Texas Health Harris Methodist Hospital FORT WORTH

Texas Health Specialty Hospital FORT WORTH

Guidelines for Management of Emerging and Pandemic Respiratory Illness

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1.0 Purpose

To provide guidelines for the prevention of healthcare-associated transmission of emerging and pandemic respiratory illness. These guidelines may be used to manage any mass influx of patients with potentially infectious respiratory illness, including seasonal influenza. This policy is intended to be used as a supplement to the existing facility Emergency Operations Plan (EOP) that addresses key issues such as mass influx of patients, facility lockdown procedures, and use of the hospital incident command system (HICS).

2.0 Guideline

Emerging infectious diseases are diseases of infectious origin whose incidence in humans has increased within the past two decades or threatens to increase in the near future. Emerging and pandemic respiratory illnesses are those that primarily affect the respiratory tract, and are spread through droplet or airborne routes and/or through direct or indirect contact with respiratory secretions. These illnesses include but are not limited to:

Pandemic Influenza – respiratory illness caused by a novel Influenza A virus appearing in the human population, causing serious disease, and spreading easily from person-to-person worldwide. Past influenza pandemics have led to high levels of illness, death, social disruption, and economic loss.

Avian (Bird) Influenza – a respiratory illness caused by an influenza virus strain (H5N1) that occurs naturally among wild birds and can be transmitted from birds to humans. A mutation of the virus resulting in efficient person-to-person transmission could lead to a pandemic.

Novel Influenza – other flu viruses such as H7N9 have been discovered that could cause a pandemic with high mortality.

Swine Influenza – a respiratory illness caused by an influenza virus strain (H1N1) that occurs naturally among swine and can be transmitted from swine to humans. A novel mutation of the virus occurred in 2009 leading to global outbreaks of person-to-person transmission.

Severe Acute Respiratory Syndrome (SARS) – a respiratory illness caused by a novel coronavirus reported in Southeast Asia, North America, and Europe in 2003. A different novel coronavirus that has been discovered in the Middle East results in infections with a high mortality.

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<u>Biological events are detailed in the Biological Event Plan.</u>

Public health authorities generally use The World Health Organization (WHO) Pandemic Influenza Phases for preparedness planning and management of emerging and pandemic respiratory illness. The phases include:

Inter-Pandemic Period
Phase 1: No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease is considered low.
Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.
Pandemic Alert Period
Phase 3: Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
Phase 5: Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).
Pandemic Period
Phase 6: Pandemic phase characterized by increased and sustained transmission in general population.

Any emerging and pandemic respiratory illness that may result in a mass influx of infectious patients may be managed under this plan. Surge capacity is the ability to rapidly expand beyond normal services to meet an increased demand for health care in the event of bioterrorism or other large-scale public health emergencies or disasters. Any event that stresses the ability of the facility to maintain normal operations may necessitate implementation of the EOP and HICS.

Infection Prevention will collaborate with THR Emergency Management, entity Administration, Safety Officer, and key department heads to assess the need for early activation of the Incident Command System in a modified condition. The potential for a surge may occur well before designation of an official pandemic period. Media reports and public concerns may result in large numbers of "worried well" presenting to the facility for evaluation. At minimum, facility planning should be triggered by clusters of human outbreaks in multiple locations overseas (WHO Pandemic Phase 4), and/or the first human case in North America. Oversight for development and evaluation of the pandemic respiratory illness policy is by the Emergency Management Committee and the Infection Prevention and Control Committee.

3.0   Scope

This policy applies to staff that may encounter suspected or confirmed emerging or pandemic respiratory illness patients, their environment, and/or their respiratory secretions or body fluids.

4.0   Guidelines

Transmission Precautions: During Pandemic Alert Period, patients presenting to the healthcare setting should be evaluated for respiratory infection. Signs and symptoms of "influenza-like illness" may include:
- Fever >100.4^0 F (>38^0 C)
- Dry or nonproductive cough
- Headache
- Muscle aches
- Shortness of breath

Patients that present to the healthcare setting with fever and respiratory symptoms are managed routinely with Standard Precautions and Respiratory Etiquette (given a mask and spatially separated from others in public areas). Additionally, seasonal influenza is typically managed with Droplet Precautions.

A separate triage area should be established for a mass influx of patients with potentially infectious respiratory illness. Jones Dismissal area/decontamination area may serve to meet this need. Patients with a history of travel within 10 days to an area with pandemic respiratory illness activity and that present with acute febrile respiratory illness should be managed with Strict Precautions. Other risk factors include close contact to someone with known or suspected pandemic respiratory illness. "Close contact" is defined as caring for or living with a person with pandemic respiratory illness, particularly if there has been contact with body fluids (e.g. kissing, sharing eating or drinking utensils, or face-to-face conversation).

Infection Prevention should be notified for further guidance on transmission precautions. Novel emerging and pandemic respiratory illnesses often have an unclear mode of transmission at the onset of an outbreak. Strict Precautions (essentially a combination of Airborne and Contact Precautions with the addition of eye protection) may be utilized until evidence based recommendations from public health authorities can be determined. Further information about Strict Precautions can be found in the facility Isolation Guidelines policy. Transmission precautions may be modified as further information and guidance becomes available from public health surveillance. Adherence to hand hygiene policy, Standard Precautions, and Respiratory Etiquette is critical for preventing transmission of pandemic respiratory illness among staff, visitors, patients, and the community.

Strict Precautions:
- Notify Infection Prevention *immediately* when a patient is placed in Strict Precautions.
- Negative airflow room is optimal if available, preferably with an anteroom. Engineering will set up HEPA filtered portable air scrubbers in rooms without negative air as needed.
- Private room is recommended, though cohorting may be necessary during a mass influx of patients.
- Strict Precautions signage is placed on the door to the room. Current signage is red and blue with a STOP sign. Door to remain closed except for entering and exiting.
- Required mask must meet minimum recommendations of NIOSH as an N95 respirator.
- All personnel must wear an N95 respirator mask to enter the room. Visitors should be limited to immediate family and are required to wear a respirator mask. The 3M 1870 mask fits most persons if these are available. *Unlike routine Airborne Precautions, the used respirator mask is considered contaminated and should be used once and discarded if supplies allow.*
- Eye protection must be worn to enter the room.
- Gown and gloves are to be worn to enter the room. Double gloving should be considered for high-risk tasks involving blood or body fluids.
- Meticulous attention to hand hygiene is extremely important. Alcohol hand rubs are appropriate unless hands are visibly soiled.
- Special attention must be made to the proper donning and removal of PPE to avoid contamination of clothing, skin, and environmental surfaces. PPE should be removed in order from "most contaminated" to "least contaminated" (i.e. gloves, gown, mask, and eye protection).
- Personnel should be on high alert during aerosol generating procedures. When available, PAPR (powered air purifying respirator) hoods are indicated for high-risk procedures such as endotracheal intubation.
- Limit patient movement outside the room unless necessary for critical procedures. Procedures should be performed in a negative airflow room whenever possible. Limit contact with other patients, visitors, and personnel in elevators and waiting areas.
- When transporting the patient outside the room, place a (surgical or N95) mask on the patient. Communicate the need for specific precautions to other caregivers as appropriate.
- Strict Precautions for a specific case shall be discontinued according to CDC/WHO guidelines.

4.1   Airborne Infection Isolation Rooms Inventory:

Med/Surg	C313, C314, C413, C414, R318, R489, R589, R689, H217, H429, H508, H529, H608, H629, H708, H729, H808
ICU	B204, B211, B304, B305, B312, B404, B405, B412, C113, C114, C213 C214, C313, C314, C413, C414
Emergency	Room 20
NICU	3 rooms

THSH   H408

THFW has a mobile medical unit (40-bed capacity) that can be deployed onsite if necessary with negative air isolation capability. Currently there are four portable HEPA filtered air scrubbers available.

Emergency Department / Triage: The Emergency Department (ED) will most likely be the first area impacted by a surge. The number of presenting patients, not the number of patients requiring inpatient treatment, measures ED surge. Routine use of screening criteria for respiratory illness, queries regarding recent travel (especially outside the country), placing a surgical/droplet mask on patients with respiratory symptoms, spatial separation in the waiting room, rapid throughput to a negative air room when indicated, and Standard Precautions including Hand Hygiene will serve to facilitate patient and staff safety during an emerging pandemic event. With expected or actual surge, an external triage for patients with respiratory illness should be established. A separate waiting area should be utilized as well. Jones dismissal area may serve to meet this need. If an internal waiting area is established, portable HEPA filtered air scrubbers should be placed in this waiting area. Rapid flu testing is appropriate in the early stages of an influx of patients. A separate Fast Track Flu Testing area may facilitate the rapid screening and dismissal of potentially infectious patient with no-life threatening illness. Other alternatives during surge could include drive through triage stations.   Ideally, the triage area should have one entrance and one exit to control access. Criteria for testing, treatment, admission, palliative care, or home care should be developed for the event and communicated to staff.   Staff should be monitored for compliance with PPE in the ED setting, including use of gloves, gown, and N95 respirator in the triage area. In past pandemic events, healthcare workers became infected while not wearing the appropriate PPE during patient contact. During significant surge, alternative clinical documentation forms may need to be implemented. Management must be alert to early signs of staff stress and fatigue in this critical area.

 In the event of facility lockdown, outside triage (Stage I) will be located in the street at Terrell Street and 5th Avenue. At this point, patients are either sent home, to a community resource, or sent to the phase II triage level.   The Stage II triage area will be located outside the Jones Building near the decontamination area, or outside the Bloxom Tower main entrance, with patients routed through Phase II recovery to the K side of the Emergency Department. Patients arriving by EMS will continue to come through the Emergency Department ambulance entrance and will be seen by Stage II triage personnel prior to entering the building. Refer to the THFW/THSH Surge Preparedness Emergency Department / Triage Attachment A for specific strategies.

5.0   **Clinical Operations:** Patients suspected of pandemic respiratory illness should be placed in a negative air room ASAP. If the volume of patients needing airborne isolation precautions overwhelms the available number of rooms, cohorting may be necessary. When possible, suspected cases should be cohorted separately from confirmed cases. Alternative strategies may also include use of a negative air surge unit or mobile hospital. When placing multiple patients in a single patient room or cohorting in a surge unit, the distance between beds should be a minimum of 3 feet to decrease the potential for transmission of respiratory droplets. Patient areas should have minimal equipment and furniture to facilitate cleaning. The Nursing Administrative Supervisor will collaborate with Hospital Incident Command System (HICS) regarding staffing needs and patient placement plan. Collaboration with Case Management/Social Services will include evaluation of patients for dismissal to facilitate decompression of inpatient units. Consideration may also be given to having a designated family member remain with the patient to provide daily hygiene, toileting, and basic care needs during severe staff shortages. Other alternatives include cancelling elective admissions, and declining acceptance of LTAC and nursing home patients. Refer to the THFW/THSH Surge Preparedness Clinical Operations Attachment B for specific strategies.

6.0   **Admissions / Registration:** Admissions has defined protocols for expedited "Quick Registration" of patients in the event of surge. For alternative triage/registration sites, Admissions will define necessary equipment for setting up a Registration Area (e.g. computer, printer, shred bin, office supplies, copier, forms, etc.). For ongoing or escalating surge, Admissions management may need to modify the registration process to include only critically necessary information. In collaboration with the HICS structure,

Admissions may recommend utilization of a paper registration process to accommodate mass influx of patients. A registration list may be accessed via the electronic record system. If resource restraints force a change to paper registration, a log will also be maintained of patients triaged home with home care instructions.

7.0   **Pharmacy:** Pharmacy management will conduct inventory of applicable medications anticipated for treatment of the specific pandemic respiratory illness. An evaluation of estimated resources needed for treatment of staff and patients will be compiled and presented to the Hospital Command Center (HCC) staff. Collaboration with THR and public health authorities on release of THR system and federal Strategic National Stockpile (SNS) medications is ongoing. Pharmacy will collaborate with Employee Health on mass distribution to staff of immunizations and/or prophylaxis as appropriate. With significant surge, Pharmacy may need to evaluate existing stock of routine medications and define substitutes where appropriate. Pharmacy COPIC will collaborate at system level on standing order sets for treatment of pandemic respiratory illness. Refer to the THFW/THSH Surge Preparedness Pharmacy Attachment C for specific strategies.

8.0   **Infection Prevention:** Infection Prevention will perform surveillance, and review lab results, patient rosters, staff reports, syndromic surveillance reports, and Employee Health reports. Infection Prevention staff will collaborate with public health on prevention and control strategies, and coordinate reportable disease reporting. Collaboration with public health is ongoing via THR EOC for the development of testing and evaluation stations in the community. Syndromic surveillance for public health threats occurs routinely through electronic reporting of ED chief complaints to public health. Infection Prevention will participate in EOP management via the HICS structure. Infection Prevention will also provide guidance on staff, patient, and public education initiatives, and coordinate communication updates on community pandemic status to key stakeholders. Respiratory Etiquette stations in public areas are monitored and modifications made as needed (e.g. moving masks to monitored location to prevent theft). Infection Prevention will collaborate with Employee Health, Nursing, and Medical Staff regarding surveillance for pandemic respiratory illness in the inpatient population and potential exposure situations between patients and staff. Infection Prevention can also provide guidance on patient placement strategies, set up of areas not routinely used for patient care, scarce resource alternatives, handling of waste and linen, cleaning and disinfection procedures, etc. Refer to the THFW/THSH Surge Preparedness Infection Prevention Attachment D for specific strategies.

9.0   **Employee Health:** Employee Health will perform ongoing surveillance of healthcare worker illness, and oversee appropriate vaccination and prophylaxis for healthcare workers. A prioritized system for dispensing immunizations and prophylactic medication has been developed to protect workers at risk for infection based on job tasking (see table below). The risk priority categories may be modified to meet the specific recommendations for the event. Staggered dispensing of immunizations and/or prophylactic medication may need to occur based on limited supplies and/or limited resources for dispensing.

Risk Priority	Categories	Approximate #
Priority 1	ED (including Texas Health Burleson), all ICUs, Respiratory Therapy, High Risk Med Surg, High Risk Employees*, Oncology, BMT, Transplant, Dialysis, Texas Health Specialty Hospital, Admissions, Employee Health, Infection Prevention, NICU, Newborn Nursery, Occupational Health	973
Priority 2	Radiology/Nuclear Med/Sono (Inpatient and Outpatient, including Texas Health Burleson), Intermediate Risk Med/Surg, General Admit/Admissions, Laboratory Services (Core Lab if performing flu testing)/Phlebotomy (including Texas Health Burleson), Rehab/PT, OB/Gyn/L&D/Antepartum, EVS	844
Priority 3	Perioperative Services, Pharmacy, Food Services, Pastoral Care, Case Management, Social Services, Behavioral Health, Lab not covered in Priority 2, PACU, Recovery, Patient Advocate	564
Priority 4	Ancillary staff and volunteers in clinical areas	378
Priority 5	All remaining employees	585

Approximate Total		3344

        * High risk staff include pregnant workers and those with significant immunocompromised status (e.g. organ transplant, chemotherapy, HIV).

        Employee Health will also provide staff education on early signs of illness (fever, respiratory symptoms, and/or diarrhea), procedure for reporting illness or possible exposure, and directives for remaining at home if ill. Staff should be free from fever for 24 hours before returning for duty. During severe staffing shortages, consideration may be given to utilizing recovering staff in a cohorted pandemic unit. Staff nurses not able to work in a clinical setting may also be utilized for phone triage or THR hotlines. A screening form for evaluation of individual staff readiness to work has been developed. Staff exposed to pandemic disease must be screened through Employee Health (or designee) daily for 1 week after the last exposure.

        Employee Health will oversee the screening stations, with additional resources obtained through the Labor Pool. Work status of employees will be communicated to the Labor Pool and Credentialing Unit Leader as applicable. Employee Health also oversees the respirator fit testing program, and will provide guidance on fit testing for alternative respirators if shortages occur. The Employee Health Medical Director or Occupational Health Medical Director will provide oversight for the Employee Health program. Refer to THFW/THSH Employee Health Attachment E.

11.0   **Laboratory:** Respiratory viral cultures should not be performed for novel pandemic respiratory disease. Respiratory specimens from highly pathogenic disease agents should be handled under Biosafety Level 3 conditions, including use of a biological safety Class II cabinet. Refer to the facility Laboratory policies for more information. PCR or commercial antigen testing under Biosafety Level 2 procedures may be utilized to test clinical specimens from suspect cases. Laboratory staff will perform all potential pandemic specimen handling with appropriate PPE (N95 respirator, gloves, gown, and eye protection). Laboratory management will provide oversight and guidance on specimen collection, reagents, test kits, specimen transport to public health agencies as needed, and public health data collection forms. Limitations on non-essential testing may be necessary as the event progresses. Lab COPIC will collaborate at system level on standing order sets for testing of pandemic respiratory illness. Refer to the THFW/THSH Surge Preparedness Laboratory Attachment F for specific strategies.

12.0   **Respiratory Therapy:** Respiratory Therapy staff will conduct an inventory of ventilators and respiratory supplies, and collaborate with the HCC on patient management. Non-critical interventions may need to be curtailed, and elective outpatient procedures cancelled. Refer to the THFW/THSH Surge Preparedness Respiratory Therapy Attachment G for specific strategies.

13.0   **Perioperative Services:** Perioperative Services management will review surge status and adjust to accommodate resource constraints. Elective services may need to be cancelled, calls placed to scheduled patients, communication coordinated with surgeons, and staff reassigned to alternative patient care areas.

14.0   **Women and Infants' Services:** Women and Infants' Services management will evaluate surge and status and adjust to accommodate resource constraints. Newborns with stable medical status will be roomed with mothers. Elective services may need to be cancelled, calls placed to scheduled patients, communication coordinated with obstetricians/pediatricians, and arrangements made to accommodate medical-surgical patients to the unit. Education will assist with refresher training for staff on transmission precautions and other clinical needs as appropriate. Refer to the THFW/THSH Surge Preparedness Women and Infants' Services Attachment H for specific strategies.

15.0   **Radiology:** Radiology management will evaluate impact of surge and adjust to accommodate resource constraints. Elective procedures may be cancelled, calls placed to scheduled patients, and staff reassigned to alternative care sites as indicated. Refer to the THFW/THSH Surge Preparedness Radiology Services Attachment I for specific strategies.

16.0   **Food Services:** Food Services will conduct an inventory of available food and water items for anticipated surge. Alternative supply sources are available as needed per the EOP process. Rationing of food and/or water supplies will be implemented if needed. Staff will be trained on updated transmission precautions and food delivery procedures. Standard Precautions are recommended for handling used dishes and eating utensils from a patient with pandemic respiratory illness. Group dining areas will be posted with reminders about social distancing, and alcohol hand hygiene products added as needed. Refer to the THFW/THSH Surge Preparedness Food Services Attachment J for specific strategies.

17.0   **Materials Management:** Materials Management staff should assure point of use availability of PPE, general waste disposal containers, alcohol hand hygiene products, and cleaning/disinfection products (e.g. germicidal wipes). In addition, Materials Management will maintain an inventory list to stock a surge or pandemic unit outside a regular patient area if needed. Materials Management will coordinate release of pandemic supplies with THR Supply Chain. Materials Management will conduct ongoing monitoring of key materials. Refer to the THFW/THSH Surge Preparedness Materials Management Attachment K for specific strategies.

18.0   **Safety & Security:** The facility Safety Officer will oversee emergency operations through the HCC and function as liaison to community emergency management entities, including activation of WebEOC. Security personnel will oversee facility access issues, lockdown protocols, crowd control, traffic management, restriction of visitors, and staff safety. In the event of significant surge, triage may need to occur outside the physical building. Security will assist with patient and public throughput, signage, tent construction, etc. as needed. Refer to the THFW/THSH Surge Preparedness Safety & Security Attachment L for specific strategies.

19.0   **Education:** Education staff will collaborate with clinical department management to determine education needs and basic competencies for personnel operating outside their normal area. Educators will assist with just-in-time training for reassigned staff as needed. Education will assist with patient, staff, and public education materials and distribution. Education will also provide support for EH on staff screening and respirator fit testing as needed, and the set up and operation of screening stations for staff and visitors in the event of a facility lockdown. Refer to the THFW/THSH Surge Preparedness Education Attachment M for specific strategies.

20.0   **Pastoral Care:** Chaplains will evaluate the needs of patients, families and staff in a pandemic event. Spiritual support and guidance will be critical as the event progresses. Pastoral Care serves as the liaison for faith-based community entities such as Parish Nursing, which may be able to provide some level of support. Pastoral Care will collaborate on support for a Palliative Care unit or team, provide liaison and support regarding Ethics Committee issues, and make recommendations for providing spiritual support to patients, families, and staff. Consideration should be given to creation of a Quiet Room for staff to decompress and receive counseling during extended pandemic events.

21.0   **Palliative Care:** In the event of escalating pandemic respiratory illness with high mortality, planning should include strategies for delivery of palliative care. Palliative care, in general, refers to care directed toward relief of symptoms (e.g. nausea, pain, shortness of breath) rather than toward curing life-threatening illness. A Palliative Care Team may be considered to provide direction on clinical interventions for both inpatient and home care. A Palliative Care Unit will be utilized, particularly for patients without home care options. When ongoing or escalating surge of pandemic respiratory illness necessitates the ethical distribution of diminished resources, the ability of the healthcare system to provide palliative care and emotional support to patients and their families will be essential. Oversight for Palliative Care will be by established Palliative Care staff or, in the absence of an established unit, by the Education Department.

22.0   **Engineering:** Engineering will evaluate stresses on utilities related to surge. Staff will also provide assistance for moving of equipment and supplies for alternative treatment/triage areas, including use of external tents as needed. Engineering will oversee deployment of the MintieAnte Surge Unit if indicated. Refer to the THFW/THSH Surge Preparedness Engineering Attachment N for specific strategies

23.0   **Clinical Engineering (Biomed):** Clinical Engineering will provide oversight of equipment evaluation and maintenance, acting as the gatekeeper for equipment brought in from the outside. Clinical Engineering will also provide an inventory of key equipment as appropriate.

24.0   **Environmental Services:** EVS management will determine availability of staff and cleaning equipment/solutions for management of a higher volume of patients. Routine preventive maintenance cleaning may need to be curtailed (e.g. floor buffing) to accommodate a decrease in staff and an increase in patient volume. EVS will oversee disposal of infectious waste and handling of soiled linen. Enhanced rounding to remove filled containers may be necessary. Increased cleaning schedules for public restrooms and the Staff Housing (as determined by HR) showers can be anticipated. Inventory of linen and scrubs will be performed at minimum daily. Collaboration with Infection Prevention on cleaning procedures specific to the event will occur. In general, routine germicides are appropriate for most pandemic respiratory illness, with meticulous attention to cleaning of high-touch and horizontal surfaces in clinical areas. Careful oversight of EVS staff in a changing clinical environment should be conducted, with ongoing evaluation of education needs. Refer to the THFW/THSH Surge Preparedness Environmental Services Attachment O for specific strategies.

25.0   **Public Relations:** Public Relations will collaborate with Infection Prevention to review and/or develop key messages and fliers for patients, public, and staff on pandemic status and prevention messages. A media center will be established in compliance with the EOP. Refer to the THFW/THSH Surge Preparedness Hospital Communication Attachment P for specific strategies.

26.0   **Human Resources:** Human Resources will assist with volunteer and temporary employee identification badges, reimbursement issues, and staffing resources. Collaboration with Clinical Operations may be needed for reassignment of staff with high risk for complications (e.g. pregnancy, immunocompromised). Human Resources staff will also coordinate staff housing and nutritional needs within the facility if needed for prolonged periods. Refer to the THFW/THSH Surge Preparedness Staff Housing Attachment Q for specific strategies.

27.0   **Postmortem Care:** In the event of mass deaths, bodies may be stored in refrigerated trucks provided by public health authorities. The county Medical Examiner's Office will provide direction for care and transport of the deceased. If there is a delay in arrival of the refrigerated truck, bodies may be temporarily (<24 hours) stored in the Morgue Body Cooler (in Lab/Histology) and Walk-in Body Cooler (Physician's Parking Garage). EVS will be responsible for relocating soiled trash and linen and preparing the room for temporary body storage. Oversight for a temporary Morgue area will be the responsibility of Lab/Pathology Director or designee.

28.0   **Personal Preparedness:** Healthcare workers should be educated on the importance of personal preparedness for community disasters. Individuals should maintain a readiness of supplies and develop a personal plan to maintain a safe home environment. Healthcare workers should also develop strategies to maintain continuity of child, elder, and pet care so that they may continue to work and support the public health response to the event. It is not advisable to congregate persons at risk during a pandemic event (including children and the elderly), so facility-provided day care is not an appropriate strategy. Instead, healthcare workers should develop a personal plan for care of children, elderly dependents and pets. Strategies may include use of family members, friends, neighbors, or other healthcare workers on alternate shifts to provide care. Department managers will work with staff to assist with needs.

29.0   **Ethics Committee:** The facility Ethics Committee will provide consultation regarding ethical distribution of diminished resources as needed. During even minor pandemic situations, it is expected that some resources may become scarce (e.g. masks) and adjustments may need to occur for the safety of staff and patients. In severe pandemic respiratory illness events, it is likely that decisions may need to be made regarding appropriate medical interventions with scarce resources, including a potential decrease of healthcare workers. When possible, algorithms that utilize specific criteria to determine allocation of resources should be implemented (e.g. allocation of ventilators). Ideally, these criteria should be standardized as much as possible across the community, with allowances expected for individual facility resource constraints. The Chief Quality Officer will provide oversight for Ethics Committee structure and

communication, and guidance on allocation of scarce resources and potential altered standards of care. The facility Chaplain will serve as the initial contact person for the Ethics Committee.

30.0   All departments and staff play a key role in planning for a pandemic event, managing the actual event and surge of patients, and recovering from the event once normal operations resume. Pre-surge planning is critical to the successful management of a pandemic event. Healthcare systems and facilities need to evaluate emergency readiness on an ongoing basis. Individuals, particularly healthcare workers, need to plan for personal emergency preparedness in the event of public health emergencies.

31.0   **References:**
- Texas Department of State Health Services Pandemic Influenza Preparedness Plan, 2005.
- U.S. Department of Health & Human Services Pandemic Influenza Plan, 2005.
- World Health Organization Pandemic Influenza Preparedness and Response, 2009.
- Flu.Gov. Interim Public Health Guidance for the Use of Facemasks and Respirators in Non-Occupational Community Settings during an Influenza Pandemic. May 2007.

32.0   **COLLABORATION**

INTERDISCIPLINARY COORDINATION DISCIPLINE	DATE	OUTCOME/COMMENT
Emergency Management Committee	02/2013	APPROVED
Environment of Care Committee	03/2013	APPROVED

Review	2009				
Revise	2013				

THFW/THSH Surge Preparedness Emergency Department/Triage Attachment A

Department/ Focus	Pre-Surge	Minor Surge 5-10% (7-15 patients)	Moderate Surge 11-15% (16-22 patients)	Major Surge 16-20% (23-30 patients)	Large Scale Emergency >20% (31+ patients)
Emergency Department / Triage	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Establish separate waiting area for patients with respiratory illness. ▪ Collaborate with Infection Prevention on need for negative air and deployment of Surge Unit for waiting area or triage. ▪ Oversee set up of Surge Unit supplies, equipment, linen, trash. ▪ Collaborate with Security on traffic control and restricted access to ED areas. ▪ Educate staff on transmission precautions for the event. ▪ Collaborate on testing & treatment protocols with Lab, Pharmacy, Med staff, HCC.	▪ Evaluate need for Code Yellow. Notify HCC. ▪ Monitor staff compliance with Standard Precautions and transmission precautions. ▪ Evaluate need for additional supplies, PPE, stretchers, equipment. ▪ Assess need for reduction or elimination of routine electronic documentation. ▪ Assess need for moving to external triage (CURRENTLYsouth entrance ED). Collaborate with Security on directional signage, tents, supply location, trash, etc. ▪ Assess External Triage cart supplies for the event. ▪ Limit routine triage of OB patients to Women's Services unless laboring or high risk. Consult L&D staff as needed. ▪ Triage stable patients to home with home care instructions. ▪ Collaborate with Pastoral Care on community partners to assist with home care needs. ▪ Maintain communication and status reports to HCC.	▪ Monitor staff compliance with Standard Precautions and transmission precautions. ▪ Move to external triage. ▪ Evaluate potential use of Surge Unit OR inpatient negative air unit. ▪ Activate disaster call list for additional staff. ▪ Collaborate with Security on traffic control and directional signage. ▪ Maintain ambulance entrance and egress. ▪ Modify registration and documentation procedures. ▪ Consider need for drive-through triage. ▪ Evaluate need for Palliative Care area for patients without home care assistance. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Monitor staff compliance with Standard Precautions and transmission precautions. ▪ Collaborate with Education on just-in-time training of reassigned staff and volunteers. ▪ Implement drive-through triage if appropriate. ▪ Collaborate with Security on traffic control and directional signage. ▪ Maintain ambulance entrance and egress. ▪ Evaluate supply and equipment needs, and possible need for altered standards of care. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Monitor staff compliance with Standard Precautions and transmission precautions. ▪ Collaborate with Education on just-in-time training of reassigned staff and volunteers. ▪ Collaborate with Security on crowd control and staff safety concerns. ▪ Maintain ambulance entrance and egress. ▪ Evaluate supply and equipment needs, and possible need for altered standards of care. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Clinical Operations Attachment B

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 beds)	Moderate Surge 11-15% (63-92 beds)	Major Surge 16-20% (93-116 beds)	Large Scale Emergency >20% (117+ beds)
Clinical Operations (Nursing Administrative Supervisor)	▪ Evaluate current hospital supplies, equipment, staffing. ▪ Collaborate with HCC to determine potential surge needs, patient placement strategies. ▪ Collaborate on - Mobile Medical Unit, staffing needs. ▪ Collaborate with IP on potential need for negative air rooms – review locations. ▪ Evaluate inpatient census and formulate strategy to decompress inpatient units.	▪ Evaluate inpatient census, begin evaluations for dismissals, decline acceptance of NH/LTAC admissions. ▪ Open - Mobile Medical Unit (capacity 40) if not designated for ED Triage/waiting area. Alternative plan for conversion of - Endoscopy into inpatient use (13) Open any closed beds. Keep Express Admit Open (10 beds) ▪ Consider need for designation of a Palliative Care unit or team. ▪ Maintain and reassign current staffing as needed. ▪ Evaluate need for additional staff, supplies, and equipment. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Open ED hallway beds (capacity 17 beds). Convert PAC on J2N back to inpatient use (13 beds) Call in non-scheduled staff to include additional 5 RN/LVN. ▪ Evaluate need for additional supplies and equipment. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ -Possible conversion of Phase II(12 chairs) and Phase III(10 beds) to less acute pt. care area ▪ Call in non-scheduled staff to include additional 10 RN/LVN, 2 PCT, 2 Monitor Tech, 1 US. ▪ Evaluate need for additional supplies and equipment. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC. ▪ Collaborate with HCC on potential need for altered standards of care.	▪ Open PACU to inpatients (18) C ▪ Call in non-scheduled staff to include additional 15 RN/LVN, 3 PCT, 2 Monitor Tech, 2 US. ▪ Evaluate need for additional supplies and equipment. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC. ▪ Collaborate with HCC on potential need for altered standards of care.

THFW/THSH Surge Preparedness Pharmacy Attachment C

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Pharmacy	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Identify and inventory applicable immunizations and medications specific to the event for patients and staff. ▪ Collaborate with COPIC to review system standing order sets for treatment of the applicable pandemic illness.	▪ Collaborate with THR and public health authorities on release of THR system and federal SNS supplies. ▪ Collaborate with EH on staff distribution of applicable immunizations, prophylactic and/or post-exposure medications. ▪ Evaluate inventory of routine medications and define substitutes where appropriate. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list for additional staff. ▪ Reassign staff as needed to maintain critical services. ▪ Eliminate non-essential Pharmacy services. ▪ Ongoing collaboration with EH on distribution of staff medications. ▪ Evaluate inventory of routine medications and define substitutes where appropriate. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training for volunteer staff. ▪ Ongoing collaboration with EH on distribution of staff medications. ▪ Evaluate inventory of routine medications and define substitutes where appropriate. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training for volunteer staff. ▪ Ongoing collaboration with EH on distribution of staff medications. ▪ Evaluate inventory of routine medications and define substitutes where appropriate. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Infection Prevention Attachment D

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Infection Prevention	▪ Collaborate with ED on triage set up, waiting room set up, supplies, staff education needs. ▪ Collaborate with Materials on pandemic supplies on site and potential need for release of emergency stock at Owens and Minor. ▪ Provide support for staff education on Pandemic policy. ▪ Provide support for staff education on personal preparedness. ▪ Ongoing surveillance for public health diseases. ▪ Monitor Respiratory Etiquette program/supplies. ▪ Collaborate with EH on staff screening, immunization, and prophylaxis issues. ▪ Communicate to HCC on infection considerations for anticipated patient presentation. ▪ Evaluate need for Surge Unit deployment.	▪ Collaborate HCC on potential need to deploy Surge Unit for Triage/Waiting Area or inpatient care area). ▪ Check Surge Unit supplies and equipment staging. ▪ Collaborate with HCC leaders on PPE use, HH, isolation precautions if appropriate, trash and linen process, biohazard disposal, traffic and access issues, etc. ▪ Provide Triage area with handouts for non-admitted patients (home care, precautions, etc.). ▪ Continue communication with public health, system partners, HCC on care management and patient placement strategies. ▪ Monitor Standard Precautions, transmission precautions, waste/linen. ▪ Collaborate with Education and EH on just-in-time staff training on PPE use, respirator fit testing, isolation precautions, PAPR use, cleaning issues, etc.	▪ Collaborate with HCC on patient placement issues (isolation issues, PPE availability, Surge Unit, cohorting of patients, environmental issues). ▪ Collaborate with Supply Chain on acquisition of surge supplies from Owens and Minor segregated storage (90 day supply PPE). ▪ Continue communication with public health, system partners, HCC on care management and patient placement strategies. ▪ Monitor Standard Precautions, transmission precautions, waste/linen. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with HCC on patient placement issues (isolation issues, PPE availability, Surge Unit, cohorting of patients, environmental issues). ▪ If staffing or supply shortages anticipated, collaborate with HCC on planning for altered standards of care. ▪ Monitor Standard Precautions, transmission precautions, waste/linen. ▪ Collaborate with Supply Chain on alternatives for scarce supply or equipment resources. ▪ Continue communication with public health, system partners, HCC on care management and patient placement strategies. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with HCC on patient placement issues (isolation issues, PPE availability, cohorting of patients, environmental issues). ▪ Monitor Standard Precautions, transmission precautions, waste/linen. ▪ Continue communication with public health, system partners, HCC on care management and patient placement strategies. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Employee Health Attachment E

Department/ Focus	Pre-Surge	Minor Surge 5-10% (11-24 beds)	Moderate Surge 11-15% (25-34 beds)	Major Surge 16-20% (35-46 beds)	Large Scale Emergency >20% (47+ beds)
Employee Health Services	▪ Provide support for staff education on pandemic symptoms and work restrictions. ▪ Ongoing surveillance for communicable diseases in employee population. ▪ Review staff screening forms, immunization prioritization schedule, prophylaxis/treatment protocols, manager/Employee Resource Pool notification forms for employee workability. ▪ Set up staff screening station at main entrance. ▪ Obtain current list of employees with ID numbers and cost centers from HR. ▪ Identify high risk employees for potential work reassignment. ▪ Assess resources available for N95 respirator fit testing if alternative product supplied (if applicable)	▪ Open employee vaccination station. ▪ Assess need for additional staff to screen staff. ▪ Provide support for staff (peer support, grief support, Quiet Room in Staff Housing area). ▪ Collaborate with HICS leaders on PPE use and availability, training needs. ▪ Continue communication with IP on communicable disease cases among staff. ▪ Collaborate with Education and IP on just-in-time staff training on PPE use, respirator fit testing, isolation precautions, PAPR use, cleaning issues, etc. ▪ Prepare for visitor screening at main entrance in event of need for facility lockdown. ▪ Collaborate with Pastoral Care on staff emotional/spiritual support needs. ▪ Evaluate need for staff Hot Line for information, screening, referrals, etc. ▪ Maintain communication and status reports to HICS.	▪ Maintain staff/visitor screening station. ▪ Ongoing staff vaccination, prophylaxis/treatment initiatives. ▪ Request additional staff from Resource Pool to support EHS activities as needed. ▪ Maintain surveillance of staff for communicable diseases. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Collaborate with Pastoral Care on staff emotional/spiritual support needs. ▪ Maintain communication and status reports to HICS.	▪ Maintain staff/visitor screening station. ▪ Ongoing staff vaccination, prophylaxis/treatment initiatives. ▪ Request additional staff from Resource Pool to support EHS activities as needed. ▪ Maintain surveillance of staff for communicable diseases. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Collaborate with Pastoral Care on staff emotional/spiritual support needs. ▪ Maintain communication and status reports to HICS.	▪ Maintain staff/visitor screening station. ▪ Ongoing staff vaccination, prophylaxis/treatment initiatives. ▪ Request additional staff from Resource Pool to support EHS activities as needed. ▪ Maintain surveillance of staff for communicable diseases. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Collaborate with Pastoral Care on staff emotional/spiritual support needs. ▪ Plan for Critical Incident Stress Debriefing for post event. ▪ Maintain communication and status reports to HICS.

THFW/THSH Surge Preparedness Laboratory Attachment F

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Laboratory	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Evaluate CDC/CAPS biosafety recommendations for specimen handling and transport specific to the event. ▪ Educate staff on biosafety practices and use of biosafety cabinet as applicable to the event. ▪ Conduct inventory of reagents, test kits, supplies applicable to the event. ▪ Collaborate with COPIC on system standing order sets for testing of pandemic respiratory illness.	▪ Monitor staff compliance with PPE and biosafety recommendations. ▪ Reassign staff as needed to maintain services. ▪ Provide just-in-time training for reassigned staff within Lab. ▪ Evaluate need to limit non-essential services. ▪ Collaborate with public health on specimen collection forms, testing restrictions, courier procedures. ▪ Provide oversight for temporary morgue location and handling of bodies if needed. ▪ Monitor inventory of supplies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list for additional staff. ▪ Evaluate need for altered work shifts. ▪ Monitor staff compliance with PPE and biosafety recommendations. ▪ Eliminate non-essential services. ▪ Collaborate with public health on specimen collection forms, testing restrictions, courier procedures. ▪ Provide oversight for temporary morgue location and handling of bodies if needed. ▪ Monitor inventory of supplies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training for volunteer/temporary staff. ▪ Monitor staff compliance with PPE and biosafety recommendations. ▪ Eliminate non-essential services. ▪ Collaborate with public health on specimen collection forms, testing restrictions, courier procedures. ▪ Provide oversight for temporary morgue location and handling of bodies if needed. ▪ Monitor inventory of supplies, identify alternatives for scarce resources. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training for volunteer/temporary staff. ▪ Monitor staff compliance with PPE and biosafety recommendations. ▪ Eliminate non-essential services. ▪ Collaborate with public health on specimen collection forms, testing restrictions, courier procedures. ▪ Provide oversight for temporary morgue location and handling of bodies if needed. ▪ Monitor inventory of supplies, identify alternatives for scarce resources. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Respiratory Therapy Attachment G

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 beds)	Moderate Surge 11-15% (63-92 beds)	Major Surge 16-20% (93-123 beds)	Large Scale Emergency >20% 124+ beds)
Respiratory Therapy	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Create process for Surge Unit deployment of RT equipment/supplies. ▪ Evaluate current supplies, equipment and staffing. ▪ Evaluate the incident presentation to determine need for additional respiratory equipment.	▪ Initiate Department Call List to determine available staff. ▪ Begin process of staging of Surge Unit supplies: 1. portable oxygen 2. portable suction. ▪ Maintain and reassign current staffing. ▪ Evaluate need for additional equipment and oxygen. As necessary arrange for rentals / deliveries from vendors. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Deploy Surge Unit oxygen and suction and other supplies as required. ▪ Evaluate the need for additional mechanical ventilators. Call UHS for additional ventilators. ▪ Collaborate with Materials Management on replacement supplies and compressed gases. ▪ Call in non-scheduled staff to include additional RCPs as required ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Call in additional non-scheduled staff to include additional RCPs as required. Work out 8 hour rotating shift schedule. ▪ Evaluate need for additional supplies. ▪ Collaborate with HCC on potential need for altered standards of care. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with HICS on ability to provide respiratory support beyond Surge Unit. ▪ Ongoing evaluation of staffing levels. ▪ Ongoing evaluation of supplies and alternative measures for shortages. ▪ Collaborate with HCC on potential need for altered standards of care. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Women and Infants' Services Attachment H

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Women and Infants' Services	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Insure adequate supplies and beds for anticipated surge. ▪ Coordinate patient education on disease process with Infection Prevention.	▪ Communicate with HICS on any female bed needs. ▪ Review plan for compression of inpatient areas by dismissals. ▪ Share plan with medical staff and possibility of cancellation of elective procedures. ▪ Stress need for Standard Precautions and transmission precautions as indicated. ▪ Implement 100% rooming in for mom and baby. ▪ Strict enforcement of no visitation policy in NICU. ▪ Use of in-room teaching as opposed to group class of new moms to limit potential exposure. ▪ Provide consultation on ED triage of OB patients to limit traffic to inpatient areas. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Implement 24 hour dismissal plan for all stable non-infected WNS patients. ▪ Cancellation of all elective Cesareans and Inductions in order to increase free beds on all units. ▪ Strict limitations on visitation and public traffic to all units. ▪ Education to all admissions on disease process and precautions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Continue to support ED triage of OB patients. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list for additional staff. ▪ 12 hour dismissal of applicable moms and babies. ▪ Strict enforcement of rooming in and no traffic flow to nurseries with babies. ▪ Restrict admissions to medical or laboring patients. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Continue to support ED triage of OB patients. ▪ Maintain communication and status reports to HCC.	▪ Float staff to other areas as needed. ▪ Collaborate with Education on needs for just-in-time training. ▪ Open triage beds and empty postpartum beds for male patients as needed. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Continue to support ED triage of OB patients. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Radiology Services Attachment I

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Radiology Services	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Collect adequate supplies for anticipated surge. ▪ Inform staff of surge process and their responsibilities during all stages. ▪ Coordinate patient and family education on disease process and infection prevention.	▪ Communicate with leadership any needs. ▪ Inform medical staff of possibility of cancellation of elective procedures. ▪ Enforce need for standard precautions and isolation. ▪ Collaborate with Supply Chain on supply and equipment needs. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Staff critical areas with portable x-ray machine and radiographer. ▪ Educate pts and family on disease process and precautions. ▪ Collaborate with Supply Chain on supply and equipment needs. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Cancel all elective procedures, emergent procedures only. ▪ Staff critical areas with portable x-ray machine and radiographer. ▪ Dedicate one x-ray room, one CT room, and one US unit to provide services to these patients. ▪ Collaborate with Education on cross training needs for float staff. ▪ Collaborate with Supply Chain on supply and equipment needs. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list. ▪ Float staff to other areas as needed as extra manpower. ▪ Collaborate with Supply Chain on supply and equipment needs. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Food Services Attachment J

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Food Services	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Check inventory of food and water. Adjust order points to include additional demands of food and water. ▪ Add signage in group dining areas regarding social distancing (e.g. leave an empty chair between persons). ▪ Add alcohol hand hygiene dispensers to dining tables. ▪ Coordinate planning with Security regarding deliveries of food and supplies.	▪ Currently have ability to serve 1350 meals. Adjust order points to include additional demands of food and water. ▪ All food shipments will be inspected and delivery personnel identified and logged in. ▪ Maintain communication and status reports to HCC.	▪ Currently have ability to serve 1350 number of meals. Adjust order points to include additional demands of food and water. ▪ All food shipments will be inspected and delivery personnel identified and logged in. ▪ Provide Security with list of vendors for expected deliveries in event of facility lockdown. ▪ Maintain communication and status reports to HCC.	▪ Currently have ability to serve 1350 meals. Adjust order points to include additional demands of food and water. ▪ All food shipments will be inspected and delivery personnel identified and logged in. ▪ Continue collaboration with Security on vendor and food delivery security. ▪ Maintain communication and status reports to HCC.	▪ Currently have ability to serve 1350 meals. Adjust order points to include additional demands of food and water. ▪ All food shipments will be inspected and delivery personnel identified and logged in. ▪ Continue collaboration with Security on vendor and food delivery security. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Materials Management Attachment K

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Materials Management	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Conduct inventory of supplies critical to the event (e.g. hand hygiene products, germicide wipes, PPE, etc.). ▪ Facility has 90 day supply of targeted pandemic supplies on site. ▪ Assess need to redirect targeted supplies (e.g. N95 masks) from non-critical areas to Materials storeroom. ▪ Establish supply/equipment list for deployment of Surge Unit or alternate inpatient care sites. Collaborate with Security on restricting access to Materials storeroom.	▪ Collaborate with THR Supply Chain on release of pandemic supplies from O&M stock. ▪ Conduct rounds to assess par levels for critical supplies, organization of supply areas. ▪ Evaluate need for alternative products for diminished resources. THR Supply Chain has list of alternative products/vendors. ▪ Collaborate with Education on training needs for product substitutions. ▪ Collaborate with EH on projected need for mask fit testing for alternative N95 devices. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with THR Supply Chain on release of pandemic supplies from O&M stock. ▪ Conduct rounds to assess par levels for critical supplies, organization of supply areas. ▪ Evaluate need for alternative products for diminished resources. ▪ Collaborate with Education on training needs for product substitutions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list for additional staff. ▪ Conduct rounds to assess par levels for critical supplies, organization of supply areas. ▪ Evaluate need for alternative products for diminished resources. ▪ Collaborate with Education on training needs for product substitutions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training for volunteer staff. ▪ Conduct rounds to assess par levels for critical supplies, organization of supply areas. ▪ Evaluate need for alternative products for diminished resources. ▪ Collaborate with Education on training needs for product substitutions. ▪ Consider acquisition of scarce medical supplies from closed physician offices if necessary. Coordinate access with Facilities. Maintain log for replacement post event. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Safety & Security Attachment L

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Safety & Security **FOCUS:** ▪ **Secure campus** ▪ **Open exterior triage** ▪ **Manage traffic flow**	▪ Normal campus operations ▪ Visitors allowed access without screening. ▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Evaluate the incident to determine need for additional resources. ▪ Notify available personnel that support may be indicated for other areas based on scale of the incident. ▪ Evaluate the need to contact law enforcement to supplement available staff. ▪ Collaborate with THR EOC on availability of public health screening stations in the community.	▪ Lockdown at this stage is not required. ▪ Monitor traffic and crowd control patterns to assure access and minimize confusion. ▪ Collaborate with ED on possible need for external Triage, Decon tent setup for Triage, drive-through Triage, etc. ▪ Maintain radio contact with officers and HCC, as applicable and communicate any safety/security issues identified. ▪ Assist with posting of signage at entrances and public areas for education, restrictions, directions, etc. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC and THR Emergency Management, WebEOC. ▪ Deploy Security Officer(s) to ED if needed for traffic and crowd control.	▪ Call in additional officer support. ▪ Security is already assigned to the ED 24/7 (one officer inside and one officer outside). ▪ Monitor traffic patterns to assure access is unobstructed. ▪ Assure PIO informed and available as needed. ▪ Evaluate need to activate lockdown procedures. ▪ Prepare for lockdown situation to maintain staff and visitor screening at main entrance (east side) under EH oversight. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC and THR Emergency Management, WebEOC.	▪ Continue to provide security support in ED area. ▪ Enhance PIO communication, as indicated. ▪ Evaluate the need and capability to rotate staff. ▪ Evaluate need for contract staff support, training and use of alternative staff (e.g. Facilities personnel), volunteers. ▪ Stage officer in lockdown screening area (main entrance). ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC and THR Emergency Management, WebEOC.	▪ Evaluate ability to sustain efforts. ▪ Maintain campus support and lockdown procedures. ▪ Continue security support for ED and lockdown screening areas. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC and THR Emergency Management, WebEOC.

THFW/THSH Surge Preparedness Education Attachment M

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Education	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Coordinate need for patient/staff education materials on pandemic event with Infection Prevention. ▪ Develop Palliative Care Team plan and/or training strategy for staff to prepare for potential resource constraints.	▪ Conduct rounds through clinical areas to determine staff training and education needs. ▪ Collaborate with HR and EH on orientation and testing (e.g. mask fit testing) for expedited credentialing and acquisition of temporary workers. ▪ Assist EH with screening of employees as needed. ▪ Conduct just-in-time training for professional volunteers and staff working outside normal area. ▪ Utilize regular staff for unit specific orientation. ▪ Educate clinical staff on palliative care strategies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Conduct rounds through clinical areas to determine staff training and education needs. ▪ Continue to support HR and EH on orientation and testing for new workers/volunteers. ▪ Assist EH with screening stations for staff and visitors in event of facility lockdown. ▪ Continue to conduct just-in-time training for professional volunteers and staff working outside normal area. ▪ Monitor effectiveness of palliative care strategies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Conduct rounds through clinical areas to determine staff training and education needs. ▪ Continue to support HR and EH on orientation and testing for new workers/volunteers. ▪ Assist EH with screening stations for staff and visitors in event of facility lockdown. ▪ Continue to conduct just-in-time training for professional volunteers, staff working outside normal area. ▪ Monitor effectiveness of palliative care strategies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Conduct rounds through clinical areas to determine staff training and education needs. ▪ Continue to support HR and EH on orientation and testing for new workers/volunteers. ▪ Assist EH with screening stations for staff and visitors in event of facility lockdown. ▪ Continue to conduct just-in-time training for professional volunteers and staff working outside normal area. ▪ Monitor effectiveness of palliative care strategies. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Engineering Attachment N

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Engineering	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Relocate unneeded items/furniture from the temporary surge area. ▪ Collaborate with Infection Prevention to determine potential negative air needs. ▪ Move portable HEPA-filtered negative air machines to ED waiting room. ▪ Assemble Environmental Containment Units in surge area and verify that room is pulling negative air. ▪ Assist installing cots and other necessities for staff housing (as designated by HR). ▪ Assist distributing supplies, etc. as needed. ▪ Coordinate additional signage as needed.	▪ Continue monitoring portable HEPA-filtered negative air machines and other negative air rooms in use. ▪ Continue to assist with distribution of supplies and equipment as needed. ▪ Assist with installation of signage in public areas. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HICS.	▪ Continue monitoring portable HEPA-filtered negative air machines and other negative air rooms in use. ▪ Continue to assist with distribution of supplies and equipment as needed. ▪ Assist with set up of staff and visitor screening stations at main entrance (east side) in event of facility lockdown. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HICS.	▪ Continue monitoring portable HEPA-filtered negative air machines and other negative air rooms in use. ▪ Continue to assist with distribution of supplies and equipment as needed. ▪ Evaluate staffing adequacy and potential stress on utility systems. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HICS.	▪ Continue monitoring portable HEPA-filtered negative air machines and other negative air rooms in use. ▪ Continue to assist with distribution of supplies and equipment as needed. ▪ Evaluate staffing adequacy and potential stress on utility systems. ▪ Assist Supply Chain with acquisition of scarce medical supplies from closed physician offices if necessary. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HICS.

THFW/THSH Surge Preparedness Environmental Services Attachment O

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31-62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Environmental Services	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Educate staff on issues related to the emergency and potential surge. ▪ Evaluate inventory of cleaning supplies, scrubs, and linen for anticipated surge. ▪ Evaluate inventory of biohazard containers/bags and confirm contractor ability to maintain scheduled service. ▪ Plan for maintenance of critical services with anticipated surge. ▪ Identify non-essential services (e.g. floor buffing) which could be curtailed if needed. ▪ Collaborate with Infection Prevention on cleaning procedures specific to the event.	▪ Reassign staff to maintain schedule of critical services. ▪ Monitor staff compliance with Standard Precautions and applicable transmission precautions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Conduct rounds to evaluate supplies of hand hygiene products, linens, scrubs, cleanliness of clinical areas, public restrooms, staff housing. ▪ Collaborate with HICS on potential need for temporary morgue. Clean and set up Soiled Trash room at dock as temporary morgue location. Review set up with Lab/Pathology and Infection Prevention. ▪ Monitor ability of contractors to maintain schedule of trash and linen services, hazardous waste services. ▪ Maintain communication and status reports to HCC.	▪ Reassign staff to maintain schedule of critical services. ▪ Monitor staff compliance with Standard Precautions and applicable transmission precautions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Conduct rounds to evaluate supplies of hand hygiene products, linens, scrubs, cleanliness of clinical areas, public restrooms, staff housing. ▪ Monitor ability of contractors to maintain schedule of trash and linen services, hazardous waste services. ▪ Maintain communication and status reports to HCC.	▪ Activate disaster call list for additional staff. ▪ Collaborate with Education on just-in-time training of volunteers for EVS duties. ▪ Monitor staff compliance with Standard Precautions and applicable transmission precautions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Conduct rounds to evaluate supplies of hand hygiene products, linens, scrubs, cleanliness of clinical areas, public restrooms, staff housing. ▪ Monitor ability of contractors to maintain schedule of trash and linen services, hazardous waste services. ▪ Collaborate with HCC on ability to provide critical services. ▪ Maintain communication and status reports to HCC.	▪ Collaborate with Education on just-in-time training of volunteers for EVS duties. ▪ Monitor staff compliance with Standard Precautions and applicable transmission precautions. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Conduct rounds to evaluate supplies of hand hygiene products, linens, scrubs, cleanliness of clinical areas, public restrooms, staff housing. ▪ Monitor ability of contractors to maintain schedule of trash and linen services, hazardous waste services. ▪ Collaborate with HCC on ability to provide critical services. ▪ Maintain communication and status reports to HCC.

THFW/THSH Surge Preparedness Hospital Communications Attachment P

Department/ Focus	Pre-Surge	Minor Surge 5% - 10% in ED Volume or 31-62 additional inpatient beds	Moderate Surge 11% - 15% in ED Volume or 63- 92 additional inpatient beds	Major Surge 16% - 20% in ED Volume or 93-123 additional inpatient beds	Large Scale Emergency >20% in ED Volume or 124 + additional inpatient beds
Hospital Communication	Develop key messages to communicate about flu pandemic preparedness and prevention.	Call on previously identified spokespeople to speak to news crews about the pandemic's affect on hospital.	Update messages and apply to all tactics listed for minor surge.	Update messages and apply to all tactics listed for minor surge.	Update messages and apply to all tactics listed for major surge.
	Communicate key messages and importance of flu preparedness to staff using fliers, THM Internal publications: Script, Culture Connection, E-Monitor & Talk	Provide regular "media updates" to media, employees and HCC. The hospital spokesperson will provide updates at regular intervals to communicate status reports.			
	Infection Prevention to provide education regarding increased awareness to: • Hand Hygiene Appropriate PPE • Importance of personal preparedness plans: including items list, childcare, working through	Public Information Officer, along with Incident Commander, will identify an alternative location for media **in the event of a campus lockdown** and communicate that to media outlets once calls begin arriving. Alert all security personnel and provide them with map to			

	pandemic, etc.	alternative media location.		
	Infection Prevention to provide staff education	Public Information Officer, with Liaison Officer, will coordinate any and all external messaging with public health department. Messaging must be approved prior by the Incident Commander.		
	Prepare a list of public health contacts and partners who can supply and provide same messaging when an event occurs.	Distribute pandemic packets previously assembled		
	Identify and train media spokespeople with key messages BEFORE the event occurs.	Post previously recorded message or slide on patient information channel indefinitely. Update as needed and appropriate to keep patients and visitors informed.		
	Prepare a media packet ahead of time that includes information from the health department and hospital. Such as: • Fact Sheets on	Alert employees that a pandemic flu status or internal crisis plan is going into effect		

	flu - FAQ - "When to come to the hospital" sheet - Guide and tips for taking care of family members at home - How can I stay healthy during a flu pandemic? - Who is at risk? - Other materials as appropriate			
	Use current and upcoming media opportunities on flu or emergency preparedness to promote the concept and need of personal preparedness plans and raise awareness of prevention of flu: Wash hands, shots, etc.	Refer employees to the "How-to" guide for pandemic flu (see pre-surge: preparing for pandemic flu)		
	Provide "How-to" guide for employees and physicians to follow (based on information from staffing, HR,	Distribute phone number and information on employee call-in line for questions (manned		

	security, etc) when a pandemic strikes	consistently or is checked every 15 min. for employees to call in with questions or concerns)			
	Pre-record or prepare messages for channel 50 and channel 2 for use during a pandemic.	Post the previously recorded message or slide on the employee channel and update as more information is known			
	Prepare talking points or key messages for employees to share with patients and visitors.	Provide staff with messages and information that they can share verbally with patients and families			
	Prepare internal communication from hospital representative to be distributed to all patients/visitors. Include the action of going to the patient channel for updates.	Keep employees and community abreast of campus accessibility and alternate standards of care.			

THFW/THSH Surge Preparedness Staff Housing Attachment Q

Department/ Focus	Pre-Surge	Minor Surge 5-10% (31–62 additional beds)	Moderate Surge 11-15% (63-92 additional beds)	Major Surge 16-20% (93-123 additional beds)	Large Scale Emergency >20% (124+ additional beds)
Staff Housing **Location to be determined by HR**	▪ Review Pandemic policy with staff. ▪ Educate staff on personal preparedness. ▪ Review Respiratory Etiquette with staff. ▪ Determine location for staff housing, preferably with sleeping and activity areas. ▪ Determine location for staff showering. ▪ Collaborate with Security on access and security issues for staff housing and showering locations.	▪ Coordinate supplies for staff housing location (beds, privacy screening for windows, linens, lighting, etc.). ▪ Set up staff lounge area in housing location with stress reduction activities (TV, movies, reading materials, board games, etc.). ▪ Establish Quiet Room or area for staff counseling by Pastoral Care. ▪ Set up staff showering area supplies (linens, scrubs, toiletries, etc.). Collaborate with EVS and Supply Chain on supply replenishing. ▪ Collaborate with Food Services on stocking of kitchen area with basic snacks and drinks. ▪ Add additional phones and computers for staff access, if able. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Maintain communication and status reports to HCC.	▪ Monitor security and supply status for staff housing and showering areas. ▪ Evaluate need for a volunteer to oversee staff housing area on continuous basis. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Collaborate with Pastoral Care for staff emotional support. ▪ Maintain communication and status reports to HCC.	▪ Monitor security and supply status for staff housing and showering areas. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Collaborate with Pastoral Care for staff emotional support. ▪ Maintain communication and status reports to HCC.	▪ Monitor security and supply status for staff housing and showering areas. ▪ Monitor staff for illness and collaborate with EH as needed. ▪ Collaborate with Pastoral Care for staff emotional support. ▪ Maintain communication and status reports to HCC.

Texas Health Resources

Medical Management of Respiratory Patients During a Pandemic when Intensive Care Services are Limited.

1.0   Purpose:

To provide a triage protocol to allocate scarce health care resources (intensive care services, including ventilators) to those who are most likely to benefit medically during a pandemic respiratory crisis or other emergency situation that has the potential to overwhelm available intensive care resources.

This triage protocol seeks to provide transparent objective clinical criteria and an ethical framework for medical decision-making in overwhelming emergency circumstances, such as during pandemic respiratory crisis when the demand for intensive care services may overwhelm the supply of services.

2.0   Scope:

This triage protocol applies to all patients who are being considered for admission   to critical care areas during a pandemic respiratory illness or other circumstance in which the policy has been activated, since there is only a single pool of critical care resources that must be shared by both those with and without the illness that has triggered the activation of this policy.

This policy should not be viewed as a first step toward any type of resource rationing under normal circumstances. It should be used only in genuinely extraordinary situations in which the demand for intensive care services overwhelms the available services, such as in pandemic respiratory crisis.

Patients using ventilators at THSH will not be subjected to the acute care triage protocol/guidelines of this policy/procedure

3.0   Guideline:

This policy is reliant first upon clinical indicators of survivability as a means of determining medically appropriate resource utilization with the purpose of benefiting each patient according to his/her medical condition.

Each patient without regard to health insurance status, socioeconomic class, race, religion, sexual orientation or other social criteria deserves and will receive respect, care and compassion. However this does not mean that all patients should or will receive critical care services in the time of resource scarcity.

THR believes that the best medical decisions are based upon both clinical medical science and clinical medical ethics. The foundational ethical principles of beneficence and respect for persons remind us that clinical indicators of survivability and the potential to relieve suffering are key guides for medical treatment decisions, but perhaps no more so than in the setting of pandemic illness or other emergency circumstances in which the health care resources available are not adequate to meet all the needs of those who present for treatment.

There is no perfect clinical scoring system for survivability (prediction of mortality) in every clinical situation. Any such system is inherently probabilistic and will foster decisions based upon probabilities and not certainty. Some members of the public may find this concept troubling, however we believe the triage protocol within this policy is the best available at this time. is the Sequential Organ Failure Assessment (SOFA) score (see Appendix I), It incorporates features of existing triage systems, information obtained from other health care pandemic flu plans, and lessons learned from previous outbreaks of severe acute respiratory syndrome reported in the literature. Central to this protocol

Moving beyond the clinical medical science of the SOFA score, this policy is supported by an ethical framework based upon a duty to care for all patients, balancing an individual patient's rights and responsibilities with communal rights and responsibilities, especially in a time of resource scarcity such as during a pandemic illness. It seeks to maximize positive outcomes for the greatest number of patients within the larger community, to protect individual patients from inequalities, and to protect the integrity of the healing professionals who may be faced with seemingly intractable ethical challenges in times of resource scarcity and overwhelming demand.

Clinicians will evaluate all patients based upon the objective guidelines provided in this policy and will offer time-limited trials of ventilator support if clinically indicated based upon the triage protocol. We recognize that this policy addresses a situation of extraordinary medical and ethical challenge and that it may not adequately address every conceivable circumstance.

The principles of palliative care will play a crucial role in providing comfort to patients, including those who are not eligible to receive mechanical ventilation.

Patients and families will be informed as soon as feasible that in the circumstance of pandemic respiratory illness or other overwhelming emergency crisis, ventilator support and other critical care interventions may not be available at all and when available will be provided based upon a protocol equally applied to all patients. They will be further informed that the ventilator and other critical care type services represent a time-limited trial of therapy that may not improve the patient's condition sufficiently, in which case the ventilator will be removed and a transfer from the critical care area will occur.

Patients using ventilators at THSH will not be subjected to the acute care triage protocol/guidelines of this policy/procedure. Utilizing ventilators at THR Specialty Hospitals for long term ventilator patients, who will have limited access to acute care facilities, offers a balance between the duty to care and the duty to allocate wisely. If, however, such patients require transfer to a THR acute care facility, they would be assessed by the same criteria as acute care patients to determine whether they meet criteria for continued ventilator use.

- THSH will be expected to provide more intensive services on site as part of the general process of expanding care beyond standard locations. The limited ability to effect transfers to acute care hospitals is appropriate and likely during a phase in which the acute care hospitals are overwhelmed by a pandemic or emergency circumstance in which this policy has been activated.

3.0   Definitions:
A. Sequential Organ Failure Assessment (SOFA) score (see Appendix I): designed to help determine as quickly and as accurately as possible which patients will have the greatest probability of benefitting medically from potentially life sustaining interventions, particularly mechanical ventilators and other interventions typically available only in the ICU. It has been validated on a wide range of patients who have had various reasons for being in an intensive care unit.
B. Triage Committee: A multidisciplinary Triage Committee will serve as a resource to the clinicians at the bedside and will have oversight responsibility for supporting compliance with this policy when implemented.

4.0   Procedure:

Activation:
As the threat of the activation of the triage protocol increases, each THR Hospital should evaluate the need to activate their Pandemic Plan, which this guideline is an appendix of.

Clinical Assessment:

Emergency Department
A. Implement disaster triage per disaster plan.

B. After initial assessment and stabilization, implement critical care/ventilator triage.

C. Emergency Department (ED) physician will reassess any intubated patient upon arrival to the ED and will triage to alternate Emergency Department site (identified in each THR Hospital Emergency Management plan) to implement Withdrawal of Mechanical Ventilation orders (Appendix II) for those patients who do not meet criteria for ICU admission and ventilator use.

D. Incoming patients who potentially will require an ICU will be assessed using the inclusion criteria (refer to Appendix IV Critical Care Triage Protocol for Targeted

Respiratory Illness Emergency Department).
- The inclusion criteria identify those patients who may potentially benefit from admission to critical care. The inclusion criteria primarily focus on respiratory failure given that the ability to provide ventilator support is fundamentally what differentiates the ICU from other acute settings.

E. Incoming patients, who meet the inclusion criteria, will be assessed for exclusion criteria (see Appendix IV Critical Care Triage Protocol for Targeted Respiratory Illness Emergency Department)
- The exclusion criteria focus primarily on current organ function rather than on specific disease entities.
- The exclusion criteria consist of 3 categories:
  (1) People who currently have a very poor prognosis/chance of survival even when treated aggressively in an ICU. This category identifies patients who have a low probability of recovery or overall poor prognosis irrespective of the amount of resources dedicated to their care. Patients with a Sequential Organ Failure Assessment (SOFA) score of > 11 have a mortality rate of 90% even with full critical care during a non pandemic time.

  (2) People who will need a level of resources that cannot be met during a pandemic situation. Some patients might benefit from ICU care during non triage times, but they would require intense use of resources and often prolonged care. During the time a triage protocol is required; such intensive consumption of resources will need to be limited.

  (3) Those with underlying significant and advanced medical illnesses whose underlying illness has a poor prognosis with high short-term mortality even without their current concomitant critical illness. These patients have very high resource requirements and are likely to suffer significant complications from viral respiratory infections.

F. Patients who meet the exclusion criteria will be designated Blue Priority and admitted to a non critical care setting.

G. Patients for whom exclusion criteria are not present will be prioritized for potential admission to the ICU and mechanical ventilation using the SOFA tool.

Black Priority
High probability of mortality; should not be cared for in a critical care setting.

These patients are admitted to a non critical care unit.

➢ Initial assessment exclusion criteria present or SOFA > 11

Red Priority
Highest priority for ICU admission and a ventilator, if required.

These patients are sick enough to require the resources and will do poorly if they don't receive the care, and they are likely to recover if they do receive the care. This category includes patients with a single organ failure, particularly those with respiratory failure due to influenza.

➢ Initial assessment SOFA $\leq$ 7 or single organ failure

Yellow Priority
Immediate priority for ICU admission.

This category includes patients who at baseline are very sick and may or may not benefit from critical care. They should receive care if the resources are available but not if doing so will deny care to someone in Red Priority who is more likely to recover.

➢ Initial assessment SOFA 8-11

Green Priority

➢ Low probability of mortality. Defer admission to critical care.

CRITICAL CARE

A. When the triage protocol is activated, patients in the ICU will be assessed to determine whether they meet criteria for continued critical care.

B. Patients who meet the exclusion criteria will be designated Blue Priority and transferred to a non critical care setting.
   - A critical care triage officer will prioritize the patient. The ICU triage officer role will be filled by appropriate physicians within the medical director structure of each THR Hospital (*e.g., ICU Medical Director Physicians, Ethics Committee Member Physicians, and Physicians in an Administration role are all suggestions of physicians who could be considered for this role*)

C. Patients for whom exclusion criteria are not present will be initially prioritized using the SOFA tool (refer to Appendix V Critical Care Protocol for Targeted Respiratory Illness ICU Patients).

Black Priority
High probability of mortality; should not be cared for in a critical care setting. These patients are transferred to a non critical care unit.

➢ Initial assessment exclusion criteria present or SOFA > 11

Red Priority
Highest priority for ICU care and a ventilator if required.

These patients are sick enough to require the resources and will do poorly if they don't receive the care, and they are likely to recover if they do receive the care.

➢ Initial assessment SOFA ≤ 7 or single organ failure

<u>Yellow Priority</u> –
Immediate priority for ICU care.

This category includes patients who at baseline are very sick and may or may not benefit from critical care. They should receive care if the resources are available but not if doing so will deny care to someone in Red Priority that is more likely to recover.

➢ Initial assessment SOFA 8-11

<u>Green Priority</u>
Low probability of mortality.

➢ Transfer patient to a non critical care setting.

D. Patients on continued use of the ventilator will be reviewed and reassessed at intervals of 48 hours and 120 hours (refer to Appendix V Critical Care Triage Protocol for Targeted Respiratory Illness ICU Patients 48 hrs and 120 hrs).
   a. Time trials for ventilator use reflect the expected duration of beneficial treatment for acute respiratory distress syndrome. Too brief a trial, for instances only a few hours, might not provide any significant benefit to patients who might survive with a limited but longer trial. Excessively brief trials might permit use of ventilators by more patients, but without decreasing overall mortality.

<u>Black Priority</u> -
High probability of mortality; should not be cared for in a critical care setting. These patients are transferred to a non critical care unit.

➢ Initial assessment--exclusion criteria present or SOFA > 11
➢ 48 hour assessment—exclusion criteria or SOFA > 11 or SOFA 8-11 unchanged
➢ 120 hour assessment—exclusion criteria or SOFA > 11 or SOFA < 8 unchanged

<u>Red Priority</u> -
Highest priority for ICU care and a ventilator if required. These patients are sick enough to require the resources and will do poorly if they don't receive the care, and they are likely to recover if they do receive the care.

➢ Initial assessment--SOFA ≤ 7 or single organ failure
➢ 48 hour assessment—SOFA < 11 and decreasing
➢ 120 hour assessment—SOFA < 11 and decreasing progressively

<u>Yellow Priority</u> -
Immediate priority for ICU care. This category includes patients who at baseline are very

sick and may or may not benefit from critical care. They should receive care if the resources are available but not if doing so will deny care to someone in Red Priority that is more likely to recover.

➢ Initial assessment-- SOFA 8-11
➢ 48 hour assessment—SOFA < 8 unchanged
➢ 120 hour assessment—SOFA < 8 with minimal decrease (<3 point decrease in 72 hours

Green Priority -
Low probability of mortality.
Discharge from critical care.

➢ Initial assessment—no significant organ failure
➢ 48 hour assessment—no longer ventilator dependent
   120ur assessment—no longer ventilator dependent

E. If exclusion criteria or SOFA score > 11 occurs at any time from the initial assessment to the 48 hour assessment or 48 – 120 hour assessment, the triage priority will be changed to Blue Priority, and the patient will be extubated and moved from the ICU. The triage officer is responsible for re-prioritizing during these time intervals.

        a.   This aspect of the triage protocol deals with the "Minimum Qualifications for Survival" (MQS). This term represents a ceiling on the amount of resources that can be expended on any one individual. The key component of the MQS is to attempt to identify early those patients who are not improving and are likely to have a poor outcome.

5.0 Triage Committee

Recommended members of the triage committee are: the chairperson or clinical ethics consultant of the ethics committee and the senior ICU Medical Director or their designee shall co-chair the Triage Committee and jointly determine the frequency of oversight rounds. Members should not be providing direct patient care or have a valued interest in any of the patients cover under this guideline. Membership should include as available at least one representative from clinical ethics, critical care medicine, nursing, social work, and pastoral care. Note that one person may meet more than one of these criteria. Clinicians in the Emergency Department or ICU who feel that a particular case requires variation from this policy should consult with the Triage Committee for guidance

6.0 Medical Staff Members:

Accordingly, if a physician responsible for the treatment and care of patients feels the guidance within this policy is inadequate for a particular case confronting them, they may act according to their medical/ethical judgment and then appeal to the Triage Committee for further guidance.

7.0 Reference and Evidence Basis:

Baylor Healthcare System, Emergency/Pandemic Protocol for Intensive Care Services   (EPICS), 2010.

American College of Physicians. The Health Care Response to Pandemic Influenza. Annals of Internal Medicine 2006; 145: 135-137.

City of Houston Department of Health and Human Services. Pandemic Influenza Preparedness and Response Plan 2006.

Collin County Texas Health Care Services. Epidemiology and Surveillance: Pandemic Influenza Response Plan 2005.

Dallas County Health and Human Services. Pandemic Influenza Preparedness Guide 2006.

Dallas County Health & Human Services Influenza Pandemic Response Plan 2006.

Health & Human Services Pandemic Influenza Implementation Plan.

Hick John L. and O"Laughlin, Daniel. Concept of Operations for Triage of Mechanical Ventilation in an Epidemic. Society for Academic Emergency Medicine 2006; 22: 707-710.

Leavitt, Michael O. Health and Human Services Pandemic Planning Update VI. January 2009.

New York State Workgroup on Ventilator Allocation in an Influenza Pandemic Planning Document 2007.

Ontario Health Plan Working Group on Adult Critical Care Admission, Discharge and Triage Criteria for an Influenza Pandemic 2006.

Storey, Porter. Palliative Medicine Offers Lessons for Pandemic Preparedness. American Academy of Hospice & Palliative Medicine Newsletter 2006.

Tarrant County Public Health Pandemic Influenza Preparedness & Response Plan 2006.

Texas Department of State Health Services Pandemic Influenza Preparedness Plan 2005.

UCSF Medical Center Outbreak (Epidemic/Pandemic) Response Policy 2006.

Appendix I

Sequential Organ Failure Assessment (SOFA) Score

Variable	0	1	2	3	4
PaO2/FiO2 mmHg	>400	<400	<300	<200	<100
Platelets, x10$_3$/µL (x 10$_6$/L)	>150 (>150)	<150 (<150)	<100 (<100)	<50 (<50)	<20 (<20)
Bilirubin, mg/dL (µmol/L)	<1.2 (<20)	1.2-1.9 (20 - 32)	2.0-5.9 (33 - 100)	6.0-11.9 (101 – 203)	>12 (>203)
Hypotension	None	MABP <70 mmHg	Dop < 5	Dop > 5, Epi <0.1, Norepi <0.1	Dop > 15, Epi >0.1, Norepi >0.1
Glasgow Coma Score	15	13 - 14	10 – 12	6 – 9	<6
Creatinine, mg/dL (umol/L)	<1.2 (<106)	1.2-1.9 (106 – 168)	2.0-3.4 (169 – 300)	3.5-4.9 (301 – 433)	>5 (>434)

Dopamine (Dop), epinephrine (Epi), norepinephrine (Norepi) doses in ug/kg/min

Adapted from:

Ferreira Fl, Bota DP, Bross A, Melot C, Vincent JL. Serial evaluation of the SOFA score to predict outcome in critically ill patients. JAMA 2001; 286(14): 1754-1758.

Explanation of variables:

PaO2/FIO2 indicates the level of oxygen in the patient's blood. Platelets are a critical component of blood clotting. Bilirubin is measured by a blood test and indicates liver function. Hypotension indicates low blood pressure; scores of 2, 3, and 4 indicate that blood pressure must be maintained by the use of powerful medications that require ICU monitoring, including dopamine, epinephrine, and norepinephrine. The Glasgow coma score is a standardized measure that indicates neurologic function; low score indicates poorer function. Creatinine is measured by a blood test and indicates kidney function.

Appendix II
Physician Orders

Date	Time	Nurse Initials	Authorization is granted to supply drugs by non-proprietary name unless the words "this brand only" are written after the drug name by the physician.
			WITHDRAWL OF MECHANICAL VENTILATION
This protocol will be followed by nursing and respiratory therapy staff to withdraw mechanical ventilation. The physician assigned to the Alternate Emergency Department site will sign the physician orders. Place signed orders in patient's medical chart. The purpose of this protocol is to provide guidance on the proper technique for withdrawal of mechanical ventilation so as to maximize patient comfort when the goal of treatment has shifted from curative care to allowing death to come naturally and peacefully.			
			**** SELECT FROM THE FOLLOWING****
			1. ____MSO4 drip 100mg in 100ccD5W (1mg/cc) to achieve & maintain Ramsay sedation score of 5*, or
			2. ____MSO4 0.1 – 0.25 mg/kg IVP q5 min to achieve & maintain Ramsay sedation score of 5*
			**** FOR PATIENTS ALLERGIC TO MORPHINE****
			3. ____Fentanyl 0.5 – 2 mcg/kg IVP q2-4h to achieve & maintain Ramsay sedation score of 5*, or
			4. ____Fentanyl drip at 1mcg/kg/hr may increase at 30 min intervals up to 3 mcg/kg/hr as needed to achieve & maintain Ramsay sedation score of 5*.
			**** AND IF NEEDED FOR ADDITIONAL SEDATION****
			5. ____Propofol infusion 20-70 mcg/kg/min to achieve and maintain Ramsay sedation score of 5*
			6. ____Lorazepam 1-2 mg IVP q30 min to achieve & maintain Ramsay sedation score of 5*
			7. Other
			8. __X__ D/C PEEP and lover FiO2 to 21% (room air) and assess for comfort.
			9. __X__ Increase sedation if needed for patient comfort to Ramsay sedation score of 6*
			10. __X__ Extubate patient.

*Ramsay Scale – Scoring system for sedation:
1) Anxious, agitated or restless,
2) Cooperative, oriented, tranquil ("awake"),
3) Responds to commands only ("awake" will be resting, usually with eyes closed but will respond to a verbal command),
4) Asleep, but brisk response to glabellar tap or loud auditory stimulus ("asleep" but wakes up when named called loudly,

5) Asleep, sluggish response to glabellar tap or loud auditory stimulus ("asleep" and difficult to wake up or elicit response with loud verbal stimulus)
6) No response

Appendix III

CRITICAL CARE TRIAGE PROTOCOL FOR TARGETED RESPIRATORY ILLNESS EMERGENCY DEPARTMENT

All incoming patients to the ED who potentially will require admission to an ICU will undergo the following steps in the assessment process:

STEP 1

1. Does the patient meet any one of the inclusion criteria below if so, the patient must also have 1 of the criteria A or B:
    A. Requirement for invasive ventilatory support:
      a. Refractory Hypoxemia (Sp02 < 90% on non-rebreather mask/FIO2 > 0.85)
      b. Respiratory Acidosis with pH < 7.2
      c. Clinical evidence of impending respiratory failure
      d. Inability to protect or maintain airway
    B. Hypotension:
      a. Hypotension (SBP < 90 or relative hypotension) with clinical evidence of shock (altered
      level of consciousness, decreased urine output, or other end organ failure) refractory to
      volume resuscitation requiring vasopressor/inotropic support that cannot be managed
      on a telemetry floor.
    C. Emergency Surgery:
      a. Need operation that will require short ventilation time in ICU.
      If the patient does not meet any inclusion criteria, reassess the patient as appropriate for
      deterioration of clinical status.
      If the patient meets inclusion criteria proceed to step 2. If patient does not meet inclusion criteria,
      designate the patient Green Priority and reassess as appropriate until the patient is transferred to noncritical
      care area.

STEP 2
1. Does the patient meet any one of the exclusion criteria below:
   A. Cardiac arrest: unwitnessed arrest, recurrent arrest, arrest unresponsive to electrical therapy
  (defibrillation, cardioversion or pacing), trauma-related arrest
   B. Traumatic injury: Severe traumatic brain injury, hemodynamically unstable traumatic injuries
  requiring more than 10 units of blood transfusion, or more than one pressor, ARDS requiring
  high peep >15 or HFOV
   C. Metastatic malignancy with poor prognosis
   D. Severe burn—body: body surface area > 40%, severe inhalation injury
   E. End-stage organ failure:
     a. Cardiac: NY Heart Association class III or IV
     b. Pulmonary: severe chronic lung disease with FEV 1* < 25%, baseline Pa02 < 55 mmHg, or
     secondary pulmonary hypertension
     c. Hepatic: MELD** score > 20
     d. Neurologic: severe, irreversible neurologic event/condition with high expected mortality

*Forced Expiratory Volume in 1 second, a measure of lung function
**Model of End-stage liver disease

If one or more exclusion criterion is present, designate the patient Blue Priority and transfer the

patient to a non critical care nursing unit.
If no exclusion criteria are present proceed to step 3.

STEP 3

1.   Using the initial assessment tool below, prioritize patients for admission to the ICU:

Critical Care Triage Tool (Initial Assessment)		
Triage Code	**Criteria**	**Priority/Action**
Black	Exclusion Criteria or SOFA > 11*	Medical Mgmt +/- Palliate & d/c
Red	SOFA ≤ 7 or Single Organ Failure	Highest
Yellow	SOFA 8 – 11	Intermediate
Green	No significant organ failure	Defer or d/c, reassess as needed

- If exclusion criteria of SOFA>11 occurs at any time during the ED stay, change triage code to   Blue Priority and palliate.
- d/c = discharge

Variables	**0**	**1**	**2**	**3**	**4**
PaO2/FIO2 mmHg	≥400	≤400	≤300	≤200	≤100
Platelets, x10$_3$/μL (x 10$_6$/L)	>150 (>150)	<150 (≤150)	<100 (≤100)	<50 (≤50)	<20 (≤20)
Bilirubin, mg/dL (μmol/L)	<1.2 (<20)	1.2-1.9 (20 - 32)	2.0-5.9 (33 - 100)	6.0-11.9 (101 – 203	>12 (>203)
Hypotension	None	MABP <70 mmHg	Dop ≤5	Dop > 5, Epi ≤0.1, Norepi ≤0.1	Dop > 15, Epi >0.1, Norepi >0.1
Glasgow Coma Score 15	15	13 - 14	10 – 12	6 – 9	<6
Creatinine, mg/dL (umol/L)	<1.2 (<106)	1.2-1.9 (106 – 168)	2.0-3.4 (169 – 300)	3.5-4.9 (301 – 433)	>5 (>434)

Sequential Organ Failure Assessment (SOFA) Score/ Scale

Dopamine (Dop), epinephrine (Epi), norepinephrine (Norepi) doses in ug/kg/min
SI units in brackets

Adapted from: *Ferreira Fl, Bota DP, Bross A, Melot C, Vincent JL. Serial evaluation of the SOFA score to predict outcome in critically ill*
patients. JAMA 2001; 286(14): 1754-1758.

Explanation of variables:
PaO2/FIO2 indicates the level of oxygen in the patient's blood.
Platelets are a critical component of blood clotting.
Bilirubin is measured by a blood test and indicates liver function.
Hypotension indicates low blood pressure; scores of 2, 3, and 4 indicate that blood pressure must be maintained by

the use of powerful medications that require ICU monitoring, including dopamine, epinephrine, and norepinephrine.
The Glasgow coma score is a standardized measure that indicates neurologic function; low score indicates poorer function.
Creatinine is measured by a blood test and indicates kidney function.

Appendix IV

CRITICAL CARE TRIAGE PROTOCOL FOR TARGETED RESPIRATORY ILLNESS ICU PATIENTS

All ICU patients are assessed at the time the triage protocol is implemented and will undergo the following steps in the assessment process:

STEP 1—INITIAL ASSESSMENT

1. Determine if the ICU patient meets any one of the exclusion criteria below:
   A. Cardiac arrest: unwitnessed arrest, recurrent arrest, arrest unresponsive to electrical therapy
      (defibrillation, cardioversion or pacing), trauma-related arrest
   B. Traumatic injury: Severe traumatic brain injury, hemodynamically unstable traumatic injuries
   requiring more than 10 units of blood transfusion, or more than one pressor, ARDS requiring
   high peep >15 or HFOV
   C. Metastatic malignancy with poor prognosis
   D. Severe burn—body: body surface area > 40%, severe inhalation injury
   E. End-stage organ failure:
      a. Cardiac: NY Heart Association class III or IV
      b. Pulmonary: severe chronic lung disease with FEV 1* < 25%, baseline Pa02 < 55 mmHg, or
      secondary pulmonary hypertension
      c. Hepatic: MELD** score > 20
      d. Neurologic: severe, irreversible neurologic event/condition with high expected mortality

*Forced Expiratory Volume in 1 second, a measure of lung function
**Model of End-stage liver disease

If one or more exclusion criteria are present, designate the patient Blue Priority and transfer the patient to a non critical care nursing unit.

If no exclusion criteria are present proceed to step 2.

STEP 2

1. Using the initial assessment tool below, prioritize patients for admission to the ICU:

Critical Care Triage Tool (Initial Assessment)		
Triage Code	Criteria	Priority/Action
Black	Exclusion Criteria or SOFA > 11*	Medical Mgmt +/- Palliate & d/c
Red	SOFA ≤ 7 or Single Organ Failure	Highest
Yellow	SOFA 8 – 11	Intermediate
Green	No significant organ failure	Defer or d/c, reassess as needed

- If exclusion criteria of SOFA>11 occurs at any time during the ED stay, change triage code to Blue Priority and palliate.
- d/c = discharge

Sequential Organ Failure Assessment (SOFA) Score/ Scale

Variables	0	1	2	3	4
PaO2/FiO2 mmHg	≥400	≤400	≤300	≤200	≤100
Platelets, x10₃/μL (x10₆/L)	>150 (>150)	<150 (≤150)	<100 (≤100)	<50 (≤50)	<20 (≤20)
Bilirubin, mg/dL (μmol/L)	<1.2 (<20)	1.2-1.9 (20 - 32)	2.0-5.9 (33 - 100)	6.0-11.9 (101 – 203	>12 (>203)
Hypotension	None	MABP <70 mmHg	Dop ≤ 5	Dop > 5, Epi ≤0.1, Norepi ≤0.1	Dop > 15, Epi >0.1, Norepi >0.1
Glasgow Coma Score 15	15	13 - 14	10 – 12	6 – 9	<6
Creatinine, mg/dL (umol/L)	<1.2 (<106)	1.2-1.9 (106 – 168)	2.0-3.4 (169 – 300)	3.5-4.9 (301 – 433)	>5 (>434)

Dopamine (Dop), epinephrine (Epi), norepinephrine (Norepi) doses in ug/kg/min SI units in brackets

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Hypotension indicates low blood pressure; scores of 2, 3, and 4 indicate that blood pressure must be maintained by the use of powerful medications that require ICU monitoring, including dopamine, epinephrine, and norepinephrine. The Glasgow coma score is a standardized measure that indicates neurologic function; low score indicates poorer function. Creatinine is measured by a blood test and indicates kidney function.

CRITICAL CARE TRIAGE PROTOCOL FOR TARGETED RESPIRATORY ILLNESS
ICU PATIENTS
48 Hours and 120 Hours

Critical Care Triage Tool (48-Hour Assessment)		
Triage Code	Criteria	Priority/Action
Black	Exclusion Criteria or SOFA > 11 Or SOFA 8 – 11 no Δ	Palliate & d/c from CC
Red	SOFA < 11 and Decreasing	Highest
Yellow	SOFA <8 no Δ	Intermediate
Green	No longer ventilator dependant	d/c from CC

Critical Care Triage Tool (120 Hour Assessment)		
Triage Code	Criteria	Priority/Action
Black	Exclusion Criteria or SOFA > 11*	Medical Mgmt +/- Palliate & d/c
Red	SOFA ≤ 7 or Single Organ Failure	Highest
Yellow	SOFA 8 – 11	Intermediate
Green	No significant organ failure	Defer or d/c, reassess as needed

*If exclusion criteria of SOFA>11 occurs at any time from 48 – 120 hours, change triage code to Blue Priority and palliate.

CC = critical care ☐ = change d/c = discharge

Sequential Organ Failure Assessment (SOFA) Score/ Scale

Variables	0	1	2	3	4
PaO2/FiO2 mmHg	≥400	≤400	≤300	≤200	≤100
Platelets, x10₃/μL (x 10₆/L)	>150 (>150)	<150 (≤150)	<100 (≤100)	<50 (≤50)	<20 (≤20)
Bilirubin, mg/dL (μmol/L)	<1.2 (<20)	1.2-1.9 (20 - 32)	2.0-5.9 (33 - 100)	6.0-11.9 (101 – 203	>12 (>203)
Hypotension	None	MABP <70 mmHg	Dop ≤ 5	Dop > 5, Epi ≤0.1, Norepi ≤0.1	Dop > 15, Epi >0.1, Norepi >0.1
Glasgow Coma Score 15	15	13 - 14	10 – 12	6 – 9	<6
Creatinine, mg/dL (umol/L)	<1.2 (<106)	1.2-1.9 (106 – 168)	2.0-3.4 (169 – 300)	3.5-4.9 (301 – 433)	>5 (>434)

Dopamine (Dop), epinephrine (Epi), norepinephrine (Norepi) doses in ug/kg/min
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