The severity of medication administration errors detected using three different research methods

Nursing-sensitive indicators reflect the structure, process and outcomes of nursing care. Patient outcomes that are determined to be nursing-sensitive improve with greater quantity or quality of nursing care. (ANA 2015.) Medication administration is an important daily nursing task that involves great potential for errors and patient harm.

The aim of this presentation is to describe the severity of medication administration errors detected using three different research methods. The study was conducted in a university hospital in Finland. Three types of data-sets were analyzed: 1) medication-related incident reports (n=671) 2) randomly selected patients' medical records (n=463) using the Global Trigger Tool (GTT) method and 3) observations (n=1058) of medication administration by nurses' which were followed by a review of medical record (n=122). In the secondary analysis, only medication administration errors (MAEs) detected by the three aforementioned methods are analyzed and described.

Of the 671 medication-related incident reports, 39.8% (n=267) were MAEs. The GTT method revealed 153 medication errors, 26.8% (n=41) of which were MAEs. Observation of 1058 medication administration events revealed 235 medication errors, 61% (n=143) of which were MAEs. The severity of MAEs (n=451) was classified using the taxonomy from The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP 1998). The taxonomy's classification of the severity of medication errors (patient outcome) ranges from Category A (no error, no harm) to Category I (error, death).

Most of the MAEs detected (n=443, 98.2%) reached the patient. Still, 62.1% of MAEs did not cause harm to patients (Categories B and C), although 24.2% of MAEs required patient monitoring to confirm the lack of harm (Category D). MAEs that were more likely to cause harm to patients (Categories E, F, H) occurred in 13.7% of cases. When the severity of MAEs were compared using the different detection methods, the observational method revealed fewer MAEs that were more likely to cause harm (3.5%), whereas the GTT method revealed the most MAEs that were more likely to cause harm (22%) followed by incident reports (18%). Pearson's Chi-Square test demonstrated a statistically significant difference in the total number of MAEs detected by the different methods and as well as in the number of MAEs that were likely to cause harm (p < .001).

MAEs are the type of errors that are the least likely to be prevented before reaching the patient. In this study, the documented severity of MAEs depended on the method used. These findings were expected as the GTT method is specifically designed to identify situations that cause harm to patients, whereas the observation method rarely identifies these situations because of the limited time of observations. More information is required to increase the safety of the medication administration process and to prevent harm to patients.

References:

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Härkänen M, Kervinen M, Ahonen J, Voutilainen A, Turunen H & Vehviläinen-Julkunen K. 2014a. Patient-specific risk factors of adverse drug events in adult inpatients – evidence detected using the Global Trigger Tool method. Journal of Clinical Nursing 24(3-4), 582-591. doi: 10.1111/jocn.12714.

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The learner should:

- The learner will be able to realize that nurses play a key role in preventing medication errors before they reach the patient during the medication administration process.

- The learner will be able to understand that medication administration errors are common but usually either does not cause harm or cause only temporary harm to patients

A statement regarding the purpose of the presentation (limited to 50 words):

- The purpose of this presentation is to discuss of the importance of the medication administration process to improving the quality of nursing care and preventing patient harm.

A statement regarding the target audience of the presentation (limited to 50 words):

- All registered nurses working in clinical practice with medication administration duties, nurse leaders, and researchers interested in nursing quality of care and patient safety.

Three (3) keywords that would be useful in searching for the abstract:

Medication administration, patient safety, clinical practice