



# Strategies to Support **NURSING SURGE CAPACITY**

## During Biological Events

A resource for the development and implementation of models of nurse staffing for North Carolina hospitals during emergency surge situations.

This resource has been compiled through the collaboration between the North Carolina Board of Nursing (NCBON), the North Carolina Healthcare Foundation (NCHF), the North Carolina Organization of Nurse Leaders (NCONL), and the North Carolina Directors of Nursing Administration in Long Term Care (NC DONA/LTC).

### OVERVIEW:

Registered Nurses (RNs), Licensed Practical Nurses (LPNs) and Nurse Managers are accountable for the provision of safe nursing care to their patients. Nursing law and rules mandate that:

1. RNs and LPNs accept only those assignments that the nurse is safe and competent to perform;
2. Nurse Managers remain available for direct participation in nursing care and that they:
  - a) delegate responsibility or assign nursing care functions to qualified personnel, and,
  - b) retain accountability for nursing care given by all personnel to whom that care is assigned and delegated.

During periods of under-staffing or limited numbers of well-qualified staff, which may be the case during a biological surge, it is essential that nurse leaders and nursing staff work collaboratively to provide safe, competent care for all patients in a manner consistent with nursing law and rules, and principles of safety. Clear communication is essential to arrive at solutions that best focus on patient care needs without compromising either patient safety or a nurse's license.

Short staffing and extended work hours pose considerable challenges for RNs and LPNs, other healthcare providers, and managers/administrators.

Therefore, the following considerations and resources are provided to help ensure the delivery of safe, competent nursing care during times of emergency, such as the novel coronavirus (COVID-19) pandemic.

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## I. CLINICAL CARE TEAM MODELS

Prior to determining the type and extent of change needed in care delivery models, the following activities should take place so that all staffing changes are part of a cohesive effort to limit the spread of disease within the context of what is happening in the community and individual facility:

- Planning for surge capacity based on CDC projections for individual hospitals and the region. See [CDC Comprehensive Hospital Preparedness Checklist](#) and [CDC Case Forecasts](#).
- Limiting the spread of disease within the hospital to protect healthcare workers and patients

Examples of care delivery models which support the maintenance of appropriate staffing and nursing care capabilities during infectious disease epidemics are described in the table below. These examples address the goals of:

- Finding ways to maintain, augment, and extend the hospital workforce;
- Allocating healthcare resources in a rational, ethical, and organized way to do the greatest good for the greatest number of people.

Hub and Spoke Nursing Care Delivery Model	Primary Care Team	Surgical, Diagnostic, and Procedural COVID Teams	Clinical and Patient Support Team
<p><b>Team Leader</b></p> <p>A specialty trained healthcare provider [e.g. an experienced intensive care unit (ICU) RN, CCRN] leads a team of newly cross-trained staff.</p> <p><b>Team Leader Responsibilities</b></p> <ul style="list-style-type: none"> <li>• Provides guidance and support to the team members</li> <li>• Coordinates closely with clinical educators to ensure rapid training and competency assessments of new staff.</li> </ul> <p><b>Example:</b> 1 CCRN Team Lead oversees a newly cross-trained RN and 2 LPNs to care for 6-8 patients.</p> <p><b>Note:</b> In some emergent situations, cross-training may not be possible. The team leader would then need to determine appropriate, routine tasks for the staff available, such as vital sign monitoring, bathing, administration of non-ICU drugs, etc.</p>	<p>Dedicated Primary Team to care for affected patient population</p> <ul style="list-style-type: none"> <li>• Provides a coordinated approach to treatment and management of affected patients (e.g. COVID-19 patients)</li> <li>• Dedicated Primary Team to care for affected patient population</li> <li>• Assists to conserve PPE and limit staff and patient exposures</li> <li>• The team consists of nurses, physicians, advanced practice nurses, physician assistants, respiratory care therapists, etc. dedicated to care for COVID patients.</li> </ul>	<p>Dedicated surgical, diagnostic, and procedural team</p> <ul style="list-style-type: none"> <li>• A dedicated team of healthcare professionals to provide surgical, diagnostic, and procedural care for affected patients, e.g. COVID patients.</li> <li>• This team closely coordinates with the Primary Care Team to ensure procedures/ diagnostics are indeed indicated and necessary for affected patients.</li> </ul>	<p>Infection prevention, clinical education, palliative care providers, family-patient engagement advisors, mental health professionals, ethics committee members, and spiritual leaders</p>

### Important Notes:

- During widespread emergencies, there is a high likelihood that care teams will consist of team members that are unfamiliar with one another. Communication is crucial during this stressful time and it is recommended that team huddles be utilized at the start of each shift and at regular intervals (such as every 4 hours) to discuss team assignments, patient care goals, and red flags that should be reported immediately to the team leader. This will enhance communication, optimize patient care activities, and allow each team member to discuss his/her patients' needs and individual needs. Consider virtual huddles to enhance safety.
- To support the newly formed teams to work together productively, it is recommended that nurse leaders collaborate with hospital administrators to develop consistent and regularly scheduled methods of updating staff on operating conditions, safety concerns and other issues related to the pandemic and surge capacity. Accurate information is essential to lower stress and nurture trust. Safety huddles are an excellent way to communicate crucial information with teams.
- Nurse leaders should be prepared to assist staff in managing internal conflict between personal and professional responsibilities as the stressors of the pandemic continue to grow.
- Nurse leaders should acknowledge the stress of working in an alternate care setting, with an unfamiliar team and a contagious illness. Identify methods to call for respite as needed.
- Method of patient assignment will be critical to the success of this newly formed team. Consider geography of assignment, patient continuity, and individual team member expertise to minimize unnecessary exposure and assure presence of optimal level of clinical expertise.
- Consider amendments to policies and protocols to assure emergency staffing plans are addressed.
- Assess opportunities for student learning experiences within the team model. Partnerships between clinical agencies and nursing education programs are encouraged. The agency and nursing education program would collaboratively determine whether this activity would be an appropriate clinical assignment for the nursing student learning experience and course outcomes. Learning opportunities may include but is not limited to vaccine clinics, testing site, community settings and a variety of clinical facilities.
- Engage facility education departments for orientation of staff reassigned to an alternative care setting, especially those transferring from ambulatory surgical centers.

## II. IDENTIFYING ALTERNATE STAFF RESOURCES

To support and extend nursing resources, the following examples are provided to stimulate creative thinking when assessing and utilizing potential pools of candidates. Always assess internally and then move to the external community to access potential sources of healthcare providers to assist in surge situations.

Internal Resources for ICU-level Staffing	External Resources
Nurses with critical care background: administrators, case management, CNS, Nurse Practitioners, CRNAs, PACU nurses, nursing pool, etc.  Staff competencies will need to be assessed.	Ambulatory surgical center nurses with critical care backgrounds or nurses with medical/surgical backgrounds that may be able to relieve internal medical/surgical staff thereby allowing them to be utilized in critical care and intensive care units.

Internal Resources for ICU-level Staffing	External Resources
<p>Identify experienced nurses in progressive care units (telemetry, stepdown/intermediate units) and medical/surgical units who could contribute in a team-based model with the guidance and experience of a critical care nurse.</p>	<p>Consider partnering with community resources to support an interdisciplinary hospital team care delivery model:</p> <ul style="list-style-type: none"> <li>•Emergency medical services: EMTs or paramedics (See the Joint Practice Statement of the NC BON and Office of Emergency Management Services entitled, "<a href="#">Alternative Practice Settings for EMS Personnel</a>").</li> <li>•Local physician practices: RNs, LPNs, Nurse Practitioners, etc.</li> <li>• Regional medical programs.</li> </ul>
<p>Identify operating room (OR) nurses to practice in a team-based model with an experienced critical care nurse as the team leader. OR nurses may require an accelerated refresher training.</p>	<p>Nurse staffing agencies — For example, Qualivis, <a href="http://www.qualivis.com/">www.qualivis.com/</a>, NCHA's supplemental staffing partner.</p>
<p>Identify other nursing staff in non-patient care roles who could, with refresher training, contribute to care somewhere in the organization, such as quality improvement, documentation specialists, compliance specialists, etc.</p>	<p>Local businesses/schools that may be closed or have decreased operations: occupational health nurses, nurse educators, healthcare professional associations, nursing school professors, and nursing students functioning in the role of an unlicensed assistive personnel and/or non-nursing role.</p>
<p>Identify Nursing Assistants, Nursing Assistant I (NAI) and Nursing Assistant II (NAII), who could perform specified tasks under the oversight of an ICU nurse team lead.</p> <p>See NCBON Resources:</p> <p><a href="#">Decision Tree for Delegation to UAP</a></p> <p><a href="#">Delegation and Assignment of Nursing Activities</a></p>	<p>e-ICU monitoring (remote monitoring of patients by critical care nurses and providers at an offsite facility) is also a potential means of workforce expansion to provide support to on-site staff.</p>
<p>Consider how virtual monitoring may be utilized to provide experienced ICU nurse and/or intensivist oversight within the facility to extend that expertise without additional physical bodies being needed.</p>	<p>Utilize additional established resources through the US Department of Health and Human Services Assistant Secretary of Preparedness Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE) at <a href="https://asprtracie.hhs.gov/">https://asprtracie.hhs.gov/</a></p>

### III. REMOVING SCOPE OF PRACTICE BARRIERS

The NC Nursing Practice Act and Administrative Code Rules define the legal scope of practice for the RN and LPN. However, hospital and facility policies and procedures may place more restrictive practice requirements than the legal scope requires, creating unintended barriers to nursing practice in the organization. For example, some hospitals/facilities may prohibit LPNs from the administration of blood/blood products and some hospitals/facilities may prohibit RNs from pulling pacing wires or removing chest tubes, etc. Both examples, as well as other activities, may be within the RN or LPN legal scope of practice. In order to prevent hospital/facility policies from constricting an organization's ability to extend nursing care in times of urgent need, such as a biological surge, it is important for the facility to examine their policies for such restrictions and to support the utilization of nurses to the full extent of their legally defined scope of practice. The North Carolina Board of Nursing has resources to support such an assessment:

- [Nursing Practice Act GS 90-171.20 \(7\) and \(8\)](#)
- [Administrative Rule 21 NCAC 36.0224](#)
- [Administrative Rule 21 NCAC 36.0225](#)
- [Current NC BON temporary waivers and guidance](#)
- [Position Statements and Decision Trees:](#)
  - [Scope of Practice Decision Tree for the RN and LPN](#)
  - [Delegation and Assignment of Nursing Activities](#)
  - [LPN Scope of Practice Clarification](#)
  - [RN Scope of Practice Clarification](#)
  - [Delegation of Immunization Administration to UAP](#)
  - [Infusion Therapy- Insertion/Access Procedures](#)
  - [Delegation: NAII Credentialed as EMT-I/P](#)
  - [Delegation of Medication Administration to UAP](#)
  - [Important Information About COVID-19 Vaccines](#)

NCBON resource for consultation:

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## ADDITIONAL RESOURCES FOR THE COVID-19 EPIDEMIC

### 1. **NC Area Health Education Centers (AHEC)**

#### [Workforce Surge Planning Playbooks | NC AHEC](#)

Ensuring an adequate and appropriately trained workforce in hospitals, health systems, and practices is an essential component of preparation for and management of patients during the COVID-19

### 2. **Centers for Disease Control**

#### [Mitigate Healthcare Personnel Staffing Shortages](#)

Maintaining appropriate staffing in healthcare facilities is essential to providing a safe work environment for healthcare personnel (HCP) and safe patient care. As the COVID-19 pandemic progresses, staffing shortages will likely occur due to HCP exposures, illness, or need to care for family members at home. Healthcare facilities must be prepared for potential staffing shortages and have plans and processes in place to mitigate these, including providing [resources to assist HCP with anxiety and stress](#).

### 3. **American Association of Critical Care Nurses**

To date, the most serious reported symptoms from COVID-19 are pulmonary complications. “COVID-19 Pulmonary, ARDS and Ventilator Resources” quickly provides learners with the knowledge and resources to provide essential care to ICU patients with coronavirus. To support nurses who need to cross train to care for patients with COVID-19, AACN is making this eLearning course available for all nurses, at no charge, to provide vital resources during this challenging time. <https://www.aacn.org/education/online-courses/covid-19-pulmonary-ards-and-ventilator-resources>

### 4. **The Society of Critical Care Medicine**

SCCM and its members are committed to supporting all clinicians on the front lines of this pandemic through this access the Society of Critical Care Medicine’s (SCCM) complimentary online training, Critical Care for Non-ICU Clinicians

<https://www.sccm.org/Disaster/COVID19-ResourceResponseCenter>

### 5. **The American Association of Colleges of Nursing**

During disasters and time of uncertainty, nurses and other health professionals can promote resilience. This presentation includes a technique to renew energy, ways to support children during disasters and strategies to decrease social isolation and foster resilience. Access the link below for the AACN webinar “COVID-19: Promoting Resilience in Times of Crisis” and other COVID topics.

[https://www.aacnnursing.org/Professional-Development/Webinar-Info/sessionaltcd/WFR20\\_03\\_27](https://www.aacnnursing.org/Professional-Development/Webinar-Info/sessionaltcd/WFR20_03_27)

### 6. [Health Force Center of the University of San Francisco’s Staffing Ratio Literature Review Results](#). (Also see below for document).

### 7. [Center to Advance Palliative Care: COVID-19 Response Resources](#) (Includes resources such as Palliative Care Role during COVID crisis; Palliative Care Team tools, scripts and conversation videos, etc.)

### 8. [Patient and Family Centered Care: Strategies in the Time of COVID-19](#)

### 9. [Coronavirus: How To Support The Mental Health Of Your Healthcare Workers](#)

The numbers below reflect best available literature, when possible, and crowd sourced information. Baseline, non-surge, ratios for acute care settings are difficult to interpret due to variations in study settings (e.g., trainees present or absent, level of support services, etc). Surge ratios for acute care settings are informed by literature and expert input and or benchmarking, if available; they do not consider existing requirements about staffing ratios. This list is limited to an abbreviated list of health workers supporting direct patient care and is not intended to be comprehensive of all team members or all settings.

Team member	Baseline ratio (min-max)	Surge ratio (min-max)	Notes
Physician (intensivist)	1:7 – 1:10	1:8 – 1:10	European and US data; Ratios differ based on levels of services and presence of trainees (residents and fellows) and advanced practice providers.
Physician (hospitalist)	1:10 – 1:15	1:12 – 1:18	Assumes no ICU care responsibilities, which would decrease ratios and does not account for teams, which could include NP/PA/trainees. Wide ranges based on patient complexity and underlying health status as well as presence of team members to help with responsibilities and tasks.
Advanced Practice Providers (NP, PA) in intensive care settings	1:5 – 1:7	1:7	See above notation
Advanced Practice Providers (NP, PA) in acute care settings	1:8 – 1:10	1:10	Assumes no ICU care responsibilities, which would decrease ratios significantly.
Nurse, licensed (ICU)	1:1	1:3	
Nurse, licensed (acute care)	1:6 – 1:8	1:6 – 1:10	Up to 50% can be licensed vocational nurses
Respiratory therapist	1:4 – 1:6	1:5 – 1:6	For settings using mechanical ventilation, depending on need to perform tasks such as insertion of arterial lines
Pharmacist (acute care)	1:8 – 1:30	1:15 – 1:30	Ratios differ based on levels of services and presence of trainees (residents)
Certified nursing assistant	1:7 – 1:17	1:10 – 1:15	If licensed nurse ratio is 1:6, then 1:12 CNA ratio. Licensed ratio of 1:8 might need 1:8-1:10 CNA ratio.

**Coordinators:**

The North Carolina Board of Nursing, the North Carolina Healthcare Foundation, the North Carolina Organization of Nurse Leaders and the North Carolina Directors of Nursing Administration in Long Term Care wish to credit the

**New Jersey Hospital Association's**  
**Healthcare Provider COVID-19 Staffing Resource Toolkit**  
from April 1, 2020 as a significant resource used to create this document.

