

EMERGENCY MEDICAL SERVICE PANDEMIC SURGE
PROTOCOLS

AND

PUBLIC SAFETY ANSWERING POINT PANDEMIC SURGE
PROTOCOLS

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Executive Summary

During a disaster which results in a health care surge, PSAP and EMS providers will need to ensure that those patients most likely to benefit from emergency medical transport are the ones who receive the services. This will require patient triage and altered procedures. Changes in care will be introduced by stages (stages 1, 2 and 3) according the stress on the system. NDDoH will make a determination of the appropriate stage given the situation and any change in care will apply to the entire state. NDDoH designation of a stage of care other than normal does not require a service to introduce all changes that NDDoH has identified as acceptable; that is, each service should continue to offer the best care it can given its local circumstances.

Patient triage will follow the schedule below:

Response Triage Based Information Available Pre-Scene

Table 1: Response Triage by Standard of Care

	Patient Categories	Stage 1 SOC	Stage 2 SOC	Stage 3 SOC
1	Arrest	Priority 1 Normal Care	Priority 1 Normal Care	Priority 0 No response Except pediatric=priority 1
2	Life threatening event, threatening scene*	Priority 2 Normal Care	Priority 2 Normal Care	Priority 1 Alternate transport if response delay anticipated
3	Life threatening event, non-threatening scene	Priority 3 Normal Care	Priority 3 Normal care	Priority 2 Alternate transport if response delay anticipated
4	Non-critical ALS assessment	Priority 4 Normal care	Priority 4 Alternate transport	Priority 0 Alternate transport
5	Inter-facility transport unstable patient	Priority 5 Normal care	Priority 5 Normal care	Priority 3 Normal care
6	BLS Assessment/ unknown scene risk	Priority 6 Alternate transport	Priority 6 Treat and Release	Priority 0 Treat and release
7	Inter-facility transport stable patient	Priority 7 Normal care	Priority 0 Alternate transport	Priority 0 Alternate transport
8	BLS Treatment	Priority 8 Alternate transport	Priority 0 Treat and release	Priority 0 Treat and release
9	No acute illness or injury	Priority 0 Refer call, no on-scene response	Priority 0 Refer call, no on-scene response	Priority 0 Refer call, no on-scene response

*Threatening scene is a location in which the scene poses a potential danger to the health of the injured or ill person independent of the injury or illness itself (e.g., cold environment) or in which the person is trapped or pinned.

EMS procedures will follow the schedule below:

Table 2 Management Protocols by EMS Standard of Care Stage

Management Protocol	Stage 1 SOC	Stage 2 SOC	Stage 3 SOC
Expansion of EMS personnel	Combining services or cross coverage	Use of first responders	Use of untrained volunteers
Implementation of alternate transport	See Response Triage Table above	See Response Triage Table above	See Response Triage Table above
Implementation of treat and release protocols	None	BLS assessment or treatment	BLS assessment or treatment
Single responder vehicles	Yes	Yes	Yes
Triage officer	Yes	Yes	Yes
Data Collection	Normal	Minimal dataset	Log run
Regional hub expansion of coverage areas*	No hub expansion	Respond to patient categories 2, 3 and 4** up to 25 miles outside of usual jurisdiction	Respond to patient categories 2 and 3** up to 50 miles outside of usual jurisdiction
*Regional hubs include the following cities: Fargo, Bismarck/Mandan, Grand Forks, Minot, Dickinson, Jamestown, Williston, Devil's Lake ** Patient categories are defined in Table 1			

PSAP surge response will seek to ensure PSAP, find EMS coverage, pre-screen calls for urgency, make callers aware of limitations, and in stage 3, limit calls forwarded to EMS to emergent calls only. PSAP protocols would be implemented on this schedule:

Table 4: PSAP Protocol Introduction

Management Protocol	Stage 1	Stage 2	Stage 3
Call Triage	Yes	Yes	Yes
Response Triage	No	Caller notification	Emergent calls only
Areas without EMS	Yes	Yes	Yes
Areas without PSAP	Yes	Yes	Yes

PART I: EMS PROTOCOLS

Scope and Applicability

The protocols presented in this document apply to disasters in which there is a sustained shortage of EMS capacity which can not be made up by the importation of state or federal resources into the area. If the option exists to mobilize external resources to supplement EMS services in localized areas of disaster, then that is the preferred approach. In North Dakota, the only event likely to rise to a level which would make activation of these protocols necessary is pandemic influenza of moderate or greater severity.

Specific protocols addressed by this document are:

- Patient triage
- Management protocols by standard of care stage
 - Treat and release
 - Alternate transport
 - Personal protective equipment
 - Use of first responders and untrained volunteers
 - Single responders and triage officers
 - Regional hub expansion
- Disease surveillance and reporting
- Pandemic vaccine prioritization
- Antiviral distribution and use
- EMS provider role expansion

Assumptions Related to Pandemic Influenza

- Because all states and all of North Dakota will be affected by a pandemic, mobilization of state and federal medical resources from one geographic area to another will not be possible. Local jurisdictions will be largely dependent on local resources to provide the best medical care possible in the circumstance.
- A moderate or severe pandemic will overwhelm the health care sector. Resources will be insufficient to provide all the care needed, so care will be prioritized and rationed.
- A moderate or severe pandemic will markedly increase the number of calls being received by 911 dispatchers. The call volume increase is expected to be primarily health related, although some scenarios might result in an increase in other public safety calls as well.
- A moderate or severe pandemic will markedly increase the number of responses requested of EMS.
- The number of available workers in both public safety answering points (PSAP) and emergency medical services (EMS) will be reduced by illness, school and daycare closure, and illness care of family members.
- Some EMS services will become partially or completely non-functional particularly in rural areas where volunteers provide EMS services in addition to working other jobs, and where the number of providers is small.

- Hospital care will be overwhelmed which may markedly increase offload times and may alter the potential destination of patients due to insufficient surge space in hospitals to handle all persons needing inpatient care.
- Although other call lines for information will be available and advertised, a substantial number of calls to 911 will not be for urgent response.
- Some PSAP services could lose enough staff due to absenteeism that full schedule coverage is not possible.

Hospital-Based Surge Planning

North Dakota hospitals have been through a planning process to address surge issues and these plans can be found in the state Mass Care Plan. Hospital surge is premised on the following:

- Hospitals can substantially increase their capacity to care for patients only by providing care at a reduced standard of care, particularly given the expected reduction in availability of health care workers.
- A limit on the number of patients which a hospital can care for at any standard of care exists, but that precise level cannot be defined pre-event.
- In order to maximize the number of patients which can receive care, disaster-specific standards of care will be introduced in stages which alter the care which is expected of providers.
- The recognized standard of care will be applied statewide and recognizes a set of actions consistent with that standard which a hospital may choose to take in order to increase its ability to care for additional patients. The recognized standard of care does not, in and of itself, alter the level of care a hospital provides. That is determined by the policies and procedures of the hospital.
- The state will recognize a disaster-specific standard of care upon review of a petition from the hospitals that the standard be changed or on an assessment by NDDoH which suggests the standard should be changed (e.g., during the recovery period back to a higher level of care).
- In the event that the number of patients needing inpatient services exceeds the capacity of the hospitals to provide care, community minimum care facilities will be opened to care for influenza patients providing hydration, nutrition and hygiene.

EMS Standard of Care

In the event that the EMS system becomes overloaded due to increased volume of patients needing care and a reduced number of personnel available to provide the care, the state will recognize a disaster-specific standard of care which

- Prioritizes whether to initiate on scene response based on the anticipated patient condition reported to EMS.
- Makes provision for alternate care protocols on scene without medical director consent based on the assessed patient condition at the scene.
- Recognizes the option to introduce management protocols to compensate for increased workload and for loss of service coverage in some areas.

Any localized disaster which creates an acute demand for EMS services which is in excess of what can be supplied (e.g., bus rollover), will result in a *de facto* alteration in

care for a very limited period of time which is handled by patient triage. When the surge is localized and sustained (e.g., evacuation of flood zone), the preferred response is the mobilization of EMS resources from unaffected areas. Changes in state recognized standards of care described in this document are intended for periods of sustained EMS surge lasting days or weeks, which are not geographically localized and cannot be supplemented by mobilization of resources outside the affected area¹.

When the state becomes aware of a sustained inability of the EMS system across North Dakota to provide for all EMS requested care during a disaster, NDDoH may choose to recognize a disaster-specific standard of care for EMS. Generally this will be accompanied by a similar change in the recognized standard of care for PSAP services as well. Like hospitals standards, EMS standards will be implemented as needed, in three stages with progression to standards that represent more marked deviations from normal practice occurring only when conditions indicate that the current recognized standard is insufficient to provide EMS care for the sickest patients. As a consequence of the changes in the care standard, patients which need to see a provider will more often be transported to health care facilities by family or other non-EMS providers, more often receive care at the scene without a recommendation for further medical follow-up or more often be left to do whatever they think best because no EMS unit will respond.

The decision to implement or not implement a state-recognized reduced standard of care will be up to the specific EMS unit or service². An EMS service may make a policy decision for the entire service to follow the state-recognized standard or may allow individual responding units to follow the standard only when patient pressures won't permit operation at a higher standard of care. NDDoH recognizes either approach as acceptable; however, a service which is not stressed beyond reasonable limits (e.g., in a less affected area of the state) would not be expected to implement altered standards in the absence of necessity. The recognition by the state of a disaster-specific standard of care does not obligate any EMS provider to provide reduced care according to that standard.

Relation to Hospital Standards of Care

It should not be assumed that when the state recognizes a certain stage of standard of care for EMS (e.g., stage 1) that the hospital system is also at that same stage. Hospital standard of care statewide may be at a higher or lower standard than the EMS standard. However, EMS should be aware of the stage of care that is being practiced in hospitals, particularly related to the following:

¹ The decision regarding when demand is exceeding an EMS service's ability to respond is not based solely on a service's physical ability to respond. For example, a volunteer service which uses EMS providers who are otherwise employed may be physically able to respond but unable to respond and keep up their usual employment. Services may also be impaired by other factors such as stress, fatigue or supply/equipment problems. The individual service must decide the scope of service that is within its capability.

² All EMS services should expect to implement any change in the state recognized standard of care which is higher than the care which the service is currently offering. This is likely to occur during the recovery phase of a pandemic when the state begins to return expectation of care back toward the standard of care practiced during non-disaster periods. Liked the staged reduction in care, reversal of the altered standards should occur in stages.

- During stage 3 hospital care, hospitals may choose not to attempt to resuscitate patients who have arrested. If the receiving hospital is not resuscitating patients, then for it is logical for EMS not to attempt resuscitation in the field even if that is not part of the recognized standard of care for EMS at the stage in which it is functioning at that time. As long as the local receiving hospital chooses to resuscitate patients, EMS should continue to provide resuscitation, unless the statewide EMS standard of care is at a level where non-resuscitation is a recognized option. In that case, the EMS unit will have the option to no longer provide resuscitation in the field regardless of the hospital care being provided.
- When a hospital moves to stage 3 standard of care, that is a trigger for the setup of minimum care facilities which are inpatient facilities, for pandemic patients only, which are state authorized, community operated and volunteer staffed. When the state authorizes these facilities to open, they may be an alternate destination of pandemic patients.

Documentation

The response of the EMS service to the recognized standard of care should be documented administratively stating the policies of the EMS service at that time. For any particular EMS standard of care stage recognized by the state, the local EMS service should document its practices. For example, practices consistent with the declared EMS recognized standard of care may be implemented slowly as the service becomes more stressed.

Triage of On-Scene Response by Standard of Care Stage

During a moderate or severe pandemic, the greatest reduction in workload will be achieved by the EMS unit not having to go on scene in response to all calls. EMS unit may also choose not to respond to a request for transport if the nature of the call is consistent with one for which response priority is zero in Table 1 below (for the currently operational standard of care)³.

The EMS unit may choose to implement this in different ways:

- No response based on information provided by the caller to the PSAP
- No response based on information provided by the caller when called back by EMS
- Response by first responder who notifies EMS of the nature of the event after an on-scene assessment
- Response by an EMS triage officer who decides whether to call in a response unit
- Recommend alternate transport

Which of these approaches is used may vary by call or by local capacity. Triage to non-response will often be based on less than complete information; while this can be improved by first responder or triage officer response if available, the nature of disaster triage is to make the best resource allocation decision based on the best information available. In situations in which the caller is not inherently reliable (e.g., child, intoxication), on scene response by somebody will likely be necessary. Because of the greater commitment of resources required when the response is distant from the responding unit, the response choice may logically be affected by distance.

If an EMS service is faced with more calls than it can immediately respond to which represent a threat to life, limb or organ, the service should request the PSAP to identify additional units from out-of-jurisdiction that can respond immediately.

There are three levels of Standard of care for EMS. Specific criteria for each level is determined within the two following tables named “Response Triage for Standard of Care” and “EMS Management Protocols by Standard of Care Stage”.

³ The categories of patients in Table 1 are based on a modification of Centers for Medicare and Medicaid Services (CMS) patient pay categories. For example, an ALS assessment is based on the patients reported condition at the time of dispatch such that an ALS crew would be the most qualified to respond. These criteria are used to the National Highway Traffic Safety Administration (NHTSA) document EMS Pandemic Influenza Guidelines for Statewide Adoption to divide patient into dispatch priority levels. Specific examples of these categories are provided in Table 3.

Response Triage Based Information Available Pre-Scene

Table1: Response Triage by Standard of Care

	Patient Categories	Stage 1 SOC	Stage 2 SOC	Stage 3 SOC
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4	Non-critical ALS assessment	Priority 4 Normal care	Priority 4 Alternate transport	Priority 0 Alternate transport
5	Inter-facility transport unstable patient	Priority 5 Normal care	Priority 5 Normal care	Priority 3 Normal care
6	BLS Assessment/ unknown scene risk	Priority 6 Alternate transport	Priority 6 Treat and Release	Priority 0 Treat and release
7	Inter-facility transport stable patient	Priority 7 Normal care	Priority 0 Alternate transport	Priority 0 Alternate transport
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*Threatening scene is a location in which the scene poses a potential danger to the health of the injured or ill person independent of the injury or illness itself (e.g., cold environment) or in which the person is trapped or pinned.

EMS Management Protocols by Standard of Care Stage

Alternatives to EMS response or transport depend on the implementation of alternative management protocols which an EMS service may choose to implement service wide or apply on a per call basis (i.e., the responding unit makes the decision to use an alternative management protocol after assessing the appropriateness of the protocol in that situation and the stress on the EMS system). Table 2 lists alternative management protocols suggested for use as needed by standard of care stage. (Some actions are already permissible under non-disaster procedures.)

Table 2 Management Protocols by EMS Standard of Care Stage

Management Protocol	Stage 1 SOC	Stage 2 SOC	Stage 3 SOC
Expansion of EMS personnel	Combining services or cross coverage	Use of first responders	Use of untrained volunteers
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Implementation of treat and release protocols	None	BLS assessment or treatment	BLS assessment or treatment
Single responder vehicles	Yes	Yes	Yes
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Data Collection	Normal	Minimal dataset	Log run
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*Regional hubs include the following cities: Fargo, Bismarck/Mandan, Grand Forks, Minot, Dickinson, Jamestown, Williston, Devil's Lake ** Patient categories are defined in Table 1			

Treat and Release

Definition

Treat and release is the onsite treatment of a patient by a responding EMS unit without either transporting that patient to a health care facility or referring that patient to a health care facility. The patient is free to seek additional medical care at their own discretion. If the patient requests additional care, but has no alternate transport option, the responding unit is not obligated to supply it.

Purpose

The purpose of treat and release is to provide adequate immediate care which does not compromise EMS ability to respond to other calls. Treat and release is disaster-specific triage with assignment of patients who have a low likelihood of threatening illness to a low level of care in order to preserve resources for patients more likely to have life, limb or organ threatening illness. Treat and release does not preclude a patient from independently seeking care.

Treat and release can be considered when

- A Governor-declared disaster and executive order specify treat and release as an acceptable care option; and
- The state-recognized disaster standard of care for the patient severity category (Table 1) specifies treat and release as an acceptable option.
- EMS evaluation identifies no illness or injury likely to result in patient harm if the patient does not immediately go to the hospital or see a health care provider.

Alternatives

- If patient refuses treatment but other criteria are met for treat and release, patient may be released without treatment.
- If treat and release is not advisable, the next alternative is assessment for alternative transport.
- The EMS unit always has the option to transport assuming resources permit.

Limitations

- Use of this protocol assumes that patients are provided the optimum level of care within the availability of resources⁴.
- An EMS provider is never obligated to practice treat and release. Treat and release is available as an option for some types of problems at certain standards of care.
- Unlike treat and release for specific conditions practiced in some services in the US, disaster-related treat and release cannot be fully driven by protocol, rather it relies upon the EMS provider to make a judgment call.

⁴ The responding unit may ascertain whether sufficient resources are available to permit a higher level of care than that authorized by the state-recognized disaster standard of care. Alternatively, the EMS provider may implement a policy adopting the state-recognized disaster standard of care thereby designating that sufficient resources are not available to provide a higher level of care.

- Treat and release is not a guarantee that every patient so assigned will be provided optimum care or a guarantee that the patient would not have benefited from transport to a health care facility.
- Treatments offered must be simple and time efficient. Treatment may be limited to reassurance without additional treatment, referral or transport.

Examples of Treat and Release Situations

- Minor trauma which does not require diagnostic assessment for internal injury, fracture or treatment of a major laceration. (Major lacerations which would preclude treat and release include large/deep lacerations, lacerations of the face, laceration of chest or abdomen of uncertain depth, laceration crossing flexion area, wound contamination, retention of foreign body in wound or wound bleeding other than of capillary source.)
- Acute condition can be adequately cared for in the field without risk of immediate recurrence or exacerbation (e.g., treatment of hypoglycemia in patient who can eat, minor epistaxis, toe fracture)
- During a pandemic, patients with influenza symptoms (headache, sore throat, cough, fever, muscle aches) without prostration or altered consciousness and no other known reason for fever (i.e., not a post-operative patient, not an immunocompromised patient, no focal signs or symptoms of infection)
- Palliative care patient who can be made comfortable
- Non-threatening exacerbations of chronic conditions or pain syndromes

Examples of When Treat and Release Should Be Avoided

- Vital signs are not normal (BP, pulse, respiratory rate)
- Patient has abdominal pain, chest pain or neck pain
- Patient has end stage renal disease
- Patient has any reason for immunocompromise
- Patient is pregnant
- Situation has potential legal implications (e.g., assault, domestic violence, sexual assault, gun shot wound, illicit drug use)
- Patient is mentally ill or expresses any intent for self harm
- Patient illness is associated with intoxication or any other alteration in mental status, alertness or behavior
- Patient is an unaccompanied minor
- Patient with uncontrolled bleeding, recent uncontrolled bleeding or any bleeding in patient taking anticoagulants
- Unstable or threatening scene
- Any situation in which the EMS providers feels uncomfortable with treat and release

ALTERNATE TRANSPORT

Definition: This protocol includes any indicated on-scene treatment and a decision that the patient needs to see a health care provider immediately; hence, it is considered to be a higher level of care than treat and release. The situation is assessed to determine alternative transport options using a non-EMS vehicle operated by family member, friend or first responder.

Purpose: Make EMS unit available for other response.

Alternate transport can be considered when

- A Governor-declared disaster and executive order specify alternate transport as an acceptable care option; and
- The state-recognized disaster standard of care for the patient severity category (Table 1) specifies alternate transport as an acceptable option; and
- EMS evaluation identifies no illness or injury expected to need intervention to save life, limb or organ or to prevent complications of the condition during the next few hours post EMS evaluation.

Transporting Entity

The transporting entity may be a first responder or any family or friend acceptable to the patient for transport. The transport vehicle can be any vehicle which can provide safe transport suitable for the patient's condition.

Assessment for Alternate Transport and Action Steps

- Patient evaluation suggests that alternate transport is available within a reasonable time frame;
- A person can be identified with a vehicle who is willing to transport the patient and can be reliably expected to do so;
- The transport vehicle has sufficient room for the patient to lie down if that is needed;
- If transport is not available on scene, the EMS provider may assess whether the patient can be left pending arrival of the transport based on
 - Safety of the scene;
 - Full expectation that the transportation will occur in a timely manner (reliability); and,
 - No anticipated problem with patient loading into the conveyance.

Examples of possible alternate transport situations

- Major laceration with capillary bleeding only and no recent non-capillary bleeding;
- Upper extremity or below knee fracture or possible fracture;
- Palliative care patient needing intervention for comfort care;
- Acute bacterial infection (e.g., pneumonia, UTI) with fever but stable vital signs/mental status;
- Acute urinary retention.

Examples Where Alternate Transport Should Not Be Used

- If alternate transport not available in a timely manner;
- If transport is not expected to substantially increase resource utilization or decrease unit availability;
- When moving patient may result in additional injury or loading patient into a private vehicle will be difficult for a single person.

Personal Protective Equipment Use during a Pandemic

PSAP Screening

Because responding EMS units may be exposed to people with transmissible respiratory illnesses, the North Dakota Department of Health (NDDoH) may recommend that all calls to Public Safety Answer Points (PSAP) which are requesting EMS dispatch include a single screening question for respiratory illness. The screening question which is recommended is *Does the patient have a cough or fever?* In the event of progression of the outbreak to health care surge (i.e., high volume health care system use), NDDoH will notify 911 providers that continued screening can be terminated.

EMS Notification

When a 'yes' answer to the screening is received, the dispatcher should notify the responding EMS unit that the patient may have a transmissible acute respiratory illness.

EMS Respiratory Protection

EMS personnel should use transmission precautions described in EMS protocols at <http://www.ndhealth.gov/EMS/Protocol.htm>). In addition, NDDoH recommends that EMS responders who are notified by the PSAP of a possible acute respiratory illness at the scene wear respiratory protection. Unless NDDoH has provided guidelines to EMS for personal protective equipment which supersede this document, respiratory protection for EMS providers should:

- a) Exclude non-patients from a minimum of a three foot perimeter about the patient(s);
- b) Wear an N95 mask plus face shield or goggles during aerosol producing procedures (e.g., respiratory suctioning, endotracheal intubation, CPR and nebulizer treatments).
- c) Wear a surgical mask when no aerosol producing procedures are anticipated

If NDDoH notifies PSAP to suspend screening for respiratory illness because the community prevalence of the organism is likely to be high, EMS responders will be recommended to wear respiratory protection for all responses.

Aerosols and N95 Protection

Because aerosols containing a potentially viable infective agent can remain suspended in the air for a substantial period of time, all EMS responders should wear an N95 respirator through the remainder of the response period following an aerosol producing procedure. EMS responders should have been fit tested for N95 wear and should use the respiratory they were approved to wear during the fit testing.

Because of the prolonged suspension of aerosols, persons nearby who are not wearing adequate respiratory protection should leave the immediate area. If the patient is being cared for indoors, others in the area should be told that the risk for transmission of the illness may remain elevated in the area for a substantial period of time after the patient is gone. The duration of elevated infectivity will depend on the organism and environmental conditions but may last for hours.

EMS Use of First Responders and Untrained Volunteers during a Pandemic

The following recommendations are made for use of non-EMT providers as EMS responders during a Pandemic:

- First responders may be used to supplement ambulance crews during EMS stage 2 or stage 3 standard of care.
- Untrained volunteers may be used to supplement ambulance crews during EMS stage 3 standard of care.
- When used as part of the EMS response, first responders or untrained volunteers act under the direct supervision of an EMT.
- First responders arriving on scene without a trained EMS provider will provide care within the scope of their training. If directed to do so by an EMS service by distance communication, a first responder may:
 - Assess the scene to determine whether on-scene EMS response is needed,
 - Arrange alternate transport including transport by the first responder.
- Untrained volunteers arriving on scene without a trained EMS provider may act with the scope of a lay person responding according to the Good Samaritan law of North Dakota.

Single Responders and Triage Officers

Single Responder

In order to increase the availability of EMS responder units during a pandemic when availability of EMS personnel may be sharply reduced, EMS units may elect to deploy trucks with only a single EMS responder.

- A single EMS responder should not be a first responder or untrained volunteer being used to supplement staff. Solo response by a first responder or untrained volunteer would not be considered an EMS response.
- When necessary, a single EMS responder may call in a first responder or call upon bystanders to assist with actions which require two persons (e.g., loading a patient, driving the truck if the EMS provider must remain with the patient).
- First responders or bystander volunteers assisting with patient care should use the same protective equipment used by the EMS responder. Surgical masks may substitute for an N95 mask if necessary, but the assistant should be told that protection against infection may be incomplete even with an N95 since fit testing will not have occurred.

Triage Officer

An emergency medical service may elect to use a triage officer as a single responder to go on-scene to perform non-transport functions. These functions may include:

- Scene triage and patient stabilization;
- Field assessment of calls of uncertain acuity (calling in transport assistance if needed);
- Treat and release or arranging alternate transport.

The role of a triage officer is not transport. The triage officer might be designated to preferentially respond to scenes where response is not expected to be high acuity and transport by an EMS vehicle is not anticipated. Alternately, a triage officer may be designated to respond to high severity events to provide on-scene stabilization pending arrival of a full EMS unit.

Regional Hub Expansion for EMS

Concept

During a pandemic when ambulance services are experiencing loss of personnel, it is expected that some services will reach a point at which inadequate responders are available to respond to even the most critical events. In this situation, it would be medically advantageous for those services in hub cities to respond to high priority calls outside their usual jurisdiction rather than to respond to low priority calls within their usual jurisdiction.

Hub expansion is coupled to a reduction in the types of calls to which an EMS unit would be expected to respond by prioritization of calls according to severity. Response prioritization during reduced standard of care stages is intended to eliminate responses to some types of calls. EMS services within the hub cities will be short staffed and the number of seriously ill individuals in the community will be higher than normal making hub expansion subject to local circumstances. Whether a service can expand beyond its jurisdiction will depend on a capacity assessment.

Hub Cities

For purposes of this document, the following cities are considered to be hub cities: Fargo, Jamestown, Bismarck, Dickinson, Williston, Minot, Devils Lake and Grand Forks. However, it is not assumed that all will have the same capacity to adopt hub expansion protocols.

Response Distance

Table 2 recommends a response to patient categories 2, 3 and 4 (as defined in Table 1) up to 25 miles outside of usual jurisdiction during EMS stage 2 standard of care and to patient categories 2 and 3 (as defined in Table 1) up to 50 miles outside of usual jurisdiction during stage 3. The actual distance that a hub city service may respond may vary from day to day as local capacity varies. A PSAP which cannot find a local or nearby response unit will have the option to contact the PSAP covering the nearest hub city and request out-of-jurisdiction response. Communication must be received back by the originating PSAP regarding whether the hub city will respond and estimated time of arrival.

Disease Surveillance for Pandemic Influenza

Case Control Measures

It is hoped, but not known for certain, whether control measures implemented around the first cases of pandemic influenza to appear in the state will delay the onset of the pandemic. For certain types of infectious diseases, isolation, quarantine, and treatment protocols can eliminate transmission if cases are identified rapidly; however, influenza has some characteristics that may limit the effectiveness of control measures.

Rapid Case Identification

If case control measures are to be effective, the first persons in North Dakota to contract the pandemic illness will need to be identified soon after becoming symptomatic in order to minimize their ability to spread the disease. Case identification depends on rapid recognition of persons may have the condition.

When the pandemic influenza virus is expected, NDDoH will provide all health care providers, including EMS, with information related to the salient features of the illness and any known risk factors (e.g., history of travel to places where the virus is already prevalent). Any patient which an EMS provider thinks could be a case should be reported by telephone to the local or state health department and should take precautions to protect himself or herself from disease transmission. Reports to state public health can be made to 1-800-472-2180 or (701) 328-2378. The emergency case manager for the North Dakota Department of Health can be reached 24 hours per day through State Radio (1-800-472-2121) by requesting to speak to the NDDoH Case Manager.

Reporting and Evaluation

Once public health has been notified of a possible case, case investigators will evaluate the patient, arrange for collection of appropriate clinical specimens to make the diagnosis, assess contacts for exposure and take steps to limit further transmission.

Pandemic Vaccine Prioritization Selecting EMS Providers as Priority Recipients

Vaccine Availability

Immediately upon recognition of a pandemic virus, the Centers for Disease Control and Prevention will initiate the process of vaccine creation which will provide protection against the specific organism causing the disease. This vaccine is not expected to be available for four to six months following the onset of the pandemic. Once the vaccine begins to come off the production line, quantities will be very limited. If the pandemic is classified as moderate or severe, initial vaccine doses are expected to be targeted to critical infrastructure including EMS personnel.

Vaccine Allocation

Early after the vaccine begins to become available, EMS will be allocated vaccine at the local public health unit. Because only a small quantity of vaccine will initially be available to a wide range of critical service providers, likely it will be necessary for each EMS service provider to select those persons who will be vaccinated first. A list of those persons selected to receive the available doses will need to be received by the local public health unit before those persons show up for vaccination.

Recipient Selection

The process by which vaccine will be allocated should be determined prior to the pandemic. No single process for selecting which persons will be eligible for early vaccination will be acceptable for all services, but most services likely will select recipients based on the critical nature of each person's skills, availability to provide patient care and their risk of becoming ill. Some factors, such as having small children at home, may increase a person's risk of becoming ill but decrease their availability to respond (particularly if day cares and schools are closed). Alternately, a service may choose to allocate vaccine using a lottery or any other justifiable method which would be public defensible if scrutinized. Services must keep records which demonstrate the rationale for why each recipient was chosen.

EMS Antiviral Distribution and Use during a Pandemic

Current plans call for antivirals to be used only for disease treatment⁵. Any person with known or suspected influenza would be eligible to receive treatment. Methods for prescribing and distributing large quantities of antivirals to the sick are intended to minimize the burden of prescribing and dispensing by the health care section but details are being worked out.

EMS is not seen as a method for prescribing and dispensing antivirals during a pandemic at this time. However, it may become advantageous to the health care system for EMS to be able to distribute antivirals; in which case the authority for this will be provided for by an executive order from the Governor, and EMS will be provided access to state stockpiles of antivirals for purposes of distribution.

⁵ Plans call for use of antivirals for prophylaxis to help prevent disease spread during the time of containment early in the pandemic. No plans currently exist to provide prophylaxis to unexposed health care workers.

EMS Provider Role Expansion

During a disaster, the Governor can issue an executive order which could expand the potential roles for multiple types of health care providers, including EMS. It is likely that a shortage of EMS personnel will make them unavailable for assuming other duties. However, in the event that patient care roles are expanded, EMS providers will be notified and the precise nature of the role expansion will be delineated.

In addition to medical transport, the most likely roles that EMS providers may fill during a pandemic are:

1. Expansion to primary patient care in an emergency room
2. Expansion to primary patient care among hospital in-patients
3. Medical director of a minimum care facility

A minimum care facility is a community expansion of inpatient capacity for influenza patients who need hospital admission but for whom there is no room in the hospital. Because excess hospital capacity (primarily due to health care worker availability) is very limited, opening of MCF facilities is likely to be needed in a moderate or severe pandemic and the need for medical directors will be acute.

Since the care of influenza patients without other complications is supportive, these sites will provide hydration, nutrition and hygiene to patients who do not have alternative care givers at home or who cannot be hydrated at home. MCF will be staffed by volunteers with a single licensed medical provider on duty during each shift. The medical director will generate patient orders and perform any necessary procedures (IV placement, NG placement, foley placement). In this role, the MCF providers will become an extension of government-sponsored disaster response and will be covered by tort claims liability protection.

An operational plan for MCF facilities can be found at <http://www.ndhealth.gov/EPR/Publications.asp?SectionID=2>

Data Reporting Reduction

During Stage 2 and Stage 3 EMS/PSAP standard of care reduction, reporting requirements into the system will be reduced during the actual event. Data acquired during the event which is not entered until after the event resolved should be entered in full.

Table 3: EMS Data Reporting

Stage 2: Minimal Data Set	Stage 3 Log Run
Mandatory and Essential* Elements Required	Mandatory and Essential Elements Required
Lithocode Incident Number EMS Agency Number EMS Unit Call Sign Incident Patient Disposition Unit Notified by Dispatch Date/Time Incident County FIPS Location Type CMS Service Level Provider Primary Impression Patient's First Name Patient's Last Name Destination Transferred To	Lithocode Incident Number EMS Agency Number Patient's First Name Patient's Last Name
Mandatory Elements Not Required	
Type of Service Requested Primary Role of Unit Crew Member Certification Type Crew Member Role PSAP Call Time/Date Unit Back in Service Date/Time Unit Back at Home Location Incident Address Incident City FIPS Incident Zip Code EMD Performed Software Creator Software Name Software Version EMS Agency State EMS Agency County Level of Service Organizational Type Organizational Status Statistical Year Total Service Size Area Total Service Area Population	

911 Call Volume per Year EMS Dispatch Volume per Year EMS Transport Volume per Year EMD Patient Contact Volume per Year EMS Agency Time Zone National Provider Identifier	
* The terms mandatory and essential refer to reporting element designations contained in the data dictionary for the SOAR system.	

PART II: PSAP SURGE PROTOCOLS

Scope and Applicability

The protocols presented in this document apply to disasters in which there is a sustained shortage in PSAP capacity (and of EMS capacity to respond to calls) which can not be made up by the importation of state or federal resources into the area. If the option exists to mobilize external resources to supplement PSAP services in localized areas of disaster, then that is the preferred approach. In North Dakota, the only event likely to rise to a level which would make activation of these protocols necessary is an influenza pandemic of moderate or greater severity.

Specific protocols addressed by this document are:

- Identification of patients who may pose a risk for disease transmission
- Call triage
- Response triage
- Area without PSAP coverage
- Area without EMS coverage

The intent of this document is to address medical response planning at the PSAP level; it is not the intent to address other public safety responses. However, some actions which might be taken during an applicable disaster might have an affect on all PSAP functions.

PSAP Management Protocols by Stage

The designation of standard of care stage for EMS and PSAP systems provides recommendations for management of surge. Regardless of stage of care, the PSAP would seek to offer the best care possible; however, the best care possible may be better achieved by introduction of surge management protocols than by maintaining usual procedures.

Table 4: PSAP Protocol Introduction

Procedure	Stage 1	Stage 2	Stage 3
Call Triage	Yes	Yes	Yes
Response Triage	No	Caller notification	Emergent calls only
Areas without EMS	Yes	Yes	Yes
Areas without PSAP	Yes	Yes	Yes

PSAP Call Triage

Definition

PSAP call triage is the sorting of call into urgent and non-urgent by an individual not PSAP trained (“triage operator”) with forwarding of only urgent calls for dispatch to the trained PSAP provider.

Application

Call triage can be used at any EMS/PSAP surge stage. Its implementation assumes:

- The volume of calls coming into the PSAP exceed the capacity of available trained staff
- A substantial proportion of calls are not emergent and can be handled by alternate hotlines or resources.

Implementation

All 911 calls are intercepted by the triage operator who asks each caller:

Are you calling to request an ambulance, police or fire response?

Callers who answer yes are answered

I am going to forward your to someone who can help you. Please stay on the line.

The call is then immediately forwarded to the PSAP provider. Callers who answer no are asked:

How can I help you?

If further explanation determines that the call is urgent and outside the scope of the triage operator to respond, the triage operator will forward the call using the above procedure to the PSAP provider or other professional responder (e.g., mental health/suicide counselor) if an appropriate responder is known.

The triage operator will be trained to know the additional resources that are available for providing information by making a direct transfer if possible or by providing the number if a direct transfer is not available. The triage operator will not attempt to answer all questions. If call volume is high the triage operator may put callers answering no to the initial question on hold to answer new incoming calls

PSAP Response Triage

Definition of Response Triage

Response triage is the identification of calls which require EMS response and provision of information to the caller for care in the absence of an EMS response. The PSAP will implement response triage differently for stage 2 and stage 3 EMS/PSAP standard of care.

Description of EMS Response

During Stage 2, EMS will continue to respond to most calls as opportunity permits. However, wait times for an ambulance may be lengthy and heavy volume may not permit responding units to respond to lower priority calls. When EMS/PSAP response stage is stage 3, EMS will be responding only to the most urgent calls.

Stage 2 PSAP Response

During stage two, the PSAP will notify EMS of all calls for on-scene response. EMS will determine the order in which it responds. Since the state is in EMS/PSAP response stage 2, it can be assumed that EMS is overloaded and having difficulty responding to all calls. All callers will be told:

Ambulances are responding to the most serious situations first. The time required for an ambulance to respond to some request for assistance may be very lengthy. Do you wish to wait for the ambulance to arrive?

(IF YES): The ambulance crew may wish to call you before they respond to your location to ensure that you still need assistance with transport. (Make sure contact number is obtained and provided to the EMS responders.)

(IF NO): Since you do not wish to wait for the ambulance, EMS will not be asked to respond to your location.

Stage 3 PSAP Response

During a stage 3 EMS/PSAP response, EMS will only be responding to illnesses or injuries which are a threat to life, limb or organ. In order to identify the situations which require EMS response, the PSAP will ask as many of the following questions as necessary to determine the patient's status:

Question	Response
What is the age of the patient?	If pediatric, EMS will respond to an arrest.
Is the patient breathing or do they have a pulse?	If no to either, EMS WILL NOT respond unless the patient is a child
Is the patient unresponsive, not fully alert or less alert than usual?	If yes, then notify EMS
Is the patient having pain in the chest, neck or abdomen?	If yes, then notify EMS
Is the patient having difficulty breathing?	If yes, then notify EMS
Do you believe the patient may be seriously injured?	If yes, then notify EMS

Is the patient trapped or unable to move?	If yes, then notify EMS
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If in doubt, the call should be referred to EMS. Other callers should be told that EMS is only responding to the most serious situations and recommend alternative transport or self-care.

Areas without EMS Coverage

If an area loses EMS coverage (e.g., due to illness or due to demand exceeding hours of responder availability), the first response should be for EMS to form a partnership to cover the area with contribution of available workers from both services. If no such partnership is available, the PSAP should institute PSAP response triage protocols referring only those calls threatening to life, limb or organ to neighboring PSAP services. The PSAP to which the call was referred will follow up with the referring PSAP to confirm dispatch or report inability to obtain response.

During stage 2 and stage 3, the EMS service in the largest city in the region will be asked to extend their range to 25 miles during stage 2 and 50 miles during stage 3 to respond to calls which are high threat. Regional response should only be used if areas in adjacent or nearby EMS service areas are unable to respond.

Areas without PSAP Coverage

In the event that personnel loss causes an area to lose PSAP coverage for any periods of time, local agreements for cross coverage between PSAP services should be implemented. If existing agreements cannot provide coverage, calls should be automatically routed to State Radio.