

An Innovative Academic Practice Model for Clinical Nursing Education During the COVID-19 Pandemic

Heidi Hahn-Schroeder, DNP, MSN, RN, Judy Honig, EdD, DNP, CPNP, ANEF,
Candice Smith, DNP, MSN, RN, Susan Chin, PhD, RN, NNP-BC,
and Lorraine Frazier, PhD, RN

Abstract

In March of 2020, Columbia University School of Nursing (CUSON) Masters Direct Entry (MDE) program and New York Presbyterian Hospital (NYPH) created an innovative academic partnership to address the clinical needs of students and to help alleviate the burden of surging COVID-19 cases

on nurses and the health care system. Through this partnership, students were hired as nurse technicians to assist with patient care during the first wave of the COVID-19 pandemic. As a result of this enhanced relationship, a pipeline of well-qualified graduate nurses with unique skills to adapt to a

rapidly changing practice environment was created. Student participants in this opportunity developed an understanding of the organizational and leadership structures of the health care institution. The understanding of organizational and leadership structures will help transform the delivery of care.

Columbia University's Masters Direct Entry (MDE) program in New York City is a second degree accelerated program for non-nurses that has existed for over 20 years. The 15-month, 4-semester program educates students to enter the nursing profession as masters-credentialed registered nurses (RNs) prepared to meet the needs of a complex health care system.¹ After their basic nursing course work and clinical rotations are completed, students enter a 3-credit final intensive clinical experience course, Integration of Nursing Practice. During this clinical intensive, students are assigned to work one-on-one with a hospital-chosen preceptor, with bi-monthly faculty visits for oversight. Students work with this preceptor for 6 weeks following their full-time schedule. In early 2020, as students were preparing for this clinical rotation, COVID-19 pandemic cases increased rapidly throughout New York City. Hospitals were faced with multiple challenges, including increasing surge capacity and acuity of patients combined with limited personal protective equipment (PPE) and nursing resources. As a result, all clinical

education throughout New York City was suspended.

After the suspension of clinical rotations was communicated to nursing students, they verbalized their desire and readiness to deliver patient care during the pandemic. As integration is the final rotation of an extended clinical experience in the MDE program, nursing leadership listened to these soon-to-be graduating students and agreed that they could be a valuable resource for an overwhelmed health care system. As a result, the leadership at Columbia University School of Nursing (CUSON) turned to their most trusted partner and largest clinical affiliate, New York Presbyterian Hospital (NYPH). An innovative academic clinical partnership between the University and NYPH was created that would allow nursing students to deliver care during the pandemic while receiving academic credit and support from the School of Nursing.

Spring 2020 Semester: Students in Nurse Technician Role

During initial meetings, involving deans (university) as well as the vice president of nursing operations and the program director of school affiliations (hospital), the needs of both institutions as well as learning objectives for students were assessed. To address the needs of students, patients, and the hospital, a new model was created. The model developed is an academic-clinical

partnership that shares responsibility for and oversight of the students, while conserving the limited PPE and nursing resources of the hospital. The partnership developed identified a role for the senior nursing students: the nurse technician, which is the health system's most-skilled, prelicensure nursing position. The nurse technician position ensured students would be able to deliver care at a higher level than a nursing assistant, but did not require the prolonged orientation and oversight of a graduate nurse by hospital nurses.

The nursing students who were to serve in this clinical nursing technician role had completed all course work associated with prelicensure. They would be hired through a staffing agency and the orientation process streamlined. The hospital identified a need for the nurse technicians to work on the inpatient units and for additional students to work as screeners at hospital entrances across the health care system. Orientation for these new employees would be delivered through a partnership with the hospital nurse educators at NYPH and nursing faculty at CUSON.

To facilitate the academic part of this experience, an independent study course was created that included mandatory weekly meetings with faculty to discuss clinical cases and readings associated with pandemic nursing and care of COVID-19 patients. The meetings also provided an opportunity for faculty to

Please see the end of this article for information about the authors.

Correspondence should be addressed to Heidi Hahn-Schroeder; email: hh196@cumc.columbia.edu.

Acad Med. 2022;97:S19-S22.

First published online November 23, 2021

doi: 10.1097/ACM.0000000000004541

Copyright © 2021 by the Association of American Medical Colleges

touch base with the students regarding their well-being.

As the burden on the health care system rapidly grew, along with the students' desire to deliver nursing care during the pandemic, a swift and efficient implementation of this partnership became imperative. It required a high level of collaboration between CUSON, NYPH, and the staffing agency that would hire the students on a temporary basis. Key stakeholders in this partnership included: CUSON MDE and simulation leadership, NYPH program director of school affiliations, talent acquisition director, the nursing professional development team, and the staffing agency.

Students received an email communication to describe the opportunity to work as nurse technicians. Interest in this paid voluntary opportunity was collected via a survey tool. Once students were identified for hire, they were referred to NYPH talent acquisition and onboarded through a staffing agency partner. Using the existing NYPH nurse technician job description, the role and competencies were modified to address the immediate pandemic-related patient care needs. Through collaborative meetings between the university and hospital key leadership, a 3-day, streamlined, hybrid hospital orientation was implemented that would ensure adherence to social distancing guidelines, while meeting regulatory training requirements and account for the hospital training students had completed for their prior clinical rotations. Didactic content was provided via self-learning modules and a live 2-day virtual classroom platform. Skills validation was accomplished in half-day, small-group sessions to allow for social distancing and provided by both NYPH nurse educators and CUSON simulation faculty. Equipment from both facilities was used. Students were then paired with a nurse for a 1-day, unit-based orientation to complete their onboarding. MDE leadership, the NYPH program director of student affiliations, and director of talent acquisition worked with hospital locations within the NYPH system to create student location assignments based on staffing needs.

Once students began working on the units, the mandatory weekly seminars course with MDE faculty started. Small-group sessions consisting of

approximately 10 students each were led by a faculty liaison who was either full-time faculty or a part-time clinical instructor. Individual groups determined mutually beneficial times to meet via Zoom. As students were working various shifts, it was necessary to schedule multiple meetings a week to ensure each student made weekly contact with faculty. One of the objectives for this course included providing an opportunity for students to share their experiences with their peers and faculty facilitators in an online discussion format. Students were also expected to integrate nursing knowledge and processes and were required to demonstrate reflective, evidence-based nursing care through verbal case descriptions.

Between April and June 2020, a total of 96 students were employed in voluntary, paid positions. A total of 82 students worked as nurse technicians and 14 as temperature screeners throughout 4 hospital locations and were assigned to all shifts. Throughout the experience, NYPH and CUSON leadership met weekly to discuss issues such as scheduling and timekeeping processes, computer and equipment access, clarification of student role, and to ensure that students' questions and concerns were addressed.

At the conclusion of the nurse technician role, students were asked to complete a survey regarding their experience. Of the 82 students who participated in the nurse technician role, 61 (74%) responded to the survey. When asked if their level of preparation/knowledge was adequate to the responsibilities of the position, 38 (62.3%) strongly agreed and 20 (32.79%) agreed. Sixty (95%) students strongly agreed or agreed that they felt supported by the nursing staff. When students were asked if they felt supported by their school of nursing faculty liaison, 54 (88.5%) strongly agreed or agreed. Forty-four (72%) students strongly agreed or agreed the seminar topics were relevant and applicable to their clinical experience. Furthermore, 52 (85.3%) of respondents would recommend this experience again if there was a need, while 7 (11.5%) were unsure and 2 (3.4%) would not recommend.

Summer Semester

During the summer semester, we have an overlap between the graduating cohort

and an incoming cohort of 200 students. For this semester, the university made the decision that all classes would be remote and clinical and simulation rotations remained suspended. The curriculum for the continuing cohort of students did not consist of any clinical or simulation experiences, so the transition to online didactic teaching was adopted for that cohort's course work. The curriculum for the new cohort of students, however, consisted of a one-credit clinical course, Science of Nursing Practice: Practicum, and 2 simulation courses, Science of Nursing Practice: Skills Lab(oratory) and Physical Assessment Lab. A task force composed of the academic dean and faculty from the MDE program and simulation lab convened to redesign the curriculum to accommodate the mandate.

The task force decided that the clinical course would be moved into the fall semester in the hope for resumption of clinical rotations. They decided it would be pedagogically sound to move Science of Nursing Practice: Skills Lab, which uses task trainers and mid-fidelity mannequins, to the fall semester for the possibility of in-person simulation. Upon consultation with the course professor, Physical Assessment Lab was offered remotely. A virtual simulation program was used in addition to small-group meetings with faculty via Zoom. Students were expected to review course content asynchronously, participate in synchronous lab sessions for content review, and complete activities in the virtual simulation program. Unlike other schools of nursing, Columbia University did not have to replace clinical hours with simulation. This option was under consideration for the fall semester if clinical placements were not available. Fogg et al² found, through their experience during the pandemic, that virtual simulation, in the event in-person clinical is not available, can be an effective replacement. In their study, 53% of undergraduate students who participated in the course evaluation agreed or strongly agreed virtual simulation did further develop their learning.

Fall Semester: Student Nurse in Assistant Role

In fall 2020, the university initiated a return to campus for clinical students and most clinical affiliates resumed

student clinical rotations. This meant that all MDE students could return to clinical rotations and the voluntary nurse technician program came to an end. The challenge at this stage became logistical—coordinating classroom and clinical requirements. For example, social distancing requirements for the MDE program could not be met in the available classroom space, but were possible in the simulation lab. A task force of CUSON leadership was formed to establish a protocol for simulation experiences that would allow for social distancing, screening of students before entering the building, and cleaning of equipment between sessions.

With respect to the clinical setting, planning for appropriate PPE was the first step. Hospital clinical sites informed CUSON that they were unable to provide N95 masks or eye protection for students; however, they would be able to accommodate all other PPE. The MDE program worked with the CUSON operations, environmental health and safety, and purchasing departments to secure N95 masks and eye protection for 200 nursing students. The fact that our clinical affiliates were unable to provide N95 masks was not limited to our school. Zerwic and colleagues³ explain that as the pandemic began, their service partners were able to provide PPE. As the pandemic persisted, the responsibility to provide students with proper PPE was now that of the universities. The financial burden of this was partially supported by the CARES Act. Fit testing of the N95 mask to each student was completed using social distancing guidelines through a collaboration with environmental health and safety.

In the fall of 2020, COVID-19 cases were once again on the rise in New York City. Hospitalizations increased, leading to a second cancelation of multiple clinical sites, except for NYPH. By this time, health care fatigue in nursing personnel had become apparent. Health care fatigue also impacted our clinical instructors, who had been working throughout the pandemic. Tokac and Razon,⁴ using an online survey, found that nurses who worked during the COVID-19 pandemic were at high risk for anxiety and depression, leading to burnout with indirect effects on work impairment. We needed to create a solution that helped both our clinical instructors and NYPH

nurses remain in their roles, care for patients, and continue to educate the next generation of nurses. MDE and NYPH leadership once again met to develop a strategic plan that would not only support student learning but also help in the delivery of patient care and work to support the nurses.

One solution was quickly realized: nursing support could come from the nursing students, similar to the nurse technician role our graduating students had assumed during the first surge. As this cohort of students was at a different, earlier point in their nursing education than the previous spring cohort, the role of nursing assistant was decided on because it better matched the students' level of competency. The same academic–clinical partnership model was adopted. Students were enrolled in a zero-credit independent study course with weekly, non-mandatory meetings with faculty for support. Students were once again hired by the staffing agency and placed on units throughout the NYPH health system based on need.

Of the 48 students who participated in the nursing assistant role between December 2020 and March 2021, 26 (54%) responded to our survey about their experience. When asked if their level of preparation/knowledge was adequate to the responsibilities of the position, 22 (84.6%) strongly agreed or agreed. Nineteen (73%) agreed or strongly agreed that they felt supported by the nursing staff. When respondents were asked if they felt supported by their school of nursing faculty, 20 (76.92%) strongly agreed or agreed. Moreover, when asked if they would recommend this experience again if there was a need, 20 (76.9%) responded yes.

Another stressor on nurses and the environment was associated with clinical rotations and the number of students on each floor. Typically, a clinical group comprises 1 instructor to 8–10 students. To help de-densify units, it was agreed clinical groups would be made up of 1 instructor to 4–6 students. This would allow for better social distancing on the units.

Additionally, it was identified that the sharing of break space for meals, when staff and students were unmasked to eat, was resulting in an increase in

COVID-19 exposures. To help mitigate these exposures, the schedule of the clinical day was adjusted. Students usually participate in a clinical experience from 7 AM to 3 PM, which includes a 15- to 30-minute pre-conference, 1-hour lunch, and a 1-hour post-conference. To avoid spending unmasked time in break and meeting rooms, the clinical day was ended at 1 PM. This provided an opportunity for students to eat in their individual homes and avoid being unmasked in the breakroom. To avoid small meeting spaces, post-conferences were conducted virtually at a mutually agreed time between students and the instructor. To maximize patient engagement with students, our clinical placement director worked closely with the clinical instructors. This included a very succinct and short pre-conference, where patient assignments were given. There was also limited computer time and a short break for student nourishment on a rotating basis.

To offer additional support to the clinical instructors, the course directors, clinical placement director, and director of the MDE program increased their visits to the clinical sites. This not only served as an educational support, but became a source of emotional support for the clinical instructors, students, and hospital nurses. Zerwic and colleagues³ adopted similar practices with their nursing students at the University of Iowa College of Nursing, initiating alternative beginning and end times for the semester. The authors allowed students to start clinical hours during the summer semester, before the scheduled fall start to reduce the density of students on the hospital floors.

The utilization of RN-licensed doctor of nursing practice (DNP) students to offer intermittent or per diem coverage was also adopted. RN-licensed DNP students submitted applications to the MDE clinical placement director and were considered based on their area of specialty. After an orientation, the DNP students provided their availability based on their academic and work schedules. Their ability to provide coverage for our clinical instructors helped to decrease cancelations of clinicals.

Flexibility and creativity to ensure students were able to engage in active clinical learning throughout the

pandemic were also implemented. Virtual clinical learning experiences were created, for example. When student groups were unable to participate in hospital-based clinical rotations, review of unfolding clinical case studies via Zoom was used. The simulation team worked very closely with MDE to provide in-person simulation experiences for students in limited groups when hospital-based learning was interrupted. Simulation experiences included, but were not limited to, skill task trainer review and specialty-based scenarios.

Discussion

The post-experience survey of students who worked in the nurse technician role during the first surge of COVID-19 found that most students strongly agreed or agreed that their level of nursing preparation was adequate. This was also the case for students who participated in the role of nursing assistant during the second surge of COVID-19. A difference was noted in survey responses between the nurse technicians and the nursing assistants regarding their feeling supported by the nursing staff. The nurse technicians who worked during the first surge overwhelmingly felt supported (95%, $n = 82$) by the nursing staff. Of the respondents who worked as nursing assistants during the second surge 19 (73%) indicated that they felt supported by nursing staff. A similar result was identified in comparing responses from nurse technicians and nursing assistants when asked about support from faculty. Of those that worked in the nurse technician role, 54 (88.5%) felt supported by nursing faculty, compared with 20 (76.9%) nursing assistants. Overall, students from both roles would recommend these experiences again if there was a need. Further investigation should be considered to determine why students who worked as nursing assistants during the second surge felt less supported by the nursing staff and faculty than those who worked as nurse technicians during the first surge.

Hayter discussed the pandemic as adding additional stress to the nursing workforce throughout the world. In response, nursing students have been offered extended roles within health care institutions. This meant that nursing schools were faced with the decision to

have students “engage with a level of risk that is unprecedented.”⁵ It is important to note that the success of this program was due, in part, to the timing of the integration experience of the CUSON MDE program coinciding with the height of the first wave of the 2020 pandemic. During integration, students had completed their coursework and had minimal commitment to the weekly seminar session created for the paid voluntary positions. Although hired into part-time nurse technician positions with a requirement of 2 shifts per week, the majority of the hired students worked up to 40 hours/week. The success of the academic–clinical partnership during the second wave of the COVID-19 pandemic was attributed to the lessons learned from the previous experience and to modification of the role (from nurse technician to nurse assistant) to account for the students’ competence levels at the time. The students’ commitment and ability to assist with patient care needs proved invaluable to the hospital. Honig et al⁶ explained that the alternate care models used in the MDE academic–clinical partnership benefited both the students and the nurses, with each learning from and inspiring the other.

Our recommendations for future innovative academic–clinical partnerships are to continue this type of arrangement based on students’ levels of competency and to consider extending this model to other schools of nursing. As the pandemic evolves, so will patient care and clinical support needs. Health care systems will need to be flexible and allow for innovative solutions to meet rapidly changing patient care and population health needs. Exploration of opportunities for nursing students and newly graduated, prelicensure students with quick onboarding and streamlined orientations to address gaps in staffing during disaster responses should also be considered. Similarly, schools of nursing will need to remain flexible and innovative in their approaches to student clinical rotations and education. Virtual settings for both didactic and simulation-based teaching, when appropriate, could be more widely adopted.

The COVID-19 pandemic forced everyone to reimagine normal. Through innovation and collaboration around an

academic–clinical partnership, CUSON and NYPH were able to provide nursing students with clinical experiences to meet the educational objectives of their program while addressing the needs of the overburdened health care system. This, coupled with CUSON’s swift and effective transition to online teaching, meant that the students’ education was uninterrupted during the COVID-19 global pandemic.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

Previous presentations: Results were presented at the National League for Nursing (NLN) Education Summit on September 24, 2021, Washington, DC.

H. Hahn-Schroeder is assistant dean of academic affairs and assistant professor of nursing, Masters Programs, Columbia University School of Nursing, New York, New York.

J. Honig is vice dean of academic affairs, dean of students, and Dorothy M. Rogers Professor of Nursing, Columbia University School of Nursing, New York, New York.

C. Smith is director of clinical placement, Masters Direct Entry Program, Columbia University School of Nursing, New York, New York.

S. Chin is program director school affiliations, Center for Professional Nursing Practice, New York Presbyterian Hospital, New York, New York.

L. Frazier is dean and Mary O’Neil Mundinger Professor, and senior vice president, Columbia University Medical Center, Columbia University School of Nursing, New York, New York.

References

- 1 Columbia University School of Nursing. Masters direct entry for non-nurses. <https://www.nursing.columbia.edu/programs/masters-direct-entry-program-non-nurses>. Accessed November 4, 2021.
- 2 Fogg N, Wilson C, Trinko M, et al. Transitioning from direct care to virtual clinical experiences during the COVID-19 pandemic. *J Prof Nurs*. 2020;36:685–691.
- 3 Zerwic JJ, Montgomery LA, Dawson C, Dolter KJ, Stineman A. Planning and implementing a practice/academic partnership during COVID-19. *J Prof Nurs*. 2021;37:24–28.
- 4 Tokac U, Razon S. Nursing professionals’ mental well-being and workplace impairment during the COVID-19 crisis: A network analysis. *J Nurs Manag*. 2021;29:1653–1659.
- 5 Hayter M, Jackson D. Pre-registration undergraduate nurses and the COVID-19 pandemic: Students or workers? *J Clin Nurs*. 2020;29:3115–3116.
- 6 Honig J, Stone PW, Vose C, Prado-Inzerillo M, Frazier L. A clinical and academic partnership: An exemplar from the COVID epicenter. *J Prof Nurs*. 2021;37:241–243.