The Lived Experience of Nursing Faculty Teaching Nursing Students to Manage Medications

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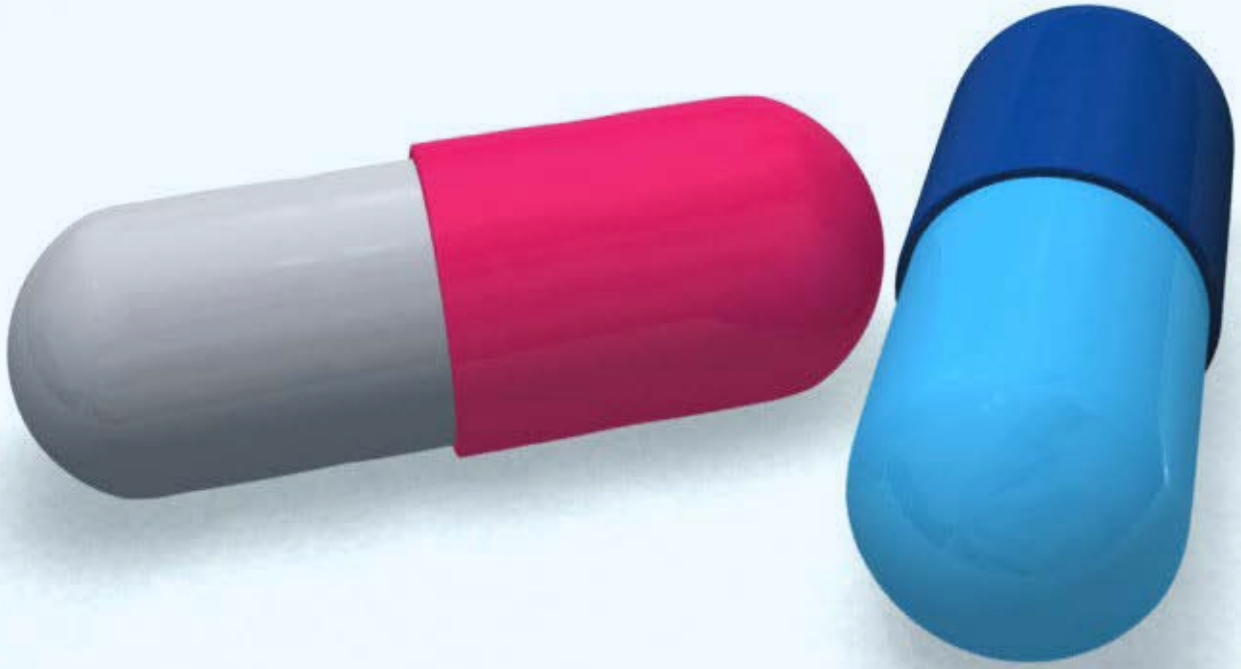

Disclosure

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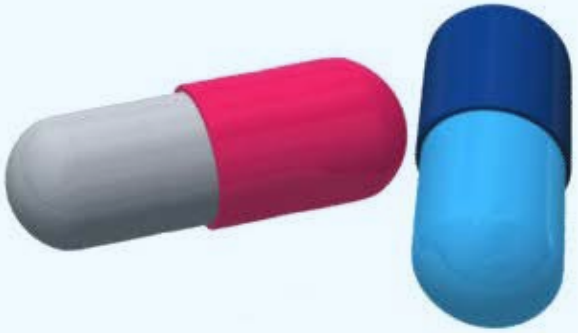
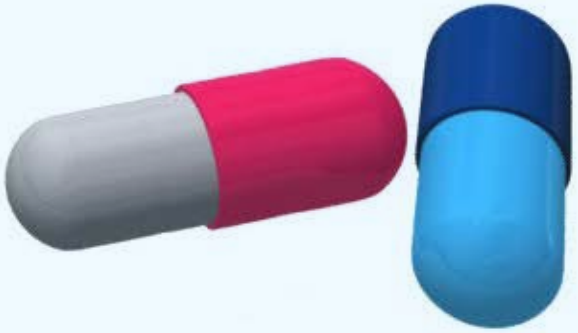


Objectives

Participants will be able to:

- -describe what is meant by medication management.
- -discuss current issues with teaching nursing students to manage medications.
- -discuss implications of teaching nursing students to manage medications.

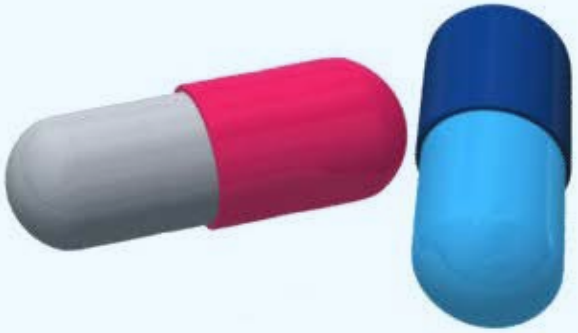


Historical Context

- Institute of Medicine
  - *To Err is Human – 2000*
    - *96K dead from mistakes*
  - *Crossing the Quality Chasm – 2001*
    - *Health care must be safe*
  - 20 priorities for quality improvement – 2003
    - preventing medication errors
  - *Preventing Medication Errors – 2007*
    - Reduce medication errors
    - Improve healthcare quality

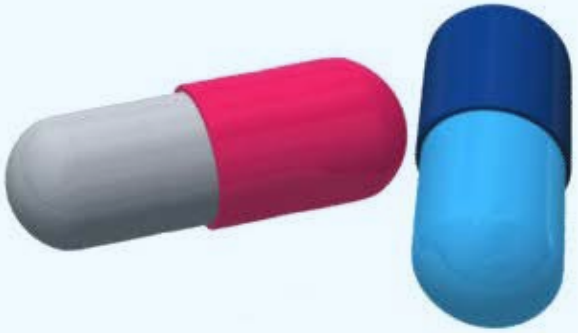
Statement of the Problem

- Medication management errors are a world-wide problem resulting in much unnecessary suffering and death.
- The naiveté inherent in nursing students has the potential of contributing to placing patients at greater risk of medication management errors.



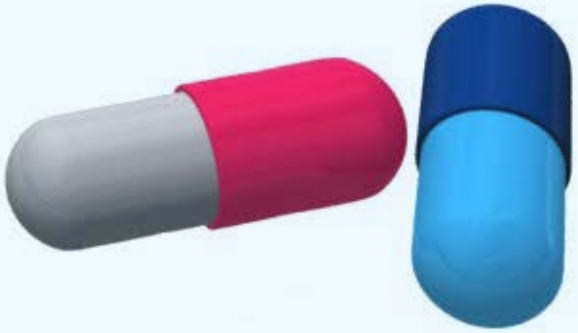
Research Questions

- What is the lived experience of nursing faculty teaching nursing students to manage medications?
- What educational strategies, techniques, and activities are being implemented by nursing faculty members to teach nursing students to manage medications?
- How are the educational strategies, techniques, and activities that are being implemented by nursing faculty members to teach nursing students to manage medications being evaluated?



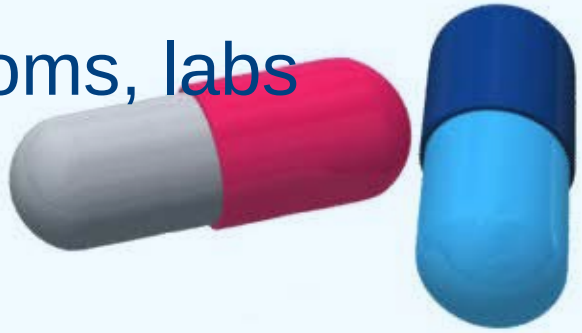
Research Design

- Phenomenology – methodological
- Moustakas
  - Transcendental Phenomenology
- Interpretive – seeks understanding
  - Epoche [bracketing]



Sample and Setting

- Sample
  - Must have had experience with study phenomenon
  - Purposive sampling
  - 9 participants
    - Saturation reached after 7; 2 more for confirmation
- Settings
  - Faculty offices, classrooms, labs



Data Collection Procedures

- IRB/Informed consent
- Semi-structured interviews
  - 45-60 min, audio recorded, researcher notes post-interview
- Transcription
  - Reviewed and analyzed
- Member check
  - 30 min, assure accuracy, give feedback

Participant Demographics

Nursing Faculty Position: Full-Time= 9; Didactic= 9; Clinical/Lab= 9

Type of RN Program: Generic BSN= 9; RN-BSN = 1; Accel. BSN= 1

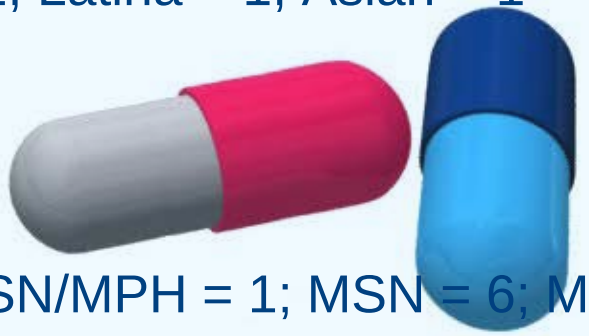
Years as Nursing Faculty: Range 2 – 39 years; Mean 13.6 years

Experience with RN Student Medication Errors: Yes= 3 No= 6

Age: 36-45= 2; 46-55= 3; 56-65= 2; > 65= 2

Race: White = 6; African-American = 1; Latina = 1; Asian = 1

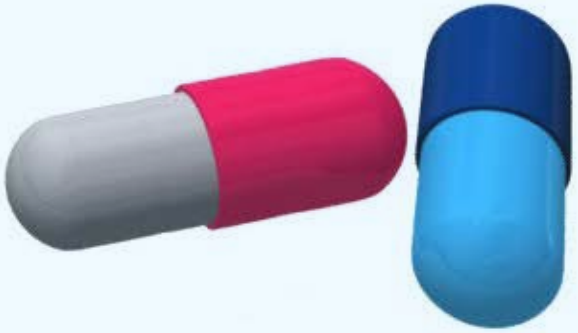
Sex: Female = 9



Highest Degree Earned: PhD = 1; MSN/MPH = 1; MSN = 6; MA = 1

Results

- 3 Themes each with Sub-Themes
  - Thinking
    - Cognitive Teaching; Dosage Calculation
  - Practicing
    - Focusing; Improvising
  - Evaluating
    - Testing; Dosage Calculation; Clinical/Simulation



Results for Thinking Cognitive Teaching

Nurse 1 described some of her medication management teaching strategies this way:

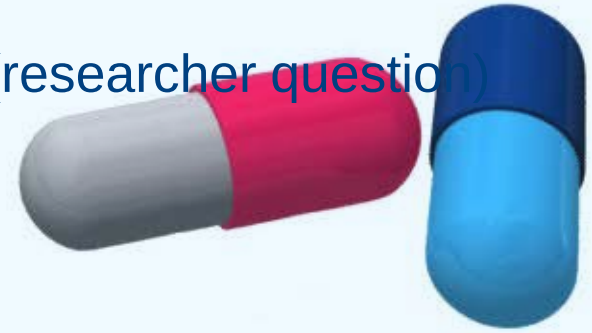
"… there is PowerPoint … and there are lectures that we have on the web that they listen about the meds...that's pretty much on their own and then when they come into class it's interactive so they also have case studies they have to do and these case studies that they present in class they have to know their medications uh the side effects and what medications you give for certain diagnoses. … during clinical...we talk about medications we talk about the side effects and if their patient is showing any side effects....what kind of medications we give if there are side effects....how we handle them …"

Results for Thinking Dosage Calculation

- Inconsistent Application
  - Nurse 2 said “Absolutely at the start of every semester the students have to take a dosage cal exam. They have to get a ten out of ten. They have three attempts to achieve that ten out of ten. They do not achieve ten out of ten or a 100 on the dosage cal they will be asked to sit out for the semester and they come back next trimester and try it again.”
  - Nurse 3 said “If they don’t pass it then they are out of the semester .

    So they have to get 100 on it? (researcher question)

    No 90. They can miss 1.”

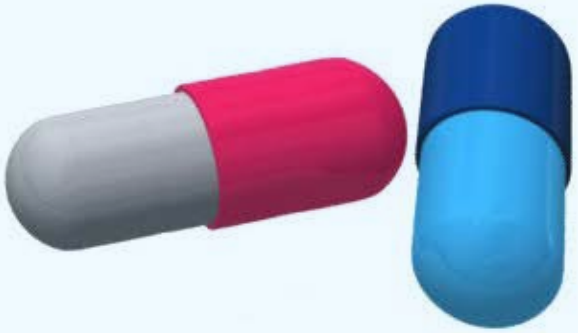


Results for Practicing

- 3 participants – no medication management practice
  - Nurse 4 said “In clinical the students can discuss the meds that they see with the faculty. …, we see it in their databases, simulation, observation …”
  - Nurse 5 said “We usually have one day of clinical, nine to ten hours of clinical per week. So that they have to wait even if they have seven to nine clinical days they might have to medication administration one or two times…”

Results for Practicing

- Focusing
  - On including medication management in clinical simulations Nurse 6 said “It’s a portion of a scenario. They have to (do) assessments and interventions and part of the interventions are med administration.”

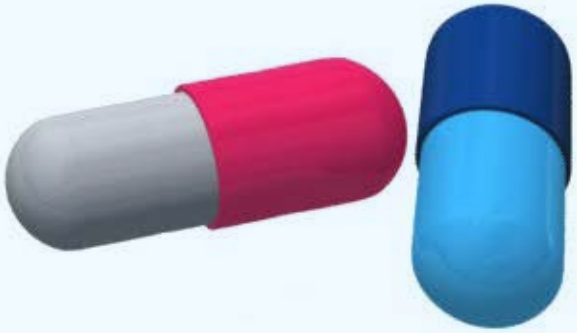


Results for Practicing

- Improvising
  - Nurse 7 describes how the lack of technology requires improvising: “Uh the only thing that I think is different is that in the lab we have a med box that they can go in the med box and pick out the medications that they need.... Where as in the hospital they have what they call it that Pyxis machine where the meds are... [In the hospital] usually they don’t take the meds out of the box it’s the nurse in charge of that patient on the floor and puts the meds in a baggie and gives it to the students”

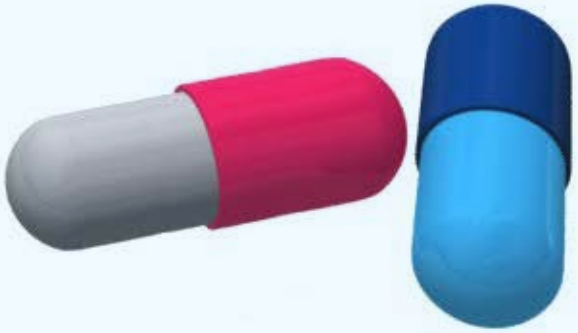
Results for Evaluating

- Testing
  - Nurse 8 describes medication management testing: “What I found the exam is more traditional. Its multiple choice...true and false, sometimes fill in the blank”
  - Nurse 7 concurred with Nurse 8: “… our exams, uh in lectures we give lecture exams, multiple choice questions. And situation and occasionally we put in a fill in the blank.”



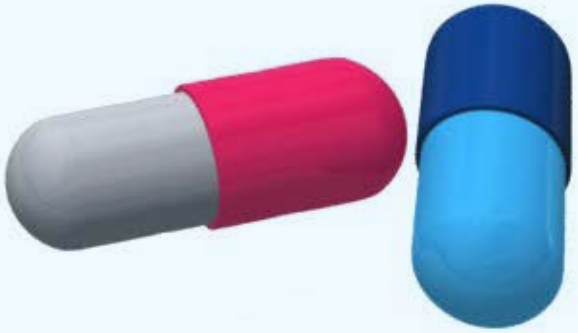
Results for Evaluating

- Dosage Calculation
  - Done using traditional exam techniques
  - Nurse 6 said “Yes just the dosage calculations we have fill in the blanks …”



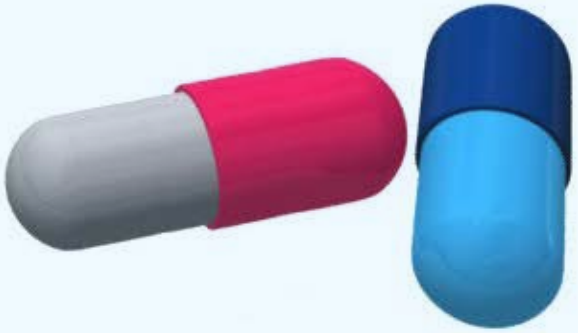
Results for Evaluating

- Clinical/Simulation
  - Nurse 9 describes clinical/simulation medication management evaluation: "… it's a lot of formative evaluation. Do you give this medication correctly today?...rather than a summative it's a long process....a number of the courses have medication component in the clinical evaluation … was the student able to do it. And it's basically a satisfactory unsatisfactory."



Interpretive Analysis of Thinking

- Participants describe good job of cognitive teaching
  - Lecture, PPTs, case studies, audience polling

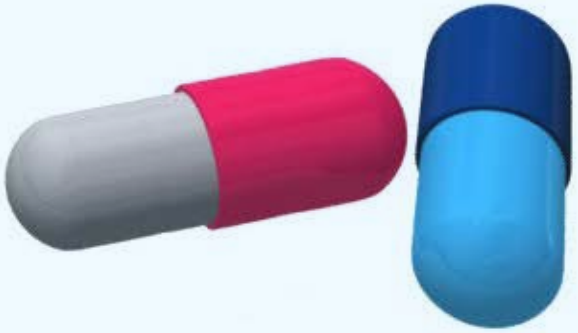


Interpretive Analysis of Thinking

Dosage calculation issues

- Level of proficiency
  - nursing literature some authors cite 90% as being adequate to success on high-stakes dosage calculation exams (Harris, Pittiglio, Newton, & Moore, 2014; Koharchik, Hardy, King, & Garibo, 2014) while others cite 100% as being the goal for success (Bourbonnais & Caswell, 2014; Roykenes & Larsen, 2010).
- Rounding
  - ¼ ≠ 0.3; ⅓ ≠ 0.3; ¾ ≠ 0.8

- No standard available



Interpretive Analysis of Practicing

Focusing

- Need more, more realistic practice
  - Other research also indicates that regular practice improves students' basic nursing skills (Ozturk, Caliskan, Baykara, Karadag, & Karabulut, 2015).
  - Clinical instructors are instrumental in focusing students' thoughts and enabling students to perform medication management activities in the clinical setting (Valdez, de Guzman, & Escolar-Chua, 2013)
  - More than half (54%) of the students who participated in an objective structured clinical examination simulation exercise committed medication management errors (Cummings, 2015)

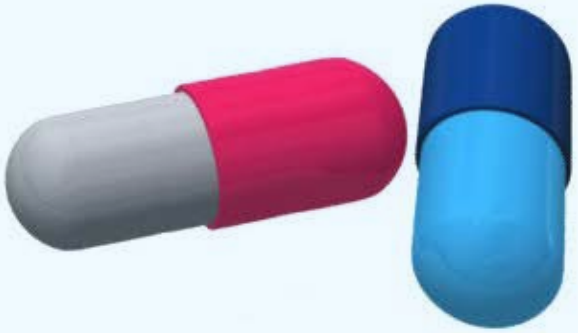
Interpretive Analysis of Practicing

Improvising

- The ever increasing use of technology in nurses' medication management practice has been shown to interfere with nursing students ability to manage medication in the clinical setting (Orbaek, Gaard, Fabricius, Lefevre, & Moller, 2015).
- Ferguson, Delaney, and Hardy (2014) found that implementing the use of an automated medication-dispensing system in their clinical simulations increased their students' confidence at medication administration and could contribute to decreasing medication management errors.

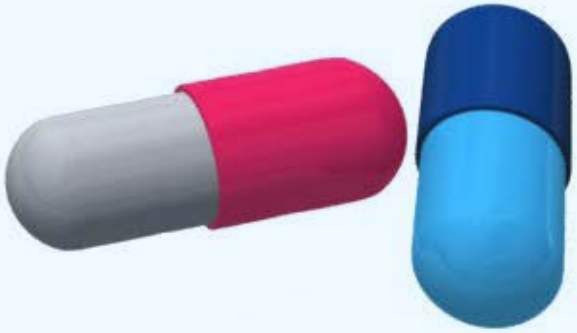
Interpretive Analysis of Evaluating

- Doing a good job of evaluating the cognitive knowledge of medication management.
  - Including dosage calculatation
- Clinical/simulation evaluation more subjective
  - One way to evaluate students' medication management skill is through the use of objective structured clinical examination (OSCE) (Cummings, 2015: Meechan, Jones, et al., 2011; Raurell-Torreda, et al., 2015)



Interpretive Analysis of Evaluating

- Including realistic dosage calculation exercises as part of clinical simulation could help students develop improved dosage calculation skills (Harris et al., 2014; Koharchik et al., 2014; Weeks, Higginson, Clochesy, & Coben, 2013)

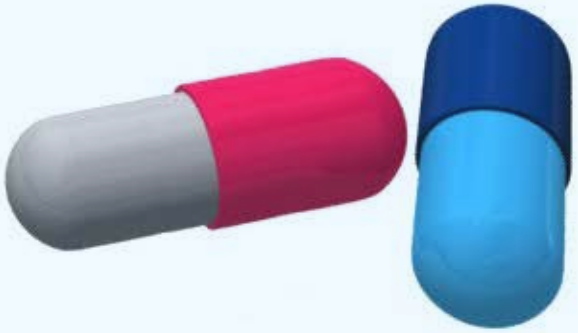


Implications

- Improve patient safety
- Nursing Education
  - Evidence to support curricular decisions
- Nursing Practice
  - Reduce incidence of medication errors
- Nursing Research
  - How should we teach medication management
- Health/Public Policy
  - More, focused medication management simulation

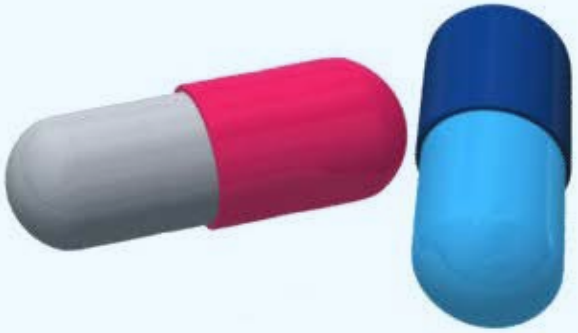
Strengths and Limitations

- Limited generalizability
- Small sample size
- Transferability to similar circumstances
  - Demographics aid in transferability
- Researcher as instrument



Recommendations for Future Research

- Can “virtual simulation” provide the same benefit as high-fidelity simulation?
  - Reduced cost, increased opportunity
- Does including realistic dosage calculation in medication management simulation improve performance on dosage calculation exams?



Conclusion

- Medication Management has potential for patient morbidity and mortality.
- Student nurses do not know how to manage medications safely upon graduation.
- Providing more practice managing medications in more realistic settings could better prepare nursing students to safely and effectively manage medications upon entry to the workforce.

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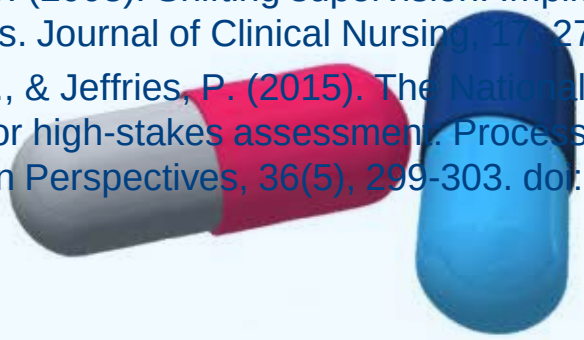

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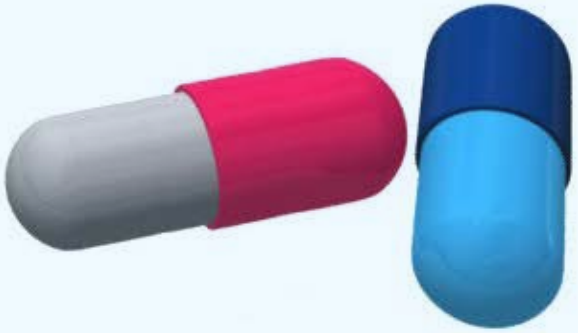

Thank You