

**State of Louisiana
Department of Health and Hospitals
Office of Public Health**

**BUREAU OF EMS GUIDANCE FOR
PANDEMIC INFLUENZA RESPONSE**



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FINAL

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I. Emergency Medical Services Guidance Overview

The Louisiana Department of Health and Hospitals (DHH) Office of Public Health (OPH) has created this Pandemic Influenza Guidance as a comprehensive containment and treatment plan to assist in the control of an outbreak of a novel influenza virus, such as the 2009 H1N1 influenza virus (“swine flu”) or avian influenza. DHH OPH has followed, and will continue to follow, the international and national recommendations^{i,ii,iii} for identification, prophylaxis, and treatment of disease as well as considered the frameworks provided by the Centers for Disease Control and Prevention (CDC) for pandemic planning purposes^{iv,v} and those recommended by the Occupational Safety and Health Administration (OSHA)^{vi}.

As there is little natural immunity to any new virus, it is recognized by DHH OPH that ongoing communications and updates to the health care community as well as the public are critical to the health of Louisiana. The recommendations that identify vulnerable populations and guidelines for treatment^{vii,viii,ix,x,xi} are also adopted by Louisiana, and the State remains in compliance with recommendations from such authorities as the Centers for Disease Control and Prevention (CDC).

Mission

The threat of pandemic influenza has caused both non-governmental and public sector agencies throughout the world to recognize the need for pandemic influenza planning as essential to preparing for a severe public health threat. As a discipline within the emergency services sector, EMS is critical to the protection of all Critical Infrastructure/Key Resources in the United States. Therefore, early and consistent planning regarding the EMS role will help ensure that when a pandemic reaches the United States the most appropriate actions can be taken to support the Nation.

This Emergency Medical Services (EMS) Pandemic Influenza Guidance is designed to assist State and local EMS agencies with coordination with their public health, health care, emergency management, 911 and public safety counterparts. Public involvement in the planning process is encouraged. In order to support a coordinated approach, steps should be taken to ensure that EMS pandemic influenza plans are consistent with Federal, State, and local guidance, plans, and policies.

II. Command and Control

National Incident Management

This Pandemic Influenza Guidance and this Guidance are compatible with the State of Louisiana Emergency Operations Plan^{xii}. Further, they are compliant with National Response Framework^{xiii}, which requires the organization of response according to the National Incident Management System (NIMS). Operations are conducted using the Incident Command System.

The National Incident Management System was developed so that responders from different jurisdictions and disciplines can work together better to respond to natural and manmade disasters, including acts of terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management. While most emergency situations are handled locally, a major incident likely will warrant help from other jurisdictions, the State and the Federal Government. However, during a pandemic, additional assets may be limited or unavailable for mutual aid because they are already committed to service within their own communities. Regional coordination prior to the event may optimize the utilization of assets among multiple jurisdictions during an event.

EMS operations and personnel should already have clearly established authority under their EMS medical director and in accordance with the Incident Command System (ICS) and the National Incident Management System (NIMS). This authority should be maintained during an influenza pandemic. Drills and exercises, coordinated with public health and emergency management officials, should be used to validate pandemic influenza response plans and training programs. All Federal, State, local, tribal, and non-governmental personnel with a direct role in emergency management and response should be NIMS compliant.

Lead Agency

DHH OPH^{xiv} is the lead agency in the Pandemic Influenza Response within Louisiana. DHH works collaboratively with several State, local, and private agencies to provide trainings and other educational opportunities to ensure preparedness in a pandemic situation. Meetings and exercises also contribute to the success of State operations and training programs ensure a variety of educational opportunities address the Pandemic Influenza Response topics.

During an emergency or disaster, some administrative procedures may be suspended, relaxed, or made optional. Such action will be carefully considered, and the consequences should be projected realistically. Departures from usual guidelines will be stated in the Governor's State of Emergency Order and in emergency plans or guidelines.

EMS Medical Direction

Given the uncertainty of the disease, its treatment and progression, the ongoing role of EMS medical directors is critically important. The guidance provided in this document is based on current knowledge of routes of influenza transmission, the pathogenesis of influenza, and the

effects of influenza control measures used during past pandemics and inter-pandemic periods. Given some uncertainty about the characteristics of a new pandemic strain, all aspects of preparedness planning for pandemic influenza must allow for flexibility and real-time decision-making that takes new information into account as the situation unfolds.

The specific characteristics of a new pandemic virus—virulence, transmissibility, initial geographic distribution, clinical manifestation, risk to different age groups and subpopulations, and drug susceptibility—will remain unknown until the viral strain is identified. Therefore, the ongoing involvement of EMS medical directors is essential.

Scope of Practice

Scope of practice is a description of what a licensed individual legally can, and cannot, do. Each State has the statutory authority and responsibility to regulate EMS within its borders and to determine the scope of practice of State-licensed EMS personnel. Scopes of practice are typically defined in law, regulations or policy documents. In contrast, credentialing is a local process by which an individual is permitted by a specific entity (EMS medical director) to practice in a specific setting (EMS agency). Louisiana Revised Statute 40:1234 places the approval of EMS protocols at the local (Parish) level. The Bureau of Emergency Medical Services does not have the authority to approve protocols.

It is virtually impossible to create a scope of practice that takes into account every unique situation, extraordinary circumstance, and possible practice situation. This is further complicated by the fact that EMS personnel are an essential component of disaster preparedness and response. In many cases, EMS personnel are the only medically trained individuals at the scene of a disaster when other healthcare resources may be overwhelmed.

The *National EMS Scope of Practice Model* states that it cannot account for every situation, but rather is designed to establish a system that works for entry-level personnel under normal circumstances. It is assumed that the scope of practice of EMS personnel may be modified or changed in times of disaster or crisis with proper education, medical oversight and quality assurance to reasonably protect patient safety.

If predictions about the surge of patients and the concomitant increase in absenteeism among EMS personnel become a reality, EMS providers' regular day-to-day practices may need to be modified during pandemic influenza. In addition, staff may be apprehensive about leaving home, need to care for sick family members and/or may find it difficult to travel to work. Burnout from stress and long hours may occur, and replacement staff may be needed.

EMS pandemic influenza plans should identify sufficient State legislative authority, administrative rules/regulations and liability protection to support the role of EMS providers during a pandemic influenza event or other major public health emergencies. The legal authority should provide for a system in which the procedures and medications that EMS providers are authorized to use may be dynamically modified, if necessary, to reflect the evolving roles of EMS providers during an influenza pandemic, while simultaneously assuring medical direction, appropriate education and quality assurance.

To the extent possible, existing laws and other mechanisms should be used to the fullest. It is therefore important to examine existing State public health laws, licensing/certification laws, interstate emergency management compacts and mutual aid agreements, and other legal and regulatory arrangements to determine the extent to which they permit necessary planning for pandemic influenza.

III. Planning Section

Preparedness

The State constantly seeks opportunities to work with local partners and assist with event-specific planning. As various aspects of this Plan have been exercised or drilled in accordance with the Louisiana EOP and SNS requirements, this provides a strong community response and cooperation.

DHH OPH has identified persons (see the State SNS Plan, Confidential Appendix A) to lead, plan, and oversee the training, exercise, and evaluation components of various preparedness programs. There are regional counterparts for each of these positions. The regions coordinate and receive guidance from the Louisiana DHH OPH Center for Community Preparedness. Coordination occurs within regions and parishes to provide guidance of upcoming and future training activities as well as event-specific training and exercise plans (as listed in the State SNS Plan, which is updated annually). The multi-year plan is HSEEP compliant, and uses local, parish, and region-wide exercises to test knowledge post-training, and lessons learned are incorporated into the Action Request Form (ARF) or IAP form 308^{xv} through an ongoing review process. A portion of pandemic response will be tested annually.

Training

Pandemic preparedness training and exercises are coordinated by the Louisiana Department of Health and Hospitals with the Bureau as an active participant. All exercise and real world event after action reports shall be reviewed and all best practices shall be incorporated into future planning documents. Exercises allow EMS and 911 personnel, as well as personnel from other disciplines, to train and practice prevention, protection, response, and recovery capabilities in a realistic but risk-free environment. Exercises are also a valuable tool for assessing and improving performance, while demonstrating community resolve to prepare for major incidents.

The Homeland Security Exercise and Evaluation Program (HSEEP) is a capabilities and performance-based exercise program which provides a standardized policy, methodology, and terminology for exercise design, development, conduct, evaluation, and improvement planning.

Another form of training - "Just-in-time" training - refers to the timely provision of information and instructions as they become available, and when users need them. Guidance regarding just-in-time pandemic influenza training is incorporated in the CDC EMS and Non-Emergent (Medical) Transport Organizations Pandemic Influenza Planning Checklist.

The Bureau of Emergency Medical Services will distribute just-in-time training to EMS providers using the health alert network and other appropriate resources. Just-in-time training (information) will ensure that EMS providers and PSAPs receive information and education to support the rapid adoption of new or modified clinical algorithms, treatment protocols or other pertinent information.

As an example of just-in-time training, the Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC), Division of Injury Response (DIR) has been working with seven communities as best practice models for how emergency medical services (EMS) can work with other safety and public health agencies in times of disaster.

Constructed around the interrelated activities of partnership building, learning lessons from terrorist events, and disseminating information, the Terrorism Injuries Information, Dissemination and Exchange (TIIDE) Project was established through a cooperative agreement in response to the urgent, ongoing need to develop, disseminate and exchange information about injuries from terrorism. As part of CDC's TIIDE Project, Model Communities identify where relationships between the emergency care community and public health officials are established and operate at levels that effectively respond to events that may cause large numbers of injuries. During an event, fact sheets will be developed for health care audiences such as EMS providers and a variety of prehospital care professionals, in-hospital clinicians and others. Such models could be used by local planners to enhance HAN notices and to disseminate case definitions, fact sheets, and other important information to EMS medical directors, Public Safety Answering Points (PSAPs), and EMS providers during an influenza pandemic.

Documentation

Incident Action Plan (IAP)

Under NIMS, the appropriate method of tracking operational objectives, logistics movements, and safety issues is through the Incident Action Plan (IAP)^{xvi}. Through the assistance of the DHH OPH Documentation Coordinator at the DHH Emergency Operations Center, the DHH OPH Planning Section will be able to complete the appropriate sections of the IAP to track requests for assets. In addition, Situation Reports (SITREPS) are also generated as a reporting mechanism out of every IAP and are useful in reporting activities and highlighting deficits.

An IAP must be created for every operational period, which may fluctuate as the event and response unfolds. IAPs are typically created for a 12-hour operational period, but may be created for shorter periods of time. IAPs may be created for operational periods up to 24-hours once an event/response has been underway for some time.

While Louisiana and the federal government do not guarantee any reimbursement for resources used during a response, in the event that reimbursement becomes available, it will be important that accurate and comprehensive documentation be available. The IAP is a generally accepted mechanism for accurately and adequately tracking situational information.

Tracking

Improved situational awareness through information sharing regarding both patients and resources will enable better management of assets during a pandemic and provide for real time epidemiological analysis. Mechanisms for tracking EMS calls, emergency department visits and hospital admissions and discharge of pandemic influenza patients is needed to monitor the progress and impact of the pandemic. Several examples currently exist, listed here.

Patient Identification/Location Tracking

The ability to track patient location from the initial site of response to arrival at a health care facility has previously been demonstrated to be of vital importance (including Hurricanes Katrina and Rita). In an influenza pandemic, this is also essential to support the community mitigation strategies that may help protect the public's health (e.g., voluntary isolation and quarantine and social distancing measures in areas where patients have been positively diagnosed with the pandemic influenza strain).

Hospital Resource Availability

The National Hospital Available Beds for Emergencies and Disasters (HAvBED) System, funded by the Agency for Healthcare Research and Quality (AHRQ), explores the feasibility of a national real-time hospital-bed tracking system to address a surge of patients during a mass casualty event.

The Health Emergency Response Data System (HERDS) is a statewide electronic web based data collection system linked to health care facilities (all New York State hospitals) through a secure internet site that allows hospitals to relay resources or needs to the New York State Department of Health during emergencies, or respond immediately to rapid request surveys in preparedness planning efforts. HERDS combines Geographic Information Systems and a comprehensive, interactive database to provide health officials with online, real time data describing available hospital beds, medical supplies, personnel, numbers, status and immediate care needs of ill or injured persons, along with other urgent information to facilitate a rapid and effective emergency response.

Operational features of HERDS:

- Routine Data Collection and Surveillance Surveys
- Emergency Events Data Collection
- Secure Messaging Forum
- Patient Locator/Tracking Function
- Activation/Deactivation Alerting Tool

FRED is the Facility Resource Emergency Database, a secure Internet-based system that provides rapid, efficient, alert-driven emergency event or disaster vetted notification with reporting of resources available to mitigate mass casualty incidents or similar situations that produce a surge of patients. It was originally developed by the Maryland Institute for EMS Systems (MIEMSS) and has since been adopted by the Pennsylvania Department of Health (PA DOH). In Maryland, FRED allows MIEMSS to send an alert to all hospitals requesting an update on their current status. This includes not only beds, but also staffing and medications, as well as information from the local jurisdictions regarding EMS staffing. Initial plans call for establishing Continuous FRED Monitoring Sites at all Pennsylvania receiving hospitals, Public Safety Answering Points (PSAPs / centers), Emergency Management Agencies, and emergency information centers such as Poison Centers.

Public Health/Epidemiologic Issues

Public health is a field that is concerned with any and all threats to the overall health of a community and is based on analysis done at the population level, rather than at that of the individual patient. Epidemiology is a subsection of the public health structure that deals with incidence, distribution, and control of disease within a population. By identifying the numerous factors that affect the health of a specific population, epidemiologic studies further guide interventions that can be made to preserve the health of the public.

Utilizing public health surveillance and epidemiologic techniques during an influenza pandemic would not only help with situational awareness by detecting disease in the area, but then would lead to appropriate response and containment mechanisms necessary to protect both the community and the providers. This can only occur if proper mechanisms are in place to securely communicate influenza patient disposition to the appropriate authorities within the public health, EMS, , and health care arenas. The ability to track patient disposition and suspected influenza contacts allows for important information regarding disease severity, characteristics of the affected population, and impacts on the healthcare system to be followed and addressed.

One method of tracking patient disposition is through an Electronic Health Record (EHR). There are a number of Federal EHR initiatives underway that may be activated as a result of an event, including those at: the Department of Health and Human Services (HHS), the Department of Homeland Security (DHS), the Department of Defense (DOD), the Department of Veterans Affairs (VA), and the Department of Transportation (DOTD).

IV. Operations Section

Concept of Operations

The *National Strategy for Pandemic Influenza: Implementation Plan* addresses the importance of prehospital EMS during a pandemic scenario. The outline of that plan is below, as specifically applies to Louisiana.

Prehospital EMS transportation capability will play a critical role in responding to requests for assistance, providing treatment, and in triaging patients. 911 call centers/public safety answering points (PSAPs) will experience a significant surge in calls and will determine how and when EMS units are dispatched. Coordination and communication among public health, PSAPs, EMS, and hospital officials will be necessary to ensure optimal patient care as hospital bed availability and prehospital resources are strained. Planners should consider modifying PSAP call-taker and dispatch protocols and developing pandemic-specific prehospital triage and treatment protocols. A robust statewide or regional system for monitoring PSAP medical calls, EMS responses and transports, and hospital bed availability will be critical for tracking and responding to a pandemic.

In planning for an influenza pandemic, it must be recognized that persons with medical conditions unrelated to influenza will continue to require emergency, acute and chronic care. Alterations to an EMS system's practices during an influenza pandemic will likely impact all EMS patients, regardless of the nature of their illness. It is important to keep the EMS system functioning as effectively as possible and to deliver optimal care to both these patients (e.g. motor vehicle crashes and cardiac events) as well as to patients with influenza related symptoms.

At the same time as it experiences a surge in calls, EMS is likely to be adversely impacted by illness and absenteeism among its workforce, as well as by increases in hospital diversion. EMS will be tasked with providing high-quality EMS care and patient transportation to the community despite a surge in demand and a concomitant loss of trained personnel, an increase in ED diversion and the potential for shortages of necessary prehospital equipment and supplies.

While planners should address the potential for additional duties associated with pandemic influenza mitigation, the public demand for EMS services may limit this ability.

FluSurge is a spreadsheet-based model that estimates the surge in demand for hospital-based services during the next influenza pandemic. FluSurge estimates the number of hospitalizations and deaths of an influenza pandemic (whose length and virulence are determined by the user) and compares the number of persons hospitalized, the number of persons requiring ICU care, and the number of persons requiring ventilator support during a pandemic with existing hospital capacity. FluSurge may be downloaded from <http://www.cdc.gov/flu/tools/flusurge/>.

Specific Multi-Interval Considerations for EMS

DHH OPH has determined that the most efficacious use of resources occurs with “interval” planning. The Intervals for Pandemic Influenza Response (including the Louisiana and national triggers) is listed as Table 1, included in Section VIII. Supporting Documents. It is noted that due to the rapid spread of a novel influenza, several of these pandemic intervals may seem to occur concurrently to one another.

As the EMS community provides preparedness, surveillance, response, and a variety of mitigation roles through normal operations, separation of such roles into the Interval concept is not practical. However, keeping the intervals in mind is important to ensure additional responsibilities are not overlooked during a pandemic response.

As the provider of pre hospital emergency medical triage, treatment and transport, EMS plays an important role in every community’s efforts to reduce morbidity and mortality from all sudden illness and injury. Community-wide efforts to mitigate the spread of pandemic influenza may increase the demand for EMS services. Below are several considerations and recommendations for localized planning in EMS services.

- To ensure continued delivery of critical services during a pandemic, EMS agencies should function within an established Incident Command System.
- As part of the coordinated community-wide effort to mitigate the spread of pandemic influenza, EMS may experience an increase in demand for its services.
- EMS agencies should systematically manage and adapt resources, capabilities and procedures to provide maximum benefit to the public’s health in response to varying surges in demand.
- Establish coordinated procedures for the use of alternate resources (e.g. call centers) to reduce demand on EMS resources.
- EMS agencies should implement surge capacity procedures as appropriate.
- EMS and 911 agencies’ medical directors, in coordination with local public health authorities, should modify dispatch procedures and treatment and transport protocols as appropriate.
- Illness and absenteeism during a pandemic may impact an EMS agency’s ability to satisfy demand for services. Flexibility in staffing configurations, recruitment and training programs may help alleviate the impact of worker illness and absenteeism.

Continuity of Operations for EMS

One of the challenges that EMS may face during an influenza pandemic is to keep operations functioning despite increases in call volume, workforce shortages and absenteeism, supply chain disruptions and other threats to continued operations. While the Continuity of Operations Plan (COOP) is included as an Annex to the State Pandemic Influenza Guidance, because of the critical nature of emergency health care direct patient contact, this topic is extremely critical to the vitality and ongoing operations of EMS and is, therefore, addressed separately to a mild degree within this EMS Guideline.

The prospect of absenteeism due to illness, quarantine, fear, or death reinforces the need to develop plans to proactively protect and support the workforce and their families before and during an influenza pandemic. The vulnerability of the healthcare workforce was apparent when both Hong Kong and Toronto dealt with SARS. Transmission of SARS appeared to result primarily from direct patient contact or contact with large respiratory droplets in the close vicinity of an infected person. Despite apparent limited modes of transmission, SARS has been known to spread extensively among HCWs [health care workers] in various settings. For example, among 138 cases of secondary and tertiary spread in Hong Kong, 85 (62%) occurred among HCWs; among 144 cases in Toronto, 73 (51%) were HCWs. SARS infection of HCWs might be related to increased contact with respiratory secretions, contact with patients during a more contagious phase of critical illness, contact with particular patients at increased likelihood of spreading SARS (i.e., super spreaders), or exposure to aerosol-generating patient-care procedures. EMS agencies and personnel should practice infection control procedures.

The foundation of a viable COOP program is the development and documentation of a COOP plan that, when implemented, will provide for the continued performance of an organization's essential functions under all circumstances.

The National Strategy for Pandemic Influenza: Implementation Plan, references the following Continuity of Operations (COOP) program elements:

1. Planning
2. Essential functions
3. Delegation of authority
4. Succession planning
5. Alternate physical facilities
6. Effective communications
7. Business record-keeping
8. Human capital
9. Training
10. Devolution
11. Reconstitution

The Department of Homeland Security's *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources* was developed to assist the private sector in addressing business continuity during a pandemic. The framework, Continuity of Operations Plan-Essential (COP-E), supports DHS's national-level Critical Infrastructure/Key Resources (CI/KR) preparedness and protection mission and urges private sector business planners to expand upon their traditional notions of business continuity. The Guide states that "Eighty-five percent of critical infrastructure resources reside in the private sector, which generally lacks individual and system-wide business continuity plans specifically for catastrophic health emergencies such as a pandemic influenza".

Illness, absenteeism, increased workload, and death during a pandemic may impact an EMS agency's ability to satisfy demand for services. Planned flexibility in staffing configurations, recruitment and expedited training programs may help augment the EMS workforce. The Bureau may use its authority to issue emergency rules under Louisiana's Administrative Procedures Act to issue temporary licensure and modification of licensure as a mechanism to

increase the available workforce. The Bureau may issue guidance on the use of non-traditional system configuration for the staffing of EMS units.

A recommended tool for EMS providers is FluWorkLoss^{xvii}. This is a tool available from the CDC that estimates the potential number of days lost from work due to an influenza pandemic. Users can change almost any input value, such as the number of workdays assumed lost when a worker becomes ill or the number of workdays lost due to a worker staying home to care for a family member. Users can also change the length and virulence of the pandemic so that a range of possible impacts can be estimated. FluWorkLoss provides a range of estimates of total workdays lost, as well as graphic illustrations of the workdays lost by week and percentage of total workdays lost to influenza-related illnesses.

EMS systems might consider a variety of mechanisms to augment their workforce including:

- Mechanisms for temporary licensure of EMS providers from other jurisdictions
- Innovative mechanisms to rapidly recruit, train and license new EMS providers
- Consider non-traditional system configurations and alternate staffing configurations
- Utilization of retired EMS and healthcare personnel
- Coordination with local Medical Reserve Corps (MRC) Community Emergency Response Teams (CERT), or cross staffing between EMS, healthcare and other sectors
- Proactively determine competencies and bridge courses from other professions and levels of EMS licensure
- Temporary modification of licensure and credentialing procedures to meet the exigencies of the situation while assuring public health and safety
- Engaging temporary workers, contractors and recent retirees, and/or cross-training the existing workforce

Disruption of Equipment and Supplies

The impact of disasters is generally felt most severely at the local level. During an influenza pandemic, State, local, and private stocks of material may be depleted quickly. A severe pandemic could have substantial impact on the global economy and on the functioning of society. Worker absenteeism, and other difficulties, will likely impact transportation networks, manufacturers, and other sectors upon which EMS systems rely. Public and private sector businesses should familiarize themselves with the various community mitigation strategies in the jurisdictions where they operate including social distancing, quarantine laws, and movement restrictions.

The Department of Homeland Security encourages system planners to assess legal and regulatory authorities, issues, and restraints that could affect the supply chain, transportation of goods and services, priority for delivery, and workplace safety issues. Additionally, EMS planners should consider the risks, impacts, and implications of pandemic-related disruptions to international production, supply chain, goods, and personnel movement. The majority of U.S. businesses rely on a global network of essential material and support functions. Disruptions in international trade could result in cascading impacts across EMS agencies even before pandemic disease outbreaks reach the United States.

EMS planners should:

- work with suppliers and clients to maintain business continuity in the event of transportation or distribution disruptions in accordance with local priorities and critical needs.
- recognize that normal supply lines may be slowed or inoperable for an extended period of time and to make personal and business preparations for pandemics for up to 12 weeks (e.g., stockpiling food, water, oxygen and delivery supplies, suction unit disposables, IV and medical supplies, and medications).
- identify business functions that could be outsourced or transferred to other facilities within the organization in the event of high employee absenteeism.

EMS agencies should:

- maintain a contact list of current suppliers and develop an alternate list of suppliers for critical supplies and essential resources and services including fuel distributors.
- Maintain sufficient and accessible infection control supplies (e.g. hand-hygiene products, tissues, PPE (gloves, FDA-approved surgical masks, NIOSH-certified N95 or higher respirators, et cetera) and receptacles for their disposal
- Work with local law enforcement and security firms to develop security plans to protect operations, facilities, supplies, and other infrastructure critical to an EMS response

Biosafety Procedures

Biosafety conditions for handling patients which may be infected with a novel or pandemic influenza virus are more stringent than those needed for routine patient care. Biosafety guidelines for handling or processing specimens or isolates of novel influenza strains are provided in the HHS national Pandemic Influenza Plan^{xviii}.

Potential Contamination from Patient Contact

The consistent practice of basic infection control and decontamination measures is essential to protect EMS providers and their patients by reducing transmission of infectious diseases and other pathogens.

The ability to limit transmission of pandemic influenza in healthcare settings will rely heavily on the appropriate and thorough application of infection control measures. The CDC *EMS and Non-Emergent (Medical) Transport Organization Pandemic Influenza Planning Checklist* identifies infection control elements for EMS. CDC makes numerous additional recommendations regarding infection control in the healthcare setting in Supplement 4 of the *Department of Health and Human Services Pandemic Influenza Plan*.

The Supplement states:

While it is commonly accepted that influenza transmission requires close contact—via exposure to large droplets (droplet transmission), direct contact (contact transmission), or near-range exposure to aerosols (airborne transmission)—the relative clinical importance of each of these modes of transmission is not known... Given some uncertainty about the characteristics of a new pandemic strain, all aspects of preparedness planning for pandemic

influenza must allow for flexibility and real-time decision-making that take new information into account as the situation unfolds. The specific characteristics of a new pandemic virus—virulence, transmissibility, initial geographic distribution, clinical manifestation, risk to different age groups and subpopulations, and drug susceptibility—will remain unknown until the pandemic gets underway. If the new virus is unusual in any of these respects, HHS and its partners will provide updated infection control guidance.

Potential Contamination from Environmental Contact

“Some microbes are infectious at very low doses and can survive for hours to weeks on nonporous surfaces, such as countertops and telephone headpieces. A number of viruses, including influenza A virus... can be found in oral secretions of those infected and survive 2-24 hours on hard surfaces.” A University of Arizona study using an invisible fluorescent tracer showed that artificial contamination from outside surfaces (e.g. such as doorknobs, telephones, faucets, and copier buttons) was transferred to 86% of 35 exposed individual’s hands. In addition, 82% of the 35 participants subsequently tracked the contaminant to their home or personal belongings. The study identified phones, desktops, and keyboards among the top five “dirtiest” work surfaces. Viruses detected using such a tracer method may no longer be viable (able to infect a human with disease), however, the study illustrates the potential transfer rates of human pathogens.

Specific considerations include:

- EMS agencies should adopt day-to-day infection control and decontamination procedures consistent with the most recent CDC and OSHA guidance. (Appendices K, L, and Q)
- EMS agencies should define mechanisms of rapidly modifying infection control and decontamination procedures based on the most recent research and scientific information, including Federal, State and local pandemic influenza guidelines.
- When a pandemic influenza symptom set is available from the CDC, EMS and 9-1-1 agencies should consider a screening algorithm to identify potentially infected patients and ensure proper use of PPE and infection control practices.
- EMS agencies should ensure ongoing availability of and encourage proper use of infection control measures and personal protective equipment to reduce risk of exposure (e.g., eye protection, personal respirators such as N95s for providers and masks for patients as appropriate, gowns for responders, gloves, hand disinfectant, disposable tissues, and effective containment of contaminated materials that may require disposal into biohazardous waste containers.)
- For office staff, consideration should be given to having in place social distancing measures (e.g., spacing people farther apart in the workplace, teleworking when feasible, substituting teleconferences for meetings.)

The Office of Public Health will continue to work with the Bureau of Emergency Medical Services in Louisiana to assure that they are aware of the national bioisolation guidelines for healthcare providers in order to assure employee safety during the a novel virus alert phase and during a possible pandemic.

Interoperable Communications

The communications discipline is one of the keys to effective incident management, and ideally, these systems would be centralized through established ICS channels. There should also be a plan for backup or redundant communication strategies in case there are failures in primary communication methods. Similarly, other backup procedures for actions that can be taken when systems fail should be planned, tested in advance, and integrated into the planning process.

EMS pandemic influenza planners should consider each of these communications systems and their capacities in terms of call volume, interoperability, and redundancy and consider how to ensure the effectiveness of these communications systems during an influenza pandemic.

- Accepting communications into a 911 center.
- Dispatching communications from a 911 center.
- Routing communications to and between emergency operations centers including lateral transfer of 911 calls when appropriate.
- Routing selected communications to non-emergency call centers as defined by local policies or protocols.
- Coordination of communications between field EMS personnel, incident command, medical control and healthcare facilities.
- Emergency communication with the public (e.g., emergency alert system and outbound emergency communications systems).

There should be backup or redundant communication strategies in case there are failures in primary communication methods. Similarly, other backup procedures for actions that can be taken when systems fail should be planned, tested in advance, and integrated into the planning process.

Upgrading emergency communications technology offers additional advantages. “Next Generation” 911 technology enhances emergency communications and enables the transmission of voice, data, text, and video/photographs from a variety of communication devices, directly to the PSAP and on to emergency responders via their communication networks. Based upon Internet Protocol enabled (IP enabled) technology, it transmits information as a digital data packet, from the source to the PSAP, and on to emergency responders, as deemed appropriate. Within the context of Pandemic Influenza, this technology offers the following advantages to 911 service:

- Allows voice, data, text and video/photographs to be transmitted directly to the PSAP
- Allows all transmissions to arrive at the PSAP as a native 911 call (some data currently is shared by person-to-person transmission, or via an administrative phone line versus 911 trunk line.
- Allows call centers to transfer calls directly to the appropriate PSAP as a 911 call.
- Allows data to be shared with emergency responders and other health care provider agencies, as deemed appropriate.
- Allows 911 calls to be transferred to other PSAPs locally as well as “long distance,” enabling call transfer, rerouting, and back-up in the event of system overload or PSAP closure.

- Allows interoperable communications between 911 and traditional “push-to-talk” radio communications systems.

Additional information on Next Generation 911 technology can be found on the Department of Transportation’s Intelligent Transportation System website at: <http://www.its.dot.gov/ng911/index.htm> or the National Emergency Number Association’s Next Generation 911 Partner Program, at: <http://www.nena.org/>.

Deceleration and Resolution (Demobilization)

During the Deceleration Interval, rates of pandemic infection decline. Mitigation activities began to be lifted and recovery begins. If medical countermeasures remain available, providing medication and supplies for treatment will continue. EMS continues its Operations throughout the deceleration process.

Documentation

Reporting Requirements

The mechanisms and processes for reporting and documentation are handled at a local level within Louisiana. Each EMS provider – be it domiciled in Louisiana or permitted to operate within the State due to Mutual Aid – will adhere to the local protocol for documentation requirements.

V. Logistics Section

EMS Freedom-of-Movement During Pandemics

Ensuring EMS personnel are able to move freely even though there may be travel restrictions is essential to the performance of their duties. State EMS pandemic influenza plans should, in coordination with public health, emergency management, and law enforcement agencies, identify mechanisms to ensure freedom of movement of EMS assets (vehicles, personnel, etc.) when faced with restricted travel laws, isolation/quarantine or security measures.

As referenced in the Louisiana Pandemic Influenza Plan, a jurisdiction's chief executive may have the authority, depending upon State and local law, to order quarantine in coordination with the local health authority. Quarantine has the potential to impact the transportation of patients by ambulance, as well as the ability of EMS and Public Safety Answering Point (PSAP) personnel to travel from their homes to their places of employment. State and local planners must be cognizant of this possibility and include processes in their pandemic influenza plans to allow EMS and PSAPs to maintain continuity of operations during these extraordinary circumstances.

Modification of Protocols

If a pandemic exceeds the healthcare capacity of a community, it may be necessary to modify the provision of emergency medical care during an influenza pandemic. The Bureau of Emergency Medical Services provides the following recommendation to EMS providers: EMS providers should prepare a "fast track system" for parish medical society approval for new treatment protocols and procedures as they are issued by the appropriate authorities to include phone triage, medic initiated referral without transport, and other appropriate non traditional roles.

The allocation of scarce resources and the decision-making that allocates resources to the most viable patients is at the heart of existing EMS triage protocols. EMS planners are familiar with the difficult challenges of triaging multiple patients. Alternate Care Facilities may be established to function as primary triage sites, providing limited supportive care, offering alternative isolation locations to influenza patients, and serving as recovery clinics to assist in expediting the discharge of patients from hospitals.

Planning should therefore include thresholds for modifying triage algorithms and otherwise optimizing the allocation of scarce resources. In addition, the appropriate method of care for certain patients may involve social distancing and quarantine strategies rather than transport to a health care facility. These community mitigation strategies may help to ensure health care resources are best utilized. Additionally they may be the best method of managing a section of the population who would otherwise be exposed to additional illness at overwhelmed health care facilities. Where prospective and mature data are available, changes in clinical care algorithms should be evidence-based.

According to the *National Strategy for Pandemic Influenza: Implementation Plan* (previously cited as part of the National Pandemic Influenza Plan), should pandemic influenza occur, preference should be given to “those patients whose medical condition suggests that they will obtain greatest benefit from them.” This rationale differs from approaches to care in which resources are provided on a first-come, first-served basis or to patients with the most severe illnesses or injuries.

Altered Standards of Care in Mass Casualty Events (previously cited, as a component of the National Pandemic Influenza Plan) offers a framework and guiding principles for planning for health and medical care in a mass casualty event.

In planning for a prolonged public health emergency, it must be recognized that persons with unrelated medical conditions will continue to require emergency, acute and chronic care. It is important to keep the healthcare system functioning as effectively as possible for these patients, as well as for influenza patients.

“Treat and Release” Protocol

Community containment strategies designed to limit the spread of the influenza virus may require patients be treated and released without transport. Additionally, healthcare facilities may become overwhelmed with patients, making it necessary to consider alternative options for patients who can be safely treated without transport. The Bureau of Emergency Medical Services will issue guidelines for the establishment of “EMS treatment with referral” programs and distribute the guidelines using the health alert network and other appropriate resources.

The concept of “treat and release” is familiar to EMS providers. During an influenza pandemic the “treat and release” concept is vital to maintain community mitigation strategies, such as social distancing and voluntary quarantine. Additionally “treat and release” may be the best method of managing a section of the population who would otherwise be exposed to additional illness at overwhelmed health care facilities.

Several studies have been reported regarding successful in-home EMS treatment of patients such as IV hydration and limited pharmacologic intervention (i.e., hypoglycemia) that does not include patient transport to a healthcare facility. According to the 2005 JEMS 200-City Survey, 71.3% of U.S. EMS systems allow providers to treat patients without transporting them, and 35.7% have a policy that allows EMS to refuse transport.

Rapid Communications for Altered Protocols

EMS providers’ practice should be based on the most up-to-date pandemic influenza clinical recommendations and treatment protocols/information from appropriate public health authorities and EMS medical direction. The Bureau of Emergency Medical Services will distribute information that would assist EMS providers in establishing new protocols by using the health alert network and other available resources.

Given the uncertainty about the characteristics of a new pandemic strain, all aspects of preparedness planning must allow for flexibility and real-time decision-making based on evolving information. The specific characteristics of a new pandemic virus—virulence, transmissibility, initial geographic distribution, clinical manifestation, risk to different age groups and subpopulations, and drug susceptibility—will remain unknown until the viral strain is identified.

The Centers for Disease Control and Prevention is a trusted source of important, timely information concerning actual or potential public health emergencies. Discussed more in-depth in Section VII, PHIRE is a secure electronic communication system designed to keep health care providers informed to protect our Nation's health. The information is provided in real time during an emergency and also allows subscribers the ability to have scheduled moderated forums, thus providing an alternative communications method.

Contingency for Mass Fatality

While not traditionally part of their day-to-day duties, EMS personnel may be called upon to assist with fatality management during an influenza pandemic or other public health emergency. An influenza pandemic is expected to result in an increased number of deaths both in and out of medical facilities. Existing fatality management systems in communities will require an increased capacity and capability to manage deaths resulting from a pandemic. The Department of Health and Hospitals is the lead agency for mass fatality management planning. The Bureau of Emergency Medical Services will coordinate with the appropriate DHH staff members that are responsible for this planning.

Deaths of persons at home or away from healthcare facilities fall under the jurisdiction and surveillance of medico-legal death investigators. Medical Examiners/Coroners have State statutory authority to investigate deaths that are sudden, suspicious, violent, unattended, or unexplained; therefore, these investigators have a role in recognizing and reporting fatal outbreaks as part of the larger public health system and can be instrumental in developing relevant local protocols that help mitigate the burden that case fatalities can place on the system.

EMS planners should collaborate with appropriate State authorities to identify roles, policies, and procedures for handling fatalities during a pandemic. EMS plans for pandemic influenza should coordinate with the State and local medical examiner/coroner to determine legal authority and appropriate protocols for the presumption or pronouncement of death including documentation requirements and proper handling of human remains during an influenza pandemic.

VI. Security Section

Overview

During a public health emergency, security partnerships between emergency responders continue to exist as procedures described for normal operations. Emergency Medical Services are considered *emergency* responders, and function in a heightened state of awareness during all functions. Existing procedures and protocols will be followed, and local agencies/authorities may enhance some aspects of operations as needed.

VII. Public Information Section

Overview

During a pandemic, the medical community must have awareness of the ongoing epidemiological analysis and community-wide interventions being recommended by public health leaders. Likewise, the public health community must have situational awareness of the evolution of disease that can come from collaboration with 911, EMS, emergency departments and other acute care and outpatient settings where patients seek medical care. The pre-pandemic planning period presents an opportunity to establish and test these relationships.

A goal of a public health information network (PHIN) is to enable real-time data flow, computer assisted analysis, decision support, professional collaboration, and rapid dissemination of information to public health officials, the clinical care community and the public. The Health Alert Network functions as PHIN's Health Alert component. This includes collaborating with Federal, State and city/county partners to develop protocols and stakeholder relationships that will ensure a robust interoperable platform for the rapid exchange of public health information.

The Centers for Disease Control and Prevention is a trusted source of important, timely information concerning actual or potential public health emergencies. PHIRE, the CDC Public Health Information Rapid Exchange, is a system that sends important real-time health information to select subscribers based on their preferences. For example, the system enables CDC to rapidly disseminate alerts about evidence of suspected pandemic influenza in the United States.

PHIRE is a secure electronic communication system designed to keep health care providers informed to protect our Nation's health. The information is provided in real time during an emergency and also allows subscribers the ability to have scheduled moderated forums. The information registrants provide regarding their county and work setting enables CDC to target relevant emergency health information specific to the registrants needs. More information, including the ability to register can be found at www.cdc.gov/phire.

Establishing a dynamic, coordinated and sustainable process will assure that State, local, tribal, and territorial EMS and 911 systems are able to rapidly incorporate updated disease and treatment information on pandemic influenza and other emerging public health threats into their practices. Internal (to the State Departments) and external communications mechanisms are more thoroughly described in the Communications Plan as supplied and amended by the DHH Bureau of Media and Communications, another Annex to the DHH OPH Pandemic Influenza Guidance document.

Limitations of Public Information and EMS

The CDC recognizes the important role that EMS plays in disease surveillance. The *EMS and Non-Emergent Medical Transport Organizations Pandemic Influenza Checklist*^{xix} recommends “a system ... to track influenza-like illness in patients transported to hospitals and among EMS staff and to report this information to the pandemic response coordinator...”

There are several EMS systems that are participating in community disease surveillance systems. For example, Richmond, Virginia, has access to real-time awareness of emerging threats by monitoring 911, law enforcement, fire and emergency medical services data from computer aided dispatch (CAD) and advanced telephone triage, as well as poison control center data. [See companion document *Preparing for Pandemic Influenza: Recommendations for 911 Personnel and Public Safety Answering Points.*]

Most health surveillance efforts are not focused on specific patients, but are looking at trends and patterns in the aggregate. However, there may be cases when public health officials are called upon to investigate specific cases which would require receiving and working with Protected Health Information (PHI), as that term is defined by the Privacy Rule promulgated pursuant to the Health Insurance Portability and Accountability Act (HIPAA) of 1996. The HIPAA Privacy Rule is the Federal law governing the use and disclosure of PHI by “covered entities” (certain health care providers, health plans and health care clearinghouses). Some government agencies are “covered entities” and some are not. State law may also address such use and disclosure, and the HIPAA Privacy Rule does not preempt contrary state laws that provide greater privacy protection. The Privacy Rule does not cover the use and disclosure of health information by non-covered entities. Moreover, the Privacy Rule permits “covered entities” to disclose PHI to public health authorities to prevent or control disease, injury or disability (including the conduct of public health surveillance.)

When considering mechanisms to obtain and share EMS data from CAD systems and patient care reports, EMS planners should coordinate with local and State public health agencies to identify data elements that will be most useful in tracking influenza-like symptoms. The National EMS Information System (NEMESIS) data elements may provide an additional mechanism for uniformity of data collection.

As part of a coordinated, community-wide strategy, PSAPs and other emergency call centers should be authorized to use modified caller queries containing the pandemic influenza symptom set when the community considers the threat of a local outbreak to be elevated. Such information must be coordinated with EMS.

Information Dissemination and EMS

The public will respond favorably to messages from EMS that acknowledge their concerns, allay anxiety and uncertainty, and provide clear direction. This may include dissemination of information on what individuals can do to protect themselves, how to care for family members at home, when and where to seek medical care, and how to protect others and minimize the risks of disease transmission. The public will respond favorably to messages which are coordinated and consistent between authorities.

The language, timing, and detail of key messages will depend on a number of factors, including demographics and group psychological profiles of intended audiences, available or preferred media, and urgency. The Department of Health and Human Services will provide communications materials for states and localities throughout all pandemic phases. Many of these resources will be made available at appropriate times on www.pandemicflu.gov website as well as www.flula.com. Others will be disseminated by using the Health Alert Network (HAN), Epidemic Information Exchange (Epi-X), and other resources for health professionals.

VIII. Supporting Documentation

Table 1: Stages and Triggers for Pandemic Influenza Response

WHO Phase	CDC Stage	Influenza Interval	Louisiana Trigger	National Trigger
1: Low risk of human cases	0: New Domestic Animal Outbreak in At-Risk Country	Investigation of Novel Influenza A Infection in Animals and Humans	Identification of animal case of influenza A subtypes with potential implications for human health within the State	Identification of animal case of influenza A subtypes with potential implications for human health anywhere in the world
2: Higher risk of human cases				
3: No or very limited human-human transmission				
4: Evidence of increased human-human transmission	2: Confirmed Human Outbreak Overseas	Recognition of Pandemic Virus	Confirmation of human cases of novel influenza A and demonstration of efficient and sustained human-to-human transmission within Louisiana	Confirmation of human cases of novel influenza A and demonstration of efficient and sustained human-to-human transmission anywhere in the world
5: Evidence of significant human-human transmission				
6: Efficient and sustained human-human transmission	3: Widespread Human Outbreaks in Multiple Locations Overseas			
	4: First Human Case in North America			
	5: Spread Throughout	Acceleration of Pandemic Wave	Two or more laboratory-confirmed	At least one State in five of the ten

	United States		cases in Louisiana that are not epi linked to any previous case; or, Increasing cases exceed resources for case-based control measures	FEMA/HHS regions have met the Acceleration criteria
		Peak/Established Transmission During Pandemic Wave	>10% of specimens from patients with influenza-like illness submitted to the State public health laboratory are positive for the pandemic strain during a seven day period; or, “Regional” pandemic influenza activity is reported by the LA DHH OPH using CDC surveillance criteria, or The health care system surge capacity has been exceeded	The majority of States have met the Peak/Established Transmission criteria (includes States that have transitioned into the Deceleration Interval)
		Deceleration of Pandemic Wave	<10% of specimens from patients with influenza-like illness submitted to the State public health lab are positive for the pandemic strain for at least two consecutive weeks; or, The health care system capacity is below surge capacity	The majority of States have met the Deceleration criteria (includes States that have transitioned into the Resolution Interval)
	6: Recovery	Resolution of Pandemic Wave	Laboratory-confirmed pandemic influenza cases are occurring sporadically; or, The healthcare system capacity is approaching pre-pandemic levels	The majority of States have met the Resolution criteria

Appendix 1: Footnotes and References

- ⁱ World Health Organization. Recommended Use of Antivirals, Briefing Note 8. August 21, 2009. (http://www.who.int/csr/disease/swineflu/notes/h1n1_use_antivirals_20090820/en/index.html)
- ⁱⁱ Centers for Disease Control. Antiviral Information and Guidance. September 23, 2009. (<http://www.cdc.gov/h1n1flu/antiviral.htm>)
- ⁱⁱⁱ Harper SA, Bradley JS, Englund JA, et al. Infectious Diseases Society of America Guidelines. Seasonal Influenza in Adults and Children—Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management: Clinical Practice Guidelines of the Infectious Diseases Society of America. *Clinical Infectious Diseases* 2009;48:1003–1032. (<http://www.idsociety.org/content.aspx?id=9202#flu>).
- ^{iv} CDC Updated Guidance for Businesses and Employers for the Fall Flu Season, September 2009. (<http://www.pandemicflu.gov/plan/workplaceplanning/index.html>)
- ^v CDC Pandemic Preparedness Planning for US Businesses with Overseas Operations Checklist, January 2007. (<http://pandemicflu.gov/professional/business/businessoversea.html>).
- ^{vi} Occupational Health and Safety Administration. Guidance on Preparing Workplaces for an Influenza Pandemic, 2009. (<http://www.osha.gov/Publications/OSHA3327pandemic.pdf>)
- ^{vii} CDC Interim Guidance for Infection Control for Care of Patients with Confirmed or Suspected Novel Influenza A (H1N1) Virus Infection in a Healthcare Setting. May 13, 2009. (http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm).
- ^{viii} CDC Using Antiviral Medications to Control Influenza Outbreaks in Institutions. (<http://www.cdc.gov/flu/professionals/infectioncontrol/institutions.htm>).
- ^{ix} Antiviral Agents for Seasonal Influenza: Side Effects and Adverse Reactions. MMWR: Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2008 MMWR August 8, 2008 / 57(RR07);1-60. (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5707a1.htm>).
- ^x Seasonal Influenza in Adults and Children—Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management: Clinical Practice Guidelines of the Infectious Diseases Society of America. (<http://www.idsociety.org/content.aspx?id=9202#flu>).
- ^{xi} Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2008. (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5707a1.htm>).
- ^{xii} State of Louisiana Emergency Operations Plan, June 2007 (<http://www.ohsep.louisiana.gov/plans/EOP.pdf>) with amendments a) [Executive Order BJ 08-32 - Emergency Operations Plan](http://www.ohsep.louisiana.gov/proclamations/exorder200832.htm) (<http://www.ohsep.louisiana.gov/proclamations/exorder200832.htm>) and b) [Executive Order No. BJ 08-94, Amendment to Executive Order No. BJ 08-32- Emergency Operations Plan](http://www.ohsep.louisiana.gov/proclamations/exorder200832_amendment.htm) (http://www.ohsep.louisiana.gov/proclamations/exorder200832_amendment.htm)
- ^{xiii} United States Department of Homeland Security, Federal Emergency Management Agency, National Response Framework, January 2008. (<http://www.fema.gov/pdf/emergency/nrf/nrf-core.pdf>)
- ^{xiv} DHH OPH Organizational Chart. Last updated 03/2009. (<http://www.dhh.louisiana.gov/offices/publications/pubs-1/OPH%20Org%20for%20Website.pdf>)
- ^{xv} FEMA ICS Form 308 (<http://www.fema.gov/emergency/nims/JobAids.shtm>)
- ^{xvi} NIMS ICS template forms comprising IAP. (<http://www.fema.gov/emergency/nims/JobAids.shtm>)
- ^{xvii} CDC. “FluWorkLoss 1.0” Guidance and Tool. (<http://www.cdc.gov/flu/tools/fluworkloss/>)
- ^{xviii} US Department of Health and Human Services. National Pandemic Influenza Plan. (<http://www.hhs.gov/pandemicflu/plan/>)
- ^{xix} Indiana University and Purdue University Scholarworks Publication. “Emergent medical service and non-emergency (medical) transport organizations pandemic influenza checklist.” March 1, 2006. (<https://scholarworks.iupui.edu/handle/1805/795>)