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A study to determine the infection control practices by the Health Care Workers (HCWs) and facilities in the labor theatre (LT) of a selected tertiary referral hospital of Udupi District , Karnataka

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"ABSTRACT

A research study entitled "Infection control practices by the Health Care Workers (HCWs) and facilities in the Labor Theatre (LT) of a selected tertiary referral hospital of Udupi District, Karnataka" was carried out at Manipal University, Manipal by Michelle S Lewis for the award of Master of Science in Nursing as a partial fulfilment of the course.

The objectives of the study were to observe the infection control practices during procedures in the LT by each category of HCWs using observational checklists and observe the facilities available in the LT using Infection Control Assessment Tool (ICAT) observational checklists by Strengthening Pharmaceutical Systems (SPS) and Assessment tool for the quality of hospital care for mothers and newborn babies by World Health Organization (WHO). The conceptual framework used in the study was based on the Healthy workplace model: avenues of influence, process, and core principles by WHO. The tools used in the study were, Observational checklists for various procedures like Non Stress Test (NST), Per Vaginal (PV) examination, assisting in PV examination, labour process, amniotomy, disinfection following amniotomy, immediate newborn care, injection administration for newborns, disinfection after newborn care, disinfection LT floor, high touch surface area disinfection, and for facilities in the LT, Infection Control Assessment Tool (ICAT) observational checklists by Strengthening Pharmaceutical Systems (SPS) and Assessment tool for the quality of hospital care for mothers and newborn babies by World Health Organization (WHO) for facility checklist.

Administrative permissions were obtained from the Dean, Manipal College of Nursing Manipal, Medical Superintendent of Kasturba Hospital Manipal, HoD of Department of OBG,

Ethical clearance from Institutional Ethics Committee (IEC), Kasturba Hospital Manipal, and post informed consent was obtained from the participants.

Content validity and reliability of the tools were established and all the tools were pre- tested. All tools were found to be reliable to be used for the study. Pilot study revealed the feasibility of the study and was used to calculate the sample size. The study was conducted during the months of January to March 2017 in the LT of Kasturba Hospital, Manipal for all the categories of HCWs. The gathered data were coded and summarized in a master data sheet and were analyzed using Statistical Package for Social Sciences (SPSS) 16.0 version.

The findings of the study were based on the research objectives, Infection control practices related to the procedures, Infection control practices related to NST:

During NST, 76 (58%) of the observations HCWs did not maintain hand hygiene, 72 (55%) of the observations the HCWs did not clean the probe and in 73 (55.7%) of the observations showed that the HCWs did not discard the waste appropriately.

Infection control practices related to PV examination:

During PV examination, 67 (57.3%) of times the HCWs maintained handwashing, in 15 (12.8%) of the observations gloves were not donned for both hands.

Infection control practices related to assisting in PV examination:

During assisting, 82 (70.1 %) of the times lubricant was applied on the fingers by the assistant without touching the tip of it to the gloved hand, during 73 (62.4%) of the observations the tip was closed after the application of the lubricant.

Infection control practices related to labor process:

During the labor process, during 55 (76.4%) of the observations HCWs maintained hand hygiene, during 39 (54.2%) of the observations cap was worn, 52 (72.2%) of the observations mask was worn, 70 (97.2%) of the observations gown was worn, in 51 (70.8%) observations the mask and apron were disposed appropriately.

Infection control practices related to amniotomy:

During amniotomy, 21 (32.8%) of the times the HCWs did not maintain hand hygiene, in seven (10.9%) of the observations gloving technique was not maintained, during 28 (43.8%) of the observations hand hygiene was maintained after the procedure.

Infection control practices related to disinfection following amniotomy:

During the disinfection following amniotomy, the waste disposal was done appropriately according to infection control policies during 54 (84.4%) of the observations, hand hygiene was maintained during 29 (45.3%) of the observations after the procedure.

Infection control practices related to immediate newborn care:

During immediate newborn care, during 46 (63.9%) observations HCWs maintained hand hygiene, disposal of gloves was practiced during 33 (45.8%) of the observations and hand hygiene was maintained during 36 (50%) of the observations after the procedure.

Infection control practices related to administration of IM injection for the newborns:

During IM administration, 50 (45.5%) of the observations, HCWs did not maintain hand hygiene, 50 (45.5%) of the observations showed that injection was carried in a sterile tray, hand hygiene was maintained at 48 (43.6%) of the observations.

Infection control practices related to disinfection after immediate newborn care:

During disinfection, the warmer was cleaned during 42 (58.3%) observations, the articles like weighing machine was cleaned during 24 (33.3%) observations, inch tape 44 (61.1%) of the observations, cradle 20 (27.8%) of the observations.

Infection control practices related to disinfection of LT floor:

During disinfection, 107 (74.8 %) of the times the class four workers did not maintain hand hygiene, personal protective equipment like plastic apron was worn at 28 (19.6%) of the observations, mask at 28 (19.6%) of the observations and cap at 12 (8.4%) of the observations and 65 (45.5%) of the times hand hygiene was maintained.

Infection control practices related to disinfection of high touch surface areas.

During disinfection, 82 (68.3%) times the HCWs did not maintain hand hygiene, personal protective equipment that is plastic apron was worn in 15 (12.5%) of the observations, mask in 45 (37.5%) of the observations and cap in 21 (17.5%) of the observation.

Description of Facilities in LT, Facility checklist based on ICAT:

For handwashing facilities it was observed that sinks had continuous running water, liquid soap is made available in a container, with tissues to dry hands. The area also had 14 hand rubs in an easily accessible area. The waste disposal was appropriate for use after each labor process.

Facility checklist using WHO assessment tool for quality of hospital care for mothers and newborn babies:

The facilities present in the LT were checked and scored according to the criteria. The overall score of the section of the summary of equipment and supplies was three that indicated good support and no need of improvement.

The present study highlighted the infection control practices related to various invasive and non-invasive procedures that were carried out by the different categories of the HCWs and the facilities of the LT of a tertiary referral hospital. From this study, we could identify the various infection control practices being followed. The Protocols can be brought out and if they are in place it may help in reducing the maternal and neonatal morbidity and related mortality by reducing the occurrences of HAI.

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