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Implementing a Novel Nursing Site Manager Role in the Pediatric Emergency Department for Patient and Staff Safety During the COVID-19 Pandemic

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NCPD Earn Up to 11.5 Hours. See page 117.

Contribution to Emergency Nursing Practice

- A pandemic response requires agile systems and rapid dissemination of biocontainment policies and procedures. Emergency nurses are uniquely positioned in their front-line role to convene multidisciplinary health care teams for safety and well-being.
- We designed a novel nursing role to ensure safety and disseminate rapidly evolving policy and environmental changes.
- Site managers foster the adaptive capacity and resilience of the multidisciplinary team by serving as real time resources for current evidence-based science, rapidly changing policies, personal protective equipment donning and doffing techniques, use of innovative communication technologies, and identification of staff burnout, severe stress, and compassion fatigue.
- This role may be replicated and individualized to meet the needs of other institutions.

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Key words: COVID-19; Emergency department; Nursing; Pediatric

Constituting the majority of the health care workforce, nurses are the front-line defense in response to an infectious disease outbreak and are at high risk for infection themselves. Given their crucial role of emergency nurses in the management of prevailing epidemics, it is imperative that nurses receive adequate support and protection. Epidemics such as the West African Ebola outbreak from 2014 to 2016 have demonstrated the consequences for not protecting health care workers and emergency staff. Lessons learned include severe physical and mental health consequences for health care workers and the community at large. In the Ebola epidemic, "most healthcare worker deaths could have been prevented with simple interventions such as diagnostic testing, proper equipment and training, which makes this loss especially devastating."¹ Much of the worldwide severe acute respiratory syndrome outbreak was hospital based, and health care workers were a significant portion (37%-63%) of suspected cases in affected countries.²

There are limited data on infection and mortality rate from coronavirus disease 2019 (COVID-19) among health care workers in the United States and around the world. Among 6760 adults hospitalized from March 1 to May 21, 2020, 5.9% were health care providers, with nursingrelated occupations (36.3%) representing the largest portion of hospitalized providers.³ In the US and Mexico, health care workers represent 1 in every 7 COVID-19 cases.⁴ Notably, "these two countries account for nearly 85% of all the COVID-19 deaths among health care workers in the [Pan American Health Organization] region.⁴ This reality, along with the idea that "there can be no patient safety without health worker safety,"5 made it immediately apparent that programs supporting the emergent and unprecedented educational needs of emergency nurses had to be implemented in a rapid, sustainable manner. Emerging

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Content	Time	Teaching method
COVID-19 introduction	10 min	Didactic lecture, clinical case study
Infection prevention and control basics	15 min	Didactic lecture, clinical case study
Personal protective equipment indications and use, troubleshooting problems	15 min	Didactic lecture, clinical case study
Personal protective equipment donning and doffing practice	15 min	Skills workshop
Drive-through swab protocols and family education	5 min	Didactic lecture
Special care practices for the emergency department, resource review	15 min	Didactic lecture, clinical case study
Psychological first aid practices	20 min	Didactic lecture
Applying psychological first aid	15 min	Clinical case studies
Orientation to the practice environment	10 min	In-situ orientation, narrative sharing

COVID-19, coronavirus disease 2019.

from this call to action, we developed a nursing site manager program.

Our site manager program created a nursing role to support the multifaceted physical and psychological needs of staff during a pandemic. The setting was a 52-bed emergency department with an annual census of 60 000 visits in an urban, quaternary-care, freestanding pediatric hospital. The urgent needs of staff included rapid roll out of personal protective equipment (PPE) education, expertise in current COVID-19 research, adaptability with quickly evolving policies and procedures, and peer-to-peer coaching to support coping and resilience.

The site manager team was intentionally composed of nurses who volunteered to participate, not selected "leaders" or senior staff. The team consisted of 40 nurses whose experience ranged from novice to expert. This demonstrated the value of all nurses regardless of where they were along their career journey. Site managers created and fostered an environment of teamwork and inclusivity, encouraging each individual to share and celebrate their unique strengths and talents. This self-selected team, by nature of its diversity, had balanced skills, complementary abilities, and individual strengths such as emotional intelligence, resilience, adaptability, technical skills, and communication skills. Site managers became a unified team navigating uncharted waters during a time of fear and uncertainty.

Key stakeholders involved during the initial development and implementation of the site manager program included hospital-wide biocontainment team leaders, infection control experts, emergency department physician and nursing leadership, and staff nurses, clinical assistants, environmental services, and administrative staff. The group acknowledged any questions or concerns that arose and addressed them in real time or within 24 hours during the daily COVID-19 leadership meetings.

Site Manager Orientation Program

Site manager orientation included a 2-hour course focused on the knowledge and skills needed to support multidisciplinary staff in the provision of safe, timely care of patients with symptoms concerning for COVID-19. Two departmental nursing leaders implemented this curriculum in collaboration: the global health fellow and the professional development specialist. Course content included modules highlighting infection control basics, PPE donning and doffing practices, and psychological first aid principles (Table 1).

Learning methods combined high-yield didactic sessions with hands-on training, including skill practice with PPE donning and doffing, current COVID-19 management, and relevant research findings. Application of public health principles emphasized the rationale behind the adaptations to existing policies, procedures, and the environment of care. Learners achieved competency validation in the ability to don and doff PPE during a demonstration against a skills objective checklist (Centers for Disease Control resources found at website link in the reference list).⁶

Unique to this site manager program was the addition of coping and resiliency education and principles of providing psychological first aid to staff during this

Emergency Department COVID-19 Site Manager: Roles and Responsibilities

Background: In response to the COVID-19 pandemic, we created a unique role to support staff safety and the provision of safe, timely, evidence-based care to children and families.

Role: Oversee the ongoing implementation of precautions for healthcare workers and patient safety to support the safe and effective delivery of care for patients with symptoms concerning for COVID-19.

Responsibilities: To perform effectively in this role, the site manager remains up-to-date with current guidelines and procedures to be aligned, coordinated and consistent with other ED site managers and hospital teams. Current guidelines will be disseminated by chain of command from Emergency Management/Command Center and through ED COVID-19 leadership. Please direct all questions and concerns up through your chain of command. This site manager should not be assuming a patient assignment; instead, acts as a resource maintaining the "30,000-foot view", supporting the provision of safe, timely care by the following:

At start of shift:

- Ensure staff caring for patients with symptoms concerning for COVID-19 are proficient in PPE use, including donning and doffing
 - Ensure appropriate supplies are stocked and available in the unit and for "drive-through" testing O Check N95 drop-off stations and organize masks (or delegate)
 - Check resuscitation equipment and communication devices
- Assess properly functioning negative pressure in negative pressure rooms (ball indicator)
- Ensure used powered air-purifying respirators (PAPRs) are picked up for cleaning
- Connect with screener/triage staff
 - Provide them with Site Manager phone number to contact you if they are worried about a patient coming back that is a concern for COVID-19
- Communicate with ED Coordinator; request they call you to respond when patient call lights ring

During shift:

- Facilitate team huddles when indicated to review updated procedures and processes
- Participate in ED COVID-19 rounds when on shift
- Facilitate flow into and out of the unit, including assisting with patient transport
- Check EMS doffing station (in ambulance bay) alert environmental staff if it needs cleaning
- Ensure COVID-19 precautions are documented in each patient's chart appropriately
- Assist with supporting staff obtaining swab samples from "drive through" testing
- Support the nurses on the team with managing patient assignments
 - Examples: support comfort rounds, obtain food for families, enforce visitor policy, notify lab control when COVID-19 swabs are sent, collaborate with ancillary staff (respiratory, radiology, IV team, social work, etc.)
 - Coach and mentor, act as a clinical resource to support staff and answer questions
 - When EMERGENT questions arise, use the appropriate chain of command to resolve
- If questions are NON-URGENT, please email the COVID-19 leadership group
 Offer and provide psychological support to staff, if staff desire; offer referral to employee
 - assistance program
- Act as "gatekeeper" for resuscitations (see resuscitation document for details)
 - o Obtain supplies to support the care of critical patients (airway equipment or medications)
 - o Co-lead low-fidelity resuscitation simulations with MD COVID-19 super-users
 - Use downtime to practice safe PPE use, discuss clinical scenarios
- Support implementation of new initiatives and processes
- Refer to the hospital's internal COVID-19 website for the most up-to-date information
 Support environmental service staff in safe linen and trash removal utilize their chain of command with guestions

At conclusion of shift:

- Email COVID-19 leadership team with non-urgent questions, concerns and ideas
 - Provide brief summary of shift support offered, general volume and acuity of patients
 - Provide PPE supply update if anything concerning

FIGURE 1

Emergency department COVID-19 site manager: Roles and responsibilities. COVID-19, coronavirus disease 2019; PPE, personal protective equipment; EMS, emergency medical services; IV, intravenous; MD, medical doctor.

unprecedented pandemic. Site managers received education to support the mental health and well-being of their colleagues. This approach involved humane, supportive, and practical interventions for staff suffering trauma and stress in ways that respect their dignity, culture, and abilities. The aim was to support staff resilience and adaptation to prevent or mitigate burnout and compassion fatigue. Site managers received resources on healthy coping strategies and methods to build resiliency to use and to share with staff. Education focused on identification of those at risk and referral to department leadership or our hospital's Office of Clinician Support for expert services as needed.

At the conclusion of the program, nurses were oriented to the 17-bed cohort area reserved for patients suspected of or confirmed with COVID-19. This orientation included incorporating available resources and discussing potential scenarios to allow for immediate application of the course content and skills. One such scenario was the presentation of a pediatric patient arriving by ambulance whose chief complaint was fever and shortness of breath. Site managers quickly identified these symptoms as potential COVID-19 and initiated airborne, contact, and droplet precautions. They facilitated patient placement into one of the COVID-19 cohort bedspaces and educated accompanying family members on the need for such precautions. Because strict isolation was necessary for these patients, site managers enlisted the assistance of child life specialists to help with distraction techniques to decrease the patient's fears and anxiety.

Evaluation of the effectiveness of the orientation program included a knowledge-based postcohort survey. In this survey, each of the 40 participants (100%) stated this experience expanded their knowledge of COVID-19 and confidence in their clinical practice and assessment skills. Each participant demonstrated to the instructors the ability to safely don and doff PPE. A precourse assessment survey was not conducted because of the rapid, emergent need to implement this role to protect the health and well-being of ED staff.

Site Manager Roles and Responsibilities

Roles and responsibilities were indoctrinated throughout the program and were divided into 3 domains of support: for patients/families, for staff, and for public health systems (Figure 1). By design, site managers did not have a patient assignment so that they could focus on supporting safety. They assisted staff with patient care activities in the COVID-19 cohort area while monitoring for safety protocol compliance and serving as a resource when processrelated issues arose. Site managers' support for patients/families included family education, comfort rounds, assessment, and referral to meet social health needs such as access to nutrition and eviction protection. Our institution's family education materials can be found in the website listed in the corresponding reference.⁷ Additional resources are listed in Table 2.

Support for staff notably included safety protocol reinforcement, especially in triage, in the COVID-19 cohort areas and during patient resuscitations. Site managers reinforced patient screening at the point of triage to identify patients suspected of having COVID-19 and to facilitate prompt isolation of these patients. Additional responsibilities involved educating staff, including new residents, specialty consultants, and environmental service staff in safe practices, including PPE donning and doffing to support their safety as vulnerable members of the care team.

The site managers' role during resuscitation and emergency response was to serve as gatekeeper at the entrance to the patient's bedspace to limit the number of personnel in the room to decrease the staff's exposure to COVID-19. They ensured that all responders wore appropriate PPE and facilitated acquiring the needed equipment and supplies because bedspaces were minimally stocked to prevent contamination. Site managers supported staff during critical events by monitoring safety protocol adherence, promoting innovative communication technologies, ensuring availability of appropriate PPE donning and doffing stations, and facilitating team huddles to review team performance.

The site managers' role included fostering the adaptive capacity and resilience of all members of the multidisciplinary team, including environmental service staff, clinical assistants, nurses, physician assistants, nurse practitioners, and attending physicians. Assisting staff to adapt innovative electronic technologies to promote optimal communication with families and minimizing potential exposure proved to be essential during the pandemic. Similarly, the site managers' role of monitoring and coaching safe PPE practices remained critical to promoting staff resiliency.

Opportunities were available for site managers to collaborate with our global health team to review and contribute to current pediatric COVID-19 research and public health initiatives. Multidisciplinary activities included literature and case reviews of all patients with COVID-19 evaluated in the department. Site managers reviewed publications to select literature that was timely and relevant to emergency staff and disseminated these to physicians, nurses, and clinical assistants. Case reviews contributed to studies on presentation and emergency care needs of children infected with COVID-19, as there were scant existing data for this patient population.

With the support of institutional leadership, site managers participated in voluntary community outreach activities. For example, site managers supported public health initiatives by educating local emergency medical service colleagues in safe transfer practices and families regarding the importance of participating in contact tracing, physical distancing, and quarantining initiatives. Site managers were also invited to collaborate with local public school nurses in safe practices as they prepared to return to school to care for over 50 000 students. While participating in these activities, site managers came forward with innovative ideas and connected with new mentors beyond the emergency department.

Throughout the initial surge in cases, the site manager team met weekly with COVID-19 leadership. With the transition from the acute response of the pandemic, the meeting frequency decreased to monthly. Meetings included a combination of policy updates and education (Figure 2), as well as unstructured time for open discussion. Site managers were encouraged to share all COVID-19related problems so that departmental and infection control leadership could develop a clear procedure or policy. For example, certain challenges resulted in policy modifications for eyewear-cleaning protocols, reorganization of patient rooms to minimize supply contamination, and reevaluation of patient transport practices.

Site Manager meetings were recorded and disseminated to the team to promote inclusivity of those working off-shift or unable to attend. During the meetings, nursing leadership addressed questions solicited from the team. Site managers could presubmit their questions in an optional forum if they wished to remain anonymous. These forums provided a clear, direct channel for site managers working at the bedside to escalate concerns up the chain of command and to propose practical solutions. Conversely, these forums served as a channel for the leadership to disseminate information to those on the frontlines, thus supporting a clear top-down/bottom-up communication model. Therefore, site managers actively participated in the multidisciplinary COVID-19 leadership team.

Although the early-hypothesized needs of the department dictated initial roles and responsibilities of the site manager, team members were encouraged to provide suggestions to adapt or edit the role as these demands evolved. For example, 7 months into the pandemic, during a lull when COVID-19 cases were not rising, site managers reassessed skill competency in PPE donning and doffing for the multidisciplinary team to ensure safe PPE practices. This re-education was in prediction of a second surge in cases to reinforce procedures that promoted continued staff and patient safety. The site manager role and responsibilities evolved monthly on the basis of the needs of staff as the pandemic progressed. Team members received suggestions from the staff they supported. Therefore, all staff nurses providing direct patient care contributed meaningfully to the evolution of the site managers' role by identifying vulnerabilities in current protocols that required additional support and adaptation. Changing paradigms, the site managers worked for their colleagues and peers. In this light, when nurses and multidisciplinary members of the team received adequate support, patient care appeared more effective, patientcentered, efficient, equitable, and safe.

Ongoing Evaluation and Change

During the COVID-19 pandemic, providing ED staff with extra psychological and physical support through the work of the site manager team has the potential to improve patient care. Staffing the emergency department with 1 volunteer site manager 24/7 helped our department facilitate COVID-19 processes to deliver safer patient care. Since the implementation of our site manager program in March 2020 through April 2021, our emergency department evaluated 10 082 patients for COVID-19. The site managers were a valuable resource to mitigate this additional workload burden while prioritizing safety. Within the first 2 months of implementation of the role, the percentage of patients placed in an ED bed within 30 minutes of arrival increased from 55% to 96%. This helped to decrease potential COVID-19 exposure between patients and families in the ED waiting area. In review of our internal data, we discovered that appropriate implementation of constantly evolving isolation/precautions protocols for COVID-19 patients in the emergency department increased by 91% immediately after the launch of the site manager program. This improvement sustained through the writing of this paper.

With a reduction in our patient census during the pandemic, reallocation of nursing resources allowed us to implement the site manager's role on a permanent basis without any significant budgetary impact. There was no additional stipend for nurses assuming this role. With the expectation that our patient census will increase after the pandemic, the cost to maintain this role has yet to be determined. As the pandemic resolves, expansion of the site manager's role to a permanent clinical nursing leader position is in development.

Our institution adopted process changes that supported the site manager position. For example, the environment of care was modified to create dedicated donning and doffing stations with defined hot, warm, and cold zones. Innovations in technology such as web

TABLE 2

Patient, family and health care provider COVID-19 resources

Patient resources	
FDA: COVID-19 Educational Resources	https://www.fda.gov/emergency- preparedness-and-response/ coronavirus-disease-2019-covid- 19/covid-19-educational- resources
FDA: Multi-lingua COVID-19 Resources	l https://www.fda.gov/emergency- preparedness-and-response/ coronavirus-disease-2019-covid- 19/multilingual-covid-19- resources
FDA: COVID-19 Vaccine Information	https://www.fda.gov/emergency- preparedness-and-response/ coronavirus-disease-2019-covid- 19/covid-19-vaccines
NIH: Supporting Mental Health During the COVID-19 Pandemic	https://www.nimh.nih.gov/news/ science-news/2020/supporting- mental-health-during-the-covid- 19-pandemic
Family resources	
CDC: Helping Children Cope	https://www.cdc.gov/coronavirus/ 2019-ncov/daily-life-coping/for- parents.html
VA: Strategies for Families to Adapt to the COVID-19 Pandemic	https://www.ptsd.va.gov/covid/ covid_family_strategies.asp
CDC: COVID-19 Parental Resources Kit–Childhood	https://www.cdc.gov/coronavirus/ s 2019-ncov/daily-life-coping/ parental-resource-kit/childhood. html
NIH: Helping Children and Adolescents Cope with Disasters and Other Traumatic Events	https://www.nimh.nih.gov/health/ publications/helping-children- and-adolescents-cope-with- disasters-and-other-traumatic- events/
USDA: COVID-15 Resources for Individuals and Families	https://www.fns.usda.gov/disaster/ pandemic/covid-19/resources- individuals-families

Health care provider/		
nurses' resources		
ENA: COVID-19 Information	https://www.ena.org/practice- resources/covid-19	
Aiken: Nurses: How to Help Your Patients Cope with COVID-19	https://online.usca.edu/articles/ rnbsn/help-patients-cope-covid- 19.aspx	
AACN: Clinical Resources	https://www.aacn.org/clinical- resources/	
ANA: COVID-19 Resource Center	https://www.nursingworld.org/ practice-policy/work- environment/health-safety/ disaster-preparedness/ coronavirus/	
HHS: COVID-19 Resources for Healthcare Professionals	https://combatcovid.hhs.gov/hcp/ resources	
WHO: COVID-19 Resources and Guidance	https://healthcluster.who.int/ resources/covid-19-resources- and-guidance	

FDA, U.S. Food and Drug Administration; NIH, National Institute of Mental Health; CDC, Centers for Disease Control and Prevention; VA, U.S. Department of Veteran's Affairs; USDA, U.S. Department of Agriculture; ENA, Emergency Nurses Association; AACN, American Association of Critical Care Nurses; ANA, American Nurses Association; HHS, U.S. Department of Health and Human Service; WHO, World Health Organization.

conferencing platforms and portable tablets enhanced communication between the care team and the patients and families in isolation to minimize staff exposure. Hospital-wide protocols established PPE conservation and N-95 mask reuse. Dedicated storage areas served as departmental pick-up and drop-off zones for reusable masks and eyewear between shifts. Rapid point-of-care testing for COVID-19 in the emergency department expedited patient care and disposition.

Approximately 1 year after the implementation of the site manager role, a multidisciplinary survey assessed the perceived effectiveness of the role (e-Content). This survey had a 22% response rate. Of the 65 respondents, 97% of nurses, and 93% of physicians stated that the role was help-ful during the COVID-19 pandemic. Open-ended responses from the survey are listed in Table 3.





Conclusion

With the contributions of every member of the site manager team, our program was a model of shared governance, collaborative decision making, and staff nurse autonomy. We learned that the shared governance framework of the team, as exemplified in the self-designed role and responsibilities, has helped maintain confidence and buy-in for the team's high professional standards. Site managers were able to address the complex, interrelated health needs of patients and families while prioritizing staff safety. They protected and championed safety for all, supporting rapidly evolving science and practice changes while maintaining quality patient care.

Implementation of the site manager's role as we described has assisted our department in the provision of safety for staff, patients, and families. We believe that this role could be adapted to meet the needs of other departments and institutions. In the event of a future pandemic, further study is necessary to determine how the site manager's role would be executed and expanded in multiple settings where both pediatric and adult patients receive care. However, the knowledge and skills gained from this program may serve as a foundation for

TABLE 3 Site manager role effectiveness survey responses Staff Response Registered I find the role hugely helpful. With the Nurse inability to leave the room without doffing, the Site Manager is instrumental in obtaining supplies, relaying messages, providing an extra pair of hands. It is also helpful that this person is globally aware of everything happening on the team in order to lend support, offer rooms to triage, etc. Site Managers have the broader view of the flow and facilitate safe and efficient care. Better flow and resources and safety when a Site Manager is part of the team. Great resource, has global view of the team. Site managers are a great "go-to" for all COVID-related questions. Able to help the team RN feel supported during times of high volume and heavy COVID burden. It is useful in managing patient flow and having another set of RN hands. Alleviates some of the rooming from the charge nurse. Physician Maintaining COVID infection prevention and control practices has added new tasks that need to be covered during clinical shifts. The environment needs to be maintained and the extra hands to support patient care are so helpful. Helpful that they [site managers] know the latest rules. It is helpful to have someone knowledgeable about the COVID-related policies as they change. Provides expertise re: COVID placement, protocols, etc. Help with current policies. Help with in-room tasks. Help with training of new staff and trainees. Can help facilitate care for patients when nurses are busy with sick patients. Can help keep a finger on the pulse for sicker patients in the pod. Aware of the larger picture of what's going on with the team, very helpful in being the clean person and getting supplies for people gowned up.

other clinical nursing leadership roles. As frontline providers and emergency staff, site managers are change agents, brave professionals lighting the way for others, providing solace and safety, and supporting best practice patient care.

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Author Disclosures

Conflicts of interest: none to report.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.jen.2021.07.009.

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