Utilizing DNP students as Graduate Teaching Assistants to train undergraduate nursing students in simulation

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University of North Florida
Purpose

- The purpose of this presentation is to discuss the training program developed for DNP students, who function as graduate teaching assistants in the facilitation of simulation activities with undergraduate nursing students.
- We have received no funding and have no conflict of interest with this presentation.
Objectives

- At the conclusion of this presentation, the participant will be able to:
  - Discuss the gap in literature related to using graduate teaching assistants to train undergraduates in simulation activities
  - Describe the training program for graduate teaching assistants
  - Discuss the challenges and successes of this training program
Background

- There is not a lot of literature on the use of graduate nurses training undergraduates in simulation.
- Studden, Halcomb and Jeffries have explored tools to reduce nursing students' anxiety prior to undergoing an OSCA; Glen and Clark discussed the enhancement of the clinical teaching role, as many new graduates came out with a lack of clinical skills; Gonzalez discussed having graduate nursing students teach undergraduates research skills.
- Many articles discuss the use of teaching assistants and how best to train them, few deal with their use in nursing programs and especially with simulation.
Due to the demand for clinical hours and training in both the graduate and undergraduate programs, the graduate faculty asked the UG faculty if we could use graduate teaching assistants (GTAs) to help with their courses.

The GTAs were all enrolled in the DNP-ARNP tract and were required to complete 30 clinical hours per semester. The nurses came from a variety of background, but all had at least 2 years of recent experience.
Background

- Undergraduate faculty decided that prior to having the GTAs work on simulation activities, we would survey them on what simulation exposure they have had and also provide them with a powerpoint and hands-on training with the simulation manikin.
Survey Results- n=31

- Majority of the GTAs expressed being moderately comfortable working with simulation
- Most had worked with role play and case studies, more so than high and low fidelity equipment, yet no one expressed moderate discomfort at working with the manikin
- 10 expressed that they had some simulation and all but one stated that they would possibly like to learn more about simulation
Q1 - How comfortable are you working with different types of simulation? Please chose your comfort level for case studies.

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Q2 - How comfortable are you working with different types of simulation? Please chose your comfort level for role playing

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Q3 - How comfortable are you working with different types of simulation? Please chose your comfort level for high fidelity, "manikin" simulation.

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Q4 - How comfortable are you working with different types of simulation? Please chose your comfort level for low fidelity, "equipment models"

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Q5 - Have you ever had training in the use of simulation?

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Q6 - What types of simulation have you participated in?

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Q7 - Would you like to learn about simulation training?

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Training

- After completion of the survey, the UG simulation faculty developed a short PPT on basic simulation training (following 20 slides)
- In addition, the faculty met with their assigned GTAs and explained the simulation process for each assigned course. The faculty taught the GTAs how to turn on the manikins, display the scenarios, and set up the rooms.
- We use an online simulation learning system and assign the students a scenario. For the adult health courses, the students are required to complete a pre-quiz and bring the results to the sim lab prior to participating in the simulation. There are 3 students per sim activity. The seniors come and draw a simulation and then must complete a number of steps in order to pass the simulation. These are the only ones graded and the GTAs are taught how to grade the performance.
- The GTAs have the book of simulations and a bag with the room set up supplies.
Simulation Training

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Simulation Learning

- At the conclusion of this instruction, the student will be able to:
  - Discuss the concept of simulation
  - Describe the benefits and problems encountered by simulation
  - Identify one simulation example that would be of importance to undergraduate students
Simulation

- Simulation has been in use for 50 years, however even before nurses were learning skills by case studies, injecting objects and practicing on each other.
- First simulators were used in the military with the Air Force, they put pilots through various scenarios that they could not safely duplicate.
- Anesthesia began the first medical simulators for intubation and emergency procedures
- Computer technology has grown this process with rapid speed.
Simulation Examples

- code blue simulation
- OB scenario
- new nurse orientation

Simulation can be used with a High Fidelity Manikin, low fidelity skills trainer or in Role Play and Standardized patient scenarios
Simulation Manikins, Trainers, Role Play
Simulation

- Think of High Risk and Problem prone areas that are difficult to replicate in the clinical area
- Advantages:
  - Allow errors to develop
  - Structure time management
  - Critical thinking scenarios and work through of patient problems
  - Allows multi-disciplinary input
  - Improves skill performance
  - Identifies problems
  - Gain self-confidence and learner satisfaction
  - Gain feedback through debriefing
  - Cost-effective? How?
Simulation

- What disadvantages might there be??
  - Time to set up and develop, faculty and staff to run
- Investment cost
  - Manikins are costly
- Faculty use and by in with equipment
  - Faculty training on equipment use, some are afraid to use or skeptical of the benefit
- Learning curve for equipment use
- Lab personnel?
  - Can you afford it
- Ownership of the lab, who cleans, who orders supplies, owns the schedule?
Situated Cognition Framework

- High Fidelity Simulation (HFS) provides cognitive training within a particular situation
- Students may be briefed ahead of time or review the scenario
- Construct meaning and make critical thinking judgments
- Bridge from theory to practice and social interaction
Simulation Models

Cognition

Jeffries Model

Figure 1: The model of pedagogical reasoning and action. Adapted from Wilson, Shulman and Richert (1987)
Benefits

- Multiple types of learners can benefit:
  - Visual/spatial, aural/auditory, verbal, physical/kinesthetic, logical, social and intrapersonal
  - Generational differences - all in it together!
- Best way for skill acquisition in a non-threatening format
- Provide exposure to high stress, high risk and difficult skills without patient risk and without faculty interaction
Problems

- Time for training and development
- Technology - how realistic is it, are the supplies correct
- Cost of equipment and supplies
- Where to house it, space needed - is there enough room
- Scenario must be realistic, research the literature
- Number of students to take through and time for that
- Support from providers
- Is this an acceptable solution to some clinical situations?
AACN Standards for Simulation

- Standard 1- Development of Skills
  - Clinical judgment
  - Clinical Reasoning
  - Problem Solving
  - Psychomotor skills
AACN Standards

- **Standard 2-**
  - Professional integrity, confidentiality, mutual respect, say will not show recordings
- **Standards 3, 4, & 5 - Participant Outcomes**
  - Focus on experience level
  - Look at KSA - knowledge, skills and attitudes
  - Facilitator to guide and manage objectives
- **Standard 6**
  - Debriefing - reflective thinking, critical thinking questions, knowledge transfer and heightened self-confidence
Consider Different Types of Simulation Experiences

- What types of simulation experiences would you develop?
- Could community be incorporated?
- How could interdisciplinary models be brought in?
- Could family interaction be used?
- Could psych and pharmacology use this?
- How many students would you use?
- Can they bring any resources?
- Should they chart? And how?
Simulation Process

1. Pre-brief the students
   - May do a pre-test off of a standardized scenario
   - Morning, you:
     - Review the case study
     - Explain the objectives, what do you want them to get from the scenario
     - Show them where everything is in the room
     - Show them how to work the monitor and IV pump or other equipment
     - Answer any questions

2. During the scenario
   - Review the case study yourself
Simulation Process

- Set the parameters on the monitor screen, vital signs, breath and heart sounds, telemetry
- Select the voices or use your own voice
- STAY in character, even if the student laughs, try to stay in character and ask them questions to guide them
- DO Not give them too much information too quickly, let them think things through
- You can quiz them on: “How are you going to flush that IV line?” or “How are you going to hang that medication?” or “What will you say if the patient asks you...?”
Simulation Process

- Allow the students to make mistakes
- Answer the phone in a timely manner and be prepared to give orders, if you forget something, call them back
- You may hang up if they are not prepared or do not follow the SBAR protocol
- Be Professional, make sure that they are as well and stop them if they are not staying in the scenario
- Usually the scenarios last 20 minutes, but you can allow them longer to ask questions and understand the process
- Once they have no more questions and have recovered the patient, then complete the scenario and ask them to come to debriefing
Debriefing

- Introduction:
  - Tell them it is safe to discuss their feelings
  - Tell them they may see a video
- Sharing of personal reactions:
  - How do they feel they did
  - Did it go like they thought it would?
  - Would they do things differently?

- Discussion of events:
  - Review how did they do in the scenario- talk about Assessment, SBAR, Skills, Evaluation
  - Focus on the patient, interventions, outcomes
  - What went wrong and what went right
  - How did the team work

- Wrap-up:
  - What did you learn from this
  - What do you need to work on
  - What was really good about the process
Debriefing

- Very important process
- Take your time, you should go through the entire scenario
- Let them see how they interact with the patient
- Talk them through things, like why did you do this
- Instructor learns a tremendous amount!
# Simulation Rubric

Your simulation lab will last one hour and will also require documentation on the CERNER system. Prior to coming please review assessment skills and techniques. The scenarios will be randomly assigned and will be based solely on medical-surgical patients. You should also familiarize yourself with SBAR (situation, background, assessment and recommendation). You also should look at the CERNER forms prior to coming so that you know what to document. You should make notes while in the room, so that you can correctly document your assessments. You will be graded on the following:

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<th>What to include</th>
<th>Percentage</th>
<th>Score</th>
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<tr>
<td>Introduction</td>
<td>Introduce self, PPE, explain why you are there</td>
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<tr>
<td>Assessment</td>
<td>Appropriate ROS and assessment, include vital signs and note changes</td>
<td>25</td>
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<tr>
<td>Planning</td>
<td>Identify patient needs, contact MD using SBAR and obtain orders</td>
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<tr>
<td>Intervention</td>
<td>Perform skills based on MD orders, may be IV insertion, NGT or Foley insertion, med administration with po, SQ and IV meds</td>
<td>20</td>
<td></td>
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<tr>
<td>Evaluation</td>
<td>Correctly evaluate patient status and call for changes if needed</td>
<td>10</td>
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- Used only on senior students- graded
- Posted on Bb
- Scenarios were chosen when they arrived from a list of 20 possible
- Scenarios were from NLN and Evolve
GTAs Reflections

1. Do you believe simulations are beneficial to students?
2. What simulations are most beneficial?
3. Any suggestions to improve?

Sent at the after they have been working with simulations for the semester
Responses

- Question 1.
  - “Simulation is a benefit for exposure to real world practice and problems they may encounter”;
  - “I was a paramedic prior to coming to nursing school and we learned most of our training in these types of simulations”;
  - “It enables them to use their critical thinking under pressure”;
  - “helps the students build confidence and work as a team”;
  - “It helps them interact with patients, families and the healthcare team”;
  - “It helps them to learn to prioritize and it helps us to learn to prioritize as well!”;
  - “Simulation helps the students and us learn the importance of clear communication and SBAR”
Responses

- Question 2:
  - “I think they were all helpful”  
  - “Scenarios with rare situations are not that helpful, but I haven’t seen any of those yet”  
  - “I think the situation with V tach and various dysrhythmias is very helpful”  
  - “I think GI bleed scenario is most helpful”  
  - “I think simulations on specific patient illnesses, like COPD, CHF and diabetes are most helpful”  
  - “The ones that contain the most commonly used medications are most helpful”
Responses

Question 3:

“Remind the students it is a real life scenario and treat it that way” “They forget to check the arm band and do the 5 rights of med administration” “More scenarios that involve critical thinking and emergency responses” “Simulations that make them think about why they are doing certain things, like why the kayexelate and how is it secreted” “Central line dressing changes, foley placements and med passes are very important” “A hypotensive patient after administering too much BP medication, what do you do?”
Challenges and Success

- Verbally, the students have responded positively to having the GTAs this semester. They say that they feel more comfortable, not as scared and really like that the GTAs provide real world experience. They have said that the GTAs are fair and they have learned a lot from them.

- However, the first time that we used GTAs, we did not have the PPT in place and faculty was just beginning the training, we found that some GTAs did not take the simulation seriously and students complained that they were heard laughing, not paying attention and at times being very critical of their performance. I had to step in and meet with the GTAs to discuss their behavior and then sit in on their performances.
Going Forward

- With the incorporation of the Survey and PPT, as well as the hands on training, the current GTAs are very professional, take the scenarios seriously and really want to do a good job. In fact a number have asked if they can continue to help because they learn a lot from the scenarios.
- I continue to survey the students and have had positive responses with all groups.
- This is a win-win experience and we hope to continue this process