Enhancing nursing students' readiness for professional practice with multi-patient simulations using telehealth to create opportunities for interprofessional collaboration

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BACKGROUND

New nurses must be able to effectively collaborate with other members of the healthcare team.

Simulation can provide valuable experience with interprofessional collaboration (Granheim et al., 2018).
- However, barriers exist such as schedule conflicts, lack of resources/space (Scott et al., 2019).

Telehealth is an option for overcoming barriers to collaborative simulations.
- Published reports are anecdotal.

AIMS & APPROACH

Used a mixed methods approach to examine multi-patient, standardized patient (SP) simulations using telehealth to provide experiential practice with interprofessional collaboration.

- **Quantitative Aim:** One-group, pre-posttest approach to evaluate for changes in collaborative competencies & amount of collaboration in clinical.

- **Qualitative:** Phenomenological approach to explore simulation experiences & perceptions of ability to utilize simulation lessons in clinical practice.

METHODS

SAMPLE: Convenience sampling; 44 BSN students enrolled in final clinical course.

SETTING: Simulation laboratory; Multi-bed room designed to depict a hospital unit.

INTERVENTION: Two simulation days designed & built into clinical course; 8-10 students attended each week. Learning objectives included identifying need for collaboration & communicating pertinent patient concerns.
- Telehealth was used (via iPads) to communicate with respiratory therapy (RT), social work (SW), & nurse practitioner (NP) colleagues who were off-site.
2 SPs per simulation day:
- Day 1: Patient with COPD requiring RT; Patient with hyperglycemia & wound requiring NP.
- Day 2: Patient with recent stroke & aspiration requiring NP; Patient with HIV & tuberculosis requiring SW.

TOOLS/PROCEDURES:
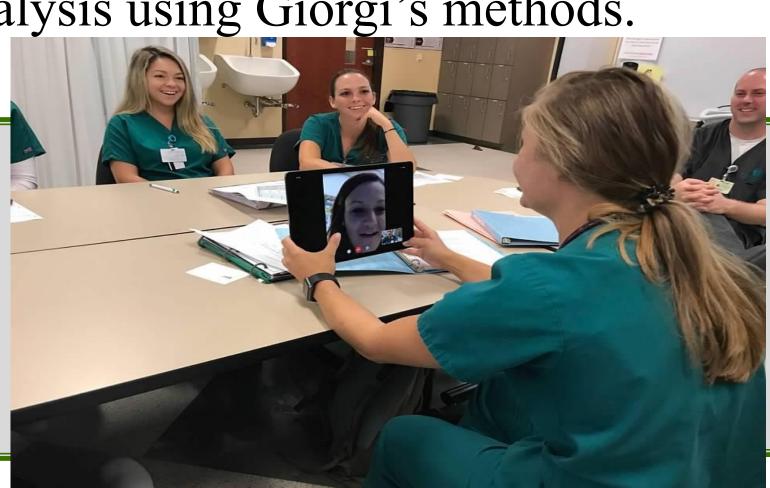Online surveys at semester start & end:
- 20-item Interprofessional Collaborative Competency Attainment Survey (ICCAS) (5-point Likert scale).
- Amount of Collaboration in Clinical: Reported number of times 1) interacted, 2) provided report, 3) reported patient concern to persons outside of nursing (1=*Never*, 2=*1-2X*, 3=*3-4X*, 4=*5-6X*, 5=*7-10X*, 6=*More than 10X*).
Focus group interviews conducted with 27 students at semester end:
- 8 question interview guide; Recorded & professionally transcribed.

ANALYSIS: Descriptive statistics, *t*-tests.. Thematic analysis using Giorgi's methods.

RESULTS

ICCAS Subscale	Pretest Mean	Posttest Mean
Communication	2.95 (.78)	3.97 (.58)*
Collaboration	3.02 (.86)	4.28 (.59)*
Roles/Responsibilities	2.81 (1.01)	4.00 (.68)*
Patient-Centered Care	3.16 (.76)	4.27 (.60)*
Team Functioning	3.28 (.64)	4.21 (.59)*

Clinical Collaboration	Prior Clinical	Final Clinical
Interacted	3.91 (1.56)	5.16 (1.26)*
Gave Report	1.84 (.79)	3.57 (1.58)*
Reported Concern	1.81 (.96)	3.25 (1.44)*

*Difference significant at *p* < .001

FIVE THEMES:
1) *Anxiety due to lack of experience*
2) *Improved clinical reasoning*
3) *Real world practice*
4) *How to communicate effectively*
5) *Application to clinical practice*

Powers, K., Neustrup, W., et al. (2021). Simulations using telehealth to collaborate with other healthcare professionals: Effect on nursing students' competencies and amount of collaboration in the clinical setting. *Journal of Interprofessional Care*.

Powers, K., Neustrup, W., et al. (2020). Baccalaureate nursing students' experiences with multi-patient, standardized patient simulations using telehealth to collaborate. *Journal of Professional Nursing*.

DISCUSSION

From semester start to end, significant improvement in ICCAS total scale mean score: 3.13 to 4.16 (*p* = .001).
- Indicates perceived ability to collaborate as *Very Good* at semester end.

At semester start, most students had *Never* or *1-2X* given report (81.4%) or reported a concern (88.3%), signifying rare collaboration in clinical settings.
- Improved to performing both items *3-4X* in final clinical course.

Themes confirmed quantitative results:
- Due to lack of collaboration experience, students felt anxiety which lessened after gaining simulation experience.
- Students felt more prepared to collaborate & provided examples of using simulation lessons in clinical.

- Augmenting simulation with telehealth can overcome barriers to collaborative simulations, ensuring all students have experiential practice.
- Important to prepare graduates for collaborative practice.