Combined Hospital Transfer Center Plan

Combined Hospital Transfer Center Work Group
Colorado Hospitals and Health Systems

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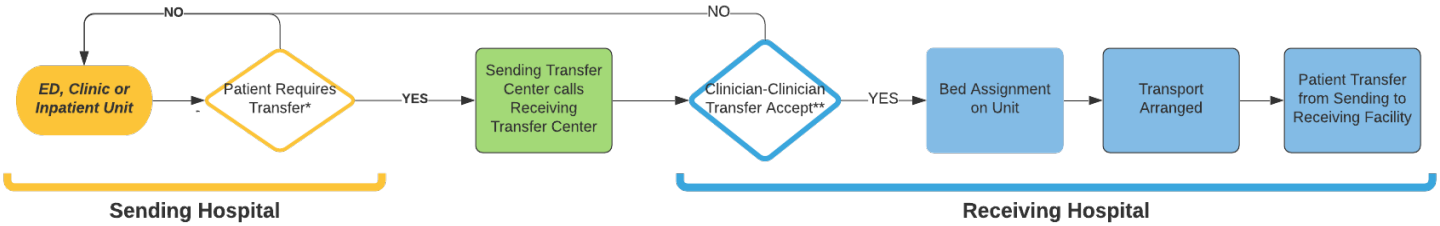
Background

During the course of clinical care, a patient's primary clinician may determine that the patient requires a different or higher level of care or is in need of services that may be unavailable at the facility at which the patient is located. Alternatively, a patient may desire or request transfer to another site for further clinical care for a variety of reasons. Figure 1 below shows the usual transfer process for inter-hospital transfers. All major health systems and hospitals in the state of Colorado routinely accept transfers from rural and independent facilities utilizing a "single contact" method through which transfers can be requested and arranged. Furthermore, each hospital and system have the capability of assuring load balance across a multi-hospital system with access to real-time bed capacity figures within the system.

Figure 1. Usual inter-hospital transfer process simplified. *,** Indicates clinical decisions



In times of usual volume, the existing structure and process for patient transfers is effective as Colorado's major health systems and hospitals manage significant transfer volume on a daily basis. However, Colorado acknowledges the possibility of future surges of inpatient and critically ill patients due to an emergency incident that may overwhelm a single hospital or group of hospitals within a region of the state. Establishing a Combined Hospital Transfer Center (CHTC) structure and/or process could facilitate optimal, equitable treatment of patients.

Scope and Structure

The CHTC would manage transfer of patients among hospitals and systems should the number of patients needing care exceed the capacity of the health care system. The CHTC is created as an ad hoc convening of hospital and health system transfer center leaders, the Colorado Hospital Association (CHA), Colorado Department of Public Health and Environment (CDPHE) Liaisons, Health Care Coalition (HCC) coordinators and Regional Emergency Trauma Advisory Committee Coordinators (RETAC), depending on the tier of activation and meeting representation need. CHTC activation levels are determined using a tiered system, or thresholds, that progress as the need occurs. CHTC Tier activities start with a set of CHTC objectives, outlining parameter or guidance to the CHTC process itself. Tier 0 is considered “normal state” where transfers are occurring through normal transfer procedures and patterns. Tier 1 utilizes dedicated, enhanced partnerships between rural hospitals and urban hospitals, or health systems, to facilitate and expedite medically appropriate patient transfers. Tier 2 starts when systems have a greater need for regional escalation to transfer patients out of their systems. A bi-direction flow will also occur in Tier 2, where higher acuity patients going to higher trauma level facilities will be exchanged with lower acuity patients being transferred to lower acuity or critical access facilities. Tier 3 develops when CHTC Leads have maxed not only system capacity, but their partnered facilities capacity as well. Tier 3 is when all bed availability in the state is considered a resource for all transfers. In Tiers 2 and 3, the structure developed for the CHTC is an ad hoc committee and functions as a supplemental resource to the existing interhospital transfer infrastructure, rather than a replacement, providing a collaborative process for the transfer of COVID-19 patients from one facility to another. The CHTC plan uses the State Healthcare

Coalition map, which is derived from the Colorado All Hazards Emergency Management regions, and is shown in Appendix D.

Activation Thresholds

Activation of the CHTC relies on meeting the pre-requisites, or thresholds, for capacity needed to move into the next level, as shown in Table 1, and relies on regional case counts relative to bed capacity within the regions hospitals and health systems. Bed designation refers to an inpatient or critical care bed that is staffed appropriately for the level of care and is equipped with sufficient personal protective equipment, medical equipment (e.g., mechanical ventilator, etc.) and medications to care for a patient.

Ongoing monitoring of regional level case counts will occur at each hospital and health system, including quarterly "check-in" meetings, in order to prepare adequately for the activation of the CHTC.

Table 1. Combined Hospital Transfer Center Tier System

CHTC Objectives	1. The objective of the Combined Hospital Transfer Center is to provide appropriate placement of patients that facilities cannot care for due to internal capacity or patient acuity. 2. Patients appropriate for transfer through the CHTC are those requiring an equal or higher level of care whom a facility cannot place within their hospital, hospital partners, or through normal transfer center operations. 3. The CHTC does not assist with "waitlisted" patients. 4. Escalation of CHTC into a specific tier should be based on objective triggers that necessitates higher level of resources and coordination from hospitals and health systems. 5. After a CHTC tier escalation has been determined by the CHTC leads and CHA, the group will remain in that Tier for a minimum of 48 hours before de-escalation. If within that 48-hours it is determined that further escalation is required, a meeting will be held to determine what objective triggers have been met to necessitate the escalation. 6. Actions are to be managed by each hospital and not the CHTC. 7. If issues arise with transfers, the escalation process is: 1-Partnered system lead, 2-CHTC Commander, 3-CHA.

Tier	Capacity Scenario	Actions	Pre-Requisites for Next Tier
Normal State	Transfers occurring through normal transfer procedures and patterns	1. Hospital transfer centers working under normal operations 2. CHTC Leads meet quarterly for ongoing communication and coordination 1. 3. No EMResource CHTC tab requirements	1. Hospital(s) have enacted internal surge measures 2. Affected hospital(s) or system transfer lead notifies CHTC Commander (if CHTC rotation still exists) and/or CHA, using activation process, providing information that supports CHTC activation 3. CHTC Leads and CHA conduct meeting to discuss affected hospital(s) situation and

			determine need for CHTC activation or if systems are able to level load the patient need 4. If CHTC activation is warranted, all stakeholders are notified of moving to Tier 1 activation 5. The trigger for activation to Tier 1 is at least one facility requiring regional assistance to move 20% or more of patients requiring transfer out of their facility after all normal operation procedures have been exhausted
Tier 1	Due to capacity stresses on at least 1 facility, 20% or more of patients require regional assistance through the CHTC to transfer patients to another facility.	**1. All Hospitals** a. Rural facilities and health systems are partnered b. Hospitals and health systems begin implementing internal surge measures c. Monthly all-stakeholder meeting cadence is created d. CHTC event is activated and updated daily **2. CHTC Leads and CHA** a. Develop CHTC Commander rotation and conduct weekly meetings with CHTC Leads b. Contact partnered facilities, making connection and determine any needs c. Support partnered facilities as well as manage patient volume within your health system **3. Additional partners** a. CDPHE activates the CHTC event in EMResource b. Attend monthly meetings for situation awareness	1. CHTC Leads have exhausted normal operational capacity to move patients within their own system and partner facilities due to capacity 2. At least 2-3 systems have a 20% or greater need for regional escalation to transfer appropriate patients out of their hospital system 3. Hospitals are managing surgery and elective volumes to slow admissions 4. Impacted hospital/health system contacts the CHTC Commander or CHA with request for moving into Tier 2 activation
Tier 2	2-3 systems have a 20% or greater need for regional escalation to	**All tier 1 activities plus**: 1. **All Hospitals** a. Stay in constant contact with	1. CHTC leads have reached max capacity not only within their system but within their partnered facilities

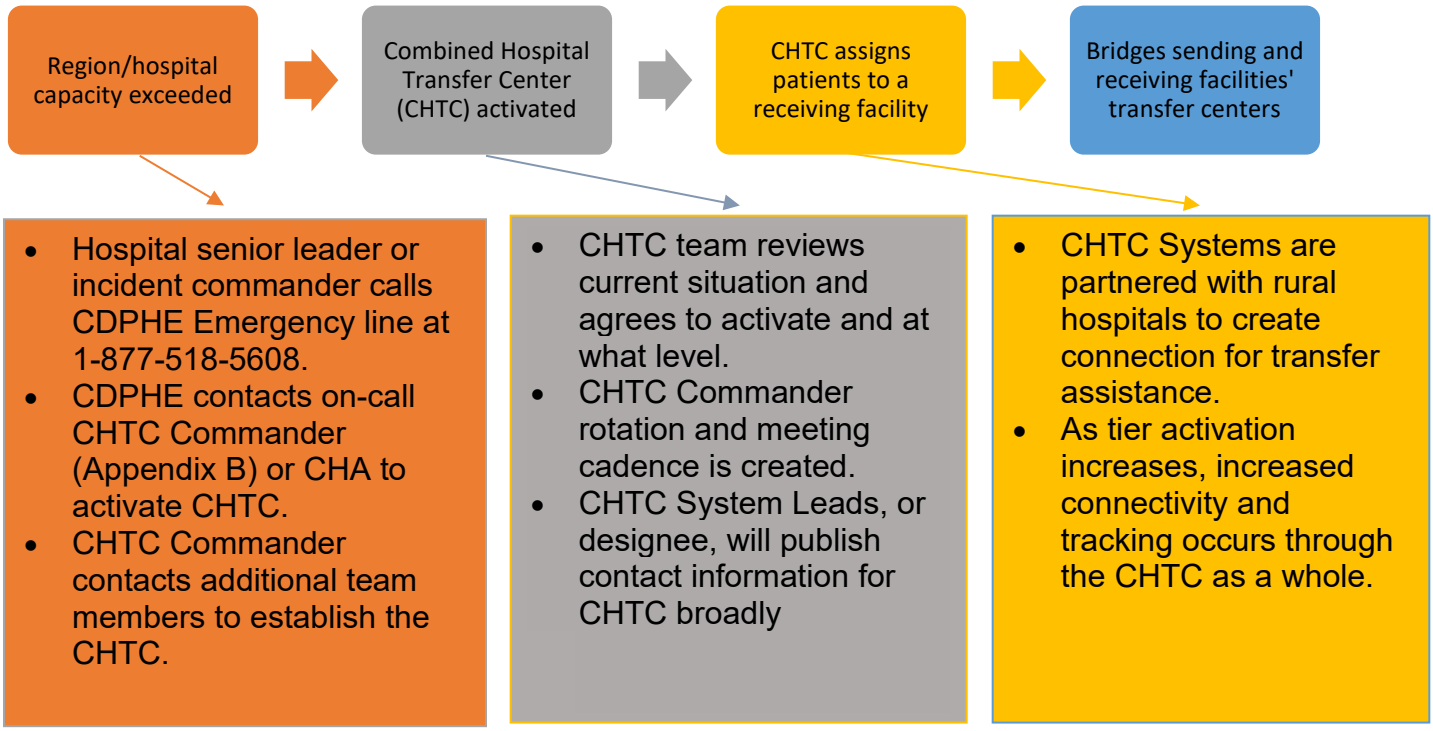
	transfer appropriate patients out of their hospital system	partnered system transfer center b. Implement escalated internal surge measures c. Be prepared to receive patients in a bi-directional transfer from partnered system d. Anticipate longer transfer times e. Ensure EMResource is updated twice daily f. Increase all stakeholder meetings to an agreed upon cadence **2. CHTC Leads and CHA** a. Remain in constant connection with partnered hospitals b. CHTC Leads meet on an agreed upon meeting cadence, to determine placement of patients requiring transfer out of impacted facilities based on patients information listed in the patient transfer information sheet c. Contact CHTC system transfer leads for additional transfer opportunity if needed d. CHTC or CHA escalates identified needs/relied needed by the State **3. Additional partners** a. Additional state requirements or regulatory relief enacted (authorization of the CHTC, transportation needs, etc.) **b.** All stakeholder meeting cadence increased to every other week or an agreed upon cadence	2. The need for movement into Tier 3 is communicated during CHTC Lead meeting 3. All stakeholders notified of escalation decision 4. Scale surgery and elective measures to capacity needs 5. Trigger for escalation is 4 or > system have a 50% or greater need for regional escalation to transfer appropriate patients out of their hospital system OR greater than 4 hospital systems remain at 100% capacity with no ability to further absorb patients into their hospital
Tier 3	4 or > hospital/system capacity exceeded across the state	**All Tier 2 Activities plus:** **1. All Hospitals** **a.** Enact all internal measures for	All hospitals are limiting surgical procedures destined for inpatient admission to those deemed medically necessary by clinicians

		patient surge **b.** Increase all-stakeholder meeting to an agreed upon cadence 2. **CHTC Leads and CHA** a. CHTC Leads increase meetings, to an agreed upon cadence, to place patients requiring transfer and provide situation awareness for all stakeholders involved b. CHTC Leads determine placement of patients who meet CHTC criteria for transfer with no identified options for bed placement 3. **Additional partners** a. Activation of state and federal surge resources to assist hospitals with patient surge (National Guard, Alternate Care Sites or Buildings of Opportunity, Federal Strike Teams, DMAT) b. All stakeholder meeting cadence increased to weekly or an agreed upon cadence	

Process for Activation

Activation of the CHTC is accomplished using either a call to the CDPHE Emergency Reporting Line at 1-877-518-5608 or by calling CHA representatives. A senior leader (C-suite or Administrator-on-Call) or incident commander of any hospital or health system may request activation of the CHTC based on the thresholds listed in Table 1. Additionally, senior leaders of local public health agencies may also request activation of the CHTC on behalf of non-hospital facilities, including prisons, long-term care facilities, skilled nursing facilities or long-term acute care facilities. Figure 2 shows the simplified process for how the combined hospital transfer works.

Figure 2. Combined Hospital Transfer Center process



If contacted, either the CDPHE representative at the Emergency Reporting Line, or the CHA representative, will identify the appropriate CHTC Lead that is "CHTC Commander on-call" for that week and notify the individual(s) of the situation. The CHTC Commander will use communication methods available (e.g., email, phone tree, text, EMResource) to contact the designated CHTC Lead parties using the contact lists within this plan (Appendix A). CHTC Commander assignment will rotate among the participating CHTC Lead hospitals and health systems on a one-week rotation (CHTC Commander Rotation, Appendix B). The CHTC Commander will organize CHTC representatives from the CHTC Leads list (Appendix A) to meet virtually within two hours of activation to determine the level of tier to be activated, the participants needed, and a cadence for meetings. The activation meeting will have a dedicated script (Appendix F). All relevant materials, including scripts, calendars, etc., will be provided to all parties and stored within the CHTC google drive by a CHA representative.

Tier 2 and 3 Transfer Protocols

The triggers for the transfer of patient are a lack of capacity (i.e., number of patients exceeds the number of capable beds) or a lack of appropriate capability (i.e., patient requires a higher or lower level of care). Transferring providers are responsible for informing patients and their families of the need for transfer and the need to refer the patient to the CHTC for assignment to a receiving hospital, which will at times be outside of normal transfer facilities and distances.

Transfer Decisions

The decision tree for assigning transfer to a facility is as follows:

1. Transfer is required due to lack of capacity or lack of a clinically indicated type/level of service
2. Level of care of needed
    a. ICU

    b. PCU
    c. Tele
    d. MS
3. Any additional specialty care needs/services or diagnosis
    a. ECMO
    b. Surgical services
    c. Obstetrics
    d. Stroke neurology, Neurosurgery, or Neuroradiology
    e. Advanced pulmonary care
    f. Pediatrics/Pediatric ICU/Neonatal ICU
4. Which facilities can meet these needs
5. Is a bed available
6. Does the patient have a preference for which facility he/she is transferred
7. Transportation need (ALS or BLS)
8. Priority of the patient needs (can the patient wait for 12hrs, etc.)

Transfers during Tier 1 and Tier 2 activations is a collaborative effort between sending facility and partnered system facility, with the CHTC acting as a bridge. Tier 3 transfers will continue, if possible, as in previous tiers but will also include a rotation table and patient transfer information table as seen in Appendix H. When a CHTC Lead system cannot transfer a patient due to capacity, the patient's information is placed in the patient transfer information table for transfer assignment during the next CHTC Lead meeting. If CHTC Leads cannot find an available bed during the meeting, the Commander Weighted Rotation table will then be incorporated into patient transfer decisions. The Commander Weighted Rotation table creates a load leveling system among CHTC Leads that is derived from bed capacity and rotates through CHTC Lead systems for distribution of patients. Finally, in the event that hospitals require assistance in transferring patients out of an acute care hospital and into a post-acute care setting, a round-robin assignment inclusive of the state's available alternate care sites would be included in the rotation.

Data Requirements

Upon activation of the CHTC and depending on what tier the CHTC is activated to, hospitals will be asked to report data elements into the electronic system of choice. The data elements and frequency of reporting will start off as outlined below but can change as additional information and data requests occur during response. These data changes will be discussed, and decided, during CHTC Lead meetings and communicated to all stakeholders before activated at the new frequency or new data elements.

Tier One Activation:

- All hospitals will report into a CHTC tab within EMResource daily the following data elements:

Facility Trans POC Name	Facility Trans POC Phone	ICU Beds - COVID Capability	ICU Beds - Non COVID Capability	PICU Beds - COVID Capability	PICU Beds - Non COVID Capability	Med/Surg Beds - COVID Capability	Med/Surg Beds - Non COVID Capability	Ped Med/Surgical - COVID Capability	Ped Med/Surgical - Non COVID Capability	PCU (Prog) Beds - COVID Capability	PCU (Prog) Beds - Non COVID Capability	Swing Beds Available	Swing Beds Capability	Waitlisted to Trans- Non COVID Capability	Waitlisted to Transfer - COVID Capability

A mixture of variable information will be requested such as:

- Point of Contact name and designated phone number
- Capability status for accepting patients
    - "Can Accept" – Open to all transfer requests from any source
    - "Tight" – Limited availability. Evaluated on patient-by-patient basis. May be some delays in bed assignments.

    - "Partner Only" – Transfer request acceptance is limited to only those coming from facilities identified as internal t the health system or partner rural facilities by CHA.
    - "Cannot Accept" – Not accepting transfer from ANY source. Health systems would need to reach out toother health systems for assistance with rural partner hospitals.
- Swing beds available
- Patients waitlisted to transfer

Tier Two Activation

- Hospital reporting into the CHTC tab within EMResource will increase to twice daily.

Tier Three Activation

- Hospitals may be asked to report into the CHTC tab upon request, including twice daily, synchronizing with additional meeting cadence created by the CHTC Leads.
- CHTC Leads will provide patient specific information into the Patient Transfer Information Table (appendix H) prior to the CHTC Leads meetings to assist with patient transfer decisions.
- CHTC Commander will use the Commander Weighted System Rotation table during CHTC Lead meetings where patient transfers must be assigned.
- CHTC Leads will provide weekly transfer totals into the Patient Transfer Information Table google spreadsheet located within the CHTC google drive. Data elements requested are patient counts designated for any patient that is worked through the Transfer Center to move Geographic Location, Accepted, Cancellations, Declines, Internal or External to the hospital system. Exclude: Consults and Internal Bed Placements (i.e., Walk-in ED to same hospital, PACU to same Hospital).
    - Patient numbers requested:
        - Prior week overall transfers
        - Prior week total out-of-state transfers
        - Prior week total partnered facility transfers
        - Prior week post-acute holds by weekday

Appendix F. Activation and Regular Meeting Scripts

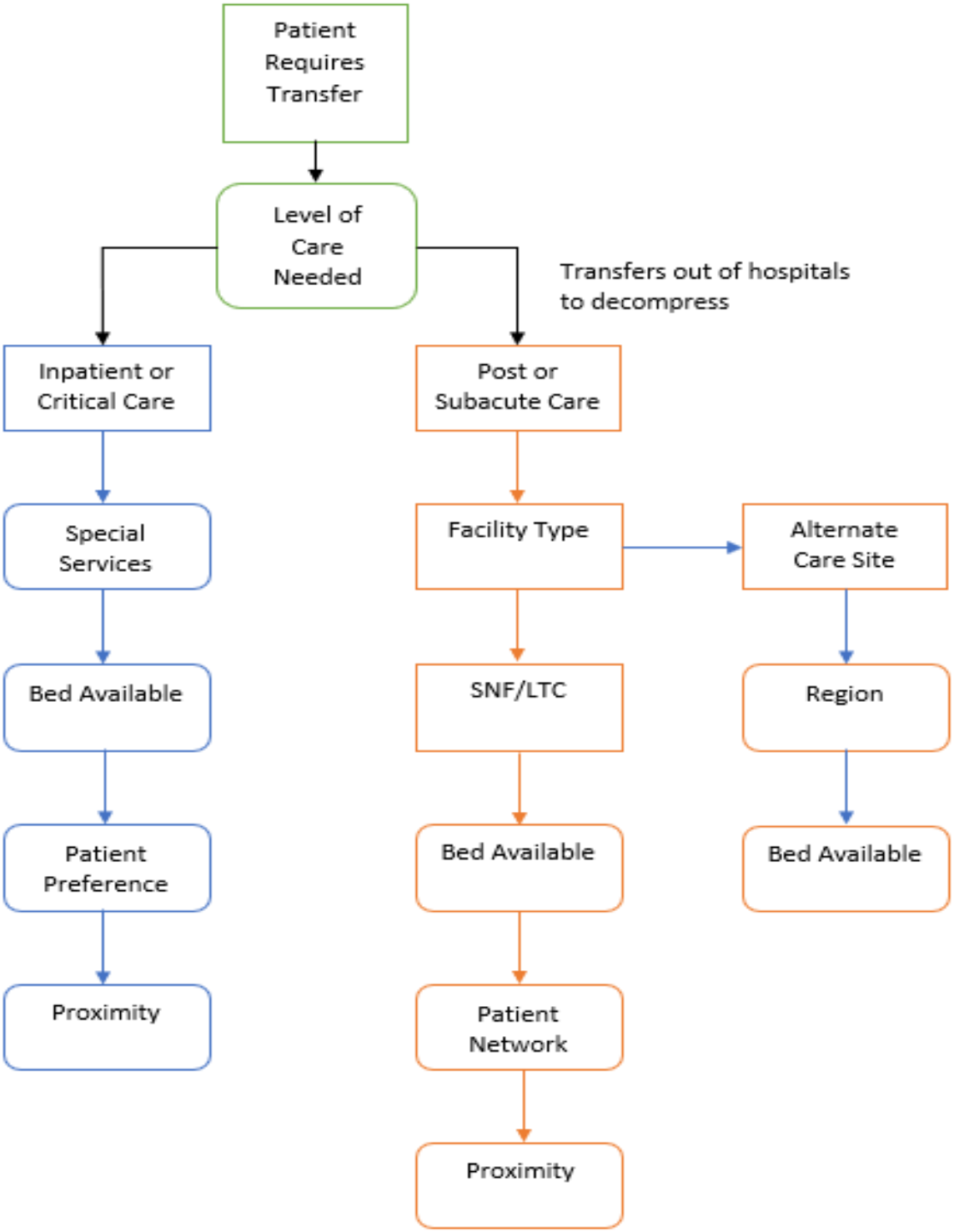
The CHTC activation meeting functions similarly to the initial incident command meeting. The goals of the activation meeting include:

1. Script and objectives that operationalize the CHTC
    a. Bring meeting to order and validate attendees
    b. Commander provides situation awareness
        i. Any additional members provide further situation awareness
        ii. Resource needs at this time
    c. Conclusive decision to activate the CHTC
    d. Develop the CHTC Commander rotation
    e. Develop meeting cadence for CHTC Leads and All-Stakeholders
2. Leads provide any changes to their system membership in the CHTC
3. Develop action items and confirm next meeting

Regular Meeting Script

1. CHTC Commander brings meeting to order
    a. Validate attendees (call attendance to assist with speaking over one another)
2. Status of Current situation
    a. Contact updates
    b. Patient Transfer List
    c. Situation awareness by Commander and any additional members
    d. Resource Needs
    e. Workgroup report outs
    f. Roundtable report out
3. Deactivation or de-escalation of Tiers (if applicable)
4. Action steps and next meeting

Appendix G. Patient Transfer Flowchart



Appendix H. Transfer Information and System Rotation Tracking

The CHTC will utilize spreadsheet templates in order to establish standard for patient information and to track transfers throughout the incident, especially during Tier 3 activation. The patient transfer information table is pictured below. The CHTC will also use spreadsheet templates with pre-existing, and agreed upon, algorithms to establish a system rotation for patients during a Tier 3 activation. The agreed upon algorithm sets the order in which systems will receive transfers based on an equation related to a designation by bed capacity. The designations are small, medium, and large which are determined by a percentage of total system beds divided by the total beds of all systems combined. The CHTC Commander will use this spreadsheet to distribute patients and is pictured below.

Patient Transfer Information Table

Patient Initials	Sex	Age	Home City	Level of Care	COVID	Diagnosis	Sending Facility (No acronyms)	Current Location	Proposed Receiving Facility	Final Transfer Desitination	Specialty Services Needed	Additional Comments	Point of Contact	Phone Number	Transfer Complete

Commander Weighted System Rotation

Weighted Rotation

		Name	DX	LOC	riginating locatio	Proposed locatior	Concerns	Final destination
1	UCH							
2	Centura							
3	HCA							
4	SCL							
5	UCH							
6	Centura							
7	HCA							
8	SCL							
9	UCH							
10	Centura							
11	DH							
12	Parkview							
13	Banner							
14	Boulder							
15	UCH							
16	Centura							
17	SCL							
18	HCA							
19	UCH							
20	Centura							