Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
COVID-19-Mediated Strengths and Challenges for 2021 Nursing Graduates: Implications for Nurse Leaders and Educators

Laura Dzurec, PhD, PMHCNS-BC, ANEF, FAAN, Maria Tackett, EdD, CCRN-k, CEN, CTRN, and Lisa Enslow, RN-BC, MSN, CLC

The purpose of this hospital-based quality improvement project was to ascertain 18 clinical instructors’ perceptions regarding senior nursing students’ strengths and challenges in the time of COVID-19. Constant comparative method yielded 4 themes suggesting 2021 diversity in senior nursing students’ clinical strengths and challenges, as well COVID-19’s implications for students’ professional identity development and transition to professional practice. Findings also suggested significant implications for nurses in professional development roles.

The COVID-19 pandemic has had far-reaching implications for nursing education, altering nursing students’ learning opportunities radically across the past 2 academic years.1,2 Beginning in early 2020 and well into late 2021, students found themselves suddenly “remote,”3 as their classroom interactions transitioned from face-to-face, in-person venues to online learning environments. Their clinical experiences were intermittently curtailed and reinstated, as simulation became central to teaching practices aimed to ensure students’ development of clinical and decision-making skills. Learning experiences became particularly unpredictable for nursing students, as faculty members and clinical agency staff endeavored to mitigate the potential and uncertain threats posed by COVID-19’s rapid, worldwide intensification.

Although it is clear that students experienced significant stresses in response to COVID-19’s influences on their educational experiences, COVID-19’s long-term impacts on students’ learning and on their transition from student to professional remain unclear. The purpose of this hospital-based quality improvement project was to ascertain clinical instructors’ perceptions about the academic strengths and challenges of 2021 senior baccalaureate nursing students. The 18 participants interviewed for this project not only served in instructor roles, but also were nursing staff members in the participating hospital. Their simultaneous involvement in teaching and practice roles positioned them well to describe both academic and clinical considerations for nursing students completing their last semester of undergraduate education. Ultimately, project participants’ insights addressed more than senior nursing students’ academic strengths and challenges, also suggesting potential implications for supporting graduates’ transition to the health care workforce.

BACKGROUND
COVID-19 swiftly and expansively altered health care education and practice. It mandated development of new decision-making schema4 in both education and practice. Judgments regarding how to effectively manage the virus’s epidemiology, to allocate resources,
and to ensure both patient and student safety added to the already-complex set of clinical judgments characterizing nurses’ daily work.\(^7\) It was this multifaceted and often dynamic situation in which senior baccalaureate nursing students found themselves as they completed their final undergraduate clinical rotations.

Determining how to best prepare students as nurses became a central concern as faculty members and nursing leaders balanced questions of safety against the benefits accruing to students through their clinical learning opportunities.\(^9,10\) As COVID-19’s impact accelerated the stress, fatigue, and perceptions of overwork that historically have influenced nurses’ decisions to leave their employing organizations,\(^9,11\) the appropriateness and safety of integrating students into complex practice settings was called into question.

Amid the uncertainties of this situation, the National League for Nursing (NLN) and the National Council of State Boards of Nursing urged nursing students’ continuing presence in clinical settings, despite the ramifications of the COVID-19 crisis.\(^12\) NLN president Beverly Malone argued that COVID-19’s impact included provision of an especially teachable moment, providing unparalleled opportunities for students to learn not only about complex issues in providing direct patient care, but also about global and population health. Questions about how nursing students’ learning actually fared in the time of COVID-19 were hard to answer. Those questions motivated the project reported here.

**DESIGN AND METHODS**

This quality improvement project was approved by the hospital’s institutional review board prior to initiation. Project authors interviewed consenting participants for the purpose of data collection. Data analyses were conducted using constant comparative method.\(^16\) The process unfolded as follows.

Project interviews were conducted in person or, in some instances, by telephone during April 2021. Each of the 3 project authors met with a subgroup of between 5 and 9 consenting, volunteer project participants. Participants all served as hospital-based clinical instructors. The senior students under consideration each were enrolled in one of five nursing programs.

Individual interviews lasted between 20 minutes and 1 hour. They were open-ended, guided by this question: “What strengths and challenges have you found among senior nursing students whose educational experiences were affected by COVID-19?” Participants were encouraged to describe their personal perceptions in response to the interview question, as the authors recorded participant responses manually with paper and pencil.

Following their completion of individual interviews, the authors met together 4 times in late April and early May 2021 to summarize the interview data. As they compared their respective data, the authors captured emerging ideas through open coding,\(^16\) ultimately labeling the emerging ideas as themes. Then, in light of emerging themes, they used axial coding, applying their own knowledge of student learning and graduates’ transition to nursing practice to interpret the significance of emergent themes.

Study authors’ familiarity with nursing as a discipline, with tenets of nursing education, with clinical practice in the participating hospital, and with project participants, themselves, helped to support the accuracy of their interpretations. Significantly, because participants were dually responsible for providing nursing care in the participating hospital and for acting as clinical instructors, they were well-positioned to address students’ learning strengths and challenges.

**RESULTS**

Speaking and listening always involve the expression and interpretation of both factual and precise denotative meanings and vaguer, value-based, connotative meanings. Participants in this project communicated in ways suggesting both kinds of meanings. For example, 1 participant noted that “students can articulate disease processes,” offering a factual, denotative insight that most nursing faculty members would understand and expect of a senior nursing student. Alternatively, the comment of another participant—“every hour in the field is golden”—reflected that participant’s beliefs about the importance of in-person clinical experience. Collectively, the transcripts reflected variability in participant beliefs. Still, 4 specific themes emerged from the collective data set. Those themes are reported here.

**Perceived Senior Student Challenges: Immediate Shortcomings**

Project participants identified numerous challenges facing senior students whose education was affected by COVID-19. One participant noted, for example, that students in her clinical group “started fall semester playing catch-up,” whereas another noted that “students are about a semester behind [developmentally].” Participants cited students’ skills in communicating with patients and others in the workplace, in developing interpersonal relationships, and in executing basic psychomotor skills as lacking. Medication administration emerged as 1 concerning skill deficit. Some participants noted that absent “dexterity” in regard to psychomotor skills such as “drawing up meds, puncturing bags.” Students seemed to be task-oriented according to some of the participants.

Many participants suggested that students’ lack of one-to-one time with their faculty members impeded their learning process. One participant, for example, commented that students would “need an extra few weeks of precepting,” because, as another participant noted, the students had experienced “definitely not enough hands-on
experience.” “Basic skills took longer” and students demonstrated “challenged assessment skills.”

Participants also reported a sense of student uncertainty that led to an appearance of hesitancy. One participant noted that students in her clinical group seemed “reserved, especially in fall (semester) when they had not been in clinical for so many months.” Another participant noted that students “are not sure what they can and cannot do.”

For participants whose transcripts suggested strong values for face-to-face clinical time, perceived challenges coalesced in the comment of 1 participant: “Every hour in the field is golden.” As another participant said, there simply is “no replacement for hands-on clinical,” whereas a third noted that COVID-19 implications leveled “less impact on students who’d had experience as a patient care tech.”

Overall, challenges described by project participants were consistent with those offered in other published reports of student skills. Most perceived shortcomings regarded students’ immediate skills and practices, those activities that did not impede their critical thinking. Collectively, perceived student challenges were about “adapting to the nuts and bolts of some of the procedures,” developing “a sense of reality about actual practice,” and “engagement.”

Project participants’ views of the impact of students’ perceived shortcomings varied widely. Some participants suggested, for example, that “students are not aware of the complexity of providing real-life nursing care; patients are really sick.” Others noted that with “more orientation,” students’ skills acumen would “stabilize over time.”

Perceived Senior Student Strengths: Beyond Basic Content to Dealing With “the Things That Can’t Be Taught”

Project participants’ views of shortcomings in senior students’ clinical acumen was offset by their perceptions of student strengths. Among recognized strengths were students’ “eagerness” for learning, their “flexibility,” “drive,” and active pursuit of “additional experiences.” In contrast to comments regarding students’ tendency to “hang back,” some participants noted that students were “easy to work with” and “eager to jump into situations.”

As they addressed student strengths, participants suggested that in many cases, students were “academically ready,” “unintimidated by technology.” Their COVID-19–affected learning experiences, according to some participants, helped students develop skills useful in dealing with electronic documentation and record-keeping. Students, participants noted, were “building contexts of working toward success” through “maturity,” “respect and appreciativeness,” and “focus.”

Moreover, as 1 participant noted, some students were “aware of their lack of experience,” “able to put together critical aspects [to get the] whole picture,” especially as they were given “professional support.” “Sim has helped them to think, making up what was lacking from missed clinical time,” said 1 participant.

As another participant noted, students they supervised in the time of COVID demonstrated insight into “things that can’t be taught.” Some students, participants noted, had “acclimated to the severity of illness” through their COVID-19 experiences, potentially preparing them for some of the challenges they would face as practicing nurses. Others understood “what it was to feel unprepared.” Overall, participants’ views of 2021 senior students’ COVID-19–mediated educational experiences suggested 2, more-implicit themes, as follows.

Views of Students’ Development of Professional Identities: “A Sense of Reality About Actual Practice?”

In describing their perceptions of senior students’ challenges and strengths, participants also referenced points that regarded students’ developing professional identities—even though this topic was not formally noted in the question posed to them in their interviews. Professional identity development in nursing involves internalizing nursing’s core values. It is an ongoing and essential aspect of professional education, influenced by multiple factors, including the nature of students’ learning experiences, their available clinical opportunities, and the nature of their professional peers’ role modeling behaviors. Project participant comments suggested their views of how students’ COVID-19–altered learning experiences might influence students’ professional identity development.

One participant noted, for example, that students “want to make an impact on the health system,” yet, as another participant noted, students “may not have a sense of reality about actual practice.” Affected by COVID-19, said 1 participant, students were unsure about “what they can and cannot do,” potentially “going through the motions without understanding the why.” Some participants described students’ role uncertainties, noting that students “didn’t think they had the right to delegate, as they were still students.” One participant found that it was not unusual for a student to ask, “Am I allowed to do this?” and another identified students as being “worried about hurting [others’] feelings.”

Although concerns such as these are not uncommon among neophyte professionals in any discipline, numerous project participants suggested that they might be heightened among students whose clinical learning opportunities had been curtailed and constrained by COVID-19. Moreover, as 1 participant said, when 1 student expresses self-doubt, “then the whole group is affected;” groups working together, she said, are “self-feeding.” Although not every participant painted a negative picture of students’ potential for developing their professional identity, participants
collectively suggested opportunities for nursing professional development staff members to support 2021 graduates’ transition to practice.

**Supporting Students’ Transition to Practice: Providing “Mental Support and Advocacy”**

The fourth emergent theme also tacitly suggested project participants’ views of appropriate supports for 2021 graduates’ transition to professional practice. In that regard, participants suggested that 2021 nursing graduates would need help moving “theory to practice,” to get beyond being “timid in some of the basics.” They would need “multiple patient assignments” and developing familiarity with “medical terminology [which] remains a foreign language.” Students, themselves, some noted, held high expectations and concerns about effectively taking on nursing roles. One participant said, “the student expectation was that they should be able to manage—I don’t want people to know I can’t do this.”

A similar notion about role status and enactment was expressed by a student in a study by Browne and colleagues17 to be a nurse, “I have to look the part… I have to perform in a variety of roles…I have to connect with others.” Many of these behaviors were challenged for 2021 nursing graduates, according to our participants. Interestingly, the student in the study by Browne and colleagues cited 1 additional comment important to professional identity development: “to be a nurse,” she said, “I have to care for myself.”

Self-care did not figure in the interview texts we reviewed for this project. In the view of the authors, it remains an important consideration for aiding 2021 nursing graduates’ transition to practice.

Participant comments implied the importance of anticipating students’ needs in order to facilitate their transition to the extraordinary challenges19 of professional practice. Their comments suggested that students’ “hesitancy” to act and their tentativeness in “reaching out and asking for help” recommended a need for anticipatory interventions to aid students in their progression to practice and helping students to focus on development of “communication, social skills, how to approach different situations.” Nursing graduates influenced by COVID might “need extra training, closer supervision,” said 1 participant, whereas another noted, “a big piece of this [perceived clinical acumen] is the way this generation communicates.”

**DISCUSSION AND IMPLICATIONS FOR NURSES IN PROFESSIONAL DEVELOPMENT**

Clinical instructor participants in this study found that although COVID-19 resulted some shortcomings for senior students, students also benefitted from the experience. Some students developed attributes that might serve to strengthen their commitment to their roles as nurses, taking advantage of every available learning opportunity, developing focused approaches to learning, and appreciating the interventions of their faculty members, for example. Others found themselves uncertain about their roles as nurses, demonstrating varying levels of basic skills. Students’ need for guidance and support as 2021 nursing graduates, whether their educational experiences left them well-prepared or relatively uncertain about nursing roles, emerged clearly through study analyses as collectively, 2021 graduates will present a range of skills acumen, knowledge, and professional identity development to the professional development staff members who will orient them to their initial clinical positions. In general, the variability notable in project participants’ comments—some viewing students’ experiences as limiting and others finding those experiences enriching—suggested that for the next few years, nursing leaders may find themselves required to “capitalize on differences to foster highly effective work groups.”

Project analyses suggested widely divergent clinical instructor perceptions of the strengths and challenges of 2021 senior nursing students. Nurse leaders and nurses in professional development are likely to require “responsive innovation and agility” to prepare for the complex needs of 2021 nursing graduates, leading “ahead of the data” in support of graduates’ professional identity development and their transition to professional practice.

**LIMITATIONS**

The goal of this quality improvement project was to describe unfolding insights into clinical instructors’ assessments of COVID-19’s impact on senior nursing students’ clinical strengths and challenges. Neither the constant comparative method nor the project’s structure as a quality improvement initiative will support broad generalization; project findings, however, do offer in-depth description of the experiences of a large group of clinical instructors with appointments in 5 separate nursing programs. Because project analyses were qualitative in structure, with no statistical or design features to control for threats to validity, the authors paid careful attention to development of an audit trail that readers could review and consider.

Project authors note that their use of paper and pencil rather than audio recordings to take field notes might have been inadequate to fully capture participants’ intended meanings. They note, as well, that themes emerging from project analyses represent multiple layers of interpretation—first, the interpretations of clinical instructors regarding students’ experiences, not the interpretations of students themselves, and second, project author interpretations of participant faculty members’ impressions of their students. Findings are necessarily distanced from the lived experiences of the students who personally completed their nursing education in a time of COVID.
Overall, findings of the project are informative because they represent the authors’ skills in conducting interviews and in their careful assessments of data provided by skilled clinical instructors who, as employees of the hospital, were exquisitely familiar with both education and practice expectations for new nursing graduates. The authors’ repeated consideration of the denotations (i.e., fact-based reports) and connotations (i.e., reflective of values) in participants’ comments helped to strengthen the overall trustworthiness of project findings. Credibility of project findings was enhanced by author attention to the repetition apparent across individual participant transcripts and as found in other published studies of student experiences in a time of COVID-19.

APPLICATION OF FINDINGS IN THE PROJECT’S CLINICAL SETTING

In consideration of project findings, project authors met with nursing directors, nursing managers, and nurse educators in the participating hospital to consider how to restructure orientation to provide the supports recommended by participants. During this meeting, the authors presented project findings and opened discussion about how to optimally help new graduates as they enter the workforce in our setting. Information gleaned from the meeting validated a need to reconfigure orientation and nurse residency activities for new graduates. In follow-up, nurse educators at the involved clinical setting incorporated findings from this project into an orientation redesign.

Nurse educators in the participating hospital structured orientation classes to foster orientees’ active involvement in learning, rather than offering passive, instructor-led lecture. Two themes—nursing basics: passport to safe practice, and transition to practice—focused orientees’ learning and practice opportunities. Each theme supported documentation of new orientees’ skill proficiency and served to reassure them of their competence. Additionally, the teaching/learning processes implemented in orientation included continuing discussion of self-care.

Transition to practice sessions were interactive. They gave orientees opportunities to try out skills as new graduates, to talk through their feelings and beliefs, to ask questions, to use critical thinking, and to refine their professional identities. The sessions allowed orientees to pose questions and develop peer relationships as they worked together in teams to practice performing roles that are central to nursing practice. Early analyses of evaluation data from orientation activities suggest orientees’ enthusiasm about the approach.

CONCLUSION AND RECOMMENDATIONS FOR NURSE LEADERS AND EDUCATORS

For nursing graduates, making the shift from student to practicing nurse can be challenging, especially because academic theory doesn’t always fit perfectly with practice expectations or behaviors. As Attenborough and Abbott12 noted, students engaged in developing a nursing identity are optimally supported through work with positive role models who contribute to building peer support, to advancing sense of belonging, to fostering confidence development, and to expanding critical thinking abilities.

Findings of this QI project reiterated long-established findings regarding factors believed to influence nursing students’ transition to professional practice.23 Project participants noted that in the time of COVID-19, students’ optimal transition to practice incorporated more than just their personal skills acumen. It reflected a wide range of learning underscored by the emergence of the pandemic. As we continue to evaluate the experiences of our newly hired RNs, many of them the COVID-19-shaped nursing graduates of 2021, we look forward to developing increased understanding of how to best meet new graduates’ needs, and potentially, to advancing relevant theory and action to support new graduates’ transition to the expanding complexities of professional nursing practice.

REFERENCES

1. Blevins S. The impact of COVID-19 on nursing education. Medsurg Nurs. 2021;30(2):145-146.
2. Jones K, Hein LC, James L. A nursing leadership practicum in the time of COVID19: a Southeastern university experience. Nurse Leader. 2021;19(2):145-149.
3. Wallace S, Schuler MS, Kaulback M, Hunt K, Baker M. Nursing student experiences of remote learning during the COVID-19 pandemic. Nurs Forum. 2021;56(3):612-618.
4. Johns Hopkins University. Futurity. Nurses face ‘unprecedented challenges’ during COVID-19. April 7, 2020. Available at: https://www.futurity.org/nurses-covid-19-2329212-2/.
Accessed August 26, 2021.
5. Nibbelink CW, Brewer BB. Decision-making in nursing practice: an integrative literature review. J Clin Nurs. 2018;27(5-6):917-928.
6. Cleland J, McKimm J, Fuller R, Taylor D, Janczukowicz J, Gibb T. Adapting to the impact of COVID-19: sharing stories, sharing practice. Med Teach. 2020;42(7):772-775.
7. DeGagne JC, Cho E, Park HK, Nam JD, Jung D. A qualitative analysis of nursing students’ tweets during the COVID-19 pandemic. Nurs Health Sci. 2021;23(1):273-278.
8. Nie S, Sun C, Wang L, Wang X. The professional identity of nursing students and their intention to leave the nursing profession during the Coronavirus disease (COVID-19) pandemic. J Nurs Res. 2021;29(2):139.
9. Africa L, Trepanier S. The role of the nurse leader in reversing the new graduate nurse intent to leave. Nurse Leader. 2021;19(3):239-245.
10. Bae SH, Cho M, Kim O, et al. Predictors of actual turnover among nurses working in Korean hospitals: a nationwide longitudinal survey study. J Nurs Manag. 2021;29(7):2102-2114.
11. Haddad LM, Annamaraju P, Toney-Butler TJ. Nursing shortage. Updated December 14, 2020. In: StatPears [Internet]. Treasure Island, FL: StatPears Publishing; 2020.
12. Sarafis P, Rousaki E, Tsounis A, et al. The impact of occupational stress on nurses’ caring behaviors and their health-related quality of life. BMC Nurs. 2016;15(56):1-9.
13. Shin S, Oh SJ, Kim J, et al. Impact of nurse staffing on intent to leave, job satisfaction, and occupational injuries in Korean
14. Sperling, D. (2021). Ethical dilemmas, perceived risk, and motivation among nurses during the COVID-19 pandemic. *Nurs Ethics*. 2021;28(1):9-22.

15. Keaton M, National League for Nursing. Nursing leaders call for flexibility in the path to graduation to ensure greater numbers of new nurses. March 27, 2020. Available at: http://www.nln.org/newsroom/news-releases/news-release/2020/03/24/nursing-leaders-call-for-flexibility-in-the-path-to-graduation-to-ensure-greater-numbers-of-new-nurses. Accessed August 26, 2021.

16. Strauss A, Corbin J. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Thousand Oaks, CA: Sage; 2008.

17. Browne C, Wall P, Batt S, Bennett R. Understanding perceptions of nursing professional identity in students entering an Australian undergraduate nursing degree. *Nurse Educ Pract*. 2018;32:90-96.

18. Walker S, Dwyer T, Broadbent M, Moxham L, Sander T, Edwards K. Constructing a nursing identity within the clinical environment: the student nurse experience. *Contemp Nurse*. 2015;49(1):103-112.

19. Hossain F, Clatty A. Self-care strategies in response to nurses’ moral injury during COVID-19 pandemic. *Nurs Ethics*. 2021;28(1):23-32.

20. Bleich MR, Bowles J. A model for holistic leadership in post-pandemic recovery. *Nurse Leader*. 2021;19(5):479-482.

21. Wymer JA, Stucky CH. Nursing leadership and COVID-19: defining the shadows and leading ahead of the data. *Nurse Leader*. 2021;19(5):483-488.

22. Attenborough J, Abbott S. Building a professional identity: views of pre-registration students. *Nurs Times*. 2018;114(8):52-55.

23. Spector N. The National Council of State Boards of Nursing’s transition to practice study: implications for educators. *J Nurs Educ*. 2015;54(3):119-120.

Laura Dzurec, PhD, PMHCNS-BC, ANEF, FAAN, is [Nursing Research Scientist] at Hartford Hospital/Hartford Healthcare in Hartford, Connecticut. She can be reached at laura.dzurec@hhchealth.org. Maria Tackett, EdD, CCRN-k, CEN, CTRN, is [Nursing Director, Professional Practice/Trauma] and Lisa Enslow, RN-BC, MSN, CLC, is [Nurse Residency Coordinator] at Hartford Hospital/ Hartford Healthcare.

Note: The authors have reported that they have no relationships relevant to the contents of this paper to disclose. This work represents an unfunded study.