APPLICATION OF THE CRITICAL INCIDENT TECHNIQUE IN SURVEY OF MEDICATION ERRORS IN NEONATAL INTENSIVE CARE UNIT

ABSTRACT

Objectives: to apply the Critical Incident Technique in the survey of errors in preparation and administration of medications in the NICU. The specific objectives are: to characterize the situation of the errors of preparation and administration of medications in the NICU for the patients and professionals involved; propose a process of evaluation of adverse events associated with the errors in preparation and administration of medications in the ICU by means of critical incidents. Method: we propose an applied research of descriptive type, with hybrid (quantitative and qualitative) approach, adopting the Critical Incident Technique (CIT). The sample will be comprised of nurses, nursing technicians and nursing assistants in a public Neonatal Intensive Care Unit and data collection will be conducted through semi-structured interview. The data will be categorized and submitted to statistical analysis and content analysis. Expected Results: acquire knowledge of positive and negative incidents associated with the medication errors, behavior and consequences of subjects involved for the patient and professional. Descriptors: medication errors; neonatal intensive care units; nursing; safety management.

RESUMO

Objetivos: aplicar a Técnica dos Incidentes Críticos na levantamento dos erros de preparo e administração de medicações na UTIN; caracterizar as situações dos erros de preparo e administração de medicações na UTIN e os comportamentos dos profissionais envolvidos; discutir as consequências dos erros de preparo e administração de medicações na UTIN para os pacientes e profissionais envolvidos; propor um processo de avaliação dos eventos adversos associados aos erros de preparo e administração de medicações na UTI por meio de incidentes críticos. Método: propõe-se pesquisa aplicada do tipo descritiva, com abordagem híbrida, adotando-se a Técnica dos Incidentes Críticos (TIC). A amostra será composta por enfermeiros, técnicos e auxiliares de enfermagem de UTI Neonatal pública e a coleta de dados será realizada por meio de entrevista semiestruturada. Os dados serão categorizados e submetidos à análise estatística e de conteúdo. Resultados esperados: conhecimento dos incidentes positivos e negativos associados aos erros de medicação, comportamento dos envolvidos e consequências para o paciente e profissional. Descritores: erros de medicação; UTI neonatal; enfermagem; gerenciamento de segurança.

RESUMEN

Objetivos: aplicar la técnica de incidentes críticos en la investigación de errores en el preparo y administración de medicamentos en el UCIN. Los objetivos específicos son: caracterizar la situación de los errores de preparación y administración de medicamentos en la UCIN y los comportamientos de los profesionales implicados, analizar las consecuencias de los errores en la preparación y administración de medicamentos en la UCIN para los pacientes y los profesionales involucrados, proponer un proceso de evaluación de eventos adversos asociados a los errores en la preparación y administración de medicamentos en la UCIN por los incidentes críticos. Método: se propone una investigación aplicada del tipo descritivo con un enfoque híbrido, con la adopción de la técnica de incidentes críticos (TIC). La muestra está compuesta por enfermeras, técnicos y auxiliares de enfermería en una unidad pública de Cuidados Intensivos Neonatales y de la recolección de datos se llevará a cabo a través de entrevista semi-estructurada. Los datos se clasifican y se sometieron a análisis estadístico y de contenido. Resultados esperados: el conocimiento de los incidentes positivos y negativos asociados con los errores de medicación, el comportamiento y las consecuencias que implica para el paciente y profesional. Descriptores: errores de medicación; unidades de cuidado intensivo neonatal; enfermería; administración de seguridad.

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INTRODUCTION

In the hospital environment, the patient safety has generated discussions of global proportions, especially, since the publication, in the year of 2000, of an American report produced by the Institute of Medicine entitled “To error is human: building a safer health system.” This report, which has been a reference for many studies, pointed out that about 44,000 to 98,000 Americans died due to problems caused by errors, which exceed deaths by motor vehicles, breast cancer and AIDS. The medication errors were responsible for killing about 7,000 people a year.1

In Brazil, in 2001, a sentinel network of hospitals was established by the Brazilian Ministry of Health through the National Health Surveillance Agency - Agência Nacional de Vigilância Sanitária (ANVISA), to report adverse events and techniques relating to products used in health the area. Among the interface areas of national policy on risk management, we can find the pharmacovigilance, which aims at the detection, assessment, prevention and notification of adverse events or any issues involving medicaments. Such events may be related to professional practice with regard to the dispensation, distribution, administration, education, monitoring and use of medicaments.2

Because of the peculiar characteristics of newborns and the system of medications in the Neonatal Intensive Care Unit (NICU), these patients are more susceptible to therapeutic errors, especially from the medicinal drug therapy. This is due to the fact that, as they are in risk situations, require the application of high technology, along with the need for individualized medical prescription, based on body weight and gestational age.3

The complexity which involves the practice of medicinal drug therapy and its interfaces in the care of seriously sick newborn, leads us to reflect on the importance of these professionals in this system, since the nursing staff is responsible for preparation, storage, scheduling and administration of medications, being a practice that takes place in nursing.

Medication errors can occur at any stage of system, involving failures of various professionals of the multidisciplinary team. Nevertheless, the nursing staff working directly on the end of the medication process has the opportunity to intercept and prevent an error occurred in the initial processes, which increases the responsibility of these professionals.4,5

The adverse events in preparation and administration of medicaments are a growing factor and increasingly are bringing catastrophic consequences to clients (patients) and various ethical and professional punishments for nurses.6

In this sense, the study object of this project is the human error in the processes of preparation and administration of medications in the NICU, which aims to optimize the management of therapeutic safety.

OBJECTIVES

- Apply the Critical Incident Technique in the survey of errors in preparation and administration of medications in the NICU.
- Characterize the situation of the errors in preparation and administration of medications in the NICU and behaviors of the professionals involved;
- Discuss the consequences of errors in preparation and administration of medications in the NICU for patients and professionals involved;
- Propose a process of evaluation of adverse events associated with errors in preparation and administration of medications in the ICU by means of critical incidents.

METHODOLOGY

- Study design

To achieve these objectives, we propose an applied research of descriptive type, with a quantitative-qualitative approach by adopting the critical incident technique (CIT) based on a methodological framework of Flanagan,7 to guide methodological procedures.

- Setting and subjects

The study will be developed in a Neonatal NICU of type II of a maternity-school linked to a Brazilian federal university. The sample will be comprised of all nurses, technicians and nursing assistants, with professional experience of at least three years, acting at least one year in the NICU of the institution of this research and who agree to participate, spontaneously, in the study.

- Logistics of the study

The data collection will be performed between August and October 2012, through individual interviews using a semi-structured instrument comprised of two parts. The first, with closed questions related to the social-professional profile of the subjects and the
second part comprised of a roadmap for getting the reports of critical incidents (situation, behavior and consequences).

The interview will be guided by the following questions:

1. Think about your work, in a situation you have experienced or witnessed an event that resulted in a medication error to the newborn hospitalized in the NICU.

2. Think about your work, in a situation you have experienced or witnessed an event in which was prevented a medication error to the newborn hospitalized in the NICU.

For each question will be prepared the following questioning:

a. Relate with details what happened
b. What did the people involved do?

c. What is (are) the consequence(s) of this situation for the newborn and the professional(s) involved?

From the material collected, we will proceed to the analysis of reports seeking to identify and categorize the positive and negative critical incidents, following the assumptions of the CIT defined by Flanagan.

The transcription of the stretches with reports of critical incidents will be discussed in the light of the theorists and researchers who study this thematic. The errors, situations, behaviors and consequences extracted from the reports of professionals will be grouped, categorized and the results will be statistically analyzed using SPSS (Statistical Package for Social Sciences), in order to provide descriptive and inferential analysis according to the objectives of the study.

### Ethical considerations

It is a dissertation project of Professional Master Course in Nursing Care - Mestrado Profissional Assistencial em Enfermagem (MPEA) of post-graduate program of the Escola de Enfermagem Aurora Afonso Costa, from Universidade Federal Fluminense (EEAAC / UFF). In compliance with Resolution n.º 196/96 National Health Service - Conselho Nacional de Saúde (CNS), this study project was presented to the Ethics Committee Research - Comitê de Ética em Pesquisa (CEP) of the Maternity- School of the Universidade Federal do Rio de Janeiro for approval on the ethical implications of the proposed research, under the CAAE n.º 05313512.9.0000.5275.

### Expected Results

The expected results include the knowledge of positive and negative incidents associated with the medication errors, behavior of subjects involved and consequences for the patient and professional, thus enabling the creation of specific mechanisms of prevention. The final product generated by the research will be a process of evaluation of adverse events associated with the errors in preparation and administration of medications in the NICU.

### References


