

**“A study to assess the gaps between standards achieved and what need to be achieved in selected ANMTC’s and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar”**

**A dissertation submitted in partial fulfilment of the requirements  
for the award of**

**Post-Graduate Diploma in Health and Hospital Management**

**By**

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**May, 2013**

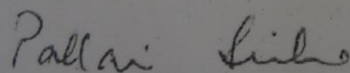
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### TO WHOM IT MAY CONCERN

This is to certify that Mr. Nagendra Babu has successfully completed his 3 months internship in our organization from February 01, 2013 to May 01, 2013. During this intern he has worked on project *“Gap analysis in selected ANMTC’s and deriving the action plan to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar”* under the guidance of me and my team at JHPIEGO – Bihar.

His work has been satisfactory during this dissertation period and we wish him/her good luck for his/her future assignments



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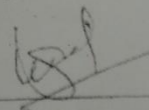
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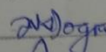
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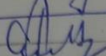
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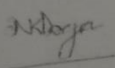


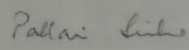
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This is to certify that **Mr. Nagendra Babu Gavvala** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management**, has worked under our guidance and supervision. He is submitting this dissertation titled **"Gap analysis in selected ANMTC'S and deriving the action plan to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar"** in partial fulfillment of the requirements for the award of the **Post-Graduate Diploma in Health and Hospital Management**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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## FEEDBACK FORM

**Name of the Student:** Nagendra Babu G.

**Dissertation Organization:** Johns Hopkins Program for International Education in Gynecology & Obstetrics (Jhpiego)

**Area of Dissertation: -** Pre-service nursing education and project implementation.

**Tasks Given:** To implement the performance standards in respective nursing schools and attached clinical facilities in Bihar.

**Attendance:** 100% attendance

**Objectives achieved:** Successfully completed DFID Baseline assessment of nursing students and faculties, implemented the performance standards in nursing schools & attached facilities & participated in implementing virtual classroom project in Bihar.

**Strengths:** Their work has been satisfactory here in 3 months, although they still need to be groomed in professionalisation and deliver with more confidence.

**Suggestions for Improvement:**

Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date: 7/6/13.

Place: Patna, Bihar

*Pallavi Sinha*  
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### Acknowledgement

I hereby would like to express my deep sense of gratitude towards my mentor **Dr. Pallavi Sinha** (State Programme Manager - PSE). She provided her supportive guidance to make the completion of this project a success. This project report could not have been written without, **Dr. Neeraj Agrawal** (National Programme Manager - PSE), who encouraged and guided me throughout my training program. They patiently guided me through the training process, never accepting less than my best efforts. I thank them.

I would like to thank **Ms Bhawna Bhakshi** (NMEO), **Mrs Lakshmi Gautam** (NMEO), **Mr Sandeep Sharma** (NMEO) and the whole Jhpiego team for their guidance and support during my training period which has a lasting effect.

I am indebted to my guide **Dr Nitish Dogra**, IIHMR, New Delhi, for extending his guidance to me, by constantly discussing the project matter and providing a meaningful insight into the topic.

Words are inadequate in offering my thanks to the Jhpiego - Patna team for their encouragement and cooperation in carrying out the project work.

I would like to express my gratitude to all the principals, nursing tutors and staff nurses who participated in this project for their co-operation and for their valuable inputs.

Finally, I am forever indebted to my parents, friends and my seniors for their understanding, endless patience and encouragement when it was most required.

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## PART – A

### ORGANISATIONAL PROFILE

#### **ABOUT JHPIEGO – INDIA:**

Jhpiego began working in India in the 1980s, collaborating with the Ministry of Health and Family Welfare (MOHFW) to strengthen reproductive health services. Numerous physicians and nurses from Indian medical and nursing colleges participated in Jhpiego training courses in the U.S. and at Jhpiego-affiliated regional training centers in Asia. Beginning in 1992, Jhpiego was named a key partner in a five-year, \$325 million project funded by the U.S. Agency for International Development (USAID) to strengthen reproductive health services in the largest state in India, Uttar Pradesh (UP). Under this project, Jhpiego successfully oversaw the training of thousands of physicians, nurses and auxiliary nurse midwives (ANMs), as well as the development of many standardized training materials. Key partners assisting Jhpiego were the prestigious King George Medical College and Meerut Medical College. To this day, the innovations in training and quality improvement (e.g., competency-based training using participatory approaches and the use of anatomic models in clinical training) continue to be used in training conducted in UP state under the auspices of the MOHFW. During this same time period, Jhpiego provided technical assistance to medical associations in India to strengthen the skills of private health care providers to deliver high-quality health care to women in UP and other states.

Over the past five years, Jhpiego has provided technical leadership to address the following MOHFW priorities:

- **Expanding emergency obstetric care:** In partnership with the Federation of Obstetric and Gynaecological Societies of India (FOGSI), Government of India (GOI), United Nations Children’s Fund (UNICEF) and premier medical schools, Jhpiego strengthened the capacity of FOGSI members and general practitioners to provide emergency obstetric and newborn care during childbirth, which was once the exclusive domain of specialists.

- **Increasing skilled attendance at birth:** From 2006 to 2009, Jhpiego worked with the Government of Jharkhand to test ways to provide skilled maternal and newborn care in communities where women typically deliver at home. With funding from USAID, the ACCESS Program strengthened clinical skills of ANMs through 12 weeks of hands-on clinical training to provide a broader range of lifesaving services.
- **Revitalizing IUCD services:** Although FP is widely available in India, women have few highly effective, reversible choices. One of these methods is the intrauterine contraceptive device (IUCD), which at less than 1% of the method mix has not gained much popularity. In 2006, the MOHFW decided to revitalize IUCD services. Supported by USAID under the ACCESS-FP Program, Jhpiego in partnership with GOI's National Institute of Health and Family Welfare (NIFHW) helped train more than 60 national and state trainers using an alternative training methodology based on competency-based training materials, anatomic models and service delivery performance standards. Activities supporting IUCD services continue in India with financial assistance from various donors in more than 16 states.
- **Preparing for emerging pandemics:** Jhpiego partnered with the U.S. Centers for Disease Control and Prevention (CDC) in November 2009 to conduct a regional training in New Delhi for teams of infection control and public health specialists from more than 10 countries.
- **Pre-service education:** Since 2008, Jhpiego has revitalized its support of pre-service education programs in India. Through funding from USAID, the Packard Foundation, Norwegian India Partnership (NIPI) and the Bill & Melinda Gates Foundation, Jhpiego and the GOI established a national nodal center for pre-service education of ANMs and Accredited Social Health Activists in Kolkata. Currently, Jhpiego and its partners are working to strengthen an additional five facilities to act as National Nodal Centers (NNCs) for pre-service education. These facilities provide a venue for the six-week

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ANM training—the curriculum for which is currently under development by the Maternal and Child Health Integrated Program (MCHIP)—in collaboration with the GOI.

### **Current Program Highlights**

Currently, Jhpiego manages six major programs, in partnership with five donors, to save women's and children's lives:

### **Repositioning FP within the Context of Maternal, Newborn and Child Health with MCHIP**

Building on the ACCESS-FP program's success using competency-based training, anatomic models and service delivery performance standards, MCHIP (USAID's Global Health flagship program for maternal, newborn and child health) supports the GOI's strategy for revitalizing use and distribution of the immediate postpartum IUCD (PPIUCD). Through this work, MCHIP and Jhpiego are addressing the unmet need for postpartum family planning (PPFP) services beyond sterilization. MCHIP is also engaging Jharkhand, UP and Uttarakhand states in their FP advocacy, training and implementation activities. Additionally, Jhpiego is involving the private sector in UP and Uttarakhand by supporting the Saathiya provider network, an initiative designed to address FP and reproductive health needs of young married couples from the lower socioeconomic class. Jhpiego aims to create sustainable partnerships with private sector providers to improve contraceptive-seeking knowledge and behavior in younger generations. Finally, Jhpiego, with support from MCHIP, is implementing a study on the effectiveness of a postpartum systematic screening tool for identifying unmet need for FP, immunization and postnatal services. This tool is being introduced by ANMs in Jharkhand through Village Health and Nutrition Days.

### **Pre-Service Education for Nurses and Midwives with MCHIP**

Also with MCHIP, Jhpiego is working closely with the Indian Nursing Council (INC) to strengthen pre-service education for the nursing and midwifery cadre in India. The project aims to upgrade the clinical training capacity of providers in UP and Jharkhand, through the

introduction of a six-week training curriculum covering effective teaching, computer skills, skilled birth attendance, clinical training, Integrated Management of Neonatal and Childhood Illness, family planning, prevention of infectious disease and the national pre-service education clinical and education standards. Currently, this training is conducted at the NNC in Kolkata. However, MCHIP plans to strengthen an additional five facilities over the next year to deliver the six-week training. Through enhanced training and the development of NNCs, MCHIP programming will improve the provision of maternal and newborn care, including FP services, at clinical sites. Besides serving as model teaching institutions, strengthened facilities will serve as pedagogic resource centers for pre-service education at ANM training centers in their region, and support the concurrent strengthening of these training centers.

### **National PPFP/PPIUCD Services with the Bill & Melinda Gates Foundation**

To address the GOI's desire to revitalize the PPIUCD, Jhpiego is providing technical assistance to the MOHFW, GOI and the Government of Bihar to introduce, establish and integrate PPIUCD services into their PPFP program, and to build the capacity of the states to conduct PPIUCD training and institutionalize these services.

In two years, this program, funded by the Bill & Melinda Gates Foundation, aims to:

- Establish one high-quality service delivery site in each of the 16 target state
- Establish training capacity in PPIUCD in 10 of the 16 states where high-quality services with adequate client volume have been established
- Establish PPIUCD clinical services at medical colleges, district hospitals, sub-divisional hospitals, community health clinics and primary health centers in two districts in Bihar
- Train facility-based community workers and nurses in PPIUCD counseling/advocacy in all 16 states
- Introduce PPFP/PPIUCD counseling for clients at the identified clinical sites supported for establishment of service delivery in all 16 states

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### **Pre-Service Education in Bihar with the Norwegian India Partnership Initiative**

The goal of this project is to improve the quality of pre-service education for the nursing and midwifery cadre in Bihar state. The Bihar state health society is leading the implementation of this program with strategic technical assistance from Jhpiego and in partnership with NIPI. Jhpiego supports the development of nodal centers of excellence for nursing and midwifery pre-service education to act as a resource and mentoring center for the process of strengthening the six general nursing and midwifery schools and 22 ANM training centers in the state of Bihar, improving the overall institutional capacity of the health care system in the state. The INC, with support from Jhpiego, formulated performance standards that will guide the development of the school of nursing into a state nodal center of excellence. By reinforcing faculty teaching skills and introducing the INC-approved educational standards and processes, Jhpiego will help strengthen the delivery of high-impact FP and maternal, newborn and child health interventions at the facility and community levels.

### **PPFP Strategy for the Bihar State with the Packard Foundation**

With nearly 100 million people, Bihar is one of India's most populous states. It has the highest rates of fertility and lowest levels of contraceptive use in the country. The Government of Bihar, in an effort to reduce the total fertility rate, aims to provide quality and comprehensive PPFP services to all clients in the state. Jhpiego is providing technical assistance to the Government of Bihar to develop a comprehensive, multi-stakeholder strategy for implementing a statewide PPFP program through the public and private sector facilities. Once finalized and approved, the Government of Bihar is planning to implement the program in all 38 districts of Bihar.

### **Testing the Effectiveness of a Safe Childbirth Checklist**

With funding from the UK-based Children's Investment Fund Foundation (CIFF), Jhpiego is implementing a three-year project to test the integration of a World Health Organization Safe Childbirth Checklist into targeted health facilities of Rajasthan, India. The project seeks to demonstrate whether exclusive use of the checklist will be effective in reducing early neonatal mortality.



Jhpiego is working in conjunction with the Government of Rajasthan to:

- 1) Identify facilities for checklist introduction;
- 2) Advocate at the state level for inclusion of the checklist for delivery cases;
- 3) Orient providers on correct use of the checklist and provide supportive supervision; and
- 4) Support data collection and monitoring and evaluation of intervention facilities.

If successful, this project will inform replication and scale-up of checklist use in other states throughout India, and in other countries with similar newborn care environments.

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## PART – II

# DISSERTATION REPORT

### ABSTRACT

*Gap analysis in selected ANMTC's and deriving the action plan to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar\**

by

Nagendra Babu Gavvala

**Back ground:** There is a increasing need for skilled and competent nurses and also to improve the quality in maternal and child health services provided to community, a comprehensive initiative to strengthen the foundation of pre-service education (PSE) for these nurse midwives is being undertaken by the Ministry of Health and Family Welfare (MoHFW) in collaboration with the Indian Nursing Council (INC). As a part of this, an operational guideline has been developed with support from various development partners.

**Objectives:** A cross sectional study was carried out with an aim to assess the gaps between standards achieved and what need to be achieved in selected ANMTC's and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar.

**Methods:** The data was collected from five selected ANMTC and district hospitals as a part of midline assessment of the performance under pre service education project .The target samples for the study are five ANMTC's and their attached hospitals which are being covered by me. The baseline assessment and 1<sup>st</sup> internal assessment of ANMTC's with performance standards are collected and then both were compared for each ANMTC separately. The existing base line and

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1<sup>st</sup> internal assessment data of five ANMTC's will be used to analyse and rule out the gaps in existing and expected outcomes.

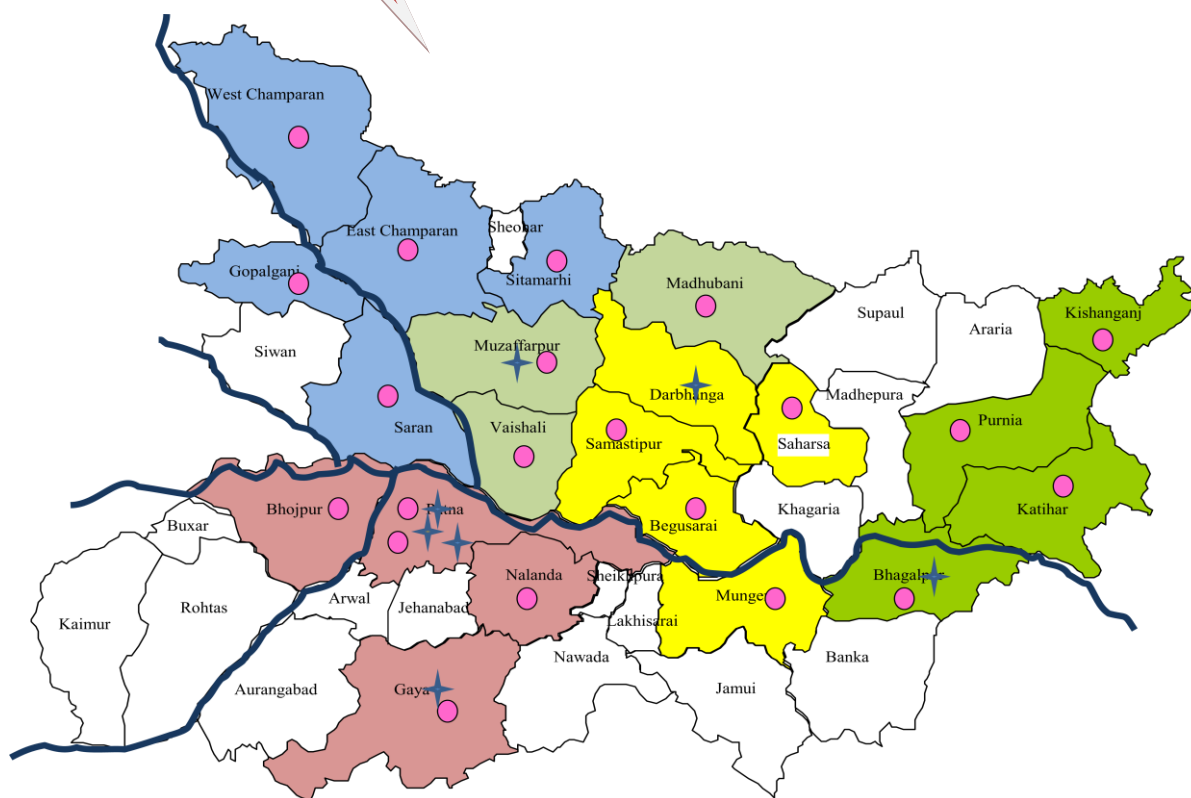
**Results:** Among the five ANMTC's, sitamarhi ANMTC have shown the significant improvement and on average it is the best performance by showing improvements in almost all the five sections of performance standards. Next to that gopalganj ANMTC and Chapra ANMTC are almost equal in the performance on average having performed well in standards of classroom teaching, clinical teaching and school management. This is all due to the presence of young, enthusiastic nursing tutors and supportive supervision by Jhpiego staff and where as the sections of school infrastructure and clinical areas practice takes time. The gaps noticed in schools include acute shortage of human resources, inadequate school infrastructure and inadequate learning resources and insufficient clinical training equipment for hands on practice.

**Conclusions:** In conclusion, PSE project in Bihar made considerable effect on the quality of nursing education by improving in various sections like classroom teaching, clinical instruction and practice, school infrastructure and school management. Among five selected ANMTCs, sitamarhi was best till date, next to that chapra and gopalganj schools performed well, whereas motihari and bettiah were lying at bottom of the ladder respectively. The findings of the study strongly suggested the areas of school infrastructure and clinical sites where students undertake clinical practice should be focused much in every district. It is highly recommended that every school should have standardized policies on students academic performance, competency based evaluation system and course completion requirements. Recruitment of nursing tutors, clinical staff and data operators should be given due importance.

## DEMOGRAPHY OF BIHAR STATE



Study ANMTC's (5 Facilities)



**Bihar State Map showing ANMTC/GNMTC Schools**

## **LIST OF ABBREVIATIONS:**

AMTSL	:	Active Management of the Third Stage of Labour
ANC	:	Antenatal Check-Up
ANM	:	Auxiliary Nurse Midwife
APH	:	Antepartum Haemorrhage
ARI	:	Acute Respiratory Infection
ASHA	:	Accredited Social Health Activist
AWW	:	Anganwadi Worker
BEmONC	:	Basic Emergency Obstetric and Newborn Care
CBO	:	Community-Based Organisation
CCT	:	Controlled cord traction
CEmONC	:	Comprehensive Emergency Obstetric and Newborn Care
CHC	:	Community Health Centre
COC	:	Combined Oral Contraceptive
DDK	:	Disposable Delivery Kit
DLHS	:	District Level Household Survey
ECP	:	Emergency Contraception Pill
EDD	:	Expected Date of Delivery
EmOC	:	Emergency Obstetric Care
FHR	:	Foetal Heart Rate
FHS	:	Foetal Heart Sound
FRU	:	First Referral Unit
GoI	:	Government of India
HBNC	:	Home Based Newborn Care

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HBsAg	:	Hepatitis B Surface Antigen
HIV	:	Human Immunodeficiency Virus
ICTC	:	Integrated Counselling and Testing Centre
IEC	:	Information, Education and Communication
IFA	:	Iron and Folic Acid
IMNCI	:	Integrated Management of Neonatal and Childhood Illnesses
IMR	:	Infant Mortality Rate
IPHS	:	Indian Public Health Standards
IUCD	:	Intra Uterine Contraceptive Device
IUGR	:	Intrauterine Growth Retardation
JSY	:	Janani Suraksha Yojana
KMC	:	Kangaroo Mother Care
LAM	:	Lactational Amenorrhea Method
LBW	:	Low Birth Weight
LHV	:	Lady Health Visitor
LMP	:	Last Menstrual Period
LPS	:	Low Performing States
MCTS	:	Mother and Child Tracking System
MMR	:	Maternal Mortality Ratio
MO	:	Medical Officer
MoH&FW	:	Ministry of Health and Family Welfare
MPW	:	F/M Multi Purpose Worker – Female / Male
MTP	:	Medical Termination of Pregnancy
MVA	:	Manual Vacuum Aspiration
NFHS	:	National Family Health Survey

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NGO	:	Non-Governmental Organisation
NHSRC	:	National Health Systems Resource Centre
NIHFW	:	National Institute of Health and Family Welfare
NNMR	:	Neonatal Mortality Rate
NR	:	Neonatal Resuscitation
NRHM	:	National Rural Health Mission
NSSK	:	Navjaat Shishu Suraksha Karyakram
NSV	:	No Scalpel Vasectomy
ORS	:	Oral Rehydration Solution
OT	:	Operation Theatre
P/V	:	Per Vaginum
PC&PNDT	:	Pre-conception & Pre-natal Diagnostic Techniques
PHC	:	Primary Health Centre
PHN	:	Public Health Nurse
PIH	:	Pregnancy-Induced Hypertension
PIP	:	Programme Implementation Plan
PNC	:	Postnatal Check-Up
PNDT	:	Pre-Natal Diagnostic Techniques
PPH	:	Post-Partum Haemorrhage
PPTCT	:	Prevention of Parent-to-Child Transmission
PRI	:	Panchayati Raj Institution
PROM	:	Premature Rupture of Membranes
RCH	:	Reproductive and Child Health
RTI	:	Reproductive Tract Infection
SBA	:	Skilled Birth Attendant



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SC	:	Sub Centre
SN	:	Staff Nurse
SNCU	:	Special Newborn Care Unit
STI	:	Sexually Transmitted Infection
TBAs	:	Traditional Birth Attendants
TFR	:	Total Fertility Rate
TT	:	Tetanus Toxoid
UTI	:	Urinary Tract Infection
VHND	:	Village Health and Nutrition Day

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## **CHAPTER - I**

**“A study to assess the gaps between standards achieved and what need to be achieved in selected ANMTC’s and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar”**

### **INTRODUCTION:**

The National Rural Health Mission (NRHM) of the Government of India (GoI) has brought back the focus on delivery of essential reproductive, maternal, newborn and child health (RMNCH) interventions at the level of Primary Health Centers. The main objective of NRHM is to increase the accessibility of these services to the vast rural population of India. The recent policies and programs, focusing on RMNCH, have put an increased emphasis on the role of the basic health worker, the Auxiliary Nurse Midwife (ANM), and General Nurse Midwife (GNM) in the provision of comprehensive RMNCH services in the country, especially in rural areas.

The main reason behind inconsistent quality of care is the sub-standard competency level of the providers, especially the nurse midwives, working in the public health facilities. This problem is further aggravated by the shortage of the human resources, especially the nurse-midwives, at the public health facilities. Therefore, capacity of the states to produce sufficient number of competent and confident nurse-midwives is crucial for the success of the various RMNCH programs being launched and implemented by the GoI.

There is a need for skilled and competent nurses to improve the quality in maternal and child health services, and to make reach the services to the vast rural population of India. To respond to this need for development of the adequate number of competent and confident basic healthcare service providers who can provide quality RMNCH services at the grassroots level, a comprehensive initiative to strengthen the foundation of pre-service education (PSE) for these nurse midwives is being undertaken by the Ministry of Health and Family Welfare (MoHFW) in collaboration with the Indian Nursing Council (INC). As a part of this, an operational guideline has been developed with support from various development partners. This operational guideline

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provides the detailed standards on five most crucial dimensions to strengthen pre service education at all the ANM and GNM schools which include educational processes, clinical practices, capacity building, training infrastructures and management capacity.

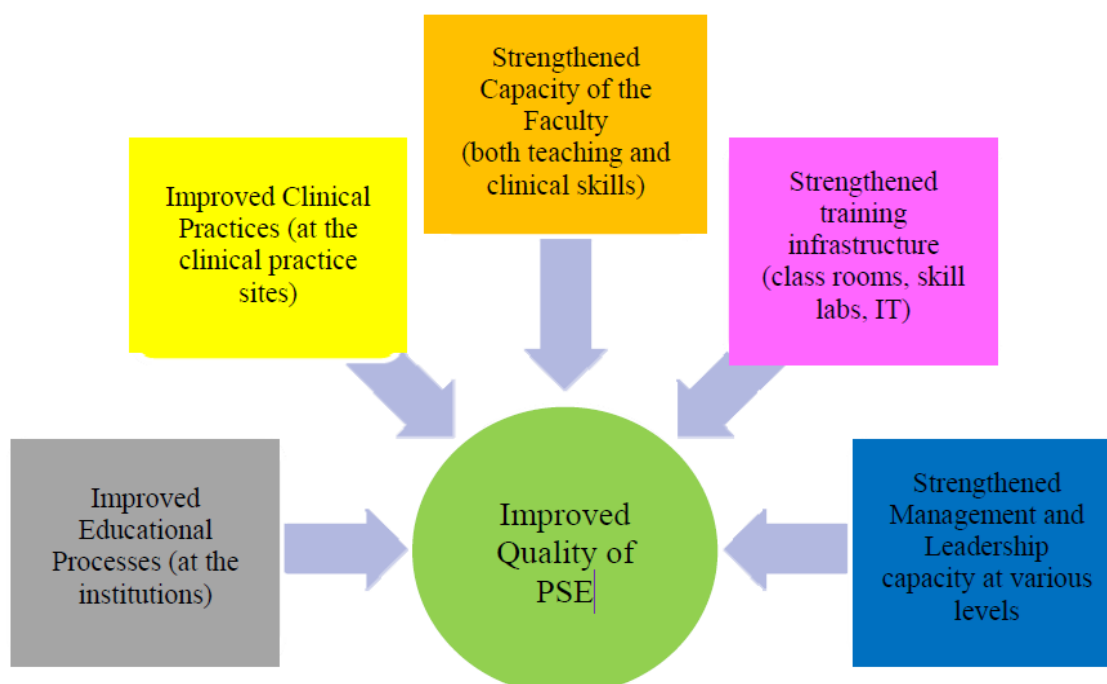
Bihar is one of the focus states for strengthening the pre service education of nursing and midwifery cadre, hence this project rolled out by Jhpiego throughout the state covering 21 ANMTCs, 6 GNMTCs and a College of Nursing in Patna by providing technical support for the same. Interventions are also been taken to establish the State Nodal Centre for the training needs of the nursing professionals and Jhpiego has established the same successfully. The approach adopted for this program includes a combination of top down and bottoms up programmatic activities where in the setting up of national/state nodal centers is initiated at the national or state levels, concurrently, the strengthening of the ANMTCs and GNM Schools is also initiated at the state and district levels, so as to minimize the time lag between the setting up of nodal centers and strengthening of ANM and GNM Schools.

Towards this objective, the initiative will work on strengthening of the five of the most critical dimensions of the Pre Service Education (PSE) at all the ANM and GNM schools, which include the following:

- Educational Processes at the schools
- Clinical practices at the respective clinical practice sites of the schools
- Capacity, including the clinical skills and teaching skills, of the faculty
- Training infrastructure of the schools, including the skill lab, library and the IT labs
- Management capacity for overall strengthening of the PSE for Nursing & Midwifery

**Fig. 1:**

**Components of the initiative for improving quality of nursing-midwifery education**



**Strengthening the quality of pre-service Nursing and Midwifery Education at the ANMTCs and GNM Schools:**

**Major activities and steps:**

**Sanctioning of faculty for GNM schools and ANMTCs:** Policy decision and budgeting at the state level to be made to sanction posts at the GNM schools and ANMTCs as per the INC requirements and plans for recruitment for the posts to be made.

**Hiring of Faculty:** Advertise, conduct interview and recruit faculty for all the GNM Schools and ANMTCs so that the HR shortages can be addressed.

**Orientation of faculty:** Three day orientation of the identified additional and regular faculty of the ANM/GNM Schools (Principal, tutors), and the representatives from the clinical practice sites (HOD –OBG, LR in-charge, NS) of these schools to the educational and clinical standards and its implementation. While the first two days of the workshop will be dedicated to the educational standards corresponding to the sections 1st to 4th of section of performance standards, the third day of the workshop is committed to orientation on the clinical standards. The first two days will be attended by faculty of the GNM/ANM Schools while the third day of the meeting will also be attended by representatives of the clinical practice sites.

Based on the capacity of the state/development partner supporting the state, the state can stagger the strengthening of ANM/GNM Schools and can do it in a phased manner, selecting a select number of ANM/GNM Schools to be strengthened in the first phase and then undertake the strengthening of the rest of the ANM/GNM Schools in the subsequent phase. This planning process will be led by the state nursing cell and supported by state nodal center.

**Baseline assessment :** Baseline assessments of the GNM and ANM schools and their affiliated clinical sites using the performance standards and preparation of an action plan for addressing the identified gaps to be conducted by the faculty of the ANMTC/ GNM School, supported by the faculty of SNC and respective development partners.

**Three day on-site training for standardization of clinical practices :** Three day on-site training for standardization of clinical practices at the respective clinical practice sites of the ANM/GNM Schools for updating the clinical skills and knowledge of clinical staff from the OBG and paediatrics department of these sites along with the identified faculty of the ANM/GNM School, to facilitate the implementation of the clinical standards at these sites. The first day of the training will focus on orientation to the clinical standards and discussion on the gaps of the clinical practice site as assessed in the baseline assessment. The next two days of the training will be focused on clinical update and standardization of clinical skills and knowledge of the providers of the clinical practice sites and select faculty of the ANM/GNM Schools. The action plan with timelines for implementation of standards, along with the roles and responsibilities, will also be discussed with the stake holders during this training.

### **Main components of the 6 weeks curriculum:**

- Effective teaching skills
- Skilled birth attendance
- Integrated Management of Neonatal and Childhood illness
- Prevention of Reproductive tract infections including prevention of Parent to Child Transmission of HIV
- Family Planning
- Quality improvement in nursing education (SBMR)

**Finalization of the action plan:** A two day on site meeting/orientation of the faculty of the ANM/GNM Schools to orient them on the educational standards, discussion on the baseline assessment findings and finalization of the action plan for strengthening of educational processes at the ANM/GNM Schools. The action plan with timelines for implementation of standards, along with the roles and responsibilities, will also be discussed during this meeting.

**Implementation of action plan:** Implementation of the action plan developed as per the gaps identified during baseline assessments of clinical and educational processes, to be done by the faculty of the ANM/GNM Schools. Periodic internal assessments to be done at an interval of every four weeks so that the standards are achieved at least upto 70% within six to nine months of initiation of the process.

**Strengthening of training infrastructure:** Strengthening the skills labs, library and IT infrastructure of the ANM/GNM Schools. The existing infrastructure of the ANM/GNM Schools may have to be strengthened for setting up of the skill lab, library and IT labs.

**Six weeks trainings:** Faculty from the ANMTC/ GNM School to be trained in the 6 weeks trainings at the SNC/NNC.

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**Implementation of action plan** (contd.): Implementation of the performance standards to strengthen the educational and clinical practices at these institutions to continue as per the action plans developed during baseline and subsequent internal assessments.

Faculty at the ANMTCs/GNM Schools will start implementing competency based trainings at their ANMTC/ GNM School while teaching their students. The strengthened skills lab, library and computer labs should be fully utilized during the trainings.

**Mentorship visits:** Faculty of the NNC/SNC to conduct mentorship visit to the GNM Schools and ANMTCs from which the faculty have been trained to hand hold them in post training transfer of learning and support the above mentioned steps for strengthening of GNM/ANM Schools.

### **RATIONALE FOR THE STUDY:**

ANMs and GNMs are the pillars of the primary health care as they are the providers of basic health care at the lowest level of health system and therefore the availability of skilled nurse-midwives is a critical determinant to accessibility of quality RMNCH services to the vast rural population in the country. Their empowerment and skill enhancement are critical for improvement in quality of the health care, though in-service training for improving the knowledge and skills are being provided but quality of pre service nursing education didn't get the due attention. As this project which mainly focuses on the improving the quality of the nursing education, the effective implementation of the project should be the utmost priority. The objective behind this project is technical strengthening of ANM and GNM training institutions which will ultimately help in availability of adequate number of competent and skilled nurse midwives in the health care delivery points.

For the effective implementation to achieve the objective of this project, periodic evaluation of gaps in performance of the institutions need to be assessed and action plan should be developed to achieve the same. It's also very important to have clear actionable points for each and every section of standards for the maximum achievement of the performance standards which in turn



strengthens the quality of pre service education and so there is great need for the present study which aims to derive actionable points. As the present study also focuses on gap analysis of performance standards for each and every selected ANMTCs, it is very important to carry out this study which gives clear analysis and to know what is achieved and what need to be achieved.

### **STATEMENT OF THE PROBLEM:**

**“A study to assess the gaps between standards achieved and what need to be achieved in selected ANMTC’s and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar, India – A cross sectional study”**

### **OBJECTIVE OF THE STUDY:**

#### **GENERAL OBJECTIVE:**

To assess the gaps between standards achieved and what need to be achieved in selected ANMTC’s and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar

#### **SPECIFIC OBJECTIVES:**

- ✓ To compare the results achieved during base line and 1<sup>st</sup> internal assessment of ANMTC’s in various sections.
- ✓ To rule out the existing gaps which needs improvement and deriving the action plan for the same.
- ✓ To determine the factors which helped to improve the performance standards of the ANMTC’s
- ✓ To develop the clear actionable points for each and every standard which helps to achieve more standards

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## **OPERATIONAL DEFINITIONS:**

### **GAP ANALYSIS:**

The process through which a company compares its actual performance to its expected performance to determine whether it is meeting expectations and using its resources effectively

### **ACTIONABLE:**

Relating to or being information that allows a decision to be made or action to be taken.

### **STANDARD:**

Established or well-known or widely recognized as a model of excellence or authority

### **STRENGTHEN:**

To increase the ability of existing performance with respect to teaching, clinical practice and management of schools.

### **PRE-SERVICE EDUCATION:**

Pre-service education for medical, nursing, other health professionals consists of the basic training required to achieve the licensure requirements of the profession; typically, this training is provided in colleges, universities, and other post-secondary education settings.

## **HYPOTHESIS:**

- All the improvement areas in standards will be ruled out for each ANM school separately after comparison between baseline and 1<sup>st</sup> internal assessment of the same. The factors influenced for the achievement are assessed which might help to follow the same for other ANM schools which didn't achieve the specific standard.

- The actionable points will be drawn for each standard in general which clearly states how the specific standard can be achieved.
- The ANM schools which have adequate staff and good support from other stakeholders might have been performed well.
- There will be a considerable increase in the performance of the ANMTC's in between base line and 1<sup>st</sup> internal assessment as Jhpiego extended its technical support during the course of time.

### **PROJECTED OUTCOMES:**

- This study will help to know which are best and underperforming ANMTC's among selected five schools
- This study gives the factors responsible for best performing and under performing in respective ANMTC's.
- This will also help to rule out the gap areas among the standards which need to be focused.
- At the end of study we will be having detailed actionable points for each and every standard which helps for better implementation and achievement of standards.

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## **CHAPTER - II**

### **RESEARCH METHODOLOGY**

#### **RESEARCH DESIGN:**

This is a cross sectional study which is done with an aim to assess the gaps between standards achieved and what need to be achieved in selected ANMTC's and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar. This study is done on the selected ANMTC's and their performance standards are assessed and compared within and in between five ANMTC's

#### **STUDY SETTING:**

##### **State Profile:**

The state of 'Bihar' is located in the northern part of India. As per Census 2011, Bihar's population is 10.38 crores comprising 5.1% of India's population. The state has a sex-ratio of 916 females per 1000 males, literacy rate of 63.82%, and decadal growth rate of 25.07% and population density of 1102 persons/km<sup>2</sup>. The Total Fertility Rate of the State is 3.7. The Infant Mortality Rate is 48 and Maternal Mortality Ratio is 261 (SRS 2007 - 2009) which are higher than the National average. The Sex Ratio in the State is 916 (as compared to 914 for the country).

##### **Setting:**

Five districts which are covered under Strengthening of Pre Service Education Project were selected. These five district hospitals are connected with ANMTC's, all these were selected for the present study which are all covered by me. The locations of five ANMTC's include Motihari, Bettiah, Chapra, Hathua and Sitamari. The baseline and 1<sup>st</sup> internal assessment data is collected and then gaps will be analysed later the detailed actionable points will be derived.

### **Study sample and Method of data collection:**

The target samples for the study are five ANMTC's and their attached hospitals which are being covered by me. The baseline assessment and 1<sup>st</sup> internal assessment of ANMTC's with performance standards are collected and then both were compared for each ANMTC separately. The existing base line and 1<sup>st</sup> internal assessment data of five ANMTC's will be used to analyse and rule out the gaps in existing and expected outcomes

### **DEVELOPMENT OF THE TOOL:**

As a step towards addressing the quality pre service nursing and midwifery education, Indian Nursing Council with technical assistance from Jhpiego through the USAID supported MCHIP project have developed these 'Performance Standards for Nodal centres and ANM/GNM Schools for strengthening the pre-service Nursing and Midwifery education'. These standards are a performance improvement tool intended for periodic use by the service providers, supervisors and managers to monitor and improve the quality of pre service education at the Nodal centres and ANM/GNM Schools.

Through these standards assessor can identify whether their method of teaching and demonstrating is according to standards and they also will be able to correct the practices with the help of the standards. They also need to ensure that all equipment and supplies required for the services are available and functional in their demonstration rooms. They need to look at these sections of the standards tool and self-assess their performance and also use the tool as a checklist to ensure all the tasks are being accomplished. They need to know that they will be responsible for the results of the assessment of these standards conducted by their supervisors from time to time at least once a quarter to assess quality of pre service education at their nodal center and GNM/ANM School.

During the assessment the assessor needs to write 'Y' for 'YES' if the task is accomplished as per standards, 'N' for tasks 'NOT DONE' or 'NOT DONE AS PER STANDARDS' and 'NA' if

the task is ‘NOT APPLICABLE’ for the situation being observed. A standard will be considered achieved **only if all** the criteria of it are accomplished (‘Y’ and ‘NA’). The ‘NA’ in a standard will be considered with ‘Yes’ and as achieved. If there is any specific qualitative finding for any criteria, the assessor may mention it in the column of comments with date in brackets. At the end of each section there is a table with the total number of standards for that section. There is space to record the number of standards observed and the number of standards met for that section with date of observation. List the standards accordingly in this table. Each achieved standard with all criteria ‘Yes’ and ‘NA’ scores one point and if the criteria is not achieved (N) then the score will be zero.

At the end of the tool is a summary sheet of scores. Note the total number of standards observed and total standards met in rows 2 and 3 respectively of column 2. Mark the score % by calculating the total number of standards met divided by total number of standards observed multiplied by 100. Eg. If the total standards observed are 50 and the total standards met are 30, then the Score % will be =  $30/50 \times 100 = 60\%$ . Note this score in column number 3 adjacent to the total number of standards met.

By using this performance standard tool the base line assessment and 1<sup>st</sup> internal assessments were done and they were scored accordingly in the above mentioned manner. Then analysis has been made between selected ANMTC’s

## **CHAPTER - IV**

### **DATA ANALYSIS AND INTERPRETATION**

This chapter deals with the description of ANM schools, analysis and interpretation of data collected based on performance standards checklist in selected ANM schools in their respective districts of Bihar. The present study was designed to assess the gaps between standards achieved and what need to be achieved in selected ANMTC's and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar. The collected data was organized and interpreted using descriptive and inferential statistics and was coded and analyzed as per objectives of the study under the following headings.

#### **ORGANIZATION OF DATA:**

The data has been described and organized as follows:

#### **PART-I:**

This part contains analysed data of all five selected ANM schools describing the present status of performance and the existing major gaps for the respective schools.

The schools were assessed during start of the project which is base line and after a period of six months the 1st internal assessment was done using the performance standards checklist.

The assessment was done for assessing standards maintained under various elements like:

- Class room and practical instruction
- Clinical instruction and practice
- School infrastructure and training materials
- School management
- Clinical site practices



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**PART-II:**

This part contains analyzed data of the comparisons in between the five selected schools showing which is the best performer and which school is under performer. This also highlights the areas which needs improvement in the under-performing schools.

**PART- III:**

This part contains overall performance summary of all selected schools and shows the difference in performance in between baseline assessment and Ist internal assessment. This shows the overall change in the schools after implementing the project in the respective schools.

**PART- IV:**

This part provides the detailed analysis of actionable points for each and every standard, which in turn help in guiding respective NMEO's to take necessary actions to achieve the standards in their respective schools.

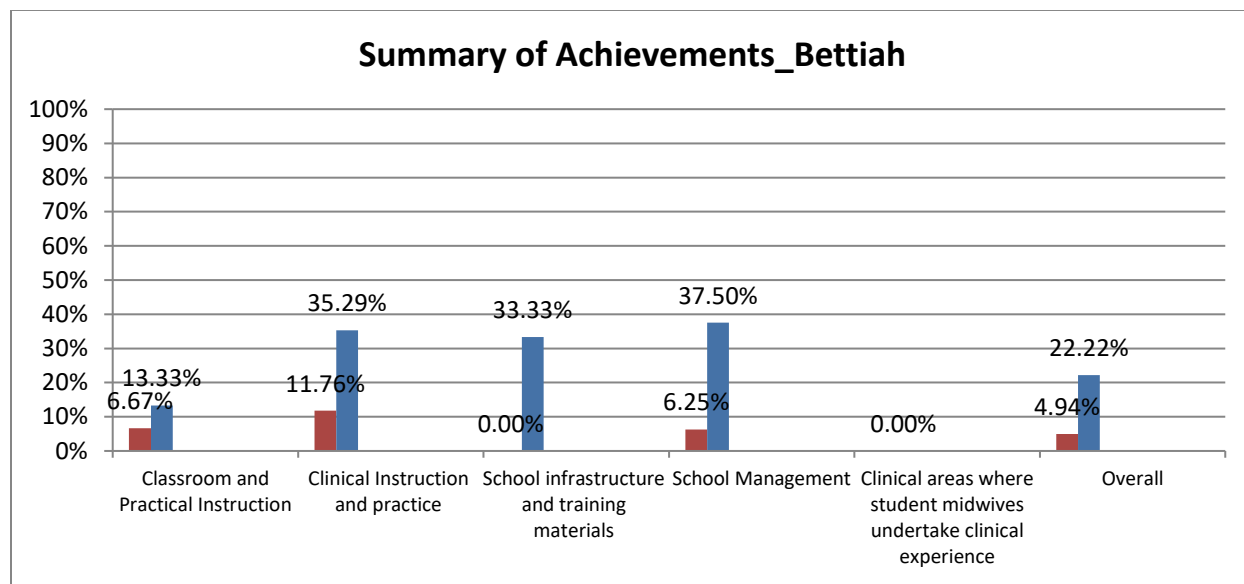
**PART – I****KNOWLEDGE EVALUATON TEST RESULTS****SECTION-I:**

This part contains analysed data of all five selected ANM schools describing the present status of performance and states the existing major gaps for the respective schools.

The schools were assessed during start of the project which is base line and after a period of six months the Ist internal assessment was done using the performance standards checklist.

**Fig.9.1.1:**

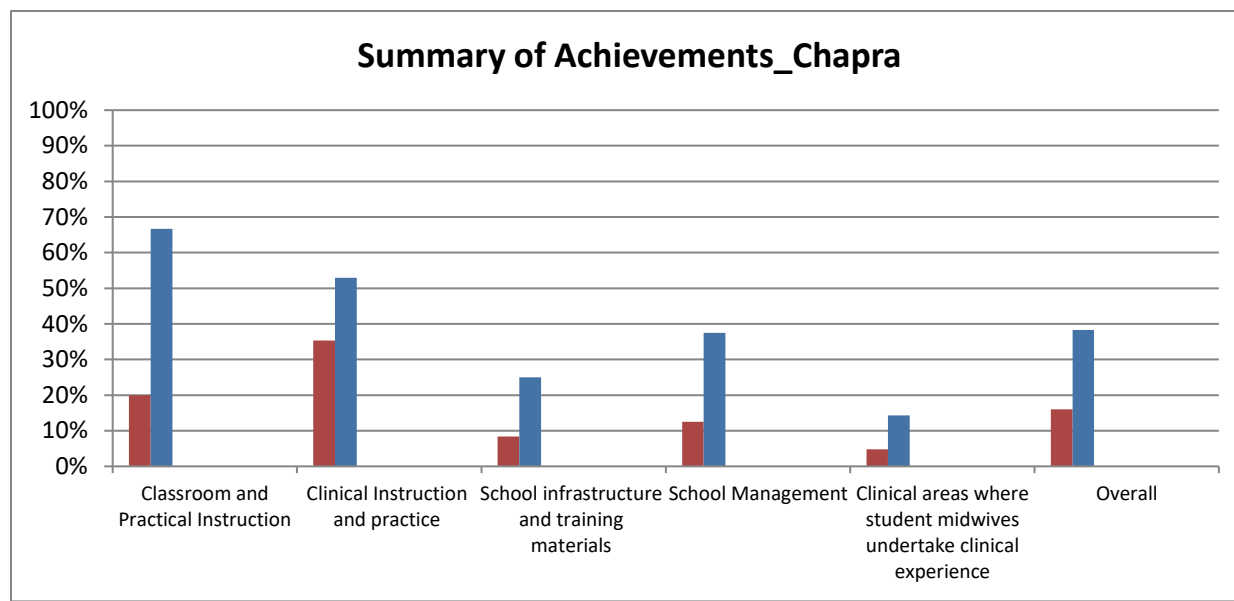
**ANMTC-I: Bettiah**



ANMTC Bettiah is one of the low performing schools among the five selected ANMTCs due to various reasons like shortage of human resources only two nursing tutors, less motivated administrative staff etc., The shortage in teaching faculty increasing the burden on the existing staff resulting in poor quality of the nursing education. Hence there is not much change (only from 7% to 13%) in the class room and practical instruction as they didn't undergo any training programme for the effective teaching skills. There is a considerable change in clinical instruction and practice section from 12% to 35% after base line assessment. The areas of improvement includes clinical site teaching, developing CRP, distributing skill checklist to every student and having competency based evaluation system in place. There is a significant change in school infrastructure and school management as well due to interventions of Jhpiego like empowering the principal with her powers and getting everything in place. The areas of improvement in these sections were strengthening infrastructure, increasing human resources, having policies in place for performance evaluation of students and staff. There is no change and improvement in clinical areas section as the existing staff is not trained under any aspect. Over all there is not very much satisfactory performance as it increased from only 5% to 22%.

**Fig.9.1.2:**

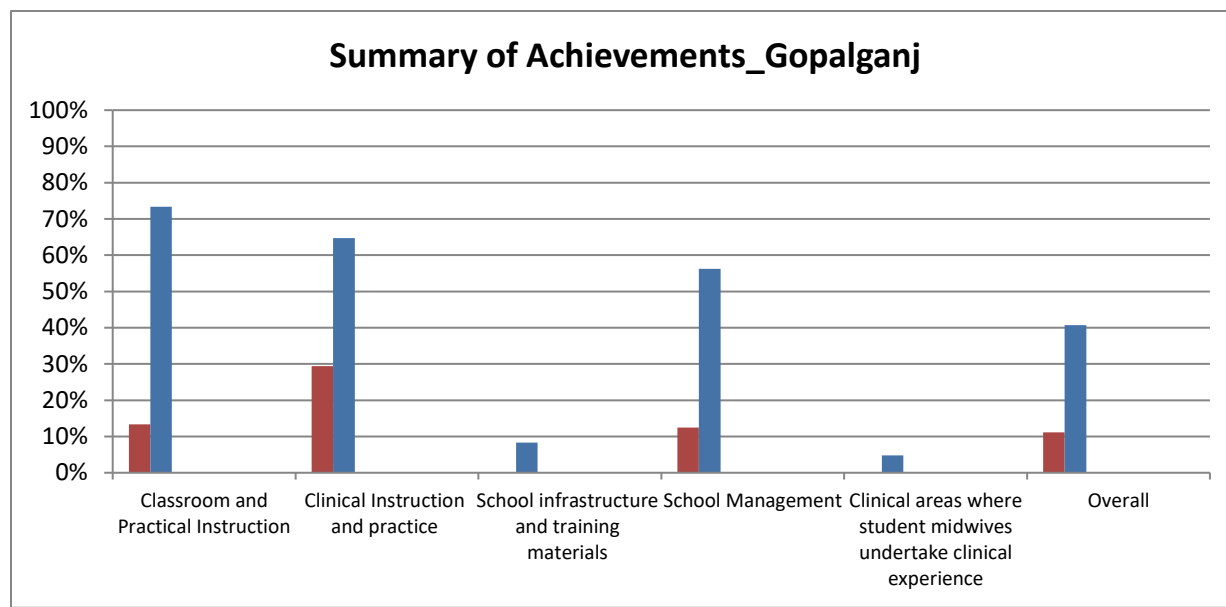
## **ANMTC-II: Chapra**



ANMTC Chapra is averagely performing school among the five selected ANMTCs even that due to presence of the young and motivated nursing tutors. The class room and practical instruction has a significant increase from the 20% to 67%, the only reason behind this is the two nursing tutors are undergone 6 wks training at National Nodal Center, Kolkata. There was not much scope to increase in clinical instruction and practice section resulting in change from 35% to 53% after base line assessment. The areas of improvement includes clinical site teaching, developing CRP, distributing skill checklist to every student, having competency based evaluation system in place and providing students a constructive feedback. There is a average change in school infrastructure and school management by bringing changes like developing JD for every cadre in school, providing master copies for preparation of class and by developing course completion requirements checklist. The areas of improvement in these sections were strengthening infrastructure, increasing human resources, having policies in place for performance evaluation of students and staff. There was minimal change and improvement in clinical areas section only from 5% to 14% as the existing staff is not trained under any aspect. Over all there is considerable change and satisfactory performance as it increased from 16% to 38%.

**Fig.9.1.3:**

### **ANMTC-III: Gopalganj**



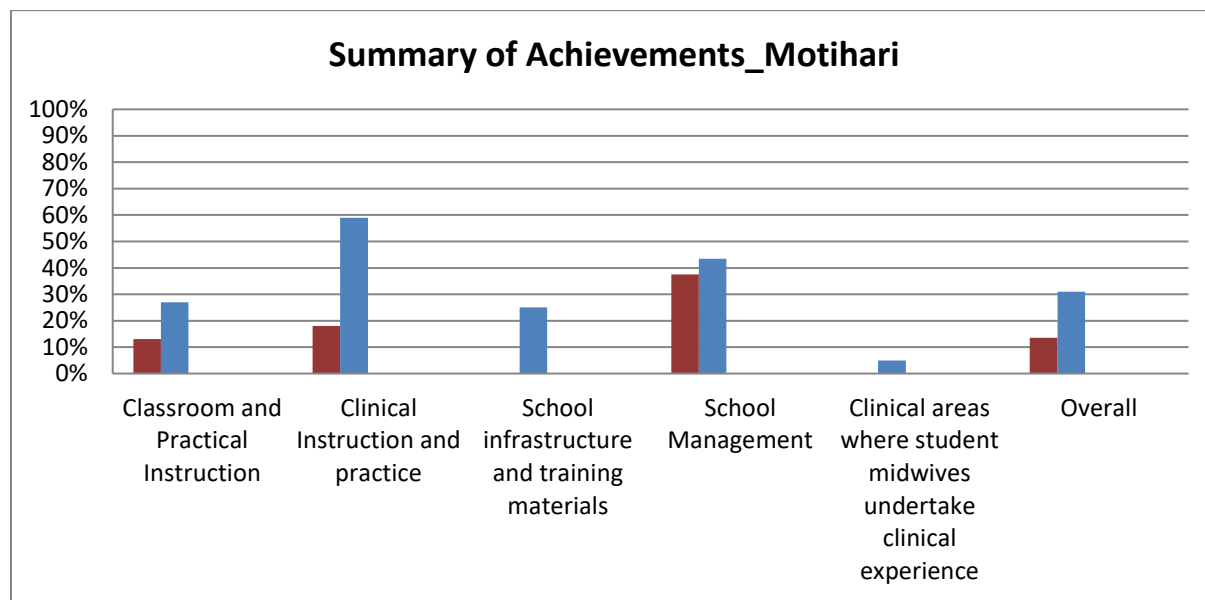
ANMTC Gopalganj is good performing school among the five selected ANMTCs despite of its shortage of human resources. All this due to presence of the young and motivated nursing tutor who maintaining all the records. In this school presently only one batch of students are pursuing their course. The class room and practical instruction has a highly significant increase from the 13% to 73%, due to well competent and confident contractual staff. There was significant increase in clinical instruction and practice section resulting in change from 29% to 65% after base line assessment. The areas of improvement includes clinical site teaching, developing CRP, distributing skill checklist to every student and having competency based evaluation system in place. There is a minimal change in school infrastructure i.e., from 0% to 8% and in school management there is a significant change from 13% to 56% by bringing changes like developing JD for every cadre in school, providing master copies for preparation of class and by developing course completion requirements checklist.

The areas of improvement in these sections were strengthening infrastructure, increasing human resources, having policies in place for performance evaluation of students and staff. There was minimal change and improvement in clinical areas section only from 0% to 5% as the existing

staff is not trained under any aspect. Over all there is considerable change and satisfactory performance as it increased from 11% to 41%.

**Fig.9.1.4:**

### **ANMTC-IV: Motihari**

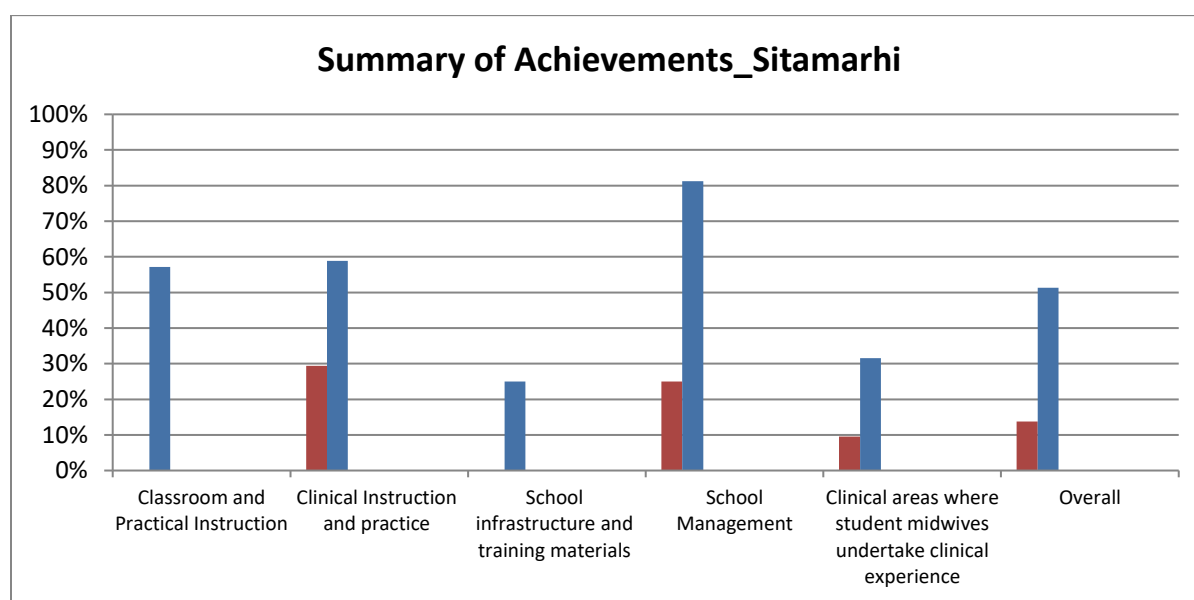


ANMTC Motihari is one of the low performing schools among the five selected ANMTCs despite showing significant change from base line to Ist internal assessment. There is not much change (only from 13% to 27%) in the class room and practical instruction as they didn't undergo any training programme for the effective teaching skills. There is a considerable change in clinical instruction and practice section from 18% to 59% after base line assessment, as there is no problem of human resources with ANMTC motihari. The areas of improvement includes clinical site teaching, developing CRP, distributing skill checklist to every student, having competency based evaluation system in place and developing course completion requirements. There is a considerable change in school infrastructure and school management as well due to interventions of Jhpiego like procuring models, basic infrastructure and provision of books.

The areas of improvement in these sections were strengthening infrastructure, having policies in place for performance evaluation of students and staff. There is minimal change and improvement in clinical areas section from 0% to 5% as the existing staff is not trained under any aspect. Over all there is not very much satisfactory performance as it increased from only 13% to 31%.

**Fig.9.1.5:**

### **ANMTC-V: Sitamarhi**



ANMTC Sitamarhi is one of the best performing schools among the five selected ANMTCs by showing significant change from base line to Ist internal assessment. The reason behind this success is dynamic principal who is highly qualified MSc Nursing and young, motivated staff. There is highly significant change in the class room and practical instruction from 0% to 57% as both principal and nursing tutor underwent six weeks training programme for the effective teaching skills and clinical skills. There is a considerable change in clinical instruction and practice section from 29% to 59% after base line assessment, as there is no problem of human resources with ANMTC sitamarhi.

The areas of improvement include developing CRP, distributing skill checklist to every student, having competency based evaluation system in place. There is a considerable change in school infrastructure (from 0% to 25%) and highly significant change in school management from 25% to 81% as well due to interventions of Jhpiego like mentoring visits by Jhpiego field officers, procuring models, basic infrastructure and provision of books. The areas of improvement in these sections were strengthening infrastructure, having policies in place for performance evaluation of students and staff. There is considerable change and improvement in clinical areas section from 10% to 32% as the existing staff trained only under certain aspects. Over all there is highly satisfactory performance as it increased from 14% to steeping 51%.

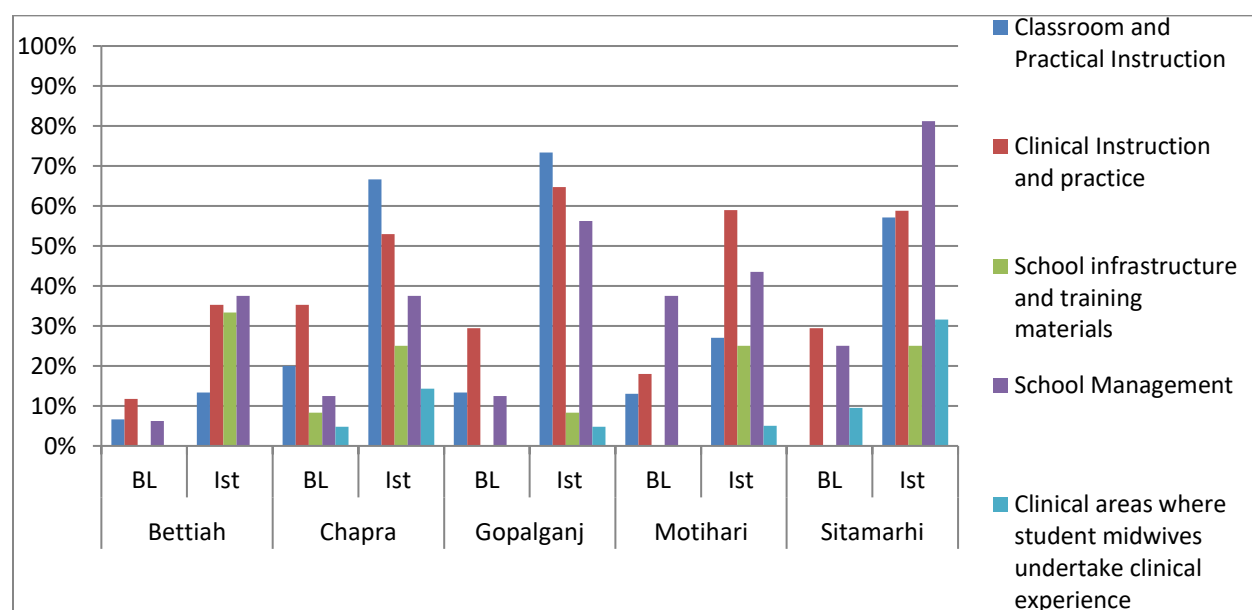
## **PART-II:**

This part contains analyzed data of the comparisons in between the five selected schools showing which is the best performer and which school is under performer. This also highlights the areas which needs improvement in the under-performing schools.

	Bettiah		Chapra		Gopalganj		Motihari		Sitamarhi	
	BL	lst	BL	lst	BL	lst	BL	lst	BL	lst
Classroom and Practical Instruction	7%	13%	20%	67%	13%	73%	13%	27%	0%	57%
Clinical Instruction and practice	12%	35%	35%	53%	29%	65%	18%	59%	29%	59%
School infrastructure and training materials	0%	33%	8%	25%	0%	8%	0%	25%	0%	25%
School Management	6%	38%	13%	38%	13%	56%	37.50%	43.50%	25%	81%
Clinical areas where student midwives undertake clinical experience	0%	0%	5%	14%	0%	5%	0%	5%	10%	32%
<b>Overall</b>	<b>5%</b>	<b>22.2%</b>	<b>16%</b>	<b>38.3%</b>	<b>11%</b>	<b>40.7%</b>	<b>13.50%</b>	<b>31%</b>	<b>14%</b>	<b>51.3%</b>

**Fig.9.2.1:**

**Comparison in between performance of five selected schools:**



Among the five ANMTC's, sitamarhi ANMTC have shown the significant improvement and on average it is the best performance by showing improvements in almost all the five sections of performance standards. Next to that gopalganj ANMTC and Chapra ANMTC are almost equal in the performance on average having performed well in standards of classroom teaching, clinical teaching and school management. This is all due to the presence of young, enthusiastic nursing tutors and supportive supervision by Jhpiego staff and where as the sections of school infrastructure and clinical areas practice takes time. The areas of improvement for the ANMTC gopalganj and chapra are school management and clinical areas practice due to inadequate human resources. The efforts were being taken to send IT equipment and library books for every school, and some of the schools received the same already. Coming to ANMTC motihari it has performed significantly in the areas of clinical instruction and practice and school management where it has much scope to improve in the areas of class room teaching, school infrastructure and



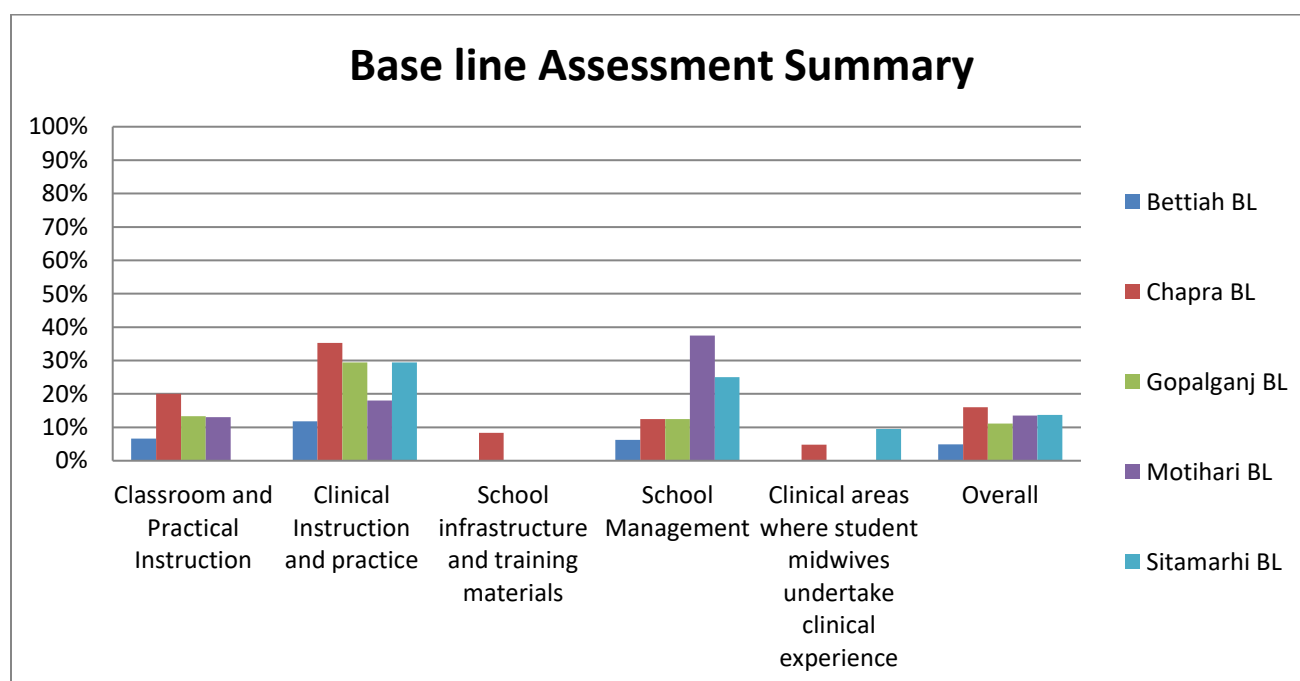
clinical areas practice sections. At last in the performance table ANMTC Bettiah is there, where it performed avergely on the areas like clinical instruction, school infrastructure and school management and needs improvement in class room teaching and clinical areas practice section.

### **PART-III:**

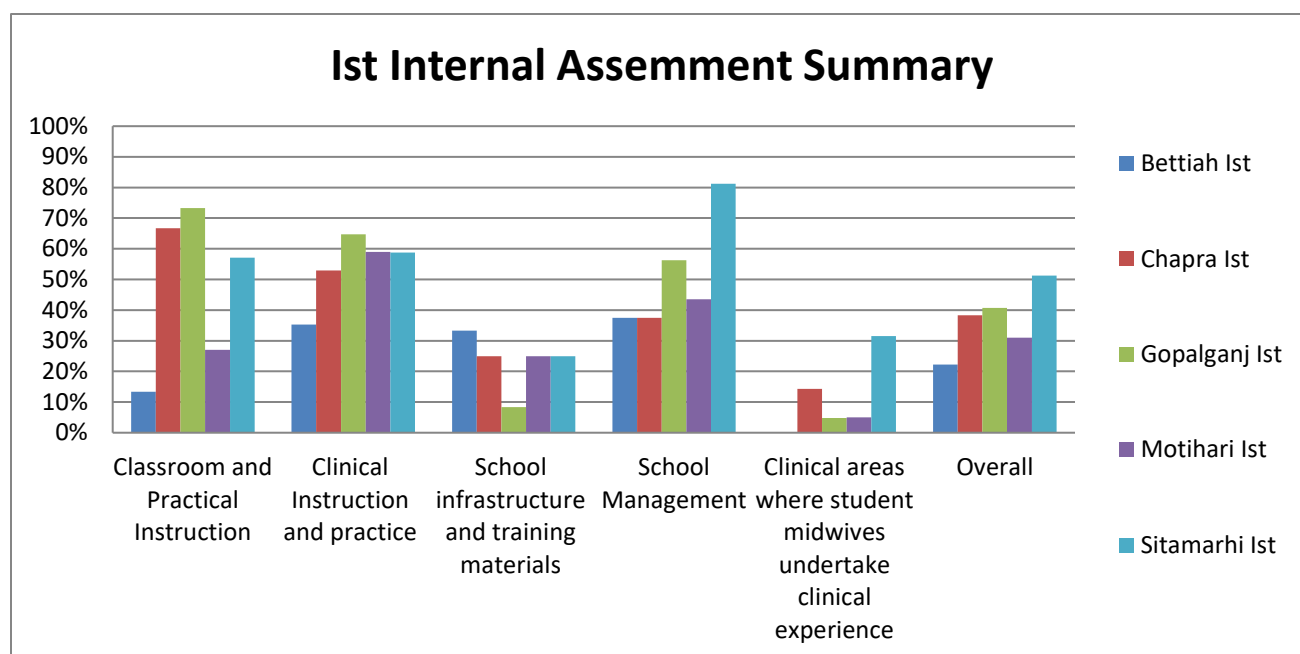
This part contains overall performance summary of all selected schools and shows the difference in performance in between baseline assessment and Ist internal assessment. This shows the overall change in the schools after implementing the project in the respective schools.

From the below it is clearly evident that there is a significant change across the schools from baseline to Ist internal assessment. Among all the five selected ANM school's, sitamarhi is the best performer, then chapra and gopalganj are almost equal in their performance, next to it is motihari ANMTC and the ANMTC which requires more attention is ANMTC Bettiah which is in the bottom most place among five schools.

**Fig.9.3.1:**



**Fig.9.3.2:**



From the above table it is very clear that among five schools chapra, gopalganj and sitamarhi are best performer in section I i.e., class room teaching. All these three schools have young contractual tutors who were trained for 6 wks at National Nodal Center, Kolkata for teaching skills and clinical teaching. In the rest of two schools efforts were being made to recruit and train as soon as possible. Coming to section-II all five schools performed equally other than bettiah, improving the clinical sites for practical learning.

Section – III is the last but one weakest section as it requires more financial resources and logistic resources to strengthen this section. Although efforts are being took by GoB to issue IT infrastructure and Library books to all ANM Schools of Bihar, for which Jhpiego is facilitating the whole process. Funds were also been released for repair and new construction of building for strengthening the physical infrastructure of the schools. Talking about the section – IV school management sitamarhi is leading in this section and gopalganj is next to it, whereas all the other three school were moreover equal in their performance

Last section- V talks about clinical areas practice where student undertake clinical practice, this areas still facing a problem in performance in almost all the schools. Bringing advocacy in this area has so many bottle necks as it involves the complete hospital clinical staff and hospital infrastructure and the way they carrying out the responsibilities. As there is staff shortage in almost all the hospitals, the workload of existing staff is heavy leading to sub optimal standard of care to the patients.

### **PART-IV:**

This part provides the detailed analysis of actionable points for each and every standard, which in turn help in guiding respective NMEO's to take necessary actions to achieve the standards in their respective schools.

### **Section – I**

Sl No	PERFORMANCE STANDARDS	ACTIONABLE POINTS
1.	Classroom instructors/ nursing tutors have the required qualifications	<ul style="list-style-type: none"> <li>Recruitment of staff according to eligibility criteria</li> <li>Regular knowledge updates by CSS, SBA, IMNCI or any other online courses</li> <li>Updating teaching skills by MODCAL software</li> </ul>
2.	Classroom instructors/ nursing tutors come to class prepared	<ul style="list-style-type: none"> <li>Providing six week training at NNC Kolkata</li> <li>MODCAL – self learning by tutors</li> <li>Facilitation in preparation of lesson plan and various types of AV aids material</li> </ul>
3.	Nursing Tutors are teaching according to the curriculum and related learning resource materials	<ul style="list-style-type: none"> <li>Providing six week training at NNC Kolkata</li> <li>MODCAL – self learning by tutors</li> <li>Regular review by field NMEO's regarding all these aspects and providing constructive feedback to ensure all these teaching skills in tutors in ANM school</li> </ul>
4.	Nursing Tutors introduce their classes effectively	
5.	Nursing Tutors use effective facilitation and questioning techniques/skills	
6.	Nursing Tutors summarize	

	effectively before ending a presentation or class	
7.	Nursing Tutors facilitate group activities effectively	
8.	Nursing Tutors plan and administer knowledge assessments properly	<ul style="list-style-type: none"> <li>Developing a structured examination pattern including three internal examinations</li> </ul>
9.	Knowledge assessments and exams are administered fairly	<ul style="list-style-type: none"> <li>Conduction of exam in an ideal exam environment, the process should be facilitated by respective NMEO</li> </ul>
10.	The nursing tutors use a standard answer key for grading knowledge assessments	<ul style="list-style-type: none"> <li>Development of answer key for every question paper to ensure uniformity in evaluation of papers</li> </ul>
11.	Results of knowledge assessments and exams are recorded and reported properly	<ul style="list-style-type: none"> <li>Ensure blind scoring of internal exam papers and make sure all scores were displayed in notice board</li> </ul>
12.	Nursing tutors use the demonstration room/ skills lab effectively for demonstrating clinical skills	<ul style="list-style-type: none"> <li>Having demonstration class in class routine should be made mandatory</li> <li>Maintenance of attendance record for practical room, recording which skill is demonstrated</li> <li>Supply of skill checklist to every student</li> <li>NNC Kolkata training to eligible faculty</li> </ul>
13.	Nursing tutor uses the demonstration room/ skills lab effectively for student practice of clinical skills	<ul style="list-style-type: none"> <li>Setting up of skill lab</li> <li>Regular trainings on skills should be ensured</li> </ul>
14.	Nursing tutor use the demonstration room effectively for assessing student achievement of clinical skill competence	<ul style="list-style-type: none"> <li>Development of competency based evaluation system for evaluating skills during practical exam.</li> </ul>
15.	Teaching is routinely monitored for effectiveness at least 2 times per year	<ul style="list-style-type: none"> <li>Development of faculty performance evaluation system and faculty appraisal system, which should be implemented annually</li> </ul>

## Section – II

Sl No	PERFORMANCE STANDARDS	ACTIONABLE POINTS
	Section - II	
1.	The number of clinical practice sites meets requirements of the curriculum	<ul style="list-style-type: none"> <li>Define all clinical sites possible for practice of students</li> </ul>
2.	The variety of clinical sites meets the requirements of the curriculum	<ul style="list-style-type: none"> <li>Check availability of clinical sites according to requirement of curriculum and ensure the same</li> </ul>
3.	The infrastructure of the clinical practice area is conducive to clinical practice	<ul style="list-style-type: none"> <li>Arrange a room for teaching and discussion in clinical site with board and markers made available</li> </ul>
4.	Clinical volume at the clinical practice sites provides students with sufficient practice to meet the clinical objectives	<ul style="list-style-type: none"> <li>Check the patient load on various aspects according to curriculum designed by INC</li> </ul>
5.	The school has an agreement with the clinical practice sites that allows students to learn in the clinical area	<ul style="list-style-type: none"> <li>Get a permission letter from concerned hospitals attached to ANM school allowing students for the clinical practice in hospital</li> <li>Get MoU certificate with all attached clinical areas:               <ul style="list-style-type: none"> <li>➤ District Hosp</li> <li>➤ FRU/CHC</li> <li>➤ PHC</li> <li>➤ Sub Center</li> </ul> </li> </ul>
6.	The clinical practice sites are prepared for student teaching	<ul style="list-style-type: none"> <li>Organise a meeting in between school staff and clinical staff thrice a year and maintain the minutes for the same</li> </ul>
7.	Clinical rotation plans have been developed to distribute students across clinical practice areas evenly	<ul style="list-style-type: none"> <li>Prepare a detailed Clinical Rotation Plan showing all students rotation of clinical areas for that particular year</li> <li>Submit one copy to clinical staff in hospital as well</li> </ul>
8.	Transportation to and from clinical practice sites is assured	<ul style="list-style-type: none"> <li>Arrange proper vehicle for students for community visits</li> <li>Organise visits according to the clinical rotation plan</li> </ul>

9.	Clinical instructors/ tutors have the necessary teaching materials to effectively guide students in clinical practice	<ul style="list-style-type: none"> <li>Provide SBA guidelines and skill checklist in every school and to every student if possible</li> </ul>
10.	Clinical instructors in the clinical area have been appropriately selected	<ul style="list-style-type: none"> <li>Training updates like CSS, SBA, IMNCI or any related online courses are mandatory to keep nursing tutors updated</li> </ul>
11.	Students are prepared for clinical practice prior to their departure for clinical practice site	<ul style="list-style-type: none"> <li>Develop learning objectives for clinical practice sites before sending students to the hospital for clinical duty</li> <li>Ensure that learning objectives are framed and communicated with the students before leaving for clinical duty</li> </ul>
12.	Students are prepared for clinical practice upon their arrival at clinical practice site	<ul style="list-style-type: none"> <li>Orientation should be provided to students on various process of hospital, different wards and infection prevention measures before sending for the clinical duty</li> </ul>
13.	Students and clinical instructor/ tutor use appropriate learning and assessment tools	<ul style="list-style-type: none"> <li>Provide a copy of skill checklist, log book/case book for the students</li> </ul>
14.	Clinical instructors/tutors provide guidance for clinical practice sessions	<ul style="list-style-type: none"> <li>Objectives of clinical practice need to be framed and informed to students</li> </ul>
15.	Clinical instructors/tutors monitor student performance and give feedback	<ul style="list-style-type: none"> <li>Students should be trained various elements like respecting patients as such, maintaining patient privacy and medical ethics etc.,</li> </ul>
16.	Clinical instructors/ tutors meet with students at the end of a clinical practice session	<ul style="list-style-type: none"> <li>Faculty and student should meet at the end of the session at clinical site for discussion</li> </ul>
17.	Clinical instructors tutors or the school develops and implements structured practical examinations (Objective Structured Clinical Examination)	<ul style="list-style-type: none"> <li>Practical examinations should be conducted in a structured way by following OSCE method.</li> </ul>

### Section – III

Sl No	PERFORMANCE STANDARDS	ACTIONABLE POINTS
	Section - III	
1.	The school has the basic infrastructure to function effectively	<ul style="list-style-type: none"> <li>Basic infrastructure should be organised</li> <li>NMEO's ensure everything is in place and in functional state</li> </ul>
2.	The school facilities are clean	<ul style="list-style-type: none"> <li>Cleanliness should be ensured in school premises by using fourth class employees and newly hired multipurpose helpers</li> </ul>
3.	Classrooms are comfortable and properly equipped for teaching	<ul style="list-style-type: none"> <li>Class room should be made equipped with sufficient furniture and with AV aid equipment</li> </ul>
4.	The demonstration room / skills lab is properly equipped for practical learning sessions	<ul style="list-style-type: none"> <li>Ensure demonstration room contains all the equipment that it should have and any gaps should be urgently addressed</li> </ul>
5.	The demonstration room / skills lab is accessible for independent practice	<ul style="list-style-type: none"> <li>Demonstration room should be made available for practice during practical demonstration class</li> </ul>
6.	The anatomic models in the skills lab are in a functional state	<ul style="list-style-type: none"> <li>Check for the functionality of all models and ensure their safety</li> </ul>
7.	The library space is appropriately equipped and organized	<ul style="list-style-type: none"> <li>Arrange library with all shelves locked</li> <li>Maintain stock register of the library</li> <li>Every book should be given accession number for the easy access and to issue students</li> </ul>
8.	The library has appropriate reference materials	<ul style="list-style-type: none"> <li>All library books should be in place according to INC norms</li> <li>Organise all the books being sent by SHS to every ANM school</li> </ul>
9.	The library is open to students on demand	<ul style="list-style-type: none"> <li>Rules and regulations of library prepare and display which includes timing of the library</li> <li>Library policy should be framed regarding action towards missing of book, duration of book lending for students and faculty etc.,</li> </ul>

10.	A well equipped and functional computer lab exists for the students and faculty	<ul style="list-style-type: none"> <li>• Arrange computer lab and make data operator responsible for all computer equipment</li> <li>• Include some computer class hours in weekly class routine whenever possible</li> </ul>
11.	The hostel (dormitory) is adequately furnished and suitable for women	<ul style="list-style-type: none"> <li>• Hostel should have adequate furniture and toilet facilities according to INC.</li> <li>• Respective NMEO's ensure the same and gaps are fulfilled by procuring the same</li> </ul>
12.	Nutritious meals are provided to students	<ul style="list-style-type: none"> <li>• Ensure the nutritious food and safe drinking water by adding high protein diet in menu and installing Aquaguard respectively</li> </ul>

### Section – IV

SI No	PERFORMANCE STANDARDS	ACTIONABLE POINTS
	Section - IV	
1.	Student composition reflects national INC policies for auxiliary nurse midwifery education	<ul style="list-style-type: none"> <li>• Admissions should be exclusively according to admission criteria only, for which BNRC is responsible</li> <li>• Get letter undersigned by guardians stating no objection for working all shifts of their daughters</li> </ul>
2.	Class size is consistent with national INC policy and local capacity	<ul style="list-style-type: none"> <li>• Ensure two class rooms and teacher student ratio for classes, demonstration and clinical teaching.</li> </ul>
3.	School has developed and implemented effective student recruitment and admission strategies according to national student admission policy	<ul style="list-style-type: none"> <li>• Students recruitment should be in line with INC requirements</li> </ul>
4.	School academic policies exist and are applied	<ul style="list-style-type: none"> <li>• School academic policy should be developed and should be made aware to students</li> <li>• School academic policy should include: <ul style="list-style-type: none"> <li>➤ Pass percentage</li> <li>➤ Attendance required</li> <li>➤ Dress code</li> <li>➤ Professional conduct</li> <li>➤ Disciplinary action procedure etc.,</li> </ul> </li> </ul>



5.	School has a clear academic calendar (Master plan for the year)	<ul style="list-style-type: none"> <li>Develop Master Rotation Plan which gives clear idea of school academics for that year</li> <li>MRP should also display the date of which student joining is not allowed</li> </ul>
6.	A record of students from entrance to exit is maintained	<ul style="list-style-type: none"> <li>Maintain cumulative record of every student from entry to exit of the school</li> </ul>
7.	Written job descriptions exist for all staff at the school	<ul style="list-style-type: none"> <li>Keep in place of job description of every staff of each cadre of school including class IV employees</li> </ul>
8.	A salary structure exists to pay school staff and staff are paid on time	<ul style="list-style-type: none"> <li>A salary structure of every employee is documented and preserved for reference.</li> </ul>
9.	The curriculum is available to principal and faculty	<ul style="list-style-type: none"> <li>Syllabus copy should be made available with the principal, all school faculty and all students</li> </ul>
10.	Master copies of the learning resource materials exist for duplication	<ul style="list-style-type: none"> <li>Master copies of learning resources from where lesson plans are prepared should be preserved separately</li> </ul>
11.	A staff performance evaluation system exists	<ul style="list-style-type: none"> <li>Staff performance evaluation system should be developed and implemented for appraisal annually</li> </ul>
12.	Student academic performance standards exist and are known by students and teachers	<ul style="list-style-type: none"> <li>Student performance standards which contains grading categories, pass percentage etc., should be developed and communicated with the students and teachers</li> </ul>
13.	Student performance results are documented centrally and in a confidential manner	<ul style="list-style-type: none"> <li>Student results should be documented in on Master Marks Register and confidentiality of marks register is ensured</li> </ul>
14.	Course completion requirements are explicit and are met before any student receives certificate	<ul style="list-style-type: none"> <li>Course completion requirements are well stated and documented.</li> <li>These should be communicated with the students before joining to the ANM school</li> <li>Every student should meet all these course completion requirements in order to provide certificate</li> </ul>
15.	School Principal and teaching staff meet regularly	<ul style="list-style-type: none"> <li>Conduct monthly staff meeting including all the staff of school</li> <li>Maintain the minutes of all meetings in Monthly Meeting Register.</li> </ul>

16.	A teaching coordinator visits clinical practice sites and meets with clinical instructors/ tutors and staff	<ul style="list-style-type: none"> <li>Regular meetings should be organised with clinical staff by the teaching staff for discussing the issues related to clinical duty of students and to know regarding the students practice &amp; performance</li> </ul>
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### Section – V

SI No	PERFORMANCE STANDARDS	ACTIONABLE POINTS
	<b>Section – V</b>	
1.	The provider asks about and records danger signs that the woman may have or has had during pregnancy	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li>Recruitment of more staff nurses to decrease the word load on existing staff</li> </ul>
2.	The provider ensures that all women and their husbands/ companions have an individual birth plan and are prepared for any complication that may arise	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li>Preparing and provision of BPCR leaflets</li> <li>Make sure they are being filled by students/staff for every patient</li> </ul>
3.	The provider uses recommended general counseling techniques while counseling clients for their area of concern	<ul style="list-style-type: none"> <li>Training on counselling techniques for the existing staff nurses at local level</li> </ul>
4.	The Provider promptly cares for the woman with Pre-eclampsia/ eclampsia	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li>Make sure that Urine test strips are procured and in place</li> <li>MgSo4 injections availability, BP apparatus and stethoscope should be made available</li> </ul>
5.	The provider receives the pregnant woman in labor in a cordial manner	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li></li> </ul>
6.	The provider uses the partograph to monitor labor and make adjustments to	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level focussing on plotting of partograph</li> </ul>

	the birth plan	<ul style="list-style-type: none"> <li>Continuous supply of partograph sheets to avoid discontinuity of usage</li> <li>Recruitment of more staff nurses to decrease the word load on existing staff</li> </ul>
7.	The provider has the basic equipments to perform resuscitation of the newborn	<ul style="list-style-type: none"> <li>Making available size- 0 &amp; 1 masks, self inflating resuscitating bag in working condition</li> <li>Ensure oxygen source and mucous extractor are also present and functional</li> </ul>
8.	The provider verifies that equipment is in proper working condition	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li>Recruitment of more staff nurses to decrease the word load on existing staff</li> </ul>
9.	The provider adequately conducts normal delivery (second stage of labor)	
10.	The provider adequately performs active management of the third stage of labor	<ul style="list-style-type: none"> <li>Continuous supply of oxytocin injection is ensured for effective management of third stage of labor</li> </ul>
11.	The provider properly conducts a rapid initial assessment and provides immediate newborn care	<ul style="list-style-type: none"> <li>Continuous supply of cord clamp, clean towels and sterile cotton pads</li> <li>Maintain sterile bucket steel to preserve sterile cotton material</li> </ul>
12.	The provider adequately performs immediate postpartum care	<ul style="list-style-type: none"> <li>SBA training of the existing staff nurses at local level</li> <li>Recruitment of more staff nurses to decrease the word load on existing staff</li> </ul>
13.	The provider properly monitors the newborn	<ul style="list-style-type: none"> <li>Training on neonatal resuscitation for the existing staff</li> <li>Provision of Vit-K injection continuously to ensure the usage</li> <li>Ensure all the essential equipment for carrying out NR is available</li> <li>Organise a separate NBCC corner for carrying out resuscitation without any interruption</li> </ul>
14.	The provider properly performs resuscitation of the newborn	
15.	The provider properly disposes the used instruments and medical waste after assisting the	<ul style="list-style-type: none"> <li>Training on bio medical waste management and preparation of chlorine solution for the existing staff at local level</li> <li>Procuring BMW bins of different colours</li> </ul>

	birth	<ul style="list-style-type: none"> <li>• Making all material available for disinfecting the articles with chlorine solution</li> </ul>
16.	The provider properly performs the general management of PPH	<ul style="list-style-type: none"> <li>• SBA training of the existing staff nurses at local level</li> <li>• Recruitment of more staff nurses to decrease the word load on existing staff</li> <li>• Continuous supply of Oxytocin, foley's catheter and urine bag to ensure effective management of PPH</li> <li>• Ensure the availability of BP apparatus in labor room</li> </ul>
17.	The provider uses recommended general counselling techniques for counselling clients for family planning	<ul style="list-style-type: none"> <li>• Regular training of Family Planning Counsellor on various methods available for FP</li> <li>• Continuous supply of FP kit to counsellor to ensure effective counselling</li> <li>• Arrange one Family Planning corner, to maintain privacy of the patient</li> </ul>
18.	The place and furniture are consistent with the Government of India requirements for SBA training sites	<ul style="list-style-type: none"> <li>• Procuring the unavailable materials according to SBA checklist.</li> <li>• Making NBCC fully functional with all minimal facilities attached to it</li> </ul>
19.	Infection prevention equipment is available as required based on the Government of India requirements for SBA training sites	<ul style="list-style-type: none"> <li>• Procuring the essentials for proper disposal like Plastic tub, bleaching powder and supplies of PPE</li> <li>• Train them on preparation of chlorine solution and duration for which articles kept in solution</li> </ul>
20.	Emergency drug tray is available as required based on the Government of India requirements for SBA training sites	<ul style="list-style-type: none"> <li>• Ensuring the availability of essential emergency drugs, supplies of daily use and other equipment according to requirement of SBA guidelines</li> </ul>
21.	Equipment, supplies and other drugs are available as required based on the Government of India requirements for SBA training sites	

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### Some more actionable points to maximum achieve Section- V:

- Involving students during clinical duties in some areas like history taking, BPCR filling etc after sufficiently trained regarding the same in respective schools. This reduces the work load of existing staff and also provides opportunity to students to get hands on experience.
- Advocacy with Civil Surgeon to get minimal essential equipment to ensure the effective management of patients
- Ensuring continuous supply of PPE equipment and infection prevention material like bleaching powder to maintain standard of preventing infection transmission
- Check for the availability of following equipment to meet certain standards so easily:
  - ✓ Stethoscope, BP
  - ✓ Ambu bag – NR equipment
  - ✓ Oxytocin
  - ✓ Sterile drum & Sterile pads
  - ✓ Autoclave
  - ✓ Plastic Tub & Bleaching powder
  - ✓ Bio medical waste management equipment – Color coded bins
  - ✓ Vitamin – K injection

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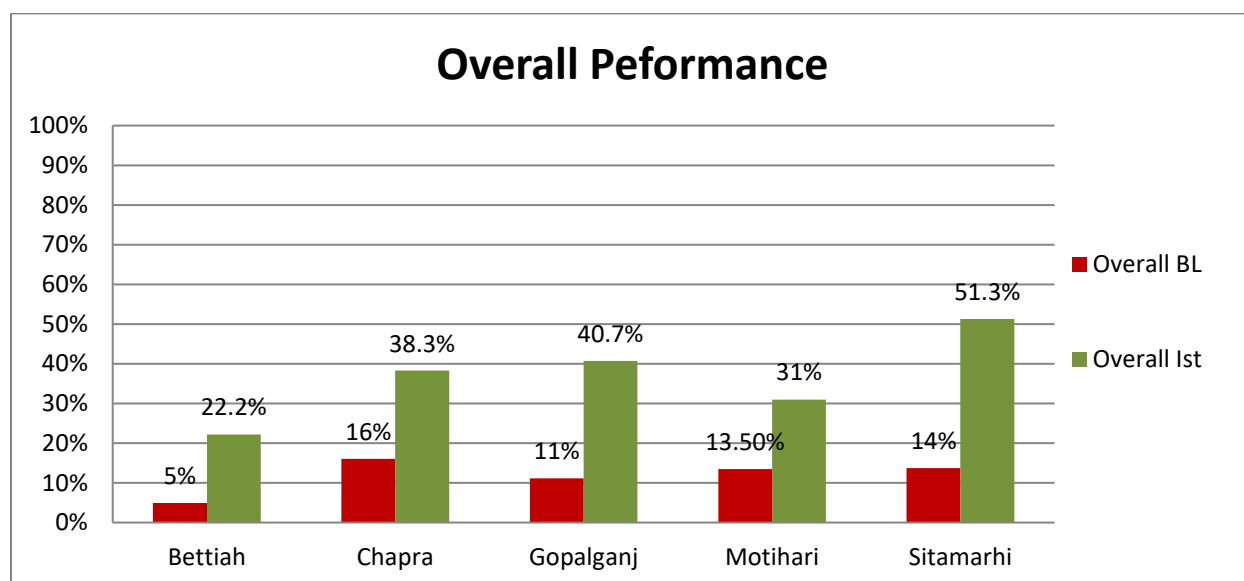
## **CHAPTER - V**

### **DISCUSSION**

This is the study which designed to assess the gaps between standards achieved and what need to be achieved in selected ANMTC's and deriving the actionable points to achieve the maximum standards to strengthen the pre service education for nursing and midwifery cadre in Bihar. Overall there were significant changes from baseline assessment to Ist internal assessment especially in the sections like classroom teaching, clinical instruction and practice and in school management. Whereas the other two sections had considerable gaps than the expected due to various external constraints. After assessing the gaps for each and every school separately, then actionable points for every standard has been derived for maximizing performance of the respective schools.

This PSE project came in to effect to respond to increasing need for skilled and competent nurses and also to improve the quality in maternal and child health services provided to community. To fulfil the need for development of the adequate number of competent and confident basic healthcare service providers who can provide quality RMNCH services at the grassroots level, a comprehensive initiative to strengthen the foundation of pre-service education (PSE) for these nurse midwives is being undertaken by the Ministry of Health and Family Welfare (MoHFW) in collaboration with the Indian Nursing Council (INC). As a part of this, an operational guideline has been developed with support from various development partners. This operational guideline provides the detailed standards on five most crucial dimensions to strengthen pre service education at all the ANM and GNM schools which include educational processes, clinical practices, capacity building, training infrastructures and management capacity.

**Fig.10.1. Overall performance of all five ANMTC's**



The above table clearly prediction that ANMTC sitamarhi is the best performing school among five schools. ANMTC gopalganj and ANMTC chapra are next to sitamarhi in the performance ladder. Atlast ANMTC motihari and ANMTC bettiah are at 4<sup>th</sup> and 5<sup>th</sup> position respectively. All schools have shown significant change in between baseline assessment and Ist internal assessment of the performance, which is clearly evident from the above bar diagram.

In low-resource settings, the clinical training package for existing staff appears to be an effective intervention to decrease perinatal mortality, and so Jhpiego had planned the clinical standardization skills training programme where clinical staff are trained for essential elements like intra partum and post partum management. Jhpiego field officers visit each and every ANMTC for supportive supervision where technical support has been provided in every aspect like class room teaching, clinical instruction, building up of school infrastructure, empowering staff for effective school management and providing learning environment at clinical practice sites.

## **RECOMMENDATIONS:**

- Recruiting the tutors preferably of young age as soon as possible according to eligibility criteria set by INC, as they are motivated and willing to contribute
- Recruitment of Data operator cum trainer as soon as possible to avoid misuse of installed IT infrastructures in all schools.
- Advocacy with Civil Surgeon to get procured minimal essential equipment to ensure the effective management of patients
- The efforts should be focused on maximum utilization of contingency fund of GoB which was provided annually.
- Recruiting the clinical staff immediately to decrease the work load of existing staff
- Ensuring continuous supply of PPE equipment and infection prevention material like bleaching powder to maintain standard of preventing infection transmission
  
- For improving the performance in class room teaching, the interventions which can be taken are:
  - Regular knowledge updates like CSS, SBA, MODCAL etc.,
  - Sending tutors for six week training at NNC Kolkata,
  - Developing structured examination system and
  - Developing competency based evaluation system.
  
- Talking about section II i.e., clinical instruction and practice, the interventions may be:
  - Providing opportunity for students at clinical sites,
  - Developing memorandum of understanding with various clinical sites, d
  - Developing MRP & CRP and
  - Distributing skill checklist to every student.
  
- To improve the School infrastructure section, the actions that need to be taken are:
  - Class room should be made equipped with sufficient furniture and with AV aid equipment



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- The efforts should be taken at the state level to provide funds for the ANM school, for the procurement of essential infrastructure.
  - Library books and models for skill lab should be procured and supplied to each ANM school
- 
- To improve the School management section, the actions that need to be taken are:
    - Developing student academic performance policy
    - Maintain cumulative record of every student from entry to exit of the school
    - Keep in place of job description of every staff of each cadre of school including class IV employees
    - Staff performance evaluation system should be developed and implemented for appraisal annually
    - Conduct monthly staff meeting including all the staff of school and maintaining minutes of meeting for the same
  
  - To improve the performance in section-V, the actions that need to be taken are:
    - Procuring the essential infrastructure for provision of better care,
    - Training of the staff on essential things which are highly essential
    - Providing opportunity for the students to practice in the clinical sites.
    - Involving students during clinical duties in some areas like history taking, BPCR filling etc after sufficiently trained regarding the same in respective schools. This reduces the work load of existing staff and also provides opportunity to students to get hands on experience.

## **CONCLUSION:**

In conclusion, PSE project in Bihar made considerable effect on the quality of nursing education by improving in various sections like classroom teaching, clinical instruction and practice, school infrastructure and school management. Among five selected ANMTCs, sitamarhi was best till date, next to that chapra and gopalganj schools performed well, whereas motihari and bettiah were lying at bottom of the ladder respectively. The findings of the study strongly suggested the areas of school infrastructure and clinical sites where students undertake clinical practice should be focused much in every district. It is highly recommended that every school should have standardized policies on students academic performance, competency based evaluation system and course completion requirements. Recruitment of nursing tutors, clinical staff and data operators should be given due importance.

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**ANNEXURE – I**

**PERFORMANCE STANDARDS FOR SCHOOL OF NURSING IN BIHAR**