

**CONTRIBUTION OF INDIGENOUS SYSTEM OF MEDICINE
(ISM) LADY DOCTORS AND GENERAL NURSE MIDWIVES
(GNMS) IN OPERATIONALIZATION OF 24X7 SERVICES
UNDER NRHM IN SELECTED DISTRICTS OF
UTTAR PRADESH**

Sponsored by



NIHFW, New Delhi

Conducted by
Department of Community Medicine,
M.L.N. Medical College, Allahabad

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OPERATIONALIZATION OF 24X7 SERVICES UNDER NRHM IN SELECTED
DISTRICTS OF UTTAR PRADESH**

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PREFACE

The National Rural Health Mission (NRHM) was launched by the Government of India on 12th April 2005 to carry out necessary architectural correction in the basic health care delivery system, with a plan of action that includes a commitment to increase public expenditure on health. The Mission envisages an additionality of 30% over existing annual budgetary outlays every year to fulfil the mandate to raise the outlays for public health from 0.9% of GDP to 2-3% of GDP. Under the Mission, multifarious activities have been initiated to strengthen the rural health care delivery system for the improvement of health of the rural population.

NRHM implementation framework does not envisage significant engagement of medical colleges in delivery of Mission interventions. The role of the medical colleges in RCH-II is largely limited to conduction of clinical skill based trainings. In the absence of any systematic engagement of medical colleges, faculty members of departments are clueless about the evidence-based technical strategies being pursued in the implementation of various National Health Programmes. There is a huge potential available in medical colleges of the country for undertaking innovations, facilitating programme interventions and conducting health systems research, which largely remains untapped.

The Rapid Assessment of Health Interventions (RAHI), a collaborative activity with the United Nations Population Fund (UNFPA), is a unique initiative taken under the wider umbrella of the Public Health Education and Research Consortium (PHERC) of the National Institute of Health and Family Welfare (NIHFW) for developing partnerships with different organisations working in the field of health and family welfare. The objective of the project is to accelerate NRHM delivery in identified states by organising timely, quality and appropriate inputs through rapid assessments/reviews to address priority implementation problems. During the first phase of the RAHI project, the UNFPA supported 12 health systems research projects in five low-performing states viz. Madhya Pradesh, Jharkhand, Chhattisgarh, Uttar Pradesh, and Orissa. During the second phase, another 12 health systems research projects from 6 low-performing states viz. Uttar Pradesh, Uttarakhand, Madhya Pradesh, Jharkhand, Bihar and Rajasthan were taken up.

The rationale for supporting such rapid assessments stems from the discussions during the periodic Joint Review Missions and Common Review Missions. An impressive number of innovations have been supported by the states to improve access and enhance service quality. Many innovations are currently underway in the states and districts to deliver health care services in an effective manner. The state and district programme managers wish to know how well these innovations are performing so that in case of gaps corrective measures can be taken to achieve the stated objectives. There has been an increasing recognition for incremental improvements in the programme delivery by undertaking quick and rapid health systems research and engineering the feedback into the processes. As an institutional response to such demand an attempt has been made to

develop a network of institutions and strengthen their capacities on rapid appraisal methodologies for generating programme-relevant information at local and regional levels.

The rapid appraisal of some of the interventions taken up in the second phase of RAHI project covered the issues of contribution of indigenous systems of medicine in operationalisation of 24x7 services, interface of ASHAs with the community and service providers, logistics and supply management system of drugs at different levels, functioning of mobile medical units, birth preparedness and complication readiness as a tools to reduce MMR, quality assessment of institutional deliveries, performance-based incentives to ASHA Sahyogini, referral transport systems, functioning of programme management units, functioning of RKS, utilisation of untied funds at various levels and utilisation and client satisfaction of RCH service. The present study report entitled “Contribution of Indigenous System of Medicine (ISM) Lady Doctors and General Nurse Midwives (GNMs) in Operationalization of 24x7 Services under NRHM in Selected Districts of U.P” by the Department of Community Medicine, M.L.N. Medical College, Allahabad, was finalized by NIHFWS in consultation with UNFPA.

The findings and recommendations of these studies will trigger of a series of follow-up measures by programme managers in the state. We strongly feel availability of such a resource to the programme managers will provide necessary evidence-based inputs enabling them to make any mid-course corrections and also scaling up. An added benefit will be incorporation of information about newer programmatic interventions in the medical curriculum

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We appreciate the efforts of the Principal, MLN Medical College, Allahabad. He is always supportive and cooperative in the pursuit of research and studies undertaken by this Department. I convey my thanks and regards for his constant guidance for the study.

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The CMOs, MOs, ISMs, GNMs of districts studied have provided excellent support and cooperation in providing information and their opinions during the field study.

I also sincerely extend my thanks to the community leaders, PRI members ASHA, AWW, school teachers, village head/s for their generous participation in the FGDs and the respondents for providing valuable information for the study during the course of in-depth interviews.

Prof. S. Dwivedi

ABBREVIATIONS

NRHM	National Rural Health Mission
RCH-II	Reproductive and Child Health-II
TFR	Total Fertility Rate
MMR	Maternal Mortality Rate
IMR	Infant Mortality Rate
ISM	Indian System of Medicine
GNM	General Nurse Midwife
UNFPA	United Nations Fund for Population Activities
NIHFW	National Institute of Health and Family Welfare
PHC	Primary Health Centre
NGO	Non-Government Organisation
OPD	Out-Patient Department
MOIC	Medical Officer-In-Charge
FRU	First Referral Unit
PRI	Panchayat Raj Institution
ANC	Ante Natal Care
IFA	Iron and Folic Acid
TT	Tetanus Toxoid
FGD	Focus Group Discussion
IDI	In-depth Interview
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
RTI	Reproductive Tract Infection
STI	Sexually Transmitted Infection
MTP	Medical Termination of Pregnancy

Executive Summary

Many states are initiating innovations to deliver evidence-based technical and institutional strategies as reflected in the programme implementation plans under NRHM ¹. One of the important indicators of health care delivery is doctor population and doctor/nurse ratio, which in Uttar Pradesh is grossly inadequate in terms of utilization rates. ISM practitioners (Ayurvedic/Unani/Homeopathy) are under-employed and have potential to be integrated in the main stream health systems for improving performance at the PHCs. Various innovative strategies have been tried out to achieve the set targets. One such innovation has been the induction of the ISM lady doctors and GNMs in 2 selected blocks of 10 identified districts with the objective of ensuring 50% institutional deliveries over the existing level at the end of the project period of 5 years (2006-10). The ISM lady doctors are paid a fixed honorarium of Rs. 8,000/- per month and the GNMs are given fixed honorarium of Rs. 6,000/- per month for the 8 hourly duties. The MOIC Block PHC and 2nd MO will be overall in-charge for the intervention and will remain on call as per fixed schedule. They will be given special incentive of Rs. 200/- per delivery/call attended by them after regular duty hours. ² The project is midway now and it is the appropriate time to assess its outcome and suggest corrective measures if necessary. The present study was conducted to find out the status of utilization of MCH services after the induction of the ISM lady doctors and GNMs for 24x7 services and the acceptance of this innovation by the health system and the community.

General Objective

To find out the change in utilizing MCH services after the induction of the ISM lady doctors and GNMs for 24x7 services and the acceptance of this innovation by the health system and the community.

Specific Objectives

- To assess the availability of services provided by the ISM lady doctors and GNMs in 24x7 PHCs,
- To assess the level of knowledge of the ISM lady doctors and the GNMs for services to be given by them and the pattern of services provided by them,
- To find out the facilitating and inhibiting factors in discharging their assigned duties,
- To find out the level of client satisfaction vis-a-vis health providers where this scheme is operational,
- To assess the system's response to this innovation,
- To assess the acceptance of this innovation by the community and the health system.

Methodology

The study adopted multistage random sampling design among the 10 districts where innovative demonstrative project is on in UP. Out of 10 districts 5 districts (50%), viz., Bahraich, Lucknow, Firozabad, Etawah and Moradabad were selected for the study. From each selected district, two blocks were identified - one closest to the district headquarters and other located remotely. With this selection criterion 10 Block PHCs in the 5 selected districts were selected. From each of the selected block level (CHC/PHC) three beneficiary villages were selected: one randomly, one nearest to the Block PHC and one most distant to the Block PHC.

The study was a typically cross-sectional design with a mix of both qualitative (FGDs) and quantitative techniques. (In-depth interview, semi-structured schedule). In-depth interviews of CMO, MOI/C, ISM, GNM, PRI members and other functionaries were conducted. The programme beneficiaries (mothers) and non-beneficiaries, school teachers, ASHA and AWW at village level were also interviewed by using semi-structured interview schedules. Observation of the PHCs and review of records and facilities check was done with a checklist. Two FGDs were also conducted in each block with the available PRI members, ASHA, AWW, community and clients to know about their perception and bottlenecks in the implementation of the programme at the community level. All the data collected were triangulated to have more clarity on the findings at the time of analysis.

The study maintained all research ethics throughout. All in-depth interviews and FGDs were recorded after taking prior consent from the respondents and were transcribed. The ethical clearance of the project was obtained from the Institutional Review Board of NIHF.

The final sample size per block is in the following table :

MO	1
ISM Lady doctors	3
GNMs	3
PRI members preferably a female member	1
FGD with beneficiaries and the community where they reside.	2/Block

Salient Findings

It was revealed from the study that at the district and block level there was a shortage of medical and paramedical staff posing a major hindrance for the programme. Inadequate facilities for institutional delivery were observed both at the district and block levels. Only 6 out of 16 ISMs were trained, all the GNMs were untrained. GNMs were found only in Etawah and Lucknow. Knowledge level of ISM/GNM was lacking in IMNCI and emergency management. There was a problem in identifying cases of high risk pregnant females and newborns for urgent and timely referral. ISMs were attached to CMO office. Timely payment of honorarium was not done. There was pay disparity between MBBS and ISM lady doctors. Transport and accommodation facilities were not adequate. There was a lack of proper logistic support e.g. ill-equipped labour room.

With regard to monitoring and supervision, non-availability of required number of staff was a major hindrance. Mostly ISMs/GNMs were reviewed during monthly review meetings. Medical officers were not able to go for field level supervision and monitoring due to extra workload.

Recommendations

Based on the study findings a set of suggestions have been formulated for efficient delivery of services :

- Mandatory pre-service training should be given to all ISMs/GNMs.
- IMNCI and RTI/STI training should be included in it.
- Contract should be made permanent and lucrative.
- Monitoring and supervision should be done timely.
- Improve infrastructure facilities.
- Remove pay disparities between MBBS and ISM.

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Many states are initiating innovations to deliver evidence-based technical and institutional strategies as reflected in the programme implementation plans. State programme managers wish to know how well these innovations are performing and will like to take up evidence-based corrective measures to achieve stated objectives. In this context there is increasing recognition of organization of collateral inputs for incremental improvements in the programme delivery by undertaking quick and rapid health systems research using appropriate techniques and tools. In this direction, UNFPA (pooling partner in the RCH -II) with National Institute of Health and Family Welfare and partner institutions is supporting health systems research. One of the important indicators of health care delivery is doctor population and doctor-nurse ratio which in Uttar Pradesh is grossly inadequate in terms of utilization rates.

ISM practitioners (Ayurvedic/Unani/Homeopathy) are under-employed and have potential to be integrated in the main stream health systems for improving performance at the PHCs. Similarly about 1500 GNMs are being trained each year and are mostly employed in private institutions because of lack of opportunities in the government health sector. They can be adequately trained to handle maternal health care in the country. Some innovative strategies have been tried out to achieve the set targets. One such innovation has been the induction of the ISM lady doctors and GNMs in 2 selected blocks of 10 identified districts with the objective of ensuring 50% institutional deliveries over the existing level at the end of the project period of 5 years (2006-10). The ISM lady doctors are paid a fixed honorarium of Rs. 8,000/- per month and the GNMs are given fixed honorarium of Rs. 6,000/- per month for the 8 hourly duties. The MOIC Block PHC and 2nd MO will be overall in-charge for the intervention and will remain on call as per fixed schedule. They will be given special incentive of Rs. 200/- per delivery/call attended by them after regular duty hours.² The project is midway now and it is the appropriate time to assess its outcome and suggest corrective measures if necessary. The present study was conducted to find out the status of utilization of MCH services after the induction of the ISM lady doctors and GNMs for 24x7 services and the acceptance of this innovation by the health system and the community.

1.2. General Objective

To find out the change in utilizing MCH services after the induction of the ISM lady doctors and GNMs for 24x7 services and the acceptance of this innovation by the health system and the community.

1.3 Specific Objectives

- To assess the availability of services provided by the ISM lady doctors and GNMs in 24x7 PHCs,
- To assess the level of knowledge of the ISM lady doctors and the GNMs for services to be given by them and the pattern of services provided by them,
- To find out the facilitating and inhibiting factors in discharging their assigned duties,

- To find out the level of client satisfaction vis -a-vis health providers where this scheme is operational,
- To assess the system's response to this innovation, and
- To assess the acceptance of this innovation by the community and the health system.

CHAPTER 2

METHODOLOGY

2.1 Study Design/Study Type

A cross-sectional descriptive study.

2.2 Study Area

Bahraich, Lucknow, Firozabad, Etawah, Moradabad districts of U.P.

2.3 Study Subjects

- A. Programme Managers at the district and block level
 - CMO
 - MO (Block PHC)
- B. Programme Implementers at block level
 - ISM
 - GNM
- C. Programme beneficiaries at village level
 - Beneficiaries (mothers)
 - Non-beneficiaries
- D. Programme Supplementers at village level
 - PRI members
 - School teachers
 - ASHA, AWW

2.4 Sampling Design

Multistage stage random sampling:

- (a) **Selection of Districts:** 50% of the districts were selected where innovative demonstrative project is on.
- (b) **Selection of Blocks:** From each selected district, two blocks were identified one closest to the district headquarters and other located remotely. With this selection criterion 10 block PHC in the 5 selected districts were selected.
- (c) **Selection of the Villages:** From each of the selected block level CHC/PHC one beneficiary village was randomly selected 2 villages were identified one nearest to the block PHC and another distant. In 5 districts, 10 block PHCs and client villages were selected.

Table 1 : Multi-Stage Random Sampling

District Lucknow CMO		District Bahraich CMO		District Moradabad CMO		District Firozabad CMO		District Etawah CMO	
Block 1	Block 2	Block 1	Block 2	Block 1	Block 2	Block 1	Block 2	Block 1	Block 2
MO	MO	MO	MO	MO	MO	MO	MO	MO	MO
Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh	Block Pramukh
3 ISM	3 ISM	3 ISM	3 ISM	3 ISM	3 ISM	3 ISM	3 ISM	3 ISM	3 ISM
3 GNM	3 GNM	3 GNM	3 GNM	3 GNM	3 GNM	3 GNM	3 GNM	3 GNM	3 GNM
Client	Client	Client	Client	Client	Client	Client	Client	Client	Client
Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity	Comm- unity

2.5 Study Duration: 12 weeks with data collection 04 weeks (October -November 2008).

2.6 Data Collection Methods

Data were collected using semi-structured schedules, in-depth interviews (IDI) and Focus Group Discussion (FGD). Primary and secondary data sources were used for data collection. Primary data were collected from all the respondents. In addition primary data were also collected from the clients and community in each village by using semi-structured interview schedules.

Secondary data were collected from the available reports and the records available at district and block levels regarding the Contribution of Indigenous System of Medicine (ISM) Lady Doctors and General Nurse Midwives (GNMs) in Operationalization of 24x7 Services Under NRHM in Selected Districts of U.P. All the data collected were triangulated to have more clarity on the findings at the time of analysis.

The study maintained all research ethics throughout. All in-depth interviews and FGDs were recorded after taking prior consent from the respondents and were transcribed. 2 FGD was conducted in each block with the available PRI members, ASHA, AWW and community, clients to know about their perception and bottlenecks in the implementation of the programme at the community level.

2.7 Quality Assurance

In order to ensure the quality of the data the Principal Investigator (P.I.)/Co. P.I. supervised the FGDs at the village level and in-depth interview at district level, while the supervisors conducted the remaining IDIs and interviewed the client and community along with the investigators. The investigators facilitated in ensuring the availability of respondents for the interviews and the FGDs. 10% of the field work was supervised by the PIs in each district.

A team of two investigators and one supervisor worked in one block for seven days. Separate teams worked simultaneously to cover the five districts. Consultants from NIHFV monitored the training, field activities, data analysis and report writing. All the staff involved in the rapid appraisal research was provided two days of training on research guidelines, tools and research issues before the commencement of the actual field work.

Table 2 : Summary of the Study Subjects, Sample Size, Data Collection Technique and Tools

Stakeholder	Number	Data Collection Method and Tool
CMO	5 (1 per district)	Interview semi-structured interview schedule
Medical Officer	10 (2 per block PHC)	Interview semi-structured interview schedule
ISM	30 (3 per block PHC)	In-depth interview semi-structured schedule
GNM	30 (3 per block PHC)	In-depth interview semi-structured schedule
PRI	10 (2 per block)	Interview semi-structured interview schedule
Client	1 FGD per Block PHC	FGD Check lists
Community	1 FGD per Block PHC	FGD Check lists

2.8 Data Analysis Plan

Quantitative data were analysed using SPSS 12 software. For qualitative data semi quantification was done by coding the responses as per the guidelines provided by NIHFW.

2.9 Ethical Clearance

The project structure was examined and cleared by ethical committee of the Institution Review Board of NIHFW for ethical considerations.

CHAPTER 3

FINDINGS AND DISCUSSION

FINDINGS

3.1 Availability of Services and Resources

Human Resources

NRHM seeks to revamp public health care delivery system so as to expedite achievement of national policy goals in health and family welfare sector. Architectural corrections suggested in the Mission aim at health system being responsive to health care needs of poor people and making the system accountable.

The study revealed that, only 16 ISMs and 6 GNMs were in place instead of the sanctioned 30 ISMs and 30 GNMs respectively in the 10 blocks of 5 districts that the study had covered. So, there is an apprehension that the shortage of medical and paramedical work force will pose a great hindrance for the ultimate success of the objective of raising institutional delivery.

It was revealed that at places a single lady doctor was posted as against the sanctioned strength of three, thus leading to overburden of work and roles and job responsibility. This has aggravated the problem of regular and quality service delivery.

Logistics

Provision and availability or required logistics is an important issue for success of any programme. Timely support and judicious utilizations are some of the key areas of significance. With regard to contribution of ISM/GNM in providing maternal and child health services, adequate logistic support in the form of registers, labour room facility, instruments and equipment in the labour room, essential medicines and emergency delivery kits. At the district and block level all the required registers namely a nd mission register, delivery register, monthly progress report, immunisation and referral records were found to be available and continually updated in all the five selected districts.

In order to physically verify the beneficiaries in the catchment area 10% sample from each block was drawn. A total of 162 beneficiaries had received institutional delivery services. Other services provided in the form of Antenatal Care, PNC, immunization, sterilization and CuT.

Institutional Deliveries on the Basis of Physical Verification of Clients

	Bahraich	Etawah	Moradabad	Lucknow	Firozabad	
Institutional delivery	12	50	29	36	35	162
MTP	0	0	0	0	0	0
Sterilisation	0	1	0	0	0	1
CuT	0	2	0	0	0	2
Other	1	0	0	0	0	1
Total Services	13	51	29	36	35	166

Service delivery was suffering a setback as proper accommodation and transport facilities were not available.

Service Provided by the ISM/GNM Lady Doctors

The MCH services provided by ISMs/GNMs 24x7 MCH services were shown in Table (13). It is a matter of concern that only about 18% (4/22) of the ISMs/GNMs provided partograph service, as partograph gives idea about the progress/non -progress of labour. It helps in identification of cases of complicated labour, which need urgent referral and management. Such instances could be counter-productive in the long-run. Only 36% (8/22) of the ISMs/GNMs in-place have provided the services of identification of high risk pregnancy. About 59% provided urine examination and abdominal, whereas about 64% provided general examination. Other services provided were 'measuring blood pressure' and 'cases referred'.

Table 3 : Services Provided By ISMs/GNMs (Work Done)

	Bahraich (4)	Etawah (7)	Moradaba d (5)	Lucknow (2)	Firozabad (4)	
Cases referred	4	5	4	2	4	19
Partograph use	2	1	0	1	0	04
General examination	2	3	4	2	3	14
Blood hemoglobin	3	6	3	1	2	15
Urine examination	2	6	2	1	2	13
Abdominal examination	3	3	1	2	4	13
Blood pressure	3	7	4	2	4	20
Identification of high risk pregnancy	2	3	1	1	1	08
Average score	.65	.61	.54	.85	.57	

3.2 Knowledge of ISMs/GNMs about the MCH Services

The level of knowledge of service providers is of paramount importance in the successful implementation of any programme. The levels of knowledge at district and block PHC level were assessed with the help of structured schedule for in-depth interviews incorporating key components.

Table 4 : Knowledge of ISMs/GNMs About Investigation to be Done and Measures for Anaemia Prevention During Pregnancy

	Bahraich (4)	Etawah (7)	Moradabad (5)	Lucknow (2)	Firozabad (4)	
General examination (height, weight)	2	5	3	2	3	15
Blood examination (Haemoglobin)	3	7	5	2	4	21
Urine examination	1	5	3	2	4	15
Abdominal examination	0	3	2	2	2	9
Blood pressure	2	7	5	2	3	19
Identification of high risk pregnancy	1	3	1	2	1	8
No. of IFA for anaemia prevention	3	6	3	2	3	17
Average score	.42	.75	.62	1.0	.71	

Table 4 shows that about 77% (17/22) of the ISMs/GNMs have the knowledge of anaemia prevention whereas about 95 % (21/22) of them know blood examination. However, it is a matter of concern that about 36% (8/22) of the ISMs/GNMs could not identify high-risk pregnancy. From all the five districts the study covered, the knowledge level of the ISMs/GNMs regarding investigation of pregnancy and use of IFA for an aemia prevention were lowest in Bahraich.

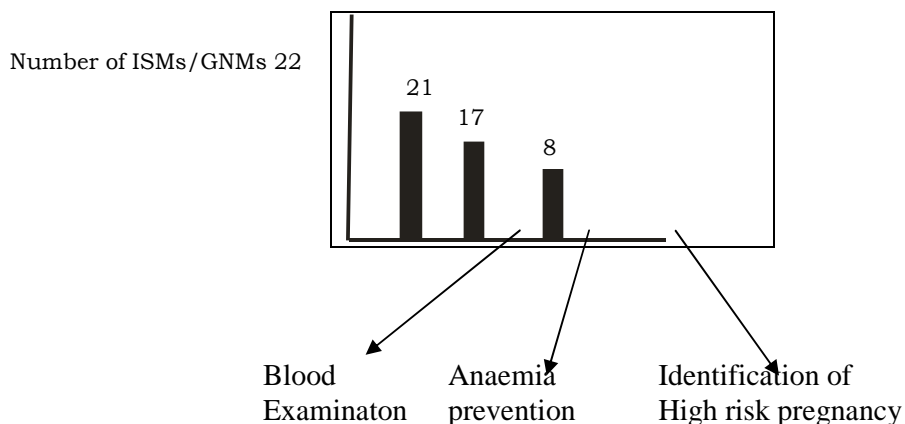


Table 5 : Knowledge of ISMs/GNMs About Pregnancy, Newborn Care and Immunization

	Bahraich	Etawah	Moradabad	Lucknow	Firozabad	
Rest in pregnant woman	3	5	1	2	2	13
Timing of TT	3	0	2	1	1	7
Bathing of newborn	0	0	0	0	0	0
Mother milk	4	7	4	2	4	21
Breast-feeding	4	7	5	2	4	22
Weaning	4	7	5	2	4	22
Average knowledge	.75	.61	.56	.75	.62	

The study revealed that none of the ISMs/GNMs knew exactly about the 'timing of bathing of newborn' as shown in Table 5. This leads to hypothermia and its subsequent complications. This component should not be overlooked in training. The knowledge of 'timing of TT' is also very poor with about 39%.

Table 6 : Knowledge of ISMs/GNMs About Immunisation of Infant by District

	Bahraich	Etawah	Moradabad	Lucknow	Firozabad	
BCG	3	6	4	2	3	18
O-OPV	3	6	4	2	4	19
DPT-1	4	7	3	2	3	19
OPV	4	7	3	2	3	19
DPT - II	4	7	3	2	3	19
DPT - III	3	7	3	1	2	16
OPV - III	3	7	3	1	2	16
Measles	4	7	4	2	4	21
Vit. A	3	6	3	2	4	18
Average knowledge	.86	.95	.73	.88	.77	

Immunisation is a very effective preventive and promotive child health. Table 6 also shows the knowledge of the ISMs/GNMs about immunization of infant. In comparison to other components of MCH services, the knowledge of the ISMs/GNMs about immunization of infant is far better than the other components. It is worth noting that knowledge level regarding immunisation was best in Etawah.

Table 7 : Factor-wise Analysis/Causative Factor Analysis of Knowledge of ISMs Regarding Pregnant and Newborn Referral (multiple response) n=16

Complication during Pregnancy	Bleeding P/V	Protei-nuria	Diabetes /Heart problem	Abortion	Severe Anaemia	Eclampsia	High B.P	Breech	C.P.D
	6	2	5	1	6	2	10	4	4
Referral for pregnant female	P.P.H	A.P.H	Eclam- psia	High B.P	Breech	Severe Anaemia	R.O.M	Foetal distress	N.P.O. L.
	3	4	1	7	4	5	5	3	2
5 cleans	Clean surface	Clean hands	Clean thread	Clean blade	Clean cord				
	12	12	11	11	2				
Referral for newborn	Difficulty in breathing	Eye problem	Cyanosis	Delayed cry	LBW	Premature	Jaundice		
	9	2	9	9	5	2	5		
Child warm	K.M.C	Woolen clothes	Temp- erature	Heater					
	10	12	6	2					
Syndromic approach	Don't know								
	16								

The factor-wise analysis of knowledge of ISMs about pregnant and newborn referral is shown in Table 4. It was found that about 63 % (10/16) and 38% (6/16) of the ISMs knew

about 'high blood pressure' and 'excessive bleeding' (P/V) respectively , as a pregnancy complication and requiring urgent referral.

Though all the 'Five Cleans' for safe delivery were not completely known, it is heartening to note that clean surface and clean hands were known to 75% (12/16) of the ISMs. As far as need for immediate referral of newborn is concerned, difficulty in breathing after birth and delayed cry were considered the most important by ISMs with about 56% (9/16). This highlights the need of including neonate and infant management in their curriculum to address these issues in an appropriate manner.

3.3 Acceptance of the Innovation in the Health System

Work Perspective of ISMs/GNMs

Work perception means how the ISMs/GNMs perceive their actual work done on the basis of various factors and the cooperation they received from other stakeholders in the health sectors.

Table 8 shows that the medical staff and clients were very supportive of the work of ISMs and GNMs. About 95% of the ISM lady doctors reported to have received help from the ASHAs.

Table 8 : Work Perspective of ISMs/GNMs According to Expected Work Environment, Referral, Cooperation from Stakeholders of Health Programmes and Clients

	Bahraich	Etawah	Moradabad	Lucknow	Firozabad	
Work environment as expected	3	5	5	1	1	15
Referral	4	7	4	2	4	21
Cooperation from - MO	4	7	5	2	2	20
- ANM	4	6	5	2	1	18
- AWW	3	6	4	2	2	17
- ASHA	4	7	5	2	3	21
- Clients	4	7	5	2	4	22
Average score	.92	.91	.94	.92	.67	

About 91% of them received from MOI/C especially in the management of complicated labour cases, whereas about 82% of them received from the ANMs. About 77% of the ISMs/GNMs received help from the AWW and all the ISM lady doctors (100%) reported that clients are supportive and helpful. Muradabad district acceptance level is highest with average score (0.92).

Perception of Job Responsibility

Perception of job responsibility means how ISMs/GNMs perceive their job responsibility expected from them.

Table 9 Perception of ISMs/GNMs About Job Responsibility Expected from Them

	Bahraich (4)	Etawah (7)	Moradabad (5)	Lucknow (2)	Firozabad (4)	
OPD service	2	6	5	2	2	17
ANC registration	2	6	4	2	4	18
TT immunisation	3	4	5	2	2	16
IFA distribution	3	4	4	2	2	15
Nutrition counselling	3	4	3	1	3	14
ANC examination	4	6	3	2	3	18
Identification of high risk cases	4	3	2	1	2	12
Normal delivery	4	7	4	2	4	21
Essential newborn care	3	4	1	2	4	14
EBF	3	4	4	2	3	16
Identification of high risk newborn	3	3	0	1	3	10
PNC check-up	2	3	2	2	3	12
PNC (family planning)	3	3	3	1	2	12
Nutrition and immunisation advise	3	4	2	2	3	14
STD/RTI treatment advise	3	3	2	1	0	09
Average score	.75	.55	.58	.83	.66	

Some crucial areas need to be strengthened like identification of high risk pregnancy, high risk newborn, post-natal care and syndromic approach in the treatment of STD and RTI.

3.4 Difficulties and Hurdles

Table 10 : Difficulties/Hurdles Faced by ISMs/GNMs (Multiple Response)

	Bahraich	Etawah	Moradabad	Lucknow	Firozabad	
OPD service	1	0	1	0	2	04
ANC registration	0	0	0	0	1	01
TT immunisation	0	0	0	0	0	00
IFA distribution	0	0	1	1	0	02
Nutrition counselling	0	1	2	1	0	04
Identification of high risk cases	1	1	3	0	2	07
Normal delivery	0	0	0	0	0	00
Essential newborn care	2	1	1	0	0	04
EBF	0	0	0	1	0	01
Identification of high risk newborn	1	1	3	2	1	08
PNC check-up	0	1	1	0	0	02
PNC (family planning)	0	1	2	0	1	04
Nutrition and immunisation advise	0	0	0	0	1	01
Average score	.08	.06	.20	.21	.14	

It is heartening to know that normal delivery and EBF face the least difficulty. This matches with the objective of increasing institutional delivery and bringing down M.M.R. Etawah is the best district on account of job responsibility as it has least number of problems. TT immunization does not face any problem in any district, which will have an effect on the prevention of neonatal tetanus and bring down neonatal mortality rate. Lucknow and Moradabad are the problem districts where maximum difficulties have been encountered by ISMs/GNMs.

Table 11 shows the factor-wise analysis of the responses about difficulties and hurdle faced by ISMs. It found that about 44% and 50% of the ISMs received help from MOI/C and nurses respectively in complicated cases. About 18% of the ISMs each faced difficulty in eclampsia management, newborn care and counselling. 12% of them faced difficulty of lack of separate OPD room and another 12 % faced in terms of lack of IFA. Due to these hurdles, ANC, PNC and FP services are affected. Lack of medicine, oxygen facility, staff and trained personnel will apply brakes to this scheme. This can be prevented by proper rostering, in-service training and improving logistics.

Table 11 : Factor-wise Analysis of Difficulties/Hurdles Faced by ISMs (Multiple Response)

Help in Complicated cases	MOIC	Nurse	Dai	ASHA	Pharmacist	ANM	
	7	8	1	1	1	1	
Difficulty	Separate OPD room	Lack of IFA	Eclampsia	Newborn	Suction Machine	Counseling	
	2	2	3	3	1	3	
Service you can't provide	PNC (FP)	ANC	Complicated Labour				
	4	1	3				
Reason for above	Lack of medicines	Duty roster	Lack of oxygen	Lack of staff	Lack of chamber	Lack of training	Lack of senior doctor
	3	1	1	1	1	1	1
Solution	In-service training	Duty roster	Timely pay	Staff	Camp	Equipped labour room	Accommodation and transport
	4	1	7	3	2	4	5

Table 12 shows dissatisfaction of the ISMs/GNMs about their work according to selected factors. The study found that the ISMs/GNMs were dissatisfied mostly with their honorarium with about 68% followed by work condition with 59 %. These two factors are rather personal and expectation. However, about 55% (12/22) and 41 % (9/22) were dissatisfied with the delivery instruments and labour room respectively, which need to be taken care of immediately. Work dissatisfaction is highest in Firozabad, most of it relating to work conditions and honorarium.

Table 12 : Dissatisfaction of ISMs/GNMs about their Work According to Selected Factors

	Bahraich(4)	Etawah(7)	Moradabad(5)	Lucknow(2)	Firozabad(4)	
Honorarium	2	5	2	2	4	15
Delivery instrument	4	2	4	0	2	12

Rules and regulations	2	2	2	0	2	08
Work conditions	3	2	3	1	4	13
Labour room	2	2	3	0	2	09
Behaviour of associates	0	0	1	0	2	03
Behaviour of clients	0	1	2	0	2	05
Average score	.46	.28	.48	.21	.64	

Table 14 : Status of Training of ISMs and GNMs

District	Block	ISM			GNM		
		Total	Trained	Untrained	Total	Trained	Untrained
Bahraich	Phakarpur	2	2	0	0	0	0
	Jarwal	2	2	0	0	0	0
Etawah	Basrehar	2	0	2	2	0	2
	Mahewa	1	1	0	2	0	2
Moradabad	Dilari	3	0	3	0	0	0
	Pawasa	2	0	2	0	0	0
Lucknow	Malihabad	1	1	0	0	0	0
	Itaunja	1	0	1	0	0	0
Firozabad	Tundla	1	0	1	2	0	2
	Jasrana	1	0	1	0	0	0
Total		16	6	10	6	0	6

With regards to the training programme it was found that only 6 of the 16 ISMs had received proper training for conducting institutional delivery. All the 6 GNMs interviewed had not received this special training.

3.5 Training

Table 15 : Factor-Wise Analysis of Pre-Service Training and Service Conditions of ISM Practitioners (Multiple Responses)

Reason for joining	Social Service	Delivery	Experience	Permanent	Money
	5	2	4	7	2
Work environment	Cooperative	Can't say			
	6	2			
Benefit from training	Emergency management	Partograph	Normal delivery	Breech	Immunisation
	3	1	2	2	1

Measure for better training	Practical	Child care	National Programme	Re-training	
	1	1	2		
Good about training	Partograph	Good food/behaviour	Neonate management	Anaemia	Other diseases
	1	3	4	3	2

Various reasons were offered by ISM practitioners for accepting contractual appointment, the most common being the sense of social service and the hope that contract will become permanent. Most important benefit from training was emergency management of high risk pregnant female and newborn. Training could be made better by incorporating better practical training and child care practices.

3.6 Monitoring and Supervision

Though the CMO and MOIC of block PHC reviewed the work of the ISM/GNM during monthly review meeting, there was a visible absence of fixed or pre-scheduled programme of field visits. Even then there was little or no documentation of these supervisory visits.

3.7 Community Acceptance and System Response

Physical verification of 10% of the clients of institutional delivery in each block was carried out as shown in Table 16.

Table 16 : Physical Verification of 10% of Clients of Institutional Delivery in 10 Blocks of the 5 Districts

District	Institutional delivery	Block
Bahraich	12	2
		10
Etawah	50	25
		25
Moradabad	29	8
		21
Lucknow	36	18
		18
Firozabad	35	17
		18
Total	162	

Panchyati Raj Functionaries Perspective

The assessment of awareness level of Panchyati Raj Functionaries about health program mes/schemes/facilities by districts is shown in Table 17.

Table 17 : Assessing Response of Panchyati Raj Functionaries

	Bahraich (6)	Etawah (5)	Moradabad (4)	Lucknow (4)	Firozabad (4)	
Knowledge about NRHM	2	1	2	2	1	08
Appointment of ASHA	6	5	3	4	4	22
Knowledge of JSY	4	1	1	1	1	08
Place of delivery	1	0	0	1	0	02
Appointment of ISM/ GNM	2	2	0	0	1	05
24 Hour institutional delivery	0	1	0	0	1	02
Average score	.41	.33	.25	.33	.33	

Except for gram pradhan of village Dhakiya, Dilari district of Moradabad; all the panchayati raj functionaries (22/23) were aware about appointment of the ASHA. The table shows that the awareness of ASHA's appointment by PRI functionaries is quite impressive with about 96% (22/23) and about 35% (8/23) know about NRHM. However, only 22% (5/23) knew about appointment of ISMs/GNMs in Block PHCs for increasing institutional delivery. Only about 0.9% (2/23) knew about place of delivery and provision of 24 hours institutional delivery services.

Table 18 : Perspective of Medical Officers about the Innovation of Inducting ISMs/GNMs in Operationalisation of 24X7 PHCs by Districts

	Bahraich (3)		Etawah (3)		Moradabad (4)		Lucknow (2)		Firozabad (2)		Total
	CMO	MO (2)	CMO	MO (2)	CMO	MO (3)	CMO	MO (1)	CMO	MO (1)	
Appointment of ISM	1	2	1	2	1	3	1	1	1	1	14
Pattern of service -OPD	1	2	1	0	1	1	1	1	1	1	10
-Delivery	1	2	1	2	1	1	1	1	1	1	12
-Immunisation	0	0	0	0	0	0	1	1	0	1	3
-Others	1	1	0	0	0	1	0	0	0	0	3
-Improvement in services	1	2	1	2	1	3	1	1	1	1	14
Average score	.8	.9	.6	.5	.6	.5	.8	.8	.6	.8	

Table 18 shows perspective of medical officers about the innovation of inducting ISMs/GNMs in the operationalisation of 24X7 PHCs in selected districts. The table shows that all the 14 medical officers interviewed, including all 5 CMOs from the five districts, have welcome the induction of ISMs/GNMs in the 24X7 PHCs, as it led to the improvement of health services delivery as well as the rise in institutional delivery.

3.8 Perception of Client and Community

To know the perception of the clients and community, besides interviews, 2 FGD per block were conducted among clients and community regarding facilities received from PHC, place of delivery, difficulties faced and availability of ISMs/GNMs especially at night. They were

also asked to make suggestions to improve the same. The FGD with various clients and community members brought out the issues related to the amount paid in JSY, the non-availability of ISMs/GNMs at night and referrals. The main complaint was the non-availability of doctor at night and even during day time in some places. Some hospitals are even close at night even if open only nurses were available. 'Money' and not 'safe delivery' was the incentive for institutional delivery.

DISCUSSION

The study examined the adequacy of logistic support in the form of registers, labour room facilities, instruments and equipments in the labour room, essential medicines and emergency delivery kits to enable the ISMs/GNMs in providing MCH services at the 24x7 services. It is apprehended that the shortage of medical and paramedical work forces will pose a great hindrance for the ultimate success of the objective of raising institutional delivery³. Service delivery was suffering a setback as proper accommodation and transport facilities were not available. An ISM lady doctor from Moradabad says, "Delivery cannot be conducted at night, as there is absence of proper accommodation and security". Same concern was also expressed by quite a few of them.

In relation to the level of knowledge of the ISM lady doctors, there was a need to address issues related to neonate and infant management in their curriculum as well as training course. One ISM lady doctor from Bahraich says "Though I have been given training in emergency management, sterilisation and immunisation, there is need for training in child management. Suction machine should also be available in labour room". Whereas an ISM lady doctor from Lucknow mentioned that, "There is a problem in management of high risk newborn".

The medical staff and clients were very supportive of the work of the ISM lady doctors and GNMs. However, one ISM lady doctor from Firozabad complained that work environment is not as per expectation and she does not get required cooperation from staff. In district-wise comparison, the ISMs/GNMs from Moradabad appears to be in good working environment. ISMs were facing difficulties in the form of need for separate chamber, eclampsia, management of newborn, suction machine and counselling. Due to these hurdles, ANC, PNC and FP services are affected. Lack of medicine, oxygen facility, staff and trained personnel will slow down the scheme. This can be prevented by maintaining proper roster, in-service training and improving logistics.

Various reasons were offered by ISM practitioners for accepting contractual appointment, the most common being the sense of social service and the hope that the contract will become permanent. Most important benefits gained from training were emergency management of high risk pregnant female and newborn.

The CMO and MOI/C of block PHC reviewed the work of the ISMs/GNMs during monthly review meeting. However, it was visible that there was an absence of fixed or pre-scheduled programme of field visits. Even then there was little or no documentation of these supervisory visits. It is a matter of concern that the representative of the people at the local level, such as, the PRI members' public health awareness is just only the aspects that directly related to their involvement (appointment of ASHA) but not the ideas and intention of their involvement. Whatever it may be, the induction of ISM lady doctors was welcome by the PRI members. One Block Pramukh from Bahraich says, "Permanent lady doctor is needed so that

operation services can be strengthened." Another panchayat member from Lucknow stated that, "More lady doctors should be posted at PHC".

The medical officers and other stakeholders of the health programmes welcome the innovation. In appreciation the CMO, Etawah says, "It is a good step for increasing institutional delivery". The MOI/C, (Jarwal) Bahraich says, "Give them permanent appointment as female patients are increasing". MOs raised their concerns over the issues of shortage of medical doctors, the need to raise the honorarium and payment at regular interval, to give permanent appointment as female patients are increasing, and the problem of ISMs/GNMs in relation to transportation and accommodation.

The objective of the programme is to increase institutional deliveries through ISMs/GNMs in order to safeguard the health of the mother and the child and reduce or prevent maternal and infant mortality and morbidity. To see the impact of only ISM/GNM on MMR and IMR, a greater in-depth study needs to be launched over a period of time and hence this study did not have the scope to look at this aspect. The study analysis pointed out that awareness in the community has increased. This is corroborated by focus group discussion with clients and community. The community members demanded that the OPD, ANC and PNC, FP, delivery services should be available at the time of need and the doctors should be recruited and made available for services as and when required.

CHAPTER 4

RECOMMENDATIONS

4.1 Recommendations

Areas of Concern	Actions Recommended
<ul style="list-style-type: none"> Only 6/16 ISM trained. All GNMs are untrained, GNMs found only in Etawah and Lucknow 	<ul style="list-style-type: none"> Mandatory pre-service training should be given to all ISMs/GNMs.
	<ul style="list-style-type: none"> Minimum one month training comprising classroom teaching and labour room should be given. Independently conducting 25 deliveries could be a criteria.
	<ul style="list-style-type: none"> IMNCI and RTI/STI training be included. Priority should be given to identification of high risk pregnant female and newborn for urgent and timely referral. ANC, PNC, FP, nutrition and immunization services can be promoted by counselling.
<ul style="list-style-type: none"> ISM attached to CMO office. 	<ul style="list-style-type: none"> Don't attach ISMs to CMO office or in other National Programmes.
<ul style="list-style-type: none"> ISM coming from Lucknow to Bahraich 	<ul style="list-style-type: none"> Don't appoint ISMs/GNMs from far off place.
	<ul style="list-style-type: none"> Proper awareness of job responsibility be made.
<ul style="list-style-type: none"> Uncooperative behaviour of MO at Itaunja, Lucknow 	<ul style="list-style-type: none"> CMO/MO should be cooperative and supportive.
<ul style="list-style-type: none"> Payment at Malihabad, Lucknow due for over six months to Khalida Tabassum ISM 	<ul style="list-style-type: none"> Timely payment should be ensured by CMO. Instead of contractual, permanent appointment could be done; this will bring in more commitment from ISMs/GNMs.
	<ul style="list-style-type: none"> Service conditions of ISMs/GNMs should be made more flexible and lucrative. Incentive-based reward for good work (star rating could be given after evaluation). Proper display of roster duties be made mandatory. Separate records of services provided should be maintained and supervised. Camps could be organised for social mobilisation of people. While focussing on raising institutional deliveries, counselling regarding family planning services should be stressed upon. Senior consultants could be hired on contractual basis for advice during complications.

	<ul style="list-style-type: none"> Contractual ISMs/GNMs should received cooperation from MOIC. Supportive staff should be appointed like ayah, sweeper in order to take care of increased workload.
<ul style="list-style-type: none"> Ineffective monitoring and supervision. 	<ul style="list-style-type: none"> Monitoring and supervision records at block and district level (review meeting) should be made and maintained.
<ul style="list-style-type: none"> Lack of proper logistic support e.g. ill equipped labour room. 	<ul style="list-style-type: none"> Labour room should be well equipped along with generator facility. Provision of free medicine (including IV drip set) should be made. Equipment, drugs and infrastructure should be assessed from time to time and a revolving fund maintained to take corrective steps.
<ul style="list-style-type: none"> Contractual MBBS lady doctor paid Rs. 18,000 and contractual ISM lady doctor paid Rs. 8,000 for similar nature of services delivered. 	<ul style="list-style-type: none"> Pay disparities between MBBS and ISM lady doctors need to be removed.
<ul style="list-style-type: none"> Non-utilization of services by community. 	<ul style="list-style-type: none"> Transport and accommodation facility must be at the block level for ISMs/GNMs, it could be done on contractual basis.
<p>IEC</p> <ul style="list-style-type: none"> Many community members were not aware of this Innovation; this prevented mothers – to – be, to avail counseling services, ANC from the very beginning. 	<ul style="list-style-type: none"> Awareness generation activities in community need to be strengthened. Feedback from top to bottom is necessary.

4.2 Limitations of the Study

- As the study duration was less, large sample could not be taken .
- If the number of study districts was increased , it would be more representative.
- Future direction of research.
- Health facility study should be taken to find out deficit and take timely corrective measures.
- It was difficult to elicit only the role of ISMs/GNMs during FGD as the village women could not appreciate the difference between ISM doctor, GNM and ANM.

REFERENCES

1. Government of India. *National Rural Health Mission: Framework for Implementation 2005-2012*, Ministry of Health and Family Welfare. New Delhi; 2005.
2. Government of Uttar Pradesh. *State Action Plan – 2007-08*, Department of Health and Family Welfare, Lucknow; 2007.
3. Mohapatra, B. et al. *An Assessment to Understand the Functioning and Impact of Janani Surkasha Yojana in Orissa*, NIHFV and UNFPA, New Delhi, 2008.