Oklahoma Hospital Surge Planning Toolkit for COVID-19

April 30, 2020

Table of Contents

This document may be revised and updated as plans and information related to the pandemic evolve. Refer to www.okoha.com for updates.

OVERVIEW

This document has been developed to assist Oklahoma hospitals and clinicians during the 2020 COVID-19 pandemic. As directed by *Gov. Kevin Stitt*, the Oklahoma Hospital Association was tasked with the development of a hospital surge plan with support of the governor's COVID-19 Solutions Task Force. The assumptions in this document are based on a model created by the Institute of Health Metrics and Evaluation (IHME) at the University of Washington.

The Oklahoma statewide plan for a hospital surge of COVID-19 patients is developed using a regional approach to maximize the full potential of hospital resources. The plan utilizes the existing eight homeland preparedness/trauma regions throughout the state to maximize existing working relationships between emergency response and hospitals as well as organize resources by the Regional Medical Response System (RMRS) for state and federal allocation of personal protective equipment and other supplies.

The planning process in this plan is organized by a tiered process. Tier 1 is a timeframe when hospital operations are planning for an imminent surge of COVID-19 patient. Tier 2 occurs when the hospital is seeing a surge of patients and has not moved to a critical state but is preparing for staffing beyond 100% capacity. Tier 3 is when a hospital is in a surge situation and working beyond 100% capacity (see definitions on next page). When hospitals begin to reach surge capacity of 140%, state government will initiate the use of alternative care sites. Tier 4 is when the hospital surge has decreased and is normalizing to pre-COVID-19 status.

It is further organized in pillars that include: operations, logistics, clinical care and resources. There are resources for each tier in these pillars.

Ideally, this document would have been developed through a deliberative process involving many stakeholders and reviews. The need for established guidance at this critical time necessitated the expedited development of a framework for Oklahoma hospitals. However, many hospital CEOs were consulted regarding assumptions and surveys that are embedded within this model.

Many hospitals have a well-developed surge plan and crisis standards process. This document is not intended to prescribe surge and crisis planning nor take the place of individual plans. It is meant to help hospitals consider interventions and provide resources for quick reference.

Key Definitions

Conventional capacity: The spaces, staff, and supplies used are consistent with daily practices within the institution. These practices are typically adequate for a major mass casualty incident within the immediate area of the facility, even one that triggers activation of the facility emergency operations plan.

Contingency capacity: The spaces, staff, and supplies used are not consistent with daily practices, but provide care to a standard that is functionally equivalent to usual patient care practices. These practices may be used temporarily during a major mass casualty incident or on a more sustained basis during a disaster that puts strain on the system or region (when the demands of the incident exceed community resources).

Crisis capacity: Adaptive spaces, staff, and supplies are not consistent with usual standards of care, but provide sufficiency of care in the setting of a catastrophic disaster (i.e. provide the best possible care to patients given the circumstances and resources available). Crisis capacity activation constitutes a significant adjustment to standards of care and typically occurs with a national or global event such as the COVID-19 response.

EMResource®: A web-based information and resource management tool that has been adapted to collect real-time data on hospital capacity and capability, and includes ventilator, PPE and other resources for Oklahoma's COVID-19 response.

MERC: During a response, the regional MERC (Medical Emergency Response Center), operating under the direction of the Regional Medical Response System, is designed to operate as a multi-agency coordination center that represents the greater health care community. Their role includes promoting and facilitating the sharing of incident and response information and resources between health care organizations, and coordinating support through an established and operational interface between health care organizations and the relevant jurisdictional agency(ies).

TReC: Trauma Transfer and Referral Center. Initially, TReC was established as a communication center for ambulance services transporting pre-hospital patients or transferring patients inter-facility whereby TReC must be contacted for transfer within metropolitan areas. For the COVID-19 response, TReC will become the center for requested transfers.

Surge: Ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. In the Oklahoma plan, the definition of surge is 40% over 100% capacity of normal.

Level of Surge Descriptions

Tier 1: The surge of patients is such that the hospital mobilizes its existing on-site human and materiel resources. The hospital begins strategies to plan for additional patients and conserves resources.

Tier 2: The surge of patients is such that the hospital needs to consider the deployment of additional human and materiel resources without changing the traditional standard of care, to prepare for 100% capacity. The trigger for this consideration is a 60% occupancy of normally staffed beds, increasing cases in the community and continued admissions. Incident Command may be activated and normal operations may be affected, e.g., cancellation of elective admissions and procedures, and conservation of resources.

Tier 3: The surge of patients is such that the traditional standard of care may be affected due to limited resources at the hospital and the inability of the hospital to transfer patients to other hospitals. The hospital conserves resources and may use the Crisis Standards of Care to assist in making conservation decisions. Normal operations may be significantly affected. The use of alternate care sites may be considered.

Tier 4: The hospital surge has decreased and is normalizing to pre-COVID-19 status.

Duty to Plan

Hospitals must develop plans for moving from Tier 1 to Tier 3. During a disaster or declared emergency, the goal is to remain in Tier 1 status to the extent possible and avoid moving to Tier 3. Strategies for remaining in the lower tiers may include:

- Canceling elective procedures and surgeries to increase capacity.
- Early discharge or transfer of appropriate patients to home or less acute levels of care.
- Transferring less acute patients from medical surgical units to alternate care sites, with the assistance of case managers and discharge planners.
- Transferring post-acute and behavioral health patients from acute settings into other appropriate settings.
- Expanding critical care capacity into areas such as post-anesthesia care units, surgical suites, outpatient care units.
- Expanding patient care areas to include hallways and private rooms.
- Expediting admissions to move patients from the emergency department to patient care units.
- EMTALA compliant screening of individuals seeking care, in coordination with EMS or other medical direction, to determine the most appropriate setting for care including an established alternate care site for less acute patients.

Planning Assumptions

Planning assumptions specific for the COVID-19 pandemic include the following:

- Adjusted staffing ratios and roles will be needed to extend and maximize care.
- Staff availability will be reduced due to COVID-19 exposure and illness, quarantine, exhaustion and personal decisions to not report for duty.
- There could be insufficient beds for all patients needing inpatient and especially critical care.
- There could be insufficient personal protective equipment for health care workers.
- The majority of infected patients can be treated at less acute levels of care or at home.
- The number of patients requiring hospital care could exceed the current capacity of Oklahoma hospitals.

Oklahoma COVID-19 Plan for Patient Care Settings

Overview: Planning and Preparing for Surge in Hospitals

Under the direction of the governor's COVID-19 Task Force and in partnership with the Oklahoma Hospital Association, Oklahoma State Department of Health, and the Oklahoma National Guard, a surge plan for the state of Oklahoma was created that includes the current health care system and alternate care sites. Planning includes surge over 40% capacity, the evaluation of current resources, and adaptation of the current regional infrastructure to address COVID-19.

Oklahoma Regional Infrastructure

There are three components of current regional infrastructure that have been adapted for the COVID-19 response: eight geographic preparedness regions, EMResource, and TReC (Trauma Transfer and Referral Center).

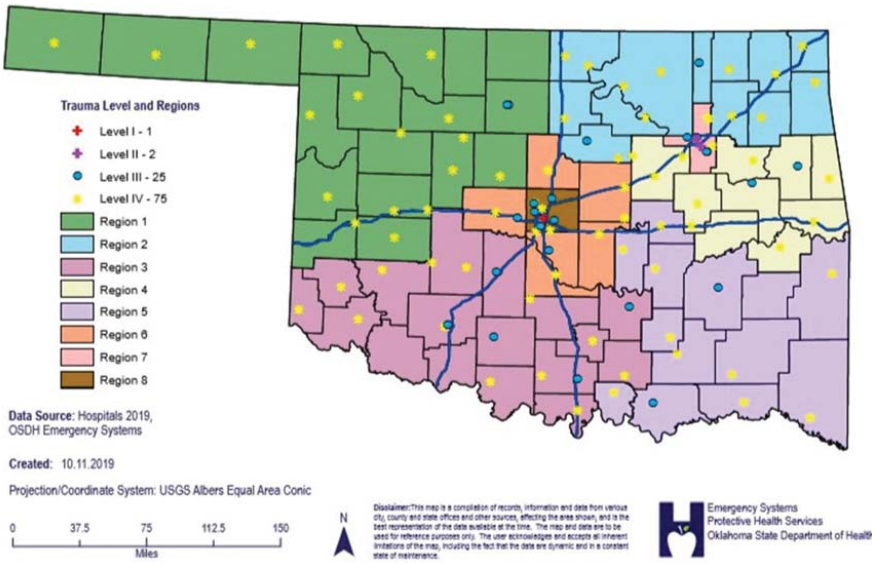
Oklahoma's Eight Geographic Preparedness Regions

Oklahoma is divided into eight geographic regions utilized by the Oklahoma Office of Homeland Security and the Oklahoma State Department of Health for the purpose of planning, protecting, providing funding and responding to an incident. Hospital capacity and capability was evaluated to determine resources available to care for the COVID-19 patient at the closest, most appropriate hospital with the resources available to care for the patient. Region 1 is NW Oklahoma, Region 2 is NE, Region 3 is SE, Region 4 is East-Central, Region 5 is SE, Region 6 surrounds Oklahoma County, Region 7 is Tulsa County, and Region 8 is Oklahoma County (see maps, next page). The Oklahoma Hospital Association conducted an assessment of current ventilator resources in each region and compiled the information contained in the surge plan.

Current Infrastructure: 8 Preparedness Regions

Trauma Regions and Hospitals by Trauma Level

Oklahoma 2019



In the following regional information:

- Hospital resource data was obtained through an OHA survey.
- Total vents: Number of full feature ventilators (including BiPap and anesthesia machines) immediately available for use.

REGION 1 NORTHWEST

Region size: 21,232 sq miles
Total population: 238,148 (est 2019)
Population per sq miles: 11.2
EMS bases (ground/air): 40/8
Hospitals (acute/other): 21/2

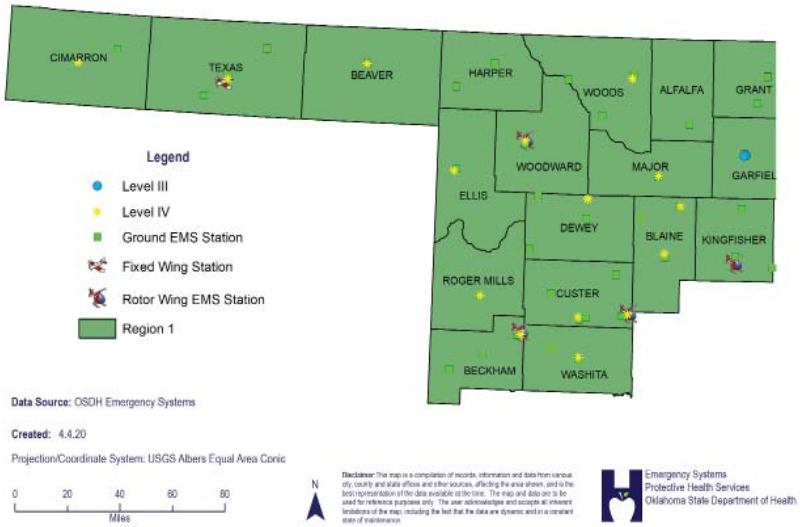
Hospital	Total Vents
St. Mary's Regional Med Cntr	40
Integris Bass Baptist Health Cntr	37
Great Plains Regional Med Cntr	13
Weatherford Regional Hospital	5
AllianceHealth Clinton	4
Fairview Regional Med Cntr	3
Share Medical Center	3
TOTAL	**105**

REGION 2 NORTHEAST

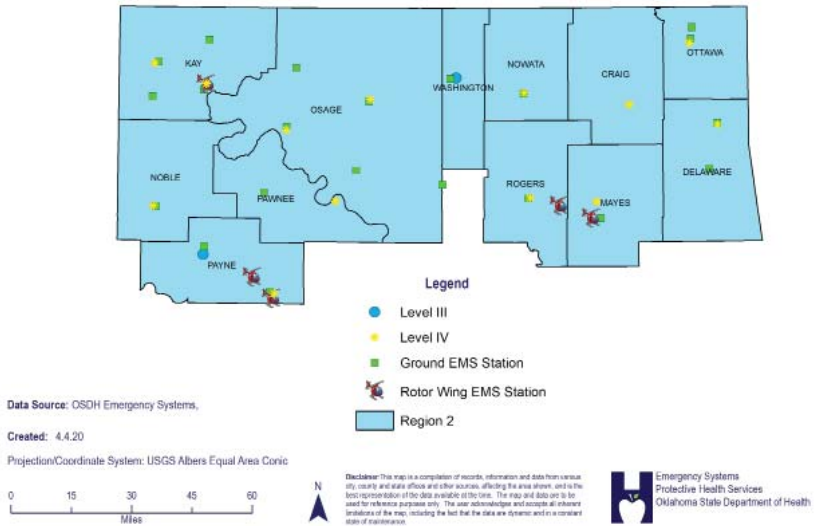
Region size: 9,433 sq miles
Total population: 483,232 (est 2019)
Population per sq. miles: 51.23
EMS bases (ground/air): 24/9
Hospitals (acute/other): 13/1

Hospital	Total Vents
Stillwater Medical Center	50
Ascension St. John J. Phillips	24
Hillcrest Hospital Claremore	18
AllianceHealth Ponca City	16
Hillcrest Hospital Cushing	12
Integris Grove Hospital	10
Integris Miami Hospital	10
Claremore Indian Hospital	8
Hillcrest Hospital Pryor	5
Saint Francis Hospital Vinita	4
TOTAL	**157**

Region 1 Northwest: EMS and Hospital Locations



Region 2 Northeast: EMS and Hospital Locations

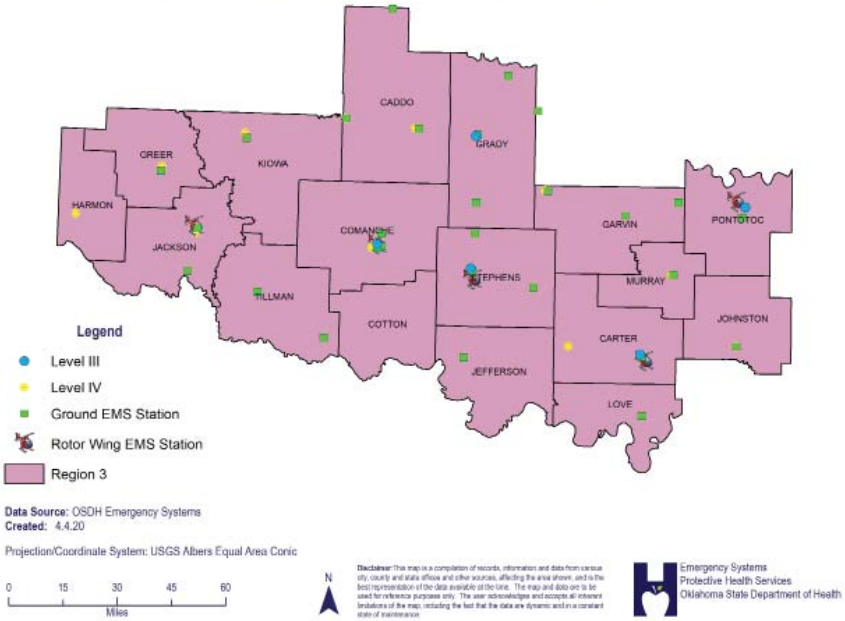


REGION 3 SOUTHWEST

Region size: 13,494 sq miles
Total population: 458,526 (est 2019)
Population per sq. miles: 34.0
EMS bases (ground/air): 31/8
Hospitals (acute/other): 20/4

Hospital	Total Vents
Comanche County Memorial	58
Mercy Hospital Ardmore	34
Chickasaw Nation Medical Cntr	18
Duncan Regional Hospital	17
Jackson County Memorial Hosp	12
Grady Memorial Hospital	9
Lindsay Municipal Hospital	5
Southwestern Medical Center	5
Mercy Hospital Tishomingo	1
TOTAL	**159**

Region 3 Southwest: EMS and Hospital Locations

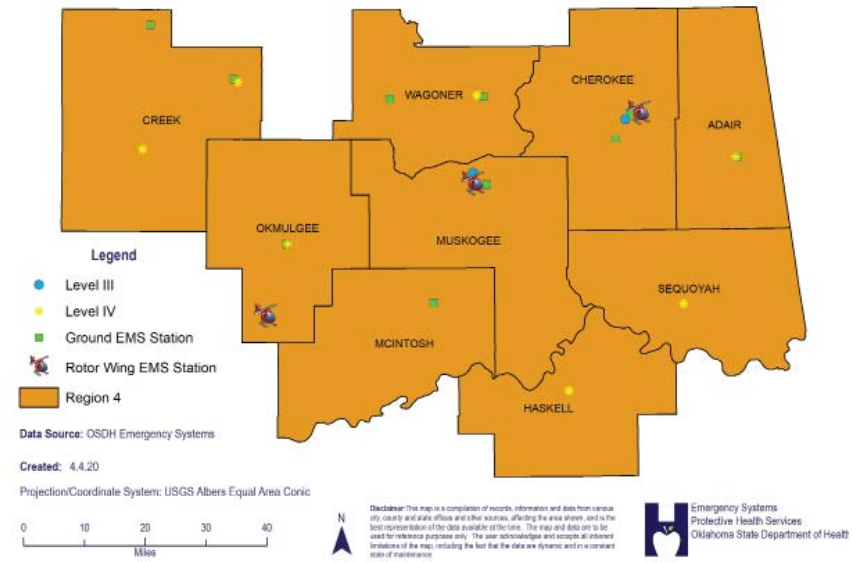


REGION 4 EAST CENTRAL

Region size: 6,211 sq miles
Total population: 403,916 (est 2019)
Population per sq miles: 65.04
EMS bases (ground/air): 10/3
Hospitals (acute/other): 9/3

Hospital	Total Vents
Saint Francis Hospital Muskogee	51
Northeastern Health System	24
Cornerstone Specialty Muskogee	23
WW Hastings Indian Hospital	15
Bristow Medical Center	3
Northeastern Health Sequoyah	8
Wagoner Community Hospital	6
Hillcrest Hospital Henryetta	5
Ascension St. John Sapulpa	4
Memorial Hospital of Stilwell	3
TOTAL	**147**

Region 4 East Central: EMS and Hospital Locations

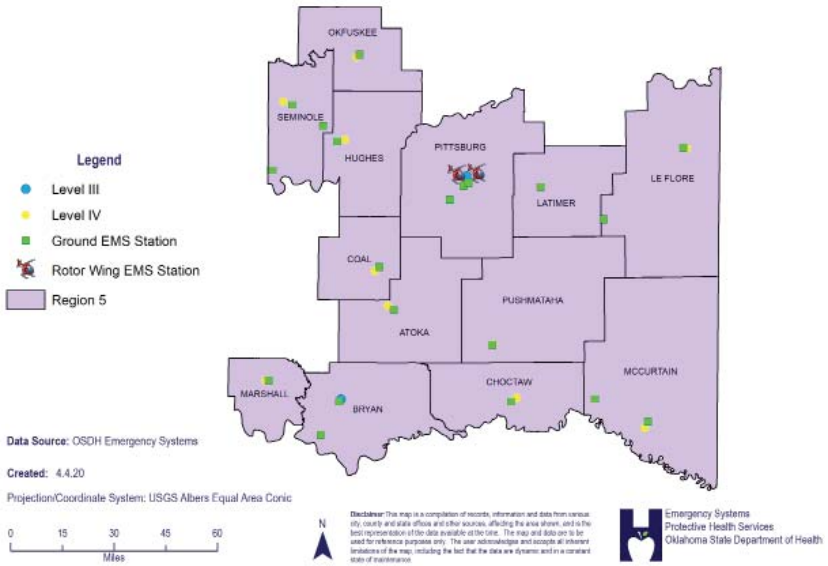


REGION 5 SOUTHEAST

Region size: 12,457 sq miles
Total population: 295,889 (est 2019)
Population per sq miles: 23.8
EMS bases (ground/air): 20/8
Hospitals (acute/other): 11/1

Hospital	Total Vents
AllianceHealth Durant	38
McAlester Regional Health Cntr	28
Creek Nation Community Hosp	20
Choctaw Nation Health Care Cntr	13
AllianceHealth Madill	8
Eastern Oklahoma Medical Cntr	6
AllianceHealth Seminole	5
Holdenville General Hospital	5
TOTAL	**123**

Region 5 Southeast: EMS and Hospital Locations



REGION 6 CENTRAL

Region size: 4,490 sq miles
Total population: 628,274 (est 2019)
Population per sq. miles: 139.9
EMS bases (ground/air): 12/0
Hospitals (acute/other): 7/3

Hospital	Total Vents
Norman Regional Health System	80
Integris Canadian Valley Hospital	25
SSM Health St. Anthony Shawnee	18
Stroud Regional Medical Center	11
Cornerstone Specialty Shawnee	11
TOTAL	**145**

REGION 7 TULSA

Region size: 570 sq miles
Total population: 651,552 (est 2019)
Population per sq miles: 1,142.6
EMS bases (ground/air): 7/1
Hospitals (acute/other): 10/11

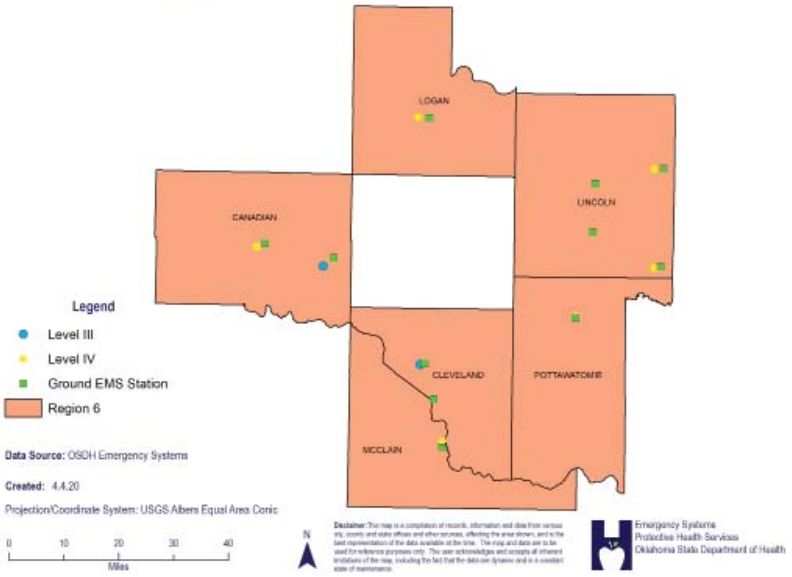
Hospital	Total Vents
Saint Francis Hospital	234
Hillcrest Medical Center	146
Ascension St. John Medical Center	88
OSU Medical Center	46
Hillcrest Hospital South	43
Bailey Medical Center	9
Oklahoma Surgical Hospital	28
PAM Specialty Hospital of Tulsa	19
Saint Francis South	25
Tulsa Spine & Specialty Hospital	14
Ascension St. John Broken Arrow	11
Southwestern Regional Medical Center	10
Ascension St. John Owasso	5
PAM Rehabilitation Tulsa	2
TOTAL	**700**

REGION 8 OKLAHOMA COUNTY

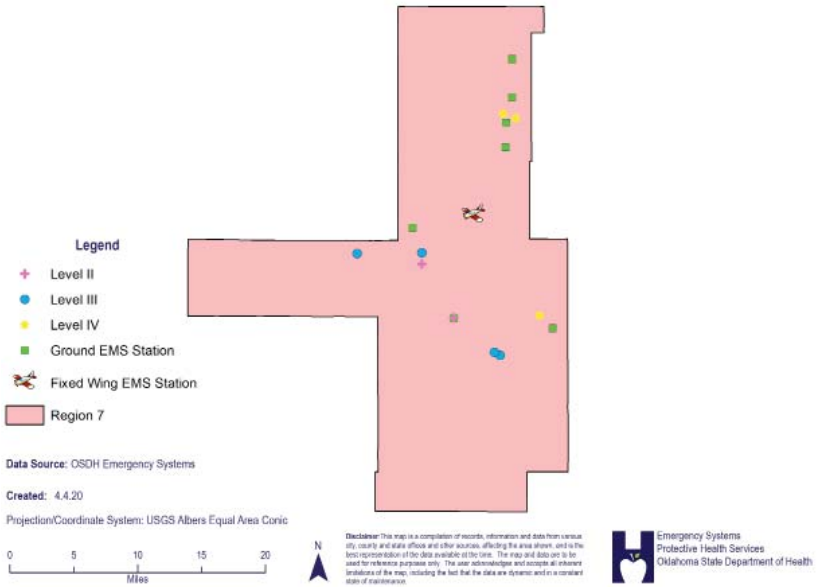
Region size: 709 sq miles
Total population: 797,434 (est 2019)
Population per sq. miles: 1,125.02
EMS bases (ground/air): 5/1
Hospitals (acute/other): 10/15

Hospital	Total Vents
Integris Baptist Medical Center	228
OU Medicine	183
Mercy Hospital Oklahoma City	128
Integris Southwest Medical Center	86
SSM Health St. Anthony Hospital	75
Integris Health Edmond	24
AllianceHealth Midwest	22
Summit Medical Center	13
OneCore	2
TOTAL	**761**

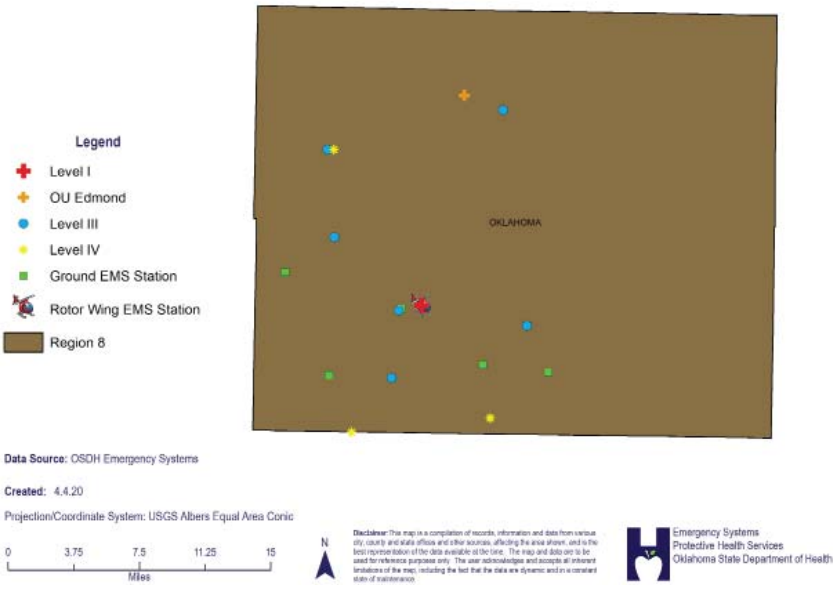
Region 6 Central: EMS and Hospital Locations



Region 7 Tulsa: EMS and Hospital Locations



Region 8 Oklahoma County: EMS and Hospital Locations



EMResource

In Oklahoma, EMResource has been used for 20 years to coordinate and communicate capacity and resources by hospitals and emergency medical services. EMResource is a web-based information and resource management tool that has been adapted to collect real-time data on hospital and EMS capacity and capability, including ventilator, PPE and other resources for Oklahoma's COVID-19 response. Daily queries and updating of current information provide the most accurate source of information for operational decision making. All Oklahoma acute care hospitals and EMS agencies have access to entering data into EMResource. This daily data reported to EMResource by hospitals is the basis for PPE/resource allocation.

TReC- Trauma Transfer and Referral Center

The Trauma Transfer and Referral Center (TReC) was established by statute OS §63-1-2530.8. – Rule: OS 310:641-3-130 to ensure trauma patients go to the closest, most appropriate hospital, reduce over and under-triage, preserve resources for those that need them the most, and to help limit demand on scarce specialists.

The TReC has been adapted to the COVID-19 response to transport/transfer COVID (+) patients to the closest, most appropriate facility within their region if capacity/capability exists and facilitate referral of COVID (+) patients requiring a higher level of care to the closest, most appropriate facility.

Surge Plan

Introduction

A tiered action plan for surge was created to define "trigger points," based upon hospital capacity for implementation of actions to maximize resources. This action plan is not intended to replace surge plans prepared by individual hospitals, but acts as a guide for hospitals. The defined Tiered Action Plan Triggers provides an overall statewide view of hospital capacity and capability.

For the Oklahoma Hospital Surge Plan, go to https://bit.ly/3breKRX.

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Defining Surge: A Tiered Action Plan

Tier	Tier Action Plan Trigger	Tier Goals
Tier 1	Preparing for Imminent Patient Surge	• Assessment of resources/needs • Estimation of resource needs • Procurement of resources (human, supply chain, equipment) • Data collection and logistics planning
Tier 2	60% Total Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)*	• Continued monitoring of surge data • Movement of resources into place • Ensure human resources positioned • Surge evaluation monitoring on EMResource
Tier 3	90 -140+% Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)*	• Full activation of clinical care and human resources • Continued monitoring of logistics (EMResource, TReC) • Utilizing alternative care sites
Tier 4	50% Hospital Bed Capacity	• Normalizing to pre-COVID-19

The Oklahoma Hospital Surge Plan is divided into four "pillars" with components relative to the COVID-19 response. Each component has been assessed and resources developed for statewide planning and for hospital use.

Operations: addresses staffing, ICU and med-surg beds, alternative care models;
Logistics: addresses facilities, transportation, health care worker wellness;
Clinical Care: guidelines for provision of care, referral to a higher level of care, EMS medical direction, telemedicine;
***Resources*:** human, supply chain and equipment items required to implement surge plan.

Oklahoma Hospital Surge Plan Pillars

Operations	Logistics	Clinical Care	Resources
Med-Surg Beds	Cohort like-patients in one facility (i.e. peds, OB, nursery, oncology)	Clinical Care Guidelines	Human Resources
ICU Beds	Interfacility Transport	Referral to a higher level of care	Supply Chain Resources
Alternative Care Models	Reassignment of healthcare workers to other facilities	EMS Medical Direction	Equipment
Staffing	Healthcare Worker Wellness	Telemedicine	

Surge Plan Pillars

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Tier 1	Imminent Patient Surge	• Assessment of current staffing & 40% increased capacity •Assess bed capacity & 40% increase capacity: med-surg, ICU, other beds that may be reallocated •Assessment/procurement of equipment •On-going reporting capacity and capability to EMResource •Create external COVID screening structure outside of ED for triage of COVID symptomatic patients
Tier 2	60% Total Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)*	• Movement of resources into place • Creating tools and providing education • Identify /resolve challenges •Adjusting staffing and nurse:patient ratios •Evaluate hospital through-put •Cohort non-COVID patients such as OB, nursery, pediatrics, immunocompromised, including partnerships with outside systems.
Tier 3	90 -140% Total Hospital Bed Capacity *(staffed beds, med-surg and ICU)*	-Continued adjustment of staffing models to supplement staffing needs -Implementation of Crisis Standards of Care -Utilize Alternative Care Sites

Comprehensive Hospital Preparedness Checklist for Coronavirus Disease COVID-19 – https://bit.ly/2W18w50.

Emergency Department Surge

Pre-Crisis Planning-Emergency Medical Treatment and Labor Act (EMTALA) Requirements and Implications Related to Coronavirus Disease 2019 – The Centers for Medicare & Medicaid Services (CMS) memorandum conveys information in response to inquiries from hospitals and critical access hospitals concerning implications of COVID-19 for their compliance with EMTALA. This guidance applies to both Medicare and Medicaid providers. To learn more, go to https://go.cms.gov/34RCAUy.

To access more resources, go to the ASPR TRACIE COVID-19 Emergency Department Resources Page, https://bit.ly/2RVplwU.

Critical Care

Critical Care Planning - COVID-19 Quick Notes – This document outlines actionable steps hospitals can take to operationalize critical care planning in areas such as space, staffing, supply, and provision of care. To learn more, go to https://bit.ly/34Rcj8O.

For additional Critical Care Resources go to https://bit.ly/3bthH4r.

Staffing

Surge Priority Planning COVID-19: Critical Care Staffing and Nursing Considerations – This document provides guidance to ensure the safety and resilience of nursing staff during a pandemic-related surge. The suggestions in this article are focused on nursing leadership and administrative considerations, strategies for optimizing staffing resources, and maintaining staff safety and resilience. To learn more, go to https://bit.ly/34Tj89R.

Strategies to Mitigate Health Care Personnel Staffing Shortages – This information is for health care facilities that may be experiencing staffing shortages due to COVID19. It outlines contingency capacity strategies to mitigate staffing shortages. To learn more, go to https://bit.ly/3avdzzz.

COVID-19 Behavioral Health Resources – The resources in this collection were created by federal agencies and their partners to help health care providers, caregivers, and the general population prepare for and manage the negative behavioral effects that can accompany a public health emergency. To learn more, go to https://bit.ly/2XVbMl4.

Mitigate Absenteeism by Protecting Health Care Workers' Psychological Health and Well-being during the COVID-19 Pandemic – The actions listed in this document can help health care facility leaders protect workers' psychological health and well-being. To learn more, go to https://bit.ly/2Knmg4y.

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Logistics

Tier 1	**Preparing for Imminent Patient Surge**	•Assess current interfacility transport capability
		•Adapt EMResource for COVID-19 data collection Resources/Bed and Ventilator Capacity
		•Ensure accurate data submission daily to EMResource
		•Adapt TReC Guidelines for Transport to COVID-19 Surge Plan
		•Plan for increased TReC Medical Director staff
Tier 2	**60% Total Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)***	•Validation of accurate reporting to EMResource
		•Monitor capacity/capability
		•Initiate plan implementation for reassignment of healthcare workers (furloughed, agency, Medical Reserve Corp, other)
		•Continual assessment of regional hospital/EMS capacity and capability on EMResource
Tier 3	**90-140+% Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)***	•Continual monitoring of healthcare workforce well-being including lodging, laundry service, food service, mental health, spiritual health
		•Real-time reporting of regional hospital/EMS capacity and capability on EMResource
		•Utilization of alternate care sites per model

Fit-Testing for N95 Filtering Facepieces During the COVID-19 Outbreak – This memorandum provides temporary enforcement guidance to compliance safety and health officers for enforcing the Respiratory Protection standard, 29 CFR § 1910.134, with regard to supply shortages of N95 filtering facepiece respirators due to the COVID-19 pandemic. To learn more, go to https://bit.ly/2xBxfVn.

Proper N95 Respirator Use for Respiratory Protection Preparedness – The National Institute for Occupational Safety and Health (NIOSH) Science Blog offers some strategies for identifying the best respirator fit. To learn more, go to https://bit.ly/34TNkli.

Sequence for Putting on Personal Protective Equipment (PPE) – This document provides a PDF of the sequence to properly don and doff PPE. To learn more, go to https://bit.ly/2RTSyIH.

What Health Care Personnel Should Know about Caring for Patients with Confirmed or Possible COVID-19 Infection – This document details how to protect oneself when treating patients who are confirmed or possible COVID-19 patients. It includes steps for environmental cleaning, disinfection and guidance when an individual should contact occupational health services. It also includes a guide on interim infection and prevention control for patients with, or suspected of having, COVID-19 in health care settings. To learn more, go to https://bit.ly/3cwyyU4.

Just in Time (JIT) Skills Training Videos for COVID-19 – These videos are provided to support preparedness training activities and provide JIT training for all frontline, assessment, and treatment facilities caring for a patient suspected or confirmed to be infected with COVID-19. Topics include:

- Laboratory Specimen Collection: Nasopharyngeal Swab, https://bit.ly/2zckAsa
- Personal Protective Equipment for 2019 Novel Coronavirus (COVID-19), https://bit.ly/3eOOUJY

To learn more, go to https://bit.ly/2xMEpGg.

Interim U.S. Guidance for Risk Assessment and Public Health Management of Health Care Personnel with Potential Exposure in a Health Care Setting to Patients with COVID-19 – This interim guidance is intended to assist with assessment of risk, monitoring, and work restriction decisions for HCP with potential exposure to COVID-19. To learn more, go to https://bit.ly/3bsLKtc.

Criteria for Return to Work for Health Care Personnel with Confirmed or Suspected COVID-19 (Interim Guidance) – This interim guidance is for health care leadership and officials making decisions about return to work for health care personnel with confirmed COVID-19, or who have suspected COVID-19 (e.g., developed symptoms of a respiratory infection [cough, sore throat, shortness of breath, fever], but did not get tested for COVID-19). To learn more, go to https://bit.ly/34SyQlL.

Clinical Care Guidelines

Tier 1	**Preparing for Imminent Patient Surge**	•Critical Care Scarce Resource Committee convened to address care issues •Approval of State Crisis Standard of Care •Clinical care guideline resources prepared for EMS, hospital, transfer guidelines, primary care providers, TReC medical director, nursing, respiratory therapy, other •ECHO utilization for training •Assess telemedicine capacity/capability
Tier 2	**60% Total Hospital Bed Capacity Reached** ***(staffed beds, med-surg and ICU)***	•Ongoing and continual updating of education (as new evidence based practice released) for rural/CAH hospitals and providers) •Implement telemedicine training
Tier 3	**90-140+% Hospital Bed Capacity Reached** ***(staffed beds, med-surg and ICU)***	•Implementation of Crisis Standards of Care •Move non-COVID patients to alternative sites

Clinical Care

Adult COVID General Admission Orders, https://bit.ly/2VornI2

CDC: COVID Decontamination and Reuse of Filtering Facepiece Respirators, https://bit.ly/2RUpAYU

Oklahoma City Homeless Shelters, https://bit.ly/2RWVCUd

OSDH Standards for Identification of Human Remains with Transmissible Disease, https://bit.ly/2yBZZ03

OUMC COVID Treatment Protocol, https://bit.ly/2ytg3S2

Respiratory Management of COVID-19 Patients, https://bit.ly/3eBDCIZ

Surviving Sepsis Campaign: Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19), https://bit.ly/2RWU7FI

SSC Infographic – Summary of recommendations on the management of patients with COVID-19 and ARDS, https://bit.ly/2XSquZP

Resources		
Tier 1	Preparing for Imminent Patient Surge	• Assess human resource current capability (primary care, nursing housekeeping, linen/laundry/dietary, respiratory, other) • Determine human resource for capacity and capacity +40% • Assess Supply Chain resources, additional needs during surge; identify gaps • Assess current equipment availability, additional needs during surge, identify gaps/daily reporting to EMResource • Obtain sources/alternatives for human, supply chain, and equipment gaps • Create plan to replenish resources in all regions • Mortality planning
Tier 2	60% Total Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)*	•Ensure placement and replacement of all resources; •Initiate workforce wellness monitoring including lodging, laundry, food service, mental health, and spiritual needs • Ensure accurate reporting of PPE and ventilator resources on EMResource •Utilize reassigned staff
Tier 3	90-140+% Hospital Bed Capacity Reached *(staffed beds, med-surg and ICU)*	•Rapid deployment of staff, equipment and PPE to regions in need; •Continue movement of patient to alternative care sites per model

Hospital Personal Protective Equipment Planning Tool – This tool is designed to help hospitals determine approximate PPE needs based on special pathogen category and a number of facility specific variables. Calculators are included for Ebola Virus Disease/Viral Hemorrhagic Fever (EVD/VHF), as well as special respiratory pathogens such as Middle East Respiratory Syndrome/ Severe Acute Respiratory Syndrome (MERS/SARS), and for pandemic influenza. To learn more, go to https://bit.ly/2XUINhc.

Personal Protective Equipment (PPE) Burn Rate Calculator – The PPE Burn Rate Calculator is a spreadsheet-based model that provides information for health care facilities to plan and optimize the use of PPE for response to COVID-19. Similarly, non-health care facilities (e.g., correctional facilities) may find this tool useful for planning and optimizing PPE use, as part of the response to COVID-19. To learn more, go to https://bit.ly/3asPFF3.

Decontamination and Reuse of Filtering Facepiece Respirators using Contingency and Crisis Capacity Strategies – Disposable filtering facepiece respirators (FFRs) are not approved for routine decontamination and reuse as standard of care. However, FFR decontamination and reuse may need to be considered as a crisis capacity strategy to ensure continued availability. This document summarizes research about decontamination of FFRs before reuse. To learn more, go to https://bit.ly/2Vpm9vs.

Strategies to Optimize the Supply of PPE and Equipment – This CDC guidance lists strategies to optimize the following equipment, eye protection, isolation gowns, facemasks, N95 respirators, PPE, and ventilators. It also includes the PPE Burn Rate Calculator listed above. To learn more, go to https://bit.ly/2VS5jom.

Strategies to Optimize Ventilator Use during the COVID-19 Pandemic – The U.S. Department of Health and Human Services (HHS) and the Federal Emergency Management Agency (FEMA) are working with multiple partners, including health care systems, academic institutions, professional medical societies, and the National Academies of Science, Engineering and Medicine, to develop crisis standards of care strategies for ventilator support when resources are limited. To learn more, go to https://bit.ly/2RV4F82.

To access more resources, review the ASPR TRACIE COVID-19 Supply Chain Resources page, https://bit.ly/3bqvZTr.

Long Term Care Discharge Guidance

The Oklahoma State Department of Health, in coordination with OHA, created guidance for the discharge of hospitalized patients to long term care facilities (LTC). The guidance addresses the appropriate LTC destination for patients and pre-discharge COVID-19 testing requirements. The Hospital Discharge to LTC Guidance can be found at https://bit.ly/3aEzqVr.

Telemedicine

Overview

The Centers for Medicare & Medicaid Services (CMS) and SoonerCare, along with most commercial payors, have relaxed and/or waived many restrictions around provision of telemedicine services for the COVID-19 pandemic. Telemedicine services are highly recommended in cases where patients are medically stable and able to quarantine in their home setting. Telemedicine services are also recommended for all other patients to promote decreased exposure, particularly for those in the at-risk category. Telemedicine may be provided through tele-monitoring, virtual visit, e-visit or by phone, all with varying options for the type of medical care allowed. Patients must consent verbally to telemedicine services and this must be documented in the patient's medical record. Patients and family members should receive guidance and education on telemedicine options and how to use the chosen option. For further guidance on Oklahoma issues from reimbursement to licensure on telemedicine, please see the OHA overview document, "Telehealth in Oklahoma During COVID-19," https://bit.ly/2RCl3dM.

A problem identified early in the Oklahoma hospital surge planning process was the need for specialists or assistance of intensivists due to possible fatigue during the COVID-19 pandemic in rural or critical access hospitals not affiliated with hospital systems. Deployment of telemedicine to hospitals with the need for equipment will keep patients in their communities and keep all possible COVID patients in a stable acute environment without transport to an urban center, while transportation and PPE are scarce statewide during the pandemic.

Breadth of problem

Oklahoma State University Center for Health Sciences (OSUCHS) administers the federal FLEX and SHIP grants for 54 rural hospitals, and through the OSU Center for Rural Health has been supporting these hospitals as they prepare and update their Incident Command Center protocols and community readiness for the COVID-19 pandemic. The center believes there would be interest

among the Small Rural Hospital Improvement Program (SHIP) recipients for some level of telemedicine assistance, and a considerable number of these hospitals are not part of a larger integrated hospital system. OHA, as part of a survey conducted in April 2020, further identified hospitals that desired and needed telemedicine equipment and support.

Primary solution

The OSU Telehealth Solutions was identified as a turnkey solution for the hospital surge to provide physician encounters and telehealth carts for the pandemic. The Oklahoma Office of Rural Health is working to help support the preparedness initiatives of the state's COVID-19 Task Force. The state is acquiring telemedicine carts for rural providers that can provide real-time physician support to rural medical communities anticipating needs for additional ICU intensivists, internists, pulmonologists, or other respiratory support to hospital medical staff. This effort will help provide rural hospitals additional physician manpower, or help provide evening or weekend relief to existing physicians and provider community. The telehealth solution carts will be powered by OSU TeleHealth Solution, a physician-led initiative within OSU Medicine, and will have board-certified, Oklahoma licensed physicians available via telemedicine consultation. The OSU Telehealth Solutions is staffed by OSU faculty or adjuncts. These physicians are all board certified in their specialty, licensed in Oklahoma and accountable to OSU as part of the faculty.

Existing medical specialties represented for a COVID team would be the first three listed here, with others as necessary:

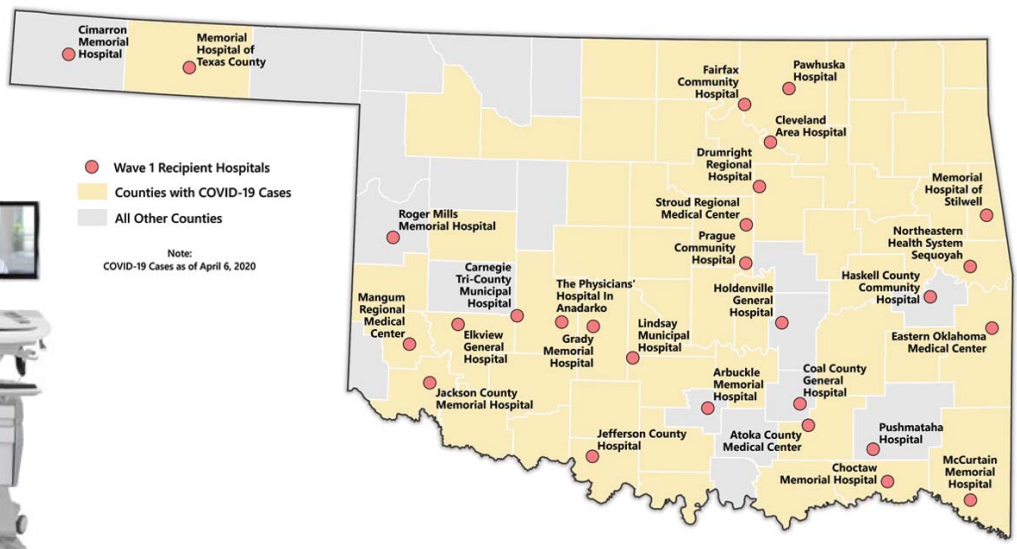
- Hospitalists
- Intensivists
- Pulmonology
- Cardiology (on call)
- Neurology (on call)
- Palliative (on call)

Market Assessment and Engagement for Placement of Carts

Based on input received from the recent OHA survey regarding telemedicine utilization, 71 responses were filtered against 54 responses received from the Office of Rural Health regarding SHIP survey and utilization and need for telemedicine services. Placement is based on assessment and filter parameters based on market research, COVID incidence, and community interest in telemedicine.

OSU Telehealth Solution offers many on-demand services, including:

- Hospitalists
- Intensivists
- Pulmonology (on call)
- Cardiology (on call)
- Neurology (on call)
- Palliative (on call)



Cart Distribution and Service Orientation

The cart is very user friendly and only requires a basic Wi-Fi or hardline internet connection. Technology delivery schedule and coordination of cart set up will need to occur with each site. Upon completion of set up, on-boarding and orientation sessions will need to occur for all clinical staff at each site. Training can be done regionally through ECHO or regular zoom meetings with the hospital staff. This can be organized virtually in two-hour blocks up to three times per week. For example, OSU TeleHealth Solutions has the capacity to on-board up to six sites per two-hour block (8 -10 a.m., 10 a.m.-12 p.m., 1-3 p.m., and 3-5 p.m.) Monday, Wednesday and Friday. Participating sites can attend as many orientation sessions as needed though typically do not require more than six to eight hours of orientation. IT support remains available to each site after go-live on a 24/7/365 basis.

Acquisition costs for the telemedicine cart will be covered by COVID-19 response stimulus funding to OSU. Additionally, the first 90 days of hospitalist medicine service will be covered through the same funding pool. Upon completion of the introductory 90-day period, the hospital may continue the hospitalist service for a monthly investment of $9,000, or they may exit the program without any financial obligation. Supplemental funding may also be available to cover the service through grant funding and available programs such as SHIP, FLEX, and other federally issued programs designed to provide assistance to critical access hospital markets. The State Office of Rural Health in coordination with the OSU Center for Rural Health are exploring these and additional funding programs to help offset or defray ongoing costs of the service outside of the introductory period.

Mental Health and Telemedicine

The Oklahoma Department of Mental Health and Substance Abuse Services has procured an option for providers – Polycom Real Presence. The initiation fees associated with their utilization will be waived. For information on using this tool, contact the ODMHSAS Help Desk, (405) 248-9326. All services using a recognized telehealth platform are considered face-to-face. Those will now include group and family therapy services. There is nothing prohibiting treatment providers from engaging with consumers over the telephone. A list of reimbursable service codes can be accessed at https://bit.ly/3cft7ZH. These codes are for department contracted services paid for by ODMHSAS.

Telephone Codes Reimbursable Through OHCA

Effective immediately and only for as long as the national emergency surrounding COVID-19 exists, services rendered by behavioral health providers via telephone will use the HCPCS/CPT codes listed in the rates and codes sheets applicable to their provider type found at https://bit.ly/3cfSfPU, using the GT modifier. Services should only be delivered telephonically (not face-to-face) in instances when the SoonerCare member does not have access to telehealth equipment, the service is necessary to the health and safety of the member, and the service can safely and effectively be provided over the telephone. Providers are encouraged to create internal policies and procedures regarding the use of telehealth during a national/state emergency so all of the staff understand its appropriate use during this time. Documentation in the client's record should either reference the provider's internal policy or otherwise indicate why telehealth was utilized if the service was not reimbursed via telehealth prior to March 16, 2020.

Mental Health and Substance Abuse

The Department of Mental Health and Substance Abuse Services is taking action to help those feeling depressed, while at home during the coronavirus pandemic. Starting April 10, every city-county health department in the state was equipped with an iPad. Someone walking in needing help can use the iPad to speak with a mental health professional. The person can take the iPad home with them to continue conversations with the provider. "There's a button on it. They hit the button and it links up to community mental health providers in their area. Someone is able to talk with them and work through it," said *Carrie Slatton-Hodges*, the interim commissioner for the Oklahoma Department of Mental Health and Substance Abuse Services. Eighty-one sites across the state have the iPads. Because of the state's large presence of telehealth technology, Slatton-Hodges said the department has been able to continue performing 90% of services.

Telemedicine Resources

- OHA Overview: Telehealth in the Time of COVID-19, April 1, 2020 (updated 4/15/20), https://bit.ly/2VlkGoS
- CMS: FAQs on Telehealth and HIPAA During the COVID-19 Nationwide Public Health Emergency, March 23, 2020, https://bit.ly/34zvZhC
- CMS: End-Stage Renal Disease Provider Telehealth and Telemedicine Toolkit, March 23, 2020, https://go.cms.gov/2yabonS
- National Consortium of Telehealth Resources Centers: COVID 19 Telehealth Coverage Policies, April 6, 2020, https://bit.ly/2K77y1f
- CMS: Telehealth Benefits in Medicare are a Lifeline to Patients during Coronavirus Outbreak, March 9, 2020, https://go.cms.gov/2XwPSUJ
- CMS: General Provider Telehealth and Telemedicine Toolkit, March 17, 2020, https://go.cms.gov/3cibMj0
- OHCA (SoonerCare): Expanded Use of Telehealth During COVID-19, https://bit.ly/2VoDNP1
- OHCA: General Policy regarding use of Telehealth, https://bit.ly/3cibZmi
- ODHMSAS: FAQ on COVID-19 including Telehealth, https://bit.ly/3a6ZSa6
- OMDHSAS: Providing iPads to County Health Departments, https://bit.ly/3a7mqHH

Scarce Resource Management and Crisis Standards of Care

Introduction

In the event of a large-scale disaster, either a no-notice event such as a natural disaster or a prolonged situation such as a pandemic, there is the potential for an overwhelming number of critically ill or injured patients. In these situations, certain medical resources may become scarce and prioritization of care may need to be considered.

A medical surge is a complex multi-system event, the response to which is equally complex. In an effort to better understand, measure, discuss best practices and manage medical surge, it is essential to have an overall guiding framework.

In 2009, the Institute of Medicine published a landmark report, in which the authors defined Crisis Standards of Care as follows:

> *"A substantial change in usual healthcare operations and the level of care it is possible to deliver, which is made necessary by a pervasive (e.g. pandemic influenza) or catastrophic (e.g. earthquake, hurricane) disaster. This change in the level of care delivered is justified by specific circumstances and is formally declared by a state government in recognition that crisis operations will be in effect for a sustained period. The formal declaration that crisis standards of care are in operation enables specific legal/regulatory power and protections for healthcare providers in the necessary task of allocating and using scarce medical resources and implementing alternate care facility operations."*

This report defines crisis standards of care and sets forth a vision for a system of just care in catastrophic events that includes fairness; equitable processes; community and provider engagement, education, and communication; and the rule of law. It also concludes that "there is an urgent and clear need for a single national guidance for states for crisis standards of care that can be generalized to all crisis events." The authors outlined a framework for the discussion of surge capacity defining it as a continuum from conventional to contingency, and finally crisis. They defined this "Continuum of Care" as follows:

- *Conventional capacity* - the spaces, staff, and supplies used are consistent with daily practices within the institution. These spaces and practices are used during a major mass casualty incident that triggers activation of the facility emergency operations plan.

- *Contingency capacity* - the spaces, staff, and supplies used are not consistent with daily practices but provide care that is functionally equivalent to usual patient care. These spaces or practices may be used temporarily during a major mass casualty incident or on a more sustained basis during a disaster (when the demands of the incident exceed community resources).
- *Crisis capacity* - adaptive spaces, staff, and supplies are not consistent with usual standards of care but provide sufficiency of care in the context of a catastrophic disaster (i.e., provide the best possible care to patients given the circumstances and resources available). Crisis capacity activation constitutes a significant adjustment to standards of care.

These same definitions are used elsewhere in this Oklahoma Hospital Surge Plan and Hospital Planning Toolkit.

The National Academy of Medicine also stresses the importance of an ethically grounded system to guide decision making in crisis to ensure the most appropriate use of resources. They define these ethical principles as:

- *Fairness* – standards that are, to the highest degree possible, recognized as fair by all those affected by them – including the members of affected communities, practitioners, and provider organizations, evidence-based and responsive to specific needs of individuals and the population.
- *Duty to care* – standards are focused on the duty of health care professionals to care for patients in need of medical care.
- *Duty to steward resources* – health care institutions and public health officials have a duty to steward scarce resources, reflecting the utilitarian goal of saving the greatest possible number of lives.
- *Transparency* – in design and decision making.
- *Consistency* – in application across populations and among individuals regardless of their human condition (e.g. race, age disability, ethnicity, ability to pay, socioeconomic status, preexisting health conditions, social worth, perceived obstacles to treatment, pass use of resources).
- *Proportionality* – public and individual requirements must be commensurate with the scale of the emergency and degree of scarce resources.
- *Accountability* – in individual decisions and implementation standards, and of governments for ensuring appropriate protections and just allocation of available resources.

Oklahoma Model Crisis Standards of Care

The Oklahoma State Department of Health published a final version on April 10, 2020, of "Hospital Crisis Standards of Care: Resource Reference Cards." This model for allocation of scarce resources is based on a decade of research and community engagement by the authors and specifically was developed to provide practical and clear guidance for clinicians during a disaster or pandemic. It combines clinical assessment tools and predictive measures to score all critically ill patients, regardless of whether their condition was caused by the disaster or pandemic.

The document identifies core clinical strategies for scarce resource situations and acts as a decision support tool. It is designed to facilitate a structures approach to resource shortfalls at a health care facility. It assumes an incident management is implemented and that key personnel are familiar with ethical frameworks and processes that underline these decisions.

Each facility will have to determine the most appropriate steps to take to address specific shortages. It is advised key staff of each facility become familiar with this card set to aid with event preparedness and in anticipation of coping mechanisms to each core category situation outlined in the cards.

Each core category has a resource reference card that includes practices and resources that form the basis for medical and critical care. The cards examine the demands of a specific subset of patients or a specific resource likely to require specialized responses during a major incident. These cards may contain content specific to the state of Oklahoma that may not be applicable in other areas due to differences in resource availability or vulnerability.

Further, during an incident, the Oklahoma State Department of Health (OSDH) may update or change this guidance document. Scarce resource cards have been created in the OSDH "Hospital Crisis Standards of Care: Resource Reference Cards," https://bit.ly/2XZ5T63, for the following potentially limited resources:

- Oxygen
- Staffing
- Nutritional Support
- Medication Administration
- Hemodynamic Support & IV Fluids
- Mechanical Ventilation/External Oxygenation
- Blood Products
- Renal Replacement Therapy
- Palliative Care

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[i] *Institute of Medicine. Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report. 2009. Washington, DC: The National Academies Press.*
[ii] *Ibid.*
[iii] *Ibid.*
[iv] *Institute of Medicine. 2012 Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response. Washington, DC: The National Academies Press. (currently the National Academy of Medicine)*
[v] *Oklahoma State Department of Health "Hospital Crisis Standards of Care: Resource Reference Cards" (Version 4/7/2020) found at https://bit.ly/2XZ5T63.*

State Executive Orders and Federal Waivers

In response to the COVID-19 pandemic, Gov. Kevin Stitt issued several executive orders. In addition, the governor invoked for the first time in state history the Catastrophic Emergency Health Powers Act that gave him added flexibilities during this time.

In certain circumstances, the Secretary of the Department of Health and Human Services (HHS), using section 1135 of the Social Security Act (SSA), can temporarily modify or waive certain Medicare, Medicaid, CHIP, or HIPAA requirements, called 1135 waivers. There are different kinds of 1135 waivers, including Medicare blanket waivers. The Oklahoma Health Care Authority and the Oklahoma Hospital Association submitted and received approval for several waivers.

A listing of health care actions taken by the governor via executive orders may be found at https://bit.ly/2z37ihx, and federal waivers as requested by the Oklahoma Health Care Authority (OHCA) and OHA may be found at https://bit.ly/2yeC8Uv. Additional information about 1135 waivers, including blanket waivers, may be found at https://go.cms.gov/2VSil6w.

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This document may be revised and updated as plans and information related to the pandemic evolve.
Refer to www.okoha.com for updates.

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