CCRC
OSLER COVID CLINICAL RESPONSE COMMITTEE

CODE ZERO - Corporate **24 April 2021**

The COVID Clinical Response Committee (CCRC) has been asked to provide guidance on actions to be taken in the event that resuscitation capability is at maximum capacity within the hospital.

Algorithm

As the volume and acuity of COVID-related critical illness continue to climb, it may affect the functional integrity of the hospital such that no resuscitation area is available and immediate action may be required.

- This may be met as the ED has no available resuscitation room;
- This may also be the case if the ICU has internal demands that exceed available resources on the Critical Care platform (e.g. no available beds, staff shortage).

Code Zero is a two-stage response, where the initial stage, Stage I, attempts to resolve the lack of resuscitation capacity in the ED or insufficient capacity in critical care by obtaining a transfer directive and sending out an appropriate patient either through the Command Table/CritiCall or internal Primary Care Paramedic (PCP). If no transfer is possible, then Stage II is activated. It is possible that in some circumstances, we would proceed with immediate Stage II activation upon approval by Anesthesia, ED, and CCRT.

CRITERIA

In order to initiate the Code Zero procedure, the following conditions must be met and for which expeditious resolution is not possible. It is acknowledged that the acuity and volumes in the Emergency Department may influence these conditions and that not all criteria may be required to be met in order to initiate the Code Zero Procedure.

- **Stage I:**
  - **Emergency Department (all conditions must be met):**
    - Three of four resuscitation areas must be occupied by critically ill patients (e.g. ventilated) and who require this space for either ongoing aerosol-generating medical procedure, mechanical ventilation, or complex resuscitative care.
    - All acute and subacute rooms occupied by patients who cannot be moved to a hallway bed (either because of isolation concerns or illness acuity).
    - The acuity and volume within the emergency department is viewed to be very high in the judgement of the on-duty acute emergency physician and the resource nurse, such that the team is overwhelmed with existing resources and patient safety is at risk.
  - **Critical Care:**
    - All immediately available options within the corporate critical care platform have been exhausted, as explored by the Critical Care Resource Nurse, Critical Care Response Team Physician, and Access and Flow Leader.
- **Stage II:**
  - All of the above met, and:
    - There is no ORNGE or PCP transfer available within 30-60 minutes (i.e. Stage I was not resolved)
  - All four resuscitation rooms are full.

PROCESS

Stage I

1. **Initiation:**
   Stage I is initiated when the Stage I criteria above is met.
   a. Any of the individuals below may initiate the Code Zero procedure:
      - The on-duty acute care ED Physician in close collaboration and agreement with the ED Resource Nurse
      - On-site Access & Flow Leader
      - The Critical Care Response Team physician in collaboration with the ICU Resource Nurse
      - Chief of Critical Care or Emergency Medicine
   b. If there are no pending transfers, Critical Care determine if a transfer directive can be obtained:
      - 0800h - 1800h: Through Command Table rescue transfer
      - 1800h - 0800h: CritiCall
   c. If there are pending transfers, Access & Flow Leader to confirm ORNGE response time
   d. If no directive can be obtained, or if ORNGE response time will take longer than 30-60 minutes, then Stage I is escalated.

2. **Escalation:**
   The initiating individual will call the Contact Centre (x34567) to activate a page to the *Code Zero ENGAGE group* indicating the site, location (i.e. ED, ICU) and stage (Code Zero Stage I).
   a. Code Zero ENGAGE group membership:
      - Site-specific: ED Resource Nurse / Team Lead, Site Chief Emergency, BCH CCU Resource Nurse (if activating site is BCH), Environmental Services Supervisor, Respirology Resource Nurse, Code Zero Anesthetist (Call Schedule for Code Zero Anesthesia), Code Zero Anesthesia Assistant.
      - Both Sites: ICU Resource Nurse, Access & Flow Leader, CCRT Physician, CCRT Nurse, Site Chief of Surgery, Corporate Chief of Surgery, Site OR Manager, Site Chief Anesthesia, Corporate Chief Anesthesia.
      - Administrative Support: Chief of ED, Chief of ICU, Director of ED & Critical Care, Director of Surgery, Director of Access & Flow, Director on Call (DOC).
   b. Code Zero Message:
      "Site Code Zero Stage I *Location.* Please join the Zoom conference in 15 minutes (*Time*). Required Zoom conference participants: Code Zero Anesthetist, Access & Flow, CCRT Physician, *Site* ED Resource Nurse and ICU Resource Nurse, Chief of *Location (ED or ICU)*.

      Join Zoom Meeting by web:
      https://zoom.us/j/95709255992?pwd=RURaUTM1OG41aUhTdlFibmpqeWJodz09
      Join Zoom Meeting by zoom:
      1-855-703-8985,,95709255992#,,,,*292011#"

   c. Determine if PCP transfer is an available option.

3. **Response - PCP Transfer Option Available:**
   If PCP transfer is available, then refer to PCP Transfer Protocol via Director on Call.

4. **Response - PCP Transfer Not Available:**
   If no PCP Transfer is not immediately available, then **Code Zero Stage II** is activated.

Stage II:

1. **Activation:**

   If Code Zero Anesthetist, CCRT and ED agree that the Stage I response is not able to be resolved, then **Code Zero Stage II** is activated.

   a. Code Zero Stage II is activated by calling x55555 and indicating the site, location (i.e. ED, ICU), stage (Code Zero Stage II), Designated Code Zero Incident Commander.
   b. Code Zero ENGAGE group membership: Code Zero ENGAGE Group + COVID-19 Incident Commander/VP on Call (off hours)
   c. Code Zero Message:
      "Site Code Zero Stage II *Location.* Please enact program procedures.
      Code Zero Incident Commander is *Chief of ED or Chief of ICU."*
   d. Chief of ED or Chief of ICU assumes the position of Code Zero Incident Commander

   While a staged response would be usual, a Code Zero may proceed directly to Stage II if the Chief of Emergency Services or Chief of Critical Care believes the conditions have already been met.

   2. Response:

   The following actions are taken immediately by each program/department:

PROGRAM	**RESPONSE**
Critical Care	● **CCRT** physician identifies the most appropriate patient for management in a non-traditional critical care setting (OR) in communication with the referring physician. ◦ 14 years or older ◦ Intubated or on a high-flow nasal cannula (HFNC) with appropriate precautions. ◦ Established vascular access (central line or minimum 2 large bore peripheral IV) ◦ Be admitted under the intensivist
Emergency Department	● **Acute ER MD** to communicate to **CCRT** physician which patient should have priority for transfer ● Review type of critical care bed and vent patient requires ● Confirm with **CCRT** whether the patient needs to be proned (prone upon arrival to OR with the assistance of the ICU team) ● Ensure patient has appropriate vascular access ● Ensure patient has appropriate documentation ● Ensure all ED orders filled and verbal TOA is completed ● Once the patient is transferred, clean and ready the room immediately for the next patient. ● **Environmental Services Associate** to clean room STAT.
Respiratory Therapy	● *Location* **Respiratory Therapy** to assist with preparing for patient transfer and ensure appropriate ventilation equipment is available
Access & Flow	● Inform **Registration** that patient will be moved to ICU Holding (OR)
Environmental Services	At the direction of Access & Flow: ● Assign dedicated **Porter** to respond to *Location* for patient transport from *Location* to ICU Holding (OR) ● Ensure **Porter** transporting the patient to the OR is wearing a cap, booties and gown ● Assign **Environmental Services Associate** to perform terminal clean of sending location (e.g. ED Resus Room)
Anesthesia & Surgery	● Ensure operating rooms are clean and ready to receive patients with the appropriate equipment (BCH OR 2, OR 3; EGH OR 2, OR 6).

	○ Anesthesia Machine ○ IV Pump ○ Pressure Bag ○ Medications ○ Critical Care bed ● **Anesthetist** to communicate to **CCRT physician** and **Access & Flow** which OR to be used at any given time, for all patient transfers. ● **Anesthetist** to ensure team is gathered and ready to retrieve patient (see program protocol) ● **Anesthetist** to assume OR team lead ● **Anesthetist** and **Anesthesia Assistant** will care for the patient ● **OR** and **PACU nurses** will be available for support to the Anesthetists as needed ● **Nursing OR/PACU** ○ Patient may be already intubated or require intubation. ○ The OR Charge nurse will provide notification to the family on notification of location of the patient. ○ First available nurses from both units (OR and PACU) will support Code Zero patients as needed. ○ Any nursing interventions are to be documented in progress notes and added to the patient's health record. ○ Access & Flow will arrange transport of the patient to another location. ● Review cases in OR with respect to capacity and patient flow.
Administrative Response	● Hospital IMT may be activated in discussion with the COVID-19 Incident Commander / VP on-Call and Code Zero Incident Commander if required.

3. **Ongoing Response**
   - **a.** Once a patient is transferred to ICU Holding (OR), they will not be returned to the emergency department under any circumstances.
   - **b.** **Anesthesia** and **Critical Care** teams to communicate frequently regarding bed situation. An OR patient may be transferred back to ICU if space available and resources permitting but must be agreed upon by intensivist.
   - c. The **CCRT physician** will be the point of contact for medical management and will remain the MRP. The **ICU Resource Nurse** will be the point of contact for nursing questions as needed.
   - **d.** After 3 hours have elapsed and the patient is still in the ICU Holding (OR), **Code Zero Incident Commander** initiates contact with the **VP on Call / COVID-19 Incident Commander** to determine if an IMT call is required.

4. **Code Zero All Clear**
   - a. Once all patients have been transferred out of ICU Holding (OR), the **Code Zero Incident Commander** notifies the Code Zero Stage II ENGAGE group that Code Zero All Clear via page to Locating/Contact Centre.

Recurring Code Zero Zoom Link:

Join Zoom Meeting by web:
https://zoom.us/j/95709255992?pwd=RURaUTM1OG41aUhTdlFibmpqeWJodz09
Join Zoom Meeting by zoom:
1-855-703-8985,,95709255992#,,,,*292011#