Phase 2: COVID-19 Pandemic Planning
Critical Care Health Human Resources (HHR)

TEAM BASED MODELS OF CARE

February 7th, 2021

Purpose

This document is based on the COVID-19 Wave 2 Critical Care Health Human Resource (HHR) Response Plan released by the Critical Care Command Centre, September 21, 2020. The purpose is to provide guidance for organizations activating Team Based Models of Care in response to COVID-19 pressures, as an essential strategy to increase health human resource capacity, in both acute care and critical care settings. Team Based Models support patient care during pandemic times by enabling flexible team compositions whereby experienced health care providers work together with team members across professions and roles to provide care that may be different than their traditional scope. This document describes planning, implementation and evaluation resources that can be used to advance Team Based Models as they progress from Contingency to Crisis phases. In this way we can ensure we continue to provide safe, high quality patient care, and support the experience and wellness of our health care teams. For the purpose of this document, a critical care team model consists of critical care trained and non-critical care trained individuals working together.

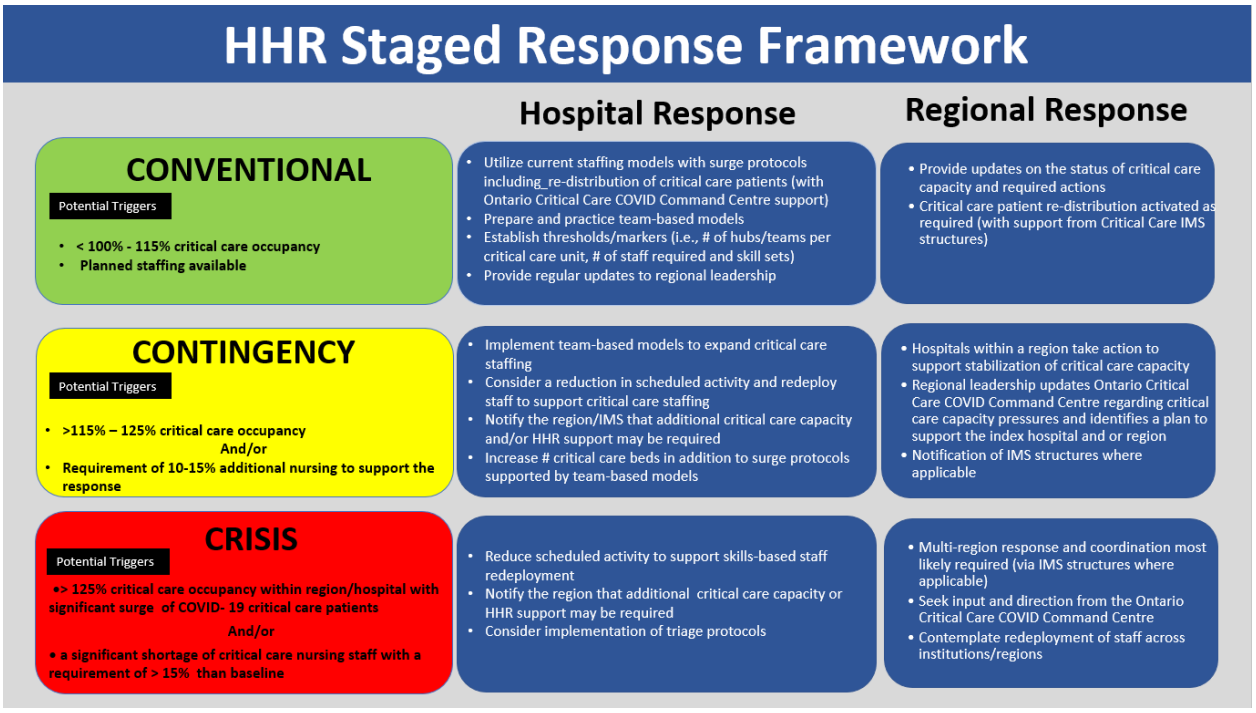
TABLE OF CONTENTS

HEALTH HUMAN RESOURCE STAGED RESPONSE FRAMEWORK

The Ontario Critical Care COVID-19 Command Centre released the Health Human Resource (HHR) Response Framework to guide hospitals, regions and the province to ensure a coordinated response during future waves of COVID activity. The following assumptions informed the development of the framework:

1. A staged approach will ensure an integrated and coordinated provincial HHR response.
2. Planning within regions will ensure a staged response is relevant and applicable within each geographic area.
3. To inform each stage, hospitals and regions will monitor triggers that include % critical care occupancy, patient acuity (e.g. NEMS), staffing capacity (determined by both % variation from baseline of critical care staff), and conduct self-assessments.
4. Nursing and other health disciplines are in-scope recognizing that there is an interdependency with the physician coverage model.
5. A complete hospital and/or regional response will include approaches to HHR, supplies (e.g., PPE), equipment, technology, and space/capacity. HHR is a primary consideration.
6. Nursing practice expectations will be aligned to the Canadian Standards for Critical Care Nursing Practice.
7. It is not realistic or appropriate to reduce all scheduled clinical activity. Some scheduled activity will continue and be balanced against critical care bed and HHR capacity requirements.
8. Extreme COVID-19 surges may require a temporary net new increase in the number of critical care beds and/or HHR.

Health Human Resource Response Framework



Stage Progression and Triggers

Triggers for each stage, Conventional, Contingency and Crisis define required hospital and regional responses. The Contingency phase requires hospitals to respond by implementing Team Based Models. Triggers within the Crisis Phase require organizations to expand Team Based Models, ensuring they have maximized internal pipelines of available staff and determine how to access new external pipelines. As capacity pressures and the need for additional nursing staff increases, Team Based Models must move along a progression to include increased integration of clinical and support roles, from both internal and external pipelines. The HHR Guiding Principles provide the foundation for ensuring the continued delivery of safe care, through the potential progression of phases from Contingency to Crisis.

HHR Guiding Principles

- Patient and staff safety will remain a top priority.
- Leverage existing HHR capacity to supplement critical care units
- Ensure roles and responsibilities are clear for team members, particularly as teams expand.
- Maintain sufficient levels of expertise in each area; utilize Team Based Models and ensure expertise is available to less experienced staff
- Operational capabilities will be flexible, scalable and adaptable to support the response.
- Partnerships among critical care units within individual hospitals and regions will be essential to support each other with equipment, personnel, decanting non-COVID patients, etc.
- Routine, standardized communication will ensure all team members are informed and aware of current needs, stage, and impact of the response.
- Strategies to support staff wellness must be integrated in every stage of response.
- Mechanisms should be in place to support ongoing evaluation while models are in operation to ensure quality, patient and staff safety are top priority.
- Readiness to act during all stages of surge will follow the Critical Care Surge Capacity Management Framework, found in the Critical Care Services Ontario (CCSO) Surge Capacity Management Plan (2009) https://criticalcareontario.ca/solutions/surge-capacity-management-plan/
- Implementation of proactive HHR approaches should contribute to the avoidance of hospital(s) and/or region(s) from going into crisis.
- Staff with advanced skill levels should be prioritized to support Critical Care teams given the higher patient acuity.
- Emergency Orders – Applicable components should be considered in HHR system planning (e.g. staff redeployment

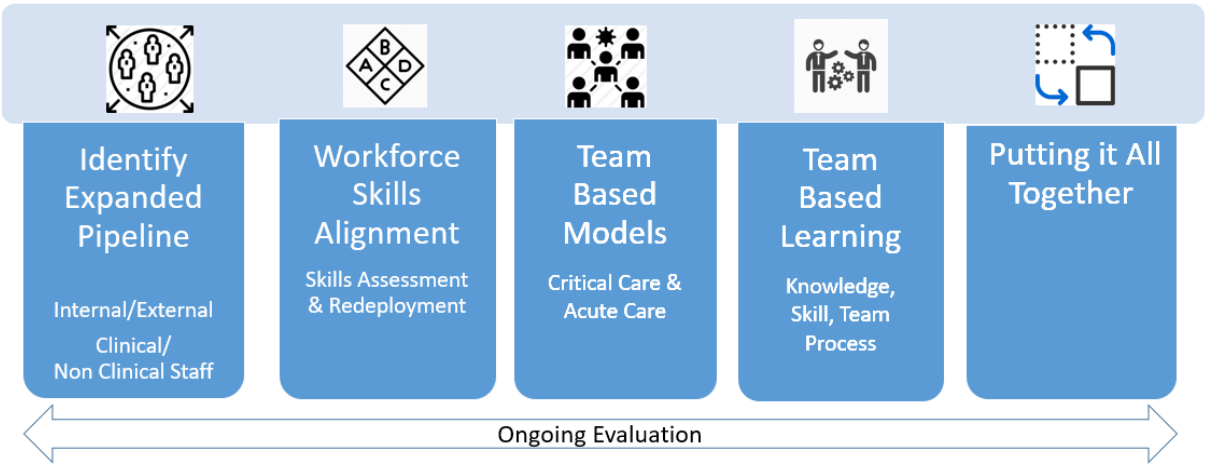
OVERVIEW OF TEAM BASED MODELS OF CARE

In Team Based Models experienced staff partner with staff who have varying levels of skill and may have been redeployed from different settings. Redeployed staff may also fulfill new roles (e.g. Alternate Care Provider, Safety Officer, Support, Helper) that have been designed to support patient care and teams during pandemic times. These roles can be operationalized by individuals regardless of professional background or experience. New team members are provided with just-in-time education to support familiarization within the clinical setting, to maximize and build on their existing skill sets.

Experienced critical care nurse and acute care nurse work together to care for a patient in the critical care setting.

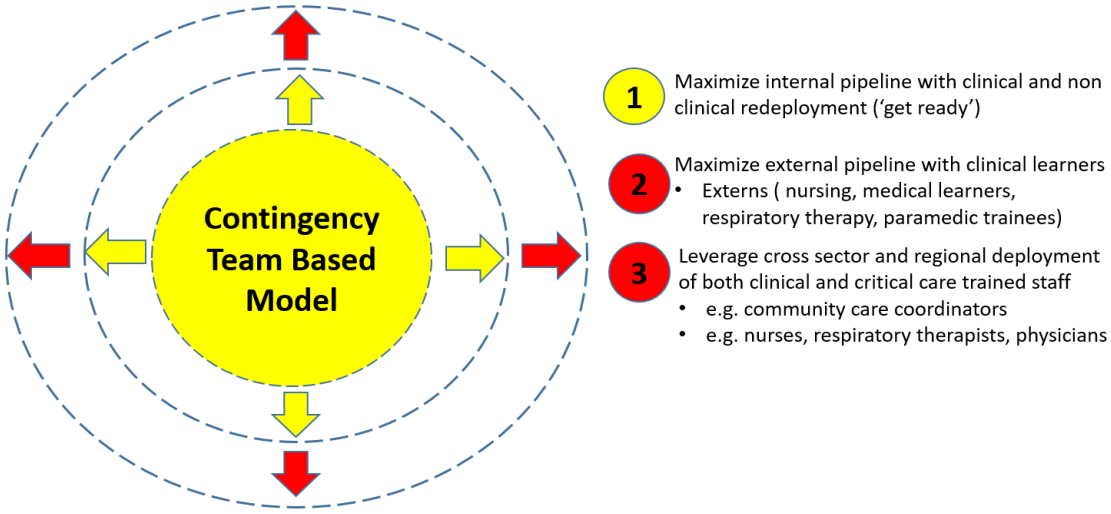
TEAM BASED MODEL OF CARE FRAMEWORK

The Team Based Model of Care Framework provides a structure for the planning, implementation and evaluation. Each component will be described in more detail to provide organizational guidance.



IDENTIFY EXPANDED PIPELINE

Contigency Team Based Models are currently in place in varying degrees across organizations. In the current state some organizations have implemented upskilling of staff to prepare, pilot testing of new care delivery models, redeployment of clinical staff through limited reduction of services, and activation of expanded models where COVID pressures have been significant. Preparing for the Crisis phase requires new HHR pipelines to be maximized, to enable team expansion. Internal and external pipelines provide staff who can be redeployed into either acute care or critical care. Redeployment of staff into Team Based Models in Acute Care can release staff with higher skill levels to support expanded Team Based Models in Critical Care.



What opportunities for internal hospital, regional and provincial levers/strategies could be implemented to advance Team Based Models?

Internal Hospital Pipeline Examples:

- Inventory and up skilling of all clinically trained/non-bedside staff to fill defined needs and roles (e.g. clinical informatics, professional practice, etc.).
- Nurses (RNs/RPNs) in Resource Teams, ambulatory care, clinics, and settings such as transitional care, rehab and palliative care, up skilled to support acute care models
- Team based models in acute care to release nurses to assume ICU Extender role
- Non-hospital community physicians/specialists to support all adjunct clinical work (e.g. vaccination, COVID testing, ambulatory services, assume roles in the ED to shift ED physicians to critical care).
- Assistance from hospital volunteers.
- Maximize part time/casual staff in critical care or backfill acute care to send staff to critical care.
- Optimize teams in all L3, L2 ICUs for hospitals in moderate surge or hot spots.
- Utilize team skills in settings such as coronary care, cardiology or stroke to create capacity in ICUs by decanting select patient populations.
- Consider recruitment of retired health care providers in all disciplines.

External Pipeline Examples (Regional and Provinical)

Clinical Externs

- ☐ Broaden Clinical Extern Program to include other health disciplines students e.g., medical, paramedic, respiratory therapy and nursing students (for more information, refer to the Ministry of Health Expanded Extern Program)

Regional and Provinical Deployment

- ☐ Leverage provinical/regional programs that may assist with the redeployment of staff from other regions redeployed staff might include other hospital or health sector staff (e.g., community clinical staff, health professionals from correctional facilities, physician offices, military and Family Health Teams etc).
- ☐ Paramedics redeployed to hospitals.
- ☐ Consider recruitment of non-traditional regulated roles who could perform some tasks.
- ☐ High school students to perform specific tasks under the direction of health care professionals.
- ☐ Internationally trained health care providers capable of working in modified or monitored clinical role.

WORKFORCE SKILLS ALIGNMENT

The Skills Assessment Tool can be broadly distributed to staff in both internal and external pipelines to categorize nurses and health professions by level of skill (ABCD). Using a consistent tool and language enables effective and efficient collaboration and coordination across organizations and regions for staff education, workforce alignment and redeployment. Models of care and roles can be designed using the skill categories to determine the number of staff required in each category to expand clinical capacity, while ensuring there is a balanced distribution of clinical experience.

Skills Assessment Tool

A	B	C	D
Full Scope Critical Care Able to work independently in a Critical Care environment (Level 3 Patients)	**Critical Care Training with Limited Experience** Able to support in a partnered model in a Critical Care environment (level 3) or independently work in with Level 2 Patients	**Non Critical Care Staff in Critical Care Setting** Able to support in a team-based model in a Critical Care environment (Level 2 or 3) OR able to work independently in an Acute Care environment	**Acute Care Staff** Able to support in a team-based model in an Acute Care environment
Key Competencies ☐ Invasive ventilator care and maintenance ☐ Cardiac Pacing ☐ Invasive advanced physiological monitoring ☐ Rapid sequence intubation – perform or assist ☐ Targeted temperature management ☐ Neuromuscular blockade ☐ Critical Care Full Systems Assessment	**Key Competencies** ☐ Arterial Line care and maintenance ☐ Cordis/PSI care and maintenance ☐ Cardiac monitoring and rhythm interruption ☐ Multiple Continuous IV vasoactive Infusion ☐ Epidural Management and Maintenance ☐ Inserting small bore Nasogastric (NG) Tube ☐ Invasive basic physiological monitoring – invasive hemodynamics ☐ Optiflow / BiPAP	**Key Competencies** ☐ Head-to-toe Systems-based Assessment – neuro, cardio, ☐ Peripheral IV (PIV) care and maintenance – Insertion, medication admin, trouble shooting ,etc. ☐ Drainage tube care and maintenance – Hemovac, Jackson-Pratt, etc. ☐ Urinary catheter insertion, care and maintenance – ex. in-dwelling, intermittent and suprapubic catheters ☐ Continuous Bladder Irrigation ☐ Bowel care and maintenance ☐ PEG tube/ feeding tube care and maintenance ☐ Pain management and symptom management ☐ Basic Skin and Wound Care – Aseptic wound care, ☐ Complex wound care – e.g VACs, , complex pressure injuries). ☐ Continuous IV Infusion (NS, Heparin, insulin, etc.) with intermittent medication admin ☐ Large bore NG tube insertion, care and maintenance ☐ Central Line care and maintenance ☐ Care and maintenance of an established Tracheostomy (including suctioning) ☐ Medications Administration . ☐ Patient Controlled Analgesia	**Key Competencies** ☐ Turning and Positioning ☐ Hygiene care ☐ Toileting and incontinence care ☐ Nutrition care (including feeding patients with dysphagia) ☐ ROM and mobilization ☐ Braden Scale Risk Assessment ☐ Falls Risk Assessment ☐ CAM Assessment ☐ Basic IV care and maintenance – i.e. bag change, monitoring site, tube change ☐ Basic urinary catheter care and maintenance ☐ Vital signs – BP, Pulse, SPO2, Temp., and Respiration rate, etc. ☐ Admin of oxygen ☐ Medication administration - Oral

TEAM BASED MODELS IN CRITICAL CARE AND ACUTE CARE

The design and implementation of Contingency Models of care is important in both the acute care and critical care settings. Model concepts have been designed for both areas, and are provided below. Organizations are encouraged to customize the models to best meet the needs of unique clinical contexts, patient populations, and staff requirements. The expedited development of contingency models should consider:

- Patient needs assessment data (acuity, complexity, dependency), including specialty care requirements for specific populations
- Workload measurement data
- Patient flow data and volume, as well as anticipated pandemic service adjustments
- Unit layouts and other contextual variables that influence unit capacity (e.g. Rapid Response Team/ Code Blues service, break capacity, access to RN consultation)
- Workforce data, including experience levels of unit teams
- Quality and safety data

Unit leaders and expert clinician perspectives should be integrated in the planning and development of models of care. The contingency models will require iterative enhancements, based on team learnings. Developmental evaluation principles should be implemented through all stages of application.

Professional Practice Considerations

Practice considerations and implications related to scope of practice, as per the Regulated Health Professional Act (1991) should be considered during model development and iterative enhancements. Practice leader consultation and regulatory standards should be integrated to support decision-making for assigned and delegated tasks.

Role responsibilities should be defined and communicated with teams, as well as ensuring clarity in relation to regulated health professionals' accountability for actions, in the COVID-19 environment (e.g. CNO https://www.cno.org/en/trending-topics/covid-19-practice-resources/). Experienced team members, as well as redeployed team members may be concerned about the impact of practice changes, and clarification should be provided. Support strategies and communication techniques to address practice changes with teams are important, including town halls, practice alerts and value prioritization through Process Priority Mapping. Teams working with unregulated health care professionals should be familiar with the College of Nurses of Ontario's practice guidelines, and consideration given as to how to integrate the guidelines into workflow. Delegations and medical directives should be developed and expedited as required.

In certain scenarios, attempts should be made to retain the current base-line model.

For example, critical care patients with the highest acuity and complexity, and least predictability, may benefit from care in the standard model.

Safety is considered when making model adjustments, as well as the skill and competency level of onboarded team members.

Patient assignments, in both acute care and critical care, should consider the patient needs and acuity, as well as the competencies and skill of the team members providing care. Efforts should be made to create safe and equitable assignments, ensuring the most acute and complex patients receive care from experienced nurses, or have access to consultation and support. Team leaders/charge nurses need to be well versed with the skill levels and capacity of new team members, to facilitate assignment creation.

Engagement of Physicians as Non-Physician Exenders

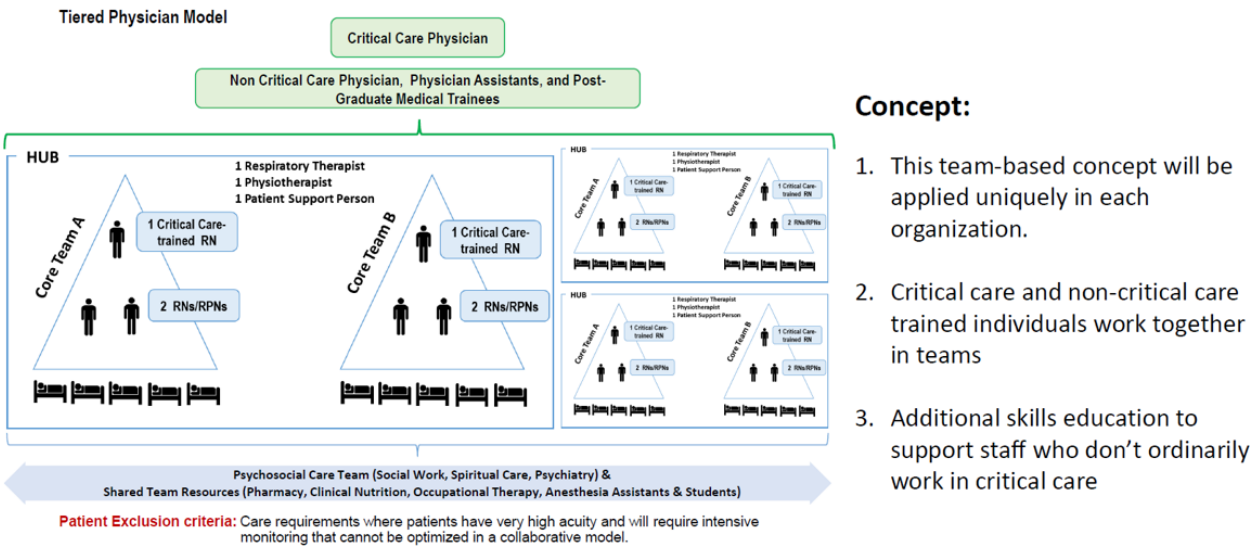
In many under-resourced enviroinments across the world, there are periods and situations when physicians are required to function in a broader clinical role than is typical in highly resourced settings. For example, in many situations where demand for care exceeds capacity for some highly skilled health care personnel, physicians do expand their role to encompass tasks more typically performed by nurses, pharmacists, respiratory therapists and others. This is an unusual occurrence in Canada, however, at times during the COVID outbreak there has been a relative shortage of nurses and respiratory therapists in acute and critical care areas. Alongside this relative shortage, there have been occasions due to service slowdowns in other areas of the health care system (e.g. procedural care and operations) where physician groups may have capacity to assist non-physicians as extenders.

This atypical model deserves exploration in order to identify the opportunites, barriers and challenges; but represents a promising and potentially necessary application of interprofessional collaboration in order to ensure patients receive the the best possible care at all times. For example, in an ICU experiencing a relative shortage of nursing staff, it may be that anesthesia, critical care or acute care physicians with sufficient practical inter-professional mentoring and oversight, training – on equipment such as transfer of accountability, charting, medication preparation, bedside patient care, intravenous pump, bedside monitor, operation, etc. – to function as a nurse extender. For example, this might allow one-to-one clinician-to-patient ratios where two clinicians at two patient bedsides are physicians who are supervised by an experienced ICU nurse. This is a model that is currently under exploration and development but one example of out-of-the box thinking on patient care models that this pandemic has demanded we investigate.

CRITICAL CARE TEAM MODEL

In this model, critical care trained and non-critical care trained individuals work together in a team approach, called a HUB. Additional skills education is provided to support staff who don't ordinarily work in critical care.

Critical Care HUB Model



*Adapted from Critical Care During a Pandemic (April 2006), https://www.cidrap.umn.edu/sites/default/files/public/php/21/21_report.pdf

Using the Skills Assessment Tool, critical care nurses can fall under the category of both skill level A and B. Level A includes full scope critical care nurses who are able to work independently in a critical care environment. Level B includes nurses who have critical care training, however have limited experience. They are able to support care in a partnered model or work independently to care for Level 2 patients. With additional support and experience, Level B nurses transition to Level A.

To further expand the workforce capacity, acute care nurses in the Level C category can be educated to partner with a critical care nurse. In further expanded models, the partner could additionally include other team members but not limited to physicians, respiratory therapists, and clinical externs. Based on this concept, teams can expect wide variation in expertise and experience. While some team members may bring specific clinical experience such as invasive monitoring, non-invasive ventilation and/or vasoactive drugs (e.g. redeployed coronary care nurses or post anaesthetic care unit (PACU) nurses), they may not have experience with invasive mechanical ventilation. For this reason, there are a variety of ways that the model can be flexibly operationalized on a daily basis. Decision-making is additionally dependent on level of acuity within the setting. Below are examples of different ways to implement the team-based concept.

1. **Partnered in a Hub**: A non-ICU nurse may be assigned to work in partnership with one Level A nurse who has 2 or more patients. The Level A nurse will be the primary nurse and act as a preceptor to the non-ICU nurse.
2. **Runner or Support Role:** A non-ICU nurse may be assigned a runner role that could include regular rounds to assess medication and supply needs, sign out and delivery narcotics, medications or supplies.
3. **Independent Assignment:** A non-ICU nurse may be assigned to a patient who does not need a critical care nurse. A stable patient who is waiting for a bed on the ward or requiring nursing care consistent with a non-ICU nurse.

Example: Considerations When Making an Assignment

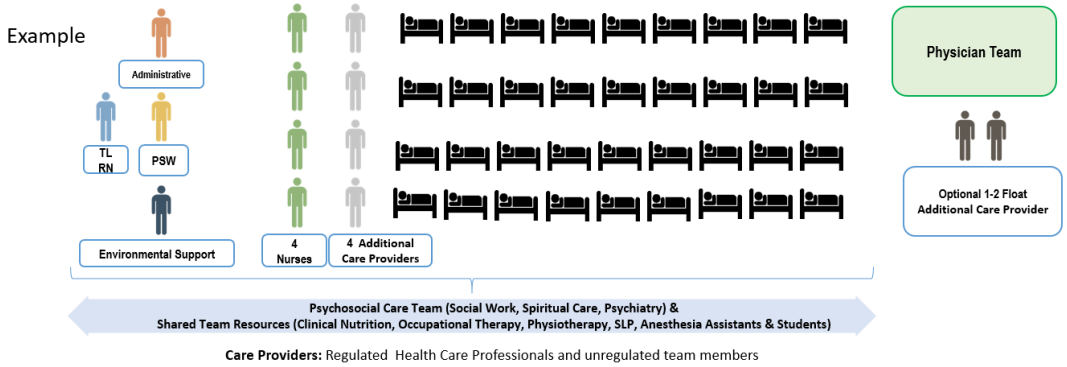
A **Experienced Full Scope Critical Care Nurse**	B **Novice Critical Care Nurse Developing Expertise**	C **Former Critical Care Nurse**	D **Non Critical Care Nurse**	**Orientation**
Attempt to assign at least one experienced critical care nurse to each Bay. Increase based on patient acuity.	Consider the acuity of the assignment and other patients in the Bay. For high acuity, balance experience.	Assignment based on the individual nurse and competence. Identify preceptor or resource nurse for support.	Assign as required: Runner/Support Partner with experienced Critical Care Nurse in HUB Independent assignment for non critical care patient Identify a preceptor or resource nurse.	Assigned to preceptor. As orientation progresses consider placement of strongest orientee to support areas with greatest need.

ACUTE CARE TEAM BASED CONCEPT

Team Based Models in the acute care setting incorporate new roles or expanded roles within the Interprofessional team. Examples of roles include Alternate Care Providers, Safety Officers, and Clinical Externs. The roles are created to safely distribute patient care support activities across multiple team members. Introduction of the support roles enables release of nurses either directly or by reducing backfill, to redeploy experienced clinical staff to high pressured areas, including critical care.

Acute Care Model

(e.g. Med/Surg) – Day shift, 36 Beds



PROGRESSION OF THE MODEL FROM CONTINGENY TO CRISIS PHASE

Team Based Models require configuration to determine the number of staff required for each skill level as the model progresses from the Contingency Phase to the Crisis Phase. The planning is impacted by the required ICU capacity and impact of staffing pressures. An example is provided below highlighting the incremental number of additional roles required to support patient care and the team.

STEP 1: Determine Staff Numbers Required to Support Progression from Conventional to Crisis Stage

- Determine the number of staff FTEs required to support critical care patient volumes in all stages of the framework (Conventional, Contingency, Crisis)
- Determine the number of critical care staff RN FTE's currently employed in your unit and utilize that as baseline number available in all stages of the Response Framework (Conventional to Crisis)
- Determine the RN Gap by subtracting (a) – (b) from above.

STEP 2: Getting the "Non Critical Care" Team Ready

- Work with Human Resources to identify staff in the system that can be redeployed to support the critical care team. (e.g. Level 2 RN's, PACU, Endoscopy, Cath Lab, CCU, MDs etc.)
- Complete a skills assessment of the staff that will support the gap
- Provide upskill or refresh training dependent on skill assessment results
- Divide identified non critical care RNs, MDs and other health professionals into "Phases" in order of redeployment (suggestion: spread redeployement of staff over several clinical programs to minimize burden on any one clinical area)

- Communicate resource impacts to Clinical Programs where staff have been identified to support the critical care surge plan

STEP 3: Moving into Teams (Critical Care + Non Critical Care Staff)

- Identify the need to move into teams (Trigger–when staffing is becoming challenging eg. number of patients outnumbers staff available to meet the demand)
- Work with Human Resources to redeploy staff in Phase 1 (2,3 and so on) – develop shift rotation for non critical care RNs, MDs and other health professionals that have been redeployed
- Consider patient acuity, location of patient (e.g. inside unit or surge space outside of unit), number of patients an area (Bay, Pod, Hub etc.), staff experience, interprofessional and alternate care providers on team
- Assign staff to meet the patient needs and staff skill level
- Readjust, Re-evaluate and Repeat; Readjust, Re-evaluate and Repeat….

Example: London Health Sciences Centre ICU Capacity Progression

Phase A UH ICU				
UH	39 Beds = 100% Occupancy			
	Day	Night	FTE	Total/24h
RN	33	33	132	66
non ICU RN	0	0	0	0
Charge Nurse	2	2	8	4
CCOT RN	1	1	4	2
CNS	1	0	1	1
PSW	2	2	8	4
Unit Clerk	2	1	6	3
RRT	7	6	26	13
non exp. RRT	0	0	0	0
Senior RRT	1	0	1	1
Inventory Clerk	1	0	1	1
Staffing Clerk (1 in central not included)	1	0	1	1
Leaders	4.5	0	4.5	4.5

Phase B UH ICU					
UH	45 beds = 115% Beds				
	Day	Night	FTE	Total/24h	
RN	33	33	132	66	
non ICU RN	5	5	20	10	10 incremental*
Charge Nurse	2	2	8	4	
CCOT RN	1	1	4	2	
CNS	1	0	1	1	
PSW	3	3	12	6	2 incremental*
Unit Clerk	2	1	6	3	
RRT	8	7	30	15	2 incremental*
non exp. RRT	0	0	0	0	
Senior RRT	1	0	1	1	
Inventory Clerk	1	0	1	1	
Staffing Clerk (1 in central not included)	1	0	1	1	
Leaders	4.5	0	4.5	4.5	
* from baseline for 24h					

Phase C UH ICU					
UH	49 Beds = 125% Occupancy				
	Day	Night	FTE	Total/24h	
RN	33	33	132	66	
non ICU RN	8	8	32	16	16 incremental*
Charge Nurse	2	2	8	4	
CCOT RN	1	1	4	2	
CNS	1	0	1	1	
PSW (or runner)	3	3	12	6	2 incremental*
Unit Clerk	2	1	6	3	
RRT	9	8	34	17	4 incremental*
non exp. RRT			0	0	
Senior RRT	1	0	1	1	
Inventory Clerk	1	0	1	1	
Staffing Clerk (1 in central not included)	1	0	1	1	consider increase
Leaders	4.5	0	4.5	4.5	
* from baseline for 24h					

- Model based on assumption of 0.8 RN per patient or 1.2 patient per RN
- 6 patients per RRT

- Staffing augmented with non critical care staff
  - (e.g. Level 2 RN, PACU etc.)
- Same ratio for RN:Patient and RRT:Patient
- Incremental increases from 115% through to 200%

It is acknowledged that quickly evolving practice environments can be challenging as health professionals strive to maintain standards of care in the dynamic nature of the pandemic. Teams have articulated moral distress when unable to complete care tasks and profession specific care, due to working in reduced numbers. Regulatory Colleges provides guidance with COVID practice resources (e.g. College of Nurses of Ontario can be found at the provided link: https://www.cno.org/en/learn-about-standards-guidelines/Practice-Support/). Local workplace policies, procedures and guidelines pertaining to COVID-19 management are important to provide guidance for changes that are required realted to team compostion, role clarification, responsibities and accountabilities, and shift routines. This may include prioritization of care as resources become increasingly stretched, and ideally occurs before a team implements the contingency or crisis model. This can be completed using a framework to guide the decision making process with the interprofessional team, facilitated by leaders who are familiar with clinical area.

ROLES IN CRITICAL CARE (SAMPLE TOOLS AND RESOURCES)

- Introduction into the ICU for Acute Care Nurses
  - This document provides an overview of roles and responsibilities including Critical Care Standards of nursing practice and patient care routines for an acute care nurse
- Team Based Hub Model of Care in ICU
  - A reference guide for the Team Based Model of Care in the ICU
- Critical Care Redeployment Passport
  - This tool outlines the individual competencies of Acute Care nurses working in Critical Care
- Common Critical Care Terminology
  - This document provides common ICU terminology

All tools and resources are working documents and are provided as examples. They can be accessed at the following link: https://drive.google.com/drive/folders/1vN4d2f**3s**uTc2pxa_qQ9DvvLfueZ2mR8Z?usp=sharing.

Documents are shared with permission by Sunnybrook Health Sciences Centre.

ROLES IN ACUTE CARE (SAMPLE TOOLS AND RESOURCES)

ALTERNATE CARE PROVIDER (ACP) ROLE

An Alternate Care Provider is a clinical role that works collaboratively with nursing and Interprofessional teams to ensure essential patient care needs are met.

- A Preparing for an ACP on the Team
  - This quick reference guide helps unit leadership prepare for an ACP to be integrated into the unit for a Team Based Model of Care.
- ACP Role at a Glance
  - This reference guide helps identify the skills and responsibilities that an ACP may perform within their scope of practice.
- ACP Care Provider Workflow
  - This document is to help orient ACPs to the general workflow of patient care within an acute care setting.
- ACP Role Description
  - A description of the ACP roles and responsibilities.
- Team Based Care Passport
  - This reference guide provides ACPs with information and resources that is applicable to their role.

SAFETY OFFICER ROLE:

A Safety Officer (SO) is a non-clinical role that observes and provides direction regarding the proper use of Personal Protective Equipment (PPE) and safe hand hygiene practices on COVID units. Orientation for the SO role is comprehensive and includes three days of in-person education and training, simulation, and shadow shifts on COVID units. Lastly, in-situ return demonstrations are used to support role development and integration into practice. Return demonstrations enable subject matter experts (SMEs) to provide just in time feedback in the new practice environment, and supports a reasonable assurance that the current practice is effective and safe.

In collaboration with unit leadership, Team Coordinators, and Infection Prevention and Control (IPAC), SOs facilitate safe staff practices at the local level. If safety breaches occur, SOs communicate their observations in a specific and timely manner and follow safety reporting guidelines. Additionally, the SO role and orientation have been modified to provide just in time support to areas on outbreak.

- Safety Officer Role Description
  - A description of the Safety officer roles and responsibilities
- Safety Officer Return Demonstration Checklist
  - A checklist used to verify competency during education and transitioning to the clinical unit.
- Safety Officer Orientation Pathway
  - This document outlines the orientation pathway for Safety Officers and is inclusive of supportive measures.

CLINICAL EXTERN ROLE

Externships provide opportunities for students to develop clinical competency, understand nursing and team roles and increase confidence and readiness for practice. Clinical Externs are students employed in an unregulated care provider (UCP) role that provide direct patient care and clinical unit support. This role has typically been fulfilled by nursing students, however consideration can be made to include additional student groups that can further support HHR capacity. Hospitals may consider a non-supervisory mentor/coordinator role to complement the clinical supervision provided by regulated healthcare professionals. The mentor/coordinator role could support the education and development of the externs, provide mentorship, support, team integration, coordination, and overall program implementation and evaluation. The number of externs supported by each mentor/coordinator should be determined by hospitals by giving consideration patient safety and the externs' knowledge, skill, judgment, and year of study.

- Role Description
    - A description of the Clinical Extern roles and responsibilities.
- Clinical Extern Role at a Glance
    - This reference guide is to help identify the skills and responsibilities that a Clinical Extern may perform within their scope of practice.
- Clinical Extern Sticker
    - This sticker has been created to assist staff and patients to easily identify Clinical Externs.
- Clinical Extern Program
    - This document provides an overview of the Clinical Extern Program to enhance safety and quality of care.
- Clinical Extern Passport
    - This reference guide provides Clinical Externs with information and resources that are applicable to their role.
- Nursing Clinical Extern Delegation
    - This document refers to Clinical Externs who are at minimum, enrolled in their final year of a Practical or Baccalaureate Nursing Program within an academic institution. This document provides guidelines form the College of Nurses of Ontario (CNO) for direct and indirect supervision with unregulated care providers, which includes Clinical Externs.

TEAM COORDINATOR FOR ALTERNATE MODELS OF CARE

The Team Coordinator role is filled by a staff member who is temporarily redeployed during the pandemic from their usual practice duties, to support integration of Team Based Models in order to maintain safe patient care where conventional staffing is not possible. Team Coordinators for Alternate Models of Care support the planning, training and integration of alternate care providers (ACP), safety officers (SO) and clinical externs (CE) during the pandemic. The role may be carried out by members of the Interprofessional teams who have direct or indirect patient care responsibilities including leadership accountabilities.

Roles and Responsibilities:

- Aid in unit implementing of Alternate Models of Care and integration of ACPs, CEs and SOs
- Coordinate and deliver orientation and ensure access to learning resources
- Support integration of team processes and role clarity during Team Based Models (e.g. unit nurses, ACPs, CEs and SOs)
- Assist ACPs, CEs and SOs to become familiar with the work in their new temporary area of practice
- Support unit teams to collaborate with ACPs to provide required patient care
- Maintain regular unit presence to support ongoing training needs and tracking of required skills attainment
- Support evaluations of Alternate Models of Care and the ACPs, CEs and SOs role
- Support staff wellness and team well-being during Alternate Models of Care
- Serve as a liaison and conduit between the team, unit leadership, Professional Practice and Operations.

Activity Breakdown Example:

Team Coordinators provide ongoing support on a daily, weekly and monthly activities. Below are examples of activities.

Daily Activity	**At Shift Change – be present on the units to:**
	Support units to work within the AMC and answer associated questions
	Reiterate the rationale and need for ACPs, CEs and SOs for pandemic preparedness
	Ensure ACPs and CEs are aligned with a unit nurse to support patient care needs
	Ensure ACPs, CEs and SOs role clarity, including if defined additional roles are required, such as Safety Leader
	Support the use of the Passport and skills self-assessment resource during ACP and CE collaboration and division of care tasks discussions
	Support huddles at beginning of shift to ensure role clarity and potential safety concerns (asks "what are the safety concerns for today?")
	During Each Shift- Visit each unit to engage each ACP & Nurse pairing (and addition team members if present) two or more times per shift
	Explore and evaluate team functioning by asking 1. What is going well today / where is there opportunity for improvement? 2. What information or resources do you need? 3. How are feeling from an emotional wellbeing perspective?
	Document action/address items raised and direct staff to the appropriate resources
	Engage teams to use a quality improvement and interprofessional collaboration approach to address improvement opportunities.
	Provide required resources, updates and/or follow up to support team functioning and to close identified gaps
Weekly Activity	Complete weekly debrief with ACP, CEs and SOs and include unit nurse where applicable and available (15 minutes)
	Explore and evaluate team functioning by asking ○ What went well this week/ where is there opportunity to improve? ○ What information or resources do you need? ○ Are there any outstanding items you would like to review? ○ What new skills did you learn? ○ What skills do you feel you have become ○ How are feeling from an emotional wellbeing perspective?
Monthly Activities	By Program, coordinate and facilitate debriefs on Alternate Models of Care for ACPs, SOs, and CE; Engage in quality improvement activities in collaboration with the Alternate Models of Care working group.
	Coordinate unit-based debrief sessions - ***Invite*** ACPs, SOs, and CE; ***unit RN(s)/ RPN(s), Patient Care Managers and Advanced Practice Nurses/Clinical Educators, Professional and Education Leaders and additional team members as relevant (Human Resources / Organizational Development & Leadership)***
	Provide updates regarding AMC, COVID data whenever possible, to reinforce need for AMC preparedness
	Support refinement of ACPs, SOs, and CE roles, share key learnings, and summarize successes, impact and resources as "AMC hacks"

TEAM BASED LEARNING

Successful implementation of Team Based Models requires education and learning for both individuals being redeployed and receiving teams who are integrating new team members. Best practices in team collaboration focus on how high performing teams work together are essential, specifically role clarity, team dynamics, situational awareness, shared mental models, communication, conflict resolution and collaborative leadership. Comprehensive tools, resources and programs are accessible to all teams to support these core components. To optimize the value of team-based learning, and to foster the development of extraordinary team performance, it is important to create structured opportunities for teams to learn together, and to do so using a variety of evidence-informed modes, including simulation. This will have the benefit of team members being better prepared to function as part of a flexible workforce which can expand, contract or relocate to align with evolving care priorities and staffing requirements.

Critical Care LEARNING COVID Care LEARNING

CRITICAL CARE/COVID CARE LEARNING PLATFORM

The COVID and Critical Care Learning platform has been created for health professionals supporting COVID-19 and critically ill patients in the Province of Ontario. The website was developed under the auspices of the COVID-19 Critical Care Capacity Steering Committee, with the support of health care and education partners across the region and can be accessed at https://criticalcarelearning.ca/login/index.php.

The learning platform is organized by profession; however, users are encouraged to visit the full set of resources across professions, especially where there are cross-disciplinary and overlapping scopes of practice. There are key sections that address Team Based Models of Care, team wellness and resilience, palliative care and bioethics Will continue to be augmented and updated, including the addition of other professions (e.g. personal support workers, pharmacists, speech-language pathologists), on the team – users will receive notification of updates following the creation of an account.

Quick ICU Training
for COVID-19

QUICK ICU TRAINING

The Quick ICU Training website aims to support professionals by providing quick accessible learning resources and reference materials to support retraining or redeployment to critical care, to prepare for practice in a critical care environment and can be accessed at https://www.quickicutraining.com/.

EDUCATING TEAMS FOR SUCCESS DURING WAVE 2 COVID-19: FROM SIMULATION TO BEDSIDE

Ontario hospital teams are invited to participate in a virtual simulation program designed to help communicate effectively within a Team Based Model.

How it Works

- Teams will participate in a 90-minute, live and interactive simulation that explores commonly encountered high-stress situations. Throughout the session, team members will engage in critical decision making and discussion.

Objectives and Learning Outcomes

By the end of the session, participants will be able to:

- Demonstrate effective briefing and communication of role clarity
- Recognize a change in patient condition that is beyond the care provider's scope of practice and competencies
- Identify the need to escalate care
- Demonstrate effective communication of a change in patient's condition
- Collaborate with Team Leader and interprofessional team members within a Team Based Model to provide safe patient care and intervene during a change in patient's status
- Demonstrate effective team debriefing within alternate models of team-based care
- Discuss opportunities to enhance team collaboration within alternate models of team-based care

Testimonials

- *80% of learners felt that simulation session was effective in preparing them to work in a Team Based Model.*
- *"This session helped me to react differently, to understand what to do in those situations and when to call for help."*
- *"Completing this program gave me more confidence."*
- *"The simulation reinforced protocols that have changed and are new in the COVID-19 pandemic."*
- *"It became more real for me, not just a concept. It made me feel like we can do this."*

Training Safety Officers with Virtual simulation:

- 90 min virtual simulation session immersing participants in commonly encountered challenges.
- This is a session for "putting it all together" prior to immersing learners in clinical environments. Fundamental knowledge of PPE and role expectation is a prerequisite.

These programs are offered by Sunnybrook Canadian Simulation Centre. If you are interested to participate or would like more information, please contact Agnes Ryzynski, agnes.ryzynski@sunnybrook.ca.

PUTTING IT ALL TOGETHER: LESSONS LEARNED FROM WAVE 1

Lessons learned from Wave 1 highlight the interconnection of pandemic staffing strategies, contingency models of care, redeployment, and change management.

The following outlines key considerations to support individuals, teams and leaders with the implementation of Team Based Models of Care.

Team Integration and Role Clarity:

- Coordinated efforts are important to **welcome and integrate new team members** at the local unit level, and with organizational leaders' engagement and support.

- Focused **change management** strategies are required in advance of the contingency model implementation to prepare teams to work differently, in a rapidly changing environment. This includes consistent and ongoing clear communication as to the rationale for the contingency model, an introduction to the tools and processes that support safety and role clarity, as well identifying local unit enhancements that will support the model's application. The advance preparation and transparency related to change is important in preparing teams to welcome new individuals, preparing the heart, and addressing fears and worries. Envision the bigger picture that during a pandemic, everyone is contributing a part in working together. Each of us acts *"with the right attitude to do what needs to be done."* Approaching the role with a sense that it's possible to *"learn something new* and that *"[you] can adapt, thrive, and change."*

- **Role Clarity:** All team members should understand the new roles on the unit, and their role in supporting individuals in those roles.

Team Reflection and Continuous Improvement:

- **Shared Iterative Design**: The contingency model, education and practice changes are co-created with the model redesign working group, practice/education leaders, operational leaders and unit leadership, integrating developmental evaluation principles to support ongoing enhancements. Evaluation includes informal debriefings, formal focus groups, surveys and other strategies to elicit broad feedback. Further, formative feedback gathered by Team Coordinators daily from individuals, and reviewed for themes, allows leaders to gain deeper insight into experiences of Team Based Models.

Example from Sunnybrook Health Sciences Centre Pandemic Toolkit (2020)

Focus of Evaluation	Evaluation Activities	Timing
Staff Experience	**Acute care and Critical care** 1. ACP debriefings – frequency fluctuates based on ACP identified need 2. Regular Unit Debriefings: weekly – bi-weekly initially	During redeployment
Staff & Leader Experiences	**Acute care** 1. ACP Experience Survey and Focus Groups 2. Receiving acute care team, Focus Group 3. Receiving APN/CE Survey 4. Sending and receiving PCM Survey 5. PCM Focus group **Critical care** 1. Alternate model ACNRT survey 2. Critical Care Nurse survey 3. Alternate Model Acute Care Nurse Focus groups **Other** 1. Directors Focus Group	End of redeployment period
Training & Orientation	**Acute Care** 1. Common Care items, self-assessment survey 2. Orientation Evaluation – upon completion only **Critical Care** 1. Alternate model orientation	Pre- and post-

- Themes from perspectives of redeployed individuals and from sending/receiving team members inform iterative design. Time should be invested in applying learnings from feedback to thoughtfully refine processes and plan for improvements. Recommendations highlight the importance of attending to needs at the individual and team levels, with different priorities considered prior, during, and post-redeployment. For an individual redeployed/deployed, reported experiences transition from a need for practical information, to a need for responsiveness so that they may perform well in their pandemic role, to a need for patience and supported re-integration to a changed home team. For teams, reported experiences focus on local leadership, with needs transitioning from information and clarity of roles, to strong presence throughout Team Based Models, to supporting re-integration.

Psychological Safety and Wellness:

Redeployment/ deployment is a significant life experience for an individual. Additionally, moving to and operating in an alternate model can be significantly impactful to teams. Staff will experience differing emotions that impact uptake of new information in new environments. Strategies should address both emotional and cognitive factors, when supporting wellness and psychological safety to be integrated throughout the process from initiation, to implementation and return. Leaders can positively influence the experiences of individuals and teams working in Team Based Models through modeling transparency and adaptability, leveraging existing team processes for regular information sharing, and providing compassion as team members adjust their understandings and behaviours in response to constantly changing system needs.

Lessons learned from team members, who fulfilled roles in acute care and critical care, during COVID-19 Wave 1.

- Wellness strategies must focus on the needs of teams, through the tangible behaviours of leaders. Leverage resources known within the organization and build on the foundation to reach team members in multiple ways (such as daily team huddles, open forums, town halls, a dedicated support person, drop in peer groups, employee assistance program, corporate resource links). Publically accessible external links containing easily understood information, such as the Pandemic Kindness Movement, may also be useful for teams.

Phases of Healthcare Workers' Experiential Responses During and after Crises and Changes

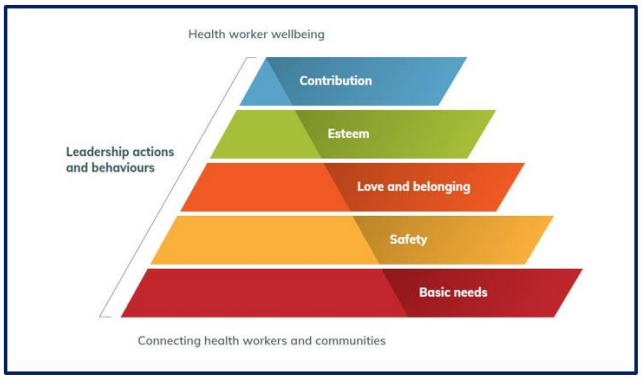


Image Credit: https://aci.health.nsw.gov.au/covid-19/kindness

- Silver Linings: Amidst the change and complexity of the environment, innovation, creativity, relationship building, and resilience can thrive and grow, as we face this together.

SUPPORTING DOCUMENTS

Ontario Critical Care COVID-19 Command Centre released the Health Human Resource (HHR) Response Framework

Ontario Ministry of Health and Long-Term Care, Ontario's Critical Care Strategy: Surge Capacity Management Toolkit, Version 2.0 Provincial Program, March 2009. (Available on https://www.ona.org/wp-content/uploads/mohltc_surgecapacitymanagementtoolkit2-0_200903.pdf)

Critical Care Surge Capacity Management Framework, found in the Critical Care Services Ontario (CCSO) Surge Capacity Management Plan (2009) (Available on https://criticalcareontario.ca/solutions/surge-capacity-management-plan/)

Standards for Critical Care Nursing Practice, 5th Edition (2017). Canadian Association of Critical Care Nurses. (Available at https://caccn.ca/wp-content/uploads/2019/05/STCACCN-2017-Standards-5th-Ed.pdf)

ACKNOWLEDGEMENTS

We would like to acknowledge the contribution and consultation that informed the development of this guidance document. We hope that teams will find the overview and supporting tools valuable.

Sunnybrook Health Sciences Centre	Ru Taggar, Chief Nurse Executive, Executive Vice President Tracey DasGupta, Director of Interprofessional Practice Alternate Models of Care Team: Laura Rashleigh, Karelin Martina, Isabella Cheng, Laline Anthony, Ekta Bromley, Kathy Carothers Emily Chen, Nicole Cooper, Caitlin Cornish, Nicole Cross, Dr Rob Fowler, Elizabeth McLaney, Susan Michaud, Maria Parzanese, Agnes, Ryzynski, Sarah Smart, Emily Stairs, Sidiqah Tseung, Cynthia Woodard.
London Health Sciences Centre	Dawna Van Boxmeer, Director Critical Care and Respiratory Therapy Services Julia Marchesan, Vice President Interprofessional Practice and Academic Relations Julie Trpkovski, Co Chair of Critical Care HHR, Wave 2, former VP Clinical Programs
Critical Care Services of Ontario, HHR Community of Practice	Marion DeLand, CCSO Project Manager Cindy Vandevyvre, CCSO Director
HHR Community of Practice – Participating Hospitals (in no particular order)	Sunnybrook Health Sciences Centre, London Health Sciences Centre, Scarborough Health Network, Humber Regional Hospital, Thunder Bay Regional Health Sciences Centre, Lakeridge Health, Health Sciences North, Mackenzie Health, St. Michael's Hospital, William Osler Health System, Quinte Healthcare Corporation, Guelph General Hospital, Muskoka Algonquin Healthcare, Royal Victoria Regional Health Centre, University Health Network, Southlake Regional Health Centre, Hamilton Health Sciences, Bluewater Health, Trillium Health Partners, Cambridge Memorial Hospital, Windsor Regional Hospital, The Ottawa Hospital, Mount Sinai Hospital, The Hospital for Sick Children, Halton Health Care, St. Mary's General Hospital, Peterborough Regional Health Centre, Pembroke Regional Hospital
Ontario Critical Care Command Centre	Dr. Andrew Baker
Photography	Visual Communications, Sunnybrook Health Sciences Centre