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2021 NCSBN Scientific Symposium - Keynote: Open Science, Public Accountability: NLM Helps Nurse Scholars Shape Public Discourse Video Transcript

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Event

2021 NCSBN Scientific Symposium

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Presenter

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- [Moderator] Richard Smiley has worked as a statistician in the research department at NCSBN for 19 years. During his time at NCSBN, he has co-authored studies on the use of simulation in nursing education on data from the National Nursing Workforce Survey and on best practices for Substance Use Disorder Monitoring Programs. He has undergraduate degrees in Mathematics and Computer Science and graduate degrees in Statistics and Demography.

He is past president of the Chicago Chapter of the American Statistical Association.

- [Richard] Hello, I am here to present, An Update on the Status of Simulation Regulation. In this presentation, I will go through an extended review of the State of Nursing Simulation Regulation, describe the methods of the update, present the results, and discuss the study implications.

I will answer questions live after the presentation has ended. During the presentation, you are welcome to submit questions in the Q&A box. The use of simulation in nursing education has increased dramatically over the past two decades. Research has documented the benefits to student learning and nursing educators' ability to effectively evaluate student performance.

Concurrently, RN and LPN/VN educational programs have struggled to obtain adequate clinical placements, as many hospitals have chosen to reduce the number of students allowed in the clinical setting. This has led to the increased use of simulation hours as a substitute for required clinical hours. As a result, regulators have become increasingly involved in overseeing the use of simulation in nursing education, especially with regards to the use of simulation hours as a substitute for clinical hours.

Since evidence on the effect of such substitution was lacking, NCSBN undertook the National Simulation Study with the intent of providing guidance to boards of nursing on the regulation of

simulation experiences. The project began in 2010 with a pre-survey that was sent to pre-licensure RN programs.

The survey was used to collect information regarding each school's curriculum, use of simulation, facilities, and substitution of simulation for clinical hours. At the end of the survey, respondents were invited to be considered for participation in the National Simulation Study by passing along their contact information to the study manager.

10 schools were selected for the National Simulation Study from those programs who offered to participate. The five ADN and five BSN programs selected were geographically diverse and in solid standing academically. Within each program, students were randomly assigned to one of three groups, traditional clinical experience with no or minimal simulation used, 25% simulation experience in place of traditional clinical experience, or 50% simulation experience in place of traditional clinical experience.

The students were tracked throughout their two-year course of study and were followed as new graduates in their first six months of their initial clinical practice. Students were assessed on clinical competency and nursing knowledge and they rated how well their learning needs were met in both the clinical and simulation environments.

Over 600 students completed the study requirements at the time of graduation in 2013. At the end of the study, there were no statistically significant differences in clinical competency as assessed by clinical preceptors and instructors, no statistically significant differences in comprehensive nursing knowledge assessments, and there were no statistically significant differences in NCLEX pass rates among the three study groups.

In 2014, prior to the release of the results from the National Simulation Study, a survey was mailed out to NCSBN's member and associate member boards of nursing to assess the status of regulation of simulation and nursing.

Responses collected from the survey and an extensive search through published regulations were used to answer two questions. Number one, "How many jurisdictions currently have regulations regarding the use of simulated clinical experiences?" Number two, "What percentage of clinical experience hours may be replaced by simulation?"

The survey found that the majority of the jurisdictions at the time did not have specific written regulation regarding the use of simulation hours. And, that a number of jurisdictions that did mention simulation in their regulations did not specify a maximum percentage of clinical experience hours that could be replaced by simulation.

It should be noted that just because a jurisdiction does not have specific written regulation, does not mean that simulation is not being regulated. Some jurisdictions mentioned approving the use of simulations and educational programs on a case-by-case basis. In 2015, an expert panel convened by NCSBN evaluated the data gathered through the National Simulation Study, examine previous research, and use their collective knowledge to develop National simulation guidelines for pre-licensure nursing programs.

An article in the Journal of Nursing Regulation presented the guidelines, the evidence to support the use of simulation, and the information for the faculty and program directors on preparation and planning for using simulation successfully in their nursing programs. Specifically, the guideline stated that the study provides confidence that substituting up to 50% simulation for pre-licensure clinical experiences promotes outcomes similar to traditional clinical experiences as long as faculty are adequately trained, committed, and in sufficient numbers when there is a dedicated simulation lab with appropriate resources, when the vignettes are realistically and appropriately designed, and when debriefing is based on a theoretical model.

The guidelines included checklists for faculty and programs to help ensure that the standards would be met. In 2017, a survey was sent to nursing programs that followed up on the 2010 pre-study survey conducted for the National Simulation Study.

The survey showed that high-fidelity simulation used at undergraduate courses increased substantially during the seven-year period after the 2010 survey. It also showed that 24% of the respondents reported their institution's policies regarding simulation changed in the past two years.

This was mainly attributed to the Simulation Study and guidelines. In order to more clearly quantify that impact, the current review was undertaken. Specifically, the purpose of this study is to determine the impact of the National Simulation Study and subsequent guidelines on the regulation of the use of simulation in nursing education.

This was accomplished by replicating some elements of the 2014 baseline study. In February, NCSBN staff reviewed the statutes and regulations of the jurisdictions who provided data to the baseline study and updated the answers to the two questions that were asked to jurisdictions. The first question was, "How many jurisdictions currently have regulations regarding the use of simulated clinical experiences?"

For RNs, the number of boards with specific regulation regarding simulation rose from 22 in 2014 to 38 in 2021, an increase of over 25%. The second question was, "What percentage of clinical experience hours may be replaced by simulation?"

For RNs, the number of boards who specifically stated that no hours substitution was allowed declined from 5 to 1 while the number of boards who had the guideline recommendation of 50% as a substitution maximum rose from 1 to 22. For LPN/VNs the number of boards with specific regulation regarding simulation rose from 20 in 2014 to 33 in 2021, an increase of 20%.

For LPN/VNs, the number of boards who specifically stated that no hour substitution was allowed declined from 3 to 0 while the number of boards who had the guideline recommendation of 50% as a substitution maximum rose from 0 to 21. I will note something that was not included in the numbers just presented.

During the pandemic, over 15 jurisdictions issued statements and emergency orders specifically addressing the use of simulation. Most of the orders involved relaxing some restrictions on the use of simulation by boards of nursing that already had specified regulations.

Six boards removed or shifted caps on the permissible percentage of simulation hours that could be substituted for clinical hours. In summary, the use of simulation in educational programs has risen substantially in the past decade. For both RN and LPN/VN programs over 60% of jurisdictions now specifically referred to the use of simulation in program approval regulatory documents.

Over a third of RN and LPN/VN educational programs allow the substitution of simulation hours for up to 50% of clinical hours. The impact of the National Simulation Study and subsequent guidelines are seen in the large number of jurisdictions that shifted from no regulation of simulation to allowing the study maximum of 50% of simulation hours substituted for clinical hours.

We will now go live for questions. Welcome. If you have any questions, please be sure to put them in the Q&A box and I hope you found this discussion worthwhile.

I think it was a very energetic exercise on our behalf to go through and see just the impact that that study had on what's been taking place in nursing regulation. And, I think this reflects not only our study but other work that's been done on simulation that there's been a great and growing interest in this topic over the last 10 or 15 years in terms of boards getting a handle on it.

So, let me see. Refresh the screen here and just see if there's anything popping into the chatbox or the Q&A box. Let's see. Yeah. "Did any of the simulations include telehealth?" For the studies we were dealing with, I think most of what we were studying was the in-lab simulations.

I think future studies, we're going to be working on looking at virtual reality and things like that. But, for the moment this was strictly related to in-person simulation. Yes.

And, I am starting to see a lot of questions appear in the box now. So, is there any similar information related to post-licensure programs? No. I was looking at pre-licensure programs, so no. And, I don't know if those are as heavily regulated. But, it's kind of where I was looking into regulations that usually appears in a different place.

"Will NCSBN do any investigation for counting simulation hours as two to one ratio for clinical hours due to the focused learning that occurs?" We are currently engaged in discussions for a study that partially will involve trying to answer some of these questions that I...we are hoping to undertake another simulation study in...not this year but hopefully coming up soon we'll do another simulation study.

And, I believe that would be incorporated. "Is there any plan to study the use of virtual simulation in contrast to face-to-face simulation?" Yes, the plans are...if assuming we do do another simulation study, the focus would be on virtual simulation.

"Will there be additional follow-up post-pandemic for the increased use of the simulation and outcomes?" I think that's a simple question. Yes, we are hoping to do this. And, boy, a lot of questions on virtual simulation which is encouraging for us. Because like I said we are hoping to do a study on this that would be kicking off not this year but hopefully next year maybe.

"Are there any concerns coming forward about programs that are not providing simulation using the recommended standards?" Boards do things differently and one thing that was very clear to me is even...although I was capturing a lot of information about boards that are applying and adjusting to these standards, there were...even those boards had differences.

As you went through the regulations, as you find out what they do, everybody does things a little bit differently. And so, even the boards that didn't have specific standards, it was clear they were usually doing something to address simulation and were aware of what was going on with their programs. So, I think I wouldn't say that there are concerns about the boards that aren't doing the specific standards.

I think we'd like to see more of them but there's still...there's evidence that they are still monitoring simulation and I think they may be moving in that direction anyways. So, [inaudible] that. "Result of the original study issued guidelines for RN and LPN programs, there was no data for LPN programs will be studies to address this specifically?"

I don't know. I mean... I, offhand, can't say if there will be something done with LPNs specifically regarding the study. And, anyway, and then there's a comment saying, "We need a better understanding of what constitutes valuable clinical experiences to be absolutely necessary for entry into practice."

I agree. So, let's... I think I'm going to refresh this screen just to see if anything else has popped up in the Q&A so I'm not missing anything here. I think that may be it.

Oh here's another question, "Are there criteria or standards set forth by NCSBN regarding simulation product vendors?" No. No. We definitely have not dealt with that issue beyond asking a couple of questions about what, you know, what products do you use?

But, I would think that might be something more in the realm of INACSL, the nursing simulation organization that deals with that. If there are standards I would think they would be the ones that would be looking for that.