Medication Safety Zone to Promote Uninterrupted Medication Administration

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MEDICATION SAFETY ZONE TO PROMOTE UNINTERRUPTED MEDICATION ADMINISTRATION

PURPOSE OF STUDY
The purpose of this evidenced-based project was to reduce interruptions during peak medication administration times (PMAT) of 08:00-10:00 and 20:00-22:00, decrease nurses’ perception of interruptions during PMAT, and reduce late administration of medications during PMAT in a 56-bed Telemetry-Oncology Unit.

CLINICAL ISSUE
According to the report by the Institute of Medicine (IOM), medical errors have been ranked as the eighth leading cause of death in the United States (U.S.).

Each year in the U.S., serious preventable medication errors occur in 3.8 million inpatient admissions.

Literature shows that inpatient preventable medication errors cost approximately $16.4 billion annually.

SIGNIFICANCE OF PROBLEM
Root Cause Analysis identified multiple factors interrupting the medication administration process. Frequent interruptions lead to loss in concentration, a more timely medication administration process & potential medication errors.

LITERATURE SEARCH
Search
PubMed
EBSCO
CINAHL
Key Word Search
Medication Safety
Medication Errors
Medication Interruptions
Three Possible Articles for Replication
(Cooper, 2016)
(Yoder, 2015)
(Flynn, 2016)
Progressive Care Nurses Improving Patient Safety by Limiting Interruptions During Medication Administration

A REPLICATION STUDY
Objectives: To evaluate the effectiveness of evidence-based strategies to limit interruptions during scheduled, peak medication administration times

Methods: The % of interruptions and med errors before and after implementation of EB strategies to limit interruptions were measured by using direct observations of nurses on 2 PCCUs with a 9% until as a comparison

Results: Interruptions (P < .001) and medication errors (P = .02) ↓ significantly in 1 PCCU. Avoidable interruptions decreased 83% in PCCU1 and 53% in PCCU2

RESULTS

Interruption	Pre Days & Nights	Post Days & Nights
Staff	89	19
Patient	59	11
Equipment	59	3
Telephone	57	24
Family	31	2
Student Nurse	22	2
Admission	3	1
Other	47	15
Total	367	77

Survey Questions: All pre-n(90) post n(53)

<table>
<thead>
<tr>
<th>Question</th>
<th>All</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you perceive Physicians, NPs, or PAs interrupt or talk to me?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>2. How often do you perceive Staff members interrupt or talk to me?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>3. How often do you perceive nursing students interrupt or talk to me?</td>
<td>0.035</td>
<td>0.671</td>
<td>0.000</td>
</tr>
<tr>
<td>4. How often do you perceive nursing Faculty interrupt or talk to me?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>5. How often do you perceive starting a conversation or talking in the area?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>6. How often do you perceive there is conversation or talking in the area?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>7. How often do you perceive a missing or wrong medication(s) causes interruption?</td>
<td>0.041</td>
<td>0.267</td>
<td>0.021</td>
</tr>
<tr>
<td>8. How often do you perceive there are loud noises in the area during medication administration?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>9. How often do you perceive an emergency (e.g. Code Blue) interrupts me?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>10. How often do you perceive phone calls interrupt the medication administration process?</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Conclusion/Limitations
- There was a small sample size (n=110) for actual interruptions measured. The data gathered was not to determine significant pre & post test to understand the types of interruption that were occurring.
- The perception surveys were not necessary done by the same nurse.
- Late medications measured did not take in to account daily census, and thus medications could have gone down due to lower census.
- In conclusion, this practice change appears to decreased perceived and actual interruptions during PMAT, providing nurses the time to give medications on time. This project is currently being monitored for success.