

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

Prepared by the Medical Advisory Team

April 2020 (as revised)

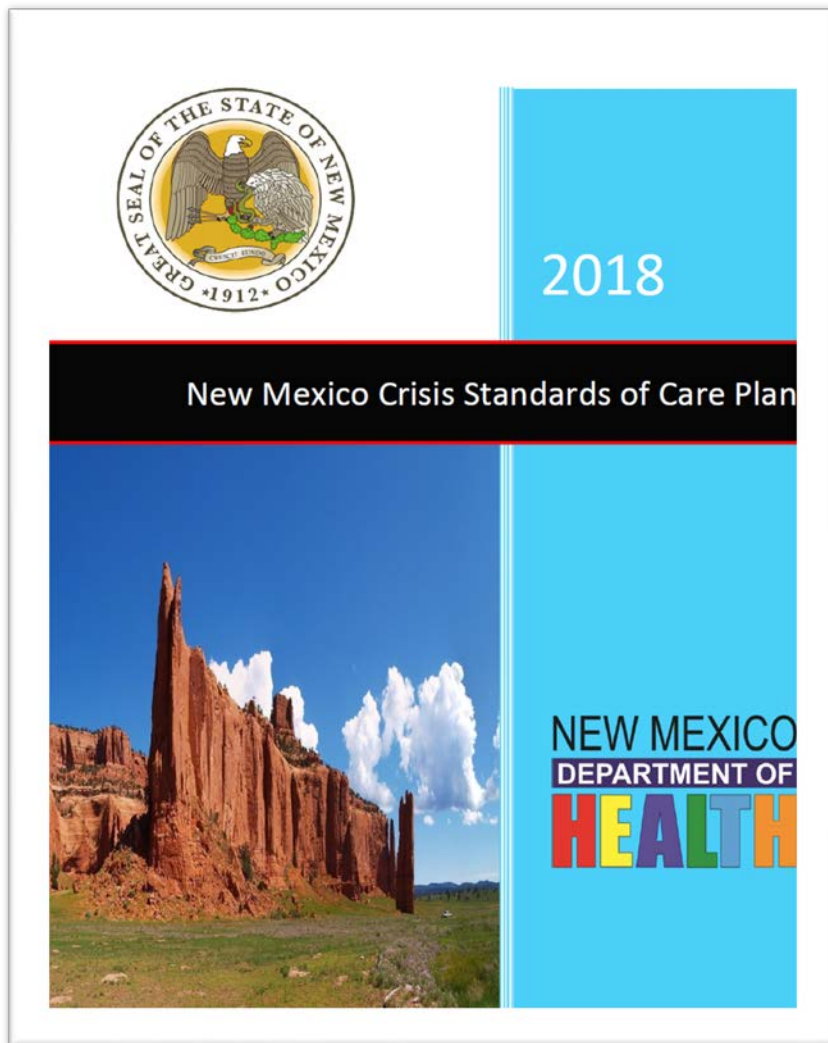


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Overview

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 swell of intensive care unit patients at the peak of the event. This event will cause major disruption to the 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. The need for established guidance at this critical time necessitated the expedited development of this framework using the New Mexico Medical Advisory Team process (see Appendix A). 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).

For the purposes of the plan, the term *medical surge* describes the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. This includes both *surge capacity*, which is the ability to evaluate and care for a markedly increased volume of patients, and *surge capability*, which is the ability to manage patients requiring unusual or very specialized medical evaluation and care.

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.

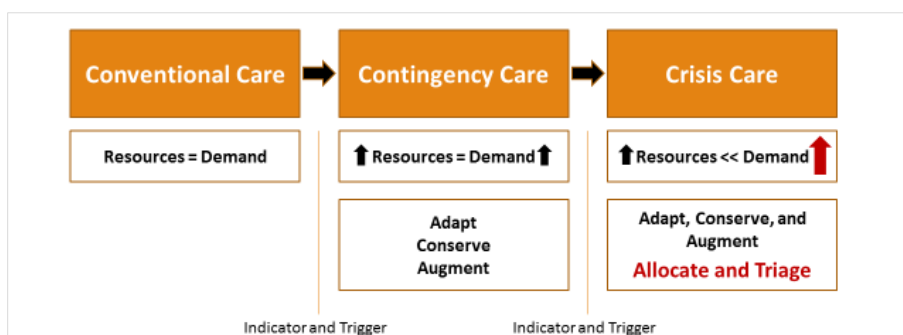
Continuum of Care

The IOM defines three levels of care within the Concept of Operations of Crisis Standards of Care, which serve as the basis for determining likely levels of 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

At the time of this document's creation, New Mexico's health care system was well into the implementation of contingency-level care to support public health measures and in anticipation of increased healthcare needs. The movement into contingency-level care statewide was mandated by 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

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.

To facilitate healthcare and public health actions along the continuum of care during the pandemic, this plan describes conditions that will likely develop within hospitals and health centers across three levels beyond conventional care: Contingency Level 1, Contingency Level 2, and Crisis Standard of Care (Appendix C). Additional criteria will be described in future document versions for other components of the healthcare systems (i.e., EMS, behavioral healthcare, skilled nursing facilities, long-term care facilities). By describing the criteria that are likely to be present across multiple indicators as the pandemic worsens, New Mexico healthcare and public health leaders can better evaluate individual agencies and the system as a whole. Understanding the likely trajectory of healthcare indicators will allow the entire state to respond appropriately with measures to support the healthcare delivery system.

Duty to Plan

Hospitals must rapidly develop or augment their medical surge and resource conservation plans that move from Conventional to Contingency to Crisis levels of care 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. Within contingency capacity, individual hospitals will manage plans for various tiers of implementation. Those tiers will necessarily vary by facility due to different resources, layouts and competing service offerings. Each hospital will maintain an incident command utilizing Hospital Incident Command Structure, including a planning function, to assess the internal and external environment and demand and move each facility through its various tiers. Strategies for remaining in Contingency Capacity 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 and outpatient care units.
- Expanding patient care areas to include hallways and semi-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 Planning

New Mexico hospitals must prepare for the expected large number and special needs of COVID-19 patients. 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.

Standards of Care in New Mexico During a Healthcare Crisis

The COVID-19 pandemic creates extraordinary medical circumstances that will severely handicap health care workers in almost every kind of care they provide, and it will require providers to change their normal perspective to a crisis perspective. Normally, providers have an ethical and legal obligation to do whatever is in the best interest of each of their patients; in a crisis providers instead have an ethical and legal obligation to do what is best for everyone in the state, not just what is best for their individual patients. The alternative to applying this perspective, and the standard of care that goes with it, is to provide good care to some New Mexicans, and no care to others. That would be an ethical disaster because it would mean that we would have to close the doors of our healthcare institutions to those in desperate need for medical care.

Healthcare providers across all fields, as well as healthcare facilities and agencies, will deploy a variety tactics and methods to manage and treat both COVID-19 and non-COVID-19 patients under the evolving conditions of a medical surge response that will not resemble the normal, pre-pandemic standards of care. The use of surge capacity tactics and methods will vary across large and small health systems, between communities, over time, and along the continuum of contingency to crisis levels of care. Appendix D of this plan illustrates tactics and methods that are expected to be needed by providers and facilities at some point during the crisis to manage increasing patient volumes and unique needs of COVID-19 patients, while managing the healthcare needs of all patients and all health conditions. The list is not exhaustive, as the uncertain nature of the pandemic crisis will necessarily require adaptations and initiatives that cannot be precisely predicted or described but that will certainly deviate from pre-pandemic frameworks for healthcare.



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 Hub 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 frequently update capacity and capability 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.



Modeling and Analysis

Medical surge planning for response to a disease outbreak should be based on the best information available regarding the spread of the disease and the number of people affected in each community. To guide planning efforts, the New Mexico Department of Health will direct the creation and maintenance of 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 critical healthcare needs 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 resources will be forecasted by county and will include medical and surgical beds, negative pressure and isolation rooms, ICU beds, ventilators, and respiratory therapy staff.

The most up-to-date discussion 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/>

The modeling results and processes are posted on the New Mexico Department of Health's COVID-19 website: <https://cvmodeling.nmhealth.org/>

Regionalization

Regional Care Planning

The most efficient model of healthcare delivery, particularly during a healthcare crisis, is through a regionalized structure. This is especially important in New Mexico because of our vast land mass and the rurality of many communities. The purpose of a regionalized care structure includes:

- Providing a supportive infrastructure for smaller hospitals that allows for patients to be cared for *within their own communities*.
- Utilizing a *hub-and-spoke model* that involves a larger hub hospital that serves as a resource for smaller satellite hospitals or spokes within the region.
- Conserving advanced care or critical care resources
- Ensuring that patients receive the correct level of care within the proper delivery system and as close to home as possible.

Hub-and-Spoke Model for New Mexico

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. The intent of this model includes: improving regional communication during an emergency, coordinating patient transfers, coordinating



resource needs (equipment/supplies) and maintaining a State-wide situational awareness. 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.

Regional hub facilities include:

Central Region:

- Lovelace Medical Center, Albuquerque, Dr. Vesta Sandoval, CMO
- Presbyterian Hospital, Albuquerque, Clay Holderman, EVP/COO
- UNM Hospitals, Albuquerque, Mike Chicarelli, 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 leader is expected to make contact with their respective spokes frequently in order to discuss plans, coordinate transfers, answer questions and evaluate concerns. The table below represents ICU specific surge capability by hub and spoke region.

Role of Hub Hospitals	Role of Spoke Hospitals
Check in with assigned "Spoke Hospitals" weekly at a minimum to assess specific needs/identified issues	Communicate with Hub hospital on a weekly basis at a minimum
Peer-to-peer collaboration with other hubs	Coordinate with Hub hospital on patient transfers
Assure information sharing within region and at the State level	Update Hub regarding operation or situational 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 spoke hospitals	Communicate regional plans with local hospital and medical staff
Support spoke hospitals in terms of providing a higher level of care	
Coordinate the distribution of equipment, supplies, medications/vaccines provided by outside sources (State of NM, FEMA, Strategic Stockpile, etc.)	
Attend the Regional Hub Check-in meetings each week	



New Mexico Hub-and-Spoke Hospitals

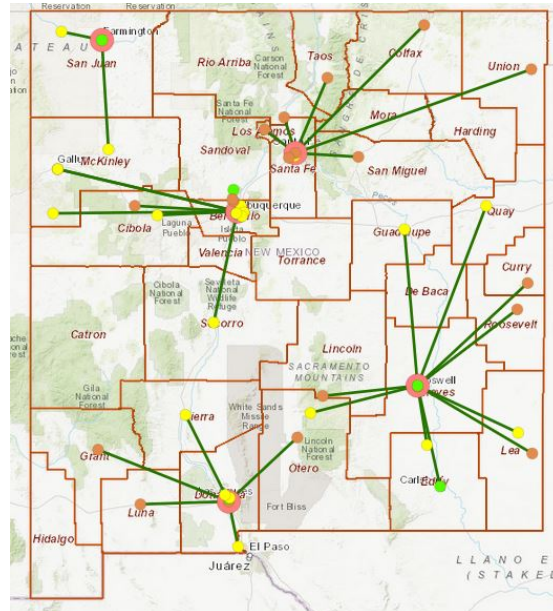
CENTRAL REGION HUB	SPOKE HOSPITALS
Lovelace Medical Center, Abq, Vesta Sandoval, CMO Presbyterian Hospital, Abq, Clay Holderman, EVP/COO UNM Hospitals, Abq, Mike Chicarelli, COO	UNM Sandoval RMC, Rio Rancho, Jamie Silva-Steele, CEO
	Kindred Hospital, ABQ, Larry Rodgers, CEO
	Encompass Health, ABQ, Rachelle Spencer, CEO
	Haven Behav. Hospital, ABQ, Jennifer Barut, CEO
	Central Desert Behav., ABQ, Kelley Whittaker, CEO
	Presbyterian Rust, Rio Rancho, Angela Ward, HCE
	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
	Zuni Comprehensive Health Center, Jean Othole, CEO
	Rehoboth McKinley Christian, Gallup,
	Gallup Indian Medical Center
	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, HCE
NORTHWEST REGION HUB	SPOKE HOSPITALS
San Juan RMC, Farmington, Jeff Bourgeois, CEO	Northern Navajo Medical Center
	Crownpoint Health Care Facility
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
	Mescalero Indian Hospital, CEO Dorlynn Simmons
	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 Center

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 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 will be used for the transport of adult non-specialty 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 using the existing EMResource bed management system.
- Patients not in need of intensive care will be encouraged to stay in their current hospital.

Alternative Care Sites

The number of patients with COVID-19 is predicted to exceed the State's normal healthcare 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.

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 appropriate alternative site 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 Plan

This Acute Care Medical Care Surge Plan includes coordination of transportation of patients for care at hospitals and skilled nursing and long-term care facilities. The transport plan is based on the development of Emergency Medical Services (EMS) COVID Strike Teams, made up of EMS transport vehicles located in the Albuquerque area, Santa Fe, Las Cruces, Clovis, and ideally Carlsbad, Farmington, Hobbs, and Portales. The goal is for each team to have a dedicated crew that has received any necessary updated training on transporting ventilated patients, PPE, and any other identified needs according to the capability of the unit. The utilization of these vehicles will supplement available facility-owned non-emergency transport, and will not impact 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 NM EMS system, which have the capability of relatively rapid response, and critical care level care. A second critical aspect of the plan is the success of the Central Communications Center. This center will be the clearinghouse for all critical care patients being transferred from any of the 44 acute care hospitals needing to transfer a patient to one of the 7 designated hub hospitals.

For COVID related medical control, there will be EMS physicians on call to provide necessary advice and guidance. The contact number for medical control will be provided to the transfer resource.

Should civilian resources be expended or otherwise unavailable, the dispatcher will contact the State EOC to request National Guard ground or air assets as appropriate. The New Mexico National Guard has offered the use of approximately 10 Forward Litter Ambulances (FLA's) and 5 UH-60 Blackhawk Helicopters. The FLA's will be staffed with EMT-Basics, and capable of transporting up to 4 non-ventilated patients. The UH-60's will have the capacity to transport 2 ventilated patients simultaneously.

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 skill 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:

- 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 volunteers in declared emergencies, will serve as the backbone for recruitment and verifying licenses and performing background checks for identified individuals.
- **Emergency Licensure:** The New Mexico Medical Board, the Board of Pharmacy, and many other licensing agencies have emergency licensure provisions. The Medical Advisory Team 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.

Other Sources of Expanded Workforce: The following categories have been targeted as potential sources of additional health care professionals: Medical Reserve Corps volunteers, 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 States 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 could 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.

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.

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 at home. 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 stressed and tired. 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

The unique challenges of treating a novel disease and the fast-moving scientific discoveries related to COVID-19 will require healthcare providers and State leaders to stay in tuned to a large amount of new information. The Medical Advisory Team will engage healthcare experts across many specialties to review new federal regulations and recommendations, as well as published research related to COVID-19. Regular updates and additions to the MAT Clinical Care Workgroup recommendations for the general areas identified below will be posted on the New Mexico Department of Health's COVID-19 website: <https://cvmodeling.nmhealth.org/medical-advisory-team/mat-resources/>

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 (rate of use) 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, group patients according to medical need, share tasks for Healthcare Providers, 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.
- Reprocessing: Facilities can also work with the Department of Health to leverage the Battelle Critical Care decontamination System (CCDS) located at the Santa Ana Star Center for reprocessing of available PPE. Facilities can enroll for use of this reprocessing technology at: ww.battelle.org/decon.

ICU and Ventilators

A team of clinicians has developed clinical care decision-making guidance under Crisis Standards of Care (Appendix E), 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 (e.g. CPAP and BiPAP machines)

Drugs and Therapeutics

A group of researchers, academics and clinicians will review the drugs and other therapies available for treatment through clinical trials, other protocols and experimental treatments including convalescent plasma. This group will provide guidance and protocol suggestions for these as they become available and will provide updated guidelines as additional peer-reviewed scientific publications are released describing the safety and efficacy of these therapeutic approaches.

Testing

A team of clinicians and pathologists is assisting the New Mexico Department of Health to determine guidelines and capacity expansion options for COVID-19 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
- Appropriate testing sites for point of care testing and priorities for testing groups
- Indications, availability and validity of serum testing

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.

Update Schedule

This plan will be updated as needed and a new version will be distributed and posted online at:

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



Appendix A – 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 activated a 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: 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 workgroups include:

- | | |
|----------------------------------|---------------------|
| • Regional Care | • Workforce |
| • Clinical Care | • Behavioral Health |
| • Transportation | • Legal and Ethics |
| • Modeling and Analytics | • Communication |
| • Skilled Nursing/Long-term Care | • Others as needed |

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://cvmodeling.nmhealth.org/medical-advisory-team/mat-resources/>



Appendix B – Sustaining Surge Capacity (July 2020)

Overview

The expansion of health system capacity to manage the initial phase of the COVID-19 pandemic has largely been successful in New Mexico. Unlike a discrete event disaster, however, a pandemic crisis requires a prolonged disaster response. Expanded healthcare services must continue to manage on-going new infections along with providing the baseline healthcare required for preventive medicine, chronic conditions, trauma, and other infectious diseases. This Appendix outlines the plan to maintain and, if necessary, further expand the healthcare delivery system during the course of the COVID-19 pandemic.

Assumptions and guiding principles:

1. New Mexico has flattened the curve for new COVID-19 infections by implementing social distancing and other public health measures.
2. The number of COVID-19 patients requiring hospitalization peaked in mid-May and has now plateaued. Regional fluctuations in case numbers and localized outbreaks continue to occur.
3. As restrictions on gatherings, restaurants, businesses, and schools implemented in March 2020 continue to be lifted, the number of positive cases including patients requiring hospitalization will continue with spikes around the current plateau.
4. The number of non-COVID-19 patients requiring hospitalization began to increase in early June. This increase is anticipated to continue and plateau over the next months. Many patients, as directed, “stayed home”, unfortunately resulting in a delay in care and, thus, a higher level of care upon presentation.
5. The delay of healthcare services for chronic diseases followed by the resumption of non-COVID healthcare services has resulted in a large influx of both critical and non-critical patients to the New Mexico healthcare system
6. New Mexico remains at the contingency level of care but could reach crisis standards of care if there is another wave of COVID-19, or due to the expected seasonal influenza burden, or because of an additional unforeseen crisis.

Sustaining medical surge capacity

Modeling and analysis

Computer-based modeling is a powerful tool to assist health policy development and disease prevention and control. In New Mexico, COVID-19 modeling helps in planning the State’s response to the pandemic by attempting to predict the impact of COVID-19 on health systems and populations. The MAT and State officials will continue to develop and analyze COVID-19 models as one of the tools necessary for gauging process towards reopening/restricting activities.

Legislative and regulatory modifications

In response to COVID-19, state and federal agencies have enacted numerous modified and new regulatory and legislative measures to allow for the expanded healthcare and public health capacity used to fight the disease in New Mexico. The

MAT will direct a cataloging of these changes and develop a plan to encourage extension of expiration dates or further measures as necessary to maintain surge capacity. This effort will include step-down planning for return to pre-COVID-19 status, and contingency planning for termination of state public health orders related to healthcare.

Call Center and Hospital Coordination

In conjunction with the Department of Health, the MAT Operations Workgroup will review the status of the Call Center and Hub and Spoke model and identify needed modification or contraction, ensuring readiness for a surge of patients in the fall and winter. The group will use New Mexico's on-going disease impact modeling to create a long-term strategy for continuing coordination and collaboration among hospitals, incorporating discharge and return to home coordination.

Current workforce support, stabilization and sustainability

The response to COVID-19 has caused an unprecedented strain on healthcare resources, most importantly on healthcare and health facility professionals. Protection of worker health, both physical and emotional, continues to be a high priority moving into the sustainability phase of response. In fact, health services will not be sustainable at all without a robust plan to provide respite for frontline workers. The MAT will create a best practices model for supporting the emotional and physical wellbeing of workers, and encourage the monitoring of workforce retention as one measure of adequately addressing this issue.

Behavioral Health services for people infected with COVID

The existing challenges of providing adequate healthcare services for people with behavioral healthcare needs have been magnified during the COVID-19 crisis. These challenges include both limited options for inpatient behavioral health care for COVID-positive patients and an increase in the need for services brought on by social distancing measures and the economic crisis. The need to identify a care pathway for COVID-positive patients within the behavioral health systems is a high priority. State officials and behavioral healthcare providers will continue collaborate to seek solutions.

Primary Care services for screening and treatment of COVID-19

The expected continuation of new COVID-19 cases into the fall and winter, coupled with the expected seasonal increase in other respiratory diseases such as influenza and respiratory syncytial virus, will require additional resources for screening, testing and treatment. People who are not experiencing severe symptoms may be able to receive care through primary care or community urgent care centers. This will require an organized and measured Statewide approach to ensure adequate COVID-19 testing and infection control practices and supplies across the spectrum of healthcare environments.

Flexible and expandable healthcare infrastructure

Additional capacity to care for non-critically ill patients has been created in several locations in New Mexico using Alternative Care Sites with federally-provided medical equipment and supplies and volunteer or contract staff. The MAT will review the use of these sites and evaluate them for future need and purpose. The goal will be to preserve the ability

to re-expand the healthcare infrastructure by the re-deployment of equipment, supplies and personnel for additional waves of patients.

Coordination between healthcare services and public health for prevention and testing

The response to COVID-19 has been driven partly by the availability of tests to detect the disease. The availability of various types of tests has improved, but still remains a challenge. Members of the MAT with expertise in diagnostic testing and personnel from the Department of Health Epidemiology and Response Division will collaborate to develop a balanced and evidence-based approach to COVID-19 testing. The testing plan will address the need for identification of the virus or past infection in symptomatic and non-symptomatic persons, and for both healthcare purposes and public health research, surveillance, tracing and prevention. Testing among essential workers or at-risk populations (e.g. racial and ethnic minorities, people residing in congregate facilities) will be prioritized. In addition to testing, the State will continue prevention strategies such as enhanced screening and infection control within skilled nursing and long-term care facilities and other congregate settings, and provision of quarantine facilities and medical shelters to mitigate disease spread and worsening of symptoms requiring hospitalization.

Stable and adequate supply of PPE for all healthcare and ancillary services

The availability and distribution of supplies to maintain infection control and protection for healthcare and facility workers has been one of the most difficult aspects of the global response to COVID-19. Early in the crisis, New Mexico developed a detailed plan to obtain, conserve, track, and distribute PPE to healthcare facilities. This plan will be reviewed by the Office of the Governor with assistance from the MAT to evaluate the amount of PPE that is being held in reserve, identify new sources of PPE, provide training and outreach to the various healthcare user groups, and encourage sensible conservation and recycling policies.

Medical intelligence and information processing

New advances in medicine and healthcare for COVID-19, as well as other proposed solutions for providing services in a COVID environment, require review by subject matter experts to ensure that they are sound, safe and effective. Subject matter experts within the New Mexico Department of Health, the Medical Advisory Team, the academic community, the healthcare community, and the technology community have been tapped for this effort and will continue to evaluate new approaches to the management of COVID-19 patients. They will continue to use scientific evidence and authoritative resources to guide recommendations for policy and process changes.

Criteria for future changes in the need for medical care

There is considerable uncertainty about the future course of the pandemic in New Mexico, the United States, and around the world. During the sustained surge phase, members of the MAT will form recommendations and identify criteria for both a resurgence of cases requiring a ramping up of contingency or crisis level of operations and a return to normal or near-normal operations. As with the MAT workgroups, criteria for change in operational levels will be guided by the same gating criteria New Mexico will use for guiding reopening: rate of disease spread, availability of tests and success with contact tracing, availability of PPE, and availability of ICU beds. Significant changes in these measures will trigger expansion or contraction of surge capacity as needed.

Appendix C – Criteria Describing Levels of Care

Indicator		Criteria Demonstrating Contingency Level 1	Criteria Demonstrating Contingency Level 2	Criteria Demonstrating Crisis Standards of Care
Clinical Care	Delays	Delay of non-essential patient care and extended wait times without anticipated clinical compromise	Cancelling, postponing or modifying essential clinical services that compromises patient care	Patient care limited to emergency and time-critical services only
	Transfers	Increasing patient transfers to regional facilities due to exhaustion of local facility capacity or capability	Significant transfer delays occurring, or receiving facilities experiencing transfer volumes that compromise patient care, particularly in specialty services.	Inability to transfer or receive patients and/or implementation of transfer triage and allocation protocols.
		Statewide triage and transfer center used to transfer COVID-19 patients to higher levels of care or for level-loading of Intensive Care Units (ICU)	Statewide triage and transfer center used to transfer all but specialty-care patients	Statewide triage and transfer center used to manage all ICU patient transfers
	Triage and Allocation	Hospitals developing triage boards and identifying triage officers according to the <i>New Mexico Triage Protocol for the Allocation of Scarce Resources Under COVID-19 Crisis Standards of Care (Appendix E)</i>	Hospital triage boards meeting to develop triage protocols and processes	Full activation of triage officers and boards, and implementation of triage and allocation protocols and processes
Facility	Emergency Department (ED) and Alternative Access Points	Less than 50% utilization of expanded ED capacity and/or alternative access points	More than 50% utilization of maximum expanded ED capacity and/or alternative access points for multiple days within each reporting period	Saturated access leading to triage and/or resource allocation that compromise patient care
	ICU	Less than 50% utilization of contingency capacity	More than 50% utilization of contingency capacity for multiple days within each reporting period	More than 100% utilization (overflow) of contingency capacity for multiple days within each reporting period
	Non-ICU	Less than 50% utilization of contingency capacity	More than 50% utilization of contingency capacity for multiple days within each reporting period	More than 100% utilization (overflow) of contingency capacity for multiple days within each reporting period
	Healthcare Modeling	Hospitalization data project the need for contingency level capacity	Hospitalization data project that community needs will exceed the resources available within 2 weeks.	Hospitalization data project that community needs will exceeding resources available presently and into the future.
Workforce	Redeployment	Workforce cross-training and orientation implemented in anticipation of staff redeployment to new areas of care	Workforce redeployed (e.g. from non-essential services such as clinics) and providing care outside of regular scope of practice	Insufficient qualified and/or available staff for immediate need.

Indicator		Criteria Demonstrating Contingency Level 1	Criteria Demonstrating Contingency Level 2	Criteria Demonstrating Crisis Standards of Care
	Sustainment	Tiered staffing model initiated to permit staff with virus infection or exposure to provide patient care under specified conditions, with asymptomatic but exposed staff working under those conditions	Utilization of asymptomatic COVID-19 positive staff for the care of COVID-19 positive patients under specified conditions	Utilization of asymptomatic COVID-19 positive staff for the care of all patients under specified conditions
	Capacity	Workforce augmentation, protection and conservation strategies implemented (e.g. hiring, use of overtime, use of contract workers, worker infection control practices)	Staff shortages resulting in inability to fully staff licensed and/or contingency bed capacity	Insufficient number of qualified and/or available staff to maintain patient care
	Ratios	Staff shortages and patient volumes resulting in maximum staff to patient ratios in most areas of care	Standard staff to patient ratios exceeded with compromise of patient care	Unable to further increase staff to patient ratios due to compromise of patient care
Essential Equipment and Supplies	Acquisition	Depletion of pre-pandemic supplies and equipment resulting in extensive re-orders, interfacility sharing and requests for State assistance	Supply chain for essential equipment and supplies no longer reliable, and limited availability of interfacility sharing	Supply and/or equipment shortages leading to triage and/or resource allocation that compromise patient care
	Management	Facilities practicing conservation, reuse, adaptation, and substitution without anticipated clinical compromise	Initial rationing or substitution of materials and supplies that compromises patient care	Shortages leading to triage or resource allocation that compromise patient care

Appendix D - Healthcare Surge Operational Tactics

Delays	Health care facilities may hold COVID-19 and non-COVID-19 patients beyond their pre-pandemic scope of service for prolonged periods of time when unable to transfer patients to a higher level of care.
	Providers will use best efforts to stabilize and maintain patients awaiting transfer, even outside credentialed scope of practice, relying on telephonic and telehealth consultative guidance when possible.
	Because facilities may redeploy resources or may have staff resources constrained by disease exposure or quarantine, they may prioritize and cancel or delay care for COVID-19 and non-COVID-19 patients according to their capacity and capabilities, recognizing routine monitoring care and preventive care may be cancelled.
	Facilities may temporarily limit the provision of some or all medical care to only those patients who are experiencing life-threatening medical emergencies.
Transfers	Sending facilities may not have appropriate consultation or supportive equipment and will use best efforts to stabilize and prepare patients for transfer.
	Receiving facility providers may manage patient transfers without access to traditional examination or diagnostic tools and results, and may advise non-traditional and inexperienced staff in the techniques for stabilizing care prior to transfer.
Triage and allocation	Facilities may use triage boards and triage officers to prioritize patient care and transfers according to changing facility capacities and capabilities.
	Providers may not have access to decisions made by triage boards or triage officers in all facilities or at all times and will make decisions for allocation of care based on patient prognosis and clinical conditions, as well as available resources.
Facilities	Facilities may have to re-purpose physical spaces, group patients according to medical need, and utilize outdoor spaces and temporary structures. These changes may occur for both COVID-19 and non-COVID-19 patients.
	Care may be provided in non-traditional environments where maintaining the traditional care standards will be impossible, and in which access to supportive monitoring, oxygen, and rescue equipment or traditional beds and mattresses for prevention of pressure ulcers, patient falls or other healthcare-acquired harm, will not be possible.
	Facilities will initiate and maintain infection control practices that may limit or prevent visitation and communication between patients and loved ones.
	Facilities may not be able to maintain all infection control practices and controls in contingency environments. In such cases, they will use best efforts to cohort known or suspected infectious patients and maintain separation from other patient populations.
Workforce	Providers and facilities may modify modality of visits for both known COVID-19 and other patients to limit in-person contact and potential disease exposure. This may require elimination of physical exams, basic vital sign collection and diagnostic labs, and create a reliance on telemedicine, telemetry, and self-reported health data.
	Providers may provide care outside their pre-pandemic scope of practice for both COVID-19 and non-COVID-19 patients
	Providers may provide care without formal demonstration of competency to perform procedures and interventions
	Facilities may employ or utilize providers without formal verification of competencies and primary source verification of credentials
	Facilities may permit staff who have been exposed to COVID-19 or who test positive for COVID-19 to work under certain circumstances.
	Facilities may require staff to work duty hours and schedules beyond their pre-pandemic levels
	Due to shortages, facilities may distribute personal protective equipment to staff according to changing needs and expected exposure level.
Facilities may alter or modify provider-to-patient ratios from pre-pandemic levels for both COVID-19 and non-COVID-19 patients.	

Equipment and supplies	Providers may react to shortages by substituting alternative supplies and equipment and/or modifying supplies and equipment beyond their intended use.
	Facilities may utilize new and unvetted vendors and sources for supplies and equipment.

Appendix E: NM Triage Protocol for the Allocation of Scarce Resources Under COVID-19 CSC

Executive Summary

This protocol (1) establishes the legal liability standard to be applied to healthcare providers who follow the protocol in treating Covid-19 and other patients during the current crisis and (2) provides a consistent way in which providers must triage Covid-19 patients when there are inadequate healthcare resources, like ventilators, to make them available to every patient who needs them. We recognize that this protocol in treating COVID 19 and other patients does not address every circumstance that might occur in a patient care setting. In those instances where the protocol is silent or unclear as to how to address a specific circumstance regarding patient care or the allocation of scarce resources, healthcare facilities and providers and staff should exercise reasonable discretion developing policies and procedures in light of the available resources of their healthcare facility, as directed by their Local Triage Board.

First, the protocol announces that healthcare providers who treat patients under the extraordinary medical circumstances prevailing during this crisis will not be measured by the ordinary standard of care applied in medical malpractice actions, but, rather, by a more limited standard that asks only whether the provider's act was grossly negligent or done recklessly or with willful disregard for the health of the patient. This protects providers who must make excruciatingly difficult decisions under circumstances that have never arisen before. This protection is necessary to assure that a sufficient number of providers will be available serve the public health needs of New Mexicans throughout this crisis.

Second, the protocol provides both a procedure and substantive standards for making triage decisions when two or more patients can benefit from treatment, like ventilator care, but when there are inadequate resources to provide the treatment to all who could benefit. The protocol provides for Triage Boards and Triage Officers at each hospital in the state as well as a Statewide Hub Triage Board and Statewide Triage Officers who will address inter-hospital transfers. Triage officers will base their triage decisions on priorities determined entirely by the medical attributes of patients and those patients' prognoses with regard to their chance of survival. The protocol does not permit consideration of any other factor, including gender, race, ethnicity, religion, social status, age, education, sexual orientation, physical or mental disability of any kind, employment status, immigration status, social worth, value to the health care system, existence of dependents, insurance coverage or ability to pay for treatment, all of which are ethically irrelevant to making allocation decisions. It applies only to patients age 18 and older.

New Mexico Triage Protocol for the Allocation of Ventilators Under COVID-19 Crisis Standards of Care

INTRODUCTION

This Protocol is issued to allow for appropriate medical care of patients with COVID-19, and patients with other medical conditions who require scarce healthcare resources, during the declared public health emergency created by the COVID-19 crisis. The purpose of this Protocol is to establish the New Mexico crisis standards of care under these circumstances. All health care providers in New Mexico are bound by the standards provided in this Protocol, which replace the ordinary standards of care during this emergency. These standards will automatically expire at the termination of the current declared emergency.

These crisis standards of care are required because the ethical and legal obligations of all healthcare providers necessarily change during a crisis of this kind and magnitude. Normally, healthcare providers have an obligation to their patients individually, and both law and clinical ethics counsels those providers to offer what is best for their patients, and then to provide the care chosen by their patients. Under the crisis circumstances which are likely to arise in this emergency, there may be times during which certain scarce resources, such as ventilators and intensive care beds, will be in short supply and cannot be provided to all patients who choose that care, and, thus, they cannot be offered to all patients who might benefit from them.

Under these circumstances, providers have an obligation to the public good to do whatever is necessary to save the most lives. This means that patients with a better chance of survival as a result of receiving scarce resources must be given priority for those resources despite other individual patients' choices, and despite the fact that some

of those other individual patients would have had a chance to benefit from the scarce resource.

The allocation method for scarce medical resources must be fair, consistent, and transparent. Being fair means that all patients across the State are subject to the same allocation procedures, and that choices are based entirely on clinical considerations. With regard to the allocation of scarce resources, patients at all geographical locations will be treated equally and patients with COVID-19 and other acute and critical conditions will be treated identically.

Being consistent means the same procedure and substantive policies will apply to everyone in the state.

Finally, it is the intent of the publication of this protocol to make it transparent.

In no case will any allocation decision consider other patient attributes such as gender, race, ethnicity, religion, social status, age, education, sexual orientation, physical or mental disability of any kind, employment status, immigration status, social worth, value to the health care system, existence of dependents, insurance coverage or ability to pay for treatment, all of which are ethically irrelevant to making allocation decisions.

LEGAL CONSEQUENCES OF ADHERING TO CRISIS STANDARDS OF CARE

Health care workers providing care during this crisis will often be severely handicapped when they are making medical decisions. They often will not have access to all of the information that they would normally consider when making healthcare decisions. For example, they may not have access to medical records of those whom they have been asked to triage or provide care, and circumstances may make it impossible for them to talk to their patients' families. In addition, they may be called to triage or treat far more patients than a reasonable provider would under normal circumstances, and they will be asked to triage and treat those patients much more quickly than they normally would. Although all providers are always expected to act with due care under the circumstances, it would be unfair to expect healthcare workers during this crisis to act with the deliberation they would engage in under other, more normal, times.

Thus, it is important to reassure health care providers that their participation in this protocol, with all of its uncertainties, will not expose them to arbitrary liability. The purpose of this Protocol is to assure health care providers, including clinicians and institutions, that they will be protected from legal liability for making treatment decisions that are consistent with these COVID-19 crisis standards of care, as long as those providers do not act with gross negligence or with willful and malicious disregard of the health of their patients. All agencies of New Mexico government are required to liberally interpret this emergency protocol, recognizing the extreme pressure and extraordinary burden that is imposed upon providers engaged in treating COVID-19 patients.

PROCEDURE FOR ALLOCATION AND SUBSTANTIVE PRINCIPLES OF ALLOCATION

Creation of Local Triage Boards and Triage Officers

In preparation for the implementation of the crisis standards of care, each hospital will create a Local Triage Board, which will have the responsibility to ensure that the appropriate triage and allocation policies and procedures are in place, maintain contact with other Triage Boards to facilitate inter-organization collaboration, maintain contact with the state Medical Advisory Team to preserve state-wide consistency in the administration of this protocol, explain the allocation process to community groups, patients and families, and review appeals of decisions to remove patients from scarce resources. Each hospital will also appoint Triage Officers who will administer the priority scale to patients requiring intensive care, mechanical ventilation, or another scarce resource, determining who will access those resources in a time of scarcity in that hospital. The Triage Officers will also serve to coordinate allocation of ICU beds with the State Triage Hub, when bed capacity becomes available to receive additional patients into that hospital. The Triage Officers should be physicians with the clinical expertise necessary to administer the priority scale. The Triage officers should serve as members of the Local Triage Board.

Statewide Capacity Surge Regional Centralized Triage Hub and Medical Command Center, and the Initial Assessment of Patients

A Statewide Triage Officer at the Statewide Triage Hub (the Statewide “Hub”), established by the Medical Advisory Team, will receive and resolve requests for intensive care services from throughout the state and will assign patients in need of critical care to scarce resources, applying the substantive principles described below.

The Statewide Triage Hub will collaborate with the Local Triage Officers to understand the available ICU capacity in each location, to allow them to use the same priority scale to determine which patients will be transferred to access those beds.

In order to respond to a surge of patients requiring critical care and access to scarce resources, all providers are required to assist with the sharing of information and evaluation procedures and to facilitate the orderly transfer of patients from regional hospitals.

Prior to making a triage decision, the Local and Statewide Triage Officers will determine whether a patient has an advance directive or a proxy decision-maker, and whether the patient wishes to receive intensive care services, mechanical ventilation or other scarce resources under the circumstances. If the patient expresses the wish not to be placed on a ventilator or receive those services, the patient will continue to receive appropriate hospital care, including treatment of any symptoms arising from their condition. Patients and families may choose to receive care focused on symptom management, which could be delivered in the inpatient setting or in the home.

Substantive Principle Governing Assessing Patients Under This Protocol

Because patients differ in the severity of their symptoms and in the probability that they will survive the illness episode, when there is a scarcity of resources, some patients should be prioritized over others in order to maximize the usefulness of resources and to save as many lives as possible.

Patients' priority for treatment under this protocol depends upon those patients' chance of survival. To facilitate that priority decision, the scoring model described below will be used. This model is similar to those developed at the University of Pittsburgh and proposed for use in other medical systems during a crisis of care.

The model assesses a patient's clinical and functional state and it yields a Priority Score. The initial step uses the Sequential Organ Failure Assessment, SOFA, to assess the patient's current clinical status, predicting the likelihood of survival from the acute clinical insult itself and the stresses of undergoing critical care and mechanical ventilation.

Table 1. Scoring Strategy to Allocate Ventilators During a Public Health Emergency

Specification	Point System*			
	1	2	3	4
Prognosis for short-term survival (SOFA score#)	SOFA score < 6	SOFA score 6-8	SOFA score 9-11	SOFA score ≥12
Prognosis for long-term survival (medical assessment of comorbid conditions)	Severely life-limiting conditions; death likely within 1 year

The Sequential Organ Failure Assessment (SOFA) scale is used to assess current respiratory, cardiovascular, hepatic, coagulation, renal and neurological systems. It returns a score between 0 and 24.

The patient's SOFA score is used to contribute up to four points on the total Priority Score. SOFA scores of <6 receive 1 priority point; 6-8 receive 2 priority points, 9-11 receive 3 priority points, >=12 receive 4 priority points.

The second step in the model is to assess the impact of comorbidities on the patient's chance of survival. A patient's short-term prognosis (survival to discharge) and medium-term prognosis (the initial years following the discharge) are strongly influenced by the number and severity of that patient's severe life-limiting comorbid medical conditions and prior functional status. Comorbidity is assessed using the following clinical criteria:

Table 2. Severely Life Limiting Comorbidities*

	Severe Life-limiting Comorbidity (commonly associate with poor 1-year survival. approx. 50% 1-year mortality)
Neurocognitive Disorder (Dementia)¹²	<ul style="list-style-type: none"> • Diagnosis of Dementia (or similar progressive neurocognitive disorder) and function ≥ 7 on FAST scale
Cancer	<ul style="list-style-type: none"> • Locally advanced or metastatic cancer AND ECOG status ≥ 3 OR • Receiving chemotherapy or radiation under palliative protocols OR • No longer able to receive treatment
Heart Failure	<ul style="list-style-type: none"> • NYHA Class 4 or AHA Stage D
CAD	<ul style="list-style-type: none"> • Severe Multivessel Coronary Artery Disease (symptomatic, not amenable to treatment)
Lung Disease	<ul style="list-style-type: none"> • Pulmonary Hypertension (all Groups): WHO Functional Class III or IV • COPD: FEV₁ <20% predicted • Idiopathic Pulmonary Fibrosis with home O₂ use
Liver Disease	<ul style="list-style-type: none"> • Childs-Pugh Class C OR MELD Score >20 and ineligible for transplant
Other Neurodegenerative Disorder	<ul style="list-style-type: none"> • Advanced Progressive Neurodegenerative Disorder, such as Amyotrophic Lateral Sclerosis, Multiple Sclerosis, Parkinson's disease

¹ Xie J, Brayne C, Matthews FE; Medical Research Council Cognitive Function and Ageing Study collaborators. Survival times in people with dementia: analysis from population-based cohort study with 14 year follow-up. *BMJ*. 2008;336(7638):258-262. doi:10.1136/bmj.39433.616678.25

² Reisberg, B. Functional Assessment Staging (FAST). *Psychopharmacology Bulletin*. 1988;24: 653-659.

*The clinical references made in this table to define the conditions are illustrative; it is understood that at times, all of the normal clinical information may not be available to healthcare providers, and that those providers will interpret these guidelines and apply them to the best of their abilities. The clinical guidelines may be changed or updated, based on the recommendation of the Medical Advisory Team to the Department of Health.

A patient who has one or more severely life-limiting comorbidity receives a score of 4 points on the Priority Score. Patients who have no major or life-limiting comorbidities score 0 points. A single score of 0 or 4 will be applied to the Priority Score;

there is no additive effect from having more than one condition. The scores reflecting symptom severity (the SOFA) (Table 1) and comorbidity (Table 2) are added to create a patient's Priority Score, which will range from 1 to 8. High scores reflect high severity and low likelihood of survival following intensive medical treatment. Patients with lower scores are thus prioritized to receive available ventilators or other scarce healthcare resources.

For administrative convenience, the scores may also be translated into color-coded priority groups, although it is the Priority Score, not the color code, that determines the ultimate priority.

Table 3. Assigning Patients to Color-coded Priority Groups

Use Raw Score from Multi-principle Scoring System to Assign Priority Category	
Level of Priority and Code Color	Priority score from Multi-principle Scoring System
RED Highest priority	Priority score 1-3
ORANGE Intermediate priority (reassess as needed)	Priority score 4-5
YELLOW Lowest priority (reassess as needed)	Priority score 6-8

In situations when two or more patients have the same Priority Score, a lottery will be used to assign a scarce resource.

Assessment of Patients for Continuation of Treatment

The decision to allocate a scarce resource to a patient is independent of the decision to maintain a patient on that resource. If the triage decision allocates a ventilator or another scarce resource to a patient, for example, he or she should be given a fair chance to benefit from it. However, not every patient will benefit from ventilator, and in an emergency, it will not always be ethical to wait until a patient's clinical state deteriorates to the point that he or she dies while on a ventilator or making use of the scarce resource, if by waiting other patients are denied the possibility of recovery. In addition, there is no legal obligation to provide treatment which is medically ineffective care, that is, treatment that would not offer the patient any significant benefit, as determined by a physician.

A patient's response to ventilator treatment or other scarce healthcare resource will be monitored closely and over time, and progress will be regularly assessed using the SOFA score and other key clinical signs of increasing or decreasing effectiveness of intensive care and the use of mechanical ventilation to reverse the patient's illness. The assessment of patients on ventilators will occur daily, overseen by a team of Local Triage Officers in collaboration with the treating clinicians. This team should be composed of at least two skilled physicians with the training necessary to make these assessments. If possible, these should not be physicians also taking care of patients in the critical care unit at the time they are in this role. In many institutions, a palliative care physician is added to assist with assessments and work with families and teams on difficult communications.

It is critical that the decision to remove a patient from a ventilator or other care be made with the collaboration of this team, both to ensure fairness and to support the critical care team operating in these difficult circumstances.

Patients removed from ventilators or other forms of treatment will receive

supportive care to relieve their symptoms.

Review of Decisions

There is no review of the decision of a Triage Officer, at the Statewide Hub or at local hospitals, in the allocation of a scarce healthcare resource, including the decision not to place a patient on a ventilator.

Review of a decision to withdraw a ventilator or another scarce resource from a patient may be requested of the Local Triage Board. This review must happen rapidly, given the demand for scarce resources. At least two clinician members of the Local Triage Board where the patient is being treated will assess any such appeal under processes established by that local Triage Review Board and make a final decision.

CONCLUSION

The COVID-19 epidemic is expected to exceed a threshold where many of our normal practices, including the methods of prioritization of available resources, must be reconsidered. This protocol, while imperfect, provides the fairest and most just method of ensuring that those patients who are most likely to benefit from a ventilator will receive priority when those scarce resources cannot be provided to everyone who wants or needs that resource.

Note 1: Triage Roles:

	Composition	Primary Role	Reports to
Medical Advisory Board	Not reviewed in this document	Not reviewed in this document	Governor; Secretary of Health; Secretary of Human Services
Statewide Triage Hub (the Statewide "Hub") is established by the Medical Advisory Team	Composed of volunteer physicians (Statewide Triage Officer) with the expertise to review these cases, assisted by administrative staff.	<ol style="list-style-type: none"> 1) Will receive and resolve requests for intensive care services from throughout the state; 2) Will assign patients in need of critical care to scarce resources, applying the substantive principles described. (reference) 3) Prior to making a triage decision, the Statewide Hub will clarify whether a patient has an Advance Directive or a proxy decision-maker, and whether the patient wishes to receive intensive care services and mechanical ventilation under the circumstances. 	Medical Advisory Team
Local Triage Officer(s)	A physician or group of physicians with the expertise necessary to administer the priority scale and review progress of patients	<ol style="list-style-type: none"> 1) Administer the priority scale to patients requiring scarce resources, determining who will access those resources in a time of scarcity in that hospital. 2) Serves as part of a team to review progress of those patients allocated scarce resources. 3) Serves to coordinate allocation of ICU beds with the State Triage Hub, when bed capacity becomes available to receive additional patients into that hospital . 4) Serves as a member of the Local Triage Board. 	

<p>Local Triage Boards</p> <p>* each hospital will create a Local Triage Board. Hospitals may choose to develop a shared Local Triage Board with other hospitals to limit the workload on their staff.</p>	<p>Clinicians and Administrators</p>	<ol style="list-style-type: none"> 1) Ensures that the appropriate triage and allocation policies and procedures are in place; 2) maintains contact with other Triage Boards to facilitate inter-organization collaboration 3) maintains contact with the state Medical Advisory Team to preserve state-wide consistency in the administration of this protocol; 4) explains the allocation process to community groups, patients and families; 5) Reviews decisions of Local Triage Officers to terminate scarce resources of patients 	
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Note 2: Changes made in this document with the update of 12/14/20:

- The following sentences have been added to the first paragraph of the executive summary: We recognize that this protocol in treating COVID 19 and other patients does not address every circumstance that might occur in a patient care setting. In those instances where the protocol is silent or unclear as to how to address a specific circumstance regarding patient care or the allocation of scarce resources, healthcare facilities and providers and staff should exercise reasonable discretion developing policies and procedures in light of the available resources of their healthcare facility, as directed by their Local Triage Board.
- Language was added which identified that these triage protocols apply to patients age 18 and above.
- The word “may” has been substituted for the word “will” in the following sentence: For administrative convenience, the scores may also be translated into color- coded priority groups, although it is the Priority Score, not the color code, that determines the ultimate priority. Several groups had expressed concern that the color-coding of groups added to confusion. This allows for local decisions to be made to continue using the color score or not.
- The phrase “in the allocation of a scarce healthcare resource” was added to the following sentence: There is no review of the decision of a Triage Officer, at the Statewide Hub or at local hospitals, in the allocation of a healthcare scarce resource, including the decision not to place a patient on a ventilator.
- The sentence: High scores reflect high severity and low likelihood of survival following mechanical ventilation was revised to read “High scores reflect high severity and low

likelihood of survival following intensive medical treatment.”

- Several changes were made to Table 2. The major change was removing the section titled “Major Comorbidities.” This section was removed due to concerns that a five-year prognostic scale was not justified by the medical literature and potentially unfair. An additional change was made in the clinical description of advanced cancer for clarity. The phrase “clinical guidelines may be changed or updated, based on the recommendation of the State Triage Hub.” was changed to “based on the recommendation of the Medical Advisory Team to the Department of Health” from the footnote of Table 2.
- The last sentence was added to the following paragraph: For administrative convenience, the scores may also be translated into color- coded priority groups, although it is the Priority Score, not the color code, that determines the ultimate priority. Note that the lower the score, the higher the priority, the more likely the treatment.
- The phrase “other scarce healthcare resources,” has been added to the following sentence: Patients with lower scores are thus prioritized to receive available ventilators or other scarce healthcare resources.
- In the section “*Assessment of Patients for Continuation of Treatment*” a sentence has been added: In addition, there is no legal obligation to provide treatment which is medically ineffective care, that is, treatment that would not offer the patient any significant benefit, as determined by a physician.

