



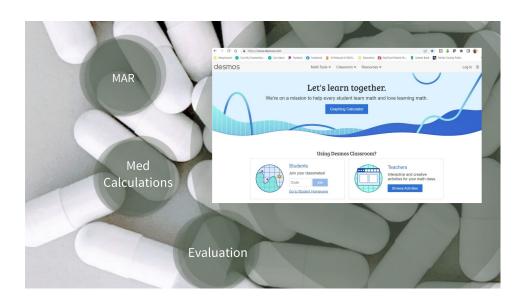
Factors affecting dosage calculation competency

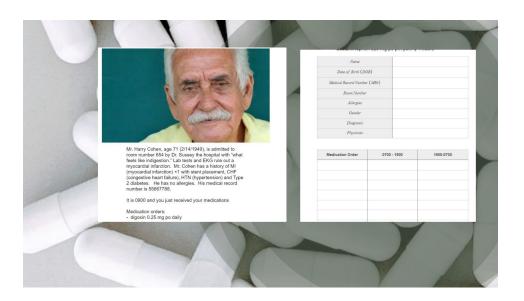
- Lack of knowledge of essential math skills
- Difficulty with applying math skills to dosage calculation problems
- Clinically relevant instruction
- Lack of reinforcement of dosage calculation skills throughout the program

3.

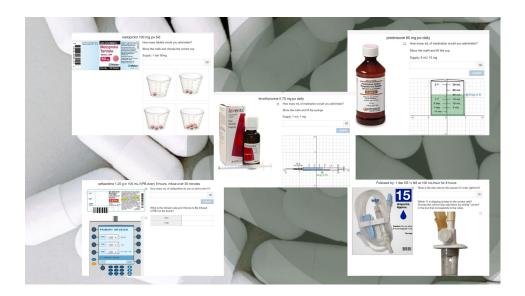
• (Bagnasco et al.2016; Young et al. 2013)





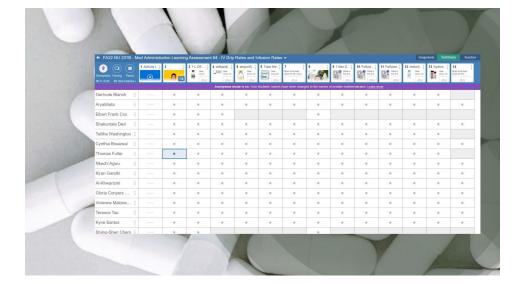


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5.







Methods

Study design: mixed methods exploratory descriptive survey design

Methods: Data was gathered through the use of a secured google forms link. Marymount University IRB procedures were followed and approval was given. The variable student confidence was measured by using a dosage calculation skills inventory. This inventory measures students' confidence level with essential math and dosage calculation skills based on a Likert scale. The inventory include open ended questions asking the student to describe math beliefs and how the experience of the teaching strategy supported their development of confidence in dosage calculation

Sampling: BSN and ABSN nursing students were recruited from Spring 2021-Spring 2022. A total of 52 students were recruited with n=12 study participants. Students were given a consent via the online googles form.

Data Analysis: Descriptive statistics and measures of central tendency were used to analyze quantitative data. Grounded Theory methods were used to analyze qualitative data.

11.

Quantitative Data - Types of Calculations **Standard** Deviation Type Mean Dose calculation 0.797724035 Weight based peds 0.937436867 4.166666667 Weight based adults 4.333333333 0.651338947 Safe therapeutic range 4.583333333 0.651338947 IV flow rates gravity 3.666666667 0.651338947 IV flow rates pump 4.166666667 0.240999602 Special IV Fluids Critical Care 1.66666667 2.015094554 Special IV Fluids Maternal 1.166666667 1.64224532

Qualitative Data Describe you experience with previous math classes. Most common theme: Struggle Which of the following strategies most supported your learning: Desmos, medication skill labs, review/remediation/study hall? Most common theme: Review/ remediation/ study hall How did the strategies support your learning? Most common theme: Repetition, explanation

Limitations
Sample size
No previous assessment data for comparison
Student repeated class
Clinical course
Variability in review and study sessions
Online/hybrid teaching methods



13.

Recommendations include:

• Assessment of and remediation of essential math skills prior to entry to the nursing program to intervene earlier.

• Math course prior to the nursing program.

• Continue with med math advisor role to support students in the program.

15. 16.

Future Research

- Secondary analysis of students competency quizzes as they progress through out the program to see if there is improvement in competency.
- Med math competency as a predictor of success in the nursing program.





References

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