



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

NOTE PREVIEW ARTICLE

THE KNOWLEDGE OF THE NURSE ABOUT CARE WITH POTENTIALLY DANGEROUS MEDICINES O CONHECIMENTO DO ENFERMEIRO ACERCA DOS CUIDADOS COM MEDICAMENTOS POTENCIALMENTE PERIGOSOS EL CONOCIMIENTO DEL ENFERMERO ACERCA DE LOS CUIDADOS CON MEDICAMENTOS POTENCIALMENTE PELIGROSOS

Karine de Melo Cezar Alves¹, Isabel Comassetto², Elizandra Cássia da Silva Oliveira³, Gabriella de Araújo Gama⁴, Gustavo Henrique de Oliveira Maia⁵, Karla Mariana Cabral dos Santos⁶

ABSTRACT

Objective: to analyze the knowledge of the nurses of the Intensive Care Units regarding the care with Potentially Dangerous Medications. **Method:** this study is descriptive with a quantitative approach to be performed with nurses of the Intensive Care Unit of a reference hospital in the trauma of Recife, Brazil, using the validated Potentially Dangerous Medications Questionnaire. The research project was approved by the Research Ethics Committee of Hospital da Restauração, under CAAE 54823116.2.0000.5198. **Expected results:** to know what care for potentially dangerous drugs nurses at ICUs consider necessary or unnecessary for a safe patient care. **Descriptors:** Patient Safety; Medication Errors; Nursing.

RESUMO

Objetivo: analisar o conhecimento dos enfermeiros das Unidades de Terapia Intensiva acerca dos cuidados com Medicamentos Potencialmente Perigosos. **Método:** estudo descritivo, de abordagem quantitativa, a ser realizado com enfermeiros da Unidade de Terapia Intensiva de um hospital referência em trauma no Recife (PE), Brasil, utilizando o instrumento validado Questionário Medicamentos Potencialmente Perigosos. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa do Hospital da Restauração, sob o CAAE 54823116.2.0000.5198. **Resultados esperados:** conhecer quais os cuidados em relação aos medicamentos potencialmente perigosos que os enfermeiros das UTIs julgam necessários ou desnecessários para uma assistência segura ao paciente. **Descritores:** Segurança do Paciente; Erros de Medicação; Enfermagem.

RESUMEN

Objetivo: analizar el conocimiento de los enfermeros de las Unidades de Terapia Intensiva acerca de los cuidados con Medicamentos Potencialmente Peligrosos. **Método:** estudio descriptivo de enfoque cuantitativo, a ser realizado con enfermeros de la Unidad de Terapia Intensiva de un hospital referencia en trauma de Recife (PE), Brasil, utilizando el instrumento validado Cuestionario Medicamentos Potencialmente Peligrosos. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación del Hospital da Restauração, sobre CAAE 54823116.2.0000.5198. **Resultados esperados:** conocer cuáles son los cuidados en relación a los medicamentos potencialmente peligrosos que los enfermeros de las UTI's juzgan necesario o desnecesario para una asistencia segura al paciente. **Descriptor:** Seguridad del Paciente; Los Errores de Medicación; Enfermería.

¹Nurse, Resident in the Intensive Care Unit, Hospital da Restauração Gov. Paulo Guerra. Recife (PE), Brazil. E-mail: Karine.demelo@hotmail.com; ²Nurse, Master's degree in Nursing, Hospital da Restauração Governador Paulo Guerra. Recife (PE), Brazil. E-mail: elizandra.cassia@bol.com.br; ³Nurse, Ph.D. Professor in Nursing, Federal University of Alagoas/UFAL. Maceió (AL), Brazil. E-mail: icomassetto@usp.br; ^{4,6}Nursing students, Federal University of Alagoas/UFAL. Maceió (AL), Brazil. E-mails: gustavohmaia91@gmail.com; kaarlacabral@hotmail.com; ⁵Nurse, Master's degree student, Graduate Program in Nursing, Federal University of Alagoas/PPGENF/UFAL. Maceió (AL), Brazil. E-mail: gabriellagama@hotmail.com

INTRODUCTION

Patients requiring intensive care are considered at risk for Adverse Events - AEs due to constant hemodynamic changes and imminent risk of death, requiring professionals to provide uninterrupted care, complex care, and immediate decision making.¹⁻²

The progressive concern with the quality of care has become the focus of many health systems around the world to ensure satisfactory patient care.³ Thus, the quality of care is being discussed among health professionals. Health and many challenges from meeting demands efficiently and effectively in the search for excellent care.⁴ Adverse event rates have been incorporated as measures to assess the quality of health services.

Patient safety is a critical component of improving the quality of health care worldwide, as it constitutes a major public health problem globally. Thus, the Ibero-American Study of Adverse Events in Care (IBEAS) was carried out in five Latin American countries between 2007 and 2009. This study showed that 10.5% of hospitalized patients suffer some form of AE, and 58.9% of them could have been avoided. In 2014, there were 31,822 adverse events reported in Brazil, of which 849 were in the state of Pernambuco.⁵

The AEs most commonly impacting on the life of the patient and their family members in the healthcare setting and society are: Health Care-Related Infections-IRAS, medication events, dose or wrong route administration, drug adverse reactions, errors in diagnosis, failure to communicate with professionals, performing surgery on patients being switched or in wrong parts of the body (laterality), and retention of foreign bodies.⁶

During undergraduate nursing, numerous technical procedures were learned that are the competence of the nurse, the technician, and the nursing assistant. Among them, there is the preparation and administration of medicines, as a process involving several steps: medical prescription, dispensation, distribution, preparation and administration.⁷

Currently, for a safe administration of medicines, nine rights were agreed, being, right patient, right medication, the right way, right time, right dose, right record, right action, right form and right answer. The nine rights do not guarantee that administration errors will not occur, but following them can prevent significant part of these events by improving the safety and quality of care provided to the patient during the drug administration process.⁸

Given the high incidence of errors related to the use of medication, it is necessary to emphasize the need for the vast technical/scientific knowledge of the nurse, regarding the manipulation of medications, since some medications have a peculiar risk of plundering the patient when there is a mistake in their use. These are called high-alert medications or high-risk drugs, here called potentially dangerous drugs, given the ANVISA nomenclature.⁹

It is known that about 20 medicines are responsible for 80% of deaths due to medication errors, so they are called Potentially Dangerous Drugs (PDD) or high vigilance or high risk. The occurrence of errors in the administration of these drugs may have catastrophic clinical results, compromising patient safety. The most common types of damage to these drugs include hypotension, hemorrhage, hypoglycemia, delirium, lethargy, and bradycardia.¹⁰

Medication errors (ME) and adverse drug reactions (ADRs) are among the most frequent failures in health care, and it is important to note that these situations could often have been avoided in the three main phases of the medication process - Prescribing, dispensing and administration, which involve multi-professional actions of medical, nursing and pharmaceutical teams.⁶

Direct costs related to the occurrence of acute myocardial infarction cause high expenses due to the execution of additional tests, a significant increase in hospital stay, use of supplementary medications, the need for medical procedures, and the transfer to semi-intensive/intensive therapy units.¹¹

The prevention of medication errors is based on the knowledge, detection, and improvement of health professionals. It is vitally important that hospital organizations identify PDDs as security strategies. Some drugs classified as PDDs are: antithrombotics, hypoglycemic agents, neuromuscular blocking agents, anesthetics, sedatives, intravenous adrenergic agonists, intravenous beta blockers, concentrated electrolytes, opioids, chemotherapeutics, among others.¹⁰

The failure of health systems and institutions to provide satisfactory education and to adjust the knowledge of their professionals in the processes that involve the medicines, determine the formation of professionals with insufficient knowledge, resulting in errors of medication. The lack of knowledge of health professionals is considered one of the factors that contribute to the occurrence of medication administration errors.¹⁰

Receiving quality health care is an individual's right, and health services must provide care that is effective, efficient, and safe with patient satisfaction throughout the process.⁶ Quality emerges as a crucial factor for health services success.

The complexity of the patient and the service in which he is inserted justifies the accomplishment of this study, being the ICU an environment in which PDDs are highly manipulated and the patient susceptible to errors, lacking professionals who understand what care should be implemented to prevent drug-related adverse events, and these drugs are highly vigilant.

OBJECTIVE

- To analyze the knowledge of nurses of Intensive Care Units about the care of Potentially Dangerous Medications.

METHOD

This study is descriptive with a quantitative approach using the validated Potentially Dangerous Medications Questionnaire, applied to the nurses of the Adult General Intensive Care Units of the Governador Paulo Guerra Restoration Hospital, located in the city of Recife, Pernambuco.

The Potentially Dangerous Medicines Questionnaire developed and validated by HSAIO in 2010 with the objective of obtaining an overview of the knowledge presented by health professionals and formulating mechanisms for a future intervention on these medicines. It is self-enforceable, of Chinese origin, composed of 20 statements (17 true and three false) with the answer options "false," "true" and "I do not know." The questionnaire with 20 statements has a total score of 100 points, so each correct answer has a score of five points. The authors of the questionnaire obtained satisfactory validity and reliability results since the questionnaire contains some basic but fundamental concepts about PDDs.¹²

The questionnaire is divided into two domains: medication administration (10 items) and clinical procedures (10 items). The first part of the instrument includes the administration of PDDs, focusing on the routes of administration and their dosages. The second part involved the main clinical procedures related to referenced drugs.¹²

The data began to be collected in June 2016. A representative number of 22 nurses working in these units will be evaluated, and they will be available to respond to the instrument and excluded all nurses who work

in the sector, but who are on leave or vacation during the period of data collection. Participants will be instructed to respond to the instrument in a place of free choice, so it does not interfere with their responses.

After collection, the data will be coded and stored using the Statistical Package for Social Sciences - for Windows Version 11.5 statistical software. The research project was approved by the Research Ethics Committee of Hospital da Restauração, under CAAE 54823116.2.0000.5198.

EXPECTED RESULTS

It is expected to obtain an overview of the knowledge of the nurses of the ICUs about the care with Potentially Dangerous Medicines since these professionals are responsible for manipulating such medicines, as well as guiding and supervising all nursing staff.

The accomplishment of this study will be the inspiration for educational interventions, independent of its results, promoting the prevention of adverse events and the promotion of the patient safety policy, favoring the nursing care in the ICU quantitatively.

REFERENCES

1. Gonçalves LA, Andolhe R, Oliveira EM de, Barbosa RL, Faro ACM, Galotti RMD, et al. Alocação da equipe de enfermagem e ocorrência de eventos adversos/incidentes em unidade de terapia intensiva. Rev Esc Enferm USP [Internet], 2012 [cited 2016 June 16];46:71-77. Available from: <http://www.scielo.br/pdf/reeusp/v46nspe/11.pdf>
2. Inoue KC, Matsuda LM. Dimensionamento de pessoal de enfermagem em Unidade de Terapia Intensiva para adultos. Acta Paul Enferm, 2010 [cited 2016 June 16];23(3):379-84. Available from: <http://www.scielo.br/pdf/apv/v23n3/v23n3a11.pdf>
3. Alves KYA, Costa TD, Barros AG, Lima KYN, Santos VEP. Segurança do paciente na terapia intravenosa em unidade de terapia intensiva. J res: fundam care online [Internet]. 2016 Jan/Mar [cited 2016 June 16];8(1):3714-24. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/3920/pdf_1780
4. Barbosa MTTSR, Alves VH, Rodrigues DP, Branco MBLR, Souza RMP, Bonazzi VCAM. Indicadores de qualidade na assistência de terapia intravenosa em um hospital universitário: uma contribuição da enfermagem. J res: fundam care online

- [Internet]. 2015. Apr/June [cited 2016 June 16];7(2):2277-86. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/3551/pdf_1532
5. NOTIVISA. Sistemas de Notificações em Vigilância Sanitária [Internet]. 2016 [cited 2016 June 16]. Available from: http://www.anvisa.gov.br/hotsite/notivisa/relatorios/tipo_notificacao.html>.
6. ANVISA. Agência Nacional de Vigilância Sanitária. Série: Segurança do paciente e qualidade em serviços de saúde. Investigação de eventos adversos em serviços de saúde. Brasília; 2013.
7. Coberllini V.L, Schilling MCL, Frantz SF, Godinho TG, Urbanetto JS. Eventos adversos relacionados a medicamentos: percepção de técnicos e auxiliares de enfermagem. Rev Bras Enferm, [Internet]. 2011 Mar-Apr [cited 2016 June 16];64(2):241-7. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672011000200004
8. Ministério da Saúde (BR). Protocolo de Segurança na Prescrição, Uso e Administração de Medicamentos. Brasília; 2013.
9. Camerini FG, Silva LD, Gonçalves TG, Lima FM, Thompson ML, Pessoa SCE, Santos CC. Estratégias preventivas de eventos adversos com medicamentos potencialmente perigosos. J res: fundam care online [Internet]. 2013 July/Sept [cited 2016 June 16];5(3):142-52. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/2055/pdf_831
10. Zanetti ACB. Segurança do paciente e medicamentos potencialmente perigosos: adaptação transcultural de um questionário. Dissertação de mestrado. Ribeirão Preto; 2014.
11. Roque KE, Melo ECP. Tempo de internação e a ocorrência de eventos adversos a medicamentos: uma questão da enfermagem. Esc Anna Nery [Internet]. 2011 July-Sept [cited 2016 June 16];15(3):595-601. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-81452011000300022&lng=en&nrm=iso&tlng=pt
12. Hsaio GY, Chen I, Yu S, Wei IL, Fang YY, Tang FI. Nurses knowledge of high-alert medications: Instrument development and validation. Journal of Advanced Nursing [Internet]. 2010 [cited 2016 June 16];66:177-90. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2648.2009.05164.x/pdf>

Submission: 2016/02/16

Accepted: 2017/02/04

Publishing: 2017/08/01

Corresponding Address

Karine de Melo Cezar Alves
Hospital da Restauração Governador Paulo Guerra
Universidade de Pernambuco/UPE
Avenida Agamenon Magalhães, s/n
Bairro Derby
CEP: 52010-040 – Recife (PE), Brasil