

New Mexico Statewide Acute Care Medical Surge Plan for COVID-19 Pandemic Response

Prepared by the Medical Advisory Team

April 2020

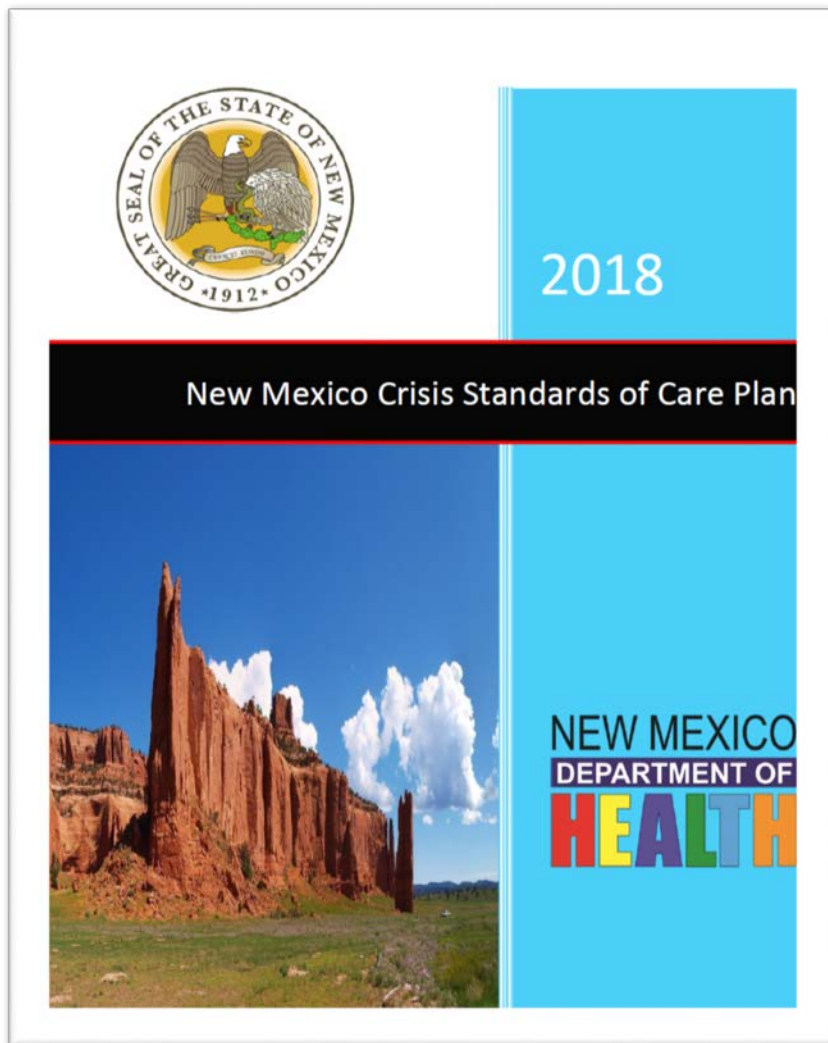


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Overview

On December 31, 2019, several cases of pneumonia with an unknown cause were detected in Wuhan City, Hubei Province, China, and reported to the World Health Organization. The underlying virus giving rise to those instances of respiratory illness was later identified as a novel coronavirus disease named COVID-19. Since it was first identified and reported, COVID-19 has spread globally.

On March 11, 2020, the first confirmed cases of COVID-19 were reported in New Mexico. As a result, Gov. Michelle Lujan Grisham declared a statewide emergency under the All Hazard Emergency Management Act and declared a public health emergency in accordance with the Public Health Emergency Response Act. These proclamations were deemed necessary to minimize the spread and adverse impacts of the COVID-19 in New Mexico.

Modeling of the impact of COVID-19 in New Mexico conducted in late March 2020 indicated that without implementation of significant public health measures, New Mexico could see as many as 4,700 deaths related to this pandemic. Even with implementation of aggressive public health measures, New Mexico could experience a large number of deaths and a surge of intensive care unit patients at the peak of the event. This event will cause major disruption to health care delivery system, likely requiring activation of Crisis Standards of Care.

This plan serves as a supplement to the New Mexico Crisis Standards of Care Plan and a Functional Annex to the New Mexico Department of Health's Emergency Operations Plan, with the purpose of supporting the New Mexico medical response for the 2020 COVID-19 pandemic.

Ideally, this document would have been developed through a deliberative process involving many stakeholders and reviews. However, the need for established guidance at this critical time necessitated the expedited development of this framework using the New Mexico Medical Advisory Team process.

This guidance is also based on other well-established plans, such as the Missouri Hospital Association Framework for Managing the 2020 COVID-19 Pandemic Response and Implementing Crisis Standards of Care and the Utah Crisis Standards of Care (2019).

Crisis Standards of Care

In catastrophic disasters, such as the COVID-19 pandemic, health care resources may become so scarce that re-allocation decisions are needed, staff may have to practice outside of their normal scope of practice, and the focus of patient care may need to switch to promoting benefits to the entire population over benefits to individuals.

In such crisis situations, strategies are necessary to avoid greater illness, injury and death by enabling more effective use of limited resources. In addition, the use of a fair, just and equitable process for making decisions about who should receive treatments that have limited availability, such as ventilators, is crucial.

The Institute of Medicine (IOM) has defined Crisis Standards of Care (CSC) as a substantial change in usual health care 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. CSC guidelines are the means to mount a response to an incident that far exceeds the usual health and medical capacity and capabilities of a medical community.

Under these circumstances, medical care shifts from focusing on individuals to promoting the thoughtful use of limited resources for the best possible health outcomes for the population as a whole. Resources are shifted to patients for whom treatment would most likely be lifesaving and whose functional outcome would most likely improve with treatment. Such patients should be given priority over those who would likely die, even with treatment, and those who would likely survive without treatment.

The Agency for Healthcare Research and Quality developed the following characteristics of altered standards of care that might be manifest during a surge situation:

- Equipment and supplies will be in short supply and will need to be allocated to save the most lives.
- There will be an insufficient number of trained staff.
- Severe delays and backlogs in emergency and hospital care will likely exist.
- Treatment decisions may need to be based entirely on clinical judgment as other diagnostic tools become inaccessible.

Continuum of Care

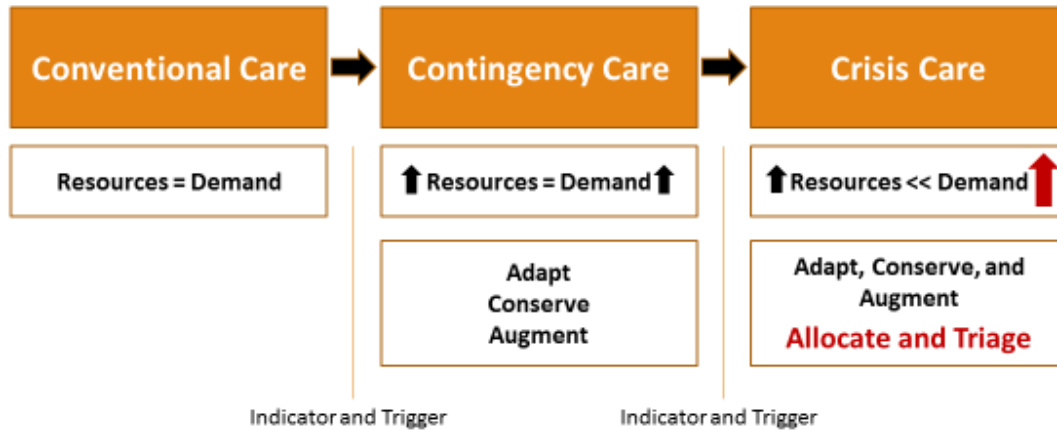
The IOM defines three levels of care within the Concept of Operations of the Crisis Standards of Care, which serve as the basis for determining likely levels of surge, resources and staffing during a disaster. The following levels are the basis for Crisis Standards of Care planning:

Conventional Care: The demand for care is less than the supply of resources. Level of care is consistent with daily practices in the institution.

Contingency Care: The demand for care surpasses conventional resource availability, but it is possible to maintain a functionally equivalent level of care by using contingency care strategies of adapting, conserving and augmenting. The facility's Emergency Operations Plan is activated during this phase. Although clinical operations may be significantly altered, resources typically are matched to demand.

Crisis Care: As the demand for care surpasses resource supply despite contingency care strategies. The normal standard of care cannot be maintained and allocation and triage strategies must be implemented.





Activation of Crisis Standards of Care

New Mexico's health care system is well into the implementation of contingency-level care to support public health measures and in anticipation of patient surge. The movement into contingency-level care statewide was mandated by the Public Health Order.

Examples of escalating contingency care activities have included:

- Limiting hospital visitation
- Cancelling elective surgical care
- Modification/reduction of non-essential ambulatory care

In some cases, this will create a potential workforce, such as surgical and anesthesia providers, that can be deployed to augment patient care in other areas.

The transition from Contingency Care into Crisis Care will become necessary when demand for care of COVID-19 patients exceeds capacity to meet that demand. International and domestic experience with COVID-19, confirmed with New Mexico-specific modeling, clearly indicates that New Mexico will reach this level, even with aggressive public health measures.

The next steps in the activation of crisis standards are being identified and implementation guidelines area being developed.

The operating principles of the continuum of care are described in the table below:



Hospital Continuum of Care Model SITUATION	Conventional	Contingency	Crisis
SURGE STATUS	Hospitals utilize normal bed capacity. Occasional and temporary surges of demand may occur that are temporary and may incur longer wait times for non-critical care as hospitals, ICUs, and emergency departments temporarily reach capacity.	Hospitals have surged beyond maximum bed capacity. Emergency Operations Plans are in effect. Elective procedures delayed. Hospitals may be adding patients to occupied hospital rooms and non-patient care areas. Community health care facilities may be requested to surge. Alternate care sites may be opened.	Expanded capacity is still not sufficient to meet ongoing demand for care. Some patients needing care cannot be admitted to hospitals and instead will be sent home or to alternate care sites. Hospitals are adding patients to occupied hospital rooms and non-patient care areas. Community health care facilities are operating beyond normal scope of practice.
RESOURCE LEVEL	Occasional, limited resource shortages may occur, typically of non-critical supplies or medications with substitution as the most common resource sparing strategy.	Some resources are becoming scarce. Attempts at conservation, reuse, adaptation, and substitution may be performed.	Some or even many critical resources are unavailable, potentially including hospital beds, ventilators, and medications. Critical resources are re-allocated to help as many patients as possible.
STAFF	Usual staffing. Hospital staff absenteeism is not a large problem.	Staff extension (increased patient/provider ratios, expanded scope of practice). Hospital staff absenteeism may be a problem.	Staffing levels at critical shortage. Staff are operating outside normal scope of practice and greatly increased patient/ provider ratios. Hospital staff absenteeism may be greater than 30%.

Duty to Plan

Hospitals must rapidly develop or augment their medical surge and resource conservation plans that move from Conventional to Contingency to Crisis Capacity for a COVID-19-specific response. During this declared public health emergency, the goal is to remain in Contingency status to the extent possible and avoid moving to Crisis Capacity.

Contingency Capacity Planning

Strategies for remaining in Contingency Capacity may include:

- [Canceling](#) elective procedures and surgeries to increase capacity.^{ix}
- 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 and 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.

Medical Surge Capacity Planning

Hospitals must prepare now for the rapidly approaching COVID-19 patient surge. The CDC [Hospital Preparedness Assessment Tool](#) is an important first step. Strategies to maximize capacity for patients requiring hospitalization include:

- Conversion of specialty units, such as post-anesthesia units, outpatient and surgical areas, into critical care areas.
- Conversion of medical-surgical units to high-acuity step-down units.
- Expansion into non-patient care areas based on supplies, staff and functionality.

Concept of Operations

Guiding Principles

Implementation of a COVID-19 medical surge plan in New Mexico should consider the following:

- The New Mexico health care system must maintain critical services during a pandemic, including acute cardiac, obstetric, trauma and burn treatment.
- Levels of response should be established based on current disease burden, with clear triggers to initiate the next level of response.
- Patients should be cared for in their local community to the greatest extent possible.
- The availability of ambulances is a significant limiting factor in a statewide response to a pandemic.
- The availability of Personal Protective Equipment, including masks, gloves, gowns, for health care providers, is a pervasive concern both domestically and internationally for the COVID-19 response.
- New Mexico's health care system is fragile, and many services are provided in facilities with limited capacity and capability, particularly in rural areas.
- Many independent providers and provider organizations lack adequate reserve funding to maintain workforce.
- Actions taken by the Governor and the Secretary of Health can have immediate and powerful impacts on the ability of the health care system to respond, but all public health emergency actions must take into consideration unintended consequences for the health care system and its workforce.



Change in Operational Model

An optimal response to the COVID-19 pandemic requires two significant operational changes to the overall approach to the New Mexico Hospital and Health System: 1) Modification of the patient referral system and approach and 2) Collaborations and management of some aspects of the delivery system through a centralized call center.

Patient Referral to Central Delivery Systems Hospitals

During a time when demand for transfers of patients to higher levels of care will exceed the capacity to accept and transport patients, a triage approach coordinated from a central location that matches the highest-priority patients with the most appropriate facility with capacity will lead to the best use of resources. One significant and essential modification of patient referral approaches that should occur under crisis care is a shift from the relatively inefficient “pushing” of referrals into a higher level of care to “pulling” patients into a higher level of care through a coordinated central process.

Central Call Center

Establishing a coordinated approach is a significant undertaking that will require an agreement to utilize common technology and then operationalizing all of the elements of a call transfer center. It will also require the rapid development of triage protocols and identification of health care professionals who can make complex and difficult triage decisions with limited information.

Medical Advisory Team

Purpose of Medical Advisory Team

In accordance with the 2018 New Mexico Crisis Standards of Care Plan and following the declaration of the Public Health Emergency, the Department of Health has activated the Medical Advisory Team (MAT). The MAT serves in an advisory role to the Department of Health Leadership Team to:

- **Facilitate Coordination and Planning**
- **Develop Recommendations, Guidelines or Protocols**
Escalate based upon increasing demand or scarcity
Use indicators and triggers for escalation
- **Provide Guidance**
Prepare to address emerging questions
Source for expert opinion
Source for identification of resources



Medical Advisory Team Structure

The Medical Advisory Team (MAT) is composed of three main groups that report the DOH Leadership Team:

- Operations Group
- Hospital and Health System Group
- Crisis Standards of Care Workgroups



Operations Group: The MAT Operations Group provides overall coordination and management. Members of the Operations Group include the MAT chair, administrative leadership assigned to support MAT, Department of Corrections liaison, chairs of the Hospital and Health System Group, chairs of each of the CSC Standard of Care Workgroups, and DOH officials as needed.

Hospital and Health System Group: The Hospital and Health System Group is composed of representatives of the designated key referral hospitals (hubs), Indian Health Service, and the Albuquerque Area Veterans Affairs Hospital. One member of the group will serve as chair.

Crisis Standards of Care Workgroups: The MAT will establish workgroups as necessary to carry out its purpose and functions. These workgroups may establish subgroups as necessary. The initial workgroups include:

- Regional Care
- Clinical Care
- Transportation
- Modeling and Analytics
- Workforce
- Behavioral Health
- Legal and Ethics
- Communication

The recommendations provided by the MAT for clinical care and healthcare operations related to the material in this Acute Medical Surge Plan document have been posted on the NMDOH COVID-19 website: <https://cv.nmhealth.org/clinicians/medical-advisory-team/>

Modeling and Analysis

The New Mexico Department of Health will direct efforts to create state-based and regional models to demonstrate predicted COVID-19 spread, the impact of social distancing and other prevention measures, and use of healthcare resources. Models created by subject matter experts from the New Mexico Department of Health, Presbyterian Health Services, Los Alamos National Laboratory and Sandia National Laboratories will be compared and aligned to create the best forecast available for the state. Models will be based on measures that describe best to worst case scenarios to provide the widest possible view of the predicted dates of patient surges in each region. Modeling factors related to the predicted rate of spread will be adjusted regularly to reflect actual conditions. The use of specific healthcare resource to be forecasted, by county, includes medical and surgical beds, negative pressure and isolation rooms, ICU beds, ventilators, and respiratory therapy staff.

The most up-to-date releases of modeling results can be seen during the regular press conference provided by Governor Michelle Lujan Grisham, streamed and archived here:

<https://www.facebook.com/GovMLG/>



Regionalization

Regional Care Plan Purpose:

- To offer a supportive infrastructure for smaller hospitals that allows for patients to be cared for *within their own communities*.
- A *hub-and-spoke model* that involves a hub hospital that serves as a connection point for smaller satellite hospitals or spokes within the region.
- To conserve advanced care resources
- To ensure that patients receive the correct level of care within the correct delivery system and as close to home as possible.

Hospitals must be preparing now for the rapidly approaching COVID-19 patient surge. A helpful tool for preparation is the [CDC Hospital Preparedness Assessment Tool](#). Strategies to maximize capacity for patients requiring hospitalization for high acuity and critical care services are differentiated by a model known as the “Hub-and-Spoke”.

Due to the nature of New Mexico’s vast land mass and the rurality of many communities, the most efficient model of pandemic care delivery is designed to offer a supportive infrastructure for smaller hospitals that allows for patients to be cared for within their own communities. This type of model conserves advance care resources and ensures that patients receive the correct level of care within the correct delivery system and as close to home as possible.

The hub-and-spoke model as applied in healthcare is a framework that involves a hub hospital that serves as a connection point for smaller satellite hospitals or spokes within the region. Typically the hub hospitals are those that have larger infrastructures, available resources and possess the ability to provide a higher level of patient care than that of the spoke hospitals. For the purpose of this plan, seven hospitals, located in four quadrants of the State were identified to serve as hub hospitals for their region.

The following action steps were taken to ensure that the hub hospitals are in a position to be successful:

- The Regional Care model (“Hub and Spoke”) was discussed with New Mexico Hospital Association members April 1st after an initial introduction to the concept to leaders of proposed regional hubs March 24th.
- Phone calls were made to each Regional Hub CEO or leadership team designee to discuss the model, surge plans, and answer questions March 31 – April 1.

Hub-and-Spoke Model

Regional hub facilities include:

Central Region:

- Lovelace Medical Center, Albuquerque, Troy Greer, CEO
- UNM Hospitals, Albuquerque, Mike Chicarelli, COO
- Presbyterian Hospital, Albuquerque, Clay Holderman, EVP/COO



North Central Region:

- Christus St. Vincent, Santa Fe, Lillian Montoya, CEO

Northwest Region:

- San Juan Regional Medical Center, Farmington, Jeff Bourgeois, CEO

South Central:

- Memorial Medical Center, Las Cruces, John Harris, CEO

Southeast Region:

- Eastern New Mexico Medical Center, Roswell, Warren Yehl, CEO

Each regional hub leaders are expected to make contact with their respective spokes in order to discuss the plan and answer questions or evaluate concerns.

The table below represents ICU specific surge capability by hub and spoke region.

Hub Region	ICU Space	Surge Capacity	% increase	Maximum Capacity	% increase
Central	157	222	41%	376	139%
North Central	16	25	56%	76	375%
Northwest	37	51	38%	79	114%
South Central*	94	100	6%	149	59%
Southeast	42	89	112%	180	329%
Total	346	487	41%	860	149%

*Incomplete regional data

Role of Hub Hospitals	Role of Spoke Hospitals
Check in via phone call to your assigned "Spoke Hospitals" assess specific needs	Coordinate with Hub hospital on patient transfers and
Peer-to-peer collaboration with other hubs	Communicate plan with hospital and medical staff
Assure information sharing within region	Keep Hub updated on any changes of status or specific needs
Coordinate with Central Command Center specific to needs of hub or spoke hospitals and significant changes in status	Be prepared to support Hub hospital in a situation of census disparity
Serve as a supportive connection point for satellite hospitals	
Support spoke hospitals as a higher level of care	
Coordinate the distribution of equipment and supplies provided by outside sources (State of NM, FEMA, Strategic Stockpile, etc.)	



New Mexico Hub-and-Spoke Hospitals

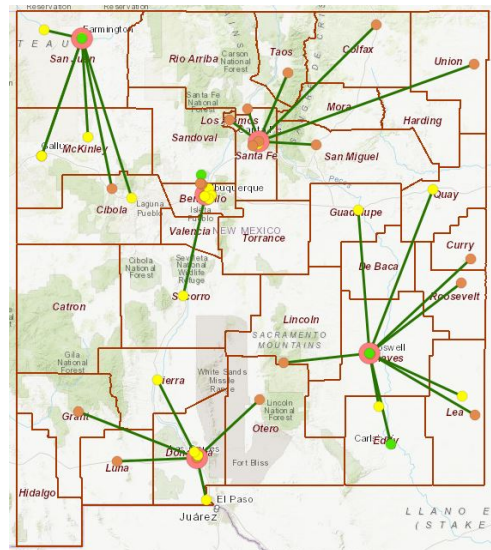
CENTRAL REGION HUB	SPOKE HOSPITALS
UNM Hospitals, Abq, Mike Chicarelli, COO Presbyterian Hospital, Abq, Devon Hyde, HCE Lovelace Medical Center, Abq, Troy Greer, CEO	UNM Sandoval RMC, Rio Rancho, Jamie Silva-Steele, CEO
	Kindred Hospital, ABQ, Larry Rodgers, CEO
	Encompass Health, ABQ, Rachelle Spencer, CEO
	Haven Behav. Hospital, ABQ, Jennifer Barut, CEO
	Central Desert Behav., ABQ, Kelley Whittaker, CEO
	Presbyterian Rust, Rio Rancho, Angela Ward, CEO
	Kaseman Presbyterian, ABQ, Doyle Boykin, HCE
	Socorro General Hospital, Veronica Pound, HCE
	Lovelace Womens Hospital, ABQ, Sheri Milone, CEO
	Lovelace Westside Hospital, ABQ, Amy Blasing, CEO
	UNM Lovelace Rehab., ABQ, Derrick Jones, CEO
	Cibola General Hospital, Grants, Thom Whelan, CEO
	Acoma Canoncito Laguna Hospital
NORTH CENTRAL REGION HUB	SPOKE HOSPITALS
CHRISTUS St. Vincent, Santa Fe, Lillian Montoya, CEO	Alta Vista RMC, Las Vegas, Caleb O'Rear, CEO
	Union County Hospital, Clayton, Tammie Stump, CEO
	Miners' Colfax Medical Ctr, Raton, Bo Beames, CEO
	Holy Cross Hospital, Taos, Bill Patten, CEO
	Espanola Hospital, Brenda Romero, HCE
	Los Alamos Medical Center, John Whiteside, CEO
	Presbyterian Santa Fe Medical Center, Jon Wade
NORTHWEST REGION HUB	SPOKE HOSPITALS
San Juan RMC, Farmington, Jeff Bourgeois, CEO	Rehoboth McKinley Christian, Gallup, David Conejo, CEO
	Northern Navajo Medical Center
	Crownpoint Health Care Facility
	Gallup Indian Medical Center
SOUTH CENTRAL REGION HUB	SPOKE HOSPITALS
Memorial Medical Center, Las Cruces, John Harris, CEO	MountainView RMC, Las Cruces, Derrick Cuenca, CEO
	Gerald Champion RMC, Alamogordo, Jim Heckert, CEO
	Sierra Vista Hospital, T or C, David Faulkner, CEO
	Gila Regional RMC, Silver City, Richard Stokes, CFO
	Mimbres Memorial Hospital, Deming, Gary Poquette, CEO
	Advance Care of So. NM, Las Cruces, Claudia Saiz, CEO
	Rehab Hospital of So. NM, Las Cruces, Sabrina Martin, CEO
	Mesilla Valley Hospital, Las Cruces, Ana Laloitis, CEO
	Peak Behav. Hospital, Santa Teresa, Sandra Emanuel, CEO
SOUTHEAST REGION HUB	SPOKE HOSPITALS
Eastern NM Medical Center, Roswell, Warren Yehl, CEO	Lovelace Regional, Roswell, Buddy Daniels, CEO
	Lincoln County Medical Ctr., Ruidoso, Todd Oberheau, HCE
	Artesia General Hospital, Cory Yates, CFO
	Carlsbad Medical Center, Cathy Hibbs, CEO
	Nor-Lea General Hospital, Lovington, David Shaw, CEO
	Lea Regional Hospital, Hobbs, Dan Springer, CEO
	Guadalupe Co. Hosp., Santa Rosa, Christina Campos, CEO
	Trigg Memorial Hospital, Tucumcari, Troy Clark, RVP
	Plains RMC, Clovis, Drew Dosta, HCE
	Roosevelt General Hospital, Portales, Kaye Green, CEO



Hub and Spoke Map

An interactive map of the hub and spoke model for New Mexico can be found here:

<http://arcg.is/0y5zau>



Central Command – Call and Triage State Plan

The Central Command Center (CCC) has been developed in collaboration with UNM Hospitals, Lovelace Health System and Presbyterian Healthcare Services to maximize the utilization of critical care beds. The process is based on the state's hub-and-spoke model.

Access to the CCC will be a *one-call* process (505-841-1941, or 1-855-222-7737) for the transfer of critical care patients to the Central Command Hub from the Regional Hub. When a Spoke hospital calls Central Command for an admission, Central Command will connect them with the closest Regional Hub for patient management. If the Regional Hub cannot care for a Spoke Hub patient, the Regional Hub will connect the Spoke Hub to the Central Command.

The Central Command will be staffed 24/7 by triage RNs, MDs, coordinators and transport personnel. MDs in the Central Command will use the state-approved medical protocol to determine the placement of critical patients. RNs, coordinators and transport personnel will follow a clearly defined operational process.

The same one-call number (505-841-1941, or 1-855-222-7737) will be used for the transport of *all critical care patients* throughout state during Central Command operations.

The keys to the success of the Central Command model are:



- Triageing MDs at all hospitals following the state-approved medical protocol.
- Bed availability updated each day by 0700 in EMResource.
- Progressive and medical patients will be encouraged to stay in their current hospital.

Alternative Care Sites

COVID-19 cases are predicted to exceed our capacity at the end of April or in early May. We expect that the demand for patient care will exceed the current supply of workforce, equipment, medical supplies and EMS transportation. It is uncertain at this time what assistance will be provided by the Federal government. New Mexico is therefore planning to identify and synchronize alternative care sites in order to expand the capacity of local health care systems to handle the anticipated surge of COVID-19 patients.

The planning team will rapidly plan for and synchronize the establishment of alternative care sites as a critical component of the local health care response to the COVID-19 pandemic, in coordination with our regional surge planning efforts, and with state agencies and departments.

Working in partnership with local agencies and using state authority, available facilities such as sub-acute health care facilities, hotels and commercial facilities will be accessed to serve COVID-positive patients who are recovering and have been discharged from hospitals. Staffing plans for these step-down facilities will be developed, using workers who have been displaced due to closed outpatient and scheduled visit clinics. The COVID-19 modeling and predictions will drive the timeline, and we will respond and adapt as needed.

The following principles will guide alternative care site planning:

1. The primary purpose of the alternative care site is to create and expand bed capacity to serve COVID-19 patients who are too sick to be at home and who still need care, and COVID-19 patients transferred from hospital who require additional care.
2. The planning team will define minimal care as general, low-level care for mildly to moderately symptomatic COVID-19 patients. This includes patients who may need oxygen (2L/min., or less), who do not require extensive nursing care, and who can generally move about on their own.
3. The best way to care for our patients is through coordination/collaboration among local hospitals to achieve unity of effort as a single health care system.
4. Larger hospitals are best positioned to expand intensive care units and medical ward capacity as part of the single health care system
5. Alternative care sites should complement and integrate into the local health care system.
6. The local health care system should validate the role and purpose of the alternative care site.
7. Alternative care sites should only be utilized for COVID-19 patients.
8. Available health care facilities with oxygen infrastructure, such as shuttered hospitals and nursing homes, can be more easily and quickly converted to alternative care sites.
9. The anticipated geographic spread of COVID-19 should guide the establishment of alternative care sites

The planning team will use best practices and lessons learned from the early outbreak of COVID-19 in Washington and the Concept of Operations provided by FEMA.



Crisis Standards of Care Transport and EMS Plan

The Crisis Standards of Care Transport Plan is predicated on the development of an EMS COVID Strike Team, made up of EMS transport vehicles located in the Albuquerque area (6), Santa Fe (1-2), Las Cruces (1-2), Clovis (1), and ideally Carlsbad (1), Farmington (1) Hobbs (1) and Portales (1). Each will have a dedicated crew that has received any necessary updated training on transporting ventilated patients, PPE and any other identified needs. The use of these vehicles will not affect the normal 911 coverage for the community from which they originate.

Supplementing the ground transport capability will be the available air ambulance components of the New Mexico EMS system, which provide relatively rapid response and critical care capacity.

Should community assets be exhausted, the New Mexico National Guard has offered the use of approximately 10 Forward Litter Ambulances (FLAs) and three UH-60 Blackhawk Helicopters. The FLAs will be staffed with EMT-Basics, and are capable of transporting up to four non-ventilated patients each. The UH-60s have the capacity to transport two ventilated patients simultaneously. These resources will be requested by the Central Communication Center (CCC) through the New Mexico Emergency Operations Center.

The CSCTP will work with the CCC which will take all calls from hospitals requesting transfer of a patient from an outlying area to a central delivery system receiving hospital. This will include all critical care transfer requests, not just COVID-19 patients. A clinician will decide whether the patient will be transported, and to what hospital. Once this is decided, the CCC will refer to the CSCTP resource list to determine the most appropriate mode of transport.

The CCC will notify the transporting entity of a mission, the level of care required, the pick-up location and destination. The CCC will advise the referring hospital of the ETA and mode of the transporting resource.

Regulatory changes have been made to allow for expanded Emergency Medical Services across state. In addition, the New Mexico Emergency Medical Services Bureau has developed recommendations for local EMS operations based on national guidelines.

Recommendations for EMS patient care and safety during COVID-19 can be found at:
<https://nmhealth.org/publication/view/guide/5650/>

Information regarding changes to EMS licensure processes can be found at:
<https://nmhealth.org/publication/view/form/5774/>

Workforce Expansion

One of the greatest challenges in managing the COVID-19 response will likely be the supply of staff and the competency level of the staff available. Hospitals will see the acuity of patients rise dramatically, with many patients requiring ventilatory assistance and other specialized care.



More health care workers will be needed in order to provide surge-level care for the state's COVID-19 patients. Several strategies will be used to meet this need:

- **Emergency Licensure:** The New Mexico Medical Board and the Board of Pharmacy have emergency licensure provisions. The Workforce Workgroup will identify avenues by which licensed out of state healthcare providers can be licensed by the appropriate board so they may practice in the state.
- **Redeployment:** During this period of Contingency Care, when only essential services are being provided, medical staff in non-essential services can be redeployed to anticipated medical surge areas. This brief window offers an opportunity to provide just-in-time training to prepare those staff for new clinical duties and responsibilities. Hospitals will re-deploy operating room and procedural area staff into emergency room, ICU and transport roles, and begin to develop competence to cover surge in those areas.
- **Expanded Scope of Practice:** The state will implement all relevant expanded scopes of health care and public safety practice available in the Public Health Emergency Response Act and individual professional licensing regulations.
- **The Workforce Workgroup** of the Medical Advisory Team will identify available health care professionals who are not currently providing health care in a New Mexico hospital. Healthcare teams may be used in which one experienced provider mentors and supports a small group of less-experienced members of the health care team (similar to the hub and spoke model used for the hospitals.)
- **New Mexico Medical Reserve Corps**, which has extensive experience in deploying in declared emergencies, will serve as the backbone in verifying licenses and performing background checks for identified individuals.

Other Sources of Expanded Workforce: The following categories have been targeted as potential sources of additional health care professionals: undeployed Medical Reserve Corps personnel, private sector physicians who are currently not providing care, unemployed health care professionals, school nurses, licensed higher education faculty and staff, and providers who have allowed their licenses to lapse. Retired healthcare providers or others in high-risk groups for COVID-19 may be able to provide consultation and triage via telehealth.

Individuals who received their health care training outside of the United State might be utilized, however, this should not be regarded as an avenue to licensure, and participation must be reviewed on a case-by-case basis. Clinical staff in administrative positions should return to clinical care as much as possible. Staff should practice “at the top of their license” (i.e., respiratory therapists should focus on managing ventilators and eliminate most other responsibilities). Nursing staff should concentrate on IV medication administration and assessment, while deferring basic personal care, feeding, etc., to health care assistants, vetted volunteers, or family members if present. Flexible staffing and patient assignment models may be needed to allocate key personnel to the most pressing patient needs.^{XI}

Health care professionals may be asked to work in capacities not necessarily directly aligned with their profession. For example, OTs and PTs may be asked to work as health care team extenders.

Current health care students could be called upon. The Medical Reserve Corps is drafting guidelines that can be used to pull nursing students into the workforce in an appropriate capacity.



Training and Support will include:

- Maximizing existing real-time telehealth-based provider support for critical care that is currently in place in multiple rural hospitals
- Providing health care providers with clinical support and training on key considerations in COVID-19 care and treatment using UNM's Project ECHO model and other remote learning services
- Maintaining focus on supporting COVID-receiving facilities across the state in expanding ICU capacity and capability and preparing staff to function in critical care roles

Other key considerations for staffing include:

- **Childcare, Adult Care, Pet Care** – In-home day care or small group care may have to be arranged. School closures are widespread, leaving young children unattended. Hospitals may consider flexible options, like staffing opposite shifts for staff who agree to alternate in providing care for one another's parents, pets and children. However, such plans must consider the risk of viral transmission attendant to such arrangements.
- **Staff Safety** – Facilities should address competency with just-in-time training related to the PPE provided and the care techniques practiced.
- **Housing** – Providers at risk of acquiring infection may be able to request alternate housing to avoid exposing family members – on- and off-campus options may be needed.
- **Communication** – Staff should be informed about the contingency and crisis practices being implemented and the reasons for these decisions. It is important to consider providing the same information in a variety of ways and multiple times, as health care staff are in a fight-or-flight situation. When guidelines and processes change daily, over-communication is a good practice.
- **Shift Type/Length** – Shifts should be varied to avoid fatigue and burnout.
- **Support, Information and Training** – Medical assistants, environmental services and information technology personnel, transporters and other ancillary staff should be included in staffing plans.

Clinical Care

Essential Personal Protective Equipment (PPE) for COVID-19

Under current Contingency Care – and the possible transition into Crisis Care – it is critical to understand burn rates and par levels for PPE. Each health care facility in New Mexico should create policies and guidelines for maximal conservation and recycling of PPE. Facilities must ensure that health care workers understand the minimum requirements for PPE under Crisis Standards of Care. The primary goal is to assure availability of PPE for health care personnel. Directive suggestions can help guide facilities to understand their options.



Burn Rates

Each health care facility should calculate its current PPE burn rates to determine current days-on-hand supplies of all essential PPE. Each facility should set a target of keeping at least seven days of PPE on hand, and increase supply orders accordingly, keeping in mind there may be unanticipated supply chain interruptions.

The Centers for Disease Control and Prevention has created an online burn rate calculator that uses a box-counting methodology, available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html>

Conservation

In order to ensure required supplies of personal protective equipment for health care personnel during the COVID-19 crisis, acute care and ambulatory facilities should develop policies and procedures to conserve PPE. The CDC suggests the following:

- Maximize Engineering Control: Provide physical barriers, such as glass or plastic windows at reception areas, curtains between patients, etc.
- Maximize Administrative Controls: Limit visitations, cohort patients and share tasks for HCP, etc.
- Maximize PPE Conservation: Methods should be devised for conserving N95-type respirators. CDC guidance offers a series of strategies for how health care facilities can optimize supplies of disposable N95 filtering facepiece respirators when supplies are limited. CDC guidance to optimize PPE supplies is also available for eye protection, isolation gowns and face masks. Acute care and ambulatory facilities should develop policies, standards and training for the extended use and reuse of N95-type respirators and other PPE as appropriate.
- Recycling and Re-Use: In order to maximize the supply of PPE, especially N95-type respirators, New Mexico acute care and ambulatory facilities should implement structures and policies for the extended use, reuse, and recycling of N95-type respirators using ultraviolet light or vaporized hydrogen peroxide and follow manufacturer's instructions for respirator specific-reuse.

ICU and Ventilators

A team of clinicians is developing material and clinical care decision-making guidance under Crisis Standards of Care (CSC), including:

- Defining the minimum standards and requirements for acquiring ventilators under CSC
- Standards for operating and managing modified ventilators and shared ventilation devices
- Minimal ventilation management standards for non-ICU clinicians
- Clinical Care Standards under CSC (e.g. triage rules, nursing/patient ratios)
- Clinical transfer criteria under CSC through a central transfer center
- ICU admission criteria under CSC
- Standards for using non-invasive ventilators with COVID-19 positive patients (CPAP and BiPAP)



Current Clinical recommendations for selecting ventilators include these minimum requirements, adapted here from recommendations provided by the Society of Critical Care Medicine:

- Food and Drug Administration approval or Emergency Use Authorization through FDA
- Intended for facility use or intra-facility transport; ventilators intended for EMS/ambulance use are not appropriate
- Control variables for volume and pressure, respiratory rate, Positive End Expiratory Pressure (PEEP), tidal volume, flow and/or inspiratory:expiratory ratio.
- Measure and display inspiratory tidal volume and peak inspiratory pressure.
- AC power with a batter backup (ideally for more than 4 hours).
- Operate with an O₂ concentrator on a low-flow source that is not an external compressed gas source
- Oxygen consumption by ventilators should allow for the following based on time to empty a 680L tank with assist control volume:
 - 16-L minute ventilation; 35 breaths/min; 15 mL/cm H₂O compliance; 20cm H₂O/L/s resistance; 10 cm H₂O PEEP; F(10)(2) of 1.0 and 0.5; 1:2 I:E ratio >38 min F(10)(2) = 1.0; > 104 min F(10)(2) = 0.5
 - 6-L minute ventilation; 12 breaths/min; 30 mL/cm H₂O compliance; 20cm H₂O/L/s resistance; 5 cm H₂O PEEP; F(10)(2) of 1.0 and 0.5; 1:2 I:E ratio
 - >100 min F(10)(2) = 1.0; > 280 min F(10)(2) = 0.5
- Allow for a range of flows ranging from 10L/min to 80L/min
- Include Positive End Expiratory Pressure (PEEP) therapy and PEEP compensation
- Audible and visible alarms
- Sustained performance of at least 2,000 hours
- If purchased, should include all ancillary equipment needed to ventilate one patient.

Drugs and Therapeutics

A group of researchers, academics and clinicians is actively reviewing drugs available for treatment through clinical trials, other protocols and experimental treatments. This group will provide guidance and protocol suggestions for the following as they become available and will update these guidelines as additional peer-reviewed scientific publications are released describing the safety and efficacy of these therapeutic approaches:

- Hydroxychloroquine
- Remdesivir
- Convalescent Serum

Hydroxychloroquine is an FDA-approved drug and can be prescribed off label at the physician's discretion if currently on hand, or if a supply of these medications can be obtained. This medication can have significant side effects, however, so it is important to monitor any patient prescribed this regimen closely. Additional details have been provided in this Clinical Recommendation posted on the MAT resources page:

https://cv.nmhealth.org/wp-content/uploads/2020/04/NMMATAssessmentHCQSulfate2020_04_09.pdf.



Remdesivir: Remdesivir is currently only available to patients through formal clinical trials and organizations must be participating in a clinical trial to obtain this medication from the manufacturer. Availability of the medication is very limited and therefore should not be considered a valid treatment for COVID-19 patients statewide.

Convalescent Serum: Protocol design and access to serum is currently under investigation by TriCore Reference Laboratories, UNM Hospitals and Presbyterian Healthcare Services. Currently, the FDA recommends that interested facilities who are expecting to transfuse Convalescent Plasma in more than a few patients should enroll in the Mayo Clinic Expanded Access Program, which may facilitate more rapid availability of these units and enable additional patients to receive Convalescent Plasma (See www.uscovidplasma.org). The criteria and timing for distribution of plasma is determined by local blood suppliers.

Testing

A team of clinicians and pathologists is assisting the New Mexico Department of Health to determine guidelines and capacity expansion options for testing based on the most up-to-date recommendations and information available from the CDC and FDA, including:

- Statewide testing capacity
- Prioritization of tested populations (e.g., close contact, nursing home residents, etc.)
- Appropriate testing sites for point of care testing and priorities for testing groups
- Indications and availability of serum testing of convalescent patients (identification of potential plasma donors, assessing immunity and population immunity status)

Innovation:

A team of clinicians, population health experts and business entrepreneurs is investigating and executing on alternative sources to supplement clinical equipment and PPE in short supply in New Mexico, such as:

- Investigation of alternative ventilator resources and fabrication
- Investigation of alternative PPE resources and fabrication
- Development of advanced telemedicine resources for health care

Behavioral Health

The COVID-19 outbreak, as well as the measures to contain it, are expected to impact the emotional health of New Mexicans. The Behavioral Health Workgroup is developing guidance to help people who are living with substance abuse disorders and serious mental health disorders and those who support them and provide treatment services.

Areas of planning needs related to behavior health include:

- Developing a process for safe treatment of COVID-19 for seriously mentally ill individuals that is capable of responding to both needs



- Developing a process to respond to the danger of alcohol withdrawal resulting from social distancing and closure of liquor stores, in order to prevent deaths from unattended withdrawal and reduce presentations to ERs and other health care settings by people in withdrawal from alcohol
- Blunting the expected increase in incidents of domestic violence stemming from lack of access to resources for victims and increased stress on families
- Ensuring the availability of in-patient and out-patient behavioral health and detoxification services

The Behavioral Health Workgroup has begun outreach to city, county, and Tribal and Pueblo leaders to increase awareness about the need for harm reduction, and will develop PSAs and other public education resources.

Appendix

The recommendations provided by the MAT for clinical care and healthcare operations related to the material in this Acute Medical Surge Plan document have been posted on the NMDOH COVID-19 website:

<https://cv.nmhealth.org/clinicians/medical-advisory-team/>

Update Schedule

This plan will be updated each Friday and a new version will be distributed and posted online at:

<https://cv.nmhealth.org/clinicians/medical-advisory-team/>

