Nursing Students’ Knowledge and Training During the Medication Administration Process: A Qualitative Case Study

Kelly J. Betts, Ed.D, MNSc, RN
Clinical Assistant Professor
Assistant Dean for Baccalaureate Education
UAMS College of Nursing
The Problem

• Stress behaviors and anxiety during medication skills
• Insufficient preparation for clinical
• Anecdotal student feedback
• Lack of skills and knowledge on testing and evaluation strategies
The Purpose

• The purpose of this study is to examine nursing student’s perceptions of their knowledge, skill proficiency, and safety during medication administration in the first year of nursing school with the intent of creating a project that may improve nursing student performance and safety of administering medications to patients.
Significance of Problem

- Patient Safety
- Complex Process
- Improvement of healthcare outcomes
Literature Review

- Self Knowledge
- Clinical Stress
- Medication Error/Error Reporting
- Perceived Faculty Support
Research Questions

• What are nursing students’ perceptions of required knowledge needed to safety administer medications to patients?
• What are nursing students’ perceptions of skill proficiency when administering medications to patients?
• How do nursing students perceive their faculty’s instruction of the medication administration process during their nursing courses?
Methodology

• Qualitative Case Study
• Face to Face Interviews
• Interview Script
• Audio taped Interviews
• Thematic Analysis
Participant Demographics (N=10)

• Sex
  – Females = 7
  – Males = 3

• Race
  – Caucasian = 5
  – African American = 5

• Age Ranges
  – 18-25 = 5
  – 25-40 = 4
  – > 40 = 1
Guiding Research Question #1

What are nursing students’ perceptions of required knowledge needed to safely administer medications to patients?

- Preparation before clinical
- Application of theory to practice
- Stress related to complexity of patient condition and number of medications to administer per patient
- Complexity of the Medication Administration Process (MAP) & Fear of errors
## Student Feedback from Question #1

<table>
<thead>
<tr>
<th>Importance of student preparation</th>
<th>Complexity of the medication administration process</th>
<th>Complexity of the patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>“You need to know if the drug mixes bad with other drugs that the patient is taking. They can have different reactions in which could have an effect on the drug or how it affects the person.”</td>
<td>“Making sure it's the right patient, the right drug, right dose, right time, so on and so forth. So to me that’s the most important, just being the proficiency of it and to make sure you are giving the right drug to the right person.”</td>
<td>“I had a patient that refused to take a medication. They told me that they did not want to take the medication, so I vocalized that to the nurse.”</td>
</tr>
</tbody>
</table>
Guiding Research Question #2

What are nursing students’ perceptions of skill proficiency when administering medications to patients?

- Experience multiple emotions: stress, anxiety, lack of confidence, excitement and feeling professional
- Fear of making an error
- Responsibility to report actual or near miss errors
<table>
<thead>
<tr>
<th>Emotional experience of the fear of making error</th>
<th>Responsibility of med error reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Ok, well I first gave some pills, and then I had to give a Heparin shot. The nurse was with me, but I was nervous about giving the shot.”</td>
<td>“Reporting is important because if something is wrong, the physician needs to know, because that is the patient's life and they could definitely be in danger.”</td>
</tr>
<tr>
<td>“I wanted to make sure that everything was right because every week during the summer when we were doing our medication administration in practice, I forgot a step in the process and my instructor, Ms. D. would remind me and make sure that I understood what step I had missed prior to going to the bedside.”</td>
<td></td>
</tr>
<tr>
<td>“I think it was just because it was my first shot that I had ever given. I think I was REALLY nervous! It was fine though, my hands just would not quit shaking...”</td>
<td>“For the most part, I remembered just about everything, though I did forget to check the patient's I.D. bracelet, but I ended up checking it right before I gave the medication.”</td>
</tr>
<tr>
<td>“For the most part, I remembered just about everything, though I did forget to check the patient's I.D. bracelet, but I ended up checking it right before I gave the medication.”</td>
<td>“You admit it as soon as you realize so that bad events are presented. You fill out an incident sheet but do not document it in the patient's chart.”</td>
</tr>
</tbody>
</table>
Guiding Research Question #3

How do nursing students perceive faculty instruction of the medication administration process during their nursing courses?

• Instructor reliance/availability
• Instructor expectations of the students
• Instructor as the safety net
### Student Feedback from Question #2

<table>
<thead>
<tr>
<th>Instructor reliance/availability</th>
<th>Instructor expectations</th>
<th>Instructor as safety net</th>
</tr>
</thead>
<tbody>
<tr>
<td>“In foundations II, our instructor did not want us to do any meds without her present, so she would only pick half of us to give medications and the timing was spread out. I gave a lot of P.O. meds. I was on oncology and renal, so we did a lot of P.O. meds. I felt more confident with that.”</td>
<td>“They are very helpful. Before we even walk into the room, they are like 'What are we giving?' and ‘Why are you giving it?’”</td>
<td>“She has a very Socratic method of teaching and she said that she was just going to “watch you do this and if you make a big error, I will stop you and correct you.””</td>
</tr>
</tbody>
</table>
Study Limitations

- Participants from one location
- Limitations with interactions
- Number of participants
Study Implications

• Better understand how students perceive their knowledge, skill proficiency and patient safety of the medication administration process

• Understand compounding factors that affect this process so educators can better instructor students in the classroom and clinical setting

• To promote social change that provides better educational strategies for nursing students that will promote improved patient safety and health outcomes
How to Better Educate Students

• Collaborative relationships with hospital nurses
• More education for hospital nurses
• More “Hands on” experience with the Medication Administration Process in clinical and simulation
• Capstone Course
• IPE engagement for learning opportunities
• Informatics and EMAR education
References

References Continued


• Chen, J. (2010). Morale and role strain of undergraduate nursing students in a pediatric clinical setting. *Journal of Nursing Research (Lippincott Williams & Wilkins), 18*(2), 144-152.


References Continued


References Continued

References Continued


References Continued


References Continued


References Continued


http://dx.doi.org/10.1016/j.nedt.2013.04.015


