

UTILIZING SIMULATION TO ENHANCE LEARNING IN CLINICAL PHARMACOLOGY: A PILOT

HEALTH PROFESSION DIVISION
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PROBLEM

Students had difficulty integrating the scientific knowledge of pharmacology with nursing knowledge.



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PURPOSE



The purpose of the pharmacology simulation was to promote safety in medication administration, improve clinical judgment, and assist in the development of critical thought processes that can be transferred to the clinical environment.

CONSTRUCTIVISM LEARNING THEORY



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Active engagement
Reflection
Critical thinking

SIMULATION OBJECTIVES



The student will be able to:

- Link the scientific and nursing principles of pharmacology with each other, and with clinical practice.
- Apply Joint Commissions safety standards when administering medications.
- Demonstrate the adherence of infection control guidelines when performing nursing care.
- Use the ISBAR technique for communication.
- Calculate accurate medication doses.
- Perform a physical assessment as needed prior to medication administration.
- Demonstrate the understanding and application of the drug family framework.

RESOURCES FOR SCENARIO IDEAS

- Reviewed course objectives and course content
- Past and present learner experiences
- Psychomotor skills (competency exam)



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STANDARD OF BEST PRACTICES



- Professional integrity of the students
- Learner needs (knowledge, skills, expected outcome)
- Facilitation methods
- Debriefing process
- Evaluation process

INCORPORATING QSEN COMPETENCIES



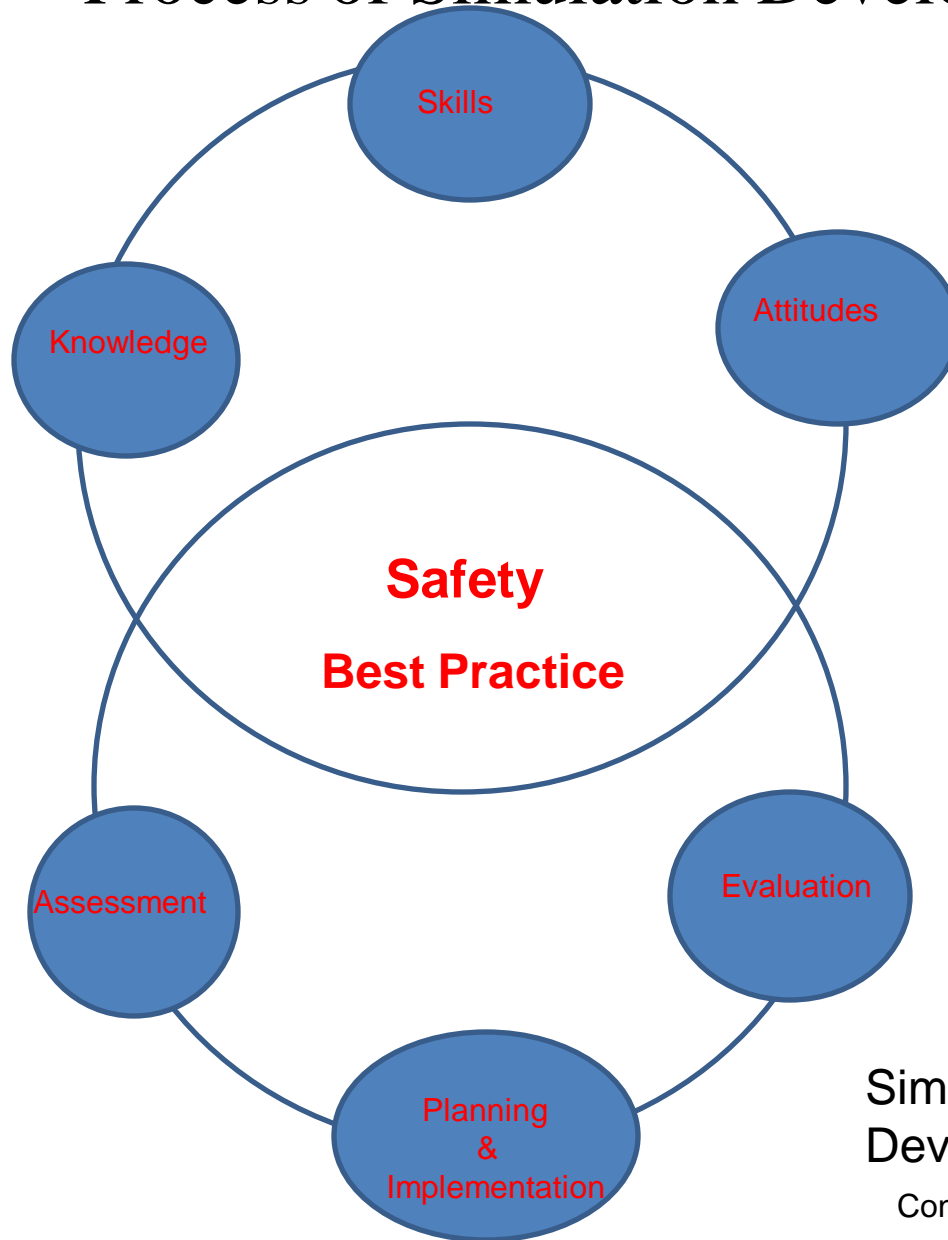
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- Safety
- Teamwork and Collaboration
- Informatics

- Communication

Building A Pharmacology Scenario

Process of Simulation Development



Simulation Scenario
Development Model (SSDM)

Connor, Derby-Davis, 2012

THE SIMULATION EXPERIENCE



- I. Divided into pairs
- II. Provided a short shift report
- III. Provided with physician orders, medication administration record, nurses notes, laboratory, and diagnostic results
- IV. Provided with IV , PO medications, equipment and supplies.
- V. Note (monitors were turned off to encourage the student to physically take vital signs

CRITICAL ELEMENTS



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Safety

Collaboration

Communication

Delegation

Teamwork

Debriefing Strategies

Direct Constructive Criticism	Reflection Based on QSEN Competencies
The report you gave was missing very important information. How will the nurse know what is going on. You need to use the SBAR	How could you have ensured that your report included all the information needed so that the receiving nurse could provide safe care to the patient?
Why would you do it that way?	Is there a scientific basis for how you are doing it?
You need to be more careful	What aspects of your practice in this situation would you change in retrospect to provide safer patient care?
You are demonstrating unsafe nursing practice	If you were the patient, what would you be concerned about in this situation?
I want you to do three checks with medication administration, verifying it against the medication administration record and use the five rights as a way of decreasing potential errors	What strategies can you use in your own practice to minimize the risk for this type of error in the future?

OUTCOMES OF DEBRIEFING



- Enhances learning (critical thinking and problem solving)
- Heightened self confidence
- Increased understanding of concepts
- Promote knowledge transfer from class to simulation lab
- Highlight best practices
- Promote quality patient care

SIMULATION EXPERIENCE: MAJOR DEFICIENCIES



- Not using resources
- Task oriented
- Difficulty looking at bigger picture
- Problems with assessment skills
- Safety (Mechanics of medication administration)

SIMULATION EXPERIENCE: IDENTIFIED STRENGTHS

- Communication with patients and peers
- Worked well together as a team
- Collaborated well together
- Improved clinical reasoning



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Students Feedback

Survey Questions	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
Did your knowledge guide the decision making process	4	8	18	14	9
Did your skills affect your performance	5	10	16	12	10
Did your attitude influence your motivation	1	3	14	15	9

STUDENT COMMENTS

COMMON THEMES



What did you enjoy during the simulation experience?

- working in pairs
- the practice and learning experience
- real-life scenario
- feed-back during debriefing
- we were not rushed

What made you anxious during the simulation experience?

- being watched by everyone

What would you change in the simulation experience?

- observed by the professor only
- preparation prior to simulation
- more simulation experiences

WHERE DO WE GO FROM HERE



- Develop a research proposal
- Integrate pharmacology simulation throughout the nursing program.



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