

Search Strategy

- A computer based search was conducted
 - ✓ Medline, Cochraine
 - ✓ CINAHL, Psycho INFO
 - ✓ British Nursing Index
- keywords were used:
 - ✓ 'Medication Errors' and 'Nursing'



Medications Error Integrative Literature Review



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Medication Errors

- To Err is human: building a safer health system. Institute of Medicine, 1999
- The report estimated that **44,000 to 98,000** people will die each year due to medical error
- Medication errors is one of the major errors occurring in the healthcare systems



Inclusion Criteria for Articles

- Published in peer-reviewed journal
- Medication errors was one of the key concepts of the study
- Full text article is available
- Article published in English language
- Articles published between 2001 and 2006



Themes Emerged from Literature

- ◆ Nurse's perception of medication errors
- ◆ Causes of medication errors
- ◆ Reporting medication errors



Literature Review

- The purpose of LR was:
 - ▶ To review five research articles conducted on medication errors
 - ▶ To understand and expand the knowledge related to causes, strategies to recover medication error



Nurse's Perception of Medication Errors

- Taxis and Barber (2003) found that:
 - Nurses were deliberately violating the recommended drug bolus administration time which is 3-5 minutes
 - Nurses comment to this violation was that this is our routine

Nurse's Perception of Medication Errors

- Stetina, et al (2005)
- Nurses perceived that violation of the patient five rights constitute a medication error
- Administering medication at the wrong time was not truly a medication error

Errors Caused by Reliance on Automated Hospital Systems

- Koppel, R. et al., (2005)
- 1. Information errors generated by fragmentation of data, failure to integrate the hospital several computers and information systems
- 2. Human machine interface reflecting machine rules that do not correspond to work organization or usual behaviors
- 3. Systems are implemented in a hospital, clinicians, nurses, and hospital will not attend that these computerized systems could cause errors

Errors Caused by Reliance on Automated Hospital Systems

- Stetina, et al., (2005)
- Additional antibiotic dose was administered because of erroneous scheduled time was present on automated medication record
- Nurses demonstrate that over reliance on system to prevent errors may engender additional errors potential

Reporting Medication Errors

- Krol, et al., (2003) studied:
 - All medication use variance incidents, and event report from Yale – New Haven hospital during April to June 2000
 - General domains founded in medication errors reports were:
 - Drug Distribution, (e.g. expired medications, wrong medication sent from pharmacy)
 - Computer Entry (e.g. interface time, suspended order).
 - Patient Identification

Reporting Medication Errors

- Stetina, P. et al., (2005)
- Nurses' reluctant to disclose medication errors
- Nurses unlikely to report a medication error, particularly if an error does not result in patient harm
- Most of errors reporting systems rely on voluntary self reporting and are imbedded into automated management systems

Causes of Medication Errors

- Available technology
- Causes related to mistake occurred when drug preparation or administration involve uncommon procedures such as preparation of very small volumes or unusual drug vial presentation
- Causes related to lack of knowledge
- Emergency department a place where nurses experience high risks for medication errors



Causes of Medication Errors

- Taxis and Barber (2003) investigated causes of the I.V medication errors and found that :
 - Most common type of error was deliberate violation of guidelines when injecting bolus doses faster than recommended speed 3-5 minutes
 - Causes related to lack of perceived risk
 - Poor role model



Thank You

