

# Assessing the Impact of a Simulation Model on Clinical Placements After Two Years of Implementation

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## BACKGROUND

The increasing demand for registered nurses in the United States has increased the pressure on nursing programs to find sufficient clinical placements for students. This pressure continues to increase. Stevenson University proposed to increase the number of bachelors prepared graduates from the pre-licensure option by 30 graduates per year. This would be accomplished by increasing the number of nursing students from approximately 70 in each year of the program to 100 in each year of the program starting in Fall 2016. This plan to increase enrollment provided the opportunity for a complete redesign of the clinical learning experiences in the pre-licensure program. A key component of the redesign is beginning to count simulation hours as part of the required clinical time in all undergraduate nursing courses that include a clinical component.

## OBJECTIVES

After reviewing the poster presentation, attendees will be able to:

- Explain the basic methodology of the model designed to count simulation as a part of clinical time.
- Explain how the model decreases the need for a parallel increase in clinical sites as the program expands.
- Compare the number of clinical placements required using the old and new models across various clinical areas.
- Identify benefits of the redesigned model to the university and the students.
- Discuss what worked in Years 1 and II of the model, and what did not work as projected.
- Identify changes in implementation proposed for Year 3 subsequent to the COVID-19 pandemic.

## DEVELOPMENT

At its most basic form, the redesign proposed to increase the size of each clinical group from six students to eight students, and then pull two students away from the clinical rotation each assigned day to participate in high-fidelity or virtual patient simulation experiences on campus. This would leave six students in each group in the clinical setting with the Clinical Supervisor and a total of 28-30 students assigned to simulation activities. Across the 14 weeks of clinical experience in NURS 310 – Introduction to Clinical Nursing, each student was pulled out 3 times – once to participate in virtual simulation activities and twice to participate in hi-fidelity simulation experiences. For the Spring semester, students are in three clinical courses. The modular courses, NURS 337 – Psychiatric Nursing and NURS 338 – Care of the Childbearing Family offer each student clinical for half a semester. The modular courses proved more difficult to fit into the new model.

## METHODOLOGY

The Simulation Team developed the Model shown below to demonstrate where each student would be throughout each week of the fall semester and another model to demonstrate placements for the spring semester. The team worked with the three Course Coordinators to determine simulation activities that best aligned with course outcomes and the clinical evaluation tool. The Creighton Simulation Evaluation Instrument was used to provide standardized evaluations across multiple courses and semesters.

NOTE: The model is not intended to be cost saving. While there are less groups in the hospitals requiring a Clinical Supervisor, more faculty/staff support is needed with students in the simulation labs.

## CLINICAL PLACEMENT NUMBERS

SEMESTER	# of Students	# of Clinical Groups Estimated Using Pre-Grant Model	# of Clinical Groups Using Grant Model
Fall 2017	74	12	Pre-grant
Fall 2018	107	18	14
Fall 2019	107	18	15
Fall 2020	112	19	13*
<b>NURS 337</b>			
Spring 2018	77	10	(pre-grant)
Spring 2019	110	18	15
Spring 2020	108	18	14
<b>NURS 338</b>			
Spring 2018	77	12	(pre-grant)
Spring 2019	110	18	14
Spring 2020	108	18	14

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## RESULTS

### Courses with clinical for full semester in fall:

- the model works best in these courses
- simulation days and inpatient clinical days can be separated evenly
- not interrupted by any days of inclement weather.

### Courses with clinical running in modules in spring:

- more difficult to evenly space time away from the units
- inclement weather cancellations impacted scheduling
- some clinical sites now mandate the SAME 6 students and do NOT allow groups of 8 even if all orient the first week.

### COVID-19 Impact

- resulted in the move from inpatient clinical to virtual experiences for the second half of the spring, 2020 semester
- Projected positive impact on the model since faculty implemented multiple alternate clinical activities and are evaluating which to continue.

## CONCLUSIONS

**THE MODEL IS WORKING** - the deliberate implementation of a simulation model such as that utilized by Stevenson can result in allowing an increase in the number of nursing students (and ultimately nursing graduates) without an equal increase in the number of clinical sites required.

As noted in Results, the course works better if clinical is over the full semester, as compared to modular clinical courses. The potential impact of the clinical sites prohibiting this model must be evaluated.

## SELECTED REFERENCES

Breymer, T. L., Rutherford-Hemming, T., Horsley, T.L., Atz, T., Smith, L.G., Dadowski, D., & Connor, K. (2015, November). Substitution of clinical experience with simulation in prelicensure nursing programs: A national survey in the United States. *Clinical Simulation in Nursing*, 11(11), 472-478. doi:10.1016/j.ecns.2015.09.004

Davis, A., Kimble, L., & Gunby, S. (February, 2014). Nursing faculty use of high-fidelity human patient simulation in undergraduate nursing education: A mixed-methods study. *Journal of Nursing Education*, 53(3), 142-150. doi:10.3928/01484834-20140219-02

Khalaila, R. Simulation in nursing education: An evaluation of students' outcomes at their first clinical practice combined with simulations. *Nurse Education Today*, 34 (2014), 252-258. doi:10.1016/j.nedt.2013.08.015

The NCSBN national simulation study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. (2014). *Journal of Nursing Regulation*, 5(2), S3-S40. doi:10.1016/S2155-8256(15)30062-4

Richardson, K. J., & Claman, F. (2014). High-fidelity simulation in nursing education: A change in clinical practice. *Nursing Education Perspectives*, 35(2), 125-127. doi:10.5480/1536-5026-35.2.125

Sullivan, N., Swoboda, S. M., Breymer, T.I., Lucas, L., Sarasnick, J., Rutherford-Hemming, T., Budhathoki, D., & Kardong-Edgren, S. (S.) (2019, May). Emerging evidence toward a 2:1 clinical to simulation ratio: A study comparing the traditional clinical and simulation settings. *Clinical Simulation in Nursing*, 30 (C), 34-41. doi:10.1016/j.ecns.2019.03.003.