



An Investigation of the Most common Interruptions During Nursing Medication Pass

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Abstract

Research shows that interruptions during medication pass lead to medical errors which can compromise patient safety and quality. This research is a replication study by Pape (2003) that investigates the most common interruptions through observation during medication pass time. The research also investigates the frequency of each type of interruption utilizing a direct observation method.

The theoretical framework of this research is based upon the review of two instrumental engineering theories relevant to health care situations. The theories include the Heinrich Domino theory and Eindhoven's Causation model. Heinrich's Domino theory explains the impact of social environment, in the case of healthcare distractions, using the analogy of dominos pushing each other over as each incident occurs. On the other hand, Eindhoven's Causation model is different because it views the environment as a circle of outside influences rather than Heinrich's linear view of causation. By reviewing these models of accident causation, a framework for the study was established.

For the purpose of this study, interruptions during medication administration is defined as any external factor causing the cessation of product activity before a current task is complete. Such interruptions will include, but are not limited to, phone calls, missing supplies, call lights, malfunctioning equipment, alarms and face-to-face care-related interruptions.

The study employed an observation method. Nurses were observed during a medication pass time. The collection time was set over 4 hour blocks from 8am to 12pm. The observers comprise of a dual team of a Registered Nurse and an Advance Practice Nurse. Using a tally sheet and floor plan designs, the observers remained 4-6 feet away ensuring patient privacy. Guidelines were established to answer any inquiries about the details of the study.

There were 49 observations, with 24 participants. Majority of the participants had 0-4 years experience. There was no dominant age group identified. The top three most common interruptions identified were face-to-face verbal communication (48.6%), supplies (18.3%), and phone interruptions (13.9%). Equipment failure, order clarification safety, change in patient status and other accounted for less than 10% for each interruption.

With these results, three interventions were chosen to be implemented to reduce interruptions during a medication pass. The first intervention would be to educate the hospital staff, patients, and visitors about the extent of this problem. The second intervention is to triage phone calls during medication pass times. The last intervention is to use signage all throughout the hospital especially medication rooms. Effectiveness of the interventions will be performed after implementation of the interventions.

Background



IOM (1999) Medication errors occur frequently in hospitals, yet many hospitals are not making use of known systems for improving safety.



nurses experience high levels of interruptions and distractions in the course of their shift which lead to medical errors (Relihan, O'Brien, O'Hara, and Silke, 2010).

This prompted a group of nurses who is part of a safety improvement team to conduct a replication study by Redding and Robinson (2009) to identify the types and frequencies of interruptions during medication pass that occur in Medical-Surgical units at a Community Hospital.

Definition

Interruptions during med pass was defined as any "external factor causing the cessation of product activity before a current task is complete. Such interruptions will include, but are not limited to, phone calls, missing supplies, call lights, malfunctioning equipment, alarms and face-to-face care-related interruptions. Relihan et al. (2010)

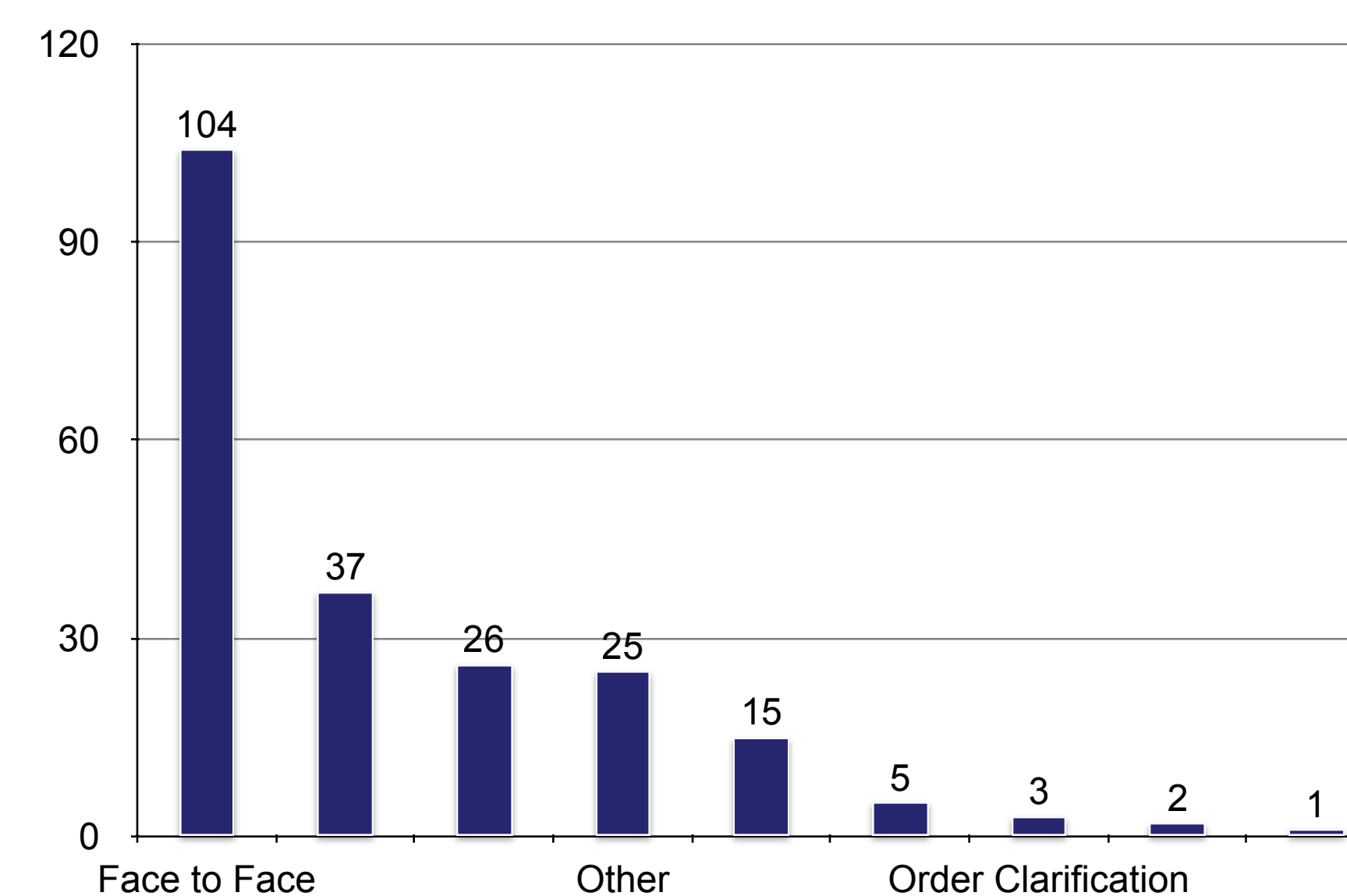
Methods

This is a qualitative observational study. Demographic data includes age, gender, and years of nursing experience of each nurse.

The study involved direct observation of a registered nurse (RN) during medication pass by a dual team including one RN and one advanced nurse clinician (ANC). Using a tally sheet, observers remained four to six feet away ensuring that the observers remain outside of the patient's view. Observers had guidelines to respond to any inquiries about the details of the study to ensure unbiased results. During observation patient information was not disclosed to the observers in order to maintain patient confidentiality. A schedule was created ensuring each RN and ANC were not assigned to the floor they work on in order to prevent biases during data collection. The data collection occurred over four-hour blocks from eight o'clock in the morning until twelve o'clock in the afternoon over a three month period.

Participants signed a consent form then selected randomly to be observed during their shifts. In order to ensure unbiased results, the participants will not be informed of the purpose or intentions of the study.

Results



Interruptions Observed During RN Observation Sessions (n = 49 sessions)

Type of Interruption	# of occurrences	Percentage to total
Change in Patient Status	1	0.5%
Equipment Failure	12	5.8%
Order Clarification	4	1.9%
Phone	29	13.9%
Safety	4	1.9%
Supplies	38	18.3%
Verbal (face to face)	101	48.6%
Other	19	9.1%

Years of Experience of Registered Nurses (RN's)

# of Years	# of Nurses
0-4	10
5-10	4
11-20	5
21+	5

Conclusion

Medication administration in a hospital setting is an important element in patient care. Research shows that when interruptions occur during medication administration, there is higher a probability for errors that may be fatal. This study was aimed to identify the most common interruptions in Medical-Surgical units to institute interventions to reduce these events.

There were 49 observations, with 24 participants. Majority of the participants had 0-4 years experience. There was no dominant age group identified. The top three most common interruptions identified were face-to-face verbal communication (48.6%), supplies (18.3%), and phone interruptions (13.9%). Equipment failure, order clarification safety, change in patient status and other accounted for less than 10% for each interruption.

With these results, three interventions will be chosen to be implemented to reduce interruptions during a medication pass. The first intervention would be to educate the hospital staff, patients, and visitors about the extent of this problem. The second intervention is to triage phone calls during medication pass times. Thirdly is to use signage all throughout the hospital especially medication rooms.

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