Introduction

Patient transition from one unit to another can be a vulnerable time for a hospitalized patient, with potential for error and communication breakdown. These communication failures are a leading cause of sentinel events in hospitals. Nurses are integral in these patient transitions but often lack a standardized handoff approach, putting these transitions at risk for miscommunication errors. This project focuses on implementation of a standardized handoff mnemonic and its impact on nurses’ perceptions of efficiency, safety, and quality of patient handoffs.

Purpose

The purpose of this quality improvement project is to educate, implement and evaluate a nursing handoff program using the I-PASS patient handoff system and determine its effect on nurses’ perception of patient handoffs between pediatric units.

Methods

Design: Pre-test prospective intervention design to evaluate implementation of the I-PASS handoff mnemonic in nursing handoffs between units.

Setting: Implemented on two inpatient pediatric units at a large academic children’s hospital in Baltimore, MD: one general care unit & one post/anesthesia care unit.

Participants: All nurses from both units were given the opportunity to participate and only non-nurse staff and nurse managers were excluded from the study. A total of 25 nurses from both units participated in I-PASS education and pre/post intervention surveys.

Study Aims:

1. Develop a nurse I-PASS handoff education program—nursing workgroup modified original I-PASS material
2. Educate nurses on the I-PASS handoff system—education sessions were conducted. Mot 90% for attendance
3. Implement and evaluate compliance with I-PASS handoff mnemonic—Auditing performed to assess the quality and frequency that each I-PASS element was present at handoff between units
4. Improve nurse perceptions of patient handoffs between units after I-PASS handoff implementation—Nurse Perceptions of Handoff Survey was completed by participants.

Analysis

Descriptive statistics were used to summarize frequencies comparing nurse characteristics by years worked in the institution. Primary outcome data was analyzed using a paired t-test to compare pre and post nurse perception survey scores of handoff. Also performing a one-way ANOVA test, the amount of difference in perception scores by number of years nurse worked was also assessed.

Secondary outcome of interest- Adherence to I-PASS mnemonic: Auditing performed to assess the quality and frequency that each I-PASS element was present at handoff between units.

Adherence to I-PASS mnemonic

A total of 36 handoffs were observed and audited by either investigative team or peer to peer and adhesion rates were collected. The element with the lowest adherence were the contingency plan (63.9%).

Results

Table 1: Characteristics of Nursing Outcomes for the Period of Time Evaluated, n=15

<table>
<thead>
<tr>
<th>Study Aims</th>
<th>Pretest Mean (SD)</th>
<th>Posttest Mean (SD)</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a nurse I-PASS handoff education program</td>
<td>4.07 (0.77)</td>
<td>4.61 (0.93)</td>
<td>-1.54</td>
<td>0.14</td>
</tr>
<tr>
<td>Educate nurses on the I-PASS handoff system</td>
<td>4.07 (0.66)</td>
<td>4.81 (0.67)</td>
<td>-0.92</td>
<td>0.37</td>
</tr>
<tr>
<td>Implement and evaluate compliance with I-PASS handoff mnemonic</td>
<td>4.20 (0.59)</td>
<td>4.93 (0.55)</td>
<td>-3.11</td>
<td>0.004</td>
</tr>
</tbody>
</table>

Summary

Through implementation of this project, this study found statistically significant improvement in overall nurse perception of handoff and specifically with those nurses with <5 years and 5-10 years of experience after I-PASS implementation. As the healthcare environment is changing with the baby boomer generation retiring and new millennial workforce coming in, there are many new nurses at the bedside. Nurses with less than 5 years of experience will soon become the majority of the workforce for this academic medical center’s study site. The need for a more structured process that the newer nurse can hold herself and others accountable to with giving and receiving a safe and efficient handoff is becoming essential as the complexity of patient care escalates. The I-PASS handoff proved to be a predictable way to transfer patient information in a clear and concise fashion that focuses on patient’s stability, medical summary, anticipation of needs thereby lessening variability and potential risk for medical errors and adverse events. Additionally, we saw potential for adherence to the entire I-PASS mnemonic during nurse handoff, which was encouraging. There was no significant difference when audited by “in person” observation or peer to peer evaluation, so the ability to use peer auditing methods for compliance sustainability is imperative for widespread use.

Conclusions

The impact of a standardized communication handoff process was found to be most beneficial in our newest nurses by empowering them to hold those giving and receiving report accountable to each I-PASS element. Our findings support that this evidence based strategy shows promise with standardizing our communication throughout nursing and potentially for other healthcare disciplines as patients transfer from one unit to another. The goal of having all caregivers speaking a consistent language when handing off vital patient information offers an environment in which patient safety and quality is a priority.