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A study to assess the existing practices of intravenous (IV) medication management and barriers for safe practices among healthcare professionals in a selected hospital of Udupi district, Karnataka.

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ABSTRACT

A research study titled "A study to assess the existing practices of Intravenous

(IV) medication management and barriers for safe practices among healthcare professionals in a selected hospital of Udupi District, Karnataka" was conducted by Ms Madhurikranta Mukherjee in partial fulfilment of the requirement for the award of Master of Science in Nursing at Manipal College of Nursing Manipal, Manipal University, Karnataka.

The present study was an attempt to observe the existing practices and identify the barriers for safe IV medication management practices among healthcare professionals, thereby minimizing the medication error and infection rate.

The objectives of the study were to assess the existing practices and identify the barriers for safe IV medication management practices among healthcare professionals.

The conceptual framework for this study was based on Rosenstock, "Health Belief Model"

A quantitative approach was undertaken to assess the existing practices and identify the barriers for safe IV medication management practices among healthcare professionals working in the Women and Children Block of a selected hospital of Udupi district, Karnataka. Non-probability purposive sampling technique was used in this study.

The tools used for this study were demographic proforma, observation checklist on intravenous (IV) medication management practices to assess the existing practices and a 5 point Likert scale to identify the barriers of safe IV medication management practices. To ensure the content validity of the tool, the tools were submitted to seven experts with the blue print and modifications were made as per the experts' suggestions. After validation, the modified tools were subjected to pretesting among five healthcare professionals who were working in the Neurology Ward of a selected hospital of Udupi District, Karnataka. The reliability of observation checklist was checked by inter-rater reliability for equivalence by observing the IV medication management practices and was found to be reliable ($r=0.987$). The reliability of the Likert scale was tested for internal consistency by Cronbach's alpha and was also found to be reliable ($r=0.718$). A pilot study was conducted in the Neurology Intensive Care Units among 10 healthcare professionals and the study was found to be feasible.

For ensuring the ethical concerns in the research methodology administrative permission was obtained from the Dean, Manipal College of Nursing Manipal, Institutional Research Committee (IRC), Manipal College of Nursing Manipal, Institutional Ethics Committee (IEC) of Kasturba Hospital (KH), Manipal, Medical Superintendent, KH, Manipal, Nursing Superintendent, KH, Manipal, Head of the Department of Obstetrics and Gynecology and Neurosurgery KH, Manipal. Informed written consent from the participants was obtained prior to the data collection. The data was collected from 2nd January to 4th February 2017.

Analysis of the data was done by using descriptive statistics. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 16 software.

Sample characteristics showed that, majority 21 (70%) of the healthcare professionals belonged to the age group of 22 to 25 years, 22 (73.3%) were GNM qualified, 16 (53.3%) of them had one to two years of experience, and most 28 (93.3%) of the healthcare professionals had attended CNE sessions on IV medication management. Majority 24 (80%) of the healthcare professionals had work experience in OBG wards.

Existing practices of IV medication management showed that in the preparation phase among 90 events observed all healthcare professionals had reviewed patient profile and in 86 (95.6%) of the events appropriate syringe was selected for preparation of IV medication. Whereas none of the healthcare professionals checked the expiry date of medication and did not perform double checking of medication. In majority 87 (96.7%) of the events, aseptic techniques were not followed during the preparation of IV medication, in 81 (90%) of the events proper hand hygiene prior to preparation and 78 (86.7%) events after preparation of IV medication was not performed.

In the administration phase, among 90 events observed, all healthcare professionals identified the patient properly; and disposed of the syringe, needle and cotton swab as per the Biomedical Waste Management policy. In a majority 89 (98.9%) of the events, healthcare professionals had secured the saline lock clamp and

74 (82.2%) events documentation was done immediately after administration of

medication. Whereas none of the healthcare professionals used any personal protective equipment (PPE) while administering IV medication, 84 (93.3%) of the events injection port was not cleaned

with spirit swab, and in 78 (86.7%) events proper hand hygiene after administration of IV medication was not followed.

Majority 23 (76.7%) of the healthcare professionals expressed excessive workload as a barrier for safe IV medication management practices, whereas the least,

1 (3.3%) reported unavailability of fellow nurses for cross checking of medication and lack of supervision was a barrier.

Thus, the study concluded that safe IV medication management practices are the most neglected areas among the healthcare professionals which can be reinforced through ensuring proper knowledge of practices, encouragement and timely motivation which helps to build up skills for safe IV medication management practices and reduce medication error and infection rates.