveries as well as availability of drugs has also improved a lot after the RHPs have joined.

Beneficiaries have started gaining confidence in the public health care delivery systems and they want to visit the center for consultation or for seeking services as they find the attitude, knowledge and skills level to be quite good and exceed their level of expectations as opposed to earlier perceptions of sub centers before the RHPs were posted. The RHPs are considered as "rural doctors" who have made a huge difference in the manner in which the public health services are made easily accessible to the rural community at the most peripheral health facilities.

When we take all these multifaceted aspects into consideration, it could be stated that the RHP model initiated by the Assam State Government should be scaled up through generation of more graduates who would become RHPs so that the remaining 92% of sub centers functioning without RHPs may improve their functionality for better delivery of services and health outcomes. The potential of replication in other states may be taken up considering the effectiveness of this model towards better health for the rural population.

06 CHAPTER

Conclusions

6.1 UPGRADE THE DIPLOMA COURSE INTO A BACHELOR'S DEGREE COURSE:

The existing Diploma course has limited scope for students wanting to pursue higher studies and for better career opportunities. Its conversion to a Bachelor's degree would not only help in up-gradation of the course but also enhance the scope for increased uptake to bridge the gap of skilled professionals in rural and remote areas. A Bachelor's degree would also facilitate interested students to pursue a Master's degree for professional progression.

There is also a need to expand the scope of the 3 and half years DMRHC course in the state in the light of the study findings. This course is oriented towards primary health care services delivery for rural population, but with changing epidemiological trends, the demand for provision of effective screening and management of non-communicable diseases apart from other commonly encountered communicable illnesses cannot be overlooked.

6.2 REVIEW OF INTERNSHIP DURATION:

The internship duration may be reviewed so that duration gets extended by another 6 months, which would help them in improving their practical skills.

6.3 REVISION OF ROLES AND RESPONSIBILITIES:

There is a need felt to revise the current roles and responsibilities of RHPs towards the overall delivery of services by other staffs and functioning of sub centers. They should be made the overall in-charge of SCs. Appropriate skills must be imparted so that they are able to act as a team leader with adequate authority. RHP should be the team leader and reporting officer for other staff like ANMs / MPWs. Relevant support system should also be established for this. They should also be able to supervise the ANM in delivery of services, especially immunization, adolescent health and family planning.

6.4 DEVELOPMENT OF CAREER PROGRESSION PATHWAYS:

In the current scenario, there is no provision of career progression for RHPs; more so since they are recruited on contractual arrangements. In order to sustain this model, there is a need to create a regular cadre for RHP, which may be renamed as Community Health Officer (CHO). This will contribute towards sustainability of the program and retaining them in health system for improved health status.

A career pathway with promotion lines should be

in place for upgrading their position, provided they acquire higher qualifications in public health. After 10 years of satisfactory service, RHPs who achieve PG diploma/degree in public health may be promoted as Block Program Manager (BPM). Subsequently, after 3-5 more years, they may be promoted to District Program Manager (DPM), District HMIS Manager, and Hospital Manager etc. as per availability of vacant posts.

6.5 DEVELOPMENT OF AN INTERGRATED TRAINING PROGRAM FOR RHPs

A customized integrated training package should be developed for RHPs, which addresses all aspects of health care services along with a focus on IEC/ BCC, leadership and program managerial issues

6.6 PREFERENTIAL SELECTION OF CANDIDATES FOR ADMISSION

Current eligibility criteria for candidates belonging to minorities /hailing from inaccessible or conflict prone/specific parts of districts may be relaxed as compared to those candidates from the other part of the state. The state may also consider reservation of seats for such candidates and preferences to female candidates.

6.7 CREATION OF ENABLING WORKING ENVIRONEMNT FOR RHPs:

Currently, no system exists to ensure proper residential and working environment for the RHPs, who are contractual employees under NRHM. All of them faced problems in arranging for their accommodation near the sub centers health centers for various reasons.

There should be provision of residential quarter or arrangement from the government's side to ensure that RHPs stay close to their place of work without facing any hardships and harassment from the community. This could be ensured through the Gram Panchayat, which has been given the power and authority for overall supervision and monitoring of functionality of sub centers.

Creation of an enabling working environment for RHPs and other sub center staff is critical not only to improve their motivation and morale but also to sustain the model for better health outcome among the rural population in the state.

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Annexures

ANNEXURES - 1

RHP-Roles and Responsibilities

ANNEXURE-1 (I)

Diseases that can be treated by a Diplomate of Medicine and Rural Health Care

- Acute bacterial and viral infections
- Parasitic diseases like Malaria, Filaria etc
- Common Respiratory Diseases like RTI, Bronchial Asthma, Bronchiectasis, Haemoptysis etc,
- Common GI problems like peptic ulcer, acute gastritis, diarrheoa, dysentery, intestinal colic, biliary colic, cholera, acute gastroenteritis, food poisoning, haematemesis, malaena, jaundice, helminthiasis etc.
- Common cardio-vascular problems like hypertension, heart failure, first aid in IHD etc.
- Common uro-genital problems like UTI, renal colic, retention of urine, STD, orchitis
- Cystitis, preliminary management of Nephrotic Syndrome and Nephritis etc.
- Common problems related to CNS like first aid in CVA, first aid in unconsciousness, preliminary treatment for epilepsy, status epilepticus, meningitis and encephalitis, First aid in spinal injury and head injury, preliminary management of common psychiatric disorder order etc.
- Common musculo-skeletal diseases
- Common skin diseases
- Anemia and nutritional deficiency disorders
- Common Gynecological problems like menstrual disorder, leucorrhoea etc
- Implementation of family planning programs like Antenatal and Postnatal care, PET, Eclampsia, Pregnancy induced Hypertension, Anemia and other diseases related to pregnancy
- Pediatric problems like common bacterial and viral infections, respiratory infection, common diarrheal diseases, common nutritional deficiency diseases, neonatal jaundice, common skin problems
- Common infective problems of Eye and ENT, epistaxis, foreign body in ear and nose
- Common dental diseases like pyorrhea, Gingivitis, carries tooth etc.
- Emergency management of any accident, shock etc.

ANNEXURE-1 (II)

Procedures that can be carried out by a Diplomate in Medicine and Rural Health Care:

- IM Injection, IV injection/infusion, Venipuncture, Venesection, application of bandages and dressings,

nasogastric intubation, Oxygen Therapy, catheterization, peritoneal tap, normal delivery

Operative Procedures permitted to be carried out by a Diplomate in Medicine and Rural Health Care:

- Repair of minor wounds by stitching, drainage of abscess; burn dressing, wound dressing, application of splints in fracture cases, application of tourniquet in case of severe burning from wound in a limb injury.
- Conduction of delivery, episiotomy, stitching of vaginal and perianal tear during labor, application of IUCD.

ANNEXURE-1 (III)

Drugs that can be prescribed by a Diplomate in Medicine and Rural Health Care:

- Antacids, H2, receptor blockers, proton pump inhibitors, sucralfate, any other medicine that controls acidity/hyperacidity
- Anti-histaminics
- Antibiotics-effective against Gram positive Bacteria's Gram Negative Bacteria; Both Gram-Positive and Gram-negative Bacteria; Gram-positive and Gram Negative Bacteria and Chlamydia & Rickettsia; Fungi; Protozoa
- Anti-helminthics
- Anti-malarials
- Tropical Drugs-Antibiotic, Antifungal, Steroids, Analgesics, Anti-septic, Tropical antihistaminic
- Antiviral drugs
- Anti-amoebic drugs
- Anti-scabies
- Anticholinergic
- Anti-emesis
- Anti-pyretics and analgesics
- Antispasmodic
- Enzyme preparations, Anti flatulent
- Laxatives
- Oral Rehydration Solutions
- Hematinics and vitamins, minerals, liver support
- Nitroglycerine
- Sedatives and anti-epilectics
- Bronchodilators
- Expectorant
- Uterine stimulants and relaxants, oral contraceptive pills
- Surface and infiltrative anesthesia for repair of minor injury etc
- Anti-biotic eye drops and ointment
- Nasal decongestant

- Skeletal muscle relaxant-oral tablets
- Haemostatic
- Anti-rabies vaccine
- Anti-snake venom
- Life saving drugs

Drugs under National Health Program can be distributed by RHPs as per guidelines of the program

ANNEXURE-1 (IV)

Job responsibilities of RHP are as follows: He/She will have to attend OPD duty regularly. He/She will have to attend emergency cases, which come to the institution outside the normal duty hours.

- He/She will organize laboratory services for cases, when necessary
- Passive Surveillance blood slides are to be taken for all fever cases and necessary presumptive treatment or fever radical treatment to be given as per new drugs regime from NVBDCP
- Treatment for minor illnesses/common communicable and non-communicable diseases
- He/She will provide quality Ante-Natal check up and Ante-Natal care
- He/She will identify High Risk Pregnancy and arranged referral as the case may be and motivate Institutional Delivery for all pregnant women in labor
- He/She will motivate pregnant women to avail the benefits of Janani Suraksha Yojana (JSY)
- Promote early within ½ hour breast feeding up to 6 months followed by Complementary feeding
- Manage cases of Asphyxia and prevention of Hypothermia and infection soon after birth
- Identification of LBW babies soon after birth and management of LBW new born
- Increase awareness of use of ORS for all Diarrheal diseases
- Provide treatment of Diarrhea and ARI cases
- Promote home based new born and child care through IMNCI (Integrated Management of Neonatal & Childhood illnesses)
- Provide routine immunization and vitamin A supplementation by conducting Immunization session on every Wednesday. If beneficiaries are more, more Immunization session may be conducted twice in a week
- Associate with Immunization Week and Intensive Pulse Polio Immunization Program (IPPI) as per schedule
- Implementation of NRHM, RCH-II, NLEP, NBCP, IDDCP, RNTCP, NCCP & IDSP as per guidelines
- Create awareness among the eligible couple and community about contraceptive and advantages of small family
- Provide contraceptives to meet the unmet need
- Popularize emergency contraceptive (E-pill)
- Motivate for quality male and female sterilization (NSV/Laparoscopic Sterilization/Minilap/PPS)
- Submit report in NRHM reporting format to the in-charge of Block PHC on 1st day of the following month.

ANNEXURES - 2

District and Block-wise list of Sub Centers visited for the study

Name of Districts	Name of Block	Name of Health Sub Centers
NAGAON	Nagaon	Barulimari
		Singgari
	Barapujia	Salmara
	Lanka	Kharikhana
		Balunala
	Jugijan	Ambari
		Bagori
	Dhing	Kandhulimari
JORHAT	Kamalaburi	Dhodang
		Phuloni
		Sriram Chapori
	Solmora	Nrmati
		Rayahavli
		Barmukoli
	Titabar	Phulbari
	Bhogamukh	Borsumoni
	Nakachari	Donikona
HAILAKANDI	Lala	Sudarsanpur
		Balicherra
		Kacharithal
	Algapur	Sisuttar
		Ratanpur
		Bornibrize
	Kalinagar	Dholidar Grant
	Katlicherra	Aranyapur
		Madhabpur
		Dinanathpur
GOLAPARA	Matia	Upper Bhagaun
		Sutrapara
	Lakhipur	Medhipara
		Simlabari
		Gossaidubi
		Hasdoba
		Simulbari
		Rajmita
		Tarangapur
		Gumaijpur

NALBARI	Rangjuli	Melopara
		Nishan Gram
	Mukalmua	Galdighala
	Agir	Barvita
		Ketkibari
	Marnoi	Baladmarichar
		Dairang
	Chamata	Lokhopur
		Khakrisal
	Mukalmua	Slalmari
		Darangipara
		Bardhap
		Meruatarg
		Kaplabori
	Kamarkuchi	Tantrasankara
		Kendukuchi
		Katra
CACHAR	Sonai BHPC	Ramankpur
		Natur Kanchapur
	Dholari BPHC	Monierkhal
		Kamlabari
	Borkhola	Buribali
		Masimpur
		Subang
		Razarila
	Lakhipur	Borjurai
		Bahadarpur
	Jalalpur	Chandinagar
DARRANG	Jaliali	Mumarichang
		No.1 Abhoy Pukhri
	Kharupetia	Baruapara
		Latakhat
		Bechimari
		Bhutpukhri
		Badlichar
		Shyampur

KARIMGANJ	Nilam Bazar	Dahagram
		Nischintapur
	Patharkandi	Eraligool
		Rogurtook
		Kukital
		Solgoi
		Kolamoni
		Tilbhum
		Kurtikutchi
	Ramkrishna Nagar	Bazar Ghat
		Bethubari
		Sonapur
		Chotokpna
		Fakwa
	Kachuadam	Alekargool
		Borthal
		Duttapur
	Girish Ganj	Gandhai