

Overview of Sentinel U® Nursing Simulation Research Grant (SUNSRG) Findings 2023-24

Utilizing Sentinel U® products, four academic groups tested how virtual simulations impact key clinical learning outcomes in advanced practice nurse students.

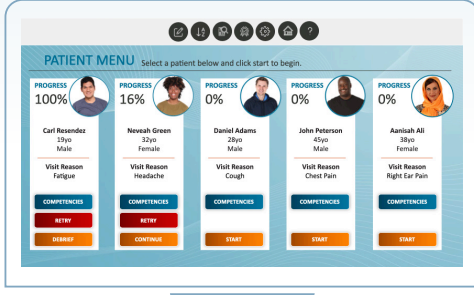
4 Research Grant Recipients @ 6 Universities



1. Multi-Site Study:
 - + University of Central Florida
 - + The University of Texas at Arlington
 - + Texas A&M University
2. Bradley University
3. South Dakota State University
4. Queensland University of Technology



STUDIED Sentinel U® Virtual Simulations



Advanced Practice Series® - Adult Typical Module



EMPOWER® Debrief

FINDING

Multi-Site Study

STUDY: Highlight the potential of virtual simulations in enhancing the education and preparation of advanced practice nurses. (N=74)

Explore the impact of virtual simulations on clinical reasoning (CR) skills, as well as between students who started on-site clinical experiences compared to students who had not.

FINDINGS: The findings highlight that while confidence alone may not significantly impact CR scores across different scenarios, the **specific content of the scenario and the confidence related to that content can influence diagnostic accuracy.** Students with clinical experience performed better, emphasizing the **importance of hands-on learning alongside virtual training.**



Bradley University



STUDY: The Role of Simulation in NP Education:

- Skill development and competency assessment
- Enhancing real-world preparedness
- Evidence on the effectiveness of simulation in nursing education
- Using virtual simulation to Meet National Task Force (NTF) Standards in Nurse Practitioner Program

FINDINGS: Sentinel U's virtual simulations **effectively enhanced interprofessional education (IPE) competencies**, particularly **collaboration and communication.** Participants reported **positive learning experiences and personal growth.**

The simulations demonstrated value in **fostering teamwork and understanding diverse perspectives.** These findings align with **ANCC and NTF criteria for integrating virtual IPE with simulation for competency assessment.**

South Dakota State University

STUDY: Assess the impact of screen-based simulation on family practice NP students' perceived readiness for clinical practicum in rural or frontier settings.

FINDINGS: The research and debriefing sessions highlight that students had an **overwhelmingly positive experience using screen-based simulations for pediatric and women's health training**, reporting **increased confidence and no identified technology barriers.** (N=24)

Screen-based simulations **effectively filled gaps where traditional clinical settings were limited and provided access to high-risk patient populations.** Students felt **more confident in their skills** and appreciated the access to high-risk patient cases. These simulations proved to be a valuable tool, especially in rural areas with limited clinical resources.



Queensland University of Technology



STUDY: Explore to what extent virtual clinical simulations impact on the learning experiences and skill development of Registered Nurses undertaking a Masters of Nurse Practitioner.

FINDINGS: Students who accessed virtual clinical simulations **performed strongly in identifying diagnoses and developing care plans.** All clinical reasoning domains demonstrated **significant improvements in self-rating scores** at the conclusion of the semester. Participants reported a **high level of self-confidence (M=31.6, SD 6.3) and satisfaction (19.5, SD 4.5)** with the virtual clinical simulations. Overall, students had strong performances, and the use of virtual clinical simulations proved effective in their clinical education.

RESULTING IN: Positive Outcomes

Sentinel U® Virtual Simulations Improve Clinical Reasoning Skills and Learner Confidence

The use of Sentinel U® screen-based virtual simulations assists advanced practice nurse learners with **key competencies and improve clinical reasoning skills, diagnosing and care planning confidence, communication, collaboration and autonomy, and overall practice readiness.**