



Critical Care
Services Ontario



ONTARIO'S CRITICAL CARE SURGE CAPACITY MANAGEMENT PLAN

MODERATE SURGE RESPONSE GUIDE:
APRIL 2023 REFRESH

Version Control

| Moderate Surge Response Guide | |
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| To be read in conjunction with | Ontario's Ventilator Stockpile Guidance Document Ontario's Surge Capacity Management Plan: Minor Surge Toolkit |
| For more information contact | Critical Care Services Ontario (CCSO) Email: info@ccso.ca |

Public Information / Information for Hospital and System Stakeholders

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About Critical Care Services Ontario

Established in 2005, Critical Care Services Ontario (CCSO) led the implementation of Ontario's first Critical Care Strategy and now centrally coordinates and develops integrated system solutions for critical care (Adult, Paediatric and Neonatal) and specialty programs aligned with critical care (Neurosurgery, Trauma and Burns, and the Life or Limb Policy). CCSO's work is the result of an ongoing collaboration between critical care providers, hospital administrators, partners from the Ministry of Health, Ontario Health, and other health system leaders.

 info@ccso.ca

 [youtube.com/CriticalCareServicesOntario](https://www.youtube.com/CriticalCareServicesOntario)

 <https://ccso.ca/>

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Foreword

Ontario's Critical Care Surge Capacity Management Framework was first developed in 2009 (Post SARS). The framework provides critical care units and staff the tools needed to have a common approach to managing increases in volume of patients who are critically ill. The scaled response framework helps to ensure integrated communication plans, streamlined use of information technology and predetermined plans for human resources and use of alternate physical space are ahead of a surge situation. In addition, the framework strengthens system capabilities to address surge events within hospitals, across Ontario Health (OH) regions and throughout the province.

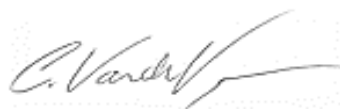
In light of continued critical care pressures in Ontario throughout the COVID-19 pandemic, Critical Care Services Ontario (CCSO) has undergone a process to refresh Ontario's Surge Capacity Management Plan with the goal of streamlining information, highlighting hospital accountabilities and providing further clarity on every step of the scalable surge response process. The updates are reflected in documents which includes Minor Surge Toolkit, Moderate Surge Response Guide and Ventilator Guidance Document, refreshed in of April 2023.

On behalf of CCSO, we extend sincere thanks and gratitude to all those who have continued to contribute to our efforts to maintain and improve the planning and coordination of the Critical Care Surge Capacity Management Framework.

Sincerely,



Bernard Lawless, MD, MHSc, CHE, FRCSC
Provincial Lead
Critical Care Services Ontario



Cindy VandeVyvere, MBA
Executive Director
Critical Care Services Ontario

Introduction

Key Stakeholders

Critical Care Services Ontario (CCSO)

Critical Care Services Ontario (CCSO), formerly known as the Critical Care Secretariat, is the managing body responsible for the overall implementation and evolution of the Ontario's Critical Care Strategy and Ontario's Critical Care Plan 2018-2021. CCSO's mandate is to work closely with healthcare system leaders to implement programs that improve access, quality and integration of critical care services to meet the needs of critically ill patients. CCSO maintains and updates the Moderate Surge Response Guide and participates in Moderate Surge responses to facilitate support as necessary. Working in close collaboration with Critical Care Clinical Leads, critical care units experiencing minor and moderate surges in patient volumes can work through CCSO Surge Capacity Management algorithms to manage a surge situation.

CritiCall Ontario

CritiCall Ontario is the 24/7 call centre facilitating emergency referral service for Ontario physicians seeking clinical advice and possible transfer of patients who may require urgent or emergent specialty care not available at the hospital to which they initially presented. The CritiCall Ontario call centre facilitates calls required between partner hospitals that may be needed in responding to a Moderate Surge situation.

Critical Care Information System (CCIS)

Ontario's Critical Care Information System (CCIS) is a comprehensive database that receives near real time data regarding occupancy, available capacity and critical care interventions / resources needed by patients admitted to all adult, paediatric and neonatal critical care units in Ontario. CCIS, hosted by CritiCall, was developed as one of the key initiatives of Ontario's Critical Care Strategy and is overseen by CCSO. This important data informs strategies used by CCSO to understand capacity utilization, patient flow and available system level capacity during minor and moderate surges in patient volumes.

Index Hospital/Corporation

This is the hospital that has self-identified as being in a Moderate Surge. They will have taken steps to activate their Minor Surge Plans and manage processes internally, completed the SBAR reporting template, updated CCIS and Provincial Hospital Resource System (PHRS) and called CritiCall Ontario to activate the Moderate Surge process.

Partner Hospital(s)

These are all other hospitals within and across Ontario Health (OH) region boundaries that will participate and provide support in the management of the Moderate Surge. This may include accepting critical care patients in transfer from the index hospital.

Health System Emergency Management Branch (HSEMB)

In December of 2003, following Ontario's experience with the Severe Acute Respiratory Syndrome (SARS) outbreak, the EMB was created to plan, organize, manage and coordinate provincial responses to emergencies that affect and impact health. Since its creation, the EMB has undertaken a number of emergency management initiatives and programming.

Surge Capacity Management Plan in Ontario

Introduction

Critical care services meet the needs of patients facing an immediately life-threatening health condition in which vital organ systems are at risk of failing. At the core of the critical care system is the hospital intensive care unit (ICU). Specialized health care teams work 24/7 to save the lives of critically ill patients who are at risk of dying due to single or multi-system organ failure. Patients are admitted to the ICU from the emergency room (ER), hospital wards and following surgery.

Since 2006, the Ministry of Health (MOH), through the Critical Care Strategy, has been working to improve critical care services in Ontario. This system improvement is the result of an on-going collaboration between critical care health care providers, hospital administrators, ministry officials and other partners. The overarching objective of the strategy is to improve access and quality, and to enhance the overall health system by addressing the policy and operational issues that impact on critical care services across the system.

In March 2009, CCSO started working with hospitals in the province to implement the Surge Capacity Management Plan. The purpose of the surge capacity planning was to provide hospitals and providers with the tools needed to better manage dramatic increases in the demand for critical care services at one or more hospitals. The plan:

- Ensures patients are transferred from the Emergency Room (ER) or Operating Room (OR) to critical care services, as quickly as possible. The plan has the potential to reduce ambulance offload delays as well as ER and surgery wait times.
- Mobilizes hospital staff, equipment and technology from other parts of the hospitals to handle the short-term increase in demand in the critical care department.
- Improves the lines of communication between hospitals in each of the OH regions.
- Ensures quick responses to large critical care surges that require a coordinated response across OH Regions. It enables hospitals to work together and coordinate their resources to help a hospital facing an overwhelming increase in critical care patients.

This initiative categorizes surge responses into three levels: *Minor Surge* (requiring response within a hospital), *Moderate Surge* (potentially requiring a regional level response), and *Major Surge* events (requiring a provincial response).

Who is involved in planning?

All Ontario hospitals in partnership with CCSO have been involved in implementing a standardized Surge Capacity Management Plan in the province. The ongoing aim is to achieve:

1. Expanded capacity by setting Surge Capacity Management Plan against a defined expandable capacity requirement at up to 15% above normal critical care capacity (>100% and <115%);
2. Establishment of pre-determined plans for management of health human resources, physical space, equipment and technology and a standardized response process;
3. Increased access to information via the CCIS.
4. A standardized, scalable framework for surge capacity management, which provides an opportunity to improve system design and coordination of critical care services.

Types of Surges

Surge capacity planning involves planning for situations where critical care demand exceeds available resources. The planning starts with individual organizations, but is expandable and scalable to address increasing demands from higher patient volumes within a region. Although pandemic planning involves addressing large-scale infectious events, it is a specific example of one type of Moderate or Major Surge capacity planning. The plan outlined in this document and the framework provided in the Minor Surge Capacity Management Toolkit are designed to move hospitals to a state of preparedness during any cause and type of surge. The different levels of surges are described below:

- Minor Surge:*** An acute increase in demand for critical care services, up to 15% beyond the normal capacity (>100% and <115%), where response is localized to an individual hospital. A Minor Surge could result in unplanned admissions from the OR, deteriorating patients on the ward, or going into a minor surge state for the purpose of accepting life or limb threatened patients from a referring hospital.
- Moderate Surge:*** A larger increase in demand ($\geq 115\%$) and/or when patient safety is compromised resulting in a situation, where an organized response at the OH regional level is required. Occurs when a hospital in Minor Surge is no longer able to maintain services and needs to rely on the resources of other hospitals to assist with managing the surge. A Moderate Surge could also result from a single event (infectious or casualty) requiring the response of several hospitals in a region to respond to the increase in demand.
- Major Surge:*** An unusually high increase in demand that overwhelms the health care resources of individual hospitals and regions for an extended period of time, where an organized response at the provincial or national level is required.

1. General Overview

This document presents the tools and protocol for declaring a Moderate Surge when at least one hospital in the region is unable to sustain their critical care services, and requires the resources of the region to ensure patients receive safe and timely access to care. Moderate Surge plan is the natural escalation from Minor Surge planning which involves hospitals managing surges within their own institutions. Building on the same elements and principles, this response guide will outline the frameworks and tools for hospitals to prepare for managing Moderate Surges.

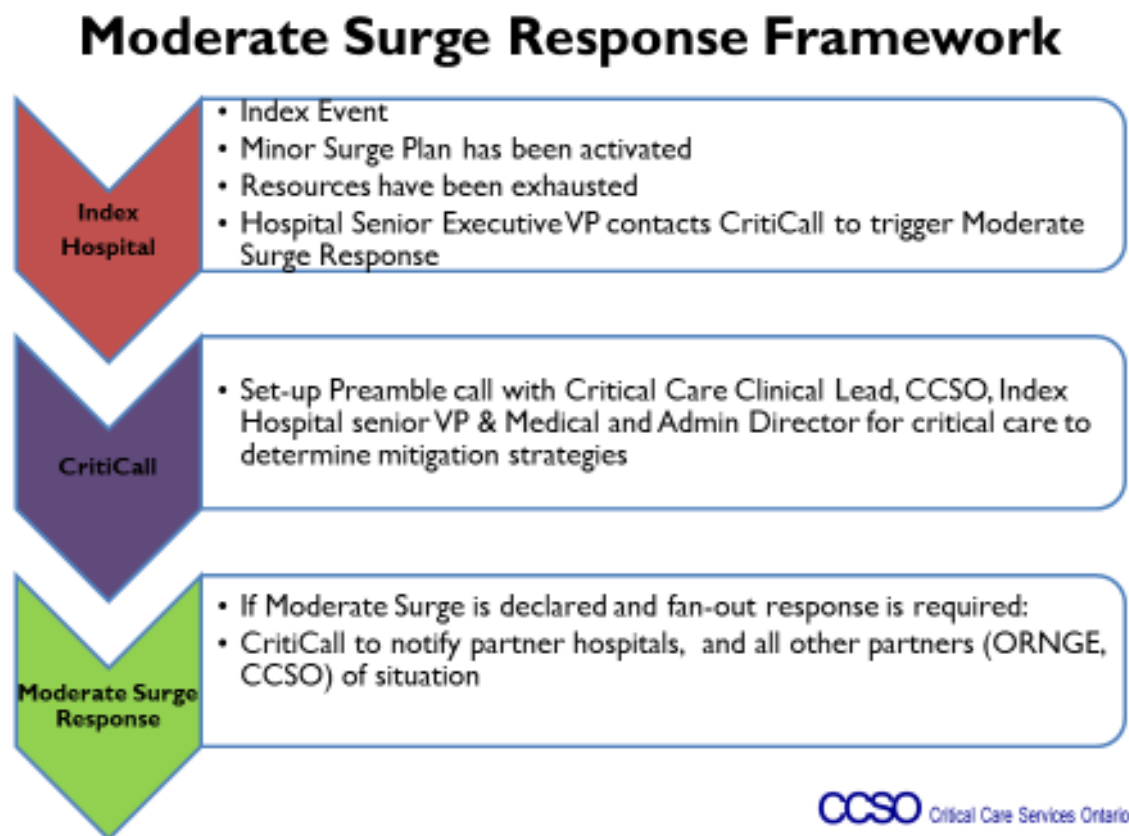
In the event of a Moderate Surge, all the elements of a response to a Minor Surge would engage. **In addition, Critical Care Clinical Lead would lead the region in response to a Moderate Surge event.** Resources will be allocated by the regions according to the regional demand.

The facilitation of a Moderate Surge requires the following pre-established concepts:

1. All hospitals involved in the region will provide information regarding capacity/capability of their organization (e.g. by updating CCIS and PHRS).
2. There is an established cache and inventory of resources available to the region
3. There are defined decision and communication algorithms in the event of a Moderate Surge.
4. The accountability framework will be followed as outlined in Appendix A.
5. During a moderate surge event, CritiCall call centre will be utilized as the 'fan-out system' to notify hospitals. Individuals in specified roles at Partner hospitals will be expected to call into a teleconference and identify available critical care capacity and resources to ensure the event is appropriately managed, and critical care services are maintained.

Escalating from Minor to Moderate Surge allows the application of a consistent approach with common principles, which enables the health care system to have a well-built infrastructure for responding to surge events, regardless of the cause. Ensuring a critical care unit has worked through implementing their Minor Surge plans before declaring a Moderate Surge assures a level of accountability between hospitals. Figure 1 describes the framework for Moderate Surge, which starts with the activation of Minor Surge Plans within a hospital.

Figure 1: Moderate Surge Response Framework

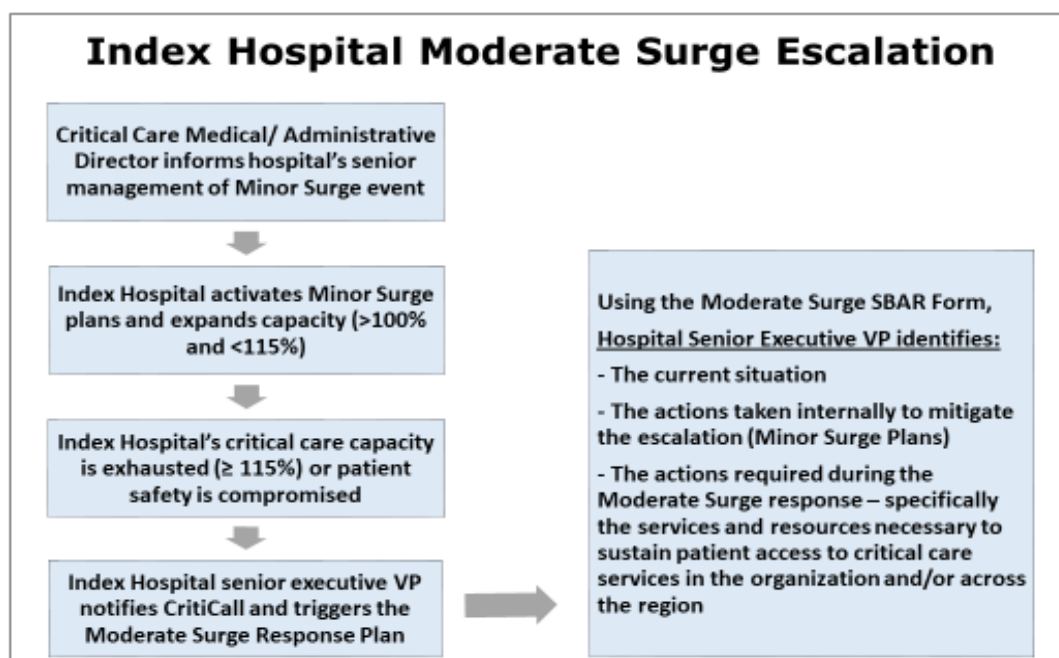


Index Hospital Moderate Surge Escalation

1. If the Minor Surge event continues to progress and the Index Hospital is not able to provide or sustain critical care services, then the critical care gatekeeper (medical or administrative director) will notify the senior team.
2. The Index Hospital VP will notify CritiCall to begin the process of declaring a Moderate Surge event.
3. A preamble call is organized by CritiCall call centre that includes the Critical Care Clinical Lead, Index Hospital VP, medical and administrative director responsible for critical care and CCSO Clinical Lead. The situation will be reviewed thoroughly (using the Moderate Surge SBAR Form) and mitigation strategies will be considered.
4. If a Moderate Surge is declared, CritiCall will facilitate a second Fan-out call, and contact the switchboards of partner hospitals in the region (as indicated by the Critical Care Clinical Leader) to alert the intensivist on-call that a Moderate Surge has been declared in the region.
5. All hospitals will be expected to update CCIS and come to the call prepared with information on their current capacity/capability (using Moderate Surge Partner Hospital Form).
6. The Index Hospital will need to articulate the needs and services of the patients that may need to be transferred (using the SBAR Form).
7. The teleconference will be chaired by the Critical Care Clinical Lead for the hospital declaring the surge.

8. Together, regional partners and senior delegates will determine which hospitals can accommodate any patients appropriate for transfer. The receiving hospital fills out Moderate Surge Partner Hospital Form.
9. Call participants should alert receiving and sending physicians *who may not be on the call* that they should prepare to be connected via CitiCall as the next step.
10. Sending and receiving physicians are connected through CitiCall to communicate patient information.
11. Hospitals organize patient transport.
12. The Critical Care Clinical Lead will determine follow-up time and call with regional partners is scheduled to assess the situation.
13. Continue Follow up region teleconferences until Moderate Surge is declared over.

Figure 2: Index Hospital Moderate Surge Escalation



Important Note:

- 1) All Moderate Surge calls are coordinated through CitiCall Ontario by calling hospital switchboards. Please ensure your hospital switchboard operators are aware of role(s) to be notified internally when a Moderate Surge call comes in from CitiCall, so that appropriate leaders from your organization can participate in a timely manner.
- 2) Recognizing surge events can occur at any point in the day, sites are encouraged to have a mechanism in place to help anticipate the likelihood of moderate surge and consider triggering the Moderate Surge response call to develop a proactive plan with two objectives:
 - a. implement tactics during business hours to reduce progression to moderate surge;
 - b. Prepare a coordinated action plan to activate a full response plan should the moderate surge materialize after the business hours

2. Moderate Surge Response: The Step-by-Step Response Plan

This section describes in detail, the protocols for a Moderate Surge Response.

Step I: Declaration of Moderate Surge

What has to happen before a Moderate Surge can be declared?

At the Index Hospital level, a tiered response will occur prior to escalation to the Moderate Surge response. The Index Hospital will have deployed their Minor Surge plans. Once the 5 elements of surge capacity management have been considered (as outlined in the Surge Capacity Management Plan: Minor Toolkit), and hospital resources have been flexed up to 15% above normal critical care capacity, but the ongoing demand exceeds the required resources, only then a Moderate Surge response will be triggered.

An important assumption regarding specialty services: If a hospital does not have the service required by a patient, or patient safety is likely to be compromised, the Index Hospital can escalate to Moderate Surge to ensure patient safety.

Who can initiate the moderate surge response?

Only the Hospital VP can initiate a Moderate Surge. It is important to ensure that the VP has all the required information regarding the situation to ensure that a solution is reached without compromising patient safety. The hospital that can no longer sustain their services will be referred to as the Index Hospital. All other remaining hospitals will be referred to as Partner Hospitals.

The Critical Care Moderate Surge SBAR form is located in appendices.

It is a communication technique that helps members of the health care team organize and present critical information about a patient's condition in an efficient and effective way. The SBAR tool consists of a script template in which the patient's information is entered. The script is then used to guide the conversation between members of the health care team during the preamble call.

What communication tools or processes are available to the Index Hospital to help in the management of Moderate Surge?

The complexity of medical care, coupled with the inherent limitations of human performance, make it critically important that clinicians have standardized communication tools, create an environment in which individuals can speak up and express concerns, and share common “critical language” to alert team members to unsafe situations.¹ Establishing a standardized communications system in a critical care environment provides a consistent mechanism of reporting between team members.

It is essential to establish a mechanism that quickly communicates the status of the critical care unit as a whole. To ensure a consistent approach to this communication method, it is necessary to triage patients daily based on their acuity to provide a standardized practice in critical care units. This triage process will be communicated via the communication board (commonly known as the White Board) that will be in a central location in the critical care unit. It will identify which patients are ready to be transferred out of the unit, which patients must remain in the unit and lastly those patients that could be reassessed and potentially be transferred out of the unit. The following is the triage methodology/traffic light system that will be used for the Moderate Surge response plan:

- RED:** Patient remains in the ICU as they require life-sustaining interventions
- AMBER/YELLOW:** Possibility of transfer within 36 hours
- GREEN:** Patient is ready to be transferred from ICU

On a daily-basis, patients will be scored as red, yellow or green as part of the traffic light system. This triage methodology is aimed at embedding a daily practice to allow this communication tool to be used as part of the common language in planning for patients in your critical care area. During times of surge, the scoring methodology will be utilized to quickly identify patients who are ready to be discharged or reassessed for potential discharge.

We recommend that anyone who will be involved in managing a surge in your hospital is familiar with the provincial Surge Capacity Management Plan. It is imperative to ensure management, physicians, frontline-staff are familiar with the tiered escalation process from Minor to Moderate surge outlined in this document. Identify the individuals within your organization who are likely to participate in a surge response and make sure they are aware of the process and their roles.

This includes notifying your switchboard that they may receive calls requesting surge designates be notified of a surge event that requires a response spanning across the regions. During a surge response it is vital that switchboard operators have access to this information so the appropriate people from your organization can participate in a timely manner. Each hospital that participates will be asked to provide information regarding capacity and capability to ensure a timely response. CCSO will be providing communication tools and checklists for participating hospitals (refer to attached appendices).

¹M Leonard, S Graham, D Bonacum. [The human factor: the critical importance of effective](#)

How does a hospital document/record a surge response as it escalates through the response framework?

As a quality measure and monitoring tool, the hospital critical care team will complete the Minor Surge worksheet (found in the Surge Capacity Management Plan: Minor Toolkit) as the hospital escalates to a Minor Surge. This tool will provide a mechanism of monitoring responses for hospital teams who are able to mitigate the situation using an internal Minor Surge response. This will also allow hospital teams to review Minor Surge events as a team and identify process improvements within their organizations. The information collected in this form mirrors the information required in the SBAR (Situation, Background, Assessment and Recommendation) tool developed for Moderate Surge responses.

As a response situation escalates and requires the resources of a region or the Province, further detailed information will be required for reporting. As such, the SBAR Tool has been developed to provide a consistent method of reporting situations which require escalation. The SBAR methodology is a well-known communication aid that helps members of the health care team organize and present critical information about a patient's condition in an efficient and effective way. SBAR form can be found in Appendices section.

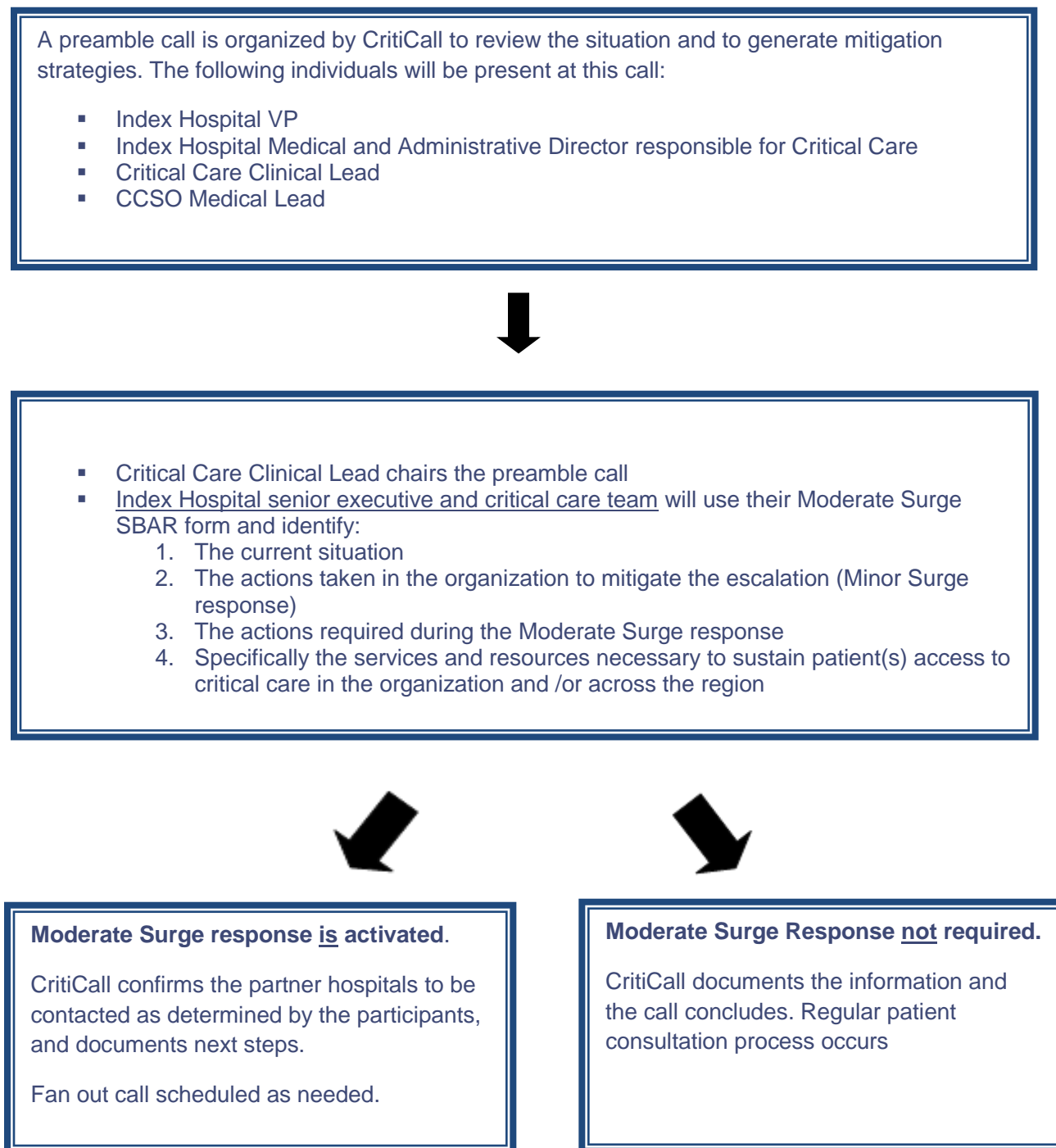
It is recommended the Moderate Surge SBAR form be completed by the critical care team (critical care manager, director or other delegate) and be provided to the Hospital VP prior to the preamble call organized by CritiCall. Once it is confirmed that additional resources from another hospital or region are required, a Moderate Surge response is triggered and the Index Hospital VP calls CritiCall at **1-877-ONT-SURGE (668-7874)**.

Step II: CritiCall Facilitates Preamble Call

After the Moderate Surge response has been requested by the Index Hospital senior VP, CritiCall will facilitate a preamble call with the Critical Care Clinical Lead, Index Hospital VP, medical and administrative director for critical care and CCSO Medical Lead to discuss the situation, and determine whether a regional-level response (i.e. moderate surge) is necessary.

The Critical Care Clinical lead will chair the preamble call and the region wide teleconference. Clinical Leads will assign appropriate coverage during periods of unavailability; CCSO and CritiCall Ontario must be notified of the coverage arrangement.

Figure 3: Preamble Call Algorithm and Possible Outcomes



Step III: Moderate Surge Fan-Out Response

The preamble call will determine the required next steps and determine who needs to participate in the mitigation process for the Index Hospital's surge response. Required Partner Hospitals in the region will be contacted by CitiCall. CitiCall will provide teleconference information and detailed information on next steps.

Will all hospitals be required to participate?

A partner hospital is any hospital in the region or sub-region that could provide the services required and assist in alleviating capacity pressures at the Index Hospital. In some cases, partner hospitals will also be outside the region. **The Critical Care Clinical Lead will decide who needs to participate.**

Who contacts partner hospitals?

When CitiCall calls a hospital's switchboard, the switchboard operator will record and then relay the required information to the intensivist on-call who will be expected to provide information about current available critical care resources in their hospital.

Figure 4 is an example of switchboard information sheet (also in Appendix C). This tool should be distributed to switchboard operators and updated as required to ensure a seamless call transfer.

Figure 4: Switchboard Information Sheet

**If you receive a call from
CRITICALL ONTARIO: (800) 668-4357**

Identifying a Moderate Surge Response is in effect for the Region, please take the following actions:

1. Notify your Hospital intensivist on-call that a region-wide surge response is in effect
2. Provide them with CitiCall teleconference details
3. Notify the critical care team (Medical and Administrative Director) and have them complete the Moderate Surge Partner Hospital Form prior to joining the teleconference

[Insert Contact Names, Titles]

- Extension: XXXX
- Pager: XXXX
- Cellular: (XXX) XXX-XXXX



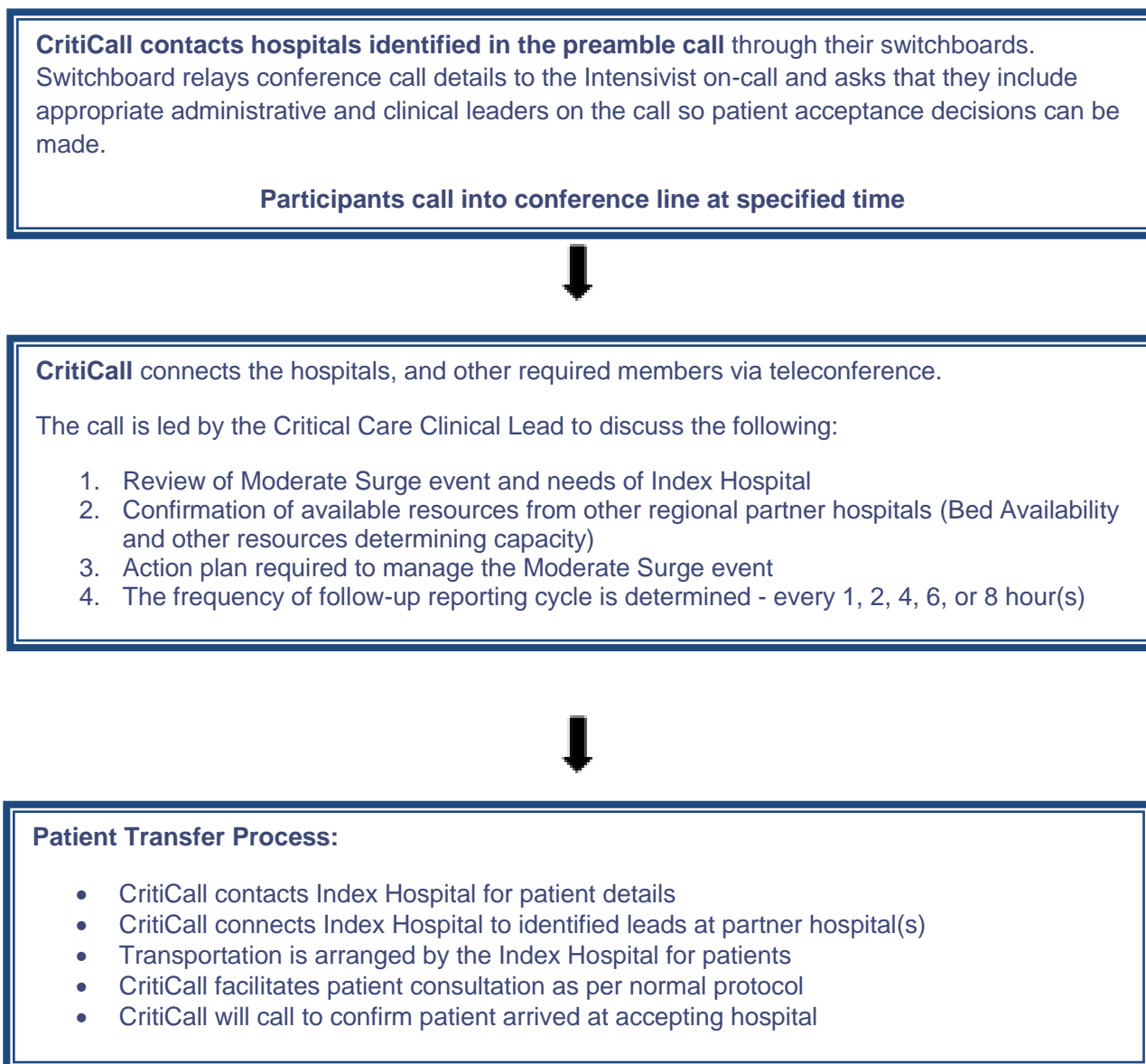
What do the partner hospitals have to do prior to participating in the Moderate Surge call?

In order to properly manage a surge event it is important that all hospitals in the region provide up-to-date information regarding capacity, and capability of services available in their organization. We ask that partner hospitals ensure that their Critical Care Information System (CCIS) is updated daily.

Additionally, a Moderate Surge Partner Hospital Form (see appendices) has been developed to assist with the collection of this information. This form should be completed prior to joining the Fan-out regional teleconference.

Step IV: Fan Out Regional Teleconference

Figure 5: Regional Partner Calls Algorithm



What happens once a partner hospital joins the Fan-out regional teleconference Moderate Surge response call?

Once CritiCall connects all the required participants, a review of the surge event is led by the Critical Care Clinical Lead. They will confirm resources available at other hospitals in the region using information provided by each partner hospital (using the Partner Hospital Form), or using available tools including relevant information in CCIS and the PHRS. An action plan to manage the Moderate Surge event will be discussed and agreed to during the call. **It is expected that all partner hospitals will provide all services for which they have the capacity and capability, including patient transfer and repatriation to other lower acuity centres.**

Once the teleconference ends, is the partner hospital required to do anything else?

Once the plan of action has been determined, participants on the call will alert their sending and receiving physicians that CritiCall will be contacting them. Prior to ending the call, a follow-up time and call sequence will be determined to ensure that the status of participating hospitals is stable, moving towards a stable state, or whether further escalation is required for stabilization. **After the teleconference, the hospitals will facilitate patient or equipment transfers to alternative centers.**

Step V: Follow up Teleconference to Determine Sustainability

At a pre-determined time, participants will call back into a teleconference to provide updates on the situation of the surge event. The Critical Care Clinical Lead will decide if the Moderate Surge status of Index Hospital and the partner hospitals is stable. If the situation is stable, the Critical Care Clinical Lead will declare an end to the surge response, retain the documentation and conclude the call.

If the Index Hospital is still in a Moderate Surge situation or cannot sustain their services, the Critical Care Clinical Lead will collaborate with the Index and partner hospitals to determine next steps. This process is continued until the situation is deemed stable by the Critical Care Clinical Lead.

Preparing for Moderate Surge at the Hospital-Level

- Conduct an in depth review of current Minor Surge plan and review the Moderate Surge response process with senior team and hospital board.
- Educate front-line and pertinent staff (e.g. nurse supervisors), administration, switchboard, the ED and critical care physicians on the Moderate Surge response process and escalation plan.
- Conduct annual Mock Surge rehearsal
- Ensure the provincial ventilator stockpile is maintained (if you are the host hospital)

What should my hospital do with critically ill paediatric patients if we are not a paediatric centre?

- Contact CritiCall Ontario for assistance **(1-800-668-4357)**

3. Provincial Ventilator Stockpile

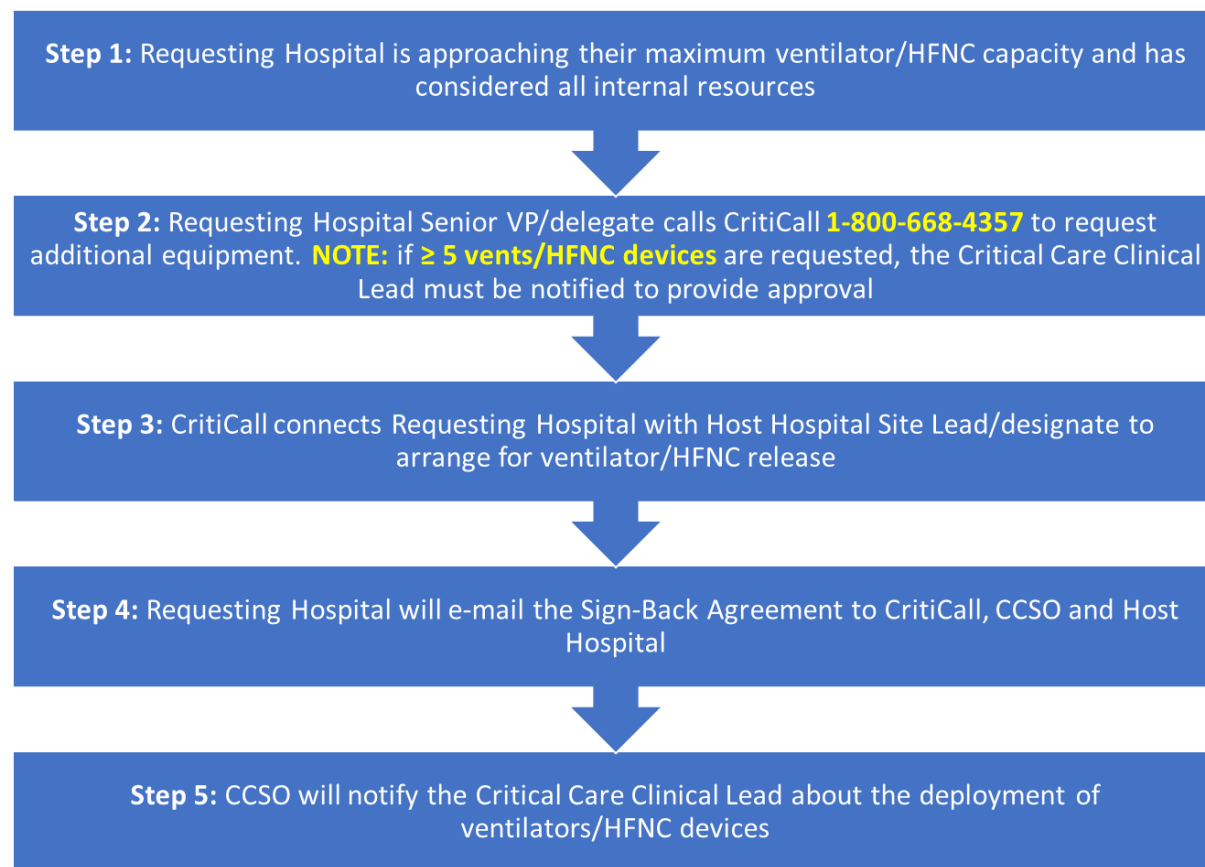
What if additional ventilators are required?

As the number of patients requiring critical care services increases, hospitals may find that they have the capability to care for additional patients but lack sufficient ventilator capacity to accommodate them. To mitigate this, a provincial stockpile of ventilators was purchased by the Ministry of Health a; and a process is in place, whereby hospitals can borrow additional ventilators from the Provincial Ventilator Stockpile.

If an Index Hospital is approaching their maximum ventilator capacity, and has considered all site and corporation-level resources, the Index Hospital VP will notify CritiCall Ontario by calling 1-800-668-4357 (different from number to declare a moderate surge), and formally request access to Ontario's Ventilator Stockpile. This process is shown in Figure 6 below.

NOTE: When an Index Hospital requests ventilators from the provincial stockpile, they will be referred to as a 'Requesting Hospital' – please refer to the Ontario Ventilator Stockpile Guidance Document for details.

Figure 6: Provincial Stockpile Ventilator Request Process



Appendices

Appendix A: Response Accountabilities

Each level of surge response will follow the following response principles:

Readiness to act for all categories of surge

- All participating hospitals are required to educate and support their frontline staff to ensure the appropriate level of response is taken to manage the surge event.
- All hospitals will have pre-determined Minor Surge plans in place for human resources, space and equipment, as outlined in the *Surge Capacity Management Plan: Minor Toolkit*.

Response built on partnerships

- All hospitals are accountable to respond in accordance to the principles of Surge Management.
- All hospitals must communicate and actively support partnerships to ensure patients are kept as priorities in the response plan.
- All hospitals are accountable to align organizational capabilities to ensure the critical care system is maintained and resources are not overwhelmed.
- All hospitals are accountable to support partnerships across organizational departments to ensure seamless coordination of patient care is maintained.

Tiered-escalation response

- Surge events must first be managed with a Minor Surge response within the organization prior to escalating to the next level of response.
- If the patient requires a service or level of care that is not provided by the hospital, the hospital will immediately activate Minor/Moderate surge and associated transfer processes to ensure the patient receives the appropriate level of care within an appropriate timeframe.

Operational capabilities will be scalable, flexible and adaptable

- Surge events can vary in size and complexity, each organization will remain accountable to ensure a minimum capability of a Minor Surge response to a maximum of a Major Surge response.
- Each organization will be accountable to report the following for each surge event that requires escalation to a Moderate Surge response:
 - Cause of the minor surge event;
 - Effect on the organization;
 - Required interventions;
 - Resources that were utilized in the response;
 - Required resources that are required to maintain patient safety.

Appendix B: Quick Reference Cards

Moderate Surge Response Card (For Critical Care Clinical Lead)

Index Hospital: Hospital experiencing the surge event

Partner Hospital: Other hospitals in the region

Minor Surge: Critical care demand >100% and <115% of capacity

Moderate Surge: Critical care demand \geq 115% of capacity and/or when patient safety is compromised

Major Surge: Critical care demand overwhelms the region

1. As the CC Clinical Lead, you are required to lead the Moderate Surge response.
2. CitiCall will inform you that (Index) Hospital in your Region has requested a pre-ambly call for a possible Moderate Surge.
3. Pre-ambly call (organized by CitiCall), will include:
 - i. Critical Care Clinical Lead,
 - ii. Index Hospital VP
 - iii. Medical and administrative director for Critical Care
 - iv. CCSO Medical Lead
4. The purpose of the call is to determine the need to declare a Moderate Surge within the region. Critical Care Clinical Lead will chair the pre-ambly call.
5. On the pre-ambly call, the Index Hospital VP will provide you with a concise summary of the surge situation, their response so far and assistance they require (using Moderate Surge SBAR form).
6. If you decide to declare a Moderate Surge, CitiCall will arrange a second Fan-out call with partner hospitals to discuss and decide on appropriate resources options for Index hospital.
7. The Critical Care Clinical Lead will chair the teleconference(s).
8. Follow-up calls with regional partners will continue until the surge event has been properly addressed and Moderate Surge concluded by the CC Clinical Lead. CitiCall will document.

Moderate Surge Response Card

(For Index Hospital)

Index Hospital: Hospital experiencing the surge event

Partner Hospital: Other hospitals in/outside the region

Minor Surge: Critical care demand >100% and <115% of capacity

Moderate Surge: Critical care demand \geq 115% of capacity and/or when patient safety is compromised

Major Surge: Critical care demand overwhelms region

1. Only the Index Hospital VP can initiate a Moderate Surge by calling CritiCall and requesting a preamble call
 - **CritiCall: 1-877-ONT-SURGE.**
 - Before a Moderate Surge can be declared, Minor Surge response must be exceeded at your hospital.
2. Pre-amble Call will include:
 - Critical Care Clinical Lead,
 - Index Hospital VP
 - Medical and administrative director for Critical Care
 - CCSO Medical Lead
3. The Moderate Surge SBAR form should be completed by your critical care team and used to provide a status report on the preamble call.
4. The Critical Care Clinical Lead will chair the pre-amble call.
5. If a Moderate Surge is declared, CritiCall will contact the appropriate/identified partner hospital(s) and facilitate another teleconference to review possible solutions to address your surge event.
6. After the call, ensure your critical care team is aware of the solution(s) and prepared for subsequent calls from CritiCall.
7. Subsequent follow-up calls, as determined by the CC Clinical Lead will occur until the surge event has been properly addressed and the Moderate Surge has been concluded by the CC Clinical Lead. CritiCall will document.

Moderate Surge Response Card

(For Partner Hospitals)

Index Hospital: Hospital experiencing the surge event

Partner Hospital: Other hospitals in/outside your region (potentially your hospital)

Minor Surge: Critical care demand >100% and <115% of capacity

Moderate Surge: Critical care demand \geq 115% of capacity and/or when patient safety is compromised

Major Surge: Critical care demand overwhelms the region

1. If a Moderate Surge is declared, CitiCall will contact the appropriate/identified partner hospital(s) – for a teleconference to review possible solutions for the Index Hospital.
2. **Ensure that switchboard operators are aware of who to notify internally when a Moderate Surge call comes in from CitiCall**
3. **Partner hospitals must ensure their CCIS and PHRS bed availability is updated and reflects current capacity** – all hospitals in the region are required to do this.
4. Partner hospitals must also complete the ‘**Moderate Surge Partner Hospital Form**’ prior to joining the moderate surge teleconference.
5. After the call, ensure your medical team is aware of solutions and to prepare them for calls from CitiCall.
6. As determined by the CC Clinical Lead, follow-up phone calls will continue until the surge event has been properly addressed and the Moderate Surge has been concluded by the Critical Care Clinical Lead. CitiCall will document.

Appendix C: Switchboard Information Sheet

If you receive a call from CRITICALL ONTARIO: (800) 668-4357

Identifying a Moderate Surge Response is in effect for the Region, please take the following actions:

1. Notify your Hospital intensivist on-call that a region-wide surge response is in effect
2. Provide them with CritiCall teleconference details
3. Notify the critical care team (Medical and Administrative Director) and have them complete the Moderate Surge Partner Hospital Form prior to joining the teleconference

[Insert Contact Names, Titles]

- Extension: XXXX
- Pager: XXXX
- Cellular: (XXX) XXX-XXXX



Appendix D: Communication Portal

Critical Care Surge Capacity Management

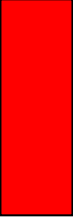

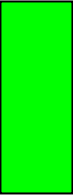
As part of the Provincial Surge Capacity Management Plan, CCSO has created a moderate surge response process to help hospitals manage **moderate-level critical care surges:** (i.e., Hospital critical care capacity is greater than 115% or when patient safety is compromised)

Your Hospital VP can initiate this process for your hospital by calling:

CritiCall Ontario: 1-877-ONT-SURGE (668-7874)



Appendix E: Rag Status Tool

| RAG STATUS: RED/AMBER/GREEN | | | | |
|--|--|--|---|---|
| Definition | Indicator | Response | Status | Required Reporting |
| RED <ul style="list-style-type: none"> Capacity requirement exceeds institutional capability. Both capacity and sustainability are at risk. Critical care capacity is at >115% or patient safety is compromised Services required by patient(s) are not available | <ul style="list-style-type: none"> Index hospital is not able to sustain the services All hospitals resources are exhausted after Minor Surge plan has been activated. | <ul style="list-style-type: none"> Situation is reviewed with senior team and VP Calls CritiCall to trigger Moderate Surge. Regional resources are required. |  | <ul style="list-style-type: none"> Complete the SBAR form Notify CritiCall to activate Moderate Surge CritiCall notifies CC Clinical Lead – teleconference with Index Hospital for assessment Region partners identify the following criteria via teleconference: <ul style="list-style-type: none"> Situation Background Assessment Recommendations |
| AMBER (YELLOW) <ul style="list-style-type: none"> Capacity Required 100-115% Normal Capacity Sustainability of Critical Care service at risk Remedial actions in place (Minor Surge plan is activated) Services required by patient(s) are available | <ul style="list-style-type: none"> Index hospital is able to sustain services. | <ul style="list-style-type: none"> Minor Surge Plan activated Consider communication with Critical Care Clinical Lead. |  | <ul style="list-style-type: none"> Complete the Minor Surge event form. |
| GREEN <ul style="list-style-type: none"> Normal level of attention Normal Capacity No actions required Sustainable Critical Care Service with Institutional tolerance. Services required by patient(s) are available | <ul style="list-style-type: none"> Regional resources are not required. | <ul style="list-style-type: none"> No required response. |  | |

Appendix F: Glossary

CritiCall Call Agent: is responsible for making all connections with appropriate parties and distributing call-in numbers. In addition, they will coordinate participants via teleconference as required. They document resource status, outcomes and next steps.

Critical Care Clinical Lead: is responsible for leading the teleconferences and facilitating collaboration among participants with the goal of resolving the surge event.

Critical Care Services Ontario (CCSO): is responsible for providing leadership and direction during a surge event, and will be contacted for assistance as required at the request of the Critical Care LHIN Leader.

Index Hospital/Corporation: the hospital or group of hospitals that have self-identified as being in a moderate surge. They will have taken steps to manage processes internally, completed the SBAR reporting template, updated their CCIS and called CritiCall Ontario to initiate process.

Minor Surge: an acute increase in demand for critical care services, up to 15% beyond the normal capacity (<115%), where response is localized to an individual hospital.

Moderate Surge: a larger increase ($\geq 115\%$) in demand for critical services that impacts on a LHIN level, where an organized response at the LHIN/regional network level is required

Major Surge: an unusually high increase in demand that overwhelms the health care resources of individual hospitals and regions for an extended period of time, where an organized response at the provincial or national level is required.

Partner Hospitals/Corporations: are contacted by CritiCall Ontario to assist by accepting patients from the index hospital

RAG Status: this refers to the red/amber/green status; it can be applied to the LHIN and is used as part of the traffic light system in all hospitals who participated in minor surge planning.

| | |
|----------------|--|
| RED: | Patient remains in ICU as they require life-sustaining interventions |
| YELLOW: | Possibility of transfer within a 36 hours timeframe |
| GREEN: | Patient ready to be transferred from critical care unit |

SBAR: SBAR stands for Situation, Background, Assessment, Recommendation and is a well-known communication tool that helps members of the health care team organize and present critical information about a patient's condition in an efficient and effective way.

Appendix G: Moderate Surge Preparedness Checklist

| MODERATE SURGE CHECKLIST– Index Hospital Team | |
|--|--|
| <p>Definition of Moderate Surge: An increase (≥115%) in demand for critical care services, where one or more hospitals cannot sustain their critical care services that is the result of one more of the following:</p> <ul style="list-style-type: none"> ○ A local level response at the Index Hospital is not sufficient ○ Human resources in the Index Hospital are not sufficient to meet demand ○ Supplies in critical care and acute care services at the Index Hospital will not be sufficient to meet the demand ○ Physical space resources are no longer sustainable in the Index Hospital ○ Use of alternative hospital space is now being considered | |
| <input type="checkbox"/> | Have you reviewed the process for declaring a Moderate surge in your hospital? |
| <input type="checkbox"/> | Has this process been communicated to relevant staff? |
| <input type="checkbox"/> | Have you reviewed the process for accessing additional ventilators from the Provincial Stockpile? |
| <input type="checkbox"/> | Has this process been communicated to relevant staff? |
| <input type="checkbox"/> | Is the hospital up-to-date with their Minor Surge planning? |
| <input type="checkbox"/> | Is there a communication structure in place for: <ul style="list-style-type: none"> ○ Informing senior management of the surge status? ○ Informing front line staff that a regional level response has been activated? |
| <input type="checkbox"/> | Have communication tools been distributed: <ul style="list-style-type: none"> ○ Switchboard Tool? ○ Rag Status Communication Tool? ○ SBAR Form? |
| <input type="checkbox"/> | Have you identified staffing models in the event that your hospital goes into a Moderate Surge? |
| <input type="checkbox"/> | Have staff been made aware of the Moderate Surge process? |
| <input type="checkbox"/> | Have you conducted a mock Moderate Surge drill? |

Appendix H: Index Hospital SBAR Form

| | | |
|--|--|---|
| SBAR FORM Situation Background Assessment Recommendation | | Date: |
| Index Hospital & OH Sub-Region: VP Name: | | Time of preamble call: Call in Number at CitiCall: Participant code: |
| Situation & Background: Summarise the situation and outline minor surge responses that has been executed e.g. cancelling OR, decanting patients etc. | | |
| | | |
| What is your current status? Please insert # : _____ Critical care capacity at Moderate Surge level (\geq 115%) _____ Critical care bed capacity (insert bed occupancy rate from CCIS) _____ # Beds Not Available | | |
| Confirm that CCIS is updated daily? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Confirm that the hospital's VP has been informed? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Assessment: What is your current patient compliment | | |
| _____ # patients are red (i.e. will remain in ICU) _____ # patients are yellow (i.e. possibility of transfer within 36 hours) _____ # patients are green (i.e. ready to leave ICU immediately) | | |
| Recommendation & Next Steps: What are the recommended actions from the preamble call? | | |
| Proceed to Fan Out Call with Partner Hospitals? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | | |

List of patients requiring possible transfer?

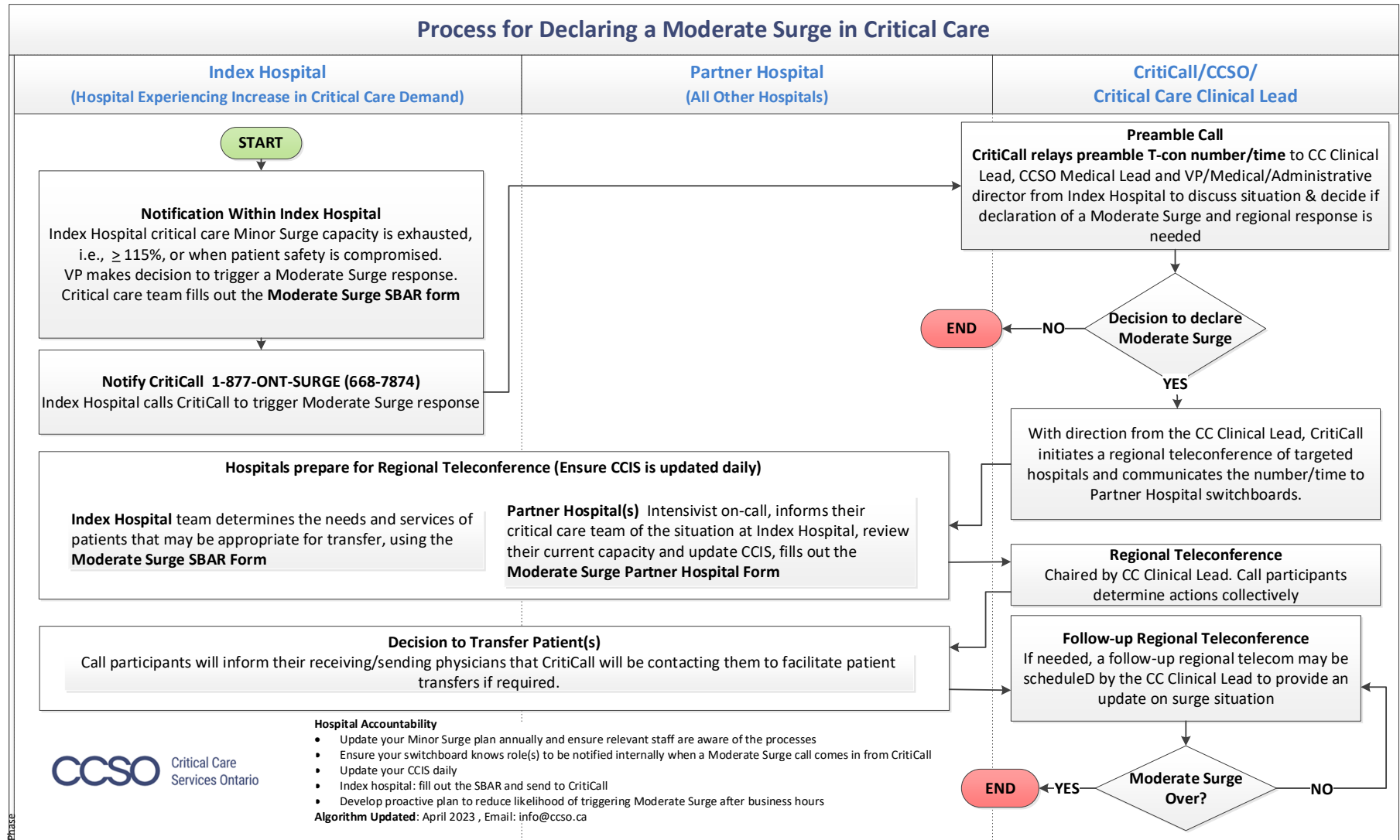
NOTE: For patient privacy this portion of the form will be for internal use only

| Pt # | Patient Identifier | Age | M/F | Diagnosis | Vented Y/N | Location | MRP Service | Necessity of Isolation? Y/N |
|------|--------------------|-----|-----|-----------|---------------|----------|----------------|-----------------------------------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |

Appendix I: Partner Hospital Reporting Form

| Partner Hospital Reporting Form | |
|---|---|
| <i>Please complete prior to joining the Moderate Surge teleconference (organized by CriteCall)</i> | |
| Call-in Number at CriteCall: Time to call-in: | |
| Partner Hospital: | |
| Date: | |
| Name of participant on call: Title: Phone: | |
| Situation : Current Capacity | |
| Identify your current critical care capacity: | <input type="checkbox"/> Moderate Surge , critical care capacity is $\geq 115\%$ <input type="checkbox"/> Minor Surge , critical care capacity $>100-115\%$ <input type="checkbox"/> Critical Care Capacity is $\leq 100\%$ |
| What is your current patient compliment? (Please insert the number of patients in each category) | ____ # patients are red (i.e. will remain in ICU) ____ # patients are yellow (i.e. possibility of transfer within 36 hours) ____ # patients are green (i.e. ready to leave ICU immediately) |
| Bed Availability: <i>The number of beds available to provide care for a critically ill patient</i> | ____ # Beds Available |
| Current Capability: <i>The resources available to you at the time of the event</i> | |

Appendix J: PROCESS FOR DECLARING MODERATE SURGE



Appendix K: Process for Accessing Ventilators/HFNC System from the Stockpile

