

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.



Contents lists available at ScienceDirect

Journal of Professional Nursing



journal homepage: www.elsevier.com/locate/jpnu

Preparing BSN students for a new workplace: Experiences in a COVID-19 designated unit as an RN extender



Patricia L. Richard^a, Kristen Starnes-Ott^{a,*}, Rebeka Watson-Campbell^a, Roy L. Trahan^a, Patricia Lea^a, Dora M. Kuntz^b, Deborah J. Jones^a

^a The University of Texas Medical Branch School of Nursing, 301 University Blvd., Galveston, TX 77555-1132, United States of America ^b The University of Texas Medical Branch Health System-Galveston, 404 8th Street, Galveston, TX 77555-1132, United States of America

ARTICLE INFO

Keywords: Nursing students Nursing education COVID-19 Public health nursing Academic-practice partnership Nursing leadership

ABSTRACT

Academic nursing programs were impacted by the onset of the pandemic with the challenges of social distancing, detecting, and controlling the spread of the virus. Many traditionally campus-based, face-to-face programs transitioned quickly to include virtual activities for classes, laboratories, and clinical experiences for students. Initially direct patient care clinical activities came to a halt due to concerns for student safety and overwhelming numbers of COVID-19 cases stressing health system resources. However, as COVID-19 cases began to rise and hospitals struggled with staffing shortages, it became necessary to explore how nursing students could contribute to relieving the staffing burden while obtaining critical education as RN Extenders. Students that participated in the RN Extender program were seniors entering the nursing workforce within the next two months. Significant student screening and preparation was provided to support students serving as RN Extenders in COVID-19 units.

The prior working relationships and personal contact between academic and practice leaders, a sense of equal participation, clear and realistic expectations of the benefits and responsibilities of each group were crucial. Building ongoing and frequent opportunities for formal and informal communication among all stakeholders was vital and the major contributor to the success of this program.

Introduction

Infectious diseases, plagues and pandemics have been documented as early as 430 BCE. Most of these outbreaks have had devastating effects on multiple countries and in many cases, the world, with high rates of infection and death (McDonald, 2020). Currently the Novel Coronavirus-19 is responsible for worldwide disruptions (World Health Organization [WHO], 2020) and has surged predictably related to several factors including human behavior, crowded venues, travel, holiday or special event gatherings, lack of social distancing, and multiple variants of the virus (Maragakis, 2021). Since the initial outbreak of COVID-19 the emergence of multiple variants have resulted in worldwide surges, requiring health care facilities and nursing education to rapidly adopt new models in response. Although nurses have been at the frontlines of public health emergencies for decades, the novel coronavirus presented profound challenges related to direct care capabilities, and their own psychological well-being (McDonald, 2020; Shun, 2021).

The World Health Organization (WHO) declared a global pandemic

in response to the worldwide spread of the Novel Coronavirus-19 (COVID-19) on March 11, 2020 (WHO, 2020). At that time little was known about how to detect, treat and control the virus. Many countries, including the US, found themselves inadequately prepared to contain the pandemic due to lack of experience with and treatments for the virus, supply shortages for personal protective equipment (PPE), and ventilators; lack of virus testing supplies and ability to generate timely results of the testing (Office of the Inspector General, 2021; Sengupta et al., 2021; Peiffer-Smadja et al., 2020; Council on Foreign Relations Independent Task Force Report No. 78, 2020; Leaver et al., 2021). Hospitals reported overwhelmed emergency rooms, intensive care units, (Courage, 2021) and tragically, increased cases and deaths among COVID-19 patients (CSSE, n.d.-a, n.d.-b; USA Facts, n.d.). All these factors led to public fear, uncertainty, and anxiety which resulted in closing all but essential businesses and stay at home orders for virtually everyone except essential workers to maintain consumer necessities, care for the sick and control the virus. During the initial surges of the pandemic, most hospitals and health systems found it necessary to

* Corresponding author. *E-mail addresses:* plrichar@utmb.edu (P.L. Richard), ykstarne@utmb.edu (K. Starnes-Ott).

https://doi.org/10.1016/j.profnurs.2022.02.003

Received 13 July 2021; Received in revised form 31 January 2022; Accepted 2 February 2022 Available online 24 February 2022

8755-7223/© 2022 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

restrict outside individuals to contain the virus and manage the flow of patients. This included restricting access to academic nursing programs for direct patient care clinical activities (NCSBN, 2021; Leaver et al., 2021). Surges of daily cases have ebbed and flowed, and two years later similar conditions exist (Our World in Data, n.d.;CSSE, n.d.-a, n.d.-b; USA Facts, n.d.). The 7-day average ending January 23, 2022, for the US for hospitalized (144,394) and patients in the intensive care units (ICU) (25,470) far exceeds the numbers approximately one year ago (January 6, 2020: hospitalizations, 33,755; March 1, 2020: ICU, 9245). (Our World in Data, n.d.). As the virus continues to change, its impact on academic nursing continues to cause problems that require flexibility and resilience among the leaders, faculty, and students.

The challenge to nursing and opportunities ahead

Academic nursing programs were impacted by the onset of the pandemic with the challenges of social distancing, detecting, and controlling the spread of the virus. Early in the pandemic the America Association of Colleges of Nursing (AACN) and the National Council of State Boards of Nursing (NCSBN) began sharing guidance for nursing programs. Nationwide, Boards of Nursing also took a position on program guidance and communicated with schools as well (TBON, 2020). These groups updated guidance on a regular basis and ranged from preparation of schools and students to safely reopening schools during the pandemic. Many traditionally campus-based, face to face programs transitioned to include virtual activities for classes, laboratories, and clinical experiences for students in a short period to time. Initially direct patient care clinical activities came to a halt due to concerns for student safety, overwhelming numbers of COVID-19 cases stressing health system resources, and uncertainty about treatment protocols and control (AACN, 2020, NCSBN, 2020, 2021; Emory et al. (2021); Leaver et al., 2021). As a result, nursing programs were challenged to secure adequate direct care clinical experiences for students completing the program during the beginning of the COVID-19 pandemic. Simultaneously, as cases began to rise and hospitals struggled with staffing leading to staff reassignments and staff shortages it became evident and necessary to explore how nursing students could contribute to relieving the staffing burden while obtaining education during a critical time (Martin-Delgado et al., 2021; Bogossian et al., 2020).

Our school of nursing expanded the existing academic-practice partnership, which allowed continued clinical placements during the pandemic on non-COVID units and with non-COVID patients only, to allow students to work as RN Extenders caring for patients early in the pandemic on COVID designated units. The purpose of the RN Extender program was to create an opportunity for select students to work closely with nurses in a COVID unit while simultaneously meeting their Clinical Capstone course objectives and preparing this soon to be nursing graduate for the realities of the healthcare environment.

The aim of this project was twofold: 1) to provide clinical experiences for the students in their final clinical course in the BSN program and 2) provide assistance to the nursing staff during the surge of the COVID-19 pandemic.

The need for new academic nursing approaches

While many academic nursing leaders recognized the need for new approaches to nursing education for several years prior to the pandemic as evidenced by American Association of Colleges of Nursing (AACN) (2016) reports, few anticipated the need for accelerated change that came on the heels of COVID-19 that would impact all facets of the nursing workforce. Academic nursing has been placed between significant regulatory requirements, shortage in nursing faculty and local pressure to produce more nurses had inhibited new nursing curricula implementation with an emphasis in public health and infection control measures.

Lessons learned from the pandemic thus far highlight the need to

expand disaster and public health emergency education and training for nurses (Leaver et al., 2021). Our experience brought into focus that we had insufficient time to prepare for major shifts in educational and clinical program offerings, and educational development needs in both experienced and new nurses grew in response. Concerns regarding access to and use of PPE and safety concerns with novice learners in direct clinical experiences in the hospitals was also of paramount concern in the early stages of the pandemic.

Along with significant complexities associated with student educational needs, the pandemic also produced an urgent need for more nurses. Of course, the nursing shortage was exaggerated by an already pre-pandemic nursing shortage. With the growing demand for healthcare providers, student nurses were now in high demand in the workforce and being offered a variety of options including paid positions or receiving academic credit to work in various settings.

Pandemic planning response and implementation emerges

The continued needs and tensions the pandemic placed on nursing is evident and for most of the nursing workforce, unprecedented. While our academic programs will provide a needed workforce with further skills and knowledge moving forward, stress and fear among educators was prevalent now. When discussing how best to support the health system and our students among our faculty leaders, we contemplated the needs of the public at large and if they outweighed the individual faculty or student concerns surrounding safety. Our decision was to move forward with supporting the public with increasing staffing needs of the health system by offering the RN Extender experience to a select group of our graduating senior students.

The RN Extender role is not new. Aiken (1989) suggested the role as early as 1989 as a potential solution to the nursing shortage, stretching the nurse's ability to work with more patients with the help of an assistant. Organizations have assigned the role to non-licensed as well as licensed individuals depending on setting and needs (Crockett & Gibbs, 1993; Eastaugh & Regan-Donovan, 1990). Breaux (2021) describes efforts to cross-train nurses from non-COVID-19 related inpatient units and ambulatory areas as nurse extenders to assist those on the front-line. These staff were trained to be observers of the PPE donning and doffing process, assist with patient care activities including but not limited to assessments, medication administration, and documentation, to allow the front-line RNs to care for more patients.

Practice partnerships to address the needs of provider and learner

Throughout the pandemic schools of nursing, medicine and health professions were faced with the challenge of continuing to provide a quality education, matriculate students on time or even early, and support the health care system in the most appropriate ways (Leaver et al., 2021). The University of Texas Medical Branch (UTMB) is an academic health science center located in Galveston, Texas which includes a Health System and schools of Nursing, Medicine, Health Professions, Graduate School of Biomedical Sciences and a new School of Public and Population Health. The UTMB Health System consists of hospitals on four campuses and a network of over 90 clinics. Despite the continued COVID-19 challenge and due to the existing academicpractice partnership between the School of Nursing (SON) and the health system, some students returned to direct clinical opportunities as early as July 2020. As mentioned before, the original SON agreement with the UTMB Health System for clinical placement in the early days of the pandemic included student experiences on non-COVID units and with non-COVID patients only. With the increased need for healthcare providers with nursing knowledge, the opportunity for the RN Extender emerged.

The guiding principle for the RN Extender we implemented was inter-organizational collaboration. Collaboration (e.g., teamwork) was a critical factor that enabled us to respond quickly to an increasing need for nursing care for COVID patients and prepare the soon to be nursing workforce for what lie ahead. The prior working relationships and personal contact between academic and practice leaders, a sense of equal participation, clear and realistic expectations of the benefits and responsibilities of each group and building ongoing and frequent opportunities for formal and informal communication among all stakeholders was vital and the major contributor to the success of this program.

Steps in the RN extender selection: a macro process

The implementation of the RN extender for students at UTMB SON and Heath System involved volunteer students who were vetted and selected during their final semester while attending a Clinical Capstone course. Through this process they were able to participate as unlicensed RN Extenders while fulfilling the requirements of the course.

As with other nursing programs across the country, clinical site placement and availability continues to be difficult to obtain due to COVID-19. The Clinical Capstone is an eight-week course during the final semester of the program with a precepted clinical component of 135 h. All Clinical Capstone students were assigned to an inpatient clinical unit with a registered nurse as preceptor for the duration of their clinical rotation in line with the course requirements. Students were not compensated as they received course credit for the experiences. Preceptors were uncompensated by the SON but may receive a financial incentive or accrue other attributes that can be used for promotion to the next level from their employer. Faculty assigned to the Clinical Capstone course were either full-time or contract part-time employees of the SON and provided oversite to the students and preceptors. Course and clinical expectations were outlined in detail prior to initiation of the rotation for all involved. Duties and tasks were then assigned to meet these expectations by either the preceptor or clinical faculty as appropriate for the student's scope of practice. All students enrolled in the Clinical Capstone course were required to successfully meet the course objectives and receive a passing clinical evaluation. The overall goal of the course and clinical experience was to prepare the student for transition to practice.

Steps in the RN extender selection: a micro process

The RN extender role is not usually a student nurse experience as other licensed employees at the university are deployed to participate in this role. However, in this situation nursing students were allowed the opportunity to work with a master's prepared clinical educator assigned to a COVID-19 unit with the intent to aid and support patient care while simultaneously acculturating to the nursing role. Protecting the safety, mental health, and reducing anxiety of the nursing students was paramount. Because the role of nurse educator includes equipping students with the necessary coping skills training, psychological support and working environments optimized for safety and welfare of students and others, participation in the RN Extender program was determined based on several factors including individual interviews. (Godbold et al., 2021).

Selection of students was conducted by Clinical Capstone course faculty and the Health System Adult Patient Care Services Clinical (APCSC) Educator. The selection process included nominations by clinical faculty from a previous course. Students were nominated based on their professionalism, clinical competence, advanced critical thinking skills and good academic standing. The nomination process resulted in a pool of 26 students, 11 of which volunteered for the RN Extender opportunity. Individual interviews were conducted with the 11 volunteer students during which three questions were asked to determine psychological readiness: a) please tell us about your thoughts regarding working with COVID patients, b) what concerns you would have for your or others' safety if caring for COVID patients, and c) describe the challenges you may experience while caring for COVID patients. Following the interviews, the selection team discussed the candidates' responses, prioritized candidates based on their interview performance, and selected the top six students to participate in the project. One of the six candidates was subsequently withdrawn from consideration when they were unable to fit test for the N95 masks available at the facility. Five students ultimately participated in the program.

During the interview, many students were excited to have the opportunity to participate as RN Extenders. Selected comments are included below:

- "Would jump at the chance as it would benefit me in the long run to care for patients in a critical care unit"
- "Excited to work with and educate COVID patients"
- "Completely unprecedented situation. This is the new norm. Want to face it head on and work in critical care"
- "Strongly believe I am in this profession for a reason and believe I must take the risk to care for these patients. It is important to care for these patients".

Students were removed from consideration for multiple reasons, including personal choice or not being identified as a candidate by clinical faculty during the nomination process. These students progressed through the Clinical Capstone rotation as originally designed in the course on non-COVID-19 units.

The SON faculty and the APCSC educator collaborated to create a standardized process to prepare the students for the experience of caring for COVID-19 patients. The RN Extender experience allowed an alternative clinical opportunity to meet course requirements. Each student was paired with a preceptor who was a master's prepared clinical educator for the adult patient care areas and reassigned to the COVID-19 units for approximately two months before precepting the students. The preceptors were selected and trained by the unit APCSC educator prior to participation using a formalized preceptor training developed by the health system with input from the SON faculty. The role of the preceptor was to provide guidance, oversight for students, and provide feedback on student progress using the same standardized clinical tool for evaluation used in all undergraduate clinical courses at the SON. The experience was graded on a pass/fail basis using critical indicators on the clinical evaluation. The students received additional training and resources and were reassigned as student RN extenders for the remainder of their Clinical Capstone experience. Training for this experience included review and validation of the activities and skills included in the Adult Medical-Surgical Disaster Cross-Training and the Adult Intensive Care Unit Disaster Cross-Training Competency Based Orientation (CBO) tools. The APCSC educators created a Student Nurse Extender Checklist that addressed the two CBO tools (see Table 1). Students were assigned to complete the checklist during the first day of clinical as an RN extender. This checklist included proper use of PPE, isolation procedures, patient identification reinforcement, specimen collection, vital sign equipment usage, cleaning, and data documentation, assisting with care for patients with respiratory distress, process for emergency communications, end of life care, and use of hazardous chemicals and cleaners used on equipment and in rooms. The checklist also addressed standard care (validated in previous courses) which included blood glucose monitoring, obtaining specimens, and preparing for lab via venipunctures and urine collection. Additional items included assisting with patient mobility using specific equipment and proper body mechanics, use of Posey Bed/Chair alarm systems, height and weight measurement, intake and output, and assistance with activities of daily living, etc. Students were fit tested for N95 masks, validated on a variety of safety measures (see Table 1). Unit assignments were made with half of the students going to the COVID Intensive Care Unit (ICU) and the other half going to the COVID Medical-Surgical areas. At week three, students flipped their assignments to give all students experiences in both COVID ICU and COVID Medical-Surgical areas. The students

Table 1Student Nurse Extender Checklist.

utmb Health Working together to work wonders*



STUDENT NURSE EXTENDER CHECKLIST

Student Nurse Name: _____ Employee/ Student ID: _____ Unit (s): _____

Skill	Date	Staff or Preceptor Signature
Watch Donning & Doffing PPE		B
Video on COVID website		
Demonstrates Donning & Doffing		
PPE correctly		
Uses 2 patient identifiers every time		
(Specimen collection, charting, vital		
signs)		
Room set up for admission of patient:		
Isolation/ Non-Isolation		
correctly: Isolation/ Non-Isolation		
Patient Discharge: Cleans and		
removes items from room: Isolation/		
Non-Isolation		
Obtains & Documents Vital Signs.		
correctly		
Assists the nurse in caring for the		
patient in respiratory distress and		
applies Oxygen as needed		
obtaining blood glucose less than 30		
minutes before administration of		
insulin.		
Once validated, performs		
Obtains using apagiman for lab using		
best practices.		
Notifies primary care nurse of signs/		
symptoms of IV complications		
Verbalizes how, when & who to		
(Rapid Response, Code Team		
Primary Medical Team, OnCall		
Team)		
Verbalizes inpatient emergency		
Response Code Stroke Activation		
Locates Code Cart on the Units		
Locates Fire Alarms/ Fire		
Extinguishers/ Panic Buttons on unit		
Uses patient lift or mobility		
mechanics when mobilizing or		
transferring patients.		
Demonstrates proper use of Posey		
Bed/ Chair Alarm systems		
Assists with care of patient at End of		
Reviews hazardous chemicals and		
cleaner used routinely on unit and		
safety considerations of each		
Collects, reports, & documents data		
Collects, reports, & documents data		
related to Intake and output		
Assist with daily care; may include		
skin care, personal hygiene, oral		
with elimination applies and removes		
TED hose/ SCDs.		
Assists primary nurse with wound		
care (including pressure injuries/		
Assists with patient with putritional		
needs and feeding		
Reviews Continuous Observation		
Requirements for Disaster Extender		
PowerPoint (on Med/ Surg Website)		
nurse with the environmental		
checklist for suicide patients		
Reviews and documents correctly on		
continuous observation form every 15		
Records and documents (as able)		
within the Electronic Medical record		

Student Attestation: I attest that I have reviewed the skills in this checklist. I will continue to review resources as needed that may be beneficial for me to augment my knowledge and/ or skill sets (Examples: Elsevier, Policy and Procedures, review with unit staff who are skilled in those procedures).

Print Name: _____ Signature: _____

Please submit this completed checklist to your clinical faculty.

____ Date: ____

Table 2

RN extender duties for nursing students.

RN extender duties: direct care	RN extender duties: to allow for primary RN to remain in the patient isolation room duties
 Assist with patient positioning (prone), gathering all necessary supplies: sacral & heel wound dressings, support for shoulders/hips/ legs, new electrode pads for telemonitoring, new linens such as a bed roll and additional disposable chuck pads, bath wipes, new gown 	 Provide frequently used provisions in patient isolated room- IV bags, point of care supplies, bathing/linen change supplies, parenteral supplies, blood collection tubes and specimen bags, humidification collection bags from Respiratory Therapy, hanging new IV solutions and resetting the infusion numps
Obtain point of care glucose results.	 Dual sign-off on medication infusions
Dual sign-off on insulin administration (Student observes RN)	(Student observes RN)
 Document vital signs and lab collection in EMR 	• Restock the supply room
 Assist with transporting patient to 	 Accept hand-off blood tubes/speci-
COVID-19 unit from ICU	mens and Accu-check machines
Assist with bed baths/linen changes	 Clean equipment and properly bag and send blood specimens
• Assist with take down of rooms once patient transferred out and set up of rooms for new admit	• Communicate with lab, operating room, radiology, materials management or Respiratory Therapy for services as neede

• Access Pyxis to acquire medications due for primary RN while in patient room

Distribute patient food trays

provided basic direct care and assisted the primary RN while in the patient room (see Table 2).

Student perspectives in preparing for the RN extender experience

The students were excited and grateful for the experience as RN Extenders in their final semester. The participants provided their reflections about the experience through their journaling requirement in the course. Below are selected excerpts from the students regarding their thoughts on the orientation process.

- "The first day of orientation for the COVID-19 unit was exciting as we were meeting our new preceptor and getting acquainted with the new unit. I was somewhat surprised when we immediately started assisting on the units that day. It showed how much help these nurses really needed, and although we had never been on this unit before they sent us into rooms to take vitals as soon as we could get our PPE on".
- "When it came time for the orientation, I was only thinking that we would be introduced to the units that we were to work on for the next few weeks. However, soon after we talked about and practiced PPE equipment and talked with the charge nurse on the floor for the day, we were asked by the educator if we could just help out for a few hours to not only provide help for a little while but also understand the unit a bit more before the first shift. That first day really showed me how much PPE gets regularly used on an hourly basis. The nurses that day were very receptive, and it started a recurring theme of appreciation throughout the experience".

While there continue to be many challenges to the educational process during the ongoing pandemic, the primary challenge for faculty was related to student safety, the initial selection, training of students in a timely manner and the availability of proper PPE for students working in COVID-19 units. Efficient and flexible scheduling was necessary for students to complete the required shifts for Clinical Capstone in the remaining weeks of the course.

Other challenges reported by students were their initial fear of the COVID-19 virus, frequent patient death and family interaction during end of life as challenging elements of their daily bedside shift as an RN extender. The following excerpt was from one of the students participating in the RN extender experience:

Student perspectives during the RN extender experience

• While on the outside I remained calm, on the inside I was wide eyed and scared as I stepped into a COVID-19 room for the first time. I know my nerves got the best of me when the patient made a comment asking if this was my first day. I laughed back in my head thinking that it technically was, but also thinking about how I would be graduating in a few short weeks and possibly be the nurse for these patients. At this moment I realized I had a long way to go. Virtual clinicals had not prepared me for these intense situations along with other clinical skills and I had a lot of making up to do.

Educational implications

Several learning opportunities emerged during the pandemic. The SON faculty were pleased with the RN Extender experience despite the many challenges COVID-19 presented to nursing education. The faculty and APCSC educators were able to collaborate to address multiple needs: clinical experiences for students and assistance for the staff caring for COVID-19 patients during a surge of patients. Students were able to complete program clinical requirements and gain incredible experience through collaborations with the health system. In response to the pandemic and as an outcome of the RN extender project, the SON BSN department continues to work with our clinical partners to provide more clinical experiences to the entire student body with the goal of preparing them for the new pandemic workplace. As a result of the pandemic and the RN Extender experience, all students are now provided additional inperson, socially distanced, laboratory skills, simulation, practice, and validation sessions including additional focus on the proper use/ demonstration of PPE and other necessary skills. All students are fit tested for N95 masks prior to clinical experiences and carry N95 masks with them during clinical experiences due to the unpredictability of patients receiving results of positive COVID-19 status during their stay.

Hospital nursing leadership during a pandemic: utilization of a shared mental model

Historically, the roles of nurse leaders have been primarily focused on initiatives to improve quality and patient safety, reduce costs, and develop a strong clinical leadership team. In our ever-changing healthcare environment, nursing leaders are now considered operational and strategic thought leaders (NASEM, 2021). This renewed focus aligns with the Institute for Healthcare Improvement quadruple aim as well as the AACN New Essentials, which focuses on improving patient care and population health, and developing a more resilient workforce (Bowles et al., 2019; AACN, 2021). The nurse leader must appreciate the importance of "just in time" education and team training to continue to meet the needs of a dynamic healthcare setting and a changing nursing workforce further impacted by a pandemic.

Health system and community setting nursing leaders will need to continue to work closely with Schools/Colleges of Nursing to gain a shared mental model and vision of what outcomes are to be achieved and how they will align with the organization's strategic mission during a crisis such as COVID-19 has presented. Authors Crayne and Medeiros (2021) have highlighted the importance of using the charismatic, ideological, and pragmatic (CIP) model of leadership as a framework that supports the leader-as-logic architect concept utilizing shared mental modeling which departs from more commonly considered leadership models. They propose that pragmatic leaders were best equipped for managing the first wave of the pandemic and, more broadly, that the variability in logic and subsequent outcomes, observed in response to the COVID-19 crisis were managed more positively with this style of leadership. Others have highlighted the pillars of sapient leadership that resonate today with many including leader humility, authenticity, and creating an open space that leads to trust and psychological safety (Chima & Gutman, 2020).

While utilizing the suggested leadership models will be important even after the pandemic has subsided, nursing leaders will need to continue to evoke the following leadership principles nurses are known for in establishing a crisis response program such as the RN Extender. Those principles include: 1) realize the risk and the reward, 2) remain relevant and logical, 3) trust the team, and 4) start somewhere. While these "leadership pearls" are demonstrated in many aspects of healthcare leadership, they are especially important and relevant in our current pandemic response environment and nursing as a profession.

Future directions

While many will remember the pandemic as a major source of disruption, many in healthcare may also view it as a vehicle that drove a transformational change in nursing education and practice. Nursing educators across the world have recognized the need to not only maintain the important proficiencies in professionalism, service to those in need, and personal accountability but to also embrace a resurgence of public health nursing competencies (Leaver et al., 2021). Today's health challenges relate directly to the nursing competencies of population and public health, need to improve health care systems, how informatics directly links to improved patient care, and decreasing healthcare disparities. It is even more important that the future nursing workforce be prepared with the education and skills that will help them respond to the health needs of society, particularly in those with social circumstances negatively impacting their holistic health and well-being (NASEM, 2021).

Nursing will need to be very attentive to future trends in healthcare including the increasing digital delivery of health care services, increasing aging population, increasing burden of mental health, failure of small/rural hospitals and changes in care in the community (NASEM, 2021). Given what we have learned and continue to learn through this pandemic, these trends will call for continued academic-practice partnerships to prepare and protect the vitally important nursing workforce.

Acknowledgment

We would like to thank the (then) senior nursing students that participated in the RN Extender program and provided valuable insight.

Olivia Fontana, BSN, RN Gabriella Mariano, BSN, RN Shanea Smith, BSN, RN Shirley Baptiste, BSN, RN Kendrick Katigbak, BSN, RN

References

Aiken, L. H. (1989). The hospital nursing shortage. A paradox of increasing supply and increasing vacancy rates. *TheWestern Journal of Medicine*, 151(1), 87–92.

- American Association of Colleges of Nursing. (2016). Advancing healthcare transformation: A new era for academic nursing. Retrieved from https://www.aacnn ursing.org/portals/42/publications/aacn-new-era-report.pdf.
- American Association of Colleges of Nursing. (2020, March 20). Considerations for COVID-19 preparedness and response in U.S. Schools of Nursing [Press Release]. Retrieved from https://www.aacnnursing.org/News-Information/COVID-19/AA CN-Recommendations.
- American Association of Colleges of Nursing. (2021). The essentials: Core competencies for professional nursing education. https://www.aacnnursing.org/Portals/42/ AcademicNursing/pdf/Essentials-2021.pdf.
- Bogossian, F., McKenna, L., & Levett-Jones, T. (2020). Mobilising the nursing student workforce in COVID-19: The value proposition. *Collegian (Royal College of Nursing, Australia)*, 27(2), 147–149. https://doi.org/10.1016/j.colegn.2020.04.004
- Bowles, J. R., Batcheller, J., Adams, J. M., Zimmermann, D., & Pappas, S. (2019). Nursing's leadership role in advancing professional practice/work environments as part of the quadruple aim. *Nursing Administration Quarterly*, 43(2), 157–163. https:// doi.org/10.1097/NAQ.00000000000342
- Breaux, A. (2021). Nurse extender orientation program. Journal for Nurses in Professional Development, 37(5), 315–316. https://doi.org/10.1097/NND.000000000000711

- Center for Systems Science and Engineering. Coronavirus resource center: COVID-19 dashboard. Johns Hopkins University. . Retrieved January 1, 2021, from https://cor onavirus.jhu.edu/map.html (n.d.).
- Center for Systems Science and Engineering. Coronavirus resource center: COVID-19 dashboard. Johns Hopkins University. . Retrieved January 26, 2022, from https:// coronavirus.jhu.edu/map.html (n.d.).
- Chima, A., & Gutman, R. (2020). What it takes to lead through an era of exponential change. Harvard Business Review. https://hbr.org/2020/10/what-it-takes-to-lead-through -an-era-of-exponential-change.
- Council on Foreign Relations Independent Task Force Report No. 78. (2020). Improving pandemic preparedness: Lessons from COVID-19. Council on Foreign Relations. http s://www.cfr.org/report/pandemic-preparedness-lessons-COVID-19/pdf/TFR_Pan demic Preparedness.pdf.
- Courage, K. H. (2021, January 27). COVID-Overwhelmed hospitals strain staff and hope to avoid rationing care. Scientific American. https://www.scientificamerican.com/arti cle/covid-overwhelmed-hospitals-strain-staff-and-hope-to-avoid-rationing-care1/.
- Crayne, M. P., & Medeiros, K. E. (2021). Making sense of crisis: Charismatic, ideological, and pragmatic leadership in response to covid-19. *American Psychologist*, 76, 462–474. https://doi.org/10.1037/amp0000715
- Crockett, M. J., & Gibbs, J. (1993). Use of a nurse extender role in the rehabilitation setting. Rehabilitation Nursing Journal, 18(1), 37–39. https://doi.org/10.1002/ i.2048-7940.1993.tb01285.x
- Eastaugh, S. R., & Regan-Donovan, M. (1990). Nurse extenders offer a way to trim staff expenses. Healthcare Financial Management: Journal of the Healthcare Financial Management Association, 44(4), 58–62.
- Emory, J., Kippenbrock, T., & Buron, B. (2021). A national survey of the impact of COVID-19 on personal, academic, and work environments of nursing students. *Nursing Outlook*, 69(6), 1116–1125. https://doi.org/10.1016/j.outlook.2021.06.014
- Godbold, R., Whiting, L., Adams, C., Naidu, Y., & Pattison, N. (2021). The experiences of student nurses in a pandemic: A qualitative study. *Nurse Education in Practice*, (56) https://doi.org/10.1016/j.nepr. 2021.103186
- Leaver, C. A., Stanley, J. M., & Veenema, T. G. (2021). Impact of the COVID-19 pandemic on the future of nursing education. Academic Medicine: Journal of the Association of American Medical Colleges. https://doi.org/10.1097/acm.000000000004528. PMID: 34789661.
- Maragakis, L. (2021, October 21). Coronavirus second wave, third wave, and beyond: What causes a COVID surge? Johns Hopkins Medicine. https://www.hopkinsmedicine. org/health/conditions-and-diseases/coronavirus/first-and-second-waves-of-coron avirus.
- Martin-Delgado, L., Goni-Fuste, B., Alfonso-Arias, C., De Juan, M., Wennberg, L., Rodríguez, E., ... Martin-Ferreres, M. L. (2021). Nursing students on the frontline: Impact and personal and professional gains of joining the health care workforce during the COVID-19 pandemic in Spain. *Journal of Professional Nursing*, 37(3), 588–597. https://doi.org/10.1016/j.profnurs.2021.02.008
- McDonald, T. (2020). Getting the COVID-19 pandemic into perspective: A nursing imperative. Retrieved from *International Nursing Review*, 67(3), 305–317 https://onli nelibrary.wiley.com/doi/pdfdirect/10.1111/inr.12608.
- National Academies of Sciences, Engineering, and Medicine. (2021). Future of nursing 2020-2030: Charting a path to achieve health equity. Washington, DC: The National Academies Press. https://doi.org/10.17226/25982
- National Council of State Boards of Nursing. (2020). Changes in education requirements for nursing programs during COVID-19. https://www.ncsbn.org/Education-Requ irement-Changes_COVID-19.pdf.
- National Council of State Boards of Nursing. (2021, January). NCSBN's Environmental scan COVID-19 and its impact on nursing and regulation [Supplement]. Journal of Nursing Regulation, 11, S3–S33.
- Office of the Inspector General. (2021, February). Hospitals reported that the COVID-19 pandemic has significantly strained health care delivery. U.S. Department of Health and Human Services. https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf.
- Our World in Data. Coronavirus (COVID-19) hospitalizations. Retrieved January 7, 2022 from https://ourworldindata.org/covid-hospitalizations (n.d.).
- Peiffer-Smadja, N., Lucet, J. C., Bendjelloul, G., Bouadma, L., Gerard, S., Choquet, C., Jacques, S., Khalil, A., Maisani, P., Casalino, E., Descamps, D., Timsit, J. F., Yazdanpanah, Y., & Lescure, F. X. (2020). Challenges and issues about organizing a hospital to respond to the COVID-19 outbreak experience from a French reference centre. *Clinical Microbiology and Infection: the Official Publication of the European Society of Clinical Microbiology and Infectious Diseases*, 26(6), 669–672. https://doi. org/10.1016/j.cmi.2020.04.002
- Sengupta, M., Roy, A., Ganguly, A., Baishya, K., Chakrabarti, S., & Mukhopadhyay, I. (2021). Challenges encountered by healthcare providers in COVID-19 times: An exploratory study. *Journal of Health Management*, 23(2), 339–356. https://doi.org/ 10.1177/09720634211011695
- Shun, S. C. (2021). COVID-19 pandemic: The challenges to the professional identity of nurses and nursing education. *The Journal of Nursing Research*, 29(2), Article e138. https://doi.org/10.1097/JNR.00000000000431
- Texas Board of Nursing. (2020, March 21). Governor Abbott waives several board of nursing regulations [Press Release] Accessed on December 1, 2020 https://www.bon.texas.gov/waivedrules.asp.
- USA Facts. US COVID-19 cases and deaths by state. Retrieved January 25, 2022, from https://usafacts.org/visualizations/coronavirus-covid-19-spread-map (n.d.).
- World Health Organization. (2020). WHO director-general's opening remarks at the media briefing on COVID-19 - 11 March 2020. World Health Organization. https://www. who.int/director-general/speeches/detail/who-director-general-s-opening-rema rks-at-the-media-briefing-on-covid-19—11-march-2020.