COLORADO
Department of Public
Health & Environment

Crisis Standards of Care – Emergency Medical Services

Emergency Medical Services (EMS) are an essential part of the continuum of health care that is often initiated by a call to a public safety answering point or dispatch center. The need for emergency medical care is determined by trained personnel who receive such a call and dispatch appropriate EMS responders to triage, treat, and transport the patient(s) to an appropriate health care facility, where definitive care is provided. This continuum of care is provided through a coordinated and integrated emergency health care system with trained and equipped personnel at dispatch centers, ambulance agencies, hospitals, and specialty care centers (trauma, burn, pediatrics).[1]

This emergency health care system will be stressed to its limits during a mass casualty incident, pandemic or other multiple patient incident, requiring all components of the system to implement contingency measures to manage the surge in medical demand.

Upon appropriate declaration of such an emergency by appropriate state authorities, crisis standards of care (CSC) may be implemented to best manage the influx of patients. These CSC will, on necessity, involve the EMS system and require modifications to the usual procedures and protocol utilized.

DEPENDING UPON THE RESOURCES AVAILABLE IN A GIVEN COMMUNITY AND EMS RESPONSE SYSTEM, SOME OR ALL OF THE FOLLOWING MEASURES MAY BE IMPLEMENTED:

Public Safety Answering Points (PSAP) and Call Centers (performing emergency medical dispatch (EMD))
- During a pandemic, perform caller inquiries/focused screening on callers for symptoms related to the infecting agent, as approved by the system medical director
    - The query process should never supersede the provision of pre-arrival instructions to the caller when immediate lifesaving interventions (e.g., CPR) are indicated.
    - COVID-19:
        - Identify symptoms of fever with cough, sore throat, shortness of breath or diarrhea.
        - Ask patient if they are under investigation or have tested positive for COVID-19.
- Screening for suspected highly infectious pathogens varies significantly depending upon the high-risk agent involved and often involves questioning patients about recent travel to endemic areas and presenting signs and symptoms.
    - If there is widespread community transmission of disease in the area served by the PSAP, travel questioning may be deferred.
    - The timeframe for these conditions varies:
        - 14 days for Middle East Respiratory Syndrome (MERS),
        - 21 days for Ebola Virus Disease (EVD)

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[1] Modified from: National Academy of Sciences, Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response

- 14-21 days for COVID-19
- Utilize a triage screening algorithm to ensure that response capability is preserved for severely ill or injured patients and protocols developed to identify patients for delayed, alternate or non-response, including but not limited to nurse advice lines, telehealth, or mobile integrated health services.
- If persons under investigation for a highly infectious disease are known to public health, it may be beneficial for public health to notify public safety to enter a temporary note on their address in the computer-aided dispatch system to alert 911 responders to the potential for illness/exposure.
    - This is a local decision dependent on the systems and policies in the community and the note should be removed once the infectious period has passed.
- Information obtained suggesting an infectious disease process should be given to dispatchers to relay to responding agencies.

Non-EMD PSAPs:
- When information is volunteered by the caller indicating the patient may have a fever, cough, sore throat, shortness of breath or diarrhea advise responders to don PPE.
    - This should be done in accordance with local PSAP policies and should not delay EMS dispatch.

Dispatch Centers:
- Send only essential resources to calls for assistance or consider staging additional resources near-by but away from the scene.
- Consider restricting assignment to ambulance only if no life-threatening symptoms (chest pain, difficulty breathing, altered mental status) present in order to decrease first responder exposure.
- Adjust resource assignments (e.g., police only on reported vehicle crash until non-ambulatory injuries confirmed)
- Auto-answer and caller deferral to information/prescribing/nurse advice lines for non-emergency situations
- Recommend private transport when appropriate with consideration for transport to non-traditional or non-emergency receiving facilities during surge times.
- Deferral of selected 911 requests for service as approved by the system medical director
- If, during the EMD caller interrogation process, it appears that the patient may have symptoms of a suspected infectious agent, provide scripted alerts to all responding EMS units.
- Recommend that ambulatory patients meet the responding EMS service outside of their residence if their condition allows and the environment is safe.
- Consider implementation of a telehealth process to allow for direct EMS communication with the patient.

EMS Agencies:
- Change in staffing/crew configuration (i.e. one EMS certified or licensed provider and one non-medical driver)
- Expand "left at scene" discretion/guidelines as approved by the system medical director

- Consider establishing a process for patient follow-up, and if indicated, instructions for self-care at home.
- Non-hospital destinations for appropriate patients
- Alternate response strategies
    - "Jump car" to assess patient and need for ambulance transport
    - Community paramedic

EMS Responders:
- First responders recognizing a potentially infectious patient should notify dispatch/communications center to assure that responding EMS personnel are prepared to implement appropriate infection prevention and control measures.
- Regardless of dispatch information, EMS personnel should be vigilant for travel history and signs and symptoms of communicable disease (e.g., fever, cough, gastrointestinal complaints) and use standard precautions and add appropriate transmission-based infection control precautions whenever history or exam findings warrant.
- Implement strict standard and transmission-based precautions based on the current known high-risk infection threat and the patient's clinical information to avoid exposure to potentially infectious bodily fluids, droplets, and particles.
- Avoid direct contact with a patient who may have a serious communicable disease until appropriate PPE is donned (see PPE Section below).
    - Similar precautions should be maintained around close contacts or household members of the patient.
- When not performing direct patient physical assessment, maintain a distance of at least six feet to provide protection from transmission of many diseases.
- Attempt to limit close contact with patient to as short a time as possible when performing the patient assessment and examination.
- Patients or their caregivers may find responders wearing high levels of PPE such as hood, suits, and respirators alarming. Communicating with and calming anxious patients may be more challenging due to PPE as well. Responders should be mindful of this and be prepared to reassure patients and to address their distress and fear.
- Limit the number of EMS providers making contact with a potentially infectious patient to the minimum required to perform tasks safely.
    - Non-essential providers on scene should wait outside of the patient treatment area or outside of the residence or building.
- Conduct initial assessment and interview at least 6 feet away.
    - Maintain this similar distance from the patient's close contacts, household members, and bystanders.
- Confirm patient's existing MOST form, DNR/DNI wishes, or advance directives.

Recommended Personal Protective Equipment (PPE) for COVID-19:
EMS clinicians who will directly care for a patient with possible or known COVID-19 infection or who will be in the patient care compartment with the patient should follow standard precautions and use PPE below:
- N-95 or higher-level respirator or facemask (if a respirator is not available)
- Eye protection (i.e., goggles or disposable face shield that fully covers the front and sides of the face).

- Personal eyeglasses and contact lenses are NOT considered adequate eye protection.
- Gloves
- Gown (if shortage, prioritize use for aerosol-generating procedures, or high-contact patient care)
- Full standard uniform to include long sleeve shirt and long pants underneath the PPE ensemble.

Drivers
- If providing direct patient care (e.g., moving patients onto stretchers), they should wear all recommended PPE
  - After completing patient care and before entering the driver's compartment, the driver should remove and dispose of PPE and perform hand hygiene to avoid soiling the compartment.
- The vehicle operator should wear a NIOSH-approved, fit-tested N95 respirator if the patient compartment and cab cannot be isolated.

For EMS clinicians present for or performing the following aerosol-generating procedures, an N-95 or higher-level respirator, instead of a facemask, should be worn in addition to the other PPE described above:
- bag valve mask (BVM) ventilation,
- oropharyngeal suctioning,
- airway management - if active management is required, airway interventions should be limited to procedures such as supraglottic airway, video laryngoscopy, or RSI.
  - For COVID-19
    - avoid multiple endotracheal intubation attempts and nasotracheal intubation
    - consider a supraglottic airway (SGA) device for short transport situations.
    - Endotracheal intubation, if needed, should be accomplished using RSI and is preferred for long transport or air-medical transport.
    - Non-pharmacologically assisted endotracheal intubation should be avoided with COVID-19
- nebulizer treatment (avoid with COVID-19 – consider metered dose inhaler with spacer or intramuscular epinephrine for severe wheezing),
- continuous positive airway pressure (CPAP), (avoid use with COVID-19)
- bi-phasic positive airway pressure (BiPAP), (avoid use with COVID-19) or
- resuscitation involving emergency intubation or CPR.

Transport Destination:
- Transport only the most severe cases
  - Refer other to an appropriate treatment facility or follow-up service.
- Change to "closest hospital" transportation or "batch" transports
- Transport destinations may be adjusted to allow transport to clinics, surgery centers, urgent care centers, or other alternate sites of care in addition to hospitals.

- **Criteria for consideration for no-transport**
  - Age <60 years old

- History of viral syndrome (e.g. fever, cough, nasal/chest congestion, sore throat, body aches)
- Vital Signs
  - Respiratory Rate between 8 and 20 bpm or upper limit of age based normal
  - Pulse oximetry >90%
  - Heart rate <110 or upper limit of age based normal
  - Systolic Blood Pressure >90 or age based lower limit of normal
- Absence of high-risk medical history including: respiratory disease (asthma, COPD), active cancer, diabetes, morbid obesity, heart disease (CAD, CHF), neuromuscular disorders, immunocompromised
- Patient (or guardian) demonstrates medical decision-making capacity, ability to communicate understanding of risks and benefits or no transport, and agrees with no-transport recommendation
- Absence of shortness of breath, respiratory distress, syncope, cyanosis, diaphoresis, chest pain (other than mild with coughing), or otherwise concerning finding on assessment
- If ALL above criteria are met, consideration for recommending NOT to transport the patient to the emergency department.
- Discuss non-transport and recommended self-quarantine with script: "*Based on your age, medical history, and our assessment, a COVID-19 test may be appropriate, but the risks from emergent transport by ambulance to the emergency department likely outweigh the benefits. In order to limit exposures, would you be comfortable with us providing you alternative information regarding home care and recommendations?*"
- Ensure proper support system in place to allow for calling of 911 if condition changes
- Suitability Assessment for HomeCare
  - Appropriate caregivers are available, if needed
  - The patient is competent and consents to non-transport
  - There is a separate bedroom where the patient can recover without sharing immediate space with others
  - Access to food, water, and other necessities
  - There are no household members at high risk of complications
- Transport if patient does not meet criteria or requests transport

Medical Care On-Scene and During Transport
- Limit the number of EMS providers making patient contact to the minimum required to perform tasks safely.
  - Hold additional resources in staging area, outside the building or residence, or outside of the primary assessment and treatment area.
- If patient is conscious and able to follow instructions, interview the patient for the nature of the call to 9-1-1. If the call nature is suspicious for any infectious illness, toss a surgical mask to them from 6 or more feet away and instruct patient to apply.
  - If patient is unable to follow instructions for whatever reason, place a surgical mask on a patient with likely infectious cough to limit droplet generation or any patient where there is known community spread.
- Advise patients to cover their nose and mouth when coughing or sneezing

- Use tissues to contain respiratory secretions and, after use, dispose them in the nearest waste receptacle;
- Perform hand hygiene after having contact with respiratory secretions and contaminated objects or materials.
- Apply strict criteria for the use of scarce equipment.
  - Keep nonessential equipment away from the patient, so as to minimize contamination on the scene and in the ambulance.
- Only perform potentially aerosol-producing procedures as described above if absolutely necessary and cannot be postponed until hospital arrival.
  - Discontinue these procedures before entering receiving facility or confirm with receiving facility if facility entry will be allowed with on-going procedure.
- If active management is required, airway interventions should be limited, as much as possible, to procedures such as supraglottic airway, video laryngoscopy, or RSI.
  - For COVID-19:
    - If clinically indicated and available, rapid sequence intubation (RSI) should be considered for patients requiring definitive airway management to avoid aerosol production from coughing and is preferred for long transport or air-medical transport.
    - consider a supraglottic airway (SGA) device for short transport situations.
    - Naso-tracheal tube placement should be avoided.
    - avoid multiple endotracheal intubation attempts
    - Anticipate rapid oxygen desaturation
- Intubated patients should be ventilated with a bag-valve device or ventilator with a HEPA filter on the exhalation port.
- Notify the receiving hospital of the impending arrival of the patient to allow time for preparation to receive.
- Family members and other contacts of patients, other than parents of minors, with possible COVID-19 should not ride in the transport vehicle to reduce the risk of transmission, absent extreme circumstances.
- During transport:
  - The patient compartment exhaust vent should be on high and the driver compartment should be isolated from the patient compartment if possible.
  - The driver compartment ventilation fan should be set to high without recirculation.
  - If a vehicle without an isolated driver compartment and ventilation must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting. This will create a negative pressure gradient in the patient area.
- Consider protocol changes as follows:
  - Implement treat on-scene and release as appropriate
  - Expanded no transport of patients without serious illness or injury
    - Refer to appropriate follow-up care where available. (ex. Community paramedics, private home health service.)
  - Discontinue certain life-saving treatment efforts

- - Patients with known poor survival should be pronounced in the field rather than have efforts at resuscitation that would place providers in danger.
    - Patients in cardiac arrest with an initial rhythm of asystole
    - Patients in non-traumatic cardiac arrest with an initial rhythm of PEA
    - Patients in cardiac arrest with an initial rhythm of ventricular fibrillation should have limited efforts at resuscitation including CPR, electrical defibrillation and ACLS drugs. If no ROSC, contact medical control for possible termination order.

Cardiac Arrest in a Patient with Suspected or Known COVID-19 Crisis Standards of Care[2]
- Applies to patients in cardiac arrest with known previous symptoms of respiratory illness and fever or known COVID-19.
- Personal Protective Equipment
  - Standard, contact, and droplet precautions
  - CPR and assisting ventilations are aerosolizing procedures. N95 masks or equivalent are required.
  - **Do not perform CPR without the appropriate PPE and respiratory precautions in place.**
- Treatment
  - Airway interventions should be limited to procedures such as supraglottic airway, video laryngoscopy, or RSI.
  - When CPR is being performed, only necessary personnel should be next to the patient.
    - Other personnel should distance themselves from the patient when not performing interventions.
  - Consider field pronouncement for:
    - Patients in cardiac arrest with an initial rhythm of asystole
    - Patients in non-traumatic cardiac arrest with an initial rhythm of PEA
  - Patients in cardiac arrest with an initial rhythm of ventricular fibrillation should have limited efforts at resuscitation including CPR, electrical defibrillation and ACLS drugs.
    - If no return of spontaneous circulation (ROSC), contact medical control for possible termination orders.
  - Patients in continuous cardiac arrest **WILL NOT BE TRANSPORTED**.
  - ROSC should be sustained (continued palpable pulse and systolic BP ≥60 mmHg for >5 minutes) **BEFORE** moving the patient to the patient compartment of a vehicle for transport.
- For witnessed arrest inside the patient care compartment:
  - If single provider is with patient in patient compartment:

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[2] Adapted from Michigan EMERGENCY SPECIAL OPERATIONS
CARDIAC ARREST IN A PATIENT WITH SUSPECTED COVID-19 CRISIS STANDARDS OF CARE
https://www.michigan.gov/documents/mdhhs/10.21_nCoV_Resuscitation_Final_3.23.2020_684791_7.pdf

- Pull vehicle to the side of the road in a discrete location and perform resuscitation using full PPE, with doors **OPEN** to maximize compartment ventilation.
- Call for additional resources to assist as needed.
  - If (or once) adequate personnel and resources are available, may proceed to nearest hospital.
    - Provide verbal presentation to ED staff prior to entering the facility to obtain field pronouncement, thus saving PPE and staff resources for a non-viable patient.
  - If patient has mechanical CPR device in place and has lost ROSC, the device may be resumed with continued transport to the hospital, as long as all personnel in the patient compartment have sufficient respiratory PPE in place.
- For cardiac arrest during inter-facility transfer where patient demise was expected:
  - Consider ceasing any interventions and divert to nearby facility
  - Provide verbal presentation to ED staff prior to entering the facility to obtain field pronouncement, thus saving PPE and staff resources for a non-viable patient.

CSC Triggers and Actions:

EMS agencies ideally should consider developing a matrix such as that shown below describing triggers and actions to be taken during Conventional, Contingency, and Crisis Conditions. See IOM example on next several pages.

	Conventional	Contingency	Crisis (Usually requires emergency declaration)
Dispatch			
Response			
Patient Assessment			
Transportation			

The example below is taken from the EMS Volume of the "Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response", Institute of Medicine of the National Academies, 2012.

TABLE 6-1
Potential EMS Response Adaptations Under Conventional, Contingency, and Crisis Conditions[a]

	Conventional	Contingency	Crisis[b]
Dispatch	• Consider initial auto-answer during times of high call volume for medical emergencies	• Prioritize calls according to potential threat to life; "pend" apparently non-life-threatening calls (note this requires a medically trained dispatcher, not available at many public safety answering points [PSAPs])	• Decline response to calls without evident potential threat to life (also requires a medically trained dispatcher)
Response	• Modify resource assignments (e.g., only fire/rescue dispatched to motor vehicle crashes unless EMS are clearly required, single-agency EMS responses if fire agencies are overtaxed) • Seek mutual-aid assistance from surrounding areas	• Modify resource assignments to a greater extent • Change EMS assignments to closest available unit rather than advanced life support (ALS)/basic life support (BLS) • Consider staffing configuration changes (e.g., from two paramedics to one paramedic plus one emergency medical technician [EMT]-B) • Consider requests for disaster assistance	• Request EMS units from emergency management (if possible) • Consider use of National Guard ambulances or other assets • Utilize scheduled BLS providers to answer emergency calls • Change staffing to one medical provider, one driver • Further modify resource assignments as possible • Attempt no resuscitation of cardiac arrests (except ventricular fibrillation [VF] witnessed by EMS)
Patient assessment	• Allow patients with very minor injuries to use their own transportation	• Encourage patients with minor injury/illness to use their own transportation	• Assess patients and decline to transport those without significant injury/illness (according to guidance from EMS medical director)
Transportation	• Transport patients to the closest appropriate facility (rather than the facility of the patient's choice)	• Consider batched transports—answer subsequent call(s) before transporting stable patients to the hospital	• Decline transports as above; employ batch transports as needed

[a] EMS volumes will fluctuate significantly over time; thus, conventional, contingency, and crisis conditions may all occur in a single operational period. Dispatchers must therefore have excellent situational awareness of resources and deployment of personnel to provide the best service possible at a given time and have practice in managing these scenarios.
[b] Crisis adaptations often require state or at least city declarations of emergency, as well as relief from usual staffing and response requirements of the state (often through a governor's emergency order).

On the next several pages, The Institute of Medicine in its' publication titled "Crisis Standards of Care: A Toolkit for Indicators and Triggers" published the following tables as an examples of potential indicators that would trigger changes in EMS delivery.

TABLE 7-1
Example Emergency Medical Services (EMS) Indicators, Triggers, and Tactics for Transitions Along the Continuum of Care

Indicator Category	Contingency	Crisis	Return Toward Conventional
Scope of the event	Minor or major disaster	Catastrophic	Approaching resolution
Surveillance data	**Indicators:** • Increased patient encounters by EMS • Increased emergency department and/or hospital census • Reports of increased cases of influenza • Reports of an earthquake with potential of additional aftershocks **Triggers:** • Significantly elevated number of dispatch requests • Significantly increased patient care encounters with similar signs and symptoms or high patient acuity • Significantly increased data registry entries from state or regional electronic prehospital patient care record systems **Tactics:** • Advise local health officials (or, as applicable, base station or online medical direction) of the observed increase in activity or increased incidence of patients with similar signs and symptoms • Establish incident command for EMS and advise the emergency care system stakeholders of this action command • Provide incident command with frequent reports and ongoing trends using surveillance data • Engage regional and state surveillance systems to follow trends and expanse of the mass casualty incident or pandemic • Engage mutual aid partners as required	**Indicators:** • Patient care demands exceed the available EMS resources, including mutual aid • Patient care demands exceed the available hospital resources • Confirmation of increased virulence of the strain of influenza • Surveillance data are impacted due to overwhelmed health care providers, public health, or collapse of data entry systems • The incidence of illness and injury continues to escalate despite mitigation measures **Crisis Triggers:** • Multiple hospitals closed to EMS • Mutual aid partners not able to answer calls involving potential life threats **Tactics:** • Maximize alternative avenues of data collection and submission (verbal, paper, or estimated reports) • Continue to advise local health officials (or, as applicable, base station or online medical direction) of the observed increase in activity or increased incidence of patients with similar signs and symptoms • Work with mutual aid agencies to revise and/or implement call triage	**Indicators:** • Stabilization or decrease in patient encounters by EMS • Stabilization or decrease in emergency department and/or hospital census • Stabilization or decrease in the reports of cases of influenza • Decreasing frequency of earthquake aftershocks **Triggers:** • Stabilization or decrease in the number of dispatch requests • Stabilization or decrease in calls with similar signs and symptoms or high patient acuity calls **Tactics:** • Monitor the surveillance data for resurgence or continued mitigation • Continue to advise local health officials (or, as applicable, base station or online medical direction) of the observed increase in activity or increased incidence of patients with similar signs and symptoms

TABLE 7-1
Continued

Indicator Category	Contingency	Crisis	Return Toward Conventional
Community and communications Infrastructure	**Indicators:** • Compromised communications (911, public safety) systems • Reports of widespread road or structural damage • Increased calls or ambulatory presentation of patients to EMS agencies seeking medical advice or treatment • Inaccurate Information from unreliable sources circulating within the community **Triggers:** • >20% increase in emergency medical dispatch or medical advice hotlines • An increase in rumors and inaccurate information within the lay population, media, and social networking sites **Tactics:** • Initiate community education regarding selective emergency medical dispatch (EMD) and EMS triage and transport measures • Engage with media outlets to disseminate information on mitigation measures • Work with emergency management and crews in the field to obtain situational awareness regarding access and damage reports • Consider partnering to establish nurse call triage lines to mitigate requests for EMS transport	**Indicators:** • Emergency medical dispatch overwhelmed by call volumes and unable to answer all calls • 911 system compromised • Media reports that incite increased anxiety • Operational or structural collapse of the communication centers • Inaccurate information is in the forefront **Crisis Triggers:** • Inability of high-acuity patients to access the emergency response system • Patient tracking mechanisms and systems are overwhelmed **Tactics:** • Use prerecorded messaging to filter calls that require direct emergency medical dispatch staff contact • Maximize frequent use of emergency broadcast system and media outlets • Implement call triage models to target highest priority calls for response	**Indicators:** • Stabilization or decrease in calls to emergency medical dispatch • Stabilization or decrease in calls to medical advice hotlines • Communication systems, networks, and physical infrastructure returning to baseline functional state **Triggers:** • The number of requests to emergency medical dispatch and for EMS are returning to baseline levels **Tactics:** • Continue to provide the community with information regarding the status of the event • Continue to educate and encourage the community to engage in mitigation measures • Revise dispatch and transport protocols to normalize operations
Staff *(Refer also to the worker functional capacity table in Toolkit Part 1 [Table 3-1])*	**Indicators:** • Members of the EMD and EMS workforce unable to report for duty due to impassable roads, incapacitated personal vehicles, or other direct effects • Members of the EMD and EMS workforce within the at-risk population for influenza • Members of the EMD and EMS workforce unable to report for duty due to illness, injury, or physical entrapment in residences	**Indicators:** • Overwhelming number of patient with insufficient staff to meet the demand for triage, treatment, and transport • Significant portion of the emergency medical dispatch and EMS workforce is sustaining physical fatigue due to extended work shifts and incident stress • Significant number of the EMD and EMS workforce are affected as disaster victims or incapacitated by the disaster and are unavailable to respond	**Indicators:** • Approaching normal baseline levels of staffing. • Return to normal shift level and staffing • Some emergency medical dispatch and EMS personnel may elect to remain off duty due to family obligations **Triggers:** • The number of emergency medical dispatch and EMS personnel reporting for duty is starting to stabilize • Recovery of EMS personnel from illness and/or injury
	Triggers: • EMS crews are at or approaching minimal staffing • Loss of 10% or more of the workforce **Tactics:** • Use mutual aid staffing resources • Prioritize dispatch calls according to potential threat to life, placing non–life threatening calls on a pending status (requires medically trained emergency medical dispatch) • Reduce staffing requirement from two advanced life support (ALS) providers to one ALS and one basic life support (BLS) provider • Change ambulance assignments according to closest available units instead of BLS/ALS capability • Activate non-EMS dispatch protocols in emergency medical dispatch centers and advise patients with minor injuries or illnesses to use their own transportation • Activate non-transport protocols and disaster triage guidelines for EMS agencies • Use 211 nurse call centers for triage • Respond to critical or urgent calls followed by batched transport of stable patients to health care facilities • Encourage mitigation measures, e.g., mass vaccination, within EMD and EMS workforce • Transport essential EMS and emergency medical dispatch workers to the workplace via National Guard or other agency • Provide support to families of EMS and emergency medical dispatch personnel to facilitate the maintenance of the workforce • Change shift length	• EMS and medical personnel are becoming victims of criminal activity by individuals seeking medications, medical supplies, vaccinations, and expedited treatment or transport **Crisis Triggers:** • Unable to maintain staffing for EMS units • Staff overwhelmed by number of patients who need care • Mutual aid staffing resources have been exhausted **Tactics:** • Direct emergency medical dispatch to decline response to calls without evidence of threat to life (requires medically trained EMD) • Mandatory use of disaster triage guidelines • Direct EMS to decline transport of assessed patients without significant injury or illness (upon guidance from EMS medical direction) • Limit resuscitation attempts to witnessed cardiac arrests • Reduce staffing for ambulances to one EMS provider (upon guidance from EMS medical direction) • Request additional EMS units through the local emergency operations center (EOC) • Use public and private mass transportation resources for patients with minor injuries or illnesses • Integrate transportation resources from out of state and through the Emergency Management Assistance Compact or National Disaster Medical System • Secure federal, state, regional, and local EMS staffing resources and non-EMS staffing resources (e.g., National Guard) • Provide appropriate security for EMS crews	**Tactics:** • Direct emergency medical dispatch to use initial automated answering systems during spikes of high call volume for medical emergencies, but revert to answering all calls when able • Initiate a gradual return to normal triage, patient treatment, and transport guidelines • Initiate a gradual transition to normal staffing levels, work shifts, and sleep cycles • Initiate plan for reduction and relief of mutual aid resources • Continue to encourage or require mitigation measures (personal protective equipment [PPE], hand washing, vaccination, etc.) • Encourage timely engagement in stress management and personal resilience resources

Indicator Category	Contingency	Crisis	Return Toward Conventional
Space/Infrastructure	**Indicators:** • Evacuation routes are becoming crowded • The general public is unable to access timely care in clinics or emergency department • Multiple emergency department and emergency care centers are going on diversion due to overwhelmed capacity • Roads and bridges have collapsed or become structurally unstable **Triggers:** • More than 20-30% of the emergency departments, emergency care centers, and public health clinics have requested additional medical staff or are on diversion • There is a trend within the general public electing not to comply with emergency declaration mitigation directives (e.g., shelter in place, evacuation, driving restrictions) **Tactics:** • Activate and open all alternative care sites, and support these with EMS resources as possible • Activate alternate transport destination and non-transport protocols for emergency medical dispatch and EMS personnel • Encourage the general public to comply with emergency declaration directives, engaging law enforcement assistance if necessary	**Indicators:** • Overwhelming number of patients exceeds the ambulances available • Transport destinations are overwhelmed and do not have the capacity to accept additional patients • Law enforcement resources are overwhelmed or limited • Evacuation routes are no longer passable • The virulence of a biologic agent has increased compared to prior projections • Structural damage to the physical plant of emergency medical dispatch, EMS, or EOC that hampers or incapacitates their operational status • Structural damage to the physical plant of health care facilities that hampers or incapacitates their operational status • Air ambulances are grounded due to weather **Crisis Triggers:** • No available ground ambulances for transport • Mutual aid for additional vehicles is exhausted **Tactics:** • Establish casualty collection points • Use treat and release protocols • Universal use of non-EMS dispatch and non-transport protocols • Use mass transport vehicles (e.g., buses) to transport patients with minor injuries • Use disaster triage guidelines • Designate ambulance transport solely for moderately/seriously ill or injured patients • Use alternative vehicles (e.g., aircraft if weather conditions permit, all terrain vehicles, motorcycles, bicycles, watercraft) to access moderately or severely ill or injured patients when routes of travel that are conducive to ambulances are no longer passable	**Indicators:** • The demand for available ambulances with patient need is better aligned • Roadways are beginning to have reduced volume • Emergency departments and emergency care centers are beginning to accept patients • Structural damage to transport destinations is no longer affecting operational status **Triggers:** • A reduction in health care facilities that are on diversion • Reliable routes of transport have been established for emergency and public safety vehicles **Tactics:** • Continue operational support of alternate transport sites until emergency department and emergency care center report improved flow of inpatients and outpatients • Initiate a gradual transition to conventional transport destinations
Supplies	**Indicators:** • EMS agencies report increased use of PPE, medical supplies, medications, or airway management equipment • Manufacturers of PPE, medical supplies, vaccines, medications, or ventilators report decreased stock available • Fuel shortages reported **Triggers:** • The available PPE is less than what is needed for the EMS workforce • The use of medical supplies, medications, vaccines, and antidotes begins to exceed their replacement **Tactics:** • Conservation of PPE • Conservation of supplies • Provide medications and vaccinations to designated at-risk populations • Determine alternate vendors and sources of supplies	**Indicators:** • EMS reports inadequate or depleted supply of PPE, medical supplies, medications, or airway management equipment • Manufacturers of PPE, medical supplies, vaccines, medications, or ventilators report insufficient or depleted stock • Manufacturers of disaster supplies and recovery equipment report factory closures and/or halted production due to loss of workforce **Crisis Triggers:** • PPE is no longer available • Vaccinations, medications, or antidotes are depleted to the point that equivalent treatment cannot be provided • Hospitals can no longer provide supplies or medications to restock ambulances **Tactics:** • Activate crisis standards of care prehospital patient care protocols • Secure federal, state, regional, and local emergency response assets	**Indicators:** • Demand for PPE for EMS personnel is subsiding • Demand for medical supplies or airway management equipment is reduced • Manufacturers of PPE, medical supplies, medications, or airway management equipment report improving product availability **Triggers:** • Incident command is receiving reduced requests for additional PPE and medical supplies from EMS personnel • Emergency departments, emergency care facilities, and hospitals have reduced requests for medications, antidotes, vaccinations, and ventilators • Manufacturers of disaster supplies and recovery equipment report a return to production **Tactics:** • Assess the current status of the supplies of medications, medical equipment, and PPE • Request a limited volume of PPE and supplies to prepare for a potential resurgence and to begin replenishing the normal stock of supplies • Adjust supply allocation guidance toward normal