

## The role of virtual simulation: Using *vClinical*s to provide clinical experience for nursing students during COVID-19

Tim J. Bristol, PhD, RN, CNE, FAAN, FAADN  
Judy Herrman, PhD, RN, CNE, ANEF, FAAN  
Karin Sherrill, RN, MSN, CNE, ANEF, FAADN

### Introduction

The advent of the COVID-19 virus restricts current classroom, clinical, and live simulation nursing education methods. Nurse educators must develop effective, efficient, and feasible approaches to meet clinical objectives in distance and virtual media. A groundbreaking tool is the *NurseThink® vClinical*s.

### Student Benefits

This highly interactive, engaging, and stimulating teaching platform provides students with the ability to develop skills in priority-setting for clients with a variety of needs and illnesses. From basics of care (including drug calculation and medication administration), to triage within the emergency department, students will be making clinical decisions, dealing with interruptions, assigning acuity levels, determining supplies, selecting from priority interventions, evaluating care, and documenting on actual patients.

### Faculty Benefits

*vClinical*s enable faculty to establish time-oriented clinical rotations and allow students to record time spent on task and scores and send to faculty. They also present stimulating topics and clinical experiences to develop pre-clinical assignments and synchronous and asynchronous debriefings. Pre-briefings and debriefings are essential mechanisms to increase the realism of these simulations, to enhance effectiveness of experiences, and to allow students to engage in reflective practice. Reflection and introspection are critical to learning and may be even more profoundly needed as our students learn in remote and independent virtual environments (8, 11, 14-15, 25-26, 30, 32).

### Live Clinical versus Simulation

One concern of nurse educators, students, and other consumers is the validity of live simulation methods in their ability to enhance clinical judgment and decision-making skills. Robust research findings demonstrate that simulations are comparable to clinical experiences in allowing students to gain knowledge, practice clinical skills, and meet selected clinical objectives in a safe, controlled environment. (3, 5-8, 13-16, 18-20, 25-26). A meta-narrative review compared the outcomes of live clinical versus live simulation. This analysis revealed that well-implemented simulations produced similar student outcomes, including clinical skills, clinical knowledge, and students' reports of self-confidence in clinical practice (24). Many schools, states, and programs

operationalize the findings of these studies to replace clinical hours with a percentage of simulation hours and develop articulating policies to enhance student learning and deal with clinical site, faculty, and/or time shortages (2-3, 5-6, 8, 14-15, 25-26, 32). These calculations must be considered as we approach the coming weeks.

### **Virtual Simulation**

Another area for exploration is the ability for virtual simulation to replicate the experiences offered in live simulation and live clinical nursing care. The virtual environment presents students with client care experiences that replicate reality, demand individual performance and accountability, and provide mechanisms for student teaching, evaluation, and remediation. Studies substantiate that virtual simulations provide similar capacities to live simulation for students to implement skills associated with client care and clinical reasoning while being “present” in the virtual clinical environment (1, 4, 7, 9-12, 17, 19-20, 22-23, 27, 29, 31).

The most supportive research findings when exploring the value of virtual simulation is its ability to reinforce and build on skills acquired in other simulation and live clinical experiences. Since students facing the COVID-19 clinical crisis have participated in some live simulation and clinical learning, the addition of *vClinical*s will build on and enrich previous experiences (7, 20, 31). Additionally, virtual simulations are noted in the literature to be especially helpful for students who struggle with clinical decision-making and learning (10). Virtual simulations may allow students to overcome stress and some barriers associated with live simulation (7, 23). Nursing students and today’s learners respond positively to the virtual simulation platform. In one study, nursing students revealed a high level of acceptability to virtual learning media, finding it easy to use, useful, and purposeful. The students sustained a high intention to use virtual simulation throughout the study (23). This fortitude will be essential as we face a protracted need to avoid live clinical and simulation experiences.

### **Clinical Hour Replacement**

Best practices associated with hours spent in simulation, both virtual and live, are also a component to be examined. Emerging evidence indicates that live simulation may provide such rich exposure to client care and decision-making that the benefits of one hour of structured, rigorous simulation are comparable to 2 hours of live clinical experiences (2-3, 5-6, 8, 13, 18, 25, 30). It is recognized that live clinical education experiences offer interpersonal, psychomotor, and realistic opportunities to develop skills. In the absence of live clinical and live simulation opportunities, virtual simulations provide the platform for the provision of client care, priority setting exercises, and clinical decision-making scenarios. These experiences are critical in the development of clinical judgment and the cultivation of safe and competent nurses.

Deficiencies inherent of live clinical rotations, including downtime in clinical, the opportunistic/random nature of client assignments, the dearth of intense faculty-student interactions, fewer opportunities for feedback associated with 8-10 person clinical group, a potential for a focus on tasks rather than thinking, changes in hospital policy that restrict full student participation, and the potential for passive student

participation or observation rather than active and accountable practice may be adequately addressed in live and virtual simulation (3, 16, 24, 30). Sullivan et al. (2019) demonstrated that students involved in intense and efficient simulations completed higher levels of tasks, engaged in a higher level of cognitive thinking, and did so in less time than those in the live clinical environment (30). Students cited that the simulation environment are often more intense and demanding than the clinical setting (18). These characteristics substantiate the use of the 2 clinical hours to equal 1 simulation hour ratio in general nursing education and especially at these critical times.

The clinical hour ratio associated with virtual simulation is, as yet, untested. Continued research, building on the value of live simulation, and its ability to meet the learning objectives of today's student is needed. Nonetheless, the current mandated demands of distance and virtual teaching require us to use our teaching abilities to develop learning experiences for nursing students with the tools available. One such tool is the **vClinical**s.

### **Conclusion**

Each program needs to determine the feasibility of **vClinical**s as an emergent measure during this time. Conferral with the state board of nursing, accreditation agencies, and program faculty concerning the unique needs of each state and program is warranted. Bradley et al. (2019) examined state regulations about simulation clinical practices. There is a high level of variability among states concerning the percentages of clinical that may be replaced with simulation, the ratio of simulation to clinical hours, the definitions of simulation (including the use of virtual simulation), and the requirements for educator involvement and supervision (5). It is suggested that state boards of nursing also consult with other states, and the existing literature, to provide guidance and regulatory information as we confront this unprecedented dilemma in clinical nursing education (see also NCSBN: Changes in Education Requirements for Nursing Programs during COVID-19).

Although clinical hours are an important metric, a critical element is the quality, value, effectiveness, and efficiency of the educational experience. We believe **NurseThink® vClinical**s provide essential opportunities to educate students and achieve the objectives of the provision of safe and competent care during this complicated time. These research findings, and the concurrent pandemic, reinforce the value of **vClinical**s for your students as a means to meet clinical objectives and ensure clinical competency in the absence of live clinical/live simulation experiences.

For more information on the formation and assessment of Clinical Judgment, review the following one-hour video.

<https://nursetim.com/webinars/NCSBN-Update-on-Clinical-Judgment-and-Next-Generation-NCLEX>  
Dr. Patricia Benner, Finding Online Clinical Replacement <https://www.educatingnurses.com/finding-online-clinical-replacement-solutions-during-the-covid-19-pandemic/>  
Changes in Education requirements for nursing programs during COVID-19:  
[https://www.ncsbn.org/Education-Requirement-Changes\\_COVID-19.pdf](https://www.ncsbn.org/Education-Requirement-Changes_COVID-19.pdf)

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