INTERNSHIP TRAINING

At

INDIA HEALTH ACTION TRUST, UTTAR PRADESH

Title of the study: “An evaluation of clinical practices of nursing staff in relation to maternal health services”

Dr. Gavish Kumar

Under the Guidance of

Dr. Pradeep Panda

Post Graduate Diploma in Hospital and Health Management

2015-17

International Institute of Health Management Research, New Delhi

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A Report

By

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr Gavish Kumar** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at **India health action trust, Uttar Pradesh**from **10th February 2017**to **30th April 2017**.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

Dr. Pradeep Panda
Professor & Dean Research
IIHMR, Delhi

CERTIFICATE OF APPROVAL

The following dissertation titled **"An evaluation of clinical practices of nursing staff in relation to maternal health services"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
_____	_____
_____	_____
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Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Gavish Kumar,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled "**An evaluation of clinical practices of nursing staff in relation to maternal health services"** 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.

Dr. Pradeep Panda

Professor & Dean Research

IIHMR, Delhi

Acknowledgement

Every successful story is a result of an effective team work, a team which comprises of a good coach and good team players. Likewise this project report is no exception. This has been a meticulous effort of a group of people along with me. I want to take this opportunity to thank each and every one who has been a part of this report.

To start with, I take immense pleasure to thank **Dr. Sanjiv Kumar** (*Director-International Institute of HealthManagement Research-Delhi*) and **Dr. A. K. Aggarwal** (*Dean, International Institute of Health Management Research-Delhi*) for placing me in such an esteemed organization (IHAT, Lucknow) to perform my dissertation and start my career with; and my mentor, **Dr. Pradeep Panda** for hir timely advice and encouragement for the successful conduction of my project.

I am highly indebted to Dr. Sanjiv Kumar , Team lead-technical , IHAT, Lucknow., and Dr. Seema Tandon, Team lead-maternal & child health(RMNCH+A Programme) for providing me with this opportunity to be a part of IHAT, Lucknow and giving me time and space from the induction and training schedule, to perform my fieldwork.

Also, I wish to thank district team, for cooperating with me during this study and helping me through cooperation and coordination

TABLE OF CONTENTS

ABBREVIATIONS

RMNCH+A	Reproductive Maternal Newborn Child and Adolescent health
PMSMA	Pradhan Mantri surakshit Matritva abhiyaan
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
WHO	World Health Organization
PHC	Primary Health Centre
CHC	Community Health Centre
FRU	First Referral Unit
MMR	Maternal Mortality Ratio
M & E	Monitoring and Evaluation
DTS	District Technical Specialist
SN	Staff Nurse
NM	Nurse Mentor
PPH	Post-partum Hemorrhage
MDGs	Millennium Development Goals
ANMs	Auxiliary Nurse midwives
AMTSL	Active Management od third stage of labor
UNICEF	United Nations Children's Fund
BCC	Behaviour Change Communication
SBA	Skilled birth attendant

INDIA HEALTH ACTION TRUST

(ORGANIZATION'S PROFILE)

INDIAN HEALTH ACTION TRUST

India Health Action Trust (IHAT) is a secular trust under the provisions of the Indian Trust Act, 1882. University of Manitoba (UM), established IHAT in 2003, as part of a five-year (2001 to 2006) bilateral development project between Canada and India.

IHAT originally focused on providing comprehensive technical assistance and training in programme planning and management to the states of Karnataka and Rajasthan. Over the years, the trust has supported the State AIDS Control Societies (SACS) in Maharashtra, Bihar, Rajasthan, Andhra Pradesh, Tamil Nadu and Goa.In 2009, IHAT was registered with the Ministry of Home Affairs (MHA) under the Foreign Contribution Regulation Act, 1976.

In 2003, IHAT was registered with the Ministry of Home Affairs (MHA) under the Foreign Contribution Regulation Act, 1976.

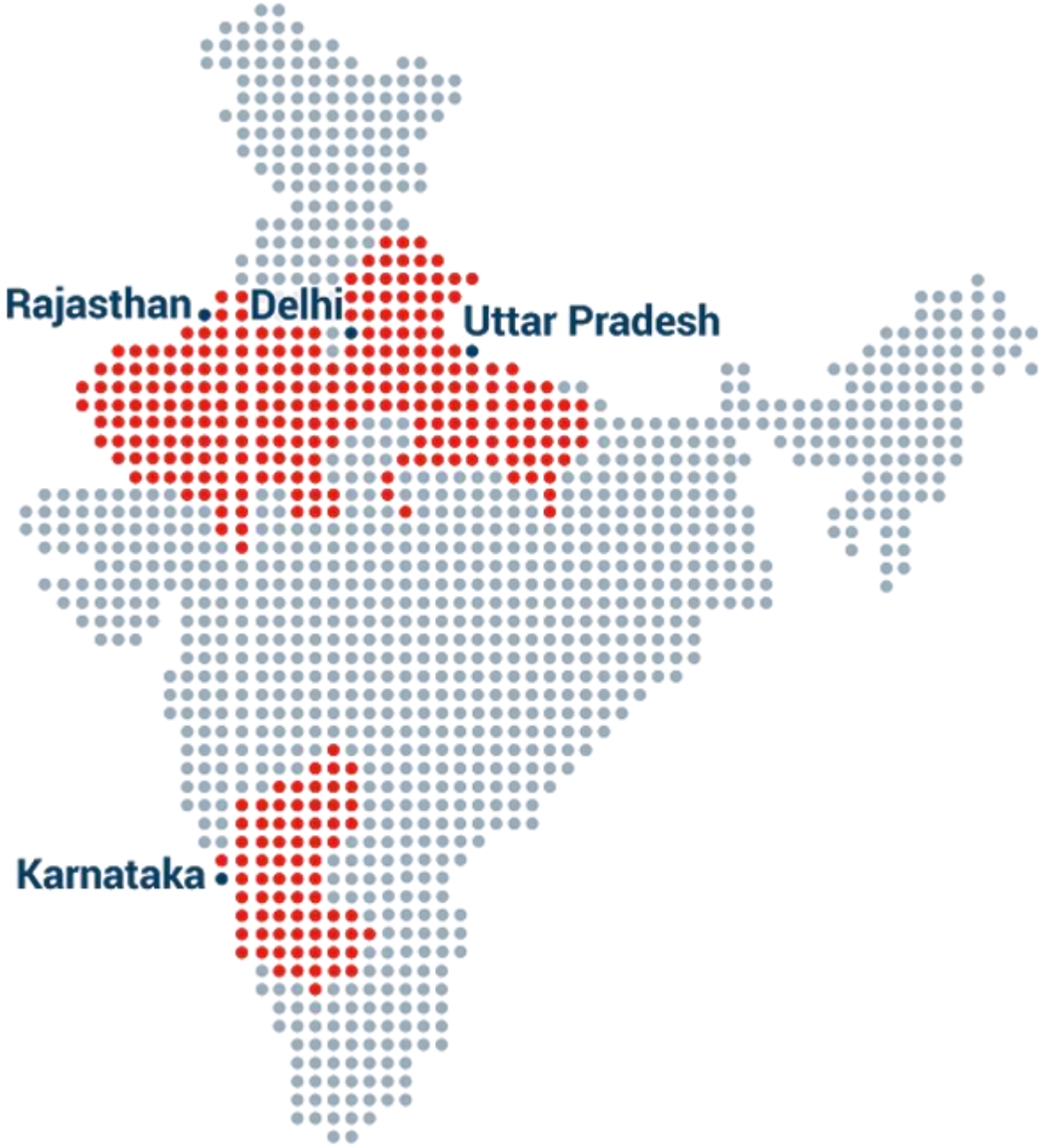
VISION

To impact public health policy and programmes in the country through the application of programme science.

MISSION

Our mission is to enhance the wellbeing of communities through evidence-based, gender-transformative, innovative, sustainable and scalable programmes.

WORKING AREAS



Working areas

IHAT works to improve public health in India and abroad by using its expertise in technical support, program implementation, research and advocacy to enhance public health policy and programmes.

Technical support

IHAT believes that strengthening the existing health system is the best way to achieve sustained health outcomes at scale. It has developed these gaps and has opted a “theory of change” to guide its support to government in improving these health outcomes and providing techno-managerial support lies at the core of this approach.

IHAT transfers skills and knowledge to partners through embedded techno-managerial support, including hands-on orientation to gap analysis and prioritization; developing standards, systems and processes; monitoring and evaluation; and problem solving.

IHAT assesses partners’ systems by reviewing their programme processes, outputs and outcomes, and shares objective feedback and constructive critique.

IHAT’s specialists explain and demonstrate user- friendly solutions for technical challenges and impart innovative strategies and principles of programme design, implementation, and evaluation. Technical support is, thus, an advisory role and does not include direct involvement in programme implementation or execution.

Technical Managerial Support focuses on Identifying and prioritizing gaps in existing systems and practices, followed by providing hands-on support to health facility staff and frontline workers to resolve these gaps.

ONGOING PROJECTS

FAMILY PLANNING PROJECT

With a goal of supporting GoUP in achieving its FP2020 goals, the University of Manitoba and its consortium partners (India Health Action Trust, EngenderHealth, Marie Stopes India (MSI) and Janani initiated a project (November 2014 – October 2017) that creates an effective system for increasing the number and geographical spread of FP service delivery points, for increasing the quality and utilization of FP services. The project is being implemented through a technical support unit (TSU) at the public health facilities in 25 high priority districts in Uttar Pradesh with the following objectives.

objectives

- To improve availability and accessibility of Family Planning (FP) services in public health facilities, including counseling, IUCD and sterilization services, and other contraceptive methods.
- To improve quality of contraceptive services resulting in decreased complication and discontinuation rates and improved client satisfaction.
- To improve education and counseling of women on FP, resulting in improved choice and enhanced uptake of modern contraceptive methods.

Strategies

- At the community level, the project focuses on generating demand for family planning acceptance. It supports in identifying families with unmet family planning

need and their counselling by frontline workers subsequently linking them to appropriate family planning services. Counseling of women and eligible couple on family planning improves their knowledge and informs their decision-making with regards to the uptake of modern contraceptive methods.

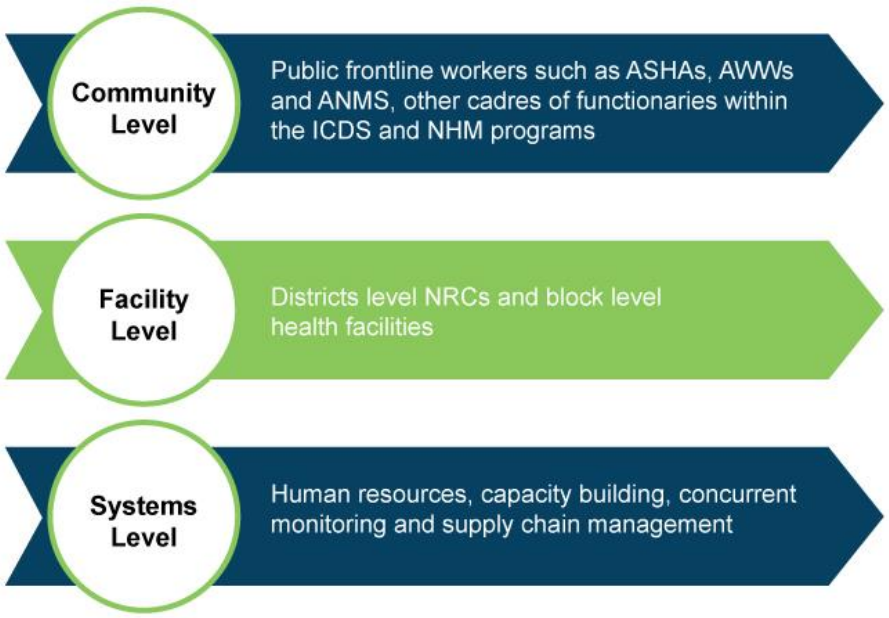
- At the facility level, the focus is at strengthening availability of family planning service provisions (static or fixed day basis) at health facilities for providing Intra Uterine Contraceptive Devices (IUCD) and sterilization services along with other contraceptive methods. Service provision also includes strengthening availability of quality counseling services at the facility.
- At the systems level, the strategy is to focus on fulfilling gaps in availability and quality of family planning services. The project focused at increasing the number of skilled family planning providers at identified health facilities through training and supervision. It also aimed at strengthening supplies and equipments at health facilities and implementing innovative models for quick delivery of FP services.

Through its various efforts, the consortium aims to reduce the unmet need for contraception and increase the use of modern method of contraception. The quality improvement efforts also aim at reducing complication and discontinuation rates of family planning and thus enhancing client satisfaction.

NUTRITION PROJECT

The University of Manitoba and its consortium partner India Health Action Trust has set up a TSU to support the GoUP in achieving its ambitious nutrition goals. The TSU will strengthen existing systems for the prevention and treatment of childhood malnutrition leveraging three platforms: The project implementation period is from November 2015 – March 2019 with the overarching goal to provide high quality, well-coordinated techno-

managerial support to the government's Integrated Child Development Services (ICDS) to reduce under 5 morbidity and mortality due to childhood malnutrition in Uttar Pradesh



RMNCH+A

India has among the highest maternal mortality ratios and infant mortality rates in the world, at 178 maternal deaths per 100,000 live births and 42 infant deaths per 1,000 live births (Sample Registration System, 2013). Among all Indian states, Uttar Pradesh, with one sixth of India's population (200 million) has the highest maternal mortality ratio (292 per 100,000 births), and the highest infant mortality (53 per 1,000 live births). One of the main underlying causes of high morbidity and mortality among women and children is the health risk associated with early childbearing, short birth intervals and high parity, often higher than desired.Given this, the Government of India (GoI) has launched a renewed campaign to improve RMNCH+A performance across India, and the GoUP has followed up the national launch with its own show of commitment through the state RMNCH+A effort, and the launch of the 'Hausla' campaign to save mothers and children across the state. A major emphasis of the Government of Uttar Pradesh (GoUP) has been investment in health and development focused on reproductive, maternal, newborn and child health, along with adolescent health (RMNCH+A) through the National Health Mission. To support this, the GoUP recognized that enhancement of the state's execution capacity through better planning and implementation could improve the efficiency, effectiveness and equity of RMNCH+A services, and thereby improve health and development outcomes.

Given this, the GoUP approached the Bill & Melinda Gates Foundation (the Foundation) to provide techno-managerial assistance through the establishment of a comprehensive Technical Support Unit (TSU) focused on supporting the GoUP to reach its goals in RMNCH+A.

RMNCH+ PROJECT

In November 2013, IHAT established a TSU to support the government of UP to increase the efficiency, effectiveness and equity of its execution vis-à-vis the three platforms identified in the Foundation's ICO (India Country Office) strategy for integrated delivery: the government, the private sector, and communities.

The objectives are:

- Support leadership to focus more on outcomes
- Improve the performance of front-line workers (FLW)
- Improve facility performance, coverage and quality of care
- Enhance accountability systems [internal and external] to ensure quality of service delivery at scale
- Improve overall planning, policy formulation and coordination
- RMNCH+A project aims to support GoUP in improving the quality and quantity of frontline worker interactions at the community level and within households to drive the priority RMNCH+A behaviors. It also focuses on improving quality of RMNCH+A services at health facilities including supporting critical health systems level improvements.
- The project leverages across three platforms of community, facility and systems to provide the necessary support to the functionaries for bringing in a holistic change in acceptance of health-promoting behaviors for RMNCH+A. At each level, techno-managerial support is provided to not only understand the bottlenecks but also undertake hand holding of the necessary intervention.

IMPACT

The RMCNH+A project is supporting in strengthening integrated-service delivery platform called Village Health & Nutrition Day (VHND), where women and their children could access key nutrition and RMNCH+A services from frontline workers.

The CRP provides support on logistics, community mobilization, and quality of services being offered at the VHNDs. TSU's support has been instrumental in shaping the quality of VHND sessions with a large majority of them now having improved infrastructural provisions and service availability, thereby emerging as the single most important and easily accessible platform for receiving integrated health and nutrition services for pregnant women and children.

KEY LEARNING & OBSERVATION

IHAT provides technical support to Government of UP in RMNCH+A activities as a technical partner and is funded by University of Manitoba, it is working in 25 high priority districts among 75 districts of Uttar Pradesh

It provides support and mentoring to ASHA, via ASHA sangini mentors and to ANM and staff nurses through Nurse mentors at block level facilities and its activities are coordinated with the staff in providing support to block level staff and mentoring them with support of JPIEGO and finding Gaps and analyzing them at different level and with support of block level MO/IC and programme managers the gaps are discussed and ways are devised to improve and fill those gaps

Gaps are analyzed in terms of infrastructure, HR, availability of beds, turn-over ratio, and monthly maternal and newborn child death data and with help of community staff follow up of complications and healthcare services received by community and assessment of levels of delivery services

At district level the different nurse mentors reports to district specialists, the monthly death data is reviewed and analyzed at district for whole district and poor performing blocks are identified and gaps are analyzed and are filled accordingly, with help of NHM staff at district level

The services at different blocks are analyzed and the deaths associated with maternal child health services are analyzed and after review of deaths individually and cumulative gaps are analyzed and trends are being analyzed, also the effect of continuous mentoring,

monitoring and evaluation helps in improving the performance and delivery of healthcare services

PROJECT REPORT

(An evaluation of clinical practices of nursing staff in relation to maternal health services)

TITLE-An evaluation of clinical practices of nursing staff in relation to maternal health services

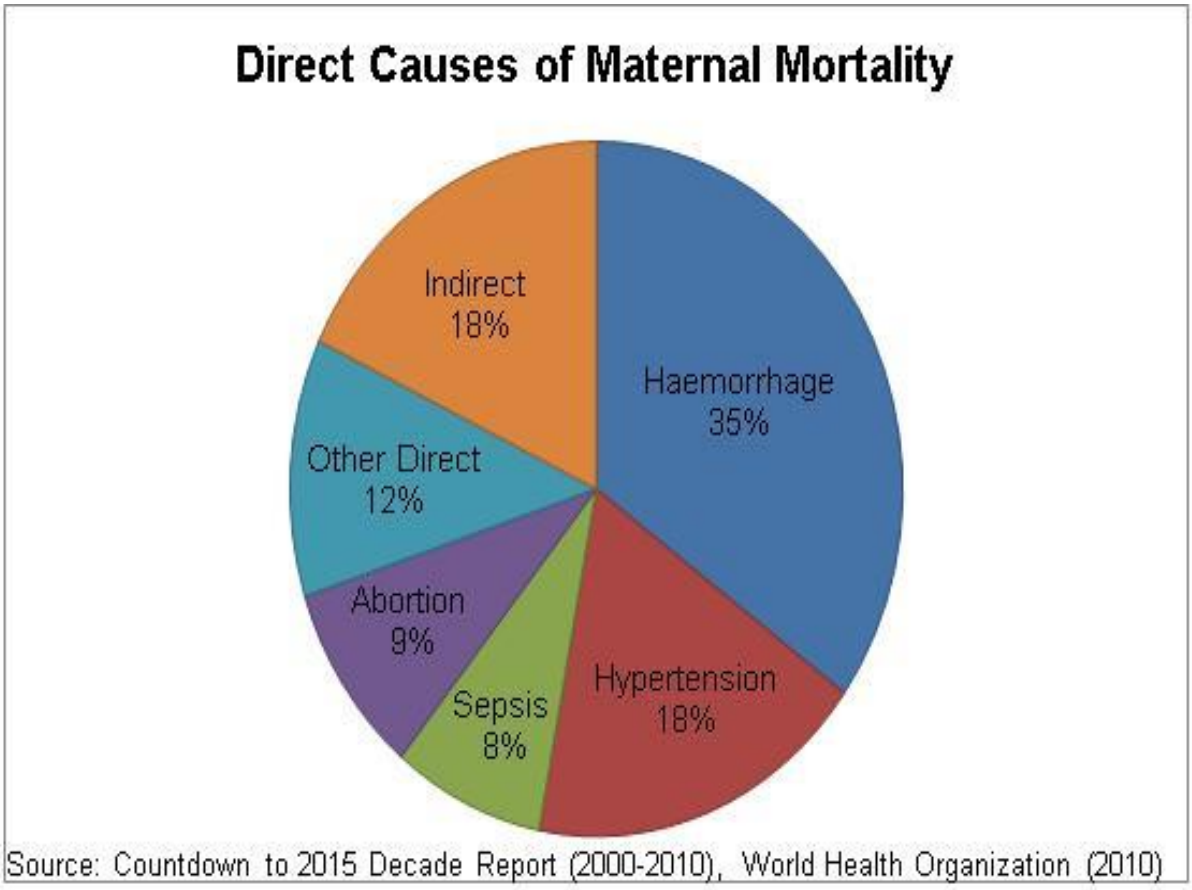
Abstract

Approximately 529,000 women die from pregnancy-related causes annually and almost all (99%) of these maternal deaths occur in developing nations. One of the United Nations' Millennium Development Goals is to reduce the maternal mortality rate by 75% by 2015. Causes of maternal mortality include postpartum hemorrhage, eclampsia, obstructed labor, and sepsis. Many developing nations lack adequate health care and family planning, and pregnant women have minimal access to skilled labor and emergency care. Basic emergency obstetric interventions, such as antibiotics, oxytocin, anticonvulsants, manual removal of placenta, and instrumented vaginal delivery, are vital to improve the chance of survival

INTRODUCTION

As we know thatMMR as expected to be achieved by 2015 according to MDG has not been achieved, though India has performed well in terms of maternal mortality rate still there are a few high priority districts in India which has led to the reason of not achieving the desired goal

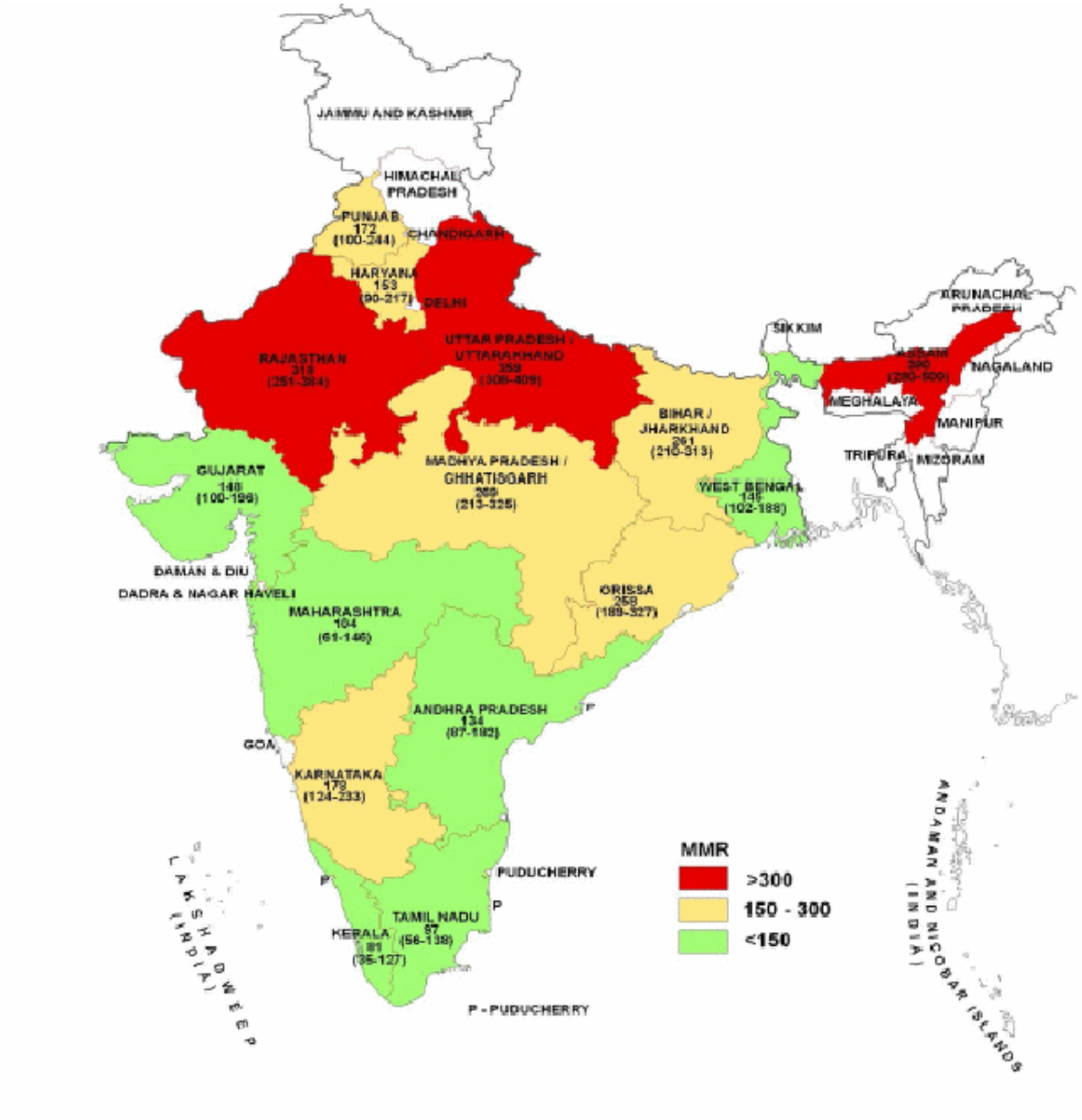
MMR in India is 174 according to World Bank data 2015 and accordingly the major proportion among maternal death is depicted in the following pie chart



Accordingly these, many factors has been not resolved and ultimately led to not achieving MDG as desired (decline) in maternal mortality rate

Though Govt. of India has launched time to time many programs like RCH, JSY, PMSMA, RMNCHA (i.e. Reproductive Maternal Child Health and Adolescent health program) and Pradhan MantriSurakshitMatritvaAbhiyan(PMSMA) which a one day initiative to register, provide ANC check-up and detect high risk pregnancy in India.

Accordingly India has spotted (health ministry) some if the low performing areas or high priority areas where there is a need of these programs to be implemented more efficiently



Source SRS special bulletin 2011(data 2008-2009)

As depicted, due to these poor performing states there is increase in national of maternal mortality

This increase in no. of maternal death has many reasons like less no. of institutional deliveries, not availability of hospitals, institutions and health care professionals, non-

availability of skilled birth attendant, high economic burden (affordability), improper implementation of programs, etc.

WHO according to its guidelines has prescribed the norms for reduction in maternal mortality keeping in view the major no. of deaths due to hemorrhage, reasons for hemorrhage during delivery can be no availability of a skilled birth attendant or improper or no ante natal checkups (ANC) i.e. not following them properly or there is a gap in knowledge among birth attendants who attend delivery or there is mismanagement at the end of health care personnel and lead to increased no. of maternal deaths due to hemorrhage (as per protocols set by WHO); basic level of understanding in staff nurse or health care delivery provider or birth attendant in these areas(i.e. high priority areas) should be good in terms of reproductive, maternal and child health as, they should have proper knowledge of menstrual hygiene, proper counselling regarding conceiving(i.e. proper maternal care), about antenatal checkup, type of complications that can arise during pregnancy, how can they be managed(when to refer, High risk pregnancy) how to conduct a normal delivery as per WHO norms

As there is scarcity of specialized care givers in HPD's so majority of burden of providing healthcare benefits lies on staff nurses

Uttar Pradesh being one of the HPD's also faces scarcity of trained healthcare professionals and so staff nurses can be evaluated by some basic test for few basic day to day procedures which they carry daily

Few basic protocols for measuring BP like checking instrument, keeping it to eye level, measuring systolic and diastolic pressure, all tests in performing ANC , how abdominal examination is being done, what all can be findings

What all complications can be seen, when a patient can be referred for specialized care, like bleeding during conception, basic overview of all these conditions combined in OSCE score for performing normal delivery, managing PPH as this is one of the major cause of maternal deaths as being mentioned above if it can be managed using 10 IU of oxytocin as prescribed by WHO or any drug like misoprostol according to RMNCHA directions can be helpful in controlling and managing maternal deaths and this can be managed by a staff nurse if such complications occurs during delivery to a staff nurse

A fair understanding is being judged of staff nurses while performing basic protocols of performing delivery and carrying out basic ANC and basic services so as to help a pregnant woman and can contribute to reduction in maternal mortality via practices which ca be dealt easily if managed timely and properly

A staff nurse is being trained continuously while performing deliveries based on competency and also they are given trainings on various practices via modules prescribed by Government of India and NHM

With RMNCH+A into existence NHM has adopted various methods prescribed and standardized by Government of India, it has been laid down by many research studies and various practices for safe birth practices and medicines with least side-effects which can be easily used and practices which can be followed in areas where trained/skilled birth attendants are not present

Review of literature

A study conducted by UNICEF states that one critical strategy for reducing maternal morbidity and mortality is ensuring that every baby is delivered with the assistance of a skilled birth attendant which generally include a medical doctor, nurse or midwife. Experts agree that the risk of stillbirth or death due to intrapartum–related complication can be reduced by about 20 percent with the presence of a skilled birth attendant.

To improve maternal and newborn survival across all ages, skilled health personnel should be capable of handling normal deliveries safely. They must also be able to recognize warning signs for complications and refer mothers to emergency care. Non-skilled attendants, including traditional birth attendants, can neither predict nor appropriately manage serious complications such as hemorrhage or sepsis, which are the leading killers of mothers during and after childbirth.

Worldwide, about one in four births (25 per cent) take place without the assistance of a skilled birth attendant. In 2015 alone, this translated into more than 40 million unattended births in low- and middle-incomecountries, about 90 per cent of which were in South Asia and sub-Saharan Africa. Regional average proportions of births without skilled birth attendant range from about 50 per cent in sub-Saharan Africa to 2 per cent in Central and Eastern Europe and the Commonwealth of Independent States (CEE/ Despite substantial progress over the last two decades, inadequate or non-existent care during pregnancy and delivery was largely responsible for the annual deaths of an estimated 303,000 mothers and 2.7 million newborns in the first month of life in 2015. Indeed, roughly three quarters of all maternal deaths take place during delivery and in the immediate postpartum period.

In early 1990, about two thirds of births were delivered with the assistance of a skilled health attendant, while over the 2010-2015 period, this coverage rose to 75 per cent. The least developed countries saw the largest increase over this period, going from 29 per cent to 54 per cent, almost doubling coverage. Furthermore, South Asia and the Middle East and North Africa region are among the regions which saw the largest increases. South Asia presented the highest increase from 29 per cent to 62 per cent between 1990 and 2015.

According to WHO factsheet Nov ’16 the gaps found in maternal death were, Poor women in remote areas are the least likely to receive adequate health care. This is especially true for regions with low numbers of skilled health workers, such as sub-Saharan Africa and South Asia. Globally in 2015, births in the richest 20 per cent of households were more than twice as likely to be attended by skilled health personnel as those in the poorest 20 per cent of households (89 per cent versus 43 per cent). This means that millions of births are not assisted by a midwife, a doctor or a trained nurse.

In high-income countries, virtually all women have at least four antenatal care visits, are attended by a skilled health worker during childbirth and receive postpartum care. In 2015, only 40% of all pregnant women in low-income countries had the recommended antenatal care visits.

Other factors that prevent women from receiving or seeking care during pregnancy and childbirth are:

- poverty
- distance
- lack of information
- inadequate services
- Cultural practices.

The problem statement

The reasons found out for maternal deaths also included Women die as a result of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy and most are preventable or treatable. Other complications may exist before pregnancy but are worsened during pregnancy, especially if not managed as part of the woman's care. The major complications that account for nearly 75% of all maternal deaths are:

- severe bleeding (mostly bleeding after childbirth)
- infections (usually after childbirth)
- high blood pressure during pregnancy (pre-eclampsia and eclampsia)
- complications from delivery
- Unsafe abortion.

The remainder are caused by or associated with diseases such as malaria, and AIDS during pregnancy.

To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system.

Few key facts as quoted by WHO for maternal deaths are: (1) Everyday, approximately 830 women die from preventable causes related to pregnancy and childbirth. (2) 99% of all maternal deaths occur in developing countries. (3) Maternal mortality is higher in women living in rural areas and among poorer communities. (4) Young adolescents face a higher risk of complications and death as a result of pregnancy than other women. Skilled care before, during and after childbirth can save the lives of women and newborn babies

RESEARCH METHODOLOGY

Objective of the Study:

The objective of the study is to evaluate the basic set of clinical practices performed by nursing staff in relation to maternal health services.

Study Site: Kasganj as it is one of the high priority districts of Uttar Pradesh, and has a population of 14+ lakh, as UP itself if a high priority zone in terms of maternal child health (Acc. to SRS-2012 data it stands behind Assam whose MMR is 328, UP has 292) and Kasganj is one of the poor performing districts among high priority districts of Uttar Pradesh

Study population: - Staff nurses (were selected randomly from 10 community level hospitals, having similar delivery load government as well as private hospitals and the staff nurses having similar basic qualification, i.e. B.Sc. Nursing and almost equal years of experience, i.e. 3+ years of experience and catering to almost equal delivery load per month)

Instrument Used in the Study: Questionnaire used was according to established protocols by WHO and being followed by NHM i.e. few protocols regarding maternal child health by NHM also from OSCE(objective structural clinical examination) examination of skilled birth attendant according to maternal child health tool kit and in accordance with RMNCH+A guidelines

Data Collection: data was collected as there was an artificial environment created in the mini skill lab as established according to Dakshataprogramme, where different skill stations are made where staff can perform different procedures and can be evaluated on basis of

their clinical performance. Marks have been allotted to each step and on the basis of performance the staff is evaluated

Data Analysis:

The skill set of basic practices includes basic procedures carried out during day to day activities, and forms an integral part of maternal health services, maternal healthcare delivery services starts from conception to delivery of fetus, placenta and observation period after delivery; and basic management as per guidelines laid by Government of India in consensus with WHO, and analysis was done accordingly

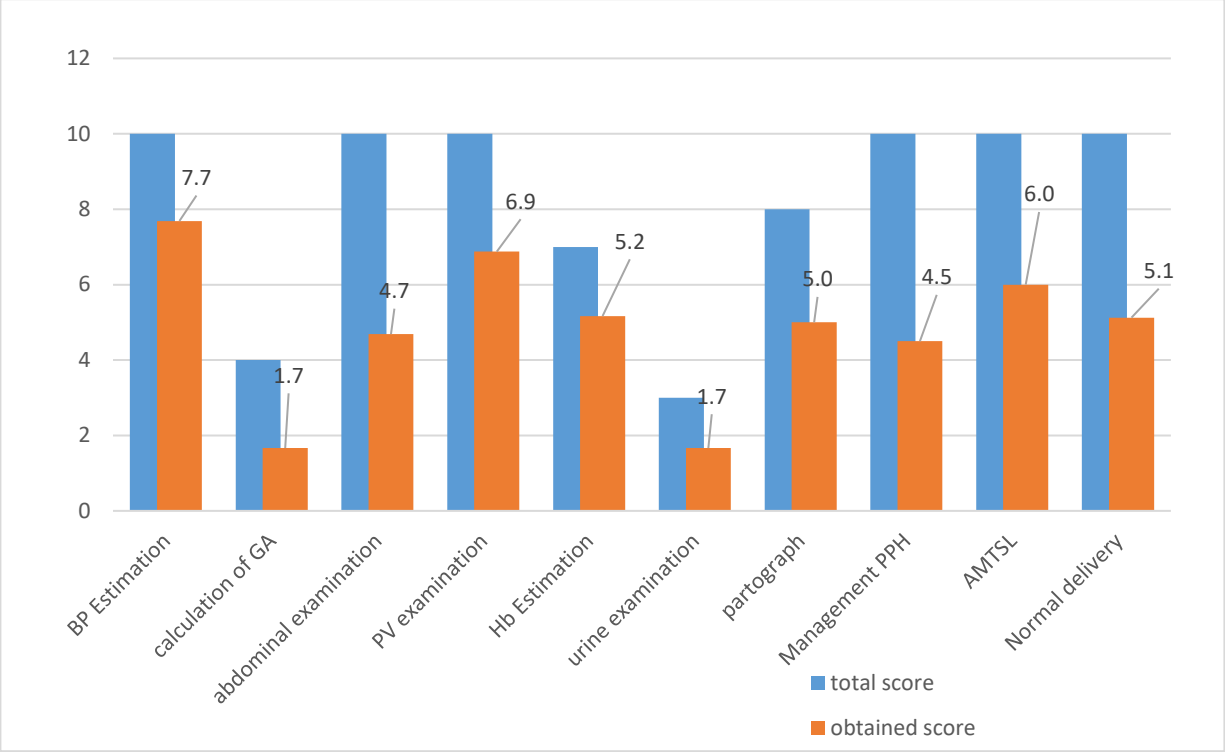
SKILL	SCORES	OBSERVATION
BP Estimation	76.9	GOOD
calculation of GA	34.4	POOR
abdominal examination	46.9	POOR
PV examination	68.8	AVERAGE
Hb Estimation	70.1	AVERAGE
urine examination	50.0	AVERAGE
Partograph	57.8	AVERAGE
Management PPH	45.0	POOR
AMTSL	60.0	AVERAGE
Normal delivery	76.9	GOOD

The performance indicators were taken as, if the score is below 50 then the performance is poor and skill lies in poor category and if it is between 50-70 then skills are in average

category and if it falls above 70 then it is considered as good; so average scores of all the staff is 58.7 which lies in average category; also as the score shows the result of the clinical skills, majority of the skills fall in the average and poor category while only BP estimation and Normal delivery lies in the good category which does not depicts a good clinical practices score there are average scores in some critical practices like partograph filling and interpreting also PV examination which is also on higher side but is in average category, AMTSL, management of PPH and partograph should lie in good category as they are the practices which should be excellent in a healthcare provider but still they lie in average and poor category

DISCUSSION

The skill set of staff nurses as per OSCE score according to MNH toolkit and it was seen that there is a decent proportion of knowledge about ANC protocols and it gives a view of a decent proportion of ANC checkup as Hb estimation, urine examination and Blood pressure skills in the staff showed a good score for skill test but when it comes to assessment of gestational age and abdominal examination then the percentages are quiet low as is depicted in the graph these are overall indicators about ANC(ante natal checkup) and this gives a view of ante natal checkup quality being given and there is a gap in abdominal examination and gestational age calculation as they form important indicators while knowing foetal wellbeing and advancement of pregnancy in a proper manner in addition to it these indicators help in assessment of any complications and management at a early stage



Now as we see about the normal delivery conducting procedures a normal partograph is a graphical representation of advancement of pregnancy and indicates when the pregnant woman is going to deliver, for conducting a normal and quality delivery it is important to have a fair understanding of partograph, while looking at data we come to know that 50% of the staff does not have a fair understanding of partograph and its uses, while only 25% of the staff had fair understanding of partograph and its uses, though they had fair understanding about Per vaginal examination but if indicators being observed then the infection prevention practices was a bit lower as, they didn't had idea about washing hand, wearing gloves, cleaning the perineum before examination(as these factors can lead to sepsis/infection later) but practically they were sound about the results of per vaginal delivery and the experience of conducting normal delivery was fairly good in these staff, majority of them fall in category of 70-90% and had a fair understanding of conducting a normal delivery

As the procedure of conducting a normal delivery is known to staff and they have performed fairly well in but when it comes to managing a complicated delivery and WHO has laid down rules for PPH and eclampsia, so, for that AMTSL has improved over time but they have not come to a good level, as while conducting AMTSL, they do not usually check for second baby and for referral part also, data shows poor results but basic facility based interventions as 10 IU oxytocin and mag sulph for eclampsia dosage is known them and they perform that, apart from scores

And according to WHO safe-birth checklist and OSCE scores of the basic interventions in a facility where much resources are unavailable the basic knowledge of such interventions is fair in the staff

CONCLUSION

The average skills of staff was observed on basis of indicators such as calculation of gestational age(GA), abdominal examination and management of PPH falls below average category as it falls below average of 50% while others falls above that average skill base, though OSCE scores according to MNH toolkit should be at least 70%, there is a gap in the clinical practices of staff as, the staff generally handles majority of the patients as availability of doctors is quiet low and they should have knowledge of managing and referring cases, so that majority of cases at least can get a decent basic medical attention and can be managed in case of complications or emergency.

Gaps varies from the ante-natal check up to conducting delivery and also post delivery period i.e. in cases of certain emergencies where basic management can be given and then pregnant women can be referred as, there can be preparedness for situations which can be managed and can help in reducing maternal mortality among those cases where fatality is higher

RECOMMENDATIONS

- Regular assessment can be done using various tools so that clinical skills may be evaluated
- Infection prevention protocols must be clear in staff as it also leads to survival of patients at least in women going into sepsis and will contribute to reducing maternal deaths
- Knowledge about observation and referrals of unmanageable cases should be imparted

LIMITATIONS

- The study was conducted in artificial environment not actual practices
- Results can be different due to some nurse mentoring programmes are going on for the staff

ANNEXURE 1

OSCE

Station 1 for OSCE (BP estimation)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Tells patient about the procedure	0.5				
2	Ask the person to sit on a chair or lie down on flat Surface	0.5				
3	Check that bulb is properly attached to the Tubing	1				
4	Place the apparatus on a horizontal surface at the person's heart level .The mercury column is at the observer's eye level	1				
5	Checks for any crack and leakage in the bulb and cuff	0.5				
6	Opens the mercury column knob	0.5				
7	Tie the cuff 1 inch above the elbow placing both tubes in front Inform the woman about the findings Record the reading Place the diaphragm of a stethoscope over the brachial artery	1				

8	Raise the pressure of the cuff to 30 mmHg above the level at which pulse is no longer felt	1				
9	Release pressure slowly and listens with stethoscope keeping it on brachial artery at the elbow	1				
10	Note the reading where the sound is heard (systolic pressure) Follow the sound and notes reading where the sound disappears (diastolic)	1				
11	Deflate and remove the cuff; closes the mercury column knob	1				
12	Inform the woman about the findings Record the findings					
	Total	10				

Station 2 for OSCE (Calculation of gestational age)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1.	use of gestational wheel/Fundal height	2				
2.	Calculation of EDD	2				
	Total	4				

Station 3 for OSCE (Abdominal examination)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Explains about	1				

	procedure					
2	Use of Mamanatalie	2				
3	Estimates fundal height accurately +/- 2 Weeks	1				
4	Demonstrates 4 grips	4				
5	FHS method and site	1				
6	Reports lie correctly	1				
	Total	10				

Station 4 for OSCE(PV examination)

S. No.	OBSERVATIONS	MARKS	Participant1	Participant 2	Participant 3	Participant 4
1	Demonstrates correctly all the steps •Asks for history of bleeding and empty bladder •Explains procedure •Washes hands •Cleans perineum •Inserts 2 fingers and Finishes entire pelvic assessment -well curved sacrum -knobby ischial spine -sacral promontory -estimation of cervical dilatation	1 1 1 0.5 0.5 0.5 0.5				

	•Removes gloves •Washes hands •Notes findings	1 1 2				
	Total	10				

Station 5 for OSCE(Hb estimation)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Keep all necessary items ready	0.5				
2	Cleans the Hbtube and pipette	0.5				
3	Wash hands and wears gloves	0.5				
4	Fill the Hb tube with N/10 HCl up to 2 gm with the dropper and places it in the Hb Meter	0.5				
5	Clean tip of the person's ring finger with spirit swab	0.5				
6	Prick the finger with lancet and discards first drop of blood	0.5				
7	Allow a large blood drop to form on the Finger tip and sucks it with pipette upto 20 cm mark. Takes care that air entry is prevented while sucking the blood	0.5				
8	Wipe tip of the pipette and transfers the blood to the Hb	0.5				

	tube containing N/10 HCl					
9	Leave the solution in Hb tube for 10 minutes	0.5				
10	After 10 minutes, dilute the acid by adding distilled water drop-by drop and mix it with stirrer	0.5				
11	Note down the reading	0.5				
12	Rinse the Hb tube 2-3 tmes with N/10 HCl and disposes off the used lancet in puncture proof container	0.5				
13	Drop the used gloves in 0.5% Chlorine solution	0.5				
	Total	7				

Station 5 for OSCE (Urine testing by uristix)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Keep all necessary items ready	0.25				
2	Remove one strip from the bottle & replace the Cap	0.25				
3	Completely immerse the reagent area off the strip in the urine &remove immediately to avoid dissolving of reagent	0.5				
4	Remove excess	0.5				

	urine by placing the strip at the edge of the bottle					
5	After 60 secs. Compare the colour of the strip with the colour codes given on the label of the bottle Interpret correctly	0.5				
6	Discard strip properly	0.5				
	Total	3				

Station 6 for OSCE(Partograph)

S. No.	OBSERVATION	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1.	Active phase >4 cm	2				
2.	Plotting of Partograph of cx dilatation starts on alert line	3				
3.	Interpretation with reference to Alert line	1				
4.	Monitoring parameters ½ hrly-FHR/Amniotic fluid color/Uterine contraction/Pulses And 4 hrly-PV/BP/TEMP	2				
	Total	8				

Station 7 for OSCE(Management of PPH)

S. No.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1.	Assessment of increased bleeding PV(>500 ml or 1 pad in 5 min)/Continuous	2				

	bleeding PV for 10 min					
2.	Diagnosis (cause)	2				
3.	Management Call for help, vitals IV line with 60 drops/min if Pulse rate >100 or DBP <100 Catheter Refer to FRU for MRP under GA	6				
	Total	10				

Station 8 for OSCE(AMTSL)

S. No.	OBSERVATION	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Checks if there is another baby inside by palpating the Abdomen	2				
2	Gives 10 U Oxytocin IM	2				
3	Controlled cord traction correctly (traction, counter traction)	3				
4	Uterine massage	1				
5	Examines placenta (cotyledons all there, membranes complete)\	2				
	Total	10				

Station 9 for OSCE(NORMAL DELIVERY)

S. NO.	OBSERVATIONS	MARKS	Participant 1	Participant 2	Participant 3	Participant 4
1	Seven steps of delivery done	7				
2	Presentation of	3				

	delivery procedure					
	Total	10				

Bibilography:

1. IHAT, UP-TSU(www.ihat.in)
2. World bank data(data.worldbank.org)
3. WHO, safe birth checklist(www.who.in)
4. NHM(nhm.gov.in)
5. Upnhm.gov.in
6. www.mchip.net
7. cghealth.nic.in
8. maternal child health toolkit
9. RMNCH+A strategy and guidelines
10. Maternal mortality factsheet, WHO, updated Nov'17
11. A study by UNICEF "Despite accelerated recent progress, millions of births occur annually without any assistance from a skilled attendant at birth"
12. Study conducted by WHO " reasons behind maternal mortality"