

Summer Training at



**State Institute of Health and Family Welfare Haryana, Panchkula
(April 1-May 31, 2014)**

**A KAP Study on Trained Medical Officers and Staff Nurses Regarding
Infection Control Practices and Management of Biomedical Waste
Generated from Labour Room in the Delivery Points in Gurgaon District,
Haryana**

**By
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**Under the guidance of
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**MBA- Hospital & Health Management (MBA-HM)
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IIHMR UNIVERSITY
The IIHMR University, Jaipur
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CERTIFICATE

This is to certify that Dr. Sakshi Sharma has undergone her summer training in State Institute of Health and Family Welfare, Haryana from 01th April to 31st May, 2014. The candidate herself carried out all the studies related to her summer training. Her approach to the study has been scientific and analytical. This summer training is in the partial fulfilment of the course requirement recommended for awarding the Post graduate Diploma in Health and Hospital Management.

Her project was "A KAP study on trained medical officers and staff nurses regarding infection control practices and management of biomedical waste generated from labour room in the delivery points in Gurgaon district, Haryana"

I wish her success in all her future endeavours.



Col. (Dr.) Ashok Kaushik

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Dr. J.P. Singh

Assistant Professor

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TO WHOM IT MAY CONCERN

This is to certify that **Dr. Sakshi Sharma**, PGDHM (Health) student from IIMR Jaipur, did her summer training under State Institute of Health & Family Welfare, Haryana on the topic ***"A KAP study of trained Medical Officers & Staff Nurses on infection control practices and management of Bio-Medical Waste generated from labour room in delivery points in District Gurgaon, Haryana"*** from **1st April 2014** to **31st May 2014**.

Her approach has been sincere, scientific and analytical towards the study. I wish her good luck in all future endeavours.


Principal

Dated: 31/5/2014

SIHFW Haryana

Acknowledgement

At the beginning of the report I would like to express my special gratitude and appreciation to Dr. Rakesh Gupta, Commissioner FD & Mission Director (NHM) Haryana for allowing me to pursue my summer internship from State Institute of Health and Family Welfare (SIHFW), Haryana.

I would also like to acknowledge with much appreciation the crucial role of Dr. Usha Gupta, Principal (SIHFW) during the internship period for her time – guidance, monitoring and words of encouragement. This acknowledgement note would be not be complete without special thanks to Dr. Puneet Gupta, Consultant –Training (SIHFW) who despite of other pre-occupations and busy schedule was there to guide me throughout the period and whose stimulating suggestions and encouragement helped me complete my training.

I would like to thank Dr. Arptia Kapur, Faculty-Admin & Child Heath Training (SIHFW), Dr. Kamna Goel, Faculty-Maternal Heath Training (SIHFW), all the consultants in various departments and other staff members at SIHFW, Panchkula for being so helpful all the time and making this summer training project an unforgettable experience.

I would also like to extend my gratitude towards Dr. Saryu, Dy. Civil Surgeon, Capacity Building & Training for guiding me regarding training of staff nurses and medical officers in district Gurgaon. I would also like to express my gratitude towards all doctors and nurses in Gurgson district who participated in the study.

I express my gratitude and respectful regards to my mentor Dr. JP Singh, Institute of Health Management Research, Jaipur, for his able guidance and useful suggestions, which helped me in completing the project-work. This project would have been a distant reality without his constant support and guidance.

I would also like to thank my institution and faculty members. My colleagues, Dr. Vidhi Tomar, Dr. Rohit Sharma, Dr. Neha Sharma and Dr. Amita Kshirsagar also hold a special mention here for supporting me throughout the summer internship training at SIHFW and making it a great learning experience.

Finally, and most importantly, I would like to thank God for allowing me to complete my project, my beloved parents for their blessings for the successful completion of this training.

Dr. Sakshi Sharma

IIHMR, Jaipur

Preface

Summer internship is an integral part of the PGDHM curriculum. As a part of the course, students of the first year are required to undergo summer training at an organization to get in depth exposure of various departments in the organization to get a better understanding of the health care delivery system.

The major objectives of the summer training programs are as follows:

- 1) To better understand the existing health delivery system including public and private sectors.
- 2) To observe the implementation of various National Health Programmes at National/State/District levels.
- 3) To understand various functions of health systems by interactions with key stakeholders, policy makers, programme managers, academicians and researchers
- 4) To work on the project/task assigned by summer training organizations.

During my training period, I had an overview of various programmes undertaken in State Institute of Health and Family welfare including the current status of the programmes. I also carried out a KAP study on-

“A KAP study on trained medical officers and staff nurses regarding infection control practices and management of biomedical waste generated from labour room in the delivery points in Gurgaon district, Haryana”

I also had the opportunity to visit and assess services and infrastructure at District Hospital-Panchkula, Primary health centre-Kot and Sub-centre-Ramgarh.

ABOUT SIHFW

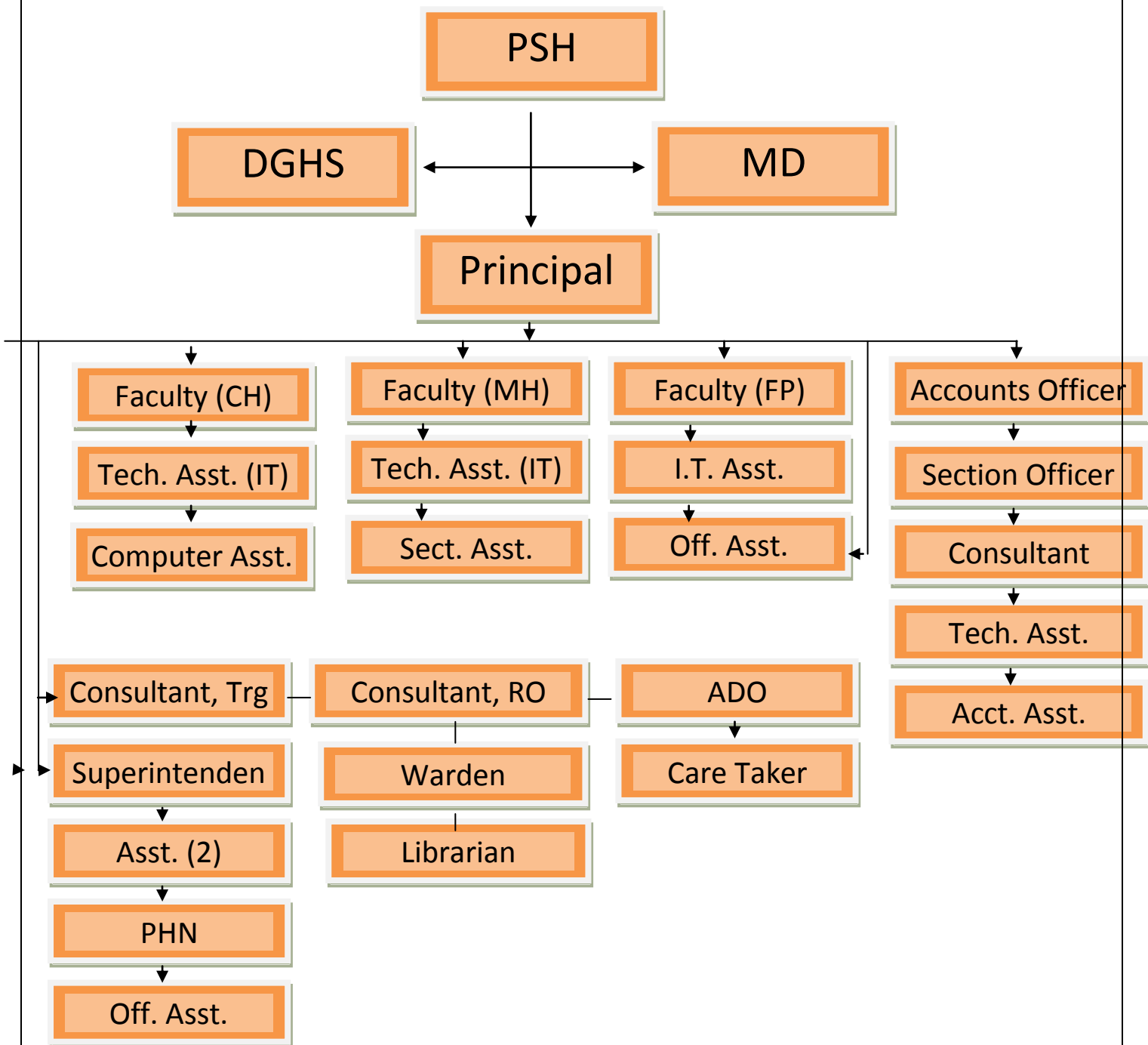
SIHFW, Haryana was established in 1992 and is the apex training institute of Department of Health & Family Welfare, Haryana. Since its inception, SIHFW has been envisaged as state level institution for improving the effectiveness of health care delivery system by imparting knowledge and skill based trainings to the medical and Para-medical health personnel at different levels.

- Apex Training Institute - The institute provides umbrella support to the following training institutions in the state:

Training Institute	Number	Location
Medical College	2(Govt) + 2 (Pvt)	Rohtak, Hisar, Ambala & Sonipat
State Level Public health training institutes	1	Gurgaon (HIPA)
Regional Institute of Health and Family Welfare	1	Rohtak
DTCs	21	One in each district headquarter
Nursing Training Centre (GNMTC)	3 (Govt) + 38 (Pvt)	Bhiwani, Hisar, Karnal.
MHPW(F)Training Centre (ANMTC)	8 (Govt) + 35 (Pvt)	Ambala, Rohtak, Narnaul, Faridabad, Gurgaon, Sirsa, Bhiwani, Mewat.
MPWTC	2	Sonepat, Rohtak

The Institute has active collaboration with various other institutes of national repute like PGI Chandigarh, All India Institute of Medical Sciences (AIIMS), Jawaharlal Nehru University (JNU), Haryana Institute of Public Administration (HIPA), Accounts Training Institute (ATI), Public Health Foundation of India (PHFI), IIHMR, Jaipur for sourcing faculties and sharing experiences etc. NIHFW and NHSRC have always been a source of inspiration for all the training, monitoring and evaluation activities and are guiding force in execution at all levels.

ORGANOGRAM OF THE INSTITUTE:



VISION OF SIHFW:

“THE VISION OF THE INSTITUTE IS TO DEVELOP, UPDATE AND REFRESH THE KNOWLEDGE AND SKILLS OF THE HEALTH CARE PERSONNEL IN THE STATE BY PROVIDING QUALITY TRAININGS AT STATE LEVEL AND ENSURING STANDARDIZED TRAININGS AT DISTRICT LEVEL FOLLOWING THE TRAINING NEEDS ASSESSMENT WITH CONTINUAL IMPROVEMENT”.

SIHFW as a Society:

To effectively monitor and systematically manage the training and infrastructure activities of the Institute, an effective accounting system – to process all aspects of the institute’s financial performance and facilitate appropriate strategic decisions about the future has been developed and the Society was formally registered with the Registrar of Societies, Panchkula on November 11, 2010 in the name “Swasthya Prashikshan Kendra, Panchkula”.

The Society functions and operates under the privileged guidance of the honorable Principal Secretary, Govt. of Haryana, Health, Medical Education & Ayurveda, who is the Chairman of its Governing Body. The Mission Director, NRHM is the Chairman of the Executive Committee. During this year, one Governing Body meetings and one Executive Committee meetings have been held in the FY 2012-13.

SIHFW as Collaborating Training Institute (CTI):

Collaborating Training Institutes (CTIs) were identified out of various State training institutes by NIHFW to achieve the goal of Comprehensive Training Plan (CTP). SIHFW, Haryana was recognized as CTI in year 2005 and is also supporting UT Chandigarh and State of J&K in implementing their CTPs apart from Haryana. SIHFW Haryana provides trainings to the health personnel on the basis of nominations received and also share pool of master trainers so as to impart trainings in their respective States. Under CTI scheme, NIHFW provides financial assistance to help the States in achieving CTP targets. Human resource is recruited as per the ToRs devised by NIHFW. SIHFW Haryana has recently recruited 1-Consultant Finance, 3 Consultant ROs and 4-Technical Assistants under CTI scheme. SIHFW received funds amounting ` 2,862,820 from NIHFW during the FY 2012-13 and has spent ` 2,618,429 till March, 2013.

Curing Clubfoot Pilot Project:

SIHFW has taken the initiative to run a project on pilot basis at GH, Sector-6, Panchkula for which infrastructure and human resource will be generated.

In this context, a seminar was organized by SIHFW in which Orthopaedic Surgeons from Haryana and UT Chandigarh and Dy. Civil Surgeon (IBSY & School Health Programme) of State Haryana were sensitized about Clubfoot. The Seminar was conducted

under the chairmanship of Dr. N.K. Arora, Director General Health Services, Haryana. Dr. P.N. Gupta from GMCH-32, Chandigarh and Dr. Nirmal Raj from PGIMER, Chandigarh were the trainer/faculty for the seminar. The seminar was attended by 29 Orthopaedic Surgeons, 14 Dy. Civil Surgeons and 2 Consultants from NRHM & SIHFW.

Assessment of ANMTC/GNMTC of the State:

The biggest challenge for the provision of health care services is the acute shortage of health personnel and disproportionate skill mix of the existing staff. Adequate knowledge and skills of ANMs and Staff Nurses working in the public as well as private sector facilities is one of the major bottlenecks in delivering quality RMNCH services particularly at primary and secondary level health facilities. In this regard, SIHFW take the responsibility to reform the pre-service education and midwifery in Haryana and conduct a baseline assessment/supportive supervision visit on 28th Feb 2013 at all Government and certain selected private ANMTC/GNMTC (25 and 22 respectively) to assess the basic knowledge and skills of final year students of ANM and GNM courses and the basic infrastructure and school management as per the performance standards provided by GoI.

After a thorough analysis of the data compiled, a detailed analysis of the same was done and various gaps were identified with respect to infrastructure, training material and knowledge/skills of students and the same were discussed in the meeting on 26th March, 2013 with the stakeholders under the chairmanship of Dr. Rakesh Gupta, Mission Director, NRHM. All the Principal Tutors (Govt +Pvt.) ANMTC/GNMTC of Haryana (approx.130) were called for the meeting. DGMER, DGHS-II, Country Head JHPIEGO were also present.

Trainings given by SIHFW:

Maternal Health Trainings:

Under Maternal Health Program, following trainings are being imparted by SIHFW, Panchkula at State as well as at district level: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	Skilled Birth Attendant	21 days	Staff Nurse ANMs	4/PB
2.	Emergency Obstetric Care	16 weeks	Medical Officers	8 P/B
3.	Life Saving Anesthesia Skills	18 weeks	Medical Officers	4 P/B
4.	Basic Emergency Obstetric Care + PPIUD	10 days	Medical Officers	5 P/B
5.	Medical Termination of Pregnancy	12 days	Medical Officers	3 P/B
6.	RTI/STI	2 days	Medical Officers, Lab Technicians	30 P/B

			Staff Nurses	
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Child Health Trainings:

Following trainings are being imparted under Child Health Programme: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	F-IMNCI	11 days	Medical Officers	16 P/B
2.	F-IMNCI	5 days	Medical Officers trained in IMNCI	16 P/B
3.	NSSK	2 days	Medical Officers Staff Nurses & ANMs	32 P/B
4.	IMNCI	8 days	ANMs	25 P/B
5.	HBPNC Supervisory Training	2 days	Medical Officers, DPM, ANM, BEE	30 P/B
6.	HBPNC Software Training	1 days	Information Assistants	20 P/B
7.	HBPNC BTF	2 days	Medical Officers Staff Nurses, LHVs	25 P/B
8.	Yashoda Supervisory Training	4 days	Yashoda, Yashoda Supervisor, SNCU Counselor	5-14 P/B

Family Planning Trainings

Following trainings are being imparted under Family Planning Programme: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	Laparoscopic Sterilization	12 days	Medical Officers OTA, OTN	3 P/B
2.	Non Scalpel Vasectomy	5 days	Medical Officers	4 P/B
3.	Alternative Training Methodology in IUCD	6 days	Medical Officer Staff Nurses & ANMs	10 P/B

4.	Post Partum IUD	10 days	Medical Officers	5 P/B
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MONITORING & EVALUATION

Monitoring & Evaluation is an important part of any program as it helps in calculating the outcome of the program as per the desired objective, but it is very important that the action taken for it should be evaluated in such a manner that all the pitfalls coming in the way of the success of that program should be cleared. Monitoring & Evaluation determines the relevance and fulfillment of objectives, as well as efficiency, effectiveness, impact and sustainability. They are as important as the other tools of the training. In continuation of the policy of the SIHFW keeping quality on top priority, institute has developed the different methods which are followed during the training and after the training to evaluate the entire schedule of training period, like session evaluation forms to assess the effectiveness of the training sessions, Pre & Post evaluation forms to assess the knowledge of the participants on first & last day of the training. While conducting evaluation test for sessions, the identity of the participants is concealed and is represented by a code.

Monitoring by Consultants & Faculty, SIHFW:

With availability of human resource, it became possible to carry out regular monitoring of the trainings at district level. The institute with its well qualified Faculty members and Consultants ensure a thorough check of all the trainings as per the guidelines issued by GOI. M&E visits are done on regular basis by the committee comprising consultants & faculty up-to the peripheral parts of Haryana, for on the spot monitoring check to ensure the quality & effectiveness of training programs.

E-course and distance learning course contact centre:

Haryana is one of the 8 states selected for the pilot course of the Professional Development Course (e-PDC) launched by NIHFW with the support of EU funded Institutional and Technical Strengthening (ITS)project. This course is meant for medical officers having an experience of more than 10 years to develop in them a sense of public health system, managerial skills and health communication.

Another course is E-learning Course for Program Managers in Program Management and Support Unit (PMSU) to strengthen public healthcare delivery system.

Apart from the above mentioned e-courses, SIHFW, Haryana also serves as a contact centre for 2 distance learning programs:

- Health And Family Welfare
- Hospital Administration

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Executive Summary:

India accounts for nearly a fifth of all maternal deaths worldwide, so it is an important target country in global efforts to reduce maternal mortality. In 2000 the National population policy and Reproductive child health program II set out the goals for 2010 including 80% institutional deliveries. One of the main elements of the National Health Mission was the continued promotion of institutional deliveries.

However, conducting institutional deliveries can even cause more harm than good if proper infection control practices are not followed in the labour room. Improper management of biomedical waste generated in labour room can result in spread of infectious diseases to hospital staff, patients as well as community.

The study undertaken was descriptive cross sectional study. It was carried out in 13 health care facilities in district Gurgaon. One district hospital, 3 SDH, 2 CHC, 7 PHC were covered. A sample size of 45 respondents was selected through purposive non probability sampling. A semi structured questionnaire schedule was used to assess the knowledge, attitude and practices followed by the respondents. Also observation of deliveries and practices being followed in the labour room was carried out. Aggregates. There was considerable difference between practices followed being mentioned and observed. The number of questions asked from MOs was more than SNs. MOs scored 93% aggregate and nurses scored 94%..

INTRODUCTION:

BACKGROUND

Increasingly, women in India attend health facilities for childbirth, partly due to incentives paid under government programs. Increased use of health facilities can alleviate the risks of infections contracted in unhygienic home deliveries, but poor infection control practices in labour and delivery units also cause puerperal sepsis and other infections of childbirth. Institutional delivery rates have steadily increased in the last 13 years from 26% to 41% in 2005. But many wound and genital tract infections can be introduced during childbirth. Of these, puerperal sepsis is one of the most serious and life threatening.

Different health care facility e.g. subcentres, primary health centre, community health centre, district hospital generates different kinds and quantity of biomedical waste. Labour room waste includes placenta, blood and body fluids, soiled waste, cotton swab, syringes and needles, blades, tubings, iv sets, masks and gloves.

PROBLEM STATEMENT

Government programs and campaigns have led to increase in institutional delivery. But if the infection control and biomedical waste practices are not stringent in the labour room, then it may lead to more harm than benefit.

REVIEW OF LITERATURE

According to infection control in delivery care units, Gujrat (Mehta, Mavalamkar, Sharma, Ramani, Hussein)

Seventy percent of respondents said that standard infection control procedures were followed, but a written procedure was only available in 5% of facilities. A sixteen year study from Northern India found that sepsis was responsible for over 35% of maternal deaths and a study in Southern India revealed that sepsis was a leading cause of maternal death, responsible for 41.9% of deaths. Demographic and health surveys show that the majority of women do not receive a postnatal check and 14% of women who had a birth in the last 5 years reported very high fever in the postpartum period. There are few recent studies and little information on infections during childbirth.

According to Assessment of infection control practices in maternity units in Southern Nigeria only 63% of healthcare facilities use proper sterilization practices. Implementing infection prevention and control programs in low- and middle-income countries is frequently hampered by financial constraints, limited laboratory capacity, and inadequate staff training in areas such as hand hygiene, sterilization procedures, isolation precautions, employee health programs, hospital epidemiology, and quality improvement.

RATIONALE

Poor infection control can lead to infections e.g. puerperal sepsis. Biomedical waste management is essential to protect community and health care workers from hazardous diseases transmitted by contaminated waste. Thus, a study on assessment of infection control practices and biomedical waste management between infection management and environment plan trained and untrained staff will be significant. It will also help to assess the role of infection management and environment plan training to increase the effectiveness of infection control practices and management of biomedical waste generated from labour room.

RESEARCH QUESTION

To assess infection control practices and management of biomedical waste generated from labour room by trained medical officers and staff nurses at delivery points in Gurgaon district of Haryana state.

RESEARCH OBJECTIVE

To assess knowledge, attitude, practices of trained medical officers and staff nurses regarding infection control and management of biomedical waste generated from labour room in district Gurgaon, Haryana.

RESEARCH METHODOLOGY

Type of study : Descriptive cross sectional study

Study population : Trained Medical officers and staff nurses working in labour room in the delivery points in District Gurgaon.

Study area : Labour room at subdistrict and district level of Gurgaon district of Haryana state

Tools: Semi structured interview schedule regarding Knowledge, attitude and practices on infection control and management of biomedical waste generated from labour room and observations.

Operational definition :

Trained Medical officers have been considered as those who have received training in either of the following : IMEP/BEmoC/EmoC/LSA/NSSK/FIMNCI/MTP

Trained Staff nurses have been considered as those who have received training in either of the following: :SBA+IMEP/NSSK/IMNCI/FIMNCI (as all of the above mentioned trainings have a component on infection control as well)

Inclusion criteria : Trained Medical officers and staff nurses who work in labour room.

Exclusion criteria : Medical officers and staff nurses not working in labour room

Sampling procedure : Non probability purposive sampling

Data collection technique : Face to face interview and observations

Data clean up and correction of data

Data analysis : Was carried out by using Frequency distribution Microsoft excel

Ethical considerations : a) Informed consent of all the respondents was be taken

b) Data collected is being kept confidential without revealing the identity of any of the respondents.

Data collection tool and technique: Pretesting of the tool was done by visiting District Hospital, Panchkula and interviewing one respondent and five deliveries were observed with four live birth's and one still birth . Few alterations were made in the tool after pretest. Data collection plan was made in coordination with Dr Pushpa Civil Surgeon, Gurgaon and Dr.Saryu Deputy Civil Surgeon(Training).

All 13 ddelivery points in Gurgaon district were covered. Data on knowledge, attitude and practices regarding infection control practices and management of biomedical waste generated in labour rooms.Data was collected with the help of a pre-tested and semi-structured interview schedule and observations.

Data analysis: Frequency distribution were used to analyze the data using MS-excel. . Online calculators were used to verify the results.

Study Duration: Study was carried out for a period of 2 months (April 1, 2014- May 31, 3014).

Variables:

Independent Variables:

Educational qualification of respondent, type of training undergone, work experience.Knowledge of respondent,his attitude and practices were also be considered.

Dependent Variables:

Hospital acquired infections and cases of puerperal sepsis.

HEALTH FACILITIES VISITED

- **DISTRICT HOSPITAL** , GURGAON
- **SDH**
- SOHNA
- HAILY MANDI
- SECTOR 10 GURGAON
- **CHC**
- FARRUKHNAGAR
- PATAUDI
- **PHC**
- GURGAON VILLAGE
- BHONDSI
- BADSHAHPUR
- BHORAKALAN
- KASAN
- WAZIRABAD
- MANDPURA

GENERAL FINDINGS

- Questionnaire was filled by Medical officers and staff nurses in various health facilities at various delivery points in District Gurgaon.
- Mostly basic questions were asked to assess respondents knowledge on Infection control and Biomedical waste management.
- Almost everyone gave ideal response towards questions pertaining to attitude and practices followed. Even though ideal practices were not being followed as they were stated.
- Observation of deliveries (where they were being conducted) and labour room was done.

OBSERVATIONS REGARDING INFECTION CONTROL PRACTICES:

- Sleepers or shoe covers were available in all the facilities covered.
- Sterile gloves and masks were available at all health facilities.
- Hub cutters were available in all facilities.
- Hands free or elbow taps were available at a few facilities only.
- Liquid soap was available in limited facilities only. Mostly soap bars were being used.
- Autoclaving was done in all facilities. Boilers were also available in all facilities.
- Bleaching powder was freshly prepared at all facilities.
- Sodium hypochlorite solution was also available in some besides bleaching powder solution.
- Formalin chambers were also available.
- Fumigation was done twice monthly in most of the facilities.
- Hand washing was followed after conducting deliveries.
- Most of the nurses while conducting deliveries were wearing bangles and didn't remove them before gloving.
- Fumigation was done at least twice monthly in most of the facilities.

OBSERVATIONS REGARDING BIOMEDICAL WASTE MANAGEMENT PRACTICES

- Disposal of Biomedical waste is outsourced to Vulcun biomedical waste Pvt. Limited in the health facilities visited in district Gurgaon.
- They collect waste from all health facilities daily. Sometimes if many deliveries are conducted successively and if biomedical waste is more then they come 'on call' as well.
- Dustbins as per color coding were available.
- But yellow bags were in shortage in most of the facilities. Vulcun usually provides them yellow bags in case of shortage.
- Store room for biomedical waste is available in some health facilities not all. Even if present it is either not locked or not labelled as 'biomedical storage room'
- Sharps pit were present but its pipe was broken in most of the facilities. At a few facilities there was no lid or pipe in the sharps pit.
- IEC material regarding infection control and biomedical waste management was available(in hindi and/or English) in all health facilities. Biomedical waste collection centre was present. Used gloves, masks and empty saline bottles were present outside the centre. Neither was the biomedical waste storage room locked.

OBSERVATIONS

DH GURGAON

- There were two labour rooms available each containing two delivery tables
- Shoe covers, head caps and masks were available before entering labour room
- Wheel chair for carrying patients after delivery from labour room to post partum room was available. Wheel chair was covered with mackintosh.
- List of materials present in both the labour rooms was available.
- Each labour room contained the following:-
 - a) Two delivery tables
 - b) Three mattress
 - c) One geezer
 - d) One medicine trolley plus three other medical trolleys
 - e) bottle almirah
 - f) two portal lights
 - g) twelve small lights
 - h) one cardiac monitor
 - i) one warmer
 - j) one air conditioner
 - k) one suction machine
 - l) two foot step
 - m) one iv stand
- List of instruments available is present over septic labour room.
- IEC practices eg on universal infection control practices, labour room. sterilization, processing of items for reuse, preparation of bleaching powder solution, Active Management of Third Stage of Labour were available.
- Bleaching powder solution and sodium hypochlorite were found in three buckets covered with lid.
- Dressing drums with pads etc were available. Sterilization drums with delivery sets etc were also available.
- Baby weighing machine covered with drape sheet was available.
- Povidone iodine solution was available.
- Boiler and hub cutter were also available.
- Color coded bins red, blue, black and yellow bins were available and were covered on top with lid.
- Since frequency of deliveries were less so investigator did a night duty to observe deliveries.
- Five deliveries were observed. One in the late evening and four in the morning.
- All five deliveries observed were conducted by nurses.
- At night the medical officer at night duty did PV examination of four patient's and wrote their notes.
- All patients were scheduled for expected time of delivery in the morning.
- Hands free taps were available in both the labour rooms.

- Liquid soap was finished in of the labour room through out the night observed so doctors and nurses used sterilium at night or had to use liquid soap kept in other labour room.
- IEC material on six steps of hand washing was available near wash basin.
- Nurses told that they have been trying to incorporate all six steps taught to them on in a lecture on infection control. However, neither nurses nor doctors were found to be practicing six steps. Although when the nurses were told to demonstrate hand washing technique then they were found to be knowing the six steps of hand washing.
- Delivery tables covered with drape sheet and Kelly's pad were available.
- Used gauze pieces etc were kept in dustbin below delivery table.
- The doctor posted for night duty came late by 15-20 minutes. So another doctor who was posted in emergency came and did PV examination of the patient. He said that the expected time of delivery was within half an hour. He also made a round in post partum room to observe condition of patient's post partum after which he left.
- A delivery was conducted by medical intern on a primary gravida patient. She wore surgical gloves. She didn't give episiotomy timely so there were vaginal tears. But she was unable to suture properly. So the nurse used fresh pair of sterile gloves and sutured the patient. There was no doctor to supervise the intern during delivery and nurse was giving her instructions.
- The doctor posted in labour room conducted PV examination of 4 patients who came in the night. All patients expected time of delivery was in the morning. Doctor used sterile pair of gloves for each examination and put on notes. The doctor used sterilium as liquid soap was not available in that room
- The second delivery was conducted in the morning at around 6 am. There was no doctor in the labour room from 6am to 8 pm during which three deliveries were conducted and one was conducted at around 9 am. Four deliveries were observed.
- Nurses conducted four deliveries and one by medical intern.
- One of the nurses who was a fresh passout and was undergoing SBA training. After episiotomy as the nurse were about to do suturing she started talking to another nurse by moving to her table. In the mean while flies were on observed to be sitting on the exposed part of patients perineum. A few moments later the nurse came back to her delivery table and sutured the patient.
- One of the nurses opened the suture material with gloved hands instead of asking some assistant to open it for her.
- Sterile pair of gloves were used before each delivery.
- Meconium was splattered on floor in one of the deliveries. However the sweeper came to mop it atleast one hour later despite repeated calls to her
- Infection control committee was formed 4-5 months back who conducts daily rounds and checks waste segregation too.
- Practices to be appreciated
- Sleepers/shoe covers available before entering the labour room. Most of the staff wore it.
- Hands free or elbow taps were available.
- Sterile gloves were used before each delivery.

- Infection control committee was formed 4-5 months back who conducts daily rounds and checks waste segregation too.

Practices that need to be improved

- There were flies and mosquitoes inside labour room .In one of the delivery post episiotomy flies were sitting on the exposed part of patient's perineum as the nurse (undergoing SBA training started talking to another nurse before applying sutures).The SBA trainee nurse also opened the suture material with gloved hands instead of asking some assistant to open it for her.
- None of the nurses were observed to remove their bangles,rings etc before wearing gloves to conduct delivery.
- One of the patient's relative accompanying her was scolded by sweeper for wearing casual footwear in labour room though the sweeper herself was also wearing casual footwear in labour room instead of shoe covers or slippers.
- Biomedical storage room was there but few used gloves,masks,empty bottles etc were lying near its door.It was labelled as Biomedical collection centre.

SDH SOHNA

- About 54 deliveries were conducted last month.
- Two deliveries were observed.
- Shoe rack with slippers were available before entering labour room.
- IEC material on segregation of biomedical waste was available entering labour room.
- Dressing drums were available.
- Hub cutter was available.
- Autoclave was available.
- Boiler was available.
- Bleaching powder solution was available.
- Electrical Hub cutter was available.
- Suction machine,Baby weighing machine was available.

Practices to be appreciated

- There was a back door in the labour room which opened in an open space behind.It contained dustbins containing yellow bags with placenta immersed in disinfectant in it.The personnel enters through the backdoor to carry off the waste.Thus Biomedical waste is not carried through crowded areas with general public.

Practices that need to be improved

- In one of the delivery patient had already delivered baby in the ambulance,on the way to hospital.Nurse went inside the ambulance where patient was lying.She clamped and cut the umbilical cord of baby with gloved hands.Then the patient was taken inside labour room in wheel chair where Active management of third stage of labour was done.

- However placenta dropped from nurse's hand on the floor which was mopped by plain cloth without using disinfectant.

SDH HAILY MANDI

- Around 15 deliveries were conducted last month.
- Shoe rack available before entering labour room.
- Red, blue and black dustbin available.
- Delivery table and kelly's pad available.
- Sterilization drums, instrument trays, betadine, normal saline, local anesthesia, forceps, disposable syringes, gloves, silicone resuscitator, fetal Doppler were available.
- Freshly prepared bleaching powder solution available.
- Plunger and barrel of disposable syringes were immersed in bleaching powder solution.
- Print outs to create awareness on Janani shishu suraksha karyakram (JSSK) available.
- Beds with mackintosh available in post partum room.
- Boiler available.

Practices to be appreciated

- Print outs regarding waste segregation etc. Were mostly posted in walls as they didn't receive printed IEC material as stated by medical officer.
- Hands free or elbow taps were available.
- Storage room for biomedical waste was there but was neither locked nor labelled.

Practices that need to be improved

- Storage room of biomedical waste available but was not labelled as biomedical waste room or locked.
- Sharps pit was available but its pipe was broken.

SDH SECTOR 10

- Around 17 deliveries were conducted last month.
- 4 delivery tables were available.
- Delivery table with mackintosh and kelly's pad were available.
- A bucket with broken rim containing instruments immersed in bleaching powder solution.
- Autoclave present.
- Sterilization drums with instruments available.
- Oxygen cylinder available.
- Baby weighing machine available but without a drape sheet on it.
- Instruments and gauge pieces were available in dressing drum.
- Delivery packs were present in dressing drum.
- Boiler is present in labour room and has been marked as working. Cidex solution available.

- Shoe covers and sleepers available.
- Emergency drugs kept handy.
- Hub cutter present.
- Red,blue and black color coded dustbins were available.
- No proper segregation into postpartum and waiting area for patients in first stage of labour.Beds with mackintosh available.

Practices to be appreciated

- Temporary labour room was functional.

Practices that need to be improved

- IEC material was deficient as it is a newly constructed hospital and permanent labour room was still under construction.
- Elbow taps were not available.
- Biomedical waste storage room was available but its door was kept wide open.
- Dustbin used below delivery table was lined by green polybag instead of yellow on one of the delivery table.

CHC PATAUDI

- About 34 deliveries were conducted last month.
- Two delivery tables were available.
- Instrument tray,pinards stethoscope,cheatle forceps,normal saline,cotton swabs,gauge pieces.
- List of emergency drugs was displayed near the tray containing emergency drugs.
- In the dustbins lying below one of the tables red bags were being used instead of yellow.
- Kelly's pad was not kept was not placed on either of the delivery tables.
- IEC material on preparation of bleaching powder solution,AMTSL etc were present.
- Electrical Hub cutter was available.
- Suction machine,Baby weighing machine was available.
- An enamel tray containing micropore tape,bandage,sterile gloves etc were available.

Practices to be appreciated

- Ample IEC material available.
- Wash basin with hands free tap and liquid soap were available.

Practices that need to be improved

- 2-3 months back there was shortage of gloves but later on the shortage of gloves had been fulfilled.
- Sweeper didn't had knowledge regarding biomedical waste was sometimes mixed different wastes,as stated by medical officer.
- Biomedical storage room was available.

CHC FARRUKHNAGAR

- About 35 deliveries were conducted last month.
- There is a room outside Labour Room containing shoe rack, three dustbins, elmira , sink without soap and another broken corroded sink kept near dustbins.
- Walls were in dilapidated condition with plaster chipped off. Biomedical waste stored in dustbins lying outside labour room and almirah lying next to it.
- Just one pair of sleepers kept in shoe rack. No shoe covers were available Sleepers available were also filthy. Neither medical officer nor nurses were observed to wear sleepers or shoe covers before entering labour room.
- IEC material on segregation of biomedical waste (in hindi) ,management of post partum hemorrhage (hindi) , preparation of 1 liter Bleaching powder solution (English) ,processing of used items (English) , Active management of third stage of labour (English) ,New born resuscitation (English) ,Infection prevention (English) available in labour room.
- IEC material on Sharps pit (Hindi) available in Medical officer's room.
- Two delivery tables were available. In one of the delivery table black bag was being used instead of yellow due to shortage of yellow bags (as told ny nurse)
- Clean mackintosh available on both the delivery tables.
- IV poles were present adjacent to delivery table.
- One examination table was present.
- A room opened inside labour room. It contained hand free or elbow tap. Soap bar was available although liquid soap was not available. Its walls were not painted properly. An autoclave and fumigator were available inside that room.
- A drum to be autoclaved and hub cutter was also kept on shelves in that room.
- Otherwise two autoclaves and two boilers are present for backup in case of dysfunctioning of some autoclave or boiler.
- Oxygen cylinder and suction apparatus available inside the labour room.
- cetrimide, chlorhexidine, betadine and savlon available.
- Formalin chamber available.
- Enamel tray available with sterilized instruments was available.
- On trolley betadine, face mask , sterile gloves, disposable syringes , autoclaved drums containing delivery packs were available.
- Two beds available inside post partum room. The same beds were also used as waiting area for patient's in first stage of labour. Washroom available adjacent to post partum room.
- Sharps pit constructed in the open ground around CHC around 1 year back.
- The pipe of sharps pit was broken by an empty water tank which had fallen on the top of the pipe.
- Utility gloves were being used by sweepers while handling biomedical waste as told by medical officer.

- To strengthen infection control practices frequency of mopping the floor has been increased from twice daily to three to four times daily as told by medical officer. Mopping of floor in labour room is done by using phenyl or bleaching powder solution.
- Staff nurses give instructions to sweepers and class IV workers regarding proper handling of biomedical waste.
- Waste is carried away by Vulcun biowaste private limited after 1 o'clock through any route. No specific or different route available for transporting biomedical route.

Practices to be appreciated

- Hands free taps or elbow taps were available.
- Ample IEC material was available on waste segregation, sharps pit, infection control etc.

Practices that need to be improved

- Shortage of yellow bags. So on one of the delivery tables black bag was being used instead of yellow.
- No separate room for storage of biomedical waste was there. So, it was kept in dustbins.
- Placenta was immersed in yellow bags containing disinfectant and stored in dustbins.

PHC WAZIRABAD

- About 27 deliveries were conducted last month.
- Two delivery tables available
- Autoclave and immunization kits was used in pantry due to paucity of space in labour room as mentioned by nurse. However ample space was observed in labour room and adjoining rooms.
- In post partum room, two beds were kept. The same room were also used as waiting area for patients in first stage of labour. The same beds were also used by general patient's. On the day of observation one more bed was also donated. It was lying in the corridor at the time of observation.
- Post partum room had curtains. A poster on correct method of breast feeding in hindi.
- IV pole adjacent to beds in post partum room was available.
- Contact numbers of all three nurses posted in PHC is displayed on almirah in post partum room.
- Ample IEC material on kangaroo care (Hindi), infection control (Hindi), neonatal care (Hindi), segregation of biomedical waste (English), AMTSL (Hindi), prurupture of membranes (Hindi), resuscitation of newborn (Hindi), management of postpartum hemorrhage (Hindi) eclampsia (Hindi), partograph, malnutrition (Hindi), high risk pregnancy (Hindi), three stages of labour (Hindi) danger signs during parturition (Hindi), infection prevention (Hindi) six steps of hand washing (Hindi), preparing Bleaching powder solution (Hindi) was available in labour room

- Handmade IEC material on hypothermia in neonates (Hindi), newborn resuscitation (Hindi), Eclampsia (English), AMTSL (English) was made by nurses.
- Baby weighing machine, warmer, sterile gloves and disposable syringes were available on trolley
- Black, Blue and yellow dustbins available
- A separate room inside labour room was used for storing placenta in polybags.
- Hub cutter present.
- Formalin chamber containing speculum etc present.
- Two wash basins with soap were available.
- Betadine solution, normal saline available.
- Boiler available inside labor room.
- Freshly prepared bleaching powder solution.
- Autoclaved drums containing delivery kits available.
- Vials containing injection metoclopramide, inj diclofenac etc available.
- Facemasks and sterile gloves available.
- Mackintosh, yellow bags, baby warmer available.

Practices to be appreciated

- Ample IEC material

Practices that need to be improved

- Medical officer incharge was not aware about the location of sharps pit.
- Investigator then asked nurse who was also not aware about it. Then investigator asked the sweeper who was also equally ignorant about the sharps pit.
- Finally, a cemented open pit was found claimed to be as sharps pit (with no lid or pipe or lock).
- Autoclave was kept in kitchen area where instruments were autoclaved daily.
- Biomedical waste usually stored in dustbins. A spare room inside labour room was there where yellow bags containing placenta was stored.

PHC BHONDSI

- About 22 deliveries were conducted last month
- Shoe rack containing sleepers and shoe covers was available before entering labour room
- One delivery table available
- It was covered with sheets and kelly's pad was available. IV pole was also placed adjacent to it.
- Fumigator was also available inside Labour room
- Sets of normal saline bottles was also available.
- Autoclaved instruments with date of autoclaving mentioned on sterilizing drums was available.
- Micropore tape, needle cutter baby weighing machine, betadine, box of disposable syringes and pinard stethoscope were also available on instrument trolley.

- Oxygen cylinder and suction machine was available
- Dustbins covered with lids were available
- Cold box vaccine carrier was available in labour room along with surgical tray on instrument trolley
- Sharps pit with intact metallic pipe and lock was available

Practices to be appreciated

- Ample sleepers and shoe covers available
- Sharps pit was in better condition than most of the other facilities.

Practices that need to be improved

- Storage room of biomedical waste available but was not labelled as biomedical waste room or locked

PHC GURGAON VILLAGE

- About 15 deliveries were last month
- Paint on walls was found to be chipped off
- Newspapers were found in dustbins lined with yellow polybags
- IEC material on hub cutters, calling of ambulance on number 102 ,DOTS etc was available
- One delivery table with blue plastic sheets and kelly's pad was available. However, the dustbin lying below delivery table was lined with red polybag instead of yellow. The red bag contained outercover of sterile glove pack
- IEC material on processing of used items, preparation of 1 liter bleaching powder solution ,infection prevention etc was displayed
- List of emergency drugs with manufacturing date was displayed
- Hub cutter, kidney tray, fetal Doppler were kept on instrument trolley.
- Autoclave was kept wrapped up in a plastic sheet to protect it from dust etc. after every use as told by a staff nurse
- Wash basin with soap bar was present. Though elbow taps or liquid soap was not available
- Freshly prepared bleaching powder solution was available
- Post partum bed available in the post partum which present adjacent to labour room. The bed was covered with white sheet and drape sheet instead of mackintosh. Below the bed autoclave and cold box vaccine carrier

Practices to be appreciated

- Autoclave covered with polybag after each use to protect it from dust
- Three cemented red, yellow and black containers with lids were built in the outer vicinity of PHC. They were also labeled as red for disposing off catheter, cannula, iv sets, urinary bags. Yellow container was labeled for anatomical waste, blood stained cotton, blood stained bandages and black for general household waste eg paper etc. A chart on color coding, waste category and treatment option was available.
- Sharps pit was available and labeled for needles.

Practices that need to be improved

- Shortage of yellow bags,so red bags were being used instead of yellow
- Newspaper sheets were being used instead of drape sheets or sterilized sheet on instrument trolley top.Sterilizing ,boiler,baby weighing machine and instrument trays were also placed on instrument trolleys covered with newspapers

PHC BADSHAHPUR

- About 30 deliveries were conducted last month
- One delivery table present
- A bed was present adjacent to the delivery table
- Fumigator and autoclave were present
- Hub cutter was available
- Used vials kept in a box
- Plungers and barrels were kept in a container without lid
- Sterilization drums containing instruments were available
- IEC material eg on safe home delivery was available
- Instruments such as needle holders etc were available
- Cheatle forceps were also available though they had undergone corrosion
- Boiler was available
- Delivery table with kelly's pad available
- Cloth most likely taken from patient during delivery was used
- Delivery table was cleaned immediately after delivery
- Two wash basins with soap bar were available
- IEC material was available
- Practices to be appreciated
- Ample IEC material available
- Ample sleepers and shoe covers available

Practices that need to be improved

- Only one delivery table was available due to paucity of space.New bigger building for PHC was underconstruction as the current building was very congested.
- Nurses were found to be using dupattas instead of masks
- No separate store room available for storage of biomedical waste as stated above.

PHC KASAN

- About 15 deliveries were conducted last month
- One delivery table available
- Two beds in post partum room. Patient's post partum as well as ante partum in first stage of labor are kept in that room. Curtains also present i n post partum room
- Ample shoe covers, sleepers and masks available before entering labor room.
- IEC material on AMTSL, Management of post partum hemorrhage, segregation of biomedical waste, Partogram ,immunization, preparation of bleaching powder solution available
- Shortage of yellow bags. Red, black bags available

- Wash basin with soap bar available
- Autoclave available in room adjacent to labor room. Enamel trays and autoclave drums containing sterile delivery packs available
- Hub cutter, copper T, Betadine, savlon, medicated spirit, sterile gloves, formalin chamber containing various instruments available on trolley
- Freshly prepared bleaching powder solution available
- Labor room has ample curtains to maintain privacy of patients
- Fetal Doppler, baby weighing machine, suction apparatus available
- Tiling of floor of labor room done around 1-2 years back .
- Medical officer in charge sits till 4 o'clock even on Saturdays though its a half day. Other medical officer and staff nurses etc also work full day even on Saturday's.
- Less spacious health facility constructed on privately donated land
- Tiling done around one and a half years back
- Mosquito repellent being used in the labour room
- Partogram being maintained
- Fumigation done once in every 15-20 days
- 24 x 7 water supply and soap available in labour room

Practices to be appreciated

- Ample shoe covers, sleepers, masks, head caps were available on rack before entering labour room.
- Sharps pit available. It had a metallic pipe.
- Red, Black and yellow cemented containers covered with lids available at around 200 meter away from PHC building. Waste is segregated in differently colored bins as per color coding.

Practices that need to be improved

- Only one delivery table due to paucity of space as it is a donated private land

PHC BHORAKALAN

- About 14 deliveries were conducted were conducted last month
- Two delivery tables
- Sharp's pit available with intact pipe
- Three beds in post partum room which can also be used for managing patients in first stage of labor.
- Mackintosh used over each bed in post partum room
- Kelly's pad available
- IEC material on kangaroo care, immunization etc available in post partum room
- Wash basin and dustbins available in Post partum room.
- Shoe rack containing sleepers available
- Formalin chamber containing cotton holding forceps, speculum, needle holder, suture cutter available
- Hub cutter available.
- Fumigator available.
- IEC material on six steps of hand washing available adjacent to wash basin

- Baby weighing machine, fetal stethoscope, normal saline, autoclaved drums containing delivery kits available
- Two delivery tables available with curtain partition to maintain privacy of patient's.
- Biomedical waste is stored in dustbins till the time Vulcan biomedical waste private limited's vans come for collection of waste.
- Print outs eg IEC material on breast feeding etc posted in Labour room as some of the printed IEC material were not available.
- **IEC material for management of puerperal sepsis available in Labour room.**
- IEC material on segregation of biomedical waste.
- Suction machine available.
- Autoclave was kept inside the spacious Labour room.
- Freshly prepared bleaching powder solution was available.
- A trolley for shifting patients kept near labour room for shifting of patient's in case of emergency.
- List of delivery instruments available in posted in labour room.It included:
 - a) Sims speculum
 - b) Valsellum
 - c) Curved scissor
 - d) Two sponge holders
 - e) Allis toothed forceps
 - f) Needle holder
 - g) Episiotomy scissor
 - h) Plane forceps
 - i) Mosquito A forceps
- List for three delivery sets was available (Set I,Set II,Set III).
- Set for Copper T insertion available.List containing name of instruments available for Copper T was also available.
- Autoclaved drums containing delivery sets with date of autoclaving mentioned on it was available.
- Sterile drums containing autoclaved drape sheet and gauge pieces available.
- Sterile gloves available
- Air coolers available.

Practices to be appreciated

- List of staff nurses with phone number, Pediatrician's phone number and ambulance available.
- Double gloving technique used during delivery as told by nurse.After delivery the outer pair of gloves is discarded and the inner pair is used for neonatal care.
- Mopping of floors in labour room is done with phenyl and bleaching powder .Earlier only phneyl was for mopping as told by nurse.
- Most of the IEC material was in hindi

Practices that need to be improved

- Separate room for storage of biomedical waste should be there.
- Shortage of yellow bags

PHC MANDPURA

- About 12 deliveries were conducted last month
- One delivery table with plastic sheets and kelly's pad available
- IV pole available
- IEC material available on Resuscitation, infection control, how to make bleaching powder solution (in Hindi) etc
- Hands free or elbow taps available
- Wash basin, soap and towel available
- IEC material on hand washing available adjacent to wash basin.
- Separate container containing disinfectant used for immersing soiled linen. It was labelled and covered with a lid
- Puncture proof container containing disinfectant solution available. It was also labelled and covered with lid.
- Red, yellow and dustbined lined with black polybag was available.
- Cheatle forceps available.
- Pack of disposable syringes, box of gloves and enamel tray seen on trolley covered with blue drape sheet.
- Curtain and curtain stand was available
- Oxygen cylinder was also available in that room.
- Sponge holders, sims's speculum were available.
- Baby weighing machine was available.
- Fumigator was also available.
- Since it is a private three roomed building so much construction can't be done. Still tilling in the labour room has been done. It has one delivery table and two beds.
- The two beds are used as post partum beds as well as waiting area for patients in first stage of labour
- Both the beds were covered with mackintosh
- New government building is underconstruction. And separate room for storage of biomedical waste can't be built. So the waste eg placenta in yellow bags immersed in disinfectant had be stored in metallic dustbin secured with a
- Shortage of yellow bags

Practices to be appreciated

- Hands free or elbow taps available
- Separate container containing disinfectant used for immersing soiled linen. It was labelled and covered with a lid.
- Puncture proof container containing disinfectant solution available. It was also labelled and covered with lid.
- Since it is a private three roomed building so much construction can't be done. Still tilling in the labour room has been done.

- New government building is underconstruction. And separate room for storage of biomedical waste can't be built. So the waste eg placenta in yellow bags immersed in disinfectant had be stored in metallic dustbin secured with a lock.

Practices that need to be improved

- Shortage of yellow bags.
- No separate room for storage of biomedical waste.

CASES OF PUERPERAL SEPSIS

- Cases of puerperal sepsis had been observed by six respondents out of forty five.

CASE 1

- Respondent : Medical officer
- Case was observed two years back
- Cause : Patient did not maintain proper hygiene after delivery
- Symptoms : Foul smelling discharge, abscess, fever
- Treatment : Patient was stabilized and referred to DH gurgaon

CASE 2

- Respondent : Medical officer
- Case was observed 1 year back
- Cause : Patient developed puerperal sepsis 30 days after delivery as she did not maintain proper hygiene post partum
- Symptoms : Foul smelling discharge, abscess, fever
- Treatment : Patient was stabilized and referred to DH gurgaon

CASE 3

- Respondent : Staff nurse
- Case was observed 2 yearS back
- Cause : Patient did not maintain proper hygiene after delivery
- Symptoms : Foul smelling discharge, abscess in sutures, itching, fever
- Treatment : Patient was stabilized and referred to DH gurgaon

CASE 4

- Respondent : Staff nurse
- Case was observed 1 year back
- Cause : Patient did not maintain proper hygiene after delivery or hospital staff did not follow proper infection control practices
- Symptoms : Foul smelling discharge, abscess in sutures, itching, fever
- Treatment : Patient was stabilized and referred to DH gurgaon

CASE 5

- Respondent : Staff nurse
- Case was observed 6 months back
- Cause : Patient developed puerperal sepsis 30 days after delivery as she did not maintain proper hygiene post partum
- Symptoms : Foul smelling discharge, abscess in sutures, itching, fever

- Treatment : Patient was stabilized (infected surfaces were cleaned and was given antibiotics) and referred to DH gurgaon

CASE 6

- Respondent : Staff nurse
- Case was observed 1.5 years back
- Cause : Patient developed puerperal sepsis 15-20 days after delivery as she did not maintain proper
- Symptoms : Foul smelling discharge, Vaginal swelling, abscess in sutures, itching, low grade fever
- Treatment : Patient was stabilized (perineal area cleaned, metrogyl applied, iv line maintained) and referred to DH gurgaon

SUGGESTIONS

- Programmes or trainings to upgrade knowledge regarding infection control and management of biomedical waste should be conducted at regular intervals for doctors and nurses.
- A lecture of sweepers in Hindi should be conducted to make them aware about the dangers of biomedical waste and how to handle it safely.
- Best performers regarding infection control and biomedical waste management should be given incentives eg Certificate of appreciation.
- Daily rounds by Medical officers should be conducted in CHC, PHC etc to monitor whether infection control practices, segregation of biomedical waste etc are being followed stringently or not.
- Hand washing even before wearing gloves for delivery and wearing mask before each delivery should be encouraged.
- Female staff should be motivated to remove bangles, rings etc before conducting deliveries.
- Supply of yellow bags should be increased.
- Sharps pit need to be maintained properly in most of the facilities.

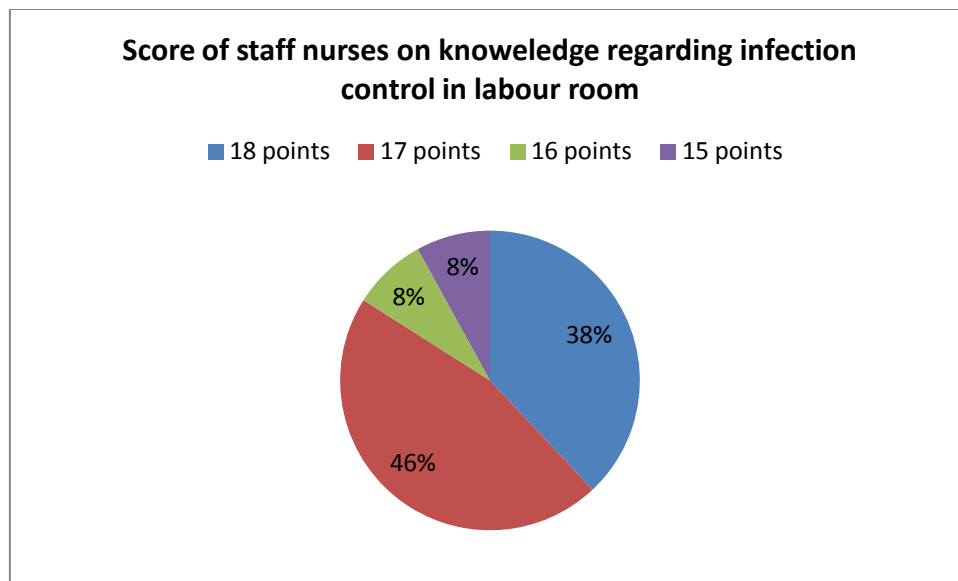
LIMITATIONS OF STUDY

- Only seven deliveries could be observed due to less frequent deliveries being conducted at various health facilities.
- Untrained doctors or nurses were not available to act as a control group and to compare the knowledge, attitude and practices of untrained versus trained medical officers and staff nurses regarding infection control and management of biomedical waste generated from labour room.

ANNEXURE 1

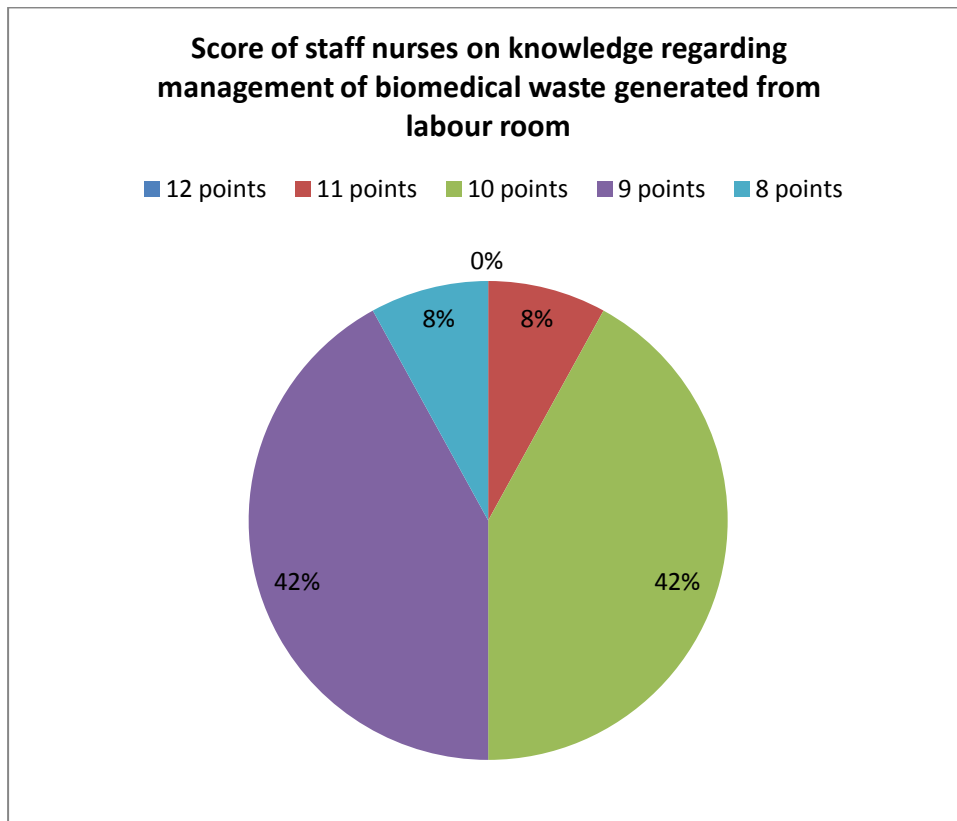
Score of staff nurses on knowledge regarding infection control in labour room

Score of Staff nurses (out of 18 points)	Number of nurses who attained that score (out of 26)	Percentage of nurses who attained that score
SN who scored 18 points	10	38%
SN who scored 17 points	12	46%
SN who scored 16 points	2	8%
SN who scored 15 points	2	8%



Score of staff nurses on knowledge regarding management of biomedical waste generated from labour room

Score of Staff nurses (out of 12 points)	Number of nurses who attained that score (out of 26)	Percentage of nurses who attained that score
SN who scored 12 points	0	0%
SN who scored 11 points	2	8%
SN who scored 10 points	11	42%
SN who scored 9 points	11	42%
SN who scored 8 points	2	8%

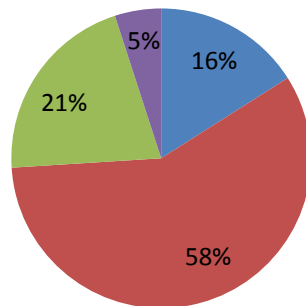


Score of Medical Officers on knowledge regarding infection control in labour room

Score of Medical Officers (out of 19 points)	Number of doctors who attained that score (out of 19)	Percentage of doctors who attained that score
SN who scored 19 points	3	16%
SN who scored 18 points	11	58%
SN who scored 17 points	4	21%
SN who scored 16 points	1	5%

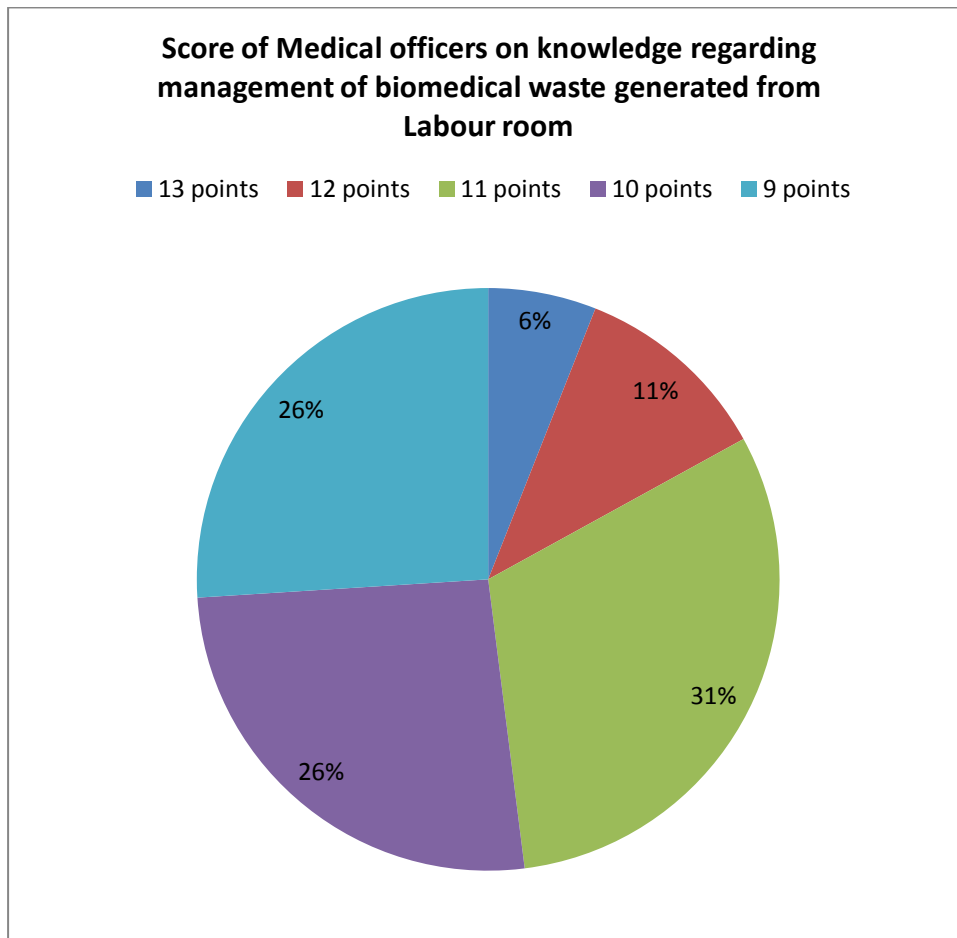
Score of Medical officers on knowledge regarding infection control in labour room

■ 19 points ■ 18 points ■ 17 points ■ 16 points



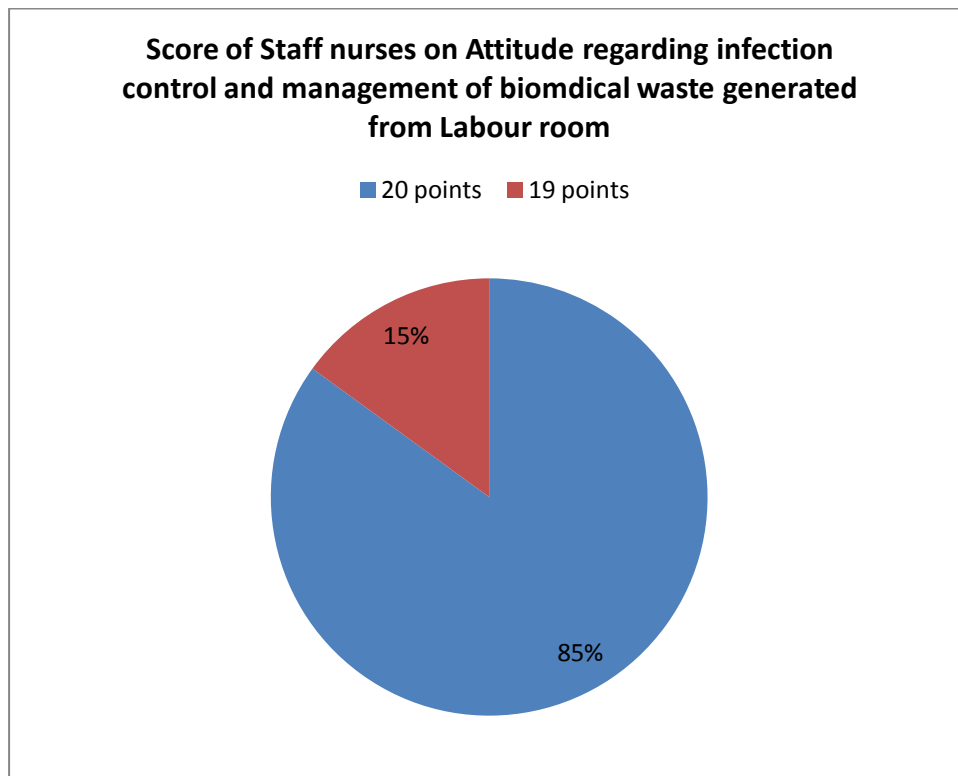
Score of Medical officers on knowledge regarding management of biomedical waste generated from labour room

Score of Medical officers (out of 13 points)	Number of doctors who attained that score (out of 19)	Percentage of doctors who attained that score
MO who scored 13 points	1	6%
MO who scored 12 points	2	11%
MO who scored 11 points	6	31%
MO who scored 10 points	5	26%
MO who scored 9 points	5	26%



Score of staff nurses on Attitude regarding infection control and management of biomedical waste generated from Labour room

Score of Staff nurses (out of 20 points)	Number of nurses who attained that score (out of 26)	Percentage of nurses who attained that score
SN who scored 20 points	22	85%
SN who scored 19 points	4	15%

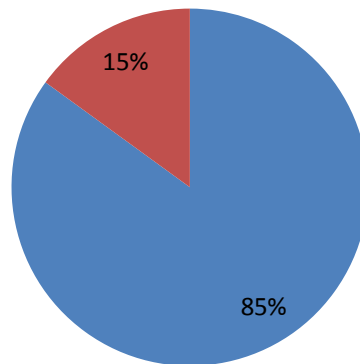


Score of Medical officers on Attitude regarding infection control and management of biomedical waste generated from Labour room

Score of Medical officers (out of 20 points)	Number of doctors who attained that score (out of 26)	Percentage of doctors who attained that score
SN who scored 20 points	10	53%
SN who scored 19 points	9	47%

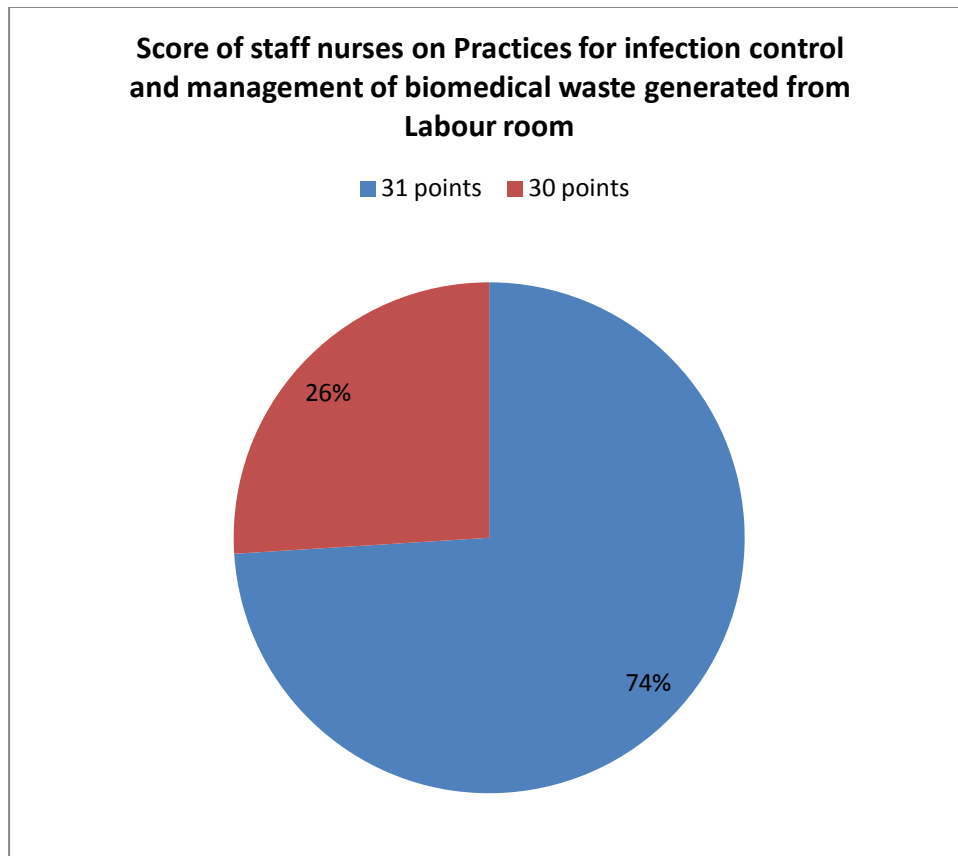
**Score of Medical officers on Attitude regarding
infection control and management of biomedical waste
generated from Labour room**

■ 20 points ■ 19 points



Score of staff nurses on Practices regarding infection control and management of biomedical waste generated from Labour room

Score of Staff nurses (out of 32 points)	Number of nurses who attained that score (out of 26)	Percentage of nurses who attained that score
SN who scored 31 points	21	81%
SN who scored 30 points	5	19%

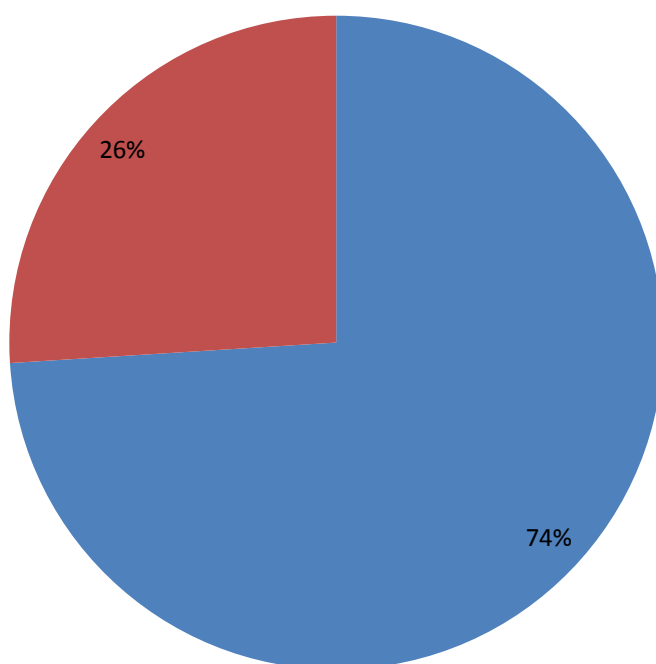


Score of Medical Officers on Practices regarding infection control and management of biomedical waste generated from Labour room

Score of Medical officers (out of 32 points)	Number of doctors who attained that score (out of 26)	Percentage of doctors who attained that score
SN who scored 31 points	14	74%
SN who scored 30 points	5	26%

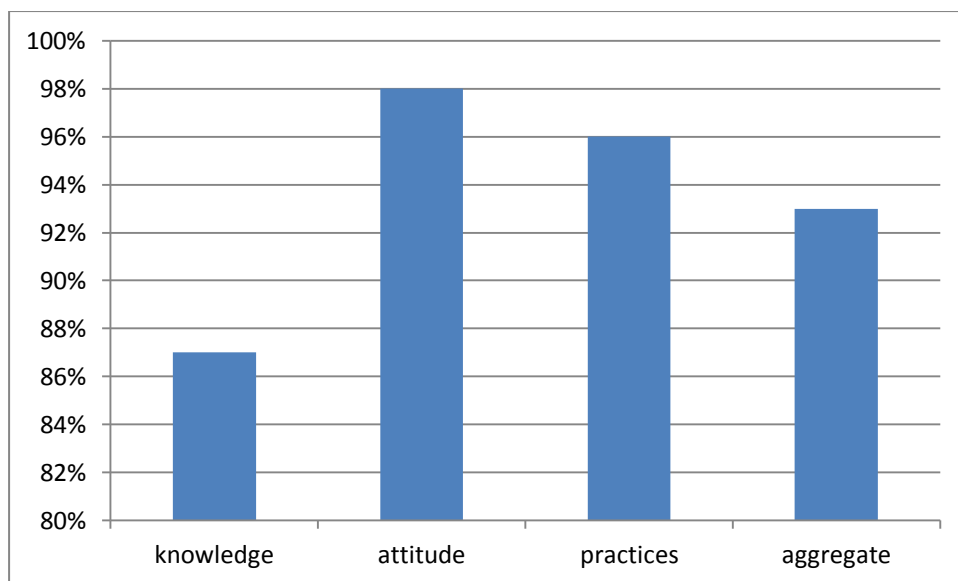
**Score of Medical officers on Practices regarding
infection control and management of biomedical waste
generated from Labour room**

■ 31 points ■ 30 points



Average scores obtained by Medical officer (19) in the KAP study conducted

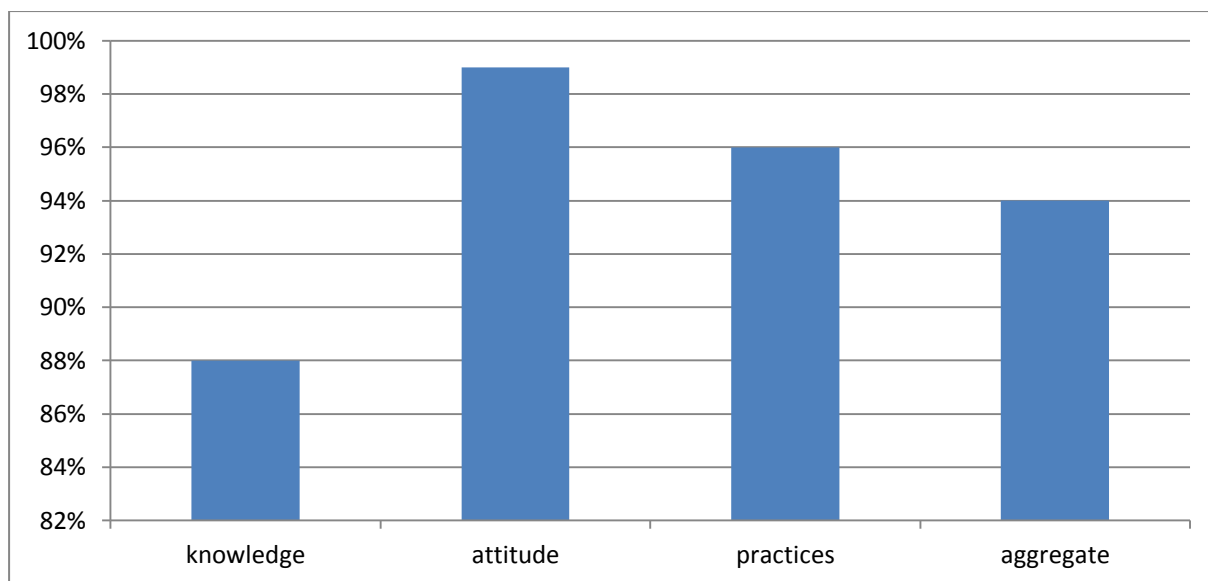
Scoring criteria	TOTAL SCORES	SCORES OBTAINED BY MEDICAL OFFICERS(AGGREGATE FOR 19 RESPONDENTS)	PERCENTAGE OBTAINED BY MEDICAL OFFICERS (AGGREGATE FOR 19 RESPONDENTS)
Knowledge regarding infection control practices in labour room	361	339	93.91 = 94%
Knowledge regarding management of biomedical waste generated in labour room	247	189	76.52 = 77%
Knowledge regarding infection control and management of biomedical waste generated in labour room	608	528	86.84 = 87%
Attitude regarding infection control practices and management of biomedical waste generated in labour room	380	371	97.63 = 98%
Practices regarding infection control and management of biomedical waste generated in labour room	608	584	96.05 = 96%
Aggregate score on KAP	1596	1483	92.92 = 93%



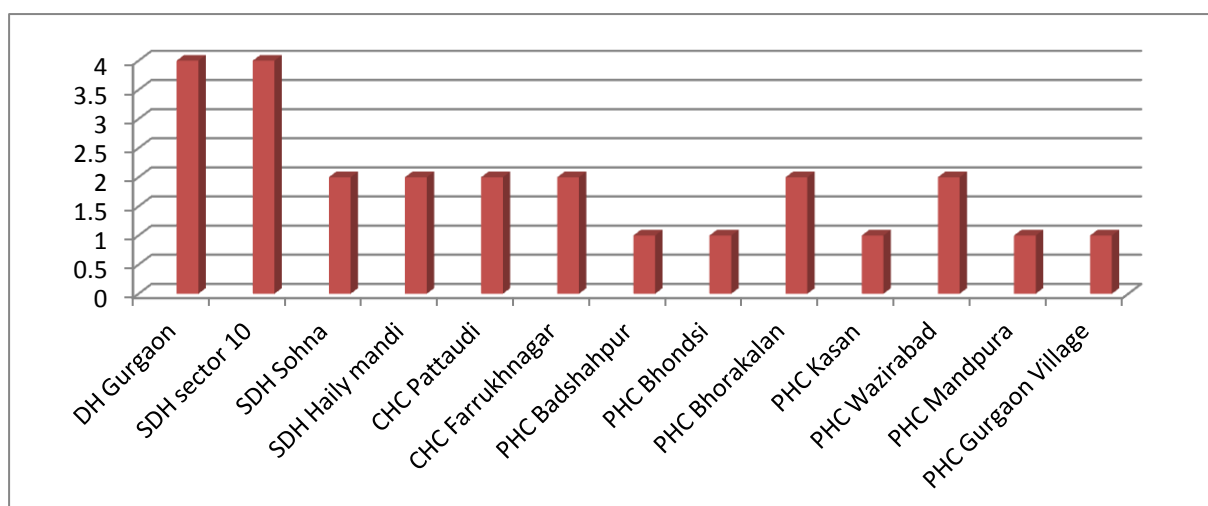
AVERAGE SCORE OF MEDICAL OFFICERS

Average scores obtained by Staff nurses (26) in the KAP study conducted)

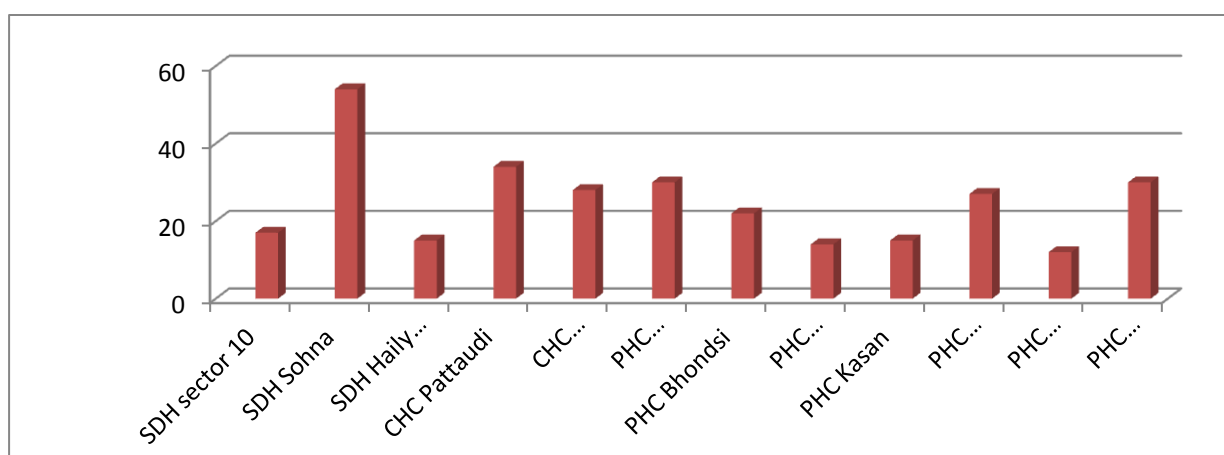
SCORING CRITERIA	TOTAL SCORES	SCORES OBTAINED BY STAFF NURSES (AGGREGATE FOR 26 RESPONDENTS)	PERCENTAGE OBTAINED BY STAFF NURSES (AGGREGATE FOR 26 RESPONDENTS)
Knowledge regarding infection control practices in labour room	468	448	95.93 = 96%
Knowledge regarding management of biomedical waste generated in labour room	312	237	75.96 = 76%
Knowledge regarding infection control and management of biomedical waste generated in labour room	780	685	87.82 = 88%
Attitude regarding infection control practices and management of biomedical waste generated in labour room	520	516	99.23 = 99%
Practices regarding infection control and management of biomedical waste generated in labour room	832	801	96.27 = 96%
Aggregate score on KAP	2132	2002	93.90 = 94%



Average score of staff nurses



Number of delivery tables in various health facilities

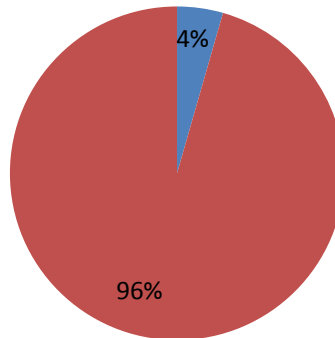


Number of deliveries conducted in health facilities in last month (DH had 500 deliveries)

PIE CHARTS OF SPECIFIC QUESTIONS REGARDING KNOWLEDGE (from doctors and nurses)

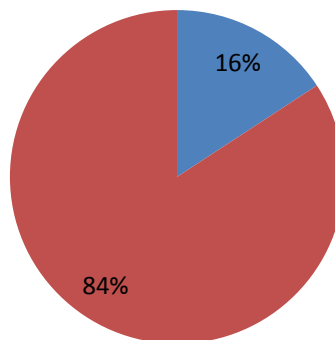
Diseases transmitted by biomedical waste

■ hepatitis B,HIV ■ hepatitis B,HepatitisA,HIV



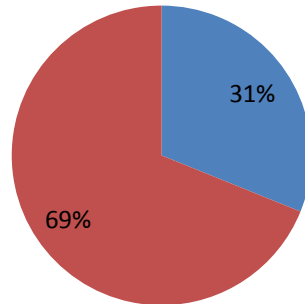
Who regulates safe transport of medical waste

■ donot know ■ Polluion control board of India



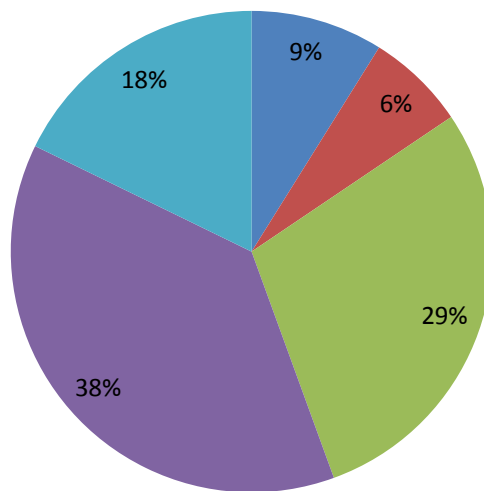
waste should not be stored beyond(biomedical waste management and handling rules)

■ 12 hours ■ 24 hours

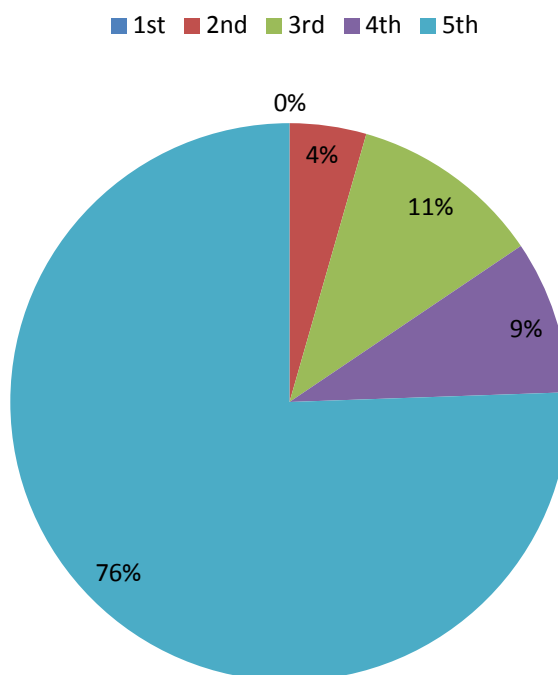


Percentage of biomedical waste generated in tertiary care hospital

■ 10-20% ■ 20-30% ■ 30-40% ■ 40-50% ■ 60-70%

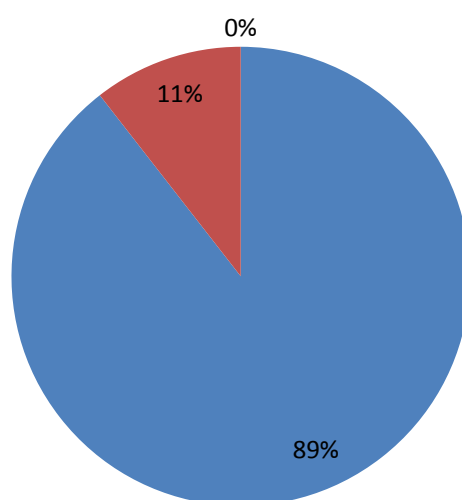


severity of nosocomial infections(1st min,5th max) as perceived by respondents



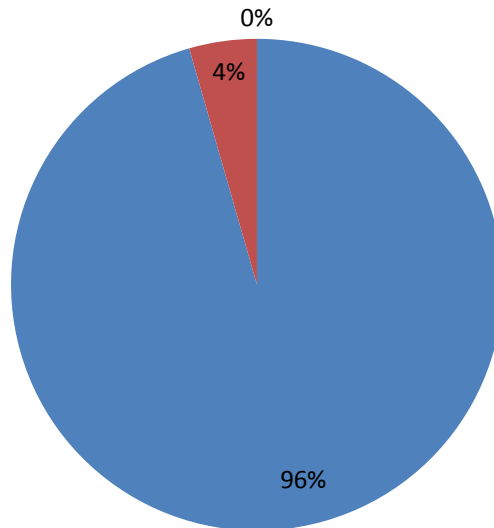
Biomedical waste includes

■ live or attenuated vaccines,cell cultures ■ Hazarduous chemicals ■ General waste



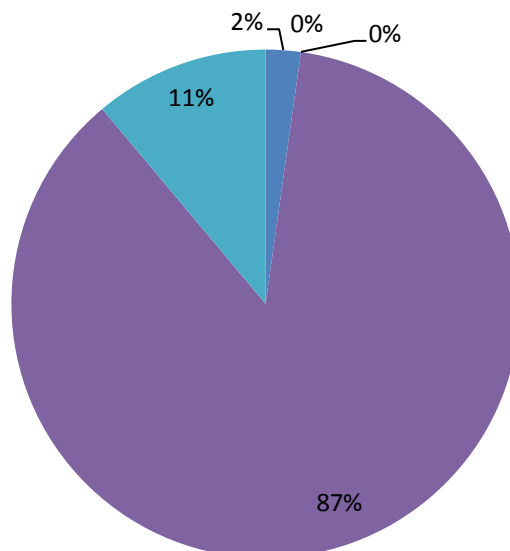
biomedical waste includes

- blood contaminated waste
- materials that may be poisonous, toxic or flammable but donot pose disease related risk
- general waste



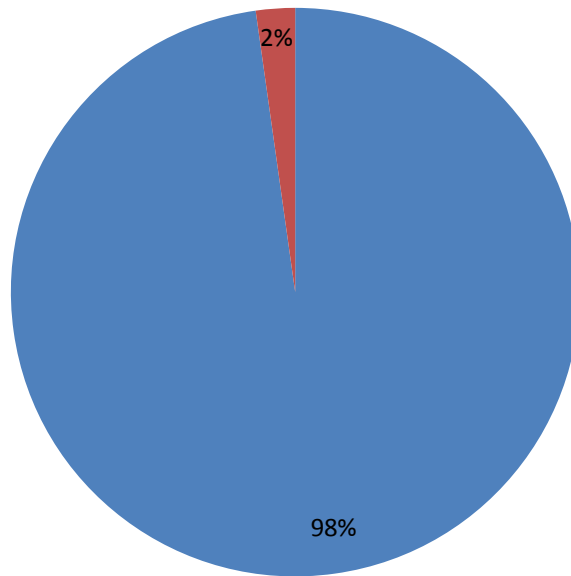
Which of the following is true regarding disinfectant

- 1st
- 2nd
- 3rd
- 4th
- 5th



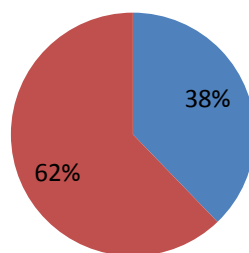
while cleaning the instruments water,soap and brush should be used to completely remove all blood,tissues and other residues paying special attention to teeth of hemostats etc

■ yes ■ no



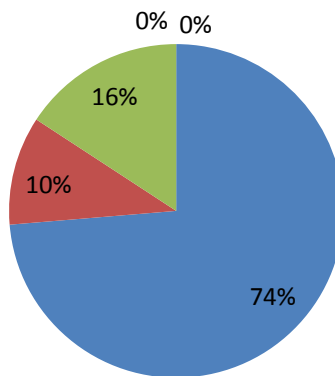
Percentage of respondents who could identify the symbol of biomedical waste

■ yes ■ no



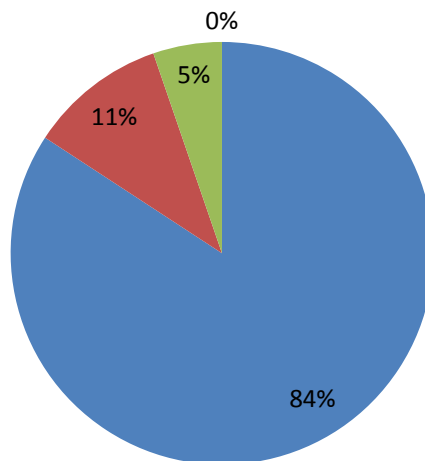
which technique kills maximum microbes including spores

■ both(HLD & sterilization) ■ high level disinfection ■ sterilization ■ cleaning ■ decontamination



Commonest cause of nosocomial infections

■ Bacterial ■ Viral ■ Fungal ■ Helminthic



ANNEXURE 2

DELIVERY POINTS IN GURGAON DISTRICT (PICTORIAL)

DISTRICT HOSPITAL



Four Delivery tables were available



Used gloves, empty bottles etc lying outside the Biomedical waste storage room

SDH SECTOR 10



Green bag being used instead of yellow



Biomedical storage room kept wide open

SDH SOHNA

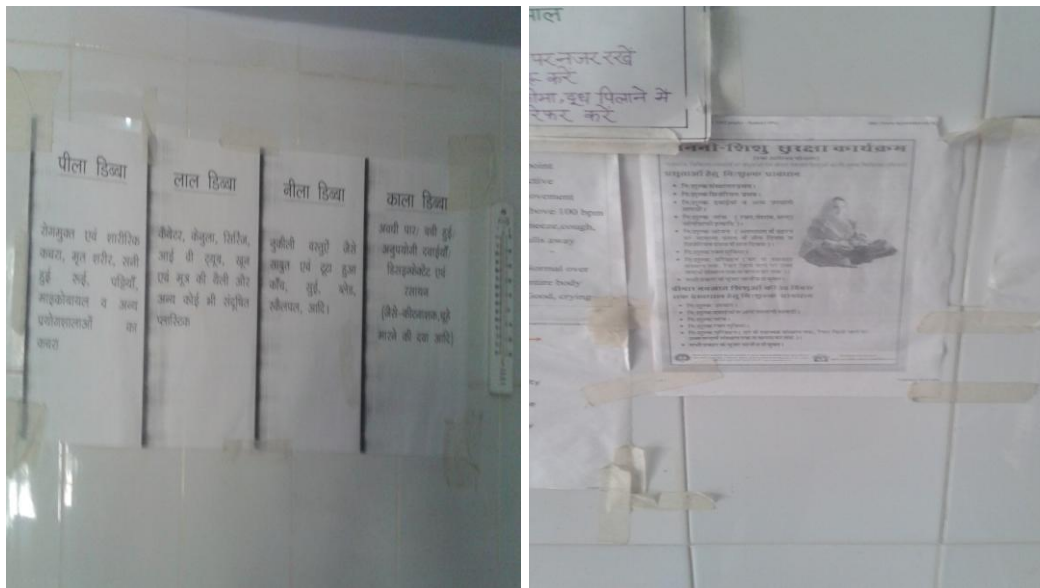


Backdoor of Labour room oened into open space area,used exclusively for carrying biomedical waste



Placenta was dropped on floor accidentally by nurse ,it was mopped by plain cloth by sweeper without using any disinfectant

SDH HAILY MANDI



Print outs of IEC material as they didn't receive any print outs



Elbow taps with liquid state available

CHC PATAUDI



Red polybags being used instead of yellow in one of the dustbins

CHC FARRUKHNAGAR



Black polybags being used instead of black due to shortage of yellow bags



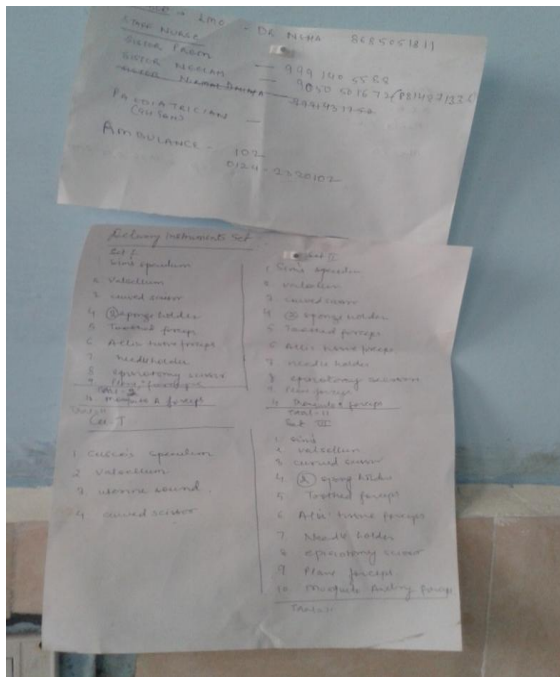
Placenta being stored in almirah and shortage of slippers, no shoe covers on shoe rack

PHC BHONDSI



Sharps pit with intact pipe and lock ; Biomedical waste storage room

PHC BHORAKALAN



Phone nos. of staff nurses displayed on list ; intermediary storage of waste is in dustbins not any biomedical waste storage room

PHC MANDPURA



Soiled linen immersed in container covered with lid and biomedical eg placenta was stored in mettalic dustbin secured with lock

PHC GURGAON



Red polybag being used instead of yellow



Color coded cemented containers with lids available for intermediary storage of waste ;
Newspapers being used on trolley tops instead of drape sheets

PHC KASAN



Color coded containers available with lids and intact sharps pit available but gloves,papers etc are cluttered around these sites

PHC BADSHAHPUR



Print outs of IEC material as pinted charts were not available ; Nurses were observed to be using dupatta's instead of face mask while conducting delivery

PHC WAZIRABAD



Non functional sharp's pit without lid or pipe ; Autoclave and cold box vaccine carrier being used inside pantry

ANNEXURE 3

A KAP study to assess the infection control practices and management of biomedical waste generated from labour room by trained medical officers and staff nurses at delivery points in Gurgaon district of Haryana state.

Questionnaire identification no.

Name of State..... Name of district.....

Respondent's name.....

Respondent's phone no

Hello. My name is Dr Sakshi Sharma and I am from State Institute of Health and Family Welfare, Haryana Panchkula conducting a survey to assess infection control practices and management of biomedical waste generated from labour room between Infection Management and Environment plan trained and untrained medical and paramedical staff at Subdistrict and District level in Gurgaon, Haryana. We would greatly appreciate your participation in this survey.

I would like to ask some questions regarding infection control practices and management of biomedical waste generated from labour room. The survey usually takes 20-30 minutes to complete.

Information you provide will be kept strictly confidential and will be used only for research purpose.

Participation in the survey is voluntary, if you choose to participate it will be highly appreciated. Although, you may also withdraw at any time.

However, we hope that you will take part in survey since your participation is important.

May I begin the interview now?

Respondent agrees to be interviewed.....1 Q no.1

Respondent does not agrees to be interviewed.....2 End

Interviewer's name.....

Date.....

Signature.....

CONFIDENTIAL

FOR RESEARCH PURPOSE ONLY

QUESTIONNAIRE

1) QUESTIONS ON THE RESPONDENT, GENERAL

Q. no.	Questions	Response categories	Skips	Remarks
1	Name of the respondent			
2	Which category of staff do you belong to)?	Nurse.....1 Midwife.....2 Lady health worker.....3 Medical officer.....4 Obstetrician..... 5 Other, please specify.....99 ()		
3	For how long have you been working in this facility?	Years..... Months		
4	Total work experience in this field	Years Months		

2) QUESTIONS ON THE FACILITY, GENERAL

Q. no.	Questions and filters	Response categories	Skips	Remarks
1	District			
2	Facility type	PHC.....1 CHC.....2 SDH.....3 District Hospital.....4		
4	How many total beds are there at this facility? (in labour room)			
5	Is there any statistical report available about number of patients , deliveries , type of deliveries , Cases of puerperal sepsis etc.?	Yes.....1 No.....2 Don't know.....3		
6	Approximately how many deliveries were conducted in previous month?			
7	Is there a separate waiting room / antenatal room for women for first stage of labour. ?	Yes.....1 No.....2 Don't know.....3		

PART A : INFECTION CONTROL PRACTICES IN LABOUR ROOM

ASSESSMENT OF KNOWLEDGE ON INFECTION CONTROL (LABOUR ROOM)

Q. no.	Questions	Response categories	Skips	Remarks
1	What are the sources of infection in a labour room?	Health personnel.....1 Contaminated instruments.....2 Contaminated air.....3 Birth attendant.....4 All of the above.....5		
2	Which of the following regarding wound infections is not true?	Prophylactic antibiotics with tetanus antitoxin are the best in wound infection control and prevention.....1 Proper wound management includes thorough cleaning & debridement of the wound..2 Presence of foreign bodies (e.g. catheter, suture) increases the risk of wound infection..3 All accidental wounds should be primarily sutured.....4 5.....2 and 3		
3	Regarding wound infections the wrong statement is/are	They can be classified as accidental and surgical.....1 Accidental wounds are clean most of the time.....2 Infection in dirty wounds is usually polymicrobial.....3		
4	Infection control and prevention in Hospital acquired infection (HAI) requires knowledge of the which of following:	Microbial resistance patterns are important.....1 Hand washing is an important preventive procedure for HAI infection.....2		

		Most of the HAI infections are preventable.....3 All of the above.....4		
5	Which one of the following microbial classes is a major cause of infection in the HAI?	Bacterial.....1 Viral.....2 Fungal.....3 Helminthic.....4		
6	Which one of the following method ensures the destruction of all pathogens from instruments?	Cleaning.....1 Disinfection.....2 Sterilization.....3 All of the above.....4.		
7	Which of the following types of barrier methods stop the spread of microorganisms from clients to staff?	Gloves.....1 Masks.....2 Eye glasses.....3 Aprons and gowns.....4 All of the above.....5		
8	Which of the following is the best for sterilizing instruments in Health care facilities?	Flaming.....1 Steaming under pressure...2 Autoclaving.....3 Using boiler.....4 Ethylene oxide.....5		
9	Which of the following dressing techniques is not part of the guidelines for keeping wound sites clean?	No need to determine the type of wound for dressing.....1 Use sterile instruments or dressings.....2 Keep the wound clear.....3 Protect skin from irritants..4.		
10	The following techniques are acceptable preparation for entering into labour room except?	Wear gown and mask.....1 Wear shoe covers.....2 Wash hands before gowning.....3		

		Remove watch and articles before gowning.....4		
11	Which of the following is/are the best barrier method for liquid contaminants eg amniotic fluids?	Gloves.....1 Masks.....2 Eye glasses.....3 Aprons and gowns.....4 All of the above.....5		
12	Which of the following processes ensures that the items are free of all microorganisms?	Decontamination.....1 Cleaning.....2 Sterilization.....3 High level disinfections....4. 3 and 4.....5		
13	1% bleaching powder solution should be prepared	freshly prepared everyday....1 stored for a week.....2 stored for a month.....3 any of the above.....4		
14	Disinfectant should be added to the soiled linen before sending it to washing	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
15	While cleaning the instruments water, soap and brush should be used to completely remove all blood, tissues and other residue, paying special attention and small spaces and teeth of clamps or hemostats.	True.....1 False.....2		

16	In order to be effective, the disinfectant chosen must:	Kill or inhibit the Micro-organisms.....1 Not be harmful to the equipment on which it is used.....2 Be used only on clean, rinsed instruments, because protein material and soap will inhibit a disinfectant.....3 all of the above.....4		
17	Always scrub from the center to the outside of the operative site (incision line)	True.....1 False.....2		
18	Autoclaving should be done at 121 degree C for 60 minutes at a pressure of 15 lb	True.....1 False.....2		
19	If a surgical wound is infected then remove the stitches over the infected area, drain the pus, clean and debride the area and do daily dressing	True.....1 False.....2		

ASSESSMENT OF ATTITUDE ON INFECTION CONTROL (LABOUR ROOM)

Q. no.	Questions	Response categories	Skip	Remarks
1	Should efforts be made to maintain infection control practices in vaginal procedures? Rate on a scale of 1 to 5	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
2	Rate the hazards of hospital acquired infections following breach in infection control procedures(5 maximum score,1	1 2		

	minimum score)	3 4 5		
3	Following infection control practices stringently increases financial burden on hospital	Yes.....1 No.....2 Don't know.....3		
4	Infection control practices should be kept bare minimum without putting additional emphasis on it	Yes.....1 No.....2 Don't know.....3		
5	Rate the significance of instructions on maintaining hygiene to the client following normal delivery in labour room	Highly relevant.....1 Relevant.....2 Not required.....3		
6	Should staff be encouraged to suggest practical/innovative ideas for improvement of infection control practices	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
7	Should warnings for non compliance towards infection control practices be there.	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
8	Should frequent audits to check infection control practices be there and best performers be awarded	Yes.....1 No.....2 Don't know.....3		
9	Should training regarding infection control practices should be conducted in	Yes.....1		

	your health facility	No.....2 Don't know.....3		
10	Should there be any strategy/plan and administrative support for strengthening infection control practices further?	Yes.....1 No2 Don't know.....3		

ASSESSMENT OF PRACTICES ON INFECTION CONTROL (LABOUR ROOM)

THROUGH QUESTIONING AND OBSERVATION

Q. no.	Questions and filters	Response categories	Skips	Remarks/ Observation
1	Do you routinely wash hands before procedure?	Yes.....1 No.....2 Don't know.....3		
2	Do you routinely wash hands after procedure?	Yes.....1 No.....2 Don't know.....3		
3	Do you follow proper hand washing techniques as per IMEP/SBA guidelines?	Yes.....1 No.....2 Don't know.....3		
4	Are gloves routinely used for aseptic procedures by you?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4		

		Never.....5		
5	Do you change gloves when they become contaminated (between clients and with the same client if the gloves become contaminated)?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
6	If there is a break in the sterile field (such as a hole in the glove)during a procedure, do you re-establish the sterile field?	Yes.....1 No.....2		
7	Are gloves ever re-used?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
8	Are instruments sterilised (autoclaved) routinely?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
9	Is there a functional system for repair and maintenance of equipment (e.g. autoclave, ,suction machine) ?	Yes.....1 No.....2 Don't know.....3		
10	Is sterility maintained to the greatest extent possible in vaginal and manual uterine procedures (e.g., bimanual uterine compression, forceps, manual removal or placenta vacuum, vaginal delivery) by			

	use of the following:			
10.1	- HLD/sterile gloves?	Yes.....1 No.....2 Don't know.....3		
10.2	- Antiseptic preparation?	Yes.....1 No.....2 Don't know.....3		
10.3	- Non contamination? (e.g. no touch technique)	Yes.....1 No.....2 Don't know.....3		
11	Are all of the following available in labour and delivery rooms for 24 hours, 7 days a week:			
11.1	Antiseptic solutions (cetrimide,betadine, chlorhexidine, gluteraldehyde etc)?	Yes.....1 No.....2 Don't know.....3		
11..2	Soap?	Yes.....1 No.....2 Don't know.....3		
12	Are the surgical sites prepared from the centre outward with an antiseptic solution (e.g., alcohol, cetrimide-based solution, iodine-based solution)?	Yes.....1 No.....2 Don't know.....3		
13	Are aseptic procedures followed while doing	Always.....1 Often.....2		

	episiotomy?	Sometimes.....3 Rarely.....4 Never.....5		
14	Are aseptic precautions followed during the care of episiotomy wound ?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
15	Between patients, does staff clear medical waste and wipe down tables and contaminated surfaces with antiseptic solutions after a delivery has taken place?	Yes.....1 No.....2 Don't know.....3		
16	Frequency of wiping floors in Labour room and delivery room (approx). Which fluids are used for this ?			
17	Is umbilical cord clamped and cut under aseptic conditions	Yes.....1 No.....2		

PART B: LAST CASE OF PUERPERAL SEPSIS

Q. no.	Question
	With regard to your experience in this facility can you tell me about the last case of Puerperal sepsis that you encountered in this facility? a) When was it? b) What time of day was she admitted? c) Was the infection acquired in the facility or outside? d) If it was acquired in the facility, why do you think it happened? e) What information was recorded on admission (Blood pressure, pulse, temperature, general condition)? f) How was it diagnosed? g) What treatment was provided? h) In your opinion, what went right with the management and treatment of the case? What went badly? i) How could treatment and general care have been improved? j) In terms of system constraints (what could this facility have provided?)

PART C: MANAGEMENT OF BIOMEDICALWASTE GENERATED FROM LABOUR ROOM

ASSESSMENT OF KNOWLEDGE ON BIOMEDICAL WASTE (LABOUR ROOM)

Q. no.	Questions	Response categories	Skips	Remarks
1	Which statement describes one type of biomedical waste?	Materials that may be poisonous,toxic or flammable and don't pose diseases related risk.....1 Waste contaminated with blood.....2 General household waste.....3		
2.	Biohazardous waste can be one of the following.	Hazardous chemicals.....1 General waste.....2 Cultures,stock or specimens of microorganisms,live or attenuated vaccines,cell cultures.....3		
3	Identify what does this symbol denote? 			
4	What is the approximate proportion of infectious waste among total waste generated from a health care facility ?	10-20%.....1 30-40%.....2 40-50%.....3 60-70%.....4		

5	Anatomical waste consists of human and animal tissue, organs, and body parts. Which containers should this waste be disposed into?	Red bins.....1 Yellow bins.....2 Black bins.....3 Puncture proof containers.....4		
6	Which of the following statement is true?	Much of the general waste at hospital includes common items found in household garbage.....1 General waste is dangerous.....2 General waste must be treated in special ways.....3		
7	General waste is put in which colored dustbin?	Red.....1 Black.....2 Yellow.....3 Blue.....4		
8	According to the Biomedical Waste (Management & Handling) Rules, waste should not be stored beyond:	12 hours.....1 24 hours.....2 48 hours.....3 72 hours.....4		
9	Who regulates the safe transport of medical waste?	Pollution Control Board of India.....1 Transport Corporation of India.....2 Hospital Administration.....3		
10	Is separate permit required to transport biomedical waste?	Yes1 No2 Cannot say.....3		

11	Liquid waste spills should never be cleaned without adding disinfectant to the spills	True.....1 False.....2		
12	All of the following statements about hazardous waste containers are true, except for:	Containers must be closed except when removing or adding waste.....1. Containers must be clean on the outside.....2. Contents must be compatible with the type of waste containers.....3 Any type of container, including food containers, can be used to contain hazardous waste.....4		
13	Diseases transmitted by biomedical waste include	HIV.....1 Hepatitis B.....2 Hepatitis A.....3 All of the above.....4		
14	Hazards of biomedical waste include	Unintended injury of hospital staff.....1 Hospital acquired infection of patients2 Injury and infections of ragpickers and scavengers.....3 All of the above.....4		

ASSESSMENT OF ATTITUDE ON BIOMEDICAL WASTE(LABOUR ROOM)

Q. no.	Questions	Response categories	Skips	Remarks
1	Safe management of health care waste is not an issue at all	Agree.....1 Disagree.....2 Cannot comment.....3		

2.	Waste management is team work/no single class of people is responsible for safe management.	Agree1 Disagree2 Cannot comment3		
3	Safe management efforts by the hospital increase the financial burden on management.	Agree.....1 Disagree2 Cannot comment.....3		
4	Do you think that the hospital should organize separate classes or a continuing programme to upgrade existing knowledge about biomedical waste management?	Yes1 No.....2 Cannot comment.....3		
5	Will you like to attend voluntarily programmes that enhance and upgrade your knowledge about waste management?	Yes.....1 No2 .Cannot comment3		
6	Should training of personnel eg sweepers, cleaning staff regarding management of biomedical waste in local language be conducted	Yes.....1 No.....2 Don't know.....3		
7	Do you think that infectious waste eg used gloves etc should always be mutilated and shredded before disposal?	Yes.....1 No.....2 Cannot comment3		
8	Do you think that an effluent treatment plant for disinfection of infected water should be set up in all big hospitals?	Yes.....1 No.....2 Cannot comment3		
9	Do you think it is important to report to the Pollution Control Board of India about a particular institution if it is not complying with the guidelines	Yes.....1 No.....2 Cannot comment3		

	for biomedical waste management?			
10	Do you think that labelling the container before filling it with waste is of any clinical significance?	Yes.....1 No.....2 Cannot comment.....3		

ASSESSMENT OF BIOMEDICAL WASTE MANAGEMENT PRACTICES (LABOUR ROOM)

THROUGH QUESTIONING AND OBSERVATION

Q. no.	Questions and filters	Response categories	Skips	Remarks/ Observation
1	Whether one container is used for all waste	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5	If never then -> 2	
2	Is segregation of waste always done according to color coding	Yes.....1 No.....2 Don't know.....3		
3	Are infectious and non infectious waste mixed in the same bin in this health facility	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
4	Is the waste carried in close containers	Always.....1 Often.....2		

		Sometimes.....3 Rarely.....4 Never.....5		
5	Lancets,scalpel and blades are discarded in which of the following?	Puncture proof plastic container carrying disinfectant solution.....1 Plastic container.....2 Plastic bags.....3 Any of the above.....4		
6	Whether soiled linen in being immersed in disinfectant?	Yes.....1 No.....2		
7	Who removes the waste material from the points of generation ?			
8	The personnel while collecting and disposing off waste wears protective clothing eg gloves, masks etc.	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
9	How frequently the waste material is removed and to where ?			
10	Is there any intermediate storage of the waste before it is moved in bulk outside the hospital campus ?			
11	Biomedical waste is disinfected and mutilated before its final disposal	Always.....1 Often.....2 Sometimes.....3 Rarely.....4		

		Never.....5		
12	Are any measures taken to deter unauthorised reuse of the discarded items, such as cutting/ mutilating needles, plastic tubes, gloves etc. ?	Always.....1 Often.....2 Sometimes.....3 Rarely.....4 Never.....5		
13	The waste is transported through	Crowded areas.....1 Predefined route only.....2 Any route.....3 Other(specify).....4		
14	What happens to the waste once it is removed from the health care establishment - can it be tracked ?			
15	Anatomical waste eg placenta is disposed off in	a)closed bags containing disinfectant b)closed bags containing disinfectant in open pit c) closed bags containing disinfectant in secure deep burial pit d)any of the above		

REPORT ON VISIT TO DISTRICT HOSPITAL, SECTOR-6, PANCHKULA

Departments observed:

I. OPERATION THEATER(OT) :

- Operation theatre area is divided into zones - preoperative, post operative area and 6 OTs (separate for each department), separate scrub area, CSSD, Dirty area.
- OT and surgical ward was on same floor for the convenience for shifting of patients. Though nursing stations were in pre & post operative room, but were not being utilized because nursing staff also had to do the records, hence seated in the common nursing station.
- Most of the patients were operated under MMIY scheme.
- OT had emergency power back-up.
- Records were well maintained.

II. SURGICAL WARD

- In surgical wards, pre-operative and post operative patients were admitted separately.
- Comatose and extubated patient were not isolated from general patients.
- Patients were unaware of bedside calling system.

III. ORTHOPEDIC WARD

- This ward was on the same floor as of surgical ward for the ease of shifting of the patients.

IV. PSYCHIATRY AND DRUG REHABILITATION WARD

- This ward had common corridor with surgical and orthopedics wards.
- Bell system, though installed, was not in the knowledge of the patients, so as to avoid unnecessary calls by the patients, as reported by a posted nursing student.

V. GYNAECOLOGY AND OBSTETRIC DEPARTMENT

- Gynecology and obstetrics OPD, IPD and Labor room were on the same floor.
- Labour room and MTP centre were adjacent to each other.
- Privacy was maintained in the labour room.
- Staff nurses conducted the normal deliveries.

VI. PAEDIATRICS WARD:

- Paediatrics ward had common corridor with chest department.
- It also had rooms for DEIC, NRC.

- There was a play room.

VII. CHEST WARD:

- TB and other chest-ailment(asthma etc.) were observed sharing the same room.

SCHEMES:

1. **Mukhyamantri muft ilaaj yojna(MMIY)** is implemented from January 1, 2014 in Haryana.

The following services are provided completely free to all the patients coming to the health institutions of the State under the MMIY:

- Basic Laboratory Investigations, along with free X-Ray, ECG and USG (wherever available in the Government Health Institutions).
- Indoor Services.
- Drug supply.
- Referral transport/ambulance services.
- Dental treatment.
- Surgery package program(For Haryana Residents Only)

2. RBSK/District Early Intervention Centre (DEIC):

- Rashtriya Bal Swasthya Karyakram (RBSK) is a new initiative aiming at early identification and early intervention for children from birth to 18 years to cover 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability. The 0-6 years age group is specifically managed at District Early Intervention Center (DEIC) level while for 6-18 years age group, management of conditions is done through existing public health facilities. DEIC acts as referral linkages for both the age groups.
- An Early Intervention Centre is established at the District Hospital under RBSK. The purpose of Early Intervention Centre is to provide referral support to children detected with health conditions during health screening.
- A team consisting of Paediatrician, Medical officer, Staff Nurses, Paramedics will be engaged to provide services and a manager who carries out mapping of tertiary care facilities in Government institutions for ensuring adequate referral support. Children and students presumptively diagnosed to have a disease/ deficiency/disability/ defect and who require confirmatory tests or further examination are referred to the designated tertiary level public sector health facilities through the DEIC.
- The DEIC promptly responds to and manages all issues related to developmental delays, hearing defects, vision impairment, neuro-motor disorders, speech and language delay, autism and cognitive impairment. Beside this, the team at DEICs is involved in newborn screening at the District level. This Centre has the basic facilities to conduct tests for hearing, vision, neurological tests and behavioral assessment.

3. **Nutrition Rehabilitation Centre (NRC)**

Severe Acute Malnutrition is an important contributing factor for most deaths amongst children suffering from common childhood illness, such as diarrhoea and pneumonia. Deaths amongst SAM children are preventable, provided timely and appropriate actions are taken.

Nutritional Rehabilitation Centre (NRCs) has been set up in GH for inpatient management of severely malnourished children, with counseling of mothers for proper feeding and once they are on the road to recovery, they are sent back home with regular follow up.

Practices to be appreciated

- OT was well-maintained.
- Microbial limit monitoring is being done in the OT on a regular basis so as to minimize the probability of cross-infection/ hospital- acquired infections. Staff nurse accompanying us for orientation honestly reported us about a recent *Psuedomonas* contamination which was followed by carbolization.
- A wing was allotted for DEIC, which was focused on rehabilitation of physical and psychological disabilities in children till 15 years of age.
- Another wing was allotted to NRC to provide service to malnourished children.
- Installation of the bell system for calling nurses in all wards was a good initiative.

Practices that need to be improved

- There was no arrangement for sitting in waiting area; patients and their attendants were seen sitting on the floor.
- Nurses were performing normal vaginal deliveries, without the presence of doctors.
- Sterilization and disinfection was not being maintained; nurse was observed receiving a phone call with gloved hands while handling a case in 2nd stage of labour.
- Cotton/gauze pieces fallen on the floor were re-used during the procedure.
- SNUC was there, but staff was not trained about its appropriate usage.
- Pediatrics and chest wards had common corridor, which could be a potential source of cross-infection especially for children.
- Lack of privacy was observed in O & G OPD.

Report on visit to Primary Health Center, Kot

- Name of the District: Panchkula
- Name of Tehsil/Taluka/Block: Panchkula/Raipur Rani
- Name of the PHC : PHC KOT
- No. of Sub-centers under the PHC:5
- Distance of CHC from PHC: Panchkula
- Distance of DH from PHC: Panchkula
- 24*7 service delivery: No
- Population Covered: 34136

SERVICE DELIVERY:

Number of Beds: 6

Average Daily OPD: 150 (proportion of Female patients reporting daily were more as compared to males)

Services Available:

OPD

Emergency Services (24 hours)

Referral Services

In-Patient Services

Specific services:

- Primary management of wounds
- Primary management of fracture (first aid)
- Primary management of cases of Poisoning
- Primary management of burns
- Abscess drainage
- *No Cataract surgeries are performed.*

MCH Care including Family Planning:

Services availability:

- ANC
- Intra Natal care
- Post-natal care
- Immunization
- Family planning
- Management of RTI/STI

No newborn care was provided, MTP services were yet not available, but a MO was undergoing training pertaining to MTP.

Specific Services:

- Organization of Antenatal clinics on regular basis.
- On call doctors available for 24 hrs. Delivery services and 24*7 nursing staff available
- Tubectomy and vasectomy
- Internal examination for gynaecology patients
- Treatment for gynecological disorders
- BCG and measles vaccine
- Treatment of children with pneumonia
- Management of children with diarrhea
- *No management of Low birth babies.*

Other functions and services:

- School health programme conducted by dentist
- Prevention and control of locally endemic disease
- Control of epidemics
- Collection of vital statistics
- AYUSH services
- *No nutrition services were available*
- *No behavior change communication services*
- *National AIDS control programme was not functional*

Human resources

S.no.	Personnel	Recommended	Current Availability	Identified gaps
1	Medical officer	2	2-MO 1-AMO	2 nd medical officer was not performing the physical examination of patients
2	Pharmacist	1	1-allopath 1-AYUSH	AYUSH pharmacist sitting idle
3	Nurse-midwife(staff nurse)	3	4	One nurse was suffering from osteoarthritis, so she was managing the OPD register and was not allotted any duty of nurse; 2 on leave
4	Health worker	1	1	
5	Health educator	1	0	
6	Health assistant	2	1	
7	Clerks	2	1	
8	Lab Technician	1	1	
9	Driver	Optional	1	

Essential Laboratory services:

- Blood grouping
- Bleeding time
- Clotting time
- Rapid test for pregnancy
- VDRL test

Infrastructure:

Location:

- Distance of PHC is 25 km from farthest village in coverage area
- Distance of PHC from District hospital is 17 km

Building:

- Government designated building is available for PHC
- Cleanliness is fair
- Prominent display boards regarding services are available

Operation Theatre:

- Laparoscopic sterilization surgeries are carried out.

Labor room:

- Normal deliveries were conducted.
- No caesarean section was performed.

Water supply:

- Piped water supply was available

Sewerage:

- Soak pit

Waste Disposal:

- Sharp pit was available

Electricity:

- Electric lines were available in all parts of PHC

Communication Facilities:

- Telephone, E-mail, Fax services were available

Vehicles:

- Ambulance services were available
- Residential facility for Mo was available

User charges:

- Free of cost services were available

Quality Control

- Citizen's charter was available outside the facility

Other significant findings:

Practices that need to be improved

- There was foul-smelling litter at the entrance of the hospital.



- There were flies all over.
- There was dung/ faeces in the hospital premises.
- Laboratory was in a shabby condition.



- There was a private pharmacy within the hospital premises



- Dental wing had no technician/assistant.
- Dental Lab was not available.
- MO was observed not doing physical examination of a single patient.
- Hot air oven was available, but not in use.
- LHV was on a long leave, so pharmacist was handling the cold chain unit.
- In spite of AYUSH pharmacist being available, a staff nurse was managing the pharmacy in the absence of the pharmacist.
- Ambulance though present, had punctured tyre.

Report on visit to sub-center, Ramgarh

- Name of the sub center: Ramgarh
- No. of villages under the SC: 12
- Distance of SC from PHC: 8 Km
- Distance of SC from nearest CHC: 20 Km
- 24*7 service delivery
- Population covered: 10637

SERVICES

MCH Care Available:

- a) ANC
- b) INC
- c) PNC
- d) Newborn
- e) Immunization
- f) Family Planning And Contraception
- g) JSY
- h) JSSK
- i) Treatment Of Common Illness

MCH Care Not Available:

- a) Adolescent Health
- b) School Health Education

Availability of specific services

- a) Doctor visits the sub center once or twice a month, but the days of visit are not fixed.
- b) LHV visits the sub-center at least once a week.
- c) The ante-natal care (inj. TT/IFA tablets, weight and BP checkup) is provided by the manpower in the sub center.
- d) The facility for referral of complicated cases of pregnancy/delivery is available at the sub center for 24 hours.
- e) The ANM/any trained person does not accompany the woman in labor to the referred care facility at the time of referral.
- f) Immunization services are provided as per government schedule provided by the sub center.
- g) ORS for the prevention of diarrhea and dehydration is available in the sub center.

- h) The treatment of minor illness like fever, cold, cough, worm disinfestations etc. is available in the sub center.
- i) The facility for taking peripheral blood smear in case of fever for detection is available in the sub center.
- j) Contraception services like insertion of Copper-T, distributing oral contraceptive pills or condoms are provided by the sub center.
- k) The Ramgarh sub center is also a DOT center.

Other functions and services

- a) Disease surveillance
- b) Control of local endemic disease
- c) Promotion of sanitation
- d) Field visit and home care
- e) National health programs including HIV/ADS control programs

Monitoring and supervision activities

- a) Training of ASHA is not done at the sub center (done at PHC).
- b) For monitoring the quality of water in the village, sample is collected and taken to PHC, Kot.
- c) An eye is kept over unusual health events.
- d) Services are provided in coordination with AWWs, ASHAs, Village Health and Sanitation Committee and PRIs.
- e) Records and registers are properly maintained.
- f) The scheme of ASHA is implemented in the sub center.

Human resources

Sub-Center Ramgarh			
STAFF	ESSENTIAL	DESIRABLE	AVAILABLE
ANM/Health Worker(Female)	2		3(2 ANM + 1 LHV)
Health Worker(Male)	1		-
Staff Nurse(or ANM, if Staff Nurse is not available)		1**	-
Safai-Karamchari*	1(Full-time)		1

*To be outsourced.

**If number of deliveries at the sub-center is 20 or more in a month.

Physical structure

- Berwala is the farthest village in the coverage area of sub center Ramgarh (15 km).
- There is a designated government building available for the sub center.
- The cleanliness was good.
- Labor room is available with a separate clinic room and an examination room.
- Water supply is through tube well.
- Electricity supply is present with a back-up facility of an inverter.
- Health care providers have government SIM card for communication. The sub center, otherwise, does not have telephone/fax/e-mail facility.
- Residential facility is available for the staff



Practices to be appreciated

- Location of the sub center is accessible.
- Citizen charter is displayed outside the clinic room; written in Hindi.



- Center is well maintained in terms of cleanliness, equipment, medicines, IEC material and records.



e) There are separate rooms for clinic, examination, delivery and sterilization.



Practices that need to be improved

- a) There was litter and garbage on the linking road to the sub center as well as just outside the sub center.



- b) Shadow-less lamp of the labor room was out of order.



- c) Toilet was not attached to the labor room and nearest door to the washroom was blocked due to wrong placement of patient bed, which could be a cause of inconvenience to the patient.



- d) Use of gloves or spirit swab was not observed during Hb-estimation.
e) Ambulance was not available.
f) Pit for placenta disposal had temporary lid.



