SURGE OPERATIONS and CRISIS CARE –
PLANNING AND IMPLEMENTATION GUIDANCE FOR
EMERGENCY MEDICAL SERVICES

A JOINT PROJECT OF THE MINNESTOA DEPARTMENT OF HEALTH (MDH) AND MINNESOTA
EMERGENCY MEDICAL SERVICES REGULATORY BOARD (MN EMSRB)

September, 2016
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. . . A substantial change in the usual health care operations and level of care possible to deliver . . . justified by specific circumstances . . .

“Institute of Medicine of the National Academies, Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response©

Preface

The Emergency Medical Services (EMS) Surge Operations and Crisis Care Guidance Document represents a thoughtful, proactive consideration and structured approach to shortfalls in the provision of front line response and care by EMS, first responders and public safety answering points (PSAP) who are often the lead agencies for disaster response. The Guidance Document is a decision support tool and assumes incident management and incident command practices are implemented and key personnel are familiar with the ethical frameworks and processes which underlie scarce resource decisions.

In a Surge Operations and/or Crisis Care situation each EMS ambulance service licensee and medical director for each licensee will have to determine the most appropriate steps and actions for their agencies based on their environment, hazards, and resources. Since pre-planned actions are always preferred to ad hoc decisions, pre-event familiarization with the contents of this Guidance and development of regional and local crisis standards of care plans is recommended to aid with event preparedness, response and in anticipation of specific resource shortfalls. The Guidance addresses common categories of pre-hospital EMS response, triage, treatment and transport. Regional health care coalitions, Minnesota Emergency Medical Services Regulatory Board designated Regional EMS Systems, PSAP/Dispatch and EMS dispatch centers, first responders, EMS ambulance service personnel and their medical directors may determine additional issues and strategies for their specific situation in addition to those outlined in this Guidance and in the overall context of the State of Minnesota Crisis Standards of Care Plan.

The Minnesota Department of Health (MDH) and the Minnesota EMS Regulatory Board (EMSRB) convened a statewide EMS Crisis Standards of Care Workgroup in the spring of 2016 to provide input on crisis care issues and solutions for EMS, which drove the development of this consensus document. This Guidance Document would not have been possible without the diverse and practical input provided by the Workgroup; their efforts will benefit the citizens of the State. This workgroup and resulting Guidance is part of a larger process by MDH to document Crisis Standards of Care policy recommendations as well as engage the public in discussions about the ethics and principles of crisis care.

This Guidance Document constitutes the consensus recommendations of the Workgroup but does not represent policy of MDH or the MN EMSRB. EMS providers and their medical directors, PSAP/Dispatch center leadership or first responders implementing these strategies in crisis situations should assure communication of this to their public safety, health care providers and local and tribal public health partners and emergency management to assure the invocation of appropriate legal and regulatory protections as appropriate in accord with State and Federal laws. This Guidance Document may be superseded during an incident by incident specific recommendations by MDH or MN EMSRB. Web links and resources listed are provided.
as examples, and may not be the best sources of information available. Their listing does not imply endorsement by MDH or MN EMSRB. This Guidance does not replace the judgement of the EMS operational management, medical directors, their legal advisors or clinical staff and consideration of other relevant variables and options during an event.
In a crisis standards of care event the focus changes from individual to population needs. The evolution from *conventional* » *contingency* » *crisis* modes isn’t simply an *operational* shift, this is a *legal* shift as well involving changes in the applicable standards used to determine whether the duty of care was met for those who required assistance to the best degree possible given the circumstances.

~*Institute of Medicine of the National Academies, Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response*®

**Introduction**

The Minnesota EMS system has a long-standing history of providing exemplary service to the people of Minnesota, both visitors and residents alike. It serves as a vital link to the health care system statewide, especially in rural areas of the state where access to medical care is less readily available.

Comprised of both private and public (paid, partial paid and volunteer) EMS organizations, Minnesota’s EMS system runs the gamut from a volunteer ambulance service that may respond to 20 calls a year to busy urban services responding to 200 calls a day. Volunteer EMS agencies are generally located in the more rural areas, and paid EMS agencies are generally found in the higher population centers (e.g., Duluth, Rochester, St. Cloud, Marshall, Mankato, Moorhead, East Grand Forks) of greater Minnesota, as well as in the Twin Cities metropolitan area of Minneapolis – St. Paul. The total population of Minnesota in 2014, based on Minnesota State Demographic Center estimates is 5,453,218. In 2015 the Center reported the new census population estimates showed that Minnesota added about 32,500 people in the latest year, with the most growth clustered in the Minneapolis and St. Paul seven county area with the population exceeding three million (55% of the State’s population.)

Minnesota EMS providers are faced with a variety of actual and potential large-scale incidents that could quickly exhaust the resources of local EMS agencies. There is a significant risk for natural, man-made and terrorism-related disasters throughout the state. Pandemics such as H1N1 flu virus can have an impact on EMS agencies statewide. Minnesota borders Canada in some of the most rural portions of the state creating cross-border issues, in addition to multiple international ports of entry on Lake Superior that serve oceangoing vessels. Highways and railways crisscrossing the state present substantial risk of hazardous materials and other transportation-related incidents. Minnesota also has two (2) nuclear power plants, both located outside of the Twin Cities metropolitan areas that could potentially impact EMS resources in the event of a radiological release at one of these plants. Unfortunately, the risk of terrorist attacks on targets small and large in Minnesota is substantial and must be planned for by all EMS agencies.

To respond to disasters, local EMS agencies would, in most cases, rely on mutual aid response from neighboring EMS agencies to fill the resource and equipment gaps necessary to meet the pre-hospital care and transportation needs of patients. Development of well trained, equipped
and ready to respond EMS systems has enhanced capabilities and reduced gaps in EMS response and resource availability for all types of disasters that may occur in Minnesota.

However, the threats mentioned above may easily generate an incident where over an extended period of time demand is so great, responding agencies are not able to provide usual services and reach a point where they need to do the ‘greatest good for the greatest number’ by implementing crisis care protocols. It is often standard for EMS systems to operate near or at this threshold for short to moderate periods of time, but would benefit from more robust and structured planning for situations where demand exceeds resources for a period of time that could result in poor outcomes for patients unless crisis strategies are implemented.

This Guidance Document provides an overview of crisis care operational considerations for EMS agencies, PSAP/dispatchers and first responders. In-depth discussion of the framework, ethics, and practical applications of crisis standards of care may be found in the 2012 National Academies of Sciences, Engineering and Medicine, Institute of Medicine (IOM) (now known as the Health and Medicine Division [HMD]) of the National Academies of Medicine report including a specific section on EMS care: (http://www.nationalacademies.org/hmd/Reports/2012/Crisis-Standards-of-Care-A-Systems-Framework-for-Catastrophic-Disaster-Response.aspx). An additional document may be of assistance to EMS is a card set designed for scarce resource situations (staff, medications, etc.) developed by the MDH Science Advisory Team/Crisis Standards of Care (SAT/CSC), which is available at: http://www.health.state.mn.us/oep/healthcare/crisis/standards.pdf.

Rural EMS may face greater challenges due to difficulties in maintaining adequate staffing, limited vehicle availability, prolonged resupply times and long response times that can be exacerbated in a disaster. In urban areas, increases in demand during major incidents, pandemics, or epidemics can also rapidly stress and exhaust available resources. The goal of this Guidance is to provide background on these issues and practical strategies across the continuum of EMS response that can be implemented at the regional and local level. This Guidance is aimed at the EMS agencies themselves and though it does detail the supporting role of State agencies it is the responsibility of the EMS agency to apply this guidance with the help of their management team and medical director to ensure operational plans are in place. The Guidance Document also provides considerations for PSAPs and EMS dispatch centers as well as first responders.

**Crisis Care**

Most EMS agencies are familiar with the concept of surge capacity—the ability to increase services to match demand. Surge capability is slightly different—it requires specialized equipment or training to meet the patient’s needs. A few examples of patients like this are those who are contaminated or those with a highly infectious disease. This guidance is focused on capacity, but services should remember, specialized patients (pediatric, highly infectious disease, special needs, etc.) can push services into crisis care as well, even with a single patient (e.g. suspect Ebola case when the crew has inadequate protective equipment). Adequate
supplies, training, and regional policies are just as important for capability as well as overall capacity. This edition of the Guidance Document focuses on capacity.

Surge capacity strategies are not all equal. Some can be accomplished with minimal risk (mutual aid) and some carry significant risk (not responding to some 911 calls with an ambulance response due to overwhelming demand). Maximizing the potential benefits of surge capacity strategies to mitigate the crisis while minimizing the risks associated with deviations from routine operations is the goal. Strategies need to be identified and selected that are most appropriate to the situation and offer the least risk to the patient and EMS personnel, proceeding to riskier strategies as demand increases and options decrease.

Surge capacity is therefore divided into three categories across a spectrum (Fig.1):

- Conventional – usual strategies and resources – e.g. dispatch of additional ambulances, mutual aid, extending staff shifts for a few hours
- Contingency – less common strategies and resources that incur a small risk to patients – e.g. staffing ambulances with less personnel or a lower level of response (delayed or single agency, i.e. only police, fire or rescue when usually more than one agency would respond)
- Crisis – disaster strategies used when demand forces choices that pose a significant risk to patients but is the best that can be offered under the circumstances – e.g. recommending self-transport, medical personnel accompanying patient in a private vehicle

**Figure 1: Examples of EMS Conventional, Contingency, and Crisis Care** (modified from IOM 2012)
This Guidance Document will refer to crisis care as a component of the surge capacity plan that must be invoked when demand forces the agency to make decisions that may place the patient at a higher risk of a poor outcome, but are the best that can be offered given the circumstances. Most of these situations are quickly resolved with arrival of additional resources. The balance of risk and time is the essential consideration; all segments of the health care delivery system need to exercise their best judgment for providing care in these circumstances. In addition the term “Crisis Standards of Care” (CSC) refers to a longer-term and more pervasive situation where adequate resources to meet the needs may not be available over an extended period of time and therefore a systematic approach is required. Additional consideration by State agencies for providing specific legal and regulatory support and clinical guidance may be necessary for the crisis care actions being taken beyond a few shifts. This may include but is not limited to dispatch and triage decisions, alternate care sites, alternate care systems, and treatment recommendations or suspension of regulations (Appendix 1). A key example of an incident requiring formal CSC would be a pandemic.

Key points about crisis care:

- Crisis care is not a separate plan on a shelf for responders—the strategies are extensions of all-hazards response plans.
- EMS agencies will not have an option to await State or other agency action before implementing crisis care decisions in a no-notice event, demand will drive options and choices.
- If strategies are not thought out ahead of time, they likely will not be considered and/or cannot be implemented.
- Strategies should be proportional to the resources available—that is, as more resources arrive, you should revert to lower risk strategies (and therefore, back to contingency and eventually conventional status).

Crisis care planning must be integrated into all-hazards plans at all levels of health care planning. Local, tribal and State governments (including agencies such as the EMSRB and MDH) support those actions through declarations and legal and regulatory mechanisms (Appendix 1), which may include care guidelines or declarations of Crisis Standards of Care.

Roles and Responsibilities

Though the primary focus of this guidance is on the operational strategies for EMS responders during crisis care, EMS should be supported by regional health care coalitions (partnerships between local and tribal public health, EMS, hospitals and emergency management that provide planning and response coordination in each of eight regions of the State) and State and local government agencies. The following is a capsule summary of the role of State and local entities in crisis situations and key responsibilities – it is not intended to be comprehensive:
### Table 1: Key agency roles and responsibilities

<table>
<thead>
<tr>
<th>Agency</th>
<th>Role</th>
<th>Key Responsibilities</th>
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| MDH                           | State lead agency for health-related issues    | - Facilitate health care resource requests to state/inter-state/Federal partners  
- Request State Emergency Declarations and Governor’s emergency orders as required from HSEM to support response  
- Request Centers for Medicare and Medicaid Services (CMS) 1135 waivers as required during response to allow patient billing when usual conditions cannot be met  
- Convene the MDH Science Advisory Team/Crisis Standards of Care (SAT/CSC) to discuss or develop incident specific medical/resource triage and treatment recommendations as needed  
- Support regional health care coalition information exchange and policy development  
- Provides information regarding testing, treatment and preventive measures to providers and population during infectious disease events |
| EMSRB                         | State lead agency for EMS disaster response   | - Carry out duties and responsibilities assigned to the EMSRB in the Minnesota Emergency Operations Plan (MEOP) and the Governor’s Executive Order 15-13 Assigning Emergency Responsibilities to State Agencies.  
- Deploy Ambulance Strike Teams (AST), Multiple Casualty Incident (MCI) buses, additional ground or air ambulances from regions as requested by local EMS agencies through the State Duty Officer or State Emergency Operations Center (SEOC)  
- Request inter-state (EMAC) or Federal (i.e.-Federal Ambulance Contract) resources as needed via HSEM  
- Communicate suspension of selected regulatory statutes/rules to facilitate crisis care activities during declared disaster  
- Provide support to regional health care coalition/response through regional EMS system program personnel  
- Support local EMS medical directors by providing guidance on patient care guideline development through the State EMS Medical Director and the Medical Director Standing Advisory Committee |
| Tribal Emergency Management    | Tribal lead for disaster, EMS response and incident support | - Declare local tribal emergency  
- Request Federal Presidential Disaster Declaration |
<table>
<thead>
<tr>
<th>Agency</th>
<th>Role</th>
<th>Key Responsibilities</th>
</tr>
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<tbody>
<tr>
<td>Tribal level coordination of overall disaster response/recovery</td>
<td>Local Emergency Management</td>
<td>Request resources from local and State Emergency Operations Center (SEOC) as required</td>
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<tr>
<td>Tribal coordination and utilization of tribal communications, EMS and tribal first responder resources and tribal public health</td>
<td>Local lead for incident support</td>
<td>Facilitate local declarations of emergency</td>
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<tr>
<td>Coordinate with Indian Health Service hospitals at Leech and Red Lake and tribal clinics as appropriate</td>
<td></td>
<td>Provide incident information/common operating picture to local and State agencies</td>
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<tr>
<td>State level coordination of overall disaster response/recovery</td>
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<tr>
<td>State Emergency Management (HSEM)</td>
<td>State lead for incident support</td>
<td>Provide point of contact (State Duty Officer/State EOC) for resource requests</td>
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<td>Request Governor declare emergencies as required</td>
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<td>Recommend Federal/Presidential Disaster Declaration request to Governor as required</td>
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<td>State level coordination of overall disaster response/recovery</td>
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<tr>
<td>Indian Health Service Hospitals</td>
<td>Leech Lake and Red Lake</td>
<td>Provide clinical support to tribal members</td>
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<td></td>
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<td>Provide situational awareness to tribal emergency managers and regional health care coalition</td>
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<td></td>
<td></td>
<td>Lead for tribal community based interventions (vaccinations, isolation, prophylaxis)</td>
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<tr>
<td>Regional Health Care Coalition</td>
<td>Regional coordination of health and medical response</td>
<td>Information sharing of activities between public health, hospitals, EMS, and emergency management</td>
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<td></td>
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<td>Assist in coordination between local and tribal public health, hospitals, EMS resources and emergency management in collaboration with the State, Regional or Local Emergency Operations Centers</td>
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<td>May provide/develop regional policies for disaster response/crisis care</td>
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<tr>
<td>Regional EMS Systems Designated by the EMSRB</td>
<td>Regional coordination EMS response</td>
<td>Information sharing of activities between EMS, hospital, emergency management and local, regional and state emergency operations centers</td>
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<td>Assist in coordination with EMS resources and emergency management in collaboration with the State, Regional or Local Emergency Operations Centers</td>
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<td>May provide or develop regional procedures for EMS disaster response</td>
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<tr>
<td>Agency</td>
<td>Role</td>
<td>Key Responsibilities</td>
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<tr>
<td>Local EMS agency</td>
<td>Local EMS response</td>
<td>• Incident command/branch command for EMS – requests</td>
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<tr>
<td></td>
<td></td>
<td>• Work with regional or state officials to coordinate and manage EMS resources</td>
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<td>• Develop policies and SOP’s for crisis care situations</td>
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<td></td>
<td>• Interface with local hospitals and regional health care coalition to share information/status</td>
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<td></td>
<td>• Respond to calls for medical assistance</td>
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<tr>
<td>Local and Tribal Public Health</td>
<td>Lead or support agency</td>
<td>• Supporting agency to EMS (lead agency for pandemic/epidemic situations)</td>
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<td>• Can provide community communications (e.g. when to call 911)</td>
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<td>• Supports/coordinates alternate care sites as appropriate</td>
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<td>• Supports/coordinates hotlines as appropriate</td>
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<td>• Communicates health alerts and other information to partner agencies</td>
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<td></td>
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<td>• Lead for community based interventions (vaccination, isolation, prophylaxis)</td>
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<tr>
<td>Public Safety Answering Point</td>
<td>Support agency</td>
<td>• Answers 911 calls</td>
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<tr>
<td>(PSAP)/911 Center</td>
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<td>• Provides emergency medical dispatch support (if equipped, may transfer to secondary PSAP or not have this capability)</td>
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<td></td>
<td>• Determines appropriate response based on situation/algorithms/Standard Operating Procedures</td>
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<td>• Provides communication point for incident responders</td>
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<td>• May assign radio talk groups during an incident</td>
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**EMS Surge Capacity**

EMS must plan for surge capacity across multiple functions. The resources available must be utilized to their maximal capacity and additional resources obtained from known sources via pre-existing mechanisms (e.g. mutual aid agreement, request to local emergency manager, through the State Duty Officer, etc.). These include ‘Send’ (dispatch and response assets), ‘Staff’ (personnel), and ‘Supplies’ (resources and materials including medications) and may include alternative transport and patient disposition destinations as resources. This step involves assessing current or potential available and alternative assets, and is *not* about policy development which is the focus of the Planning and Implementation sections that follow.

**Dispatch**

EMS agencies are dispatched by PSAPs. PSAPs may be primary (single point of answer/dispatch) or secondary (receives PSAP routed calls for post-dispatch, EMS dispatch, or pre-arrival instructions and is able to receive 911 calls routed to it from a PSAP when the PSAP is unable to
receive or answer 911 calls). Sometimes, all or selected EMS calls are transferred to an Emergency Medical Dispatcher (EMD). EMDs are trained to perform caller interrogation to collect critical information in order to provide pre-arrival instructions to responders, assign different priorities to calls based on the acuity, dispatch appropriate EMS/fire/law enforcement resources and then give pre-arrival instructions to the caller to provide basic medical care while awaiting EMS arrival. PSAPs in rural areas often do not have these resources or training. EMS agencies should examine their dispatch process and determine:

- Potential for supplemental staff and dispatchers—sometimes the configuration or communication equipment capacity of the dispatch center does not allow for additional call taking and dispatch personnel. In a rural area even if call volumes are tripled it may not result in substantial call handling burden due to normally low hourly call volumes. However, the increase in ambulance requests may have a dramatic impact on the availability of ambulance staff and vehicles.
- Rollover of calls to other dispatch centers or PSAPs.
- Auto-answer to divert calls related to a particular event to a hotline or recording rather than a dispatcher (water contamination, pandemic influenza, etc.).
- Transfer of calls to a clinical provider that can help prioritize the need for an ambulance in areas where EMD’s are not normally available (this could be hospital based personnel, call transfer to another dispatch center with EMD capability, use of a medical director, etc.)
- Use of an algorithm to assist non-medically trained dispatchers in determining the need for an ambulance (see below under Planning and Implementation).

**Ambulances/Transport**

EMS agencies generally do not have significant additional ambulance capacity available, and should account for the following in their plans:

- Maximal use of existing ambulances
- Mutual aid from surrounding agencies (including knowledge of capacity, special capabilities, and response times) or from a parent health system. This should include area agencies providing non-emergency transportation where applicable.
- A request to the State Duty Officer (SDO) for deployment and use of Ambulance Strike Teams (AST). The request will be processed through the EMSRB on-call staff (Appendix 2). An AST consists of five ambulances, either Basic Life Support (BLS) or Advanced Life Support (ALS) or a Task Force which is a combination of ALS/BLS, plus one Strike Team Leader. These teams can provide support within hours that can help the community augment 911 responses and/or provide inter-hospital transfers for victims from an overloaded community hospital to referral centers or potentially assist in other clinical missions such as alternate care sites.
- Request and use of mass casualty incident buses – two buses in the metro (Minneapolis Fire and Metropolitan Emergency Services Board, Metro Region EMS System), and one in Fargo (F-M Ambulance). These resources can move many patients at a time to assist...
evacuating a hospital or long-term care facility. Plans should include guidance for when it is appropriate and how to request these assets.

- Mutual aid including ambulances from neighboring states may be obtained via request to the State EOC via the Emergency Management Assistance Compact (EMAC). Significant aid would be limited to state-declared disasters.
- Federal ambulance contracts can provide hundreds of ambulances but requires a Federal declaration of disaster, in addition to a request, and time to get the ambulances to the disaster location. Therefore, at minimum 24-48 hours would be required to see significant contributions from these contractors.
- Scheduled BLS provider engagement – if the service area has scheduled BLS providers those resources may contribute substantially during a disaster. Their capabilities and contact information should be available and the point at which they become involved should be predefined.
- Wheelchair (WC) vans – local WC or stretcher service providers may be a very helpful asset particularly with long-term care evacuations, though they may contribute to other predefined responses as well.
- Buses - school buses or public transit buses that are climate controlled and capable of assisting with mass movements or batched transports.
- Private transport – use of private vehicles, with or without medical personnel may need to be used to augment ambulance services. In general, it is better to get a patient to the hospital faster rather than wait long periods of time for an ambulance. Prioritizing ambulatory and other selected patients to private transport can significantly reduce burden on EMS agencies. The threshold for recommending private transport should be specified at the dispatch level (see Planning and Implementation section which follows).
- Military – in particular, National Guard ambulances and potentially airlift capacity could contribute to patient movement if activated by the State during a declared disaster. Military airlift assets could also be used to move patients via the National Disaster Medical System if required during a federally declared disaster.

Agency plans should include guidance for when and how to request these additional assets.

**Staff**

Flexibility of staffing often correlates with run volumes (small volume volunteer services often have less flexibility than large urban services) though exceptions occur. During a pandemic or epidemic, EMS staff could be severely and disproportionately affected, dramatically reducing staffing options. EMS agencies should examine the following possibilities when planning for surge situations:

- Maximal utilization of current staff – consider extending shifts and changing schedules
- Mutual aid from nearby services – though current mutual aid focuses on ambulances in some cases it may also be possible to share staff across services to maximize the use of the vehicles available. Also, services that are part of a health system may obtain staff from other areas if the event affects a single area/jurisdiction.
- Change in crew configuration – for example, 1 Paramedic/Emergency Medical Technician (EMT) rather than 2 Paramedics; or 1 Emergency Medical Responder (EMR)/1 EMT rather than 2 EMTs (note that some areas of the state are already doing this).
- Use of direct response by staff in personal vehicles – this could involve community paramedics, or simply a first responder that can respond to provide assessment and basic care if an ambulance is not available.
- Medical Reserve Corps (MRC) – depending on the community, MRC members may have qualifications that would enable them to contribute to EMS operations if this was a priority for their use. MRC can be activated by the local or tribal public health or State (MDH) on request during a disaster.
- MN Mobile Medical Team (MMT) – the MMT has a broad array of providers and could be used to supplement EMS and emergency service personnel or used to staff an alternate care site to relieve the burden on EMS personnel. MMT may be requested by a local jurisdiction through the SDO or SEOC.
- National Guard or other state personnel could be assigned by the State to assist EMS.
- Disaster Medical Assistance Team (DMAT) – DMAT teams are Federal versions of the MMT and may provide emergency and alternate care site medical services. DMAT teams are available during federally declared disasters and are operational within 48 – 72 hours. DMAT teams do not staff ambulances directly but can provide support in many areas where EMS personnel might otherwise be requested to assist. A DMAT is requested through the SEOC or HSEM.


**Supplies**

Current supply chain models rely on ‘just-in-time’ inventory processes with minimal stock or “par” levels. Few ambulance services are able to maintain significant contingency stocks of disposable supplies. Services should identify key supplies required in a disaster and attempt to assure adequate supplies are available by increasing par levels and rotating those items through existing stock. These key supplies may include:

- Hemorrhage control – particularly tourniquets and dressings
- Backboards (helpful for transferring multiple patients, and for short carries over uneven terrain)
- Medications – particularly pain medication and IV fluids
- Triage tags/tagging system
- General personal protective equipment
- Specialty supplies for pediatrics, burn (in particular, airway, pain management, IV access and fluids and burn sheets/dressings) and potentially chemical (auto-injectors) and general personal protective equipment
The vast majority of disaster medical care focuses on basic life support skills, with the predominant ALS contribution of narcotic pain medications (and occasionally airway management and chest decompression). Many EMS agencies cache disaster supplies in trailers. Caches can be problematic for two reasons: 1) Supplies may become outdated or compromised without a system of checks, and 2) Staff has to retrieve the cache from its storage location, which takes time and resources.

EMS agencies should understand their supply chain – where things come from, what is available within the region, etc. so there are no surprises when replenishing stocks during or after a major incident. Drug shortages routinely occur and serve as a good reminder of how fragile the supply chain is. Adaptations and substitutions may need to occur when usual supplies are not available. These ‘routine’ shortages are useful opportunities to engage medical directors, managers or leadership in creating new SOPs that contribute to familiarity with the process and options during a crisis. Consistent with crisis care frameworks—see IOM 2012 for additional information: [http://www.nationalacademies.org/HMD/reports/2012/crisis-standards-of-care-a-systems-framework-for-catastrophic-disaster-response.aspx](http://www.nationalacademies.org/HMD/reports/2012/crisis-standards-of-care-a-systems-framework-for-catastrophic-disaster-response.aspx)

Federal stockpiles contain significant quantities of medications, specialized incident supplies, and prophylactic antibiotics in the Strategic National Stockpile (SNS). These can be accessed during a federally declared disaster through the State Duty Officer (SDO) if sufficient supplies are unavailable locally. Regional health care coalition and State options should be exhausted (or clearly inadequate) prior to requesting SNS assets (SNS assets should be available within 12 hours of a request).

**Destinations**

Destinations are included under ‘resources’ as it is critical that EMS have the ability to safely off-load patients, freeing ambulances for additional calls. In general, hospitals are the default destination. During disasters, the closest hospitals to the scene usually receive a significant number of walk-in casualties, therefore a conscious decision should be made early in response to distribute casualties across several hospitals rather than overly burden a single hospital when possible. EMS should understand the trauma and other capabilities of the hospitals in the area and also be able to obtain capacity information for local hospitals rapidly via radio, phone, or Minnesota system for Tracking Resources, Alerts and Communications (MNTrac). This information should be utilized to distribute patients/casualties among receiving hospitals when more than one destination is available.

In prolonged events—such as a pandemic—or an event where the local hospital is damaged and not operational, alternate destinations for care may have to be used. Clinics, urgent care centers, or temporary care sites (e.g. a ‘field hospital’ or site where an MMT or DMAT is operational) or even an influenza screening center may be appropriate sites depending on the situation. However, these are generally event-dependent options for the EMS medical directors, managers or leadership to consider, develop event-specific policy, and communicate appropriate destinations to the crews. Waivers to local ordinances and CMS 1135 waivers may
Planning and Implementation – General

Indicators and Triggers

An ‘indicator’ is a predictor of a possible event (e.g. a tornado warning, report of several cases of unusual respiratory illness) that requires gathering of additional information or analysis to decide if a ‘trigger’ point has been reached to take action.

There are two types of triggers, scripted and non-scripted. Scripted triggers are built into SOPs and are automatic ‘if/then’. Whenever possible, scripted triggers should be developed for frontline personnel so they have actions they can take immediately to prevent delay. Non-scripted triggers require additional analysis and consideration involving management and supervisory staff. These are often part of an incident action planning cycle. The less specific the information available, the more difficult it is to apply a scripted trigger and the more likely an experienced manager, supervisor or subject matter expert (SME) will be involved to process the information and decide on necessary actions. Responder and dispatch personnel should have a low threshold for passing indicator information along to supervisors for situational awareness and potential action.

Rather than focus on indicators and triggers in isolation, the EMS agency should determine what strategies or options it may employ in a disaster and then decide on indicators that might be available and a ‘trigger point’ for staff to take tactical action. Though this may sound complex, it is all about establishing thresholds for action. A tornado warning, while an indicator, does not trigger disaster related actions. A report to a dispatcher of a tornado touchdown in a populated area should generate specific pre-planned actions by dispatch staff just as a report of a fire in a building or ‘gun shots fired’ would.

Standard operating procedures (guidelines/policies) and algorithms for frontline personnel should specify when to take certain actions and what those actions should be. This is critical to the success of crisis response plans. Unfortunately delays in decision making can occur in unfamiliar situations and with unclear authority when the decisions could have been automatic if they were pre-planned. Worse, providers under stress may continue to delay procedures or try to invent solutions that are sub-optimal without clear guidance.

Triggers are important at every level of response from local to regional to State to Federal and the thresholds may vary (e.g. the threshold for a local disaster declaration is different than for a Federal declaration). Detailed information on indicators and triggers (including templates for EMS) is available in the 2015 IOM report— http://www.nationalacademies.org/hmd/Reports/2013/Crisis-Standards-of-Care-A-Toolkit-for-Indicators-and-Triggers.aspx
Agency Policy

EMS agencies should first look at their resources (staff, ambulances, equipment and supplies) and determine which policy and procedure options best apply to their service across the surge capacity spectrum from conventional to crisis care. This should be a joint effort involving management or leadership, medical directors, and responder/dispatcher staff and potentially members of the regional health care coalition and regional EMS system. Indicator and trigger thresholds should be determined. These will vary by service, for example in a very rural area a response time of 30 minutes for an ambulance may be normal, and in an urban area could prompt implementation of call triage and recommendations for private transport for stable patients.

Once the indicators and triggers have been determined, EMS agency policy should be developed to give personnel clear expectations of what they will do and when they will do it, as well as the notifications that should occur to supervisors and surrounding agencies when these triggers are activated. Delegating authority to the responders and dispatchers should be done when possible, and the adoption of clear policies helps facilitate decisions as well as provides accountability across the agency and facilitates communication of the plan with partner agencies.

Education, training, and exercising should be conducted to assure successful policy implementation. During an event that lasts longer than a day, the agency should review and modify their procedures as needed. Plans should be flexible to not ‘lock in’ disaster response protocols for the duration of an incident but allow transition back to conventional care as more resources arrive or demand falls, or both (e.g. do not keep recommending private transport once ambulances are available).

Medical Direction

Crisis strategies and tactics balance community versus individual needs. Risk to the individual patients must be balanced against the demand. Therefore, involvement of medical directors is critical to the success of the plans, strategies and tactics. Local EMS agency medical directors should know the area and resources and be engaged with neighboring agencies in these planning discussions. Optimally, the medical director should have a role during the crisis situation providing subject matter expertise at minimum, and act as a liaison between the hospital and EMS. However, the engagement level of EMS medical directors varies widely across the state, and the EMS agency and medical director will need to agree on an appropriate level of participation. If needed, individual EMS agency medical directors may need to collaborate at a regional level to serve as an organized resource or provide guidance.

Medical directors must also approve of triage strategies used by their service (including baseline strategies such as Simple Triage And Rapid Treatment (START) or Sort, Assess, Lifesaving intervention, Treatment/Transport (SALT) as well as any incident-specific guidance that allows EMS personnel to make decisions to leave patients at the scene or transport to
alternate destinations. Since the medical director is ultimately responsible for the care provided, any change to usual SOPs will require physician input and approval.

EMS medical direction in Minnesota occurs at the local level; however, the Medical Direction Standing Advisory Committee (MDSAC) of the EMSRB through the State EMS Medical Director may support individual local medical directors by providing resource documents including sample patient care guidelines. In situations with unique clinical circumstances such as pandemics the MDSAC is a resource that can offer guidance on clinical circumstances from physicians with EMS expertise.

Integration with Regional Operations

Minnesota is divided into eight designated public health and regional health care coalitions. Each regional health care coalition (Coalition) consists of leadership from hospitals, EMS, local and tribal public health, and local and tribal emergency management. There are also eight EMSRB designated regional emergency medical services systems in the State. The EMSRB designated agency in each regional EMS system is usually the EMS coordinating entity in collaboration with EMSRB staff (EMS Specialist) assigned to each designated regional EMS System. Each Coalition also has an assigned Regional Health Care Preparedness Coordinator (RHPC) who works primarily with the hospitals and EMS, and a corresponding Public Health Preparedness Consultants (PHPC) who work with local and tribal public health agencies. The RHPCs and PHPCs have direct communication with MDH and their EMSRB EMS Specialist.

It is critical EMS agencies do not work on EMS CSC plans in isolation, but do so in concert with their regional framework and partners. Consistency of plans and knowing what others in the region (and adjacent regions) are planning is critical to success. Surge strategies and SOPs do not have to be identical, but if they are similar or complementary it will help greatly in education, training, and mutual aid response. During a response, the Coalition assures information sharing between partners and support for and between disciplines in the area. The Coalition can also engage with neighboring Coalitions and the State (MDH/EMSRB) to coordinate information and policies. Local Coalition members interface with emergency management to assure that resource requests are processed and a common operating picture is maintained. The Coalition may also convene workgroups during planning or a response to help develop regional tactics (e.g. to discuss hotline/virtual support/common EMS practices in the area during a response).

The key is to only implement crisis strategies when planned assistance from regional partners is inadequate (either too little or too late). This prevents inappropriate implementation of crisis care strategies when resources are available to address the demand. Coordination with the regional partners must be achieved as soon as possible when a crisis situation develops so the services can return to conventional operations as soon as possible. The sooner a crisis situation is recognized (indicators) and pre-planned resources and coordinating mechanisms are activated (triggers), the shorter the crisis period will be.

Planning and Implementation—Rural
This section offers strategies and tactics with a focus on rural settings. However, the diversity of services in rural areas or their proximity to urban areas may require adaptation. This guidance is generally directed toward a volunteer service dispatched by a PSAP with no EMD capability. Advanced life support (ALS) services with EMD may wish to refer to the “Urban” strategies section below. Note that an EMS Surge Operations and Crisis Care Matrix summary of issues is presented in Appendix 3.

**Multi-Agency Coordination/Policy Development/IAP/IMS**

Rural agencies should know their lead regional EMS contacts (EMSRB and designated regional EMS system) and plans for the regional health care coalition multi-agency coordination function and capability during an event to help coordinate overall health care response efforts across the geographic area during a disaster. Due to the distances in many Coalition regions, health care coalition multi-agency coordination and engagement often is virtual, involving conference calls and electronic coordination platforms such as MNTrac rather than a specific physical location. The regional Coalitions coordination function can assist local agencies with resource issues (in conjunction with local emergency management), policy development, and joint incident action plans.

The use of the incident management system (IMS) during an event is extremely important. Use of the National Incident Management System (NIMS) is required by EMS, but incident action plans (IAP’s) - (management by objectives) are seldom used due to the short duration of most events. In longer term events, use of the planning ‘P’ and the IAP cycle greatly facilitates development of common goals and identifies, obtains, and documents use of resources. All agencies should be comfortable using incident action planning processes. Incident Management Teams (IMT) are an additional appropriate resource to augment local incident management personnel when the incident is expanding, extends across multiple regions or jurisdictions, involves massive number of victims, or continues through multiple operational periods. Contact the SDO or the State EOC to request an IMT. The request for an IMT will be processed through a State coordinating group who will determine the appropriate IMT level, either a Type II or a Type III team. The regional Coalition coordinating function or an EMS multi-agency coordinating function can also provide assistance. (For additional information on IAP see https://www.fema.gov/media-library/assets/documents/25028 and page 6 for the ‘Planning P’).

**PSAPs/Dispatch**

Part of the goal during a crisis is to decrease the call volume at the PSAP. This may be done by a variety of measures:

- Work with emergency management, local and tribal public health, regional health care coalitions and local media to communicate to the public the stress on the system and to only call 911 for life-threatening emergencies.
- Keep the public up to date with incident information to reduce non-emergency 911 calls. Thus, ongoing information provision to the community through the Public Information Officer (PIO) or Joint Information System (JIS) can be very helpful.
- Activate an ‘auto-answer’ that may be as simple as ‘Due to extreme demands on our 911 system please stay on the line only if you have a life-threatening emergency’ or may involve options to route a caller to a hotline if they have questions about influenza symptoms, toxin exposure, or family reunification depending on the event. Auto-answer systems should be available to PSAPs if possible and optimally should be activated whenever the dispatcher cannot answer the phone right away. Some dispatch centers have roll-over capability to another PSAP or secondary PSAP when they cannot answer by a certain number of rings. In this case a trigger for use of the auto-answer should be determined and the dispatcher empowered to activate the system.

During a crisis, once a request for EMS is received by the PSAP/Dispatch, the goal is to provide the most appropriate services available. Given the long response and transport times in some rural areas, and the lack of medically trained dispatchers in many communities, determining the best services to match a request can be difficult. A possible algorithm for consideration is presented in Fig. 2. Dispatchers should be trained and empowered to use an algorithm such as this whenever the situation occurs, with a trigger to notify supervisory personnel whenever mutual aid is not available in a timely manner (the number of minutes should be specified by local decision based on usually available resources). The algorithms which can be used by the dispatcher and what other actions must be taken at the time they are implemented (triggers) should be clearly spelled out in policy and education and drills conducted to reinforce the agency policies and procedures.

The use of private non-ambulance transport may seem unusual to EMS providers, but may represent the best practice when EMS care would otherwise be substantially delayed. The community may have first responders that are not currently on the ambulance(s) and can respond to subsequent calls for assistance directly to the scene to help the patient determine the best option for transport. In these situations, maintaining the minimum staff on the ambulance may help conserve responders, allowing remaining staff to be available.

When possible, it may be very helpful to screen calls using a medical provider. This approach has been utilized following prior major disasters in some communities. Call screening could involve a partnership with an EMS agency medical director within the designated regional EMS system, the area hospital, or a dispatch center with EMD capability. During a pandemic event even tripled call volumes in a rural area may not cause severe stress on available ambulance resources if they are spaced out in time. More likely is a no-notice mass casualty incident that overwhelms a rural community PSAP and EMS resources for a short period of time. Crew members may have to assist in prioritizing the response to calls that are pending if no supervisor or medical director is available to provide input. PSAP/dispatch should always have contact information for an available EMS operations manager, supervisor or operations chief as well as the designated regional EMS System point of contact.
Additionally, if the PSAP does not use an emergency medical dispatch system the service may wish to authorize the use of an algorithm by non-medically trained personnel to prioritize ambulance dispatches during a disaster as shown below in Fig. 3. Note that this algorithm does not cover all circumstances and should not substitute for good judgment of the dispatcher.
Figure 3: Disaster dispatch algorithm to prioritize pending EMS calls

EMS Crisis Care Dispatch Aid

Automatic First Priority:
- Severe difficulty breathing
- Unconscious or confused
- Severe uncontrolled bleeding
- Penetrating trauma to chest/abdomen
- Ongoing seizure

First Priority - Assign resource immediately Ambulance as soon as possible

No

Complaint Specific – YES = First Priority NO = Second priority

Chest pain:
- Present for LESS than 2 hours? OR
- NOT worse with breathing or coughing?

Possible Stroke:
- New difficulty speaking, moving arm/leg/facial changes? AND
- Present for LESS than 4 hours?

Trauma
- Injury accident and trapped/cannot get out due to injury?

Pregnancy
- Severe pain or bleeding? OR
- Contractions < 5 min/feeling need to push?

Headache
- Worst ever? AND
- Sudden onset?

Overdose
- Refer ALL to poison control 1-800-222-1222
- Send EMS if caller directed to by poison control

Uncertain Priority? (Language barrier, unclear history or doesn’t fit criteria) – Send other public safety or EMS first responder to check

First Priority
- Assign resources immediately
- Ambulance as soon as possible

Second Priority
- Assign ambulance as available

Third Priority
- None of above and minor trauma or complaints
- Advise delay, encourage self-referral
- Ambulance when available
Treatment

During no-notice or unpredicted disasters, care should focus on BLS measures with rapid transport to the hospital. Automatic changes to SOPs may be invoked during a disaster (for example, some ambulance services do not require calling in for on-line physician verbal orders during a disaster and allow the ambulance personnel to work within the full scope of their SOP for a medical complaint). During no-notice or prolonged disasters such as a pandemic the medical director and EMS agency leadership may approve broader discretion for patients being left at scene by EMS (if the condition is not emergent and appropriate follow-up and/or transportation can be arranged). This should ONLY be invoked when additional 911 calls are pending in the system and ONLY for conditions and circumstances that the medical director approves via SOP or on-line medical control (see Appendix 5 – Hennepin County ALS Pandemic Protocols – Triage/Treatment).

Transport

Batch transports (more than one patient/ambulance) should be encouraged. Batch transport can also be used during pandemic or other events where calls are pending and the current patient is stable. As noted above, use of non-traditional transport including any available wheelchair vans and private vehicles may be the best option.

Inter-facility/Inter-hospital transfers can take essential local ambulance resources out of the service area for hours at a time. Careful consideration should be given for decisions regarding the use of ambulance resources for inter facility transport during a crisis of care event. The use of ASTs (See Appendix 4), EMS units from the receiving facility/community, or more aggressive use of rotor-wing aircraft transfer may be of substantial benefit in order to preserve community response assets. In some situations, the hospital may need to board patients they wish to have transferred while EMS continues to respond to high volumes of 911 calls. The hospital should understand this ‘dual priority’ ahead of time and EMS leadership, supervisory staff and medical directors may need to be involved in this negotiation.

Transports to Hospital in Non-Ambulance Vehicle:

In a crisis EMS resources may be severely limited and alternate transport options may need to be considered. One option would be transport of patients via a motor vehicle that is not an ambulance with or without EMS providers administering care in the vehicle during transport. Minivans with a flat cargo area offer lower loading height as well as a protected environment compared to pickup trucks. Pickups may offer an advantage in rescue situations for getting patients to roadways from remote areas that require a high-clearance 4WD vehicle. Appendix 4 provides specific considerations and guidance to be taken into account when the option of non-ambulance transport is considered. Dispatch and the receiving hospital should always be notified when private transports are occurring and an abbreviated report given to the receiving hospital when feasible.
Destination

EMS units almost universally transport to hospitals since they are usually not reimbursed for non-hospital transports. Further, they usually transport to a single hospital in rural response areas, with occasional exceptions.

During a disaster, the closest hospital can quickly become overwhelmed with patients self-presenting as well as EMS transported patients. In these cases it may be appropriate to change protocols. These changes should be considered and developed ahead of an event. It will usually require a supervisor or manager to approve transport to non-hospital facilities, but a crew may have to make a decision about the most appropriate destination hospital and should be empowered to do so.

The disadvantage of spreading patient transports between other and more distant hospitals or facilities is distance equals time. The time the crew takes to transport the patient to a farther facility is time they could be spending responding to requests for EMS service. Time can be reduced with lights-siren transport to the hospital though this increases provider and patient risk as well as risk to other drivers. However, when an incident is in an area where the transport time is not significantly longer or when the facility may be larger or offer a higher level of trauma care it is appropriate to try to balance transports between hospital facilities rather than risk overloading one particular hospital or facility. Patient tracking becomes important in this situation.

In some events where there are many patients that have mild symptoms (pandemic or a hazardous materials release—for example chlorine) the hospital may set up a screening site for those with mild symptoms so they can focus on very sick individuals. Alternate patient dispositions could include a clinic, alternate care or other community venue. It is appropriate for EMS to transport to those locations provided they are open, appropriately staffed, and the patient does not have any severe symptoms.

EMS may be requested to provide on-site response and transport support for these facilities, as well as to shelters, and to support fire personnel at fire rescue or suppression scenes during a disaster. Unless there is an active need for transport, these support or stand-by roles must be declined if the service is in a crisis situation and having difficulty answering all their requests for service.

Planning and implementation—Urban

Multi-agency Coordination/Policy Development/IAP/IMS

Urban agencies benefit from close mutual aid relationships and more resources compared to rural environments, but can easily enter crisis mode during a very large or prolonged event (e.g. pandemic with tripled call volumes). EMS agencies should know their regional EMS system program contacts and dispatch numbers as well as plans for the regional health care coalition multi-agency coordination function during an event that will help coordinate efforts across the geographic region during a disaster. The regional health care coalition multi-agency
coordination function should include the regional planners, EMS agencies, and interface with regional health care coalition partners such as hospitals, local and tribal public health and emergency management. In conjunction with the regional health care coalition multi-agency coordination function an urban regional health care coalition may establish a health multi-agency coordination center (H-MACC). The H-MACC can assist local agencies with resource issues, policy development, and joint incident action plans. Note that an EMS Surge Operations and Crisis Care Matrix summary of issues is presented in Appendix 3.

In the Twin Cities metro area if an incident affects a single jurisdiction, the EMS agency responsible for the primary service area should be represented at the jurisdictional EOC. In a large event, the affected agency or agencies may request regional assistance. The Metropolitan Emergency Services Board (the Metro Regional EMS System) provides a virtual or physical location of the EMS Multi-Agency Coordination Center (EMSMACC), acts as a base for the Metro AST assets, serves as the first-responder pharmaceutical cache distribution point and is available as an alternate site for the ESF-8 (regional medical and public health) H-MACC or regional health care multi-agency coordination function and other essential response and planning functions. The EMSMACC assists the SDO or State EOC processes in a metro-wide emergency by assisting with facilitating EMS resource requests, tracking assets and costs, assisting requesting agencies by providing operational period planning, situational awareness and updates, and providing local/regional/state EMS incident management assistance upon request. The EMSMACC is the EMS representative to the H-MACC and partners with the Metro region health care coalition’s Regional Health Care Resource Center (RHRC) to coordinate acute care as required. The H-MACC, if established, may encompass the EMSMACC and RHRC in a single location.

The use of the incident management system (IMS) during an event is extremely important. Use of the National Incident Management System (NIMS) is required by EMS, but incident action plans (IAP’s) - (management by objectives) are seldom used due to the short duration of most events. In longer term events, use of the planning ‘P’ and the IAP cycle greatly facilitates development of common goals and identifies, obtains, and documents use of resources. All agencies should be comfortable using incident action planning processes. Incident Management Teams (IMT) are an additional appropriate resource to augment local incident management personnel when the incident is expanding, extends across multiple regions or jurisdictions, involves massive number of victims, or continues through multiple operational periods. Contact the State Duty Officer or the State EOC to request a team. The request for an IMT will be processed through a State coordinating group who will determine the appropriate IMT level, either a Type II or a Type III team. A regional H-MACC or an EMSMACC can also provide assistance to the overall regional health care coalition multi-agency coordination function. (For additional information on the IAP see https://www.fema.gov/media-library/assets/documents/25028 and page 6 for the ‘Planning P’).

The critical role of the regional health care coalition multi-agency coordinating function or its Coalition H-MACC in a disaster is to maintain consistency and communications across the region—one area should not be in conventional status while others are in crisis. Therefore,
information sharing about system demand and the ability to facilitate mutual aid to load balance are key activities the H-MACC or regional health care coordinating function must be prepared to provide. Disaster situations are dynamic and require frequent monitoring.

**PSAPs/Dispatch**

Part of the goal during a crisis is to decrease the call volume at the PSAP. This may be done by a variety of measures:

- Work with public health and local media to communicate to the public the stress on the system and to only call 911 for life-threatening emergencies.
- Keeping the public up to date with incident information can reduce non-emergency 911 calls. Thus, ongoing information provision to the community through the Public Information Officer (PIO) or Joint Information System (JIS) can be helpful.
- Activate an ‘auto-answer’ that may be as simple as ‘Due to extreme demands on our 911 system please stay on the line only if you have a life-threatening emergency’ or may involve options to route a caller to a hotline if they have questions about influenza symptoms, toxin exposure, or family reunification depending on the event. Auto-answer systems should be available to PSAPs if possible and optimally should be activated whenever the dispatcher cannot answer the phone right away. Some dispatch centers have phone lines that roll-over to other PSAPs when they cannot answer by a certain number of rings, in this case a trigger for use of the auto-answer should be determined and the dispatcher empowered to activate the system.

During a crisis, once a request for emergency medical services is received by the 911 center the goal is to provide the most appropriate services available. Medical priority dispatch is very helpful in prioritizing pending calls. A log should be kept of calls that are pending or were referred to self-transport. The following adaptations should be considered during a crisis when calls are pending:

- No response or only a first responder with AED to cardiac arrest calls (recommend use of on-site AED if one is available)
- First responder (fire, rescue or police) only on the following until clear that EMS transport is required:
  - Motor vehicle crashes
  - Assaults
  - Intoxication
  - Slumper or ‘one-down’ calls
  - Fall (without other priority 1 complaints)
- Continue priority dispatch (i.e. maintain response to priority 1 (echo, delta, bravo) calls for as long as possible, recommending private transport when available based on current wait times for ambulance to lower priority calls (e.g. recommend to priority 3 (omega and alpha))

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<th>Type</th>
<th>Capability</th>
<th>Response Time</th>
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<tr>
<td>Alpha</td>
<td>Basic Life Support</td>
<td>Cold (single unit)</td>
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 Dispatch centers should have authority to use crisis dispatch algorithms and must immediately notify supervisory staff. Unless the situation is clearly limited to a few hours, the supervisor should notify the regional points of contact for the EMSMAC.

**Treatment**

During no-notice or unprediced disasters, care should focus on BLS measures with rapid transport to the hospital. Providers should understand what changes to SOP’s may be invoked during a disaster (for example, some services do not require calling in for on-line orders during a disaster and allow the ambulance personnel to work within the full scope of their SOP’s for a medical complaint). During no-notice or prolonged disasters such as a pandemic the medical director and EMS leadership may also approve broader discretion for patients being left at scene by EMS (if the condition is not emergent and appropriate follow-up and/or transportation can be arranged). This should ONLY be invoked when additional 911 calls are pending in the system and ONLY for conditions and circumstances the medical director approves via SOP (see Appendix 5—Hennepin County ALS Pandemic Protocols—Triage/Treatment).

During a prolonged event, printed information may be available for EMS to distribute to persons seeking care for pandemic or other conditions.

**Transport**

Urban EMS crews may be given the discretion to leave patients at the scene as stated above. Also, crews may ‘batch transport’ or transport more than one victim from a single scene or may respond to calls sequentially when their first patient is stable and another call is pending in the same general area.

Mass casualty buses (two in the metro area) or less traditional transport (scheduled BLS, self-transport by family, public transport, wheelchair van) may all be utilized as appropriate. The EMS agency should know how and when to use these resources if they will help relieve stress on the emergency response system.

Inter facility transfers may be required to redistribute casualties to more appropriate levels of care. The use of ASTs if available (Appendix 2) and use of scheduled BLS or wheelchair transports may help to reduce the burden of these transports. In some situations, the hospital may need to delay transfers while EMS continues to respond to high volumes of 911 calls. The hospital should understand this ‘dual priority’ ahead of time and EMS leadership, supervisory

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<th>Type</th>
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<tr>
<td>Bravo</td>
<td>Basic Life Support</td>
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<td>Advanced Life Support</td>
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staff and medical directors may need to be involved in this negotiation. Inter facility transport providers may provide critical additional resources and should be contacted to assist when possible.

Use of on-line medical control or contact with a duty supervisor may be helpful to resolve specific medical or logistical questions and a mechanism for crews and dispatch to contact these individuals should be available at all times.

**Transports to Hospital in Non-Ambulance Vehicle**

In a crisis EMS resources may be severely limited and alternate transport options may need to be considered. One option would be transport of patients via a motor vehicle that is not an ambulance with or without EMS providers. Appendix 4 provides specific considerations to be taken into account when the option or need to use a non-ambulance for transport may be needed. Dispatch and the receiving hospital should always be notified when private transports are occurring and an abbreviated patient report given to the receiving hospital when feasible.

**Destination**

EMS should seek to avoid overloading a single hospital with victims from a no-notice event. In the metro area, the East and West Metro Medical Resource Control Centers (MRCC) maintain lists on MNTrac of the ‘first wave’ assignments for hospitals based on their trauma level. MRCC can assist ambulances with hospital assignments based on the triage category of their patient and capacity reported by individual hospitals via the MNTrac system. In general, critical trauma should go to a Level 1 trauma center and burns to a designated Burn Center unless these centers are over capacity. Otherwise, the closest appropriate hospital should be chosen. Critical medical patients may need to be diverted away from Level 1 trauma centers to allow those facilities to focus their resources on trauma patients. Though patient preference is usually honored when choosing a destination hospital, during a crisis situation the closest appropriate hospital should be chosen to allow the crew to return to service as quickly as possible (similar to blizzard and other situations that require exceptions).

In cases such as a pandemic, it is possible that information or flu lines, caller screening, alternate care sites, or designated clinics or urgent care facilities may be appropriate options or destinations for EMS units. These options, locations and protocols would be developed regionally with input from MDH, EMSRB, local and tribal public health, EMS managers and medical directors and would be implemented in special circumstances.

**EMS Legal and Regulatory Considerations**

Crisis care actions that occur during major disasters or for a prolonged period should be undertaken with consideration for the impact of legal and regulatory standards, which may apply either because those laws were already in effect or because they are activated or applied specifically to address the mass casualty event. Responders, in evaluating which laws may apply to any crisis situation, need to seek legal advice from their attorneys. Legal advice from qualified attorneys is a critical element of emergency planning and response activities, equally
as important as the guidance and support from local, Tribal and Federal governments as well as from State agencies such as the Minnesota Department of Health and the Minnesota EMS Regulatory Board. In a prolonged event, systematic regional or statewide Crisis Standard of Care activities such as structured triage of resources and specific emergency orders may be issued.

The ability of the Minnesota Governor and the President of the United States to issue emergency declarations and promulgate enforceable orders and rules to address the contingencies created by a mass casualty event are provided by law. Some of the more important State and Federal laws that may apply to the preparedness for, response to, and recovery from an emergency or disaster are summarized in APPENDIX 1: Legal Aspects and Actions in Emergencies and Disasters.

**Federal Declarations**

If a local jurisdiction is severely affected by an emergency or disaster, including one with public health ramifications, the Governor may request a Presidential Declaration of Disaster. Appendix 1 includes a summary of key federal actions that can be taken with and without a federal declaration.

The Stafford Act enables the President to declare an emergency or disaster if the Minnesota Governor:

- Requests the declaration through the regional Federal Emergency Management Agency (FEMA) office;
- Certifies federal assistance is needed because state and local resources are not sufficient; and
- Activates the State’s emergency operations plan.

A Federal Coordinating Official then becomes Minnesota’s conduit to request Federal resources such as ambulances or a Disaster Medical Assistance Team (DMAT).

The President, however, can issue a Declaration of Disaster without the request of a state governor if the emergency primarily impacts a subject or geographic area for which, under Federal law, the United States Government exercises exclusive or preeminent authority. Examples include federal facilities, Tribal lands, nuclear materials, weapons of mass destruction, and national defense. Apart from a Presidential Declaration of Disaster, the State may use mutual aid from other states either through existing mutual aid agreements or the Emergency Management Assistance Compact (EMAC). State-to-state assistance is often more expedient than the Federal response.

The Secretary of the United States Department of Health and Human Services (HHS) may declare a “public health emergency” in the absence of any formal request from a state governor or a Presidential Stafford Act Declaration. The declaration of a public health emergency gives the Secretary the **discretionary** authority to authorize a range of actions
during a crisis care event important to EMS and health care facilities. Appendix 1 presents a summary of key actions the Secretary may implement in a public health emergency.

The Federal Public Readiness and Preparedness Act of 2005 (PREP) was enacted to address liability concerns related to the manufacturer, distribution, and administration of “covered countermeasures.” The Act authorizes the Secretary of HHS to issue a declaration providing immunity from tort liability under certain circumstances. Liability protections under the PREP Act may apply to the persons, entities, and other qualified persons designated in the PREP Act Declaration who are involved with the development, distribution, and administration of the medical countermeasures designated in the Declaration. These protections may apply to EMS personnel.

**Tribal Emergency Declarations**

Tribal nations are independent sovereign nations and although they interact with local, state and federal governments they are self-governing and maintain the sovereign authority to make and enforce their own laws and rules. Tribal nations through their Tribal chair are allowed to directly request Federal assistance under the Stafford Act from the President, although in most cases they will also interface with State emergency management as resources may be available more rapidly through local and State channels. Tribal nation sovereignty enables the Tribal chair to declare a local emergency separate from state statutory authorities as the Tribal chair determines is in the best interests of the tribe. Under the Minnesota Emergency Management Act, the Governor or the Director of the Minnesota Department of Homeland Security (HSEM) and Emergency Management must consult with Tribal authorities before the Governor declares a peacetime emergency if the emergency occurs on Indian lands.

**Minnesota State Emergency Declarations**

The Minnesota Emergency Management Act (MEMA); Minnesota Statutes chapter 12 ([https://www.revisor.mn.gov/statutes/?id=12](https://www.revisor.mn.gov/statutes/?id=12)) is the primary Minnesota law pertaining to emergency preparedness and response. The Act provides the Governor with general direction and control over Emergency Management. There are two types of Governor declared emergencies under MEMA:

- National Security Emergency; and
- Peacetime Emergency

The Governor may, by proclamation, declare a National Security Emergency in all or any part of the State if information from the President, FEMA, or the Department of Defense indicates an imminent disaster from enemy sabotage or other hostile action.

The Governor may declare Peacetime Emergency if there occurs:

- An act of nature, terrorist incident, industrial or hazardous materials accident, or civil disturbance, that endangers life and property, and
- Local government resources are inadequate to handle the situation.
Appendix 1 summarizes some of the actions that may be instituted by the Governor following the declaration of a Peacetime or National Security Emergency.

While many of MEMA’s provisions require the Governor to issue an emergency executive order declaring an emergency, not every emergency power under the Act requires such declaration. Appendix 1 also presents a summary of key actions the Governor and emergency management may implement under MEMA which do not require a Governor’s Emergency Declaration.

State Agencies:

Agencies that issue rules, such as the Minnesota Department of Health and the EMS Regulatory Board (https://www.revisor.mn.gov/statutes/?id=144E.16) obtain their authorities and enforcement abilities by statute (law). Laws are more difficult to modify, even in times of emergency, unless the Governor exercises the authority granted under the MEMA and promulgates a rule suspending the statute. Rules, on the other hand, are more easily suspended but, absent an emergency executive order issued by the Governor, also likely will not be modified or suspended in time to address the mass casualty event.

Minnesota Department of Health

In the event of a large-scale mass casualty event, MDH would likely open its Department Operations Center (DOC) and utilize incident management to interface with the State Emergency Operations Center (EOC) operated by HSEM. MDH, while acting as the lead agency for public health related responses at the State level would likely rely on the eight regional health care coalitions to provide situational awareness and assist with resource management, patient transfers, and policy issues.

Minnesota law provides the Commissioner of MDH with the authority to take extraordinary measures to protect the public health including:

1. Minn. Stat. §151.37, Subd. 10 (ability to purchase and stockpile drugs, vaccines, and supplies to treat and prevent communicable disease)
2. Minn. Stat. §151.37, Subd. 2(b) (prescribe legend drugs by protocol for mass dispensing)
3. Minn. Stat. §144.4197; (authorize “any person” to administer vaccinations or dispense legend drugs subject to imposed conditions)
4. Minn. Stat. §144.4198, Subd. 2; (expedited mass dispensing methods for legend drugs including closed point of dispensing)
5. Minn. Stat. §145A.06, Subd. 7. (use of medical reserve corps)

In addition, MDH maintains authority to implement provisions of Minnesota’s mass dispensing laws pursuant to Minn. Stat. §151.37, Subd. 2(b) when the Commissioner finds such action necessary to protect the public health. This law also provides for broad authority and protections in the types, uses, and administration of those medical interventions. The Commissioner may call for Minnesota Responds Medical Reserve Corps Volunteers if requested by local board of health, federal government, a First Nation, or another state if “in the public
interest.” When activated, Minnesota Responds volunteers are afforded the liability protections and workers’ compensation protections provided in Minn. Stat. §145A.06, Subd. 7(a)(f)(1).

The Commissioner may also request the Science Advisory Team - a group of clinical care providers from a variety of disciplines – be convened to provide input when guidelines for clinical care are required in a prolonged event.

Whether in a mass casualty event or otherwise, the Commissioner has the power to order the isolation or quarantine of specific individuals or groups of individuals with (isolation) or exposed to (quarantine) a communicable disease if isolation or quarantine will be an effective measure to prevent the spread of the disease or otherwise protect the public health; though this authority is rarely used. A person may be ordered into isolation or quarantine either pursuant to a directive issued by the MDH Commissioner or an order issued by a district court. Under the isolation and quarantine statutes, public health officials and law enforcement are authorized to apprehend, hold, transport, quarantine, or isolate a person subject to a Commissioner’s directive or a district court order. There is no EMS, or medical director authority to transport, evaluate, or treat a patient against their will based on suspicion of an infectious disease absent a directive issued by the Commissioner or an order issued by a district court.

**Minnesota EMS Regulatory Board**

The MN EMSRB is the lead agency for EMS response and coordination as designated by State law and in the State plan. The EMSRB, during a mass casualty or surge event, will interface with the State EOC and designated regional EMS system coordinators to provide information and support EMS operations and resource requests. Under Minn. Stat. §144E.266 during a Governor declared emergency certain state ambulance statutes, as listed in Appendix 1, are suspended. Additionally, certain administrative rules pertaining to EMS may also be suspended even in the absence of a Governor’s emergency declaration in time of disaster, mass casualty, or other public emergency. Note that even during these periods, resources may be available that allow the usual requirements to be met, and at those times, EMS responders should continue to meet those standards.

**Local Emergency Declaration**

Minn. Stat. §12.29 provides that a mayor of a municipality or county board chair may declare a “local emergency.” The length the declaration is 3 days, unless a longer period is approved by the governing body. A declaration of a local emergency invokes necessary portions of their response and recovery aspects of applicable local or interjurisdictional disaster plans, and may authorize aid and assistance under those plans.

It is critical that EMS agencies know if there are local ordinances that may apply to them. These cannot be in conflict with State laws and rules, but could be more proscriptive (for example, Hennepin County specifies a response time standard and staffing standards for EMS). These
ordinances may need to be relaxed in a crisis, and EMS should work with local Emergency Management to determine how this would happen.

**Liability**

Liability is always a significant concern when care is being provided in unusual ways or circumstances. Some of the more important Minnesota laws providing liability protections to emergency responders include:

1. If a responder is not going to receive any substantial reimbursement for the care, the Minnesota “Good Samaritan Law” may protect that responder from liability unless their conduct was ‘willful and wanton.’

2. Responders acting as volunteers through the Minnesota Medical Reserve Corps or Minnesota Mobile Medical Team) have broad liability protections, caps on the amount of recoverable damages, and indemnification protections from either the State or local jurisdiction.

3. Responders working in alternate care sites may have broad liability protections under Chapter 12 regardless of whether they are paid to be there.

4. Individuals who volunteer to assist either the State or a local jurisdiction during an emergency or disaster, who register with the State or that local jurisdiction, and who act under the direction and control of the State or that local jurisdiction, are considered employees of the State or that local jurisdiction for purposes of workers’ compensation and tort claim defense and indemnification.

5. Similar liability protections exist for businesses, non-profits, and other entities and organizations, and their employees, who volunteer to assist the State or a local jurisdiction during an emergency or disaster.

6. A person or entity operating a closed point of dispensing (POD) acting in good faith and under the direction of an approved closed POD plan is not liable for civil damages or administrative sanctions.

Medical malpractice and other forms of civil liability are situational. During a disaster, as in conventional operations, responders are held to the standard of care that a “reasonable responder” would have given in that same or similar situation accounting for the availability of resources. One factor in determining whether the “reasonable responder” standard may have been met is whether the responder was following previously-adopted operating plans or guidance. Having pre-existing operational plans for crisis situations may provide protections for responders, as well as the agencies that employ them. If these plans are reasonable, based on recognized guidance and best practices documents, and approved by the agency (or optimally, by multiple agencies and the jurisdiction), it will be, in most situations, difficult to find liability if the responder’s actions conformed to the expectations of the plan. That said, in some cases a
reasonable responder would be required to deviate from the requirements of the operational plan to do the best they could for their patient or community.

This also raises the issue of ‘duty to plan’. This is not a new concept in risk analysis, but is somewhat new in disaster response. The failure to adequately plan for reasonably foreseeable results of anticipated catastrophic events has served as the legal basis for several successful lawsuits throughout the United States against both private medical care providers and government agencies.

Additionally, many government agencies including the Occupational Health and Safety Administration (OSHA) can hold employers liable when a ‘commonly recognized’ risk was not sufficiently mitigated. Thus, because any EMS agency could experience a crisis situation, not having a plan to address the situation could result in liability for the agency in case of worker injury/illness.

**Reimbursement**

Finally, there may be insurance/payer issues that need to be addressed during a mass casualty event. Generally, if a patient is not taken to a hospital, CMS (Centers for Medicare and Medicaid Services) and private insurance will not pay for ambulance transport. However, if the nearest hospital is not operating because it was damaged or destroyed in the disaster, or the hospital is overwhelmed, it may be more appropriate to transport the patient to a clinic or some type of alternate care facility. During an emergency or disaster, CMS may authorize what is known as a “Section 1135 Waiver” that can allow reimbursement under specific circumstances. A Federal declaration must be obtained prior to CMS issuing a Section 1135 Waiver, and information justifying why the actions are in the patients’ best interest must be supplied to the regional CMS office. MDH may make Section 1135 Waiver requests to CMS on behalf of EMS or hospitals in the affected area. For additional information please see: [https://www.cms.gov/About-CMS/Agency-Information/H1N1/downloads/requestingawaiver101.pdf](https://www.cms.gov/About-CMS/Agency-Information/H1N1/downloads/requestingawaiver101.pdf)

Non-ambulance transport generally cannot be billed to insurance, though the hours the personnel worked and supplies used may be reimbursable with proper documentation if patients were not billed for the disaster-related activities. Agencies should keep careful records and work with local Emergency Management on all administrative and financial issues.

**Recovery**

EMS agencies should conduct a thorough review and quality assurance process whenever crisis care strategies are implemented. This should include a ‘hot wash’ with involved personnel after the incident, drill or exercise to determine successes and opportunities as well as provide a common understanding of the sequence of events and decision-making. A formal after-action report may be generated depending on the scope of the incident. A corrective action plan should be generated for all incidents in which a practice was identified that can be improved.
Planning for recovery should begin while the event is ongoing. Recovery is the restoration of services to their pre-existing state (or optimized conventional state – whether this is above or below the prior state). The basic philosophy of recovery is ‘build back better’ after an incident.

However, because of the dynamic nature of crisis conditions (particularly during long events such as pandemics) a return to conventional care may be temporary, and does not mean the recovery phase has truly begun, as recovery is a stable state. EMS agencies should assure they are prepared to be flexible across the surge spectrum and be certain the situation has concluded prior to ending the response (for example, EMS may be able to operate in conventional status during the night in a pandemic but during daytime hours may be in crisis mode due to call volumes).

During recovery, there are multiple priorities including debris removal, strategic re-building of damaged infrastructure, mental health support, etc. Some priorities for EMS specifically include:

- Final documentation of supply and time costs for potential reimbursement
- Return of borrowed equipment
- Restoration of equipment to usual state
- Replacement of supplies
- Provision of mental health support to affected staff (psychological first aid or more specific strategies depending on the situation)
- Support for provider families affected by the incident
- After-action reviews of the event and development of a corrective action plan for future similar events

EMS may need to provide ongoing support to other agencies as they continue body recovery and other operations. EMS should also confirm with local Emergency Management there are no other functions required of them and participate in community recovery planning and after-action analysis.

**Conclusion**

EMS agencies in Minnesota are diverse, but all are at risk of situations where demand exceeds available resources and require adaptive strategies. All of us have a duty and responsibility to plan for such situations and empower EMS providers through training and standard operating procedures to make good choices that truly do the ‘greatest good for the greatest number’ while assuring available additional resources are requested in a timely manner. Though these situations are rare, ad hoc decisions in novel conditions are often sub-optimal; the unique risks of these situations to patients requires deliberate planning.

This Guidance should provide a valuable framework on which agencies working with their regional partners can modify their operational plans to incorporate crisis care conditions.

The key planning steps for each EMS agency following review of the document are:
1. Convene a planning group with leadership or supervisory staff and medical director
2. Identify resources and limitations (‘staff’, ‘ambulances’, ‘equipment’ and ‘supplies’)
3. Determine **limitations and options**, then **resource and policy** needs, then develop **indicators** and **triggers** in the following areas:
   a. Dispatch
   b. Response
   c. Treatment
   d. Transport
4. Develop formal written policy
5. Discuss policy with surrounding agencies, regional health care coalition, Regional EMS System Program and receiving hospitals
6. Educate and exercise new policies and procedures

**Appendices**

1. Legal Aspects and Actions in Declared Disasters or Emergencies – identifies authority and specific ambulance statutes suspended during a legally declared disaster; local, state and federal authorities and actions enabled in an emergency
2. Requests to the State for Additional EMS Resources
3. EMS Surge and Crisis Care Matrix – provides examples of tactics for each phase of response across conventional, contingency, and crisis
4. Transports to Hospital in Non-Ambulance Vehicle – provides considerations to account for if the use of non-ambulance resources are being considered to transport a patient to a hospital.
5. Hennepin County ALS Pandemic Protocols – Triage/Treatment – example of protocols that may be used after approval of the medical director during a pandemic to triage patients for transport and disposition options.
6. Abbreviations and Acronyms
APPENDIX 1: Legal Aspects and Actions in Declared Disasters or Emergencies

DISCLAIMER: The information in this Appendix, as well as any information in the Surge Operations and Crisis Care – Planning and Implementation Guidance for the Provision of Emergency Medical Services – is provided for information only and is not intended to be, nor should be interpreted as, legal advice. Readers are encouraged to consult with their own attorney to obtain legal advice regarding any information included in the Planning and Implementation Guidance or this Appendix.

The statutes, rules, and other legal authorities included in this Appendix are provided simply as samples; this Appendix does NOT contain a complete or exclusive list of laws that may apply to any given situation. Readers are encouraged to consult with their own attorney to obtain a complete list of all statutes, rules, laws, and other regulatory authorities that might apply to them in any given situation and to obtain interpretations of those laws.

State Ambulance Requirements Suspended during Declared Disasters

As part of disaster preparedness planning, the EMSRB recognized the need to allow for suspension of certain ambulance requirements during legally declared disasters. The following legislation was enacted as a result: Minnesota Statutes, section 144E.266, provides:

Emergency Suspension of Ambulance Service Requirements

The requirements of sections 144E.10; 144E.101, subdivisions 1, 2, 3, 6, 7, 8, 9, 10, 11, and 13; 144E.103; 144E.12; 144E.121; 144E.123; 144E.127; and 144E.15, are suspended:

1) throughout the state during a national security emergency declared under section 12.31;
2) in the geographic areas of the state affected during a peacetime emergency declared under section 12.31; and
3) in the geographic areas of the state affected during a local emergency declared under section 12.29.

For purposes of this section, the geographic areas of the state affected shall include geographic areas where one or more ambulance services are providing requested mutual aid to the site of the emergency.

Explanation of Specific Requirements Suspended:

1) 144E.10: license required to operate an ambulance service;
2) 144E.101 subd. 1: requires certified personnel and staffing appropriate to the level of service on ambulance; also requires ambulance service to have medical director;
3) 144E.101, subd. 2: requires at least one ambulance attendant in patient compartment and Paramedic in patient compartment if ALS care provided.
4) **144E.101, subd.3**: requires ambulance service to offer continual service (24 hours a day, every day of the year);

5) **144E.101, subd. 6**: basic life support staffing and care requirements;

6) **144E.101, subd. 7**: advanced life support staffing and care requirements:

7) **144E.101, subd. 8**: part-time advanced life support staffing and care requirements;

8) **144E.101, subd. 9**: specific requirements for specialized life support ambulances;

9) **144E.101, subd. 10**: requires driver of ambulance to have driver’s license and emergency driving course;

10) **144E.101, subd. 11**: requires on-call schedule, documentation of personnel qualifications, and statement signed by medical director accepting responsibilities;

11) **144E.101, subd. 13**: limits ambulance to assigned PSA, except when called for mutual aid or requested by transferring physician;

12) **144E.103**: equipment and safety restraints requirements; requires drugs approved by medical director for ALS;

13) **144E.12**: licensure of air ambulances;

14) **144E.121**: requirements for air ambulance;

15) **144E.123**: requires pre-hospital care data be collected and submitted to Board on every response; requires copy of patient care report to be left at hospital;

16) **144E.127**: allows substitution of physician, RN, or PA for one of required ambulance attendants on inter-hospital transfer;

17) **144E.15**: requires board approval for relocating base of operations within PSA.

**Extraordinary Powers under the Minnesota Emergency Management Act (MEMA) Requiring a Governor’s Declaration:**

1. Order evacuations, shelters, and otherwise control the movement of persons and vehicles, and cancel public meetings and events. Minn. Stat. §12.21, Subd. 3(7) (iv)-(vi)

2. Alter or adjust state employee working hours and conditions. Minn. Stat. §12.21, Subd. 3(10)

3. Authorize the Commissioner of Education to close schools – Minn. Stat. §12.21, Subd. 3(11)
4. Require any person to perform emergency management services, under threat of criminal prosecution. Minn. Stat. §12.34, Subds. 1(1) & 3

5. Commandeer vehicles, tools, appliances, medical supplies*, other personal property, or facilities subject to compensation. Minn. Stat. §12.34, Subd. 1(2)

(*) NOTE: MEMA, Minn. Stat. §12.03, Subd. 6a, defines “medical supplies” as excluding medication, equipment, instruments, or materials deemed essential for a provider’s practice or facility; or medication, equipment, etc., owned or used by individuals for treatment or care.

6. Take possession of fatalities; provide safe disposition including mass burial. Minn. Stat. §12.381, Subd. 1

7. Authorize volunteer health professionals licensed in another state or Canadian Province to practice in Minnesota. Minn. Stat. §12.42


9. Activate requests for assistance pursuant to the Interstate Emergency Management Assistance Compact (EMAC). EMAC, Minn. Stat. §192.89, Subd. 4

MN Emergency Management Act powers not requiring a Governor’s Declaration:

1. During an emergency or disaster, Governor may enter contracts, incur obligations, and exercise powers in light of the exigencies without compliance with time-consuming procedures and formalities prescribed by laws pertaining to contracts, employment, purchasing supplies and equipment, budgeting, etc. Minn. Stat. §12.36

2. Minn. Stat. §13.37, also grants to local political subdivisions the same authority to enter contracts, incur obligations, and exercise powers in light of the exigencies without compliance with time-consuming procedures and formalities prescribed by laws pertaining to contracts, employment, purchasing supplies and equipment, budgeting, etc.

3. Governor may direct personnel, equipment and supplies of police, fire-fighting, health, or other forces of one political subdivision to assist another in an imminent emergency. Minn. Stat. §12.33

4. Volunteer protections under Minn. Stat. §12.22, Subd. 2(a): Individuals who volunteer with state/political subdivision, who register, and act under direction and control are considered employees of the state/political subdivision for workers’ compensation and tort claim defense and indemnification

5. Mutual aid agreements, Minn. Stat. §12.27;
6. Local assistance, Minn. Stat. (12.331;


**Federal Assistance during a Declared Disaster:**

Federal Assistance to state and local efforts under the Stafford Act includes:

1. Federal personnel, equipment, facilities, managerial, technical and advisory services in response and recovery efforts;
2. Coordination of disaster relief assistance (including volunteers) provided by federal, state, local agencies and private organizations; and
3. Provide technical and advisory assistance to state and local governments for essential community services, health and safety measures, information services, recovery activities.

Through the FEMA specific disaster relief may include: individual assistance, public assistance and hazard mitigation assistance.

The Secretary of Health and Human Services can declare “Public Health Emergency” under the Public Health Service Act. The Secretary may determine, after consultation with such public health officials as may be necessary, that:

1. A disease or disorder presents a public health emergency (including significant outbreaks of infectious diseases or bioterrorist attacks, otherwise exists);
2. Provides notice to Congress within 48 hours;
3. Terminates when the Secretary determines that the emergency no longer exists or after 90 days, whichever occurs first; and
4. May be renewed by the Secretary for additional 90 day periods.

If the Secretary of Health and Human Services (HHS) issues a declaration of a public health emergency it enables the Secretary the discretionary authority to authorize a range of actions which may include:

1. Authorizing the use of an investigational medical product;
2. Waive or modify certain Medicare, Medicaid and CHIP requirements, such as:
   a. Conditions of participation;
   b. Pre-approval requirements for health care services;
   c. Requirement that health care providers be licensed in the state in which they provide services;
3. Waive sanctions under EMTALA for redirecting a patient to another location – if the transfer is pursuant to a state emergency plan or if the transfer is necessitated by the circumstances of the declared emergency;
4. Waive sanctions and penalties arising from noncompliance with the Health Insurance Portability and Accountability Act (HIPAA) privacy regulations related to:
   a. obtaining patient’s agreement to speak with family or friends;
b. distributing a notice of privacy practices; or
   c. the patient’s right to request privacy restrictions or confidential communications
5. Waive other participation or program requirements, or certification requirements (e.g., caps on critical access hospital beds);
6. Waive Stark self-referral sanctions;
7. Access Public Health Emergency Fund (when funds are available);
8. Make grants, provide awards for expenses, and enter into contracts and conduct and support investigations;
9. Extend deadlines, waive sanctions for submission of data or reports; and
10. Waive certain restrictions on requirements for medical countermeasure distribution
11. Exempt select agent requirements (PHS Act §351A);
12. Adjust Medicare payment for Part B drugs (SSA §1847A);
13. Waive Ryan White HIV/AIDS requirements (PHS Act Title XXVI);
14. Exceptions to telemedicine practices (21 USC § 801); and
15. Allow State and local government access to federal General Services Supply schedules when using federal funds.

Following the declaration of a Public Health Emergency, the exercise of any of these authorities is discretionary; these authorities do not automatically result when a PHE is declared, and the existence of a PHE does not create a right of entitlement for those who may benefit from any action the Secretary is authorized to undertake.

Federal actions not requiring a public health emergency determination:

1. Deploy approved, licensed, or cleared countermeasures from the Strategic National Stockpile (SNS);
2. Deploy National Disaster Medical System teams, U.S. Commissioned Corps;
3. Provide temporary assistance to States and localities to meet health emergencies;
4. Conduct research, surveillance, investigations; and
5. Quarantine and isolation under Federal law.
APPENDIX 2: Requests to the State for Additional EMS Resources

EMS Resources Needed

Minnesota Duty Officer (MDO)
- EMSRB On-Call:
  - Gather information, resources needed, when, where, how long, mission, contact, staging, etc.
  - Contact WMRCC at xxx-xxxx-xxxx to send out a page to EMS MAC on-call person to provide situational update and schedule a conference call if needed (provide time) conference call number xxx-xxxx-xxxx code xxxxxxx
  - Start entering information into MNTRAC "State EMS Room 1" or other designated room Coordination Center

EMSRB Duties—MDO
- Maintain Communication with MDO, hand off local contact to EMS MAC
- Provide any situational awareness to EMS MAC

EMSRB Duties—State EOC
- Staff EMS desk at SEOC
- Phone numbers are xxx-xxxx-xxxx or xxxx
- Communicate to EMS MAC any situational awareness information or any EMS assets requests
- Provide EMS information & updates to appropriate stakeholders, at SEOC operational period briefings, SITREPs IAPs & DLAN

EMS MAC Conference Call
- Follow EMS MAC Agenda (located on MNTRAC "State EMS Group"
- EMSRB provides update and reason for EMS MAC Conference Call
- Situation discussed and next steps agreed upon by State EMS MAC Group
- Decision for EMS MAC to be virtual or staffed

EMS MAC Duties
- EMS MAC contact info xxx-xxxx-xxxx and xxxxxxx@ems.mn.org
- Maintain EMS situational awareness statewide
- Communicate with those requesting EMS assets
- Coordinate EMS assets available
- Maintain EMS asset availability
- Produce SITREPs for each operational period
- Maintain accountability (PAR) of EMS assets deployed and available
- Work with MN EMAC and State of MN ensuring appropriate paperwork is completed
- Provide agreed upon EMS information to be shared

EMAC
- Act as liaison
- Ensure EMS assets operate within EMAC
- Maintain PAR
- Ensure paperwork is complete & accurate

EMS & Home Agencies
- Provide SITREPs
- Ensure paperwork is complete & accurate
- Maintain Communication

Affected Agencies
- Maintain Communication
- Work within MN Chapter 12
- Assist with logistics
## APPENDIX 3: EMS Surge Operations and Crisis Care Matrix

<table>
<thead>
<tr>
<th></th>
<th>Conventional</th>
<th>Contingency</th>
<th>Crisis</th>
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<tbody>
<tr>
<td>Public messaging</td>
<td>- None</td>
<td>- Limit calls to 911</td>
<td>- Auto-answer with diversion of non-emergency calls to health care provider health line/311/other source (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Medical screening for necessity – decline or refer callers to other transportation options (taxi, bus, special transportation, etc.) (A, possible C, S for liability issues?) or to prescribing line (S) (3)</td>
</tr>
<tr>
<td>PSAP/EMS Dispatch</td>
<td>- Priority dispatch</td>
<td>- Mutual aid as required and normally requested</td>
<td>- Priority dispatch but pend calls of non-emergent nature (A) (1)</td>
</tr>
<tr>
<td></td>
<td>- Standard dispatch procedures or protocols</td>
<td>- Priority dispatch but pend calls of non-emergent nature (A) (1)</td>
<td>- Consider adjusted response assignments (e.g. no EMS until injuries confirmed at MVC) (A,C) (2)</td>
</tr>
<tr>
<td>Response</td>
<td>- Usual resources and response standards</td>
<td>- Mutual aid</td>
<td>- Additional mutual aid, EMS strike teams or MCI bus? (A,C, possible S)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consider additional use of BLS or alternate transport (A)</td>
<td>- Non-medical vehicle drivers (A,C, possible S)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consider alternate staffing and shift patterns</td>
<td>- Alternate response – BLS, wheel chair/special transportation, school or public transit buses, other (A,C,S)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>- Additional trained staff unavailable or unable to respond to volume of requests even with extension techniques (A,C,S)</td>
</tr>
<tr>
<td>Treatment – Standard of Care</td>
<td>- Assess and treat per usual Standard Operating Procedures (SOP) and standard of care</td>
<td>- Assess and treat per SOP, radio control for unusual situations; functionally equivalent care (ALS, BLS)</td>
<td>- Broaden discretion of EMS to leave patient at scene according to crisis plan or radio contact with MD/RN (A,C, possible S) and/or refer to alternate transport options (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Conservation, adaption and substitution of supplies with occasional re-use of selected supplies</td>
<td>- Critical supplies lacking, possible re-allocation of personnel and life sustaining resources (A,C,S)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>- Broaden on-scene treatment options (A,C, possible S)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Crisis Standard of Care – incident specific patient care guidelines from MDH, EMSRB or other source (A, C, S)</td>
</tr>
<tr>
<td>Transport</td>
<td>- Transport to destination hospital of choice</td>
<td>- Transport to closest appropriate hospital (A,C)</td>
<td>- 'Batch’ transports of multiple patients, private or public vehicle, buses, special transportation (A,C) (5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Transport to closest appropriate facility (A,C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Transport to alternate care facility, i.e. clinic, specialty clinics, field medical station, alternate care site, other non-traditional patient disposition facilities (A,C, S)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Use of non-ambulance vehicles (private, wheel chair, buses, vans, police/fire vehicles) (A,C,S) (5)</td>
</tr>
</tbody>
</table>
Notes:

A = Agency EMS policy/SOP adjustment needed – operational policy development, service and medical director approval

C = County or City/ community ordinance may require exemption/waiver

S = State regulatory or other action needed (EMSRB, etc.)

1. Requires Emergency Medical Dispatch (EMD) – for 911 public safety answering points (PSAP) without medically trained dispatchers will require algorithm and/or referral to EMS EMD-providing service. Algorithms would need to be approved by local gov’t entity and potential liability relief from locality.

2. Will require pre-scripting of changes to response assignments on paper or in computer aided dispatch (CAD) for dispatch to use – requires trigger for use approved by agency and medical director.

3. Medical screening may be carried out by dispatcher, or by medical provider (RN or MD) – staffing and scripting should be pre-planned and approved by agency

4. Left at scene discretion should be developed by agency policy (e.g. Hennepin County EMS System Pandemic Influenza Plan) and clear approval by agency, medical directors, and triggers for use should be described

5. Trigger and approval by agency supervisor/medical director should be described in policy
APPENDIX 4: Transports to Hospital in Non-Ambulance Vehicle:

In a crisis, EMS resources may be severely limited and alternate transport options may need to be considered. One option would be transport of patients via a motor vehicle that is not an ambulance including the following options:

1. Family members or others transporting stable patient in private vehicle without escort/attendant (e.g. arm laceration with bleeding controlled by dressing)

2. Family members or others transporting patient in vehicle with EMS personnel following in another vehicle (stable but with potential for deterioration)

3. Family members or others transporting in private vehicle with EMS personnel in the vehicle with them monitoring or providing care (unstable – highest risk to patient and provider)

4. Non-ambulance public safety vehicle (fire or police) transporting patient (professional driver and marked vehicle but limited ability to provide any medical care in usual squad vs. private vehicle such as mini-van)

EMS agencies should develop clear policies on when these options may be exercised, as this may be an option in many situations where EMS transport is severely limited (e.g. multi-victim accident in rural community with one EMS unit available). Transports by non-ambulance vehicles should be reviewed retrospectively by EMS management and medical directors for appropriateness.

EMS providers need to objectively weigh the risks and benefits of patient transport in a non-traditional vehicle verses the risks and benefits of waiting for an ambulance to arrive. This may involve consultation with a physician or supervisor to assist with the assessment of the risks/benefits of the two options. Some considerations that should be taken into account when considering transport to a hospital by a non-ambulance vehicle are:

- **Time sensitivity** – Does the patient have a time sensitive condition that can only be stabilized at a hospital and that is likely to continue to deteriorate until hospital arrival? This could include conditions such as ST elevation myocardial infarction (STEMI), acute stroke, sepsis, shock or multisystem trauma.

- **Decreased time to treatment** – Does the time to the hospital by a non-ambulance decrease the time to hospital arrival and increase the chances of the patient having a successful outcome?

- **Stabilization needed** – Can the patient be appropriately stabilized on-scene while awaiting arrival of an ambulance? Patients requiring spinal immobilization will need to be supine and may not be adequately restrained in a supine position in vehicles other than an ambulance.

- **Existing medical conditions** – Are there medical conditions present which will make transport by a non-ambulance more difficult? Many patients transported by a non-ambulance will need to be able to tolerate a seated position.
- **Spinal immobilization – Other transport available** - If a patient is to be transported supine in a vehicle other than an ambulance are there other marked emergency vehicles that can provide an escort for the transport? Are there other variables that can be adjusted to increase the safety of a supine transport in a non-ambulance like speed, route of travel, and immobilization methods?

- **Patient restraints** – Although not always possible, patients and any attendants being transported to a hospital in a non-ambulance should have appropriate patient restraints while the vehicle is in motion whenever possible; this will necessitate the patient is able to sit upright for appropriate safety belt use while the vehicle is in motion. Vehicle collisions are one of the most common causes of death for patients and first responders even in well-marked emergency vehicles with lights and sirens.

- **Driver distractions** – The provision of patient care by EMS personnel will be a distraction to the driver of the vehicle and the driver should be specifically cautioned about this.

- **Car seats** – Children in car seats may be transported in a non-ambulance safely if the car seat is appropriately installed in the vehicle.

Transporting a patient in a non-ambulance can be a stressful decision that could require the involved parties to operate outside their standard motor vehicle operating procedures regarding restraints. The private vehicle will likely not be equipped with lights/sirens so all speed limits and traffic laws must be obeyed for safety. The most experienced driver available should drive the vehicle. Public safety vehicle drivers (e.g. police) may not be used to driving with medical care enroute and should minimize speed in favor of safe transport.
APPENDIX 5: Pandemic Influenza Appendix

Protocols approved 4-9-2009 by Hennepin County EMS Council

Policy Context

These standing orders will be used to provide the best pre-hospital care to the greatest number of people during an extreme situation. They will only be put into place when resources are defined by the system as “Level Red,” which means EMS services are pending or not answering calls for which there is a significant risk of death for the patient. They do not supersede other protocols. You will be notified when this status is in effect.

Our ethical commitments are:

Limitation of Individual Autonomy: The fair and just rationing of scarce resources requires public health decisions based on objective factors, rather than on the choice of individual leaders, providers, or patients. All individuals should receive the highest level of care given the resources available at the time.

Transparency: Governments and institutions have an ethical obligation to plan allocation through a process that is transparent, open, and publicly debated. Governmental honesty about the need to ration medical care justifies institutional and professional actions of withholding and withdrawing support from individual patients. These restrictive policies must be understood and supported by medical providers and the public, ideally with reassurances that institutions and providers will be acting in good faith and legally protected in their efforts.

Justice/Fairness: The proposed triage process relies on the principle of maximization of benefit to the population served. The triage process treats patients equally based on objective, physiologic criteria, and when these criteria do not clearly favor a particular patient, “first come, first serve” rules will apply...

Assurance: In order to ensure “procedural justice,” EMS triage processes will be regularly evaluated to assure that the process has been followed fairly and consistently.

Documentation: MNTrac records will include policy notations including the times the “Level Red” was in effect.

When an ambulance arrives on scene during “Level Red” status, instead of automatically offering transport to an emergency department, as under normal practice, you will assess the patient’s objective condition and triage him/her into the following categories:

- provide homecare information
Standing Orders
A. If the patient’s complaint or symptoms are not listed in this Appendix, Paramedic’s discretion is advised as long as the decision is not in conflict with SOP.
B. When resources during a Pandemic are “Level Red,” automatically offer to transport patients with the following presentations:

1. Paramedic discretion – suspicion of critical illness/injury

2. Altered vital signs (or age-specific abnormal vital signs), including any one of these:
   - SBP < 90
   - SpO2 < 92%
   - RR > 30 (or respiratory distress)
   - HR > 120, or delayed capillary refill

3. Breathing:
   - Respiratory distress
   - Cyanosis, or pallor/ashen skin

4. Circulation/Shock:
   - Signs or symptoms of shock
   - Severe/uncontrollable bleeding
   - Large amounts of blood (or suspected blood) in emesis or stool

5. Neurologic:
   - Unconscious or altered level of consciousness
   - New focal neurologic signs (CVA, etc.)
   - Status, multiple or new-onset seizure
   - Severe headaches – especially sudden onset or accompanied with neck pain/stiffness
   - Head injuries with more than brief loss of consciousness or continued neck pain, dizziness, vision disturbances, ongoing amnesia or headache, and/or nausea and vomiting
6. Trauma:
- Significant trauma with chest/spinal/abdominal/neurologic injury deemed unstable or potentially unstable
- Suspected fractures or dislocations that cannot be safely transported by private vehicle

C. When resources during a Pandemic are “Level Red,” consider patients with the following presentations for:

- **Transportation by ambulance**: Note that many ‘transport by ambulance’ patients will not require emergency transport to the hospital – in which case, the crew may answer additional calls until the ambulance is full, or a critical patient is picked up, depending on system call volumes.

- **Transportation by alternate means**:
  - Private vehicle or police to clinic or hospital. Except in very limited cases, the patient should NOT self-transport to the hospital/clinic, but could be driven by someone else.

- **Homecare**: Give patient the Homecare form for their complaint and advise to contact PMD if symptoms persist or worsen. The form will have information pertaining to their complaint and list ways of caring for themselves, as well as what to look for that would prompt self-transport to a clinic or hospital, or transport via ambulance to the hospital. Advise the patient that this does not restrict them from seeking care at a clinic or hospital on their own, should they desire.

1. **ABDOMINAL PAIN**:

- Pulsating mass
- Marked tenderness/guarding
- Pain radiating into back and/or groin/inner thighs
- Recurrent severe vomiting not associated with diarrhea
- Recurrent severe vomiting associated with diarrhea – to emergency if associated with signs/symptoms of dehydration, to urgent care or clinic if no dizziness nor vital sign changes and normal exam
- Intermittent vomiting and diarrhea without blood or evidence of dehydration

2. **ANAPHYLAXIS/STINGS**:

- Patients who have had epinephrine administered for symptoms
- Patients experiencing airway, hypotension or respiratory symptoms, after an allergy exposure
### Patients with itching after exposure

- If rapid onset of symptoms, may require EMS transport; if delayed > 1 hour, safe for private transport. All patients with history of anaphylaxis should be seen in emergency room if possible. Others may be seen in clinic or urgent care. EMS may administer diphenhydramine prior to clearing scene, up to 1 mg/kg.

### BACK PAIN:

- Acute trauma with midline bony spinal tenderness
- New onset of extremity weakness, sensory deficits, other neurological changes, incontinence of urine or bowel, urinary retention, or bloody urine
- Concern for abdominal aortic aneurysm
- Pain radiating into abdomen, or groin/inner thighs

- Inability to ambulate/care for self

- Concern for kidney stone, bloody urine

### BEHAVIORAL:

- Uncontrolled agitation requiring sedation by EMS

- Suicidal ideation – must be left with a responsible party

- Other emotionally disturbed patients may be transported at law enforcement’s discretion or by other means

### BLEEDING (LACERATIONS, ABRASIONS, OR AVULSIONS):

- Patient is on Coumadin or other blood thinner with significant ongoing bleeding or large hematoma

- Significant lacerations after bandaging – heavily contaminated, bite-related, likely to involve foreign body, deep structure injury, sensory/motor deficit – to emergency room

- Lacerations requiring simple repair – consider self-transport to physician’s office or urgent care center (however, some offices do not do procedures; patient will need to call ahead)
6. **BURNS:**

- All chemical or electrical burns
- Suspected inhalant burn
- Significant third degree burns
- Second degree burns to ≥5% of body area
- Second degree burns to face, mouth
- Severe pain

- Second degree burns to hands or feet, or to other location 1%-5% body surface area (size of patient’s palmar surface)

- Second degree burns < 1% body surface area, non-critical location
- First degree burns

7. **CARDIAC ARREST:**

- Witnessed down time ≤ 10 minutes – follow usual resuscitation protocols

- All others – report death to dispatch and return to service; do not wait for law enforcement or medical examiner arrival

8. **CHEST PAIN:**

- Chest pain or other signs or symptoms suspicious for cardiac ischemia, pulmonary embolus, or other life threat

- Chest pain ongoing for >12 hours and a normal ECG
- Pleuritic chest pain without hypoxia
- Chest pain reproducible on physical exam to palpation is generally NOT concerning; unless ECG changes or known cardiac disease, unlikely to require treatment for acute coronary syndrome

9. **DIABETIC:**

- Any patient on oral diabetes medications with low blood glucose – if transported by private vehicle must NOT drive self
- Critical high glucose or signs of Diabetic Ketoacidosis/dehydration

- Patients with typical hypoglycemia and explanation for low sugar (did not eat, etc.) can be left without medical control contact as long as family/friend is present and patient is eating
**10. ENVIRONMENTAL:**

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| ![Image 1](#) | • Heat-related illness with any alteration in mental status (confusion, decreased LOC)  
• Frozen extremity  
• Hypothermia with AMS |
| ![Image 2](#) | • Frostbite to face, hands, feet, other location suspected deeper injury, blisters, or frozen to touch |
| ![Image 3](#) | • Heat-related illness without alteration in mental status – initiate external cooling at home under supervision of friends/family  
• Minor frostbite with tissues now soft, pink, no blisters, and NOT involving digits |

**11. ETOH/SUBSTANCE ABUSE:**

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<tbody>
<tr>
<td><img src="#" alt="Image 4" /></td>
<td>• Very decreased LOC or other confounding issues (head injury, suspicion of aspiration)</td>
</tr>
<tr>
<td><img src="#" alt="Image 5" /></td>
<td>• Otherwise may be transported at law enforcement’s discretion</td>
</tr>
</tbody>
</table>
| ![Image 6](#) | • Patient may be left with a responsible individual who can assist the patient  
• Able to ambulate safely without assistance |

**12. EYE PAIN:**

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| ![Image 7](#) | • Impaled objects or possible penetrating injury to eye, or globe rupture  
• Chemical exposures (alkaline) after decontamination and initial rinsing |
| ![Image 8](#) | • Eye pain and/or acute changes to vision should receive transport for urgent evaluation to emergency department or other qualified clinic (e.g. eye clinic)  
• Chemical exposures (non-alkaline) – consult poison control for instructions; transport if symptoms/dangerous exposure |
| ![Image 9](#) | • Chemical exposures (non-alkaline) – consult poison control for instructions; if no symptoms and limited toxicity likely, give instruction sheet |

**13. FEVER:**

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| ![Image 10](#) | • Fever plus altered mental status including confusion  
• Fever plus severe symptoms by paramedic assessment  
• Fever plus seizures, lethargy, still neck, rash, or blistering |
14. **HEADACHE:**

- With vision deficit, lethargy, or page 1 qualifiers (fever, etc.)
- New headaches for patient require assessment
- Usual headaches for patient may require treatment

15. **MUSCULOSKELETAL INJURIES (ISOLATED):**

- Loss of distal pulses
- Unable to effectively splint the affected part
- Neurological changes or deficits
- Open fractures
- Displaced fractures or pain requiring injectable narcotics
- Suspected fractures that are stable and do not require injected analgesia may be splinted appropriately and transported by private vehicle
- Neck pain and back pain after MVC, that is delayed in onset and not associated with midline tenderness or neurologic symptoms

16. **NOSEBLEED:**

- Signs of hypovolemia or dizziness upon standing
- Patient is on blood thinners (Coumadin, lovenox, clopidogrel, etc.)
- Continued high blood pressure (SBP >200) in setting of nosebleed
- Continued severe bleeding despite EMS efforts to control
- All other

17. **OB/PREGNANCY:**

- Imminent delivery
- Pain in abdomen or back
- Profuse vaginal bleeding
- Third trimester (>24 weeks) bleeding
- Pre/eclampsia – syncope, seizure, altered mental status, SBP≥140
- All other

18. **SWALLOWING PROBLEM:**
<table>
<thead>
<tr>
<th></th>
<th>Patient unable to manage own secretions due to pain or obstruction</th>
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<tbody>
<tr>
<td></td>
<td>All other</td>
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</tbody>
</table>

### 19. HEART DISEASE:

<table>
<thead>
<tr>
<th></th>
<th>History of coronary disease or heart failure</th>
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<tbody>
<tr>
<td></td>
<td>Age =&gt;55</td>
</tr>
<tr>
<td></td>
<td>Pregnant</td>
</tr>
<tr>
<td></td>
<td>Chest pain, headache, or shortness of breath (or other symptoms concerning to paramedics)</td>
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</tbody>
</table>

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<thead>
<tr>
<th></th>
<th>Likely dehydration, with dizziness preceding the syncope</th>
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<tbody>
<tr>
<td></td>
<td>Other underlying medical conditions</td>
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</table>

### 20. TOXICOLOGIC:

<table>
<thead>
<tr>
<th></th>
<th>Overdose or other toxic exposure → contact Poison Control and/or online medical control</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>If intentional, see Behavioral Health in this Appendix</td>
</tr>
</tbody>
</table>

### 21. VULNERABLE PERSON IN POTENTIAL DANGER:

<table>
<thead>
<tr>
<th></th>
<th>EMS should assure person will not be left in dangerous environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If safe disposition and transport can be arranged and the injuries do not otherwise require medical evaluation, other transport may be appropriate</td>
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</tbody>
</table>
## APPENDIX 6: Abbreviations & Acronyms

<table>
<thead>
<tr>
<th>Acronym or Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4WD</td>
<td>Four Wheel Drive</td>
</tr>
<tr>
<td>AED</td>
<td>Automatic External Defibrillator</td>
</tr>
<tr>
<td>ALS</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>AST</td>
<td>Ambulance Strike Team</td>
</tr>
<tr>
<td>BLS</td>
<td>Basic Life Support</td>
</tr>
<tr>
<td>CMS</td>
<td>Centers for Medicare and Medicaid Services Coalition</td>
</tr>
<tr>
<td>Designated HPP health care coalition</td>
<td></td>
</tr>
<tr>
<td>CSC</td>
<td>Crisis Standards of Care</td>
</tr>
<tr>
<td>DMAT</td>
<td>Disaster Medical Assistance Team</td>
</tr>
<tr>
<td>DOC</td>
<td>Department Operations Center</td>
</tr>
<tr>
<td>EMAC</td>
<td>Emergency Management Assistance Compact</td>
</tr>
<tr>
<td>EMD</td>
<td>Emergency Medical Dispatch</td>
</tr>
<tr>
<td>EMR</td>
<td>Emergency Medical Responder</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>EMSMACC</td>
<td>Emergency Medical Services Multi Agency Coordination Center</td>
</tr>
<tr>
<td>EMSRB</td>
<td>Emergency Medical Services Regulatory Board</td>
</tr>
<tr>
<td>EMT</td>
<td>Emergency Medical Technician</td>
</tr>
<tr>
<td>EOC</td>
<td>Emergency Operations Center</td>
</tr>
<tr>
<td>ESF</td>
<td>Emergency Support Function</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Administration</td>
</tr>
<tr>
<td>HHS</td>
<td>United States Department of Health and Human Services</td>
</tr>
<tr>
<td>H-MAC</td>
<td>Health Multi Agency Coordination</td>
</tr>
<tr>
<td>H-MACC</td>
<td>Health Multi Agency Coordination Center</td>
</tr>
<tr>
<td>HMD</td>
<td>Health and Medicine Division</td>
</tr>
<tr>
<td>HPP</td>
<td>Health Care or Hospital Preparedness Program</td>
</tr>
<tr>
<td>HSEM</td>
<td>Homeland Security and Emergency Management</td>
</tr>
<tr>
<td>IAP</td>
<td>Incident Action Plan</td>
</tr>
<tr>
<td>IMS</td>
<td>Incident Management System</td>
</tr>
<tr>
<td>IMT</td>
<td>Incident Management Team</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>JIC</td>
<td>Joint Information Center</td>
</tr>
<tr>
<td>JIS</td>
<td>Joint Information System</td>
</tr>
<tr>
<td>MACC</td>
<td>Multi Agency Coordination Center</td>
</tr>
<tr>
<td>MCI</td>
<td>Multiple Casualty Incident</td>
</tr>
<tr>
<td>MDH</td>
<td>Minnesota Department of Health</td>
</tr>
<tr>
<td>MDSAC</td>
<td>Medical Direction Standing Advisory Committee</td>
</tr>
<tr>
<td>MEMA</td>
<td>Minnesota Emergency Management Act</td>
</tr>
<tr>
<td>MEOP</td>
<td>Minnesota Emergency Operations Plan</td>
</tr>
<tr>
<td>Minn. Stat.</td>
<td>Minnesota Statute</td>
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<tr>
<td>Acronym or Abbreviation</td>
<td>Description</td>
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<td>------------------------</td>
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<tr>
<td>MMT</td>
<td>Mobile Medical Team</td>
</tr>
<tr>
<td>MN</td>
<td>Minnesota</td>
</tr>
<tr>
<td>MNTrac</td>
<td>Minnesota system for Tracking Resources, Alerts and Communications</td>
</tr>
<tr>
<td>MRC</td>
<td>Medical Reserve Corps</td>
</tr>
<tr>
<td>MRCC</td>
<td>Medical Resource Control Center</td>
</tr>
<tr>
<td>NIMS</td>
<td>National Incident Management System</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Health and Safety Administration</td>
</tr>
<tr>
<td>PDD</td>
<td>Presidential Disaster Declaration</td>
</tr>
<tr>
<td>PHPC</td>
<td>Public Health Preparedness Consultant</td>
</tr>
<tr>
<td>PIO</td>
<td>Public Information Officer</td>
</tr>
<tr>
<td>PREP Act</td>
<td>Public Readiness and Preparedness Act of 2005</td>
</tr>
<tr>
<td>PSAP</td>
<td>Public Safety Answering Point</td>
</tr>
<tr>
<td>RHPC</td>
<td>Regional Health Care Preparedness Coordinator</td>
</tr>
<tr>
<td>RHRC</td>
<td>Regional Health Care Resource Center</td>
</tr>
<tr>
<td>SALT</td>
<td>Sort, Assess, Lifesaving intervention, Treatment/Transport</td>
</tr>
<tr>
<td>SAT/CSC</td>
<td>Science Advisory Team/Crisis Standards of Care</td>
</tr>
<tr>
<td>SDO</td>
<td>State Duty Officer</td>
</tr>
<tr>
<td>SEOC</td>
<td>State Emergency Operations Center</td>
</tr>
<tr>
<td>SME</td>
<td>Subject Matter Expert</td>
</tr>
<tr>
<td>SNS</td>
<td>Strategic National Stockpile</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
</tr>
<tr>
<td>START</td>
<td>Simple Triage And Rapid Treatment</td>
</tr>
<tr>
<td>Subd.</td>
<td>Subdivision</td>
</tr>
<tr>
<td>WC</td>
<td>Wheel Chair</td>
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