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Past Event: 2024 NCSBN Scientific Symposium - Regulation and Simulation: Push and Pull — The Role of Regulators in the Rapid Expansion of Simulation During the Pandemic Video Transcript

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Event

2024 NCSBN Scientific Symposium

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Presenter

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So, I'm going to be covering two studies today. So, the first is on virtual clinical simulation, and the second of which is the simulation regulation of RN pre-licensure programs. So, both studies, however, detail the success and challenges faced by regulators and nursing educators during the pandemic.

So, to begin, I'm going to provide a little background on what actually precipitated these two studies before breaking out the methods and results for each of the studies. From there, we're going to move to a discussion of the results and then a short period for any questions that you may have.

So, let me unfortunately take you back to early 2020. Oh, right? In January 2020, a new virus named COVID-19 was identified in the U.S., and soon after, it began to appear in multiple locations. So, to avoid spreading this new virus, schools were closed, office-based employees were sent home to work in order to reduce the spread.

In March 2020, recognizing the serious implications for the healthcare workforce, our team pivoted towards examining how the pandemic impacted nursing education programs and ultimately the nursing students that were educated under such conditions. As part of a larger study in August and September 2020, as noted by the little red arrow, we developed two survey instruments directed towards all active RN program administrators and all active PN program administrators to solicit information regarding planned simulation use during the fall 2020 term, and how these plans compared to the previous term of fall 2019.

So, I'm going to begin with our study examining the usage of virtual clinical simulation in PN, pre-licensure nursing programs. So, that would be our first study, aptly titled Virtual Clinical Simulation Adoption and Use by PN Nurse Education Programs During the COVID-19 Pandemic focusing on the usage of virtual clinical simulation in PN programs during the COVID-19 pandemic.

So, prior to the pandemic, there was some interest in the usage of virtual clinical simulation to replace traditional in-person clinicals. However, virtual simulation is pretty new, and many techniques and methodologies fall under the umbrella term of virtual clinical simulation.

So, scholars have used it to describe Google Glass, a narrative-type video game, or simply watching videos. So, to some degree, the use of sim and virtual sim, kind of, serve as an attractive alternative for program directors who've encountered difficulty in setting up those clinical-based experiences for their students. And so practical nurses tend to work in long-term care homes.

And unfortunately, as a result, like, the programs tend to rely heavily on such sites for clinical experiences. And as COVID-19 began to spread, those homes had to close their doors to students in order to protect their very vulnerable residents.

So, this presented a very, very difficult situation for practical nursing programs. How do they continue to educate PN students with an extremely limited or even non-existent number of clinical experiences available to them? Hence, the aim of our study was to understand the degree to which pre-licensure PN programs shifted to virtual clinical simulation during the early stages of the pandemic.

So, we did what everyone would have done. We developed a Qualtrics-based survey in July 2020, and we asked administrators about their plans to use virtual simulation during the upcoming fall 2020 term. Then, we were also asking them to compare their approach to fall 2019.

So, in early September 2020, the instrument was sent to about 1,133 deans and directors with valid email addresses in the U.S., and the instrument remained in the field for about a month with weekly reminders, and we ended up getting a total of 266 responses representing a 23.5 response rate.

So, we then generated some descriptive stats, and then we looked at change associated between the terms using repeated measures in COVA. So, here. We found that clinical site scarcity or restrictions in the U.S., to the surprise of no one, were linked to nursing programs' rapid adoption to virtual clinical simulation.

So, program leaders who had indicated they had difficulty finding clinical sites...well, indicated it was very difficult to find clinical sites, were found to have significantly higher rates of virtual clinical simulation adoptions, so an average of about 41%. And those that indicated it was simply just more difficult had an average adoption rate of about 23% for virtual clinical sim.

And again, it's to the surprise of no one, no one indicated it was easier to find clinical placements during the pandemic either. So, additionally, administrators indicated they used a variety of teaching modalities under the virtual clinical simulation umbrella term. So, some folks were using augmented reality, some folks were watching videos, and some were using online software packages, or performing activities with instructions from students viewing the screen remotely.

So, to date, unfortunately, none of these approaches had been evaluated in the same rigorous manner as high-fidelity simulation-based education à la Hayden's 2014 study on simulation. More evidence therefore is necessary to evaluate the effectiveness of these methods before more sustained adoption or regulation should be considered.

So, moving on to our second study. Our second study was titled "Prelicensure Nursing Clinical Simulation and Regulation During the COVID-19 Pandemic." So, we took a little bit of a different

approach to this one. So, we examined the adoption of simulation in pre-licensure RN programs in the context of Board of Nursing guidance.

So, prior to the pandemic, most boards allowed for up to 50% clinical hours to be replaced by simulation hours in line with Hayden's landmark study, illustrating that high-quality sim may be substituted with a 1:2 ratio and maintain similar outcomes. However, during the pandemic, many boards of nursing in the United States recommended the need to provide guidance and issue emergency orders in order to allow nursing programs' flexibility in the use of simulation.

The aim of this study was to examine the degree to which pre-licensure RN nursing programs plan to substitute their clinical instruction with simulation in the context of this guidance. So, to accomplish this aim, we worked in two phases, the first of which involved collecting pre-pandemic and pandemic regulation or guidance information as it related to simulation.

The second of which involved surveying programs to see how their adoption of simulation changed in the context of pandemic regulation and guidance. So, simulation regulation was reviewed prior to and during the pandemic and classified to the degree to which it changed.

U.S. pre-licensure RN programs were then contacted and asked to estimate the proportion of clinical hours completed in sim prior to the pandemic fall 2019 and what they anticipated during the fall 2020 term. The data from each phase was then merged to determine the degree to which programs substituted traditional in-person clinicals in the context of jurisdictional changes to simulation regulation.

These were then evaluated with a Wilcoxon Signed Rank Test. So, early in the pandemic, about half of U.S. boards issued emergency orders or guidance to allow for the expanded use of simulation-based education. Of those boards, most adopted a flexible approach while others temporarily waived simulation regulation.

Programs in jurisdictions in which regulations were waived estimated a median replacement value of 20% before the pandemic but increased by 31% during the pandemic. So, most programs increased their use of simulation-based education with the most pronounced changes occurring in jurisdictions in which emergency orders were modified or waived existing clinical substitution thresholds.

However, while many of these programs anticipated sharp increases in the number of clinical hours to be completed in sim after the onset of the pandemic, relatively few, about 16% or about 72 programs surveyed they expected to actually exceed the recommended threshold of 50% high-fidelity simulation. So, in closing, nursing regulatory bodies' rapid communication and guidance on the proportion of clinical courses completed in sim were instrumental in supporting pre-licensure of nursing programs' ability to deliver instructional content during the pandemic.

Proactive guidance from regulatory bodies may be an effective tool in managing hopefully fewer health crises. All right, does anybody have any questions? All right. All right, are we good? Okay.

All right, well, thank you so much. I very much appreciate this. Thank you.