DEPARTMENT OF HEALTH

Minnesota Crisis Standards of Care Framework

SURGE OPERATIONS AND CRISIS CARE FOR EMERGENCY
MEDICAL SERVICES

Preface

The Medical Surge Operations and Crisis Care for Emergency Medical Services (EMS) Attachment represents a thoughtful, proactive consideration and structured approach to shortfalls in the provision of front line response and care by ambulance services, first responders and public safety answering points (PSAP) who are often the lead agencies for disaster response. This Attachment 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 Crisis Standards of Care situation each ambulance service licensee and medical director for each licensee will have to determine the most appropriate steps and actions for their agency/agencies based on their environment, hazards, and resources in concert with MDH and this Framework. Since pre-planned actions are always preferred to ad hoc decisions, pre-event familiarization with the contents of this Attachment 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. This Attachment addresses common categories of pre-hospital EMS response, triage, treatment and transport. Regional health care coalitions, Minnesota Emergency Medical Services Regulatory Board (EMSRB) designated Regional EMS Systems, PSAP/Dispatch and EMS dispatch centers, first responders, ambulance service personnel and their medical directors may determine additional issues and strategies for their specific situation in addition to those outlined in this Attachment and in the overall context of the State of Minnesota Crisis Standards of Care Framework.

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 Attachment 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 Attachment constitutes the consensus recommendations of the Workgroup but does not represent policy of MDH or the MN EMSRB. Ambulance service 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 Attachment may be superseded 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 Attachment 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."[1]

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) ambulance services, 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 ambulance service agencies are generally located in the more rural areas, and paid ambulance service 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.

Minnesota ambulance service providers are faced with a variety of actual and potential large-scale incidents that could quickly exhaust the resources of local ambulance service agencies. There is a significant risk for natural, man-made and terrorism-related disasters throughout the state. Influenza pandemics can have an impact on ambulance services 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 area that could potentially impact ambulance 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 ambulance service agencies.

To respond to disasters, local ambulance services would, in most cases, rely on mutual aid response from neighboring 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 ambulance 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 that responding agencies are not able to provide

---

[1] IOM/NAM*, Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response*©

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 a more robust structured planning is required 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 Attachment provides an overview of crisis care operational considerations for ambulance service providers, and PSAP/dispatchers. 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 National Academies of Medicine, Health and Medicine Division [HMD]—referred to as IOM/NAM throughout this Attachment) report including a specific section on EMS care, Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response. An additional document that may be of assistance to EMS are the Patient Care Strategies for Scarce Resource Situations (staff, medications, etc.) developed by the MDH Science Advisory Team/Crisis Standards of Care (SAT/CSC).

Rural ambulance services may face greater and more frequent challenges than urban systems 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 Attachment 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 Attachment is aimed at the EMS agencies themselves and though it does detail the supporting role of State agencies it is the responsibility of the ambulance service agency to apply this guidance with the help of their management team and medical director to ensure operational plans are in place. The Attachment also provides considerations for PSAPs and ambulance dispatch centers as well as first responders.

Crisis care

Most ambulance service 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 are patients who are contaminated with hazardous materials 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.

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 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 (Figure 3.1):

▪ **Conventional** – usual strategies and resources (e.g., dispatch of additional ambulances, mutual aid, extending staff shifts for a few hours)

▪ **Contingency** – uncommon strategies and resources that incur a small risk to patients such as staffing ambulances with less personnel or a lower level of response delayed or single agency response (police, fire, rescue)

▪ **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 3.1: Examples of EMS Conventional, Contingency, and Crisis Care (modified from IOM/NAM 201)
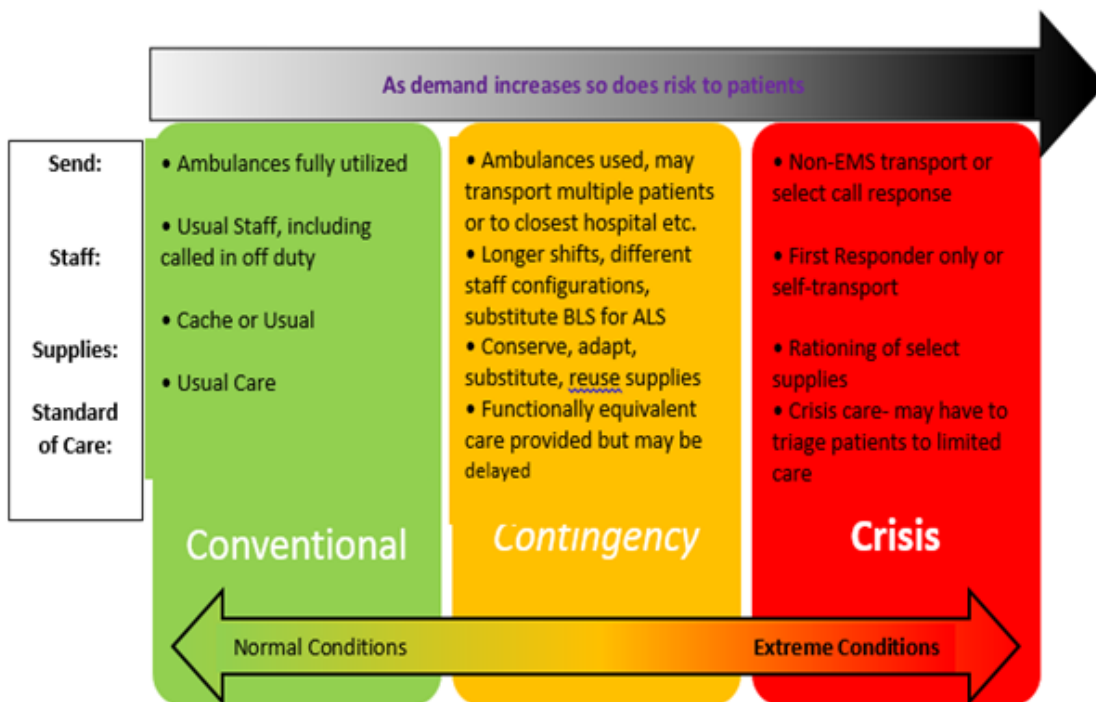
This Attachment will refer to crisis care as a component of the surge capacity plan that must be invoked when demand forces the agency to make decisions that may place the patient at a higher risk of a poor outcome, but are the best that can be offered given the circumstances. Most of these situations 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.

The term "Crisis Standards of Care" (CSC) refers to a longer-term and more pervasive situation where adequate resources to meet the needs are not available and therefore a systematic

approach is required. In these situations, State agencies provide necessary legal and regulatory support and clinical guidance to support the crisis care actions being taken. 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 (Attachment 2). 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.

- Ambulance service 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 (Attachment 2), which may include care guidelines or declarations of CSC.

Roles and responsibilities

Activation of a State response is detailed in the AHRRP. A brief outline of key roles and responsibilities as related to the initiation of the CSC Framework is in the Roles and Responsibilities Table 2. 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 with State of Minnesota and local government agencies.

Table 3.1 Roles and Responsibilities

RESPONSE ENTITY	ROLE	RESPONSIBILITIES
Public Safety Answering Point/9-1-1 Dispatch Center	Support agency	▪ Answers 911 calls ▪ Provides emergency medical dispatch support (if equipped, may transfer to secondary center/ PSAP or not have this capability) ▪ Determines appropriate response based on situation/algorithms/Standard Operating Procedures ▪ Provides communication point for incident responders May assign radio talk groups during an incident
Medical Response Unit/First Responders	First response	▪ "Medical Response Unit" is an organized service recognized by a local political subdivision whose primary responsibility is to respond to medical emergencies to provide initial medical care before the arrival of a licensed ambulance service ▪ "Emergency Medical Responder Group" is a group of certified or registered personnel who respond to medical emergencies and have a medical director ▪ Personnel with "Emergency Response Units" and First Responder Groups are typically educated at the Emergency Medical Responder or EMT levels, but may include Paramedics, Nurses, Doctors, other health care professionals or the general public that may be trained in emergency care at some level ▪ Frequently the first personnel on scene to assess and report on the situation, provide initial triage and care and help determine what additional resources may be needed ▪ Support and assist arriving ambulance personnel on scene as needed
Local EMS Agency	Emergency response and patient transport	▪ Coordinate patient destination hospitals to the degree possible to avoid overloading a single facility ▪ Develop policies for crisis care situations

RESPONSE ENTITY	ROLE	RESPONSIBILITIES
		▪ Interface with local hospitals and regional health care coalition to share information/status ▪ Adjust response and transport guidelines to reflect the situation at the hospital (e.g., if all hospitals overwhelmed may recommend self-transport to clinic for non-emergent problems)
Health Care Facilities	Acute patient care	▪ Implement surge plans including crisis care plans, implement facility or regional triage/treatment plans as required, coordinate information and resource management with other facilities in the region via their Regional Health Care Coalition (HCC)
Indian Health Service Clinics and Hospitals	Acute patient care	▪ Provide clinical support to tribal members ▪ Provide situational awareness to tribal emergency managers and regional health care coalition ▪ Lead for tribal community based interventions (vaccinations, isolation, prophylaxis)
Minnesota Hospital Association (MHA)	Health care facility communication & regulations	▪ Assist in communications and information sharing with hospitals and health care facilities across the state
Local EMS Agency	Emergency response and patient transport	▪ Coordinate patient destination hospitals to the degree possible to avoid overloading a single facility ▪ Develop policies for crisis care situations ▪ Interface with local hospitals and regional health care coalition to share information/status ▪ Adjust response and transport guidelines to reflect the situation at the hospital (e.g., if all hospitals overwhelmed may recommend self-transport to clinic for non-emergent problems)

Surge capacity

EMS must plan for surge capacity across multiple functions (dispatch, response, treatment, transport). 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

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

- Are there options for adding supplemental staff and dispatchers to support additional communications call volumes?

- Is there a technical capability to automatically rollover calls to other dispatch centers or PSAPs if call volumes exceed pre-determined call wait times?

- Is there a phone system 'auto-answer' capability which can be activated to divert calls related to a particular event to a hotline or recording rather than a dispatcher (water contamination, pandemic influenza, etc.)?

- Is there a capability to develop arrangements, policy and procedures to transfer calls to a clinical provider that could 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.)?

- Could a call taker/dispatcher ambulance response algorithm, policy and protocol be utilized to assist non-medically trained dispatchers in determining the need for an ambulance (see Figure 3.2—Disaster dispatch algorithm to prioritize pending ambulance request calls under Planning and Implementation – Rural and Urban – Strategies and Tactics).

Ambulances/transport

Ambulance service 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 (Addendum 3.1). 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), 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 helpful asset particularly with long-term care evacuations, though they may contribute to other 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 ambulance service agencies. The threshold for recommending private transport should be specified at the dispatch level (see Planning and Implementation section).

- 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.

Ambulance service agency plans should include guidance for when and how to request these additional assets including the threshold to engage community emergency management and HCC partners.

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, ambulance service agency staff could be severely and disproportionately affected, dramatically reducing staffing options. 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 EMT's (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.

- 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. More information about DMAT teams can be found at U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response, Public Health Emergency, Disaster Medical Assistant Team.

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 ambulance services 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 have to retrieve the cache from its storage location, which takes time and resources.

Ambulance service agencies should understand their supply chain – where things come from, what is available within the region - recognizing that the supply chain could be compromised during and immediately following an incident when attempting to replenish stocks. Drug shortages recently have become routine and serve as a good reminder of how fragile the supply chain is even without the pressures of a disaster. 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 and are consistent with crisis care frameworks—see IOM/NAM 2012 for additional information.

Federal stockpiles contain significant quantities of medications, specialized incident supplies, and prophylactic antibiotics (e.g. the Strategic National Stockpile). 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 ambulance services 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. Ambulance service personnel should understand the trauma and other capabilities of the hospitals in the area and 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 ambulance service medical directors, managers or leadership to consider, develop event-specific policy, and communicate appropriate destinations to the crews. 11 35 waivers to local ordinances and Centers for Medicare and Medicaid Services (CMS) may be needed to facilitate these changes or reimbursements, more information may be found at Requesting an 1135 Waiver.

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 decisions. Whenever possible, scripted triggers should be developed for front line 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 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 ambulance service 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/NAM report.

Agency policy

Ambulance service 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 the designated 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, ambulance service 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, as the adoption of clear policies helps facilitate decisions and provides accountability.

Education, training, and exercising should be conducted to ensure successful policy implementation. During an event that lasts longer than one day, the agency should review and modify their procedures as needed. Plans should be flexible and not "lock in" disaster response protocols for the duration of an incident, but rather allow transition back to conventional care as more resources arrive or demand falls, or both. For example, 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 ambulance service 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, while acting as a liaison between the hospital and ambulance service. However, the engagement level of ambulance service medical directors varies widely across the state, and the ambulance service agency and medical director will need to agree on an appropriate level of participation. If needed, individual ambulance service 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 ambulance 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.

Ambulance service 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 has eight health care coalitions covering the geography of the state. Each regional Health Care Coalition (HCC) consists of members 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 which are in most regions identical to the coalition boundaries. The EMSRB designated regional EMS system is usually the EMS coordinating entity in collaboration with EMSRB staff (EMS Specialist) assigned to each designated regional EMS System. Each HCC also has at least one full-time equivalent Regional Health Care Preparedness Coordinator (RHPC) to coordinate information sharing, situational awareness and resource coordination among members for surge events affecting the health care system. The HCCs have mechanisms in place to communicate with MDH and the EMSRB.

It is critical that ambulance service 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 HCC assures information sharing between partners and support for and between disciplines in the area. The local HCC can also engage with the neighboring HCC and the State (MDH and EMSRB) to coordinate information and policies. Members of HCCs also interface with their local

jurisdictional response structure to assure that resource requests are processed and a common operating picture is maintained. HCCs may also convene members 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 to EMS crisis strategies is to only implement them 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 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 and Urban - Strategies and Tactics

This section offers strategies and tactics for rural and urban settings. However, the diversity of services in rural areas or their proximity to urban areas may require adaptation. For rural ambulance services this guidance is generally directed toward a volunteer service dispatched by a PSAP with no EMD capability. Rural ambulance services with EMD support may wish to refer to the "Urban" strategies highlighted in this section. Note that an EMS Surge Operations and Crisis Care Matrix summary of issues, strategic and tactical considerations is presented in Addendum 3.2.

Incident management

The critical role of the regional HCC 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 HCC must be prepared to provide or support. Disaster situations are dynamic and require frequent monitoring.

The use of an 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. In order to request an IMT, contact the SDO or the State EOC. 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 HCC or an EMS multi-agency coordinating function

can also provide assistance. (For additional information on IAP see [FEMA Incident Action Planning Guide](#).

All ambulance service 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 rural 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 HCCs can assist local agencies with resource issues (in conjunction with local emergency management), policy development, and joint incident action plans.

Urban ambulance service 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). In urban settings, such as the twin cities metro area, if an incident affects a single jurisdiction the ambulance service 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 and serves as the first-responder pharmaceutical cache distribution point. 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 partners with the Metro region health care coalition's Regional Health Care Resource Center (RHRC) to coordinate acute care as required. The EMSMACC may assist other HCCs, designated regional EMS systems, emergency management or other ambulance service providers upon request as presented in Addendum 3.1.

Dispatch/911/PSAPs

Part of the goal during a crisis is to decrease the call volume at the PSAP. This may be accomplished using a variety of methods:

- Work with emergency management, local and tribal public health, 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. Frequently updated information provision to the community through the Public Information Officer (PIO) or Joint Information System (JIS) can be very helpful at reducing call volumes.

- 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 other PSAPs or secondary 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 ambulance response is received by the PSAP/Dispatch, the goal is to provide the most appropriate services available:

Rural ambulance service dispatch considerations

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 dispatcher algorithm for consideration is presented in Fig. 3.2. 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, education and drills to reinforce the agency policies and procedures.

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 EMS multi-agency coordination center.
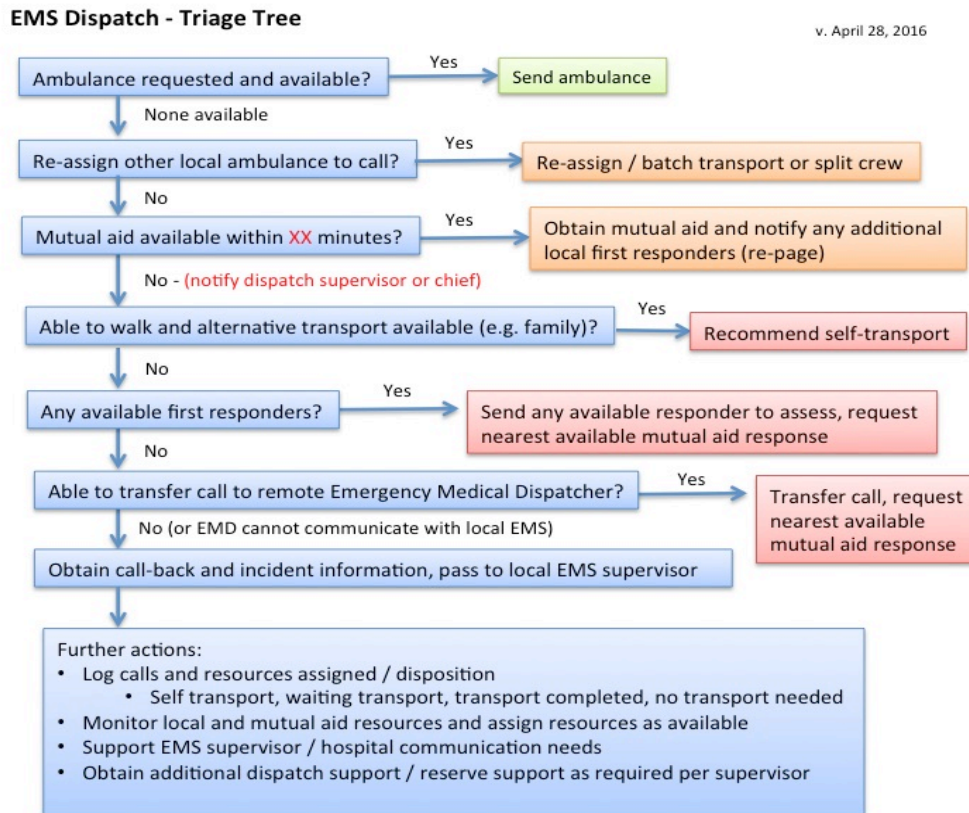
The use of private non-ambulance transport may seem unusual to EMS providers, but may represent the best practice when ambulance response and care would otherwise be substantially delayed. The community may have first responders that are not currently on the ambulance(s) and can respond to subsequent 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 if available. This approach has been utilized following prior major disasters in some communities. Call screening could involve a partnership with an ambulance service agency medical director within the designated regional EMS system, the area hospital, or a dispatch center with EMD capability. During a pandemic 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 ambulance 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 ambulance service operations

manager, supervisor or operations chief as well as the designated regional EMS system point of contact.

Figure 3.2: EMS dispatch-triage tree

EMS Dispatch - Triage Tree

v. April 28, 2016

Ambulance requested and available? — Yes → Send ambulance

None available ↓

Re-assign other local ambulance to call? — Yes → Re-assign / batch transport or split crew

No ↓

Mutual aid available within XX minutes? — Yes → Obtain mutual aid and notify any additional local first responders (re-page)

No - (notify dispatch supervisor or chief) ↓

Able to walk and alternative transport available (e.g. family)? — Yes → Recommend self-transport

No ↓

Any available first responders? — Yes → Send any available responder to assess, request nearest available mutual aid response

No ↓

Able to transfer call to remote Emergency Medical Dispatcher? — Yes → Transfer call, request nearest available mutual aid response

No (or EMD cannot communicate with local EMS) ↓

Obtain call-back and incident information, pass to local EMS supervisor

Further actions:
- Log calls and resources assigned / disposition
  - Self transport, waiting transport, transport completed, no transport needed
- Monitor local and mutual aid resources and assign resources as available
- Support EMS supervisor / hospital communication needs
- Obtain additional dispatch support / reserve support as required per supervisor

Notes:
- Assumes non-EMD PSAP - for EMD PSAP triage calls based on priority dispatch levels and in conjunction with medical direction
- Supervisors for EMS and public safety should be notified when any 'red box' / 4th level is used
- Dispatcher should have authority, process, and contact numbers for activating this algorithm
- Dispatcher should have contact information for regional ground and rotor-wing resources
- Identify support mechanism for call triage decisions (EMS supervisor / lead medic, hospital personnel and document responsibilities / contact information prior to event)
- Identify role of EMS supervisor / medical director in this process
- First responders without an ambulance should coordinate appropriate care with receiving hospital / EMS supervisor
- Consider *not* sending EMS initially on calls for potential injury accidents until confirmed significant injuries.
- Consider other call type triage based on local system and dispatcher training

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 Figure 3.3. Note that this algorithm does not cover all circumstances and should not substitute for good judgment of the dispatcher.

Figure 3.3: Disaster dispatch algorithm to prioritize pending EMS calls

EMS Crisis Care Dispatch Aid

Draft May 8, 2016

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

Yes →

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?

YES = FIRST

NO = SECOND

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

Urban ambulance service dispatch considerations

Medical priority dispatch is very helpful in prioritizing pending calls and is widely available to urban PSAPs or EMS agencies serving as secondary PSAPs. 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 and no ALS or BLS ambulance is available:

- No ambulance response or only a first responder with automatic external defibrillator (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 ambulance transport is required:

  - Motor vehicle crashes

  - Assaults

  - Intoxication

  - Slumper or "one-down" calls (unknown medical victim in a vehicle or on the ground)

  - Fall (without other priority 1 complaints)

- Continue emergency medical 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 (e.g., recommend to priority 3 (omega and alpha). See Table 3.2:

Table 3.2: Emergency Medical Priority Dispatch

Type	Capability	Response Time
Alpha	BLS—Minor emergency	Cold (no lights and siren) single unit
Bravo	BLS—Life threatening emergency	Hot (with lights and siren) multiple units
Charlie	ALS—Minor emergency	Cold single unit
Delta	ALS—Life threatening emergency	Hot multiple units
Echo	ALS & special units—Life threatening emergency	Hot multiple units
Omega	Referral or Alternate Care	None—no EMS response

Treatment

During no-notice or unpredicted disasters, care should focus on BLS measures with rapid transport to the hospital. Providers should understand what automatic changes to SOPs may be invoked during a disaster (for example, some ambulance services do not require calling in for online 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 ambulance service agency leadership

may also approve broader discretion for patients being left at scene by the ambulance service crew (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 online medical control (see Addendum 5 as an example of pre-developed and approved SOPs prepared for medical director authorization for use – 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

Ambulance crews may be authorized the discretion to leave patients at the scene as discussed in the Treatment section and with pre-established SOPs as authorized for a specific situation by the ambulance service medical director. 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 ambulance service agency should know how and when to request and use these resources if they will help relieve stress on the emergency response system.

Inter-facility/Inter-hospital transfers can take essential local ambulance resources out of the service area for hours at a time particularly in rural areas. 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 Addendum 3.1), EMS units from the receiving facility/community, or more aggressive use of rotor-wing aircraft transfer may be of substantial benefit to preserve community response assets in rural areas and scheduled BLS and wheel chair transports may help to reduce the burden of these transports in more urban settings. 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 ambulance service leadership, supervisory staff and medical directors may need to be involved in these discussions and negotiations.

Use of online medical control if available or contact with an ambulance service supervisor may be helpful to resolve specific medical or logistical questions; 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, ambulance resources may be severely limited and alternate transport options may need to be considered and utilized. 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. If necessary, 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 four-wheel drive vehicle. Addendum 3.3 provides specific considerations and guidance to be 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 patient report given to the receiving hospital when feasible.

Destination

Ambulance units almost universally transport to hospitals since they are usually not reimbursed for non-hospital transports. A crisis care event may require changes to this standard practice.

Rural ambulance service destination considerations:

Rural ambulance services usually transport patients 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 ambulance 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 decide on 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 ambulance 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 or burn care it is appropriate to try to balance transports between hospital facilities rather than risk overloading one particular hospital. 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 the sickest individuals. Alternate patient dispositions could include a clinic, alternate care site or other community venue. It is appropriate for ambulance service personnel to transport to those locations provided they are open, appropriately staffed, and the patient does not have any severe symptoms.

Ambulance services 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.

Urban ambulance service destination considerations:

Urban ambulance services 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" patient 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 ambulance 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 flu lines, caller screening, alternate care sites, or designated clinics or urgent care facilities may be appropriate options or destinations for ambulance units.

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. 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 an element of emergency planning and response activities, equally as important as the guidance and support from local, tribal and Federal governments, and State agencies such as MDH and EMSRB. In a prolonged event, systematic regional or statewide CSC activities such as structured triage of resources and specific emergency orders may be issued.

The ability of the Governor of Minnesota 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 *Attachment 2—Legal Authority and Environment for Crisis Standards of Care*.

Tribal and territorial areas are independent legal entities and though they interface with surrounding jurisdictions they are self-governing and have the ability to make and enforce their own laws and rules. Tribes are also allowed to directly seek federal assistance, though in most cases they will also interface with the State, as resources are often available more rapidly through those channels.

Statutes and ordinances

Agencies that issue rules obtain their authorities and enforcement abilities by statute (law). Laws are more difficult to modify, even in times of emergency unless the Governor promulgates a rule suspending the statute. Rules, on the other hand, are more easily suspended. EMSRB is the lead agency for ambulance response and coordination as designated by state law and in the Minnesota Emergency Operations Plan (MEOP). During a surge event, EMSRB will interface with the State Emergency Operations Center (SEOC) and regional EMS program coordinators to provide information and support for ambulance operations and resource requests. Under Minn. Stat. §144E.266 during a Governor declared disaster certain state ambulance statutes may be suspended (see below for more detail). Additionally, certain administrative rules pertaining to ambulance services 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, ambulance responders should continue to meet those standards.

Additionally, it is critical ambulance service 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 ambulance services. These ordinances may need to be relaxed in a crisis, and ambulance service agencies should work with local Emergency Management to determine how this would happen.

State ambulance requirements suspended during declared disasters

As part of disaster preparedness planning, the State recognizes the need to allow suspension of certain ambulance requirements during legally declared disasters. Minnesota Statute, section 144E.266 enables this by suspending the following:[2]

The requirements (see below for explanation) 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:

- Throughout the state during a national security emergency declared under section 12.31;

- In the geographic areas of the state affected during a peacetime emergency declared under section 12.31; and

- 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 areas where one or more ambulance services are providing requested mutual aid to the site of the emergency.

---

[2] Minn. Stat. 144E.266, available at Emergency Suspension of Ambulance Service Requirement.

Explanation of specific requirements suspended

- 144E.10: license required to operate an ambulance service;

  - 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;

  - 144E.101, subd. 2: requires at least one ambulance attendant in patient compartment and Paramedic in patient compartment if ALS care provided.

  - 144E.101, subd.3: requires ambulance service to offer continual service (24 hours a day, every day of the year);

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

  - 144E.101, subd. 7: advanced life support staffing and care requirements:

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

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

  - 144E.101, subd. 10: requires driver of ambulance to have driver's license and emergency driving course;

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

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

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

  - 144E.12: licensure of air ambulances;

  - 144E,121: requirements for air ambulance;

  - 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;

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

  - 144E.15: requires board approval for relocating base of operations within PSA.

Liability

A catastrophic disaster which causes initiation of the CSC Framework may raise legal and liability concerns among health care and public health professionals due to their potential liability risk when extreme service demands, coupled with constrained supplies and diminished personnel, prevent provision of usual services and care expected by the community. Although lawsuits resulting from emergency planning or services rendered during an emergency or disaster are rare, responders may nonetheless be comforted in knowing what laws currently exist that might afford protections against lawsuits that might be leveled against them for actions undertaken – or not undertaken – during a response. For a more comprehensive review

of Minnesota laws pertaining to emergency responders please see *Attachment 2—Legal Authority and Environment for Crisis Standards of Care* for more detail.

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. This raises the issue of "duty to plan". The failure to adequately plan for reasonable 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 ambulance service 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: 1135 Waiver

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, Centers for Medicare and Medicaid Services (CMS) 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 site. During an emergency or disaster, the HHS Secretary may authorize a Section 1135 Waiver, which enables reimbursement under specific circumstances. A Federal declaration must be obtained prior to the Secretary 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.

Additionally, 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. For additional information on 1135 Waivers please see Requesting an 1135 Waiver.

Recovery

Ambulance service 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). The basic philosophy of recovery is to "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. Ambulance service 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, ambulance services may be able to operate in conventional status during the night in a pandemic, but during daytime hours may remain 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, and more. Some priorities for ambulance services 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

Ambulance services may need to provide ongoing support to other agencies as they continue body recovery and other operations. Ambulance service agencies 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

Ambulance service agencies in Minnesota are diverse, but all are at risk of situations where demand exceeds available resources and require adaptive strategies. All agencies have a duty to plan for such situations and should 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.
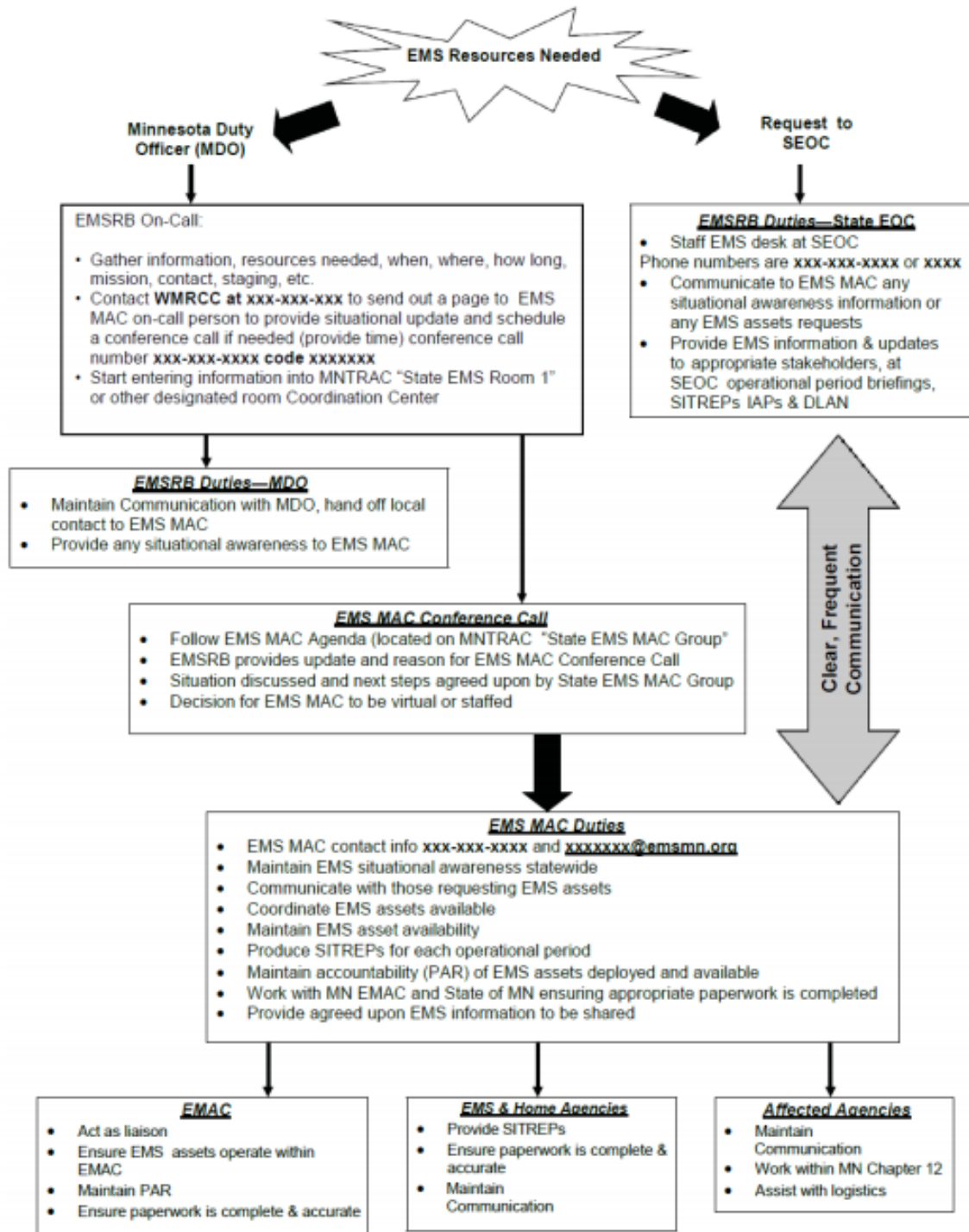
This Attachment should provide a framework on which ambulance service agencies, working with their HPP Coalition and designated regional EMS system partners, can modify their operational plans to incorporate crisis care conditions.

The key planning steps for each ambulance service agency following review of the document are:

- Convene a planning group with leadership or supervisory staff and medical director

- Identify resources and resource limitations ('send', 'staff', and 'supplies')

- Determine limitations and options, then resource and policy needs, then develop indicators and triggers in the following areas:

  - Dispatch

  - Response

  - Treatment

  - Transport

  - Destination/Patient Disposition

  - Develop formal written policy

- Discuss policy with surrounding agencies, regional HPP Coalition, Regional EMS System Program and receiving hospitals

- Educate and exercise new policies and procedures

Addendum 3.1—Requests to the State for Additional Ambulance Service 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-xxx-xxx** 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-xxx-xxxx code xxxxxxx**
- Start entering information into MNTRAC "State EMS Room 1" or other designated room Coordination Center

Request to SEOC

EMSRB Duties—State EOC

- Staff EMS desk at SEOC
  Phone numbers are **xxx-xxx-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

EMSRB Duties—MDO

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

EMS MAC Conference Call

- Follow EMS MAC Agenda (located on MNTRAC "State EMS MAC 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

Clear, Frequent Communication

EMS MAC Duties

- EMS MAC contact info **xxx-xxx-xxxx** and **xxxxxxx@emsmn.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

Addendum 3.2—Ambulance service surge operations and crisis care matrix

	Conventional	Contingency	Crisis
Public Messaging	▪ None	▪ Limit calls to 911	▪ Limit calls to 911 – risk to others if not true emergency
PSAP/EMS Dispatch	▪ Priority dispatch ▪ Standard dispatch procedures or protocols	▪ Mutual aid as required and normally requested ▪ Priority dispatch but pend calls of non-emergent nature (A) (1) ▪ Consider adjusted response assignments (e.g., no EMS until injuries confirmed at MVC) (A,C) (2)	▪ Auto-answer with diversion of non-emergency calls to health care provider health line/311/other source (A) ▪ 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) ▪ Priority dispatch of emergency calls only (A,C) ▪ Adjusted response assignments as per Contingency (A,C)
Response	▪ Usual resources and response standards	▪ Mutual aid ▪ Consider additional use of BLS or alternate transport (A) ▪ Consider alternate staffing and shift patterns	▪ Additional mutual aid, EMS strike teams or MCI bus? (A,C, possible S) ▪ Non-medical vehicle drivers (A,C, possible S) ▪ Alternate response – BLS, wheel chair/special transportation, school or public transit buses, other (A,C,S) ▪ Additional trained staff unavailable or unable to respond to volume of requests even with extension techniques (A,C,S)
Treatment – Standard of Care	▪ Assess and treat per usual Standard Operating Procedures (SOP) and standard of care	▪ Assess and treat per SOP, radio control for unusual situations; functionally equivalent care (ALS, BLS) ▪ Conservation, adaption and substitution of supplies with occasional re-use of selected supplies	▪ Broaden discretion of ambulance service personnel 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) ▪ Critical supplies lacking, possible re-allocation of personnel and life sustaining resources (A,C,S) ▪ Broaden on-scene treatment options (A,C, possible S) ▪ Crisis Standard of Care – incident specific patient care guidelines from MDH or other source (A, C, S)

Transport	▪ Transport to destination hospital of choice	▪ Transport to closest appropriate hospital (A,C)	▪ 'Batch' transports of multiple patients, private or public vehicle, buses, special transportation (A,C) (5) ▪ Transport to closest appropriate facility (A,C) ▪ 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) ▪ Use of non-ambulance vehicles (private, wheel chair, buses, vans, police/fire vehicles) (A,C,S) (5)

Notes:

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

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

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

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.

- 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.

- 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

- 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

- Trigger and approval by agency supervisor/medical director should be described in policy

Addendum 3.3—Transports to hospital in non-ambulance vehicle

In a crisis, ambulance 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:

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

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

- Others transporting in private vehicle with EMS personnel in the vehicle with them monitoring or providing care (unstable – highest risk to patient and provider)

- 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)

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

Ambulance service providers need to 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:

- **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 en route and should minimize speed in favor of safe transport.

Addendum 3.4—Pandemic influenza protocols

Protocols developed and approved by Hennepin County EMS Council (April 9, 2009) for use in the Hennepin County EMS System and included here to serve as a guide for other EMS agencies.

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.

Categories for Triage

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:

INFO	Provide homecare information
CLINIC	Refer to a clinic or other medical destination

ALT TRANS	Refer to use of alternate transportation to a hospital, clinic or other medical destination
LE	Transport by (and at the discretion of) law enforcement
EMS	Transport by ambulance to a hospital or other medical destination

Standing Orders

1. 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.

2. B. When resources during a Pandemic are "Level Red," automatically offer to transport patients with the following presentations:

EMS	1. Paramedic discretion – suspicion of critical illness/injury
EMS	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
EMS	3. Breathing: • Respiratory distress • Cyanosis, or pallor/ashen skin
EMS	4. Circulation/Shock: • Signs or symptoms of shock • Severe/uncontrollable bleeding • Large amounts of blood (or suspected blood) in emesis or stool
EMS	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
EMS	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

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 personal medical doctor 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:**

EMS	• Pulsating mass • Marked tenderness/guarding • Pain radiating into back and/or groin/inner thighs • Recurrent severe vomiting not associated with diarrhea
ALT.TRANS/CLINIC	• 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
INFO	• Intermittent vomiting and diarrhea without blood or evidence of dehydration

2. **ANAPHYLAXIS/STINGS**:

EMS	• Patients who have had epinephrine administered for symptoms • Patients experiencing airway, hypotension or respiratory symptoms, after an allergy exposure
INFO/ALT. TRANS./CLINIC	• Patients with itching after exposure – if rapid onset of symptoms, may require EMS transport; if delayed > 1hour, 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 1mg/kg.

3. **BACK PAIN**

EMS	• 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
INFO/ALT. TRANS.	• Inability to ambulate/care for self
INFO	• Concern for kidney stone, bloody urine

4. **BEHAVIORAL**

EMS	• Uncontrolled agitation requiring sedation by EMS

EMS/LE/ ALT. TRANS	• Suicidal ideation – must be left with a responsible party
INFO/ALT. TRANS	• Other emotionally disturbed patients may be transported at law enforcement's discretion or by other means

5. BLEEDING (LACERATIONS, ABRASIONS, OR AVULSIONS):

EMS	• Patient is on Coumadin or other blood thinner with significant ongoing bleeding or large hematoma
ALT.TRANS/ CLINIC	• 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)
INFO	• Abrasions or avulsions not requiring suturing or repair, no significant contamination. • Minor lacerations that do not require sutures

6. Burns

EMS	• 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 • Circumferential burns
ALT. TRANS	• Second degree burns to hands or feet, or to other location 1%-5% body surface area (size of patient's palmar surface)
INFO	• Second degree burns < 1% body surface area, non-critical location • First degree burns

7. CARDIAC ARREST

EMS	• Witnessed down time ≤ 10 minutes – follow usual resuscitation protocols
INFO	• All others – report death to dispatch and return to service; do not wait for law enforcement or medical examiner arrival

8. CHEST PAIN

EMS	• Chest pain or other signs or symptoms suspicious for cardiac ischemia, pulmonary embolus, or other life threat
INFO/ALT. TRANS/ CLINIC	• 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

EMS/ALT. TRANS	• 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
INFO	• 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

EMS	• Heat-related illness with any alteration in mental status (confusion, decreased LOC) • Frozen extremity • Hypothermia with AMS
EMS/ ALT. TRANS.	• Frostbite to face, hands, feet, other location suspected deeper injury, blisters, or frozen to touch
INFO	• 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

EMS	• Very decreased LOC or other confounding issues (head injury, suspicion of aspiration)
LE	• Otherwise may be transported at law enforcement's discretion
INFO	• Patient may be left with a responsible individual who can assist the patient • Able to ambulate safely without assistance

12. EYE PAIN

EMS	• Impaled objects or possible penetrating injury to eye, or globe rupture • Chemical exposures (alkaline) after decontamination and initial rinsing
EMS/ALT. TRANS/ CLINIC	• 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
INFO	• Chemical exposures (non-alkaline) – consult poison control for instructions; if no symptoms and limited toxicity likely, give instruction sheet

13. FEVER

EMS	• Fever plus altered mental status including confusion • Fever plus severe symptoms by paramedic assessment

	• Fever plus seizures, lethargy, still neck, rash, or blistering
EMS/ALT. TRANS/ CLINIC	• ≤ 3 months with fever estimated a 100.5˚F → emergency room or clinic urgently • > 3 months with fever that does not reduce with anti-pyretics, or fever lasting more than 5 days→ emergency room, urgent care, or clinic

14. HEADACHE

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

15. MUSCULOSKELETAL INJURIES (ISOLATED)

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

16. NOSEBLEED

EMS	• Signs of hypovolemia or dizziness upon standing • Patient is on blood thinners (Coumadin, lovenox, clopidogrel, etc.)
INFO	• All other

17. OB/PREGNANCY

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

18. SWALLOWING PROBLEM

EMS	• Patient unable to manage own secretions due to pain or obstruction
INFO	• All other

19. HEART DISEASE

EMS	• History of coronary disease or heart failure • Age =>55

	• Pregnant • Chest pain, headache, or shortness of breath (or other symptoms concerning to paramedics)
INFO/ALT. TRANS./CLINIC	• Likely dehydration, with dizziness preceding the syncope • Other underlying medical conditions

20. TOXICOLOGIC

EMS/INFO/ALT. TRANS./CLINIC	• Overdose or other toxic exposure→ contact Poison Control and/or online medical control • If intentional, see Behavioral Health in this Appendix

VULNERABLE PERSON IN POTENTIAL DANGER

EMS/ALT. TRANS./CLINIC	• EMS should assure person will not be left in dangerous environment • If safe disposition and transport can be arranged and the injuries do not otherwise require medical evaluation, other transport may be appropriate