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Introduction

In the event of an influenza pandemic, local jurisdictions will have to be prepared to handle a rapidly escalating increase in the number of fatalities. The total number of fatalities (including influenza and all other causes) occurring within any local jurisdiction, during a six (6) – eight (8) week pandemic wave, is estimated to be similar to that which typically occurs over six (6) months in the inter-pandemic period.

Due to the prolonged time frame and the scope of area affected by a pandemic event, it is likely that regional, state, and federal resources will not be available to provide assistance. Therefore, it is the intent of this plan to not only outline issues, processes and actions to be taken at the state level within the Missouri Department of Health and Senior Services (DHSS), but also to provide information and action steps, specific to a pandemic event, that local jurisdiction representatives like coroners/medical examiners, public health agencies, hospitals, funeral directors, elected officials, and religious representatives can utilize to assist them in local planning efforts to prepare for such a situation.

Background

The State of Missouri has a mixed medical legal death investigation system. This system is made up of county level coroners and medical examiners. These county coroners and county medical examiners are responsible for investigating sudden or violent deaths and providing accurate, legally defensible determinations of the manner and cause of these deaths. These vital duties require very close interaction with judicial, public safety, and public health agencies. There are slight variances in the statutory descriptions of the coroner and medical examiner duties and responsibilities. See RSMO Chapter 58 for further information, (www.moga.mo.gov/STATUTES/C058.htm)

The coroner is an elected position, every four years, at the county level. State of Missouri statutes do not require elected coroners to possess medical licensure or maintain any medical legal certifications. Any such requirements are the self imposed responsibility of the individual holding the office. Missouri statues also outline the type of reportable cases, jurisdictional requirements and authority for the appointment of deputy coroners. See RSMO Chapter 58 for further information, (www.moga.mo.gov/STATUTES/C058.htm)

The medical examiner is an appointed position, by the county governing body. State of Missouri statutes do require that a medical examiner must be a physician duly licensed to practice by the Missouri State Board of Healing Arts. Missouri statues also outline the type of reportable cases, jurisdictional requirements and authority for the appointment of medical examiner assistants. See RSMO Chapter 58 for further information, (www.moga.mo.gov/STATUTES/C058.htm). It should be noted that a forensic pathologist usually performs any autopsies requested or required by a coroner or medical examiner office. The forensic pathologist is a licensed physician with

certifications by the American Board of Pathology in anatomic/clinic pathology and forensic pathology.

The determination as to whether an autopsy will be performed or not is at the sole discretion of the county coroner and county medical examiner from whose jurisdiction the deceased is located or was transported from (Excluding any requirements outlined in the Missouri Child Fatality Review Panel (CFRP) system, (www.moga.mo.gov/STATUTES/C058.htm).

In 1991 the State of Missouri mandated the Missouri Child Fatality Review Panel (CFRP) system**.** This system ensures that child deaths (birth through age 17) are comprehensively reviewed. It is not believed at this time that the current policies and procedures of this system will have a detrimental impact on the local coroner or medical examiner during a pandemic event. (Missouri Child Fatality Review Panel (CFRP) system, (www.moga.mo.gov/STATUTES/C058.htm).

Planning for Mass Fatalities

In order to identify planning needs for the management of mass fatalities during a pandemic, It is important to examine each step in the management of a body under normal circumstances and then to identify what the limiting factors will be when the number of bodies increase over a short period of time. The following table identifies the usual steps. Possible solutions or planning requirements are discussed in further detail in the sections that follow this table.

Table 1: Usual Process for Deceased Management

Steps	Requirements	Limiting Factors	Planning for Possible Solutions/Expediting Steps
Pronounced	Person legally authorized to perform this task.	If death occurs in the home then one of these people will need to be contacted. Availability of people able to do this task.	Provide public education on how to activate or access medicolegal systems in place. Consider best utilization of Medical and EMS resources currently in place. Consider planning for on-call system 24/7 specifically for this task.
Death Certified	Person legally authorized to perform this task.	Legally, may not necessarily be the same person that pronounced the death.	Consider having one authorized person perform this task en masse to improve efficiency. Ensure redundant backup is identified and outlined in plan. Consider need for or ability to do faster scene processing. Consider possible time delay between scene processing/certification and body pickup. Consider need for public education on altered standards due to pandemic event.

Body Pickup	Person (s) trained and authorized to perform this task.	Staffing and transport conveyance availability, Contracted transport resource availability.	Consider best utilization of resources "collecting" bodies and time associated with response and transport.
Body Wrapped	Person(s) trained to perform this task. Body bags	Supply of human and physical (body bags) resources.	Consider developing a rotating 6-month inventory of body bags, given their shelf life. Consider training or expanding the role of current staff to include this task if not already a part of duties. Consider providing this service at location where body found, in conjunction with pronouncement, if legally authorized. Otherwise include in body pickup and transportation.
Morgue Storage	Suitable facility that can be maintained at approximately 46 to 38 degrees F or 4 to 8 degrees C.	Capacity of such facilities	Identify and plan for possible temporary morgue sites. Consider unavailability of reefer units. Consider portable air coolers and tents
Autopsy if required	Person qualified to perform autopsy and suitable facility with equipment	Availability of human and physical resources may be required in some circumstances	Ensure that physicians and families are aware that an autopsy is not required for confirmation of influenza as cause of death.
1) Cremation*	Suitable vehicle of transportation from morgue to crematorium Availability of cremation service. A cremation certificate.	Capacity of the crematorium/speed of process Availability of coroner or medical examiner to issue certificate for cases under their jurisdiction.	Identify alternative vehicles that could be used for mass transport. Examine the capacity and surge capacity of crematoriums within the jurisdiction. Discuss and plan appropriate storage options if the crematorium becomes backlogged. Discuss and plan expedited cremation certificate completion process

(2) Embalming**	Suitable vehicle for transportation to the morgue. Trained person Suitable location	Availability of human and physical resources. Capacity of facility and speed of process.	Consult with service provided regarding the availability of supplies and potential need to stockpile or develop a rotating six (6)-month inventory of essential equipment/supplies. Consider what to do if shortage of embalming fluid occurs in pandemic event. Discuss capacity and potential alternate sources of human resources to perform this task e.g. retired workers or students in training programs. Consider "recruiting" workers that would be willing to provide this service in an emergency.
Death Certificate Issuance	Person legally authorized to perform this task.	Legally, may not necessarily be the same person that pronounced or certified the death.	Consider having appropriate amount of authorized person(s) to perform this task to improve efficiency and speed processing. Ensure redundant backup is identified and outlined in plan. Consider need for public education on altered standards due to pandemic event.
Funeral service	Appropriate location(s), casket (if not cremated), funeral director.	Availability of caskets. Availability of location for service and visitation	Contact suppliers to determine lead time for casket manufacturing and discuss possibilities for rotating 6-month inventory. Consider what to do if shortage of caskets occurs in pandemic event. Locate and acquire additional locations for surge and visitation. Consider alternate plans if Isolation/Quarantine issues arise.
(2a) Transportation to temporary vault or burial site	Suitable vehicle and driver.	Availability of human and physical resources.	Identify alternate vehicles that could be used for this purpose. Consider use of volunteer drivers.
(2b) Temporary vault storage	Access to and space in a temporary vault.	Temporary vault capacity and accessibility.	Expand capacity by increasing temporary vault sites.
(2c) Burial	Grave digger, space at cemetery.	Availability of grave diggers and cemetery space.	Identify sources of supplementary workers.

**Cremated bodies are not usually embalmed; families may choose to have a funeral service followed by cremation or to have the body cremated first and a memorial service later.*

***Bodies to be buried may be embalmed, but legally are not required to be. Consideration should be given to need to be stored in a temporary vault prior to burial.*

General Considerations

In a mass fatality/mortuary affairs event primary responsibility falls to the local coroner or medical examiner. However, in a pandemic event people will die from a known disease process, influenza. Therefore, it is likely that once a pandemic event has occurred, many cases will be identified as natural deaths, and coroner/medical examiner jurisdiction will be waived. Deceased that are found at home, or outside of an approved healthcare facility will still need to be reported to the local coroner/medical examiner, but most likely jurisdiction will be waived. Unless there are indications found of a suspicious death or other unusual circumstance.

Public health, vital registrars, hospitals, funeral directors, embalmers, and cemetery service providers all have secondary roles and responsibilities that are crucial to the overall success of any response and handling of a pandemic mass fatality/mortuary affairs event.

In order to develop guidelines or adjust existing plans to suit the pandemic situation, local pandemic planners should ensure that the following persons are involved in mass fatality planning:

- Coroner / Medical Examiner
- Local Public Health Administrator/Director
- First Responder Community
- Representatives of the mortuary services and/or the local funeral director
- Representatives from local health care facilities
- Representatives of local religious and ethnic groups

Existing disaster plans may include provisions for mass fatalities but should be reviewed and tested regularly, to determine if these plans are appropriate for the relatively long period of increased demand which may occur in a pandemic, as compared to the shorter response period required for most disaster plans. There are currently no long-term plans in place to address the most extreme of circumstances.

Autopsies

Many deaths in a pandemic would not require autopsies since autopsies are not indicated for the confirmation of influenza as the cause of death. However, for the purpose of public health surveillance (e.g., confirmation of the first cases at the start of the pandemic), respiratory tract specimens or lung tissue for culture or direct antigen testing could be collected post-mortem. Serological testing is not optimal, but could be performed. Public health agencies should coordinate with their jurisdictions coroner/medical examiner and the State Public Health Laboratory regarding this capability and the processes associated, including specimen required and proper packaging.

Any changes to regular practices pertaining to the management of bodies and autopsy requirements during pandemic situations, would require the authorization of the chief coroner /medical examiner.

Role of the Missouri Funeral Directors Association Disaster Response Team (MFDADRT)
According to current State of Missouri Emergency Operations Plan: Annex - T, when a local mass fatality event surpasses the capabilities of local resources, then assistance can be request through the local Emergency Management Agency from the Missouri State Emergency Agency (SEMA) for the MFDADRT. However, due to the prolonged time frame and the scope of area affected by a pandemic event, it is likely that regional, state, and federal resources will not be available to provide assistance.

Role of Funeral Directors
It is recommended that all funeral directors coordinate with their local coroners/medical examiners and become involved in their disaster and pandemic planning activities with respect to the management of mass fatalities at the local level. Accepted practice for pandemic influenza planning has recommended that funeral directors consider it a part of their professional standards to make contingency plans for what would happen if they were incapacitated or overwhelmed.

Preparations for Funeral Homes and Crematoriums
In a pandemic, each individual funeral home could expect to handle about six (6) months work within a six (6) – 8 (eight) week period. That may not be a problem in some communities, but funeral homes in larger cities may not be able to cope with the increased demand.

Individual funeral homes should be encouraged to make specific plans during the interpandemic period regarding the need for additional human resources during a pandemic situation.

For example, volunteers from local service clubs or churches may be able to take on tasks such as digging graves, under the direction of current staff.

Crematoriums will also need to look at the surge capacity within their facilities. Most crematoriums can handle about one (1) body every four (4) hours and could probably run 24 hours to cope with increased demand.

Cremations have fewer resource requirements than burials and, where acceptable, this may be an expedient and efficient way of managing large numbers of bodies during a pandemic.

Healthcare Facilities
Since it is possible that you could expect a marked increase in deaths in hospitals, nursing homes and other institutions (including non-traditional sites), one must plan for more rapid processing of bodies. These institutions should evaluate their current morgue capabilities, including cooler space, as well as assess what their surge capabilities are and where additional temporary morgue space can be established.

These medical service providers should also work with the local public health pandemic planners, coroner/medical examiner office, and funeral directors to ensure that they have access to the additional supplies (e.g., body bags) and preplan what can be done to expedite the steps, including the completion of required documents (e.g., vital records), necessary for efficient deceased management during a pandemic.

Planning for Temporary Morgues

Additional temporary cold storage facilities may be required during a pandemic, for the storage of bodies prior to their transfer to funeral homes. A temporary morgue must be maintained at approximately 46 to 38 degrees F or 4 to 8 degrees C.

Consideration should also be given to rooms that can be cooled down or that portable air-cooling units can be set up. Memorandum of Understandings (MOUs) with local generator and refrigeration equipment providers should be sought to provide equipment for surge capacity. If nothing else is available consideration can be given to freezer use.

Remember, decomposition process begin immediately following death, cooling a body only slows the process. If the body is not going to be cremated, plans to expedite the embalming process should be considered since in the case of a pandemic, bodies may have to be stored for an extended period of time. Note: Embalming is not required by law, so consideration can also be given to natural burials which do not require embalming.

A survey was conducted in March 2007 of hospitals across the State of Missouri regarding their refrigerated morgue capacity, temporary on-site capacity, and temporary off-site capacity. A chart below outlines this information.

Table 2: Hospital Regions: Body Storage Capacity

Region	Number of Hospitals	Morgue Refrigerated Storage Capacity	Temporary On-Site Capacity	Temporary Off-Site Capacity
A	34	61 bodies	152 bodies	103 bodies
B	08	06 bodies	74 bodies	112 bodies
C	47	115 bodies	402 bodies	132 bodies
D	26	10 bodies	117 bodies	315 bodies
E	10	16 bodies	54 bodies	02 bodies
F	15	119 bodies	148 bodies	518 bodies
G	04	03 bodies	06 bodies	00 bodies
H	09	02 bodies	143 bodies	114 bodies
I	05	07 bodies	26 bodies	00 bodies

Each municipality should make pre-arrangements for temporary morgues based on local availability and requirements. The resource needs (e.g. body bags) and supply management for temporary morgues should also be addressed. The types of temporary cold storage to be considered may include refrigerated trucks, cold storage lockers or arenas.

Refrigerated trucks can generally hold 25-30 bodies without additional shelving. To increase storage capacity, temporary wooden shelves can be constructed of sufficient strength to hold the bodies. Shelves should be constructed in such a way that allows for safe movement and removal of bodies (i.e., storage of bodies above waist height is not recommended). To reduce any liability for business losses, municipalities should avoid using trucks with markings of a supermarket chain or other companies, as the use of such trucks for the storage of bodies may result in negative implications for business.

Arenas and ice rinks, where the required temperature of approximately 46 to 38 degrees F or 4 to 8 degrees C can be maintained, are other options for temporary morgues. (Refer to resource list)

Using local businesses for the storage of human remains is not recommended and should only be considered as a last resort. The post-pandemic implications of storing human remains at these sites can be very serious, and may result in negative impacts on business with ensuing liabilities.

Capacity of and Access to Vaults

A vault is a non-insulated storage facility for remains that have already been embalmed, put into caskets and are awaiting burial. Once embalmed or cremated there is no reason to store the bodies. The bodies are either interred or given to the families for final disposition.

In preparation for a pandemic each community should identify the capacity of existing vaults and address access issues for temporary storage. In addition, the need for the creation of new temporary vaults, to meet the increased demand during a pandemic should be addressed.

This temporary vault should be non-insulated, have some security features such as covered windows and locks on doors.

Continuity of Operation Plans

In preperation for emergencies it has become an essential activity for all public and private entities to develop and maintain Continuity of Operation Plans (COOP). Therefore it is recommended that pandemic planning efforts include development of COOP plans. This plan not only would address internal failures and compromises of infrastructure, but will provide guidance to continuing daily activities in the event a large portion of an entities employees are unable to attend work. (See Appendix 1)

Death Registration

Death registration is a local public health/vital records responsibility and each agency has state laws, and regulations, as wells as local administrative practices to register a death. Moreover, there is a distinction between the practices of pronouncing and certifying a death. For example, in some states physicians, nurses, and in some circumstances police and emergency medical

service personnel may pronounce a person dead. In Missouri only physicians, coroners and medical examiners may certify death. In the pandemic situation, with the increased number of deaths, each jurisdiction must have a body collection plan in place to ensure that there is no unnecessary delay in moving a body to the (temporary) morgue.

If the person's death does not meet any of the criteria for needing to be reported to a coroner or medical examiner, then the person could be moved to a holding area soon after being pronounced dead. Then, presumably on a daily basis, a physician could be designated to complete the death certificate.

Funeral directors generally have standing administrative policies that control when they may collect a body from the community or an institution such as a hospital. Evaluation of the current processes and identification of answers should include consideration of the regional differences in resources, geography, and population. This will help speed the process for release and collection.

Infection Control

Infection Control and Occupational Health Guidelines provide general recommendations on infection control for health care facilities and non-traditional sites during a pandemic. However, special infection control measures are not required for the handling of persons who died from influenza, as the body is not "contagious" after death.

Still funeral homes should take special precautions with deaths from influenza.
Visitations could be a concern in terms of influenza transmission amongst attendees, particularly in smaller communities.

It is the responsibility of public health to place restrictions on the type and size of public gatherings if this seems necessary to reduce the spread of disease. This may apply to funerals and religious services. The local public health agency should plan in advance for how such restrictions would be enacted and enforced, and for consistency and equitability of the application of any bans.

Families requesting cremation of their deceased relative are much less likely to request a visitation, thus reducing the risk of spreading influenza through public gatherings.

Transportation

No special vehicle or driver license is needed for transportation of a body. Therefore, there are no restrictions on family members transporting bodies of family members, if they have an official copy of the death certificate. When interstate transportation is provided by a common carrier the body must be embalmed and sealed in a casket as outlined in Missouri statues.

Transportation of bodies from their place of death to their place of burial in rural and isolated communities may become an issue, especially if this requires air transport. Local pandemic planners should consult existing plans for these communities and determine what changes can be made to meet the increased demand during a pandemic.

Supply Management
It is not the intent of this plan to recommend to funeral directors, that they not order excessive amounts of supplies such as embalming fluids, body bags, etc., but that they have enough on hand in a rotating inventory to handle the first wave of the pandemic (that is enough for six months of normal operation). Fluids can be stored for years, but body bags and other supplies have a limited shelf life. Cremations generally require fewer supplies since embalming is not required. Families having multiple deaths are unlikely to be able to afford multiple higher-end products or arrangements. Funeral homes could quickly run out of lower-cost items (e.g. inexpensive caskets such as cloth and some wooden caskets) and should be prepared to provide alternatives.

Mental Health Issues
Coping with large numbers of deaths represents a key challenge in planning for a flu pandemic. In recent decades, American experiences with deaths have become increasingly medically sterilized with more deaths occurring outside the home and expectations that family will have limited exposure to dead bodies. With the increased numbers of deaths occurring at home in a flu pandemic and the prospect that there may be delays in transportation of bodies due to surge in demand and potential coroner involvement, the emotional impact of these experiences may be more traumatic for many. Particularly if there are disproportionately large numbers of children or younger adults who succumb to the flu, the emotional toll is even greater. If there is a high degree of blood or fluid discharge associated with the deaths, the nature of the death experience and the appearance of the body can be even more distressing for family. These concerns and others will require additional planning for response and recovery efforts associated with any pandemic and especially with highly lethal flu viruses.

The Missouri Department of Health and Senior Services, Pandemic Planning Mental Health and Mortuary Subcommittees have given consideration to these issues and offer the following recommendations for provision of support to those individuals and families experiencing flu-related deaths. The recommendations have been divided into phase-specific recommendations for coping. (See Appendix 2)

Special Populations
A number of religious and ethnic groups have specific directives about how bodies are managed after death, and such needs must be considered as a part of pandemic planning. Different religious groups, and others with specific cultural requirements, have specific directives for the treatment of bodies and for funerals. The wishes of the family will provide guidance, however, if no family is available local religious or ethnic communities can be contacted for information.

As a result of these special requirements, some religious groups maintain facilities such as small morgues, crematoriums, and other facilities, which are generally operated by volunteers. Religious groups should be contacted to ensure these facilities and volunteers are prepared to deal with pandemic issues. Religious leaders should be involved in planning for funeral management, bereavement counseling, and communications, particularly in ethnic communities with large numbers of people who do not speak the official languages.

Pandemic Periods and Phases
This plan recognizes the World Health Organization's (WHO) Pandemic Periods and six (6) phases of pandemic influenza as the standard response paradigm. Planning factors listed below are related to each phase beginning with phase 4. Present status as of April 2006 is phase 3. The phases should be considered operational time frames in which LPHA personnel will carry out duties outlined in the pandemic plan. Note that it is possible that pandemic phases could be skipped over if the disease moved quickly.

Interpandemic Period
Phase 1: No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is low.

Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial threat of human disease.

Pandemic Alert Period
Phase 3: Human infection(s) with a new subtype, but no human-to-human spread, or only rare instances of spread to a close contact.

Phase 4: Small cluster(s) with limited human-to-human transmission, but spread is highly localized, suggesting the virus is not well adapted to humans.

Phase 5: Large cluster(s) but human-to-human transmission still localized, suggesting that the virus is becoming better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).

Pandemic Period
Phase 6: Pandemic: increased and sustained transmission in the general population.

Pandemic Response According to Pandemic Periods and Phases
Because the present Missouri Department of Health and Senior Services (DHSS) Emergency Operations Plan covers most of the necessary response activities, DHSS looks at the pandemic plan as complementary to the DHSS Emergency Operations Plan and refer to the relevant annexes whenever necessary. On going maintenance will include an updated assessment of available and needed resources.

Due to the current world situation and epidemiological finding we are at Pandemic Alert Period: phase 3. Because of this, the following outline will begin with Pandemic Alert Period: Phase 4.

Phase 4
- Coordinate with Coroner and Medical Examiner on support for influenza-related preparations. (Annex J, Mass Fatality Management)

- Work with County Coroner/Medical Examiner and Mortuary Service providers to review resources and evaluate need for activation of local Emergency Operations Plan (EOP) and local Mass Fatality Plan.
- Share event related Health Alert information and updates with County Coroner/Medical Examiner and Mortuary Service providers.
- Review mass fatality/mortuary affairs related public information messaging templates for most current and accurate information.
- Coordinate mass fatality/mortuary affairs related public information messaging with DHSS Public Information Officers (PIO)**.**

Phase 5

- Work with County Coroner/Medical Examiner and Mortuary Service providers to locate resources in the community to meet unanticipated needs and issues.
- Share event related Health Alert information and updates with County Coroner/Medical Examiner and Mortuary Service providers.
- Coordinate mass fatality/mortuary affairs related public information messaging with DHSS PIOs and Joint Information Center (JIC).

Phase 6

- Continue work with County Coroner/Medical Examiner and Mortuary Service providers and Emergency Medical Departments (EMD) on mass fatality needs and resources; and assist with obtaining and establishing alternate morgue sites as required.
- Share event related Health Alert information and updates with County Coroner/Medical Examiner and Mortuary Service providers.
- Coordinate mass fatality/mortuary affairs related public information messaging with DHSS PIOs and JIC.

Resources

The following data sets will be added to this plan as a linked resource through the Geographic Information System (GIS) as they are completed.

- Missouri Cemeteries
  - Data compiled from:
    - US Geological Survey-GNIS
    - Missouri Department of Economic Development –Professional Registration: Cemetery Registration
      - Endowed
      - Non-Endowed
      - Not-for-profit
      - Municipal

- Missouri Parks
  - Data compiled from:
    - US Geological Survey-GNIS

- Missouri Ice Rinks/Arenas

    - Data compiled from:
        - Internet Search

- Missouri Licensed Funeral Homes
    - Data compiled from:
        - Missouri Department of Economic Development –Professional Registration

- Missouri Licensed Crematoriums
    - Data compiled from:
        - Missouri Department of Economic Development –Professional Registration

- Missouri Coroners and Medical Examiners
    - Data compiled from:
        - Missouri Coroner and Medical Examiner Website

- Missouri Licensed Funeral Directors
    - Data compiled from:
        - Missouri Department of Economic Development –Professional Registration

- Missouri Licensed Embalmers
    - Data compiled from:
        - Missouri Department of Economic Development –Professional Registration

State Plans

Current Missouri state plans include the State of Missouri Emergency Operations Plan, Annex T – Mortuary Services; the Missouri Department of Health and Senior Services Emergency Operations Plan, Annex K.1.9 – Mass Fatality Management; and the Missouri Department of Health and Senior Services Pandemic Plan, which this annex is a part.

Currently, the existing State of Missouri Annex T – Mortuary Services plan outlines response actions based in part on an earthquake along the new Madrid Seismic Zone as being the potential worst-case scenario. However, these plans do not take into consideration the long period of time associated with the "waves" that will occur during a pandemic event.

The Missouri Department of Health and Senior Services Emergency Operations Plan, Annex K.1.9 – Mass Fatality Management outlines the basic response actions to be taken by the department during a mass fatality/mortuary affairs event. (See Annex K.1.9 – Mass Fatality Management for specific details)

The Missouri Department of Health and Senior Services Pandemic Plan of which this annex is a part, outlines the pandemic specific response actions to be taken by the department during a mass fatality/mortuary affairs event.

Additional References

1. Canadian Pandemic Influenza Plan, "Guidelines for the Management of Mass Fatalities During an Influenza Pandemic", February 2004
2. Southwest Public Health District, Albany, GA.; "Pandemic Influenza Response Plan, Mass Fatality Plan", June 15, 2006.

Statutory Citations

1. Missouri Revised Statutes, Chapter 58, Coroners and Inquests.

Appendix 1: Continuity of Operations
Essential Vital Record Needs & Functions in Mass Fatality Event

The following is intended to provide suggestions in the development of Continuity of Operation (COOP) plans for local public health / vital records in the event of mass fatalities resulting from major disasters or a pandemic.

A COOP plan should include recognition of the need to relocate operation to another location. This need may occur from either facility compromise or a need to function out of a satellite location. Action should be taken to identify possible pre-designated sites. (Remember: sites utilized for other activities such a Mass Care and Point of Distributions (PODs) have similar characteristics, so beware of the same locations being designated with multiple roles.) The primary and back-up sites should include, or have available, equipment and materials necessary to operate until primary site is functional again. Copies of the COOP plan should be available at designated primary site and any pre-designated alternate site. Listed below is a list of basic office supply items that should be considered for a vital records go-kit.

Supplies

- Supply of Standard Certificate of Death
- Supply of Computer Birth/Death Certificates
- Next-of-Kin Interview Forms
- Copier (generator)
- Carbon paper or Carbonless paper
- Hand Seal
- Certification Statements
- Registrar's signature stamp
- Date Stamps
- Black ink pads, Black ink
- Black ink pens, #2 black lead pencils
- Plain white paper
- Steno pads/log
- Map of Missouri
- Reference book of "Where to Write for Out-of-State Vital Records"
- Supply of birth/death applications
- Basic office supplies (staplers, staples, rubber bands, paper clips, etc.)
- Envelopes (window, plain, brown)
- Receipt books
- Lock box
- Tissue/Kleenex, paper towels
- Cleaning materials (Soap/hand wipes, bleach, alcohol)
- First Aid Kit
- Camera and film
- Flashlight and Batteries

Primary Vital Records Duties

- Registration

- Issuance of certified copies
- Fees (collection, security, etc.)
- Training (non-vital records personnel to assist in an emergency)

Registration

- Bureau of Vital Records will assist as assigned by the medical examiner/coroner in the collection of information pertaining to the victims for completion, processing and registration of death certificates.
- State Vital Records staff will assist local registrars in performing same functions as needed.
- Staff will assist in compiling list of missing persons, when appropriate.
- Assigned Vital Records personnel will be responsible for maintenance and security of all completed death certificates.
- Certificates will be processed and registered as soon as reasonably possible.
- Certificates registered with the local registrar will be maintained and secured at that facility until such time as they are able to forward originals to the State office.

Issuance of Certificates

- Assigned Vital Records personnel will be responsible for issuance of certified copies of death certificates for victims of mass casualties. Other requests will be processed according to established procedures if functional at primary site.
- At primary site, if mainframe system is unavailable for daily operations to issue computer certifications, applications for certified copies may be taken and mailed at the earliest possible convenience.
- In an extreme situation, if phone system is available, local Vital Records staff may call to verify certificate availability before accepting applications. State staff will conduct manual search and call local area back.
- Suspension of 24-hour issuance of death certificates is effective in major disasters. Local registrars may continue to issue certified copies for additional certificates if possible upon request.
- In the metropolitan areas where file copies are maintained for that location, certified copies of exact duplicates may be issued upon request, if possible.

Fees

- If primary site is not functional, two (2) assigned Vital Records personnel should be responsible for securing fees, signing and issuing receipts, and balancing. Both will balance and sign balance sheet.
- Local Registrar will be responsible for securing fees taken in for their facility.
- Refunds should be processed according to established procedures as soon as reasonably possible for requested records that are not available.

Training

- A resource manual that includes basic training should be accessible if vital records staff is limited. Functions that could be performed by non-vital records staff are:
    - Review of certificates for completeness and accuracy

- Duplicate copies from copier
- Certify documents
- Mail certificates
- Number and date stamp certificates
- Answer phone
- Entries on certificates should be reviewed for blanks and/or inconsistencies, (such as age not calculated to agree with date of birth on death certificates, or no age given but a date of birth is)
- Guide sheet should be available with information as to how to obtain copies including fees
- Guide sheet should be available as to how to review certificates
- Reference list should be available with out-of-state vital records offices, other local registrars, etc.

- To certify a death certificate:
  - Duplicate original certificate on copier. Certificate may need to be duplicated and reduced and the copy used in certifying document. Certification statement is placed on the bottom covering the embalmer's statement. Certificate is embossed at bottom over certification statement.
  - Emboss bottom of duplicated certificate by inserting between metal die for hand seal and impress. Since embossers may vary, instructions should be provided to use embosser model.
  - Mail: Computer certificates should be folded in three parts with customer address showing to be placed in window envelopes. If window envelope is not used customer address should be handwritten on legal size envelope for mailing.

Coping With Death And Dying At Home

Pre-Event

Family Preparedness

- Importance of plans for minors, elderly, persons with disabilities if caretaker falls ill or dies
  - Include powers of attorney, end of life planning
  - Designation of beneficiaries, guardians, trust administrators
  - Redundancy of designated parties important in pandemic, give specific guidelines
  - Advance discussions with children, elderly, people with disabilities (PwD)
    - Preparatory without being scary
    - Involve in choices, especially if independence of elderly, PwD will be threatened
  - Consider other benefit transition issues, death benefits, health insurance coverage, etc.
  - Designate alternates for banking and safety deposit access, as appropriate

- Fact sheet regarding what to expect in terms of emotions when dealing with deaths occurring in home and coping with body
- Planning for pets
- Unique aspects of preparedness to address include extended shelter in place and infrastructure failure potential (power outages, communications failures, etc.)
  - Plan for checking on each other, especially those who live alone, including layers of redundancy since some may be ill or unable to participate
  - Establish signals, i.e. flags or colored sheets for designating illness, need supplies, etc.
  - Multiple languages for planning information
  - Importance of understanding we may be putting children and adolescents in adult roles if caregivers fall ill or die so materials need to be accessible and tailored to younger age groups potentially depending on mortality by age groups

Emergency Kit Contents

- Copy of will, power of attorney, name and contact information for attorney, executor with phone numbers plus location of other important documents
- Copy of written funeral arrangements, including funeral/burial policies
- Special religious or cultural instructions regarding last rites, funeral, burial
- Thermometer and fever reducer
- Primary care physician contact information plus medication and pharmacy information
- An informational brochure that addresses:
  - Supplies if someone dies
  - Instructive guidance for handling a death in home
  - Information sheet containing medical history information, current medications, next-of-kin contact information (i.e. spouse, children, parents, siblings).

- Possible development of form to download to complete in advance to expedite process for those who come to get the body
- Emotional coping and resources

- Special hotline just for dealing with this issue - local or state #.

Systemic Planning

- Convene work groups to look at cultural differences in death, burial and grief rituals and how to accommodate in mass fatality pandemic flu scenario
- Develop public information materials that include information about handling of bodies including temporary burials if needed, process for reclaiming bodies for burials and reburials, information about getting death certificates, contact information to learn more, information about release of bodies, etc.
- Develop checklists related to end of life planning if CDC does not
- Explore adaptation of Family Assistance Center models for use in pandemic flu event

During Pandemic

- Address emotional aspects of a positive death experience (learn from hospice and other cultures) regarding rituals, communication, support and assistance during the period when death is apparent and imminent and after someone has died that anticipate the following:
  - How to help children and others in household cope
  - Checklist of when to seek professional medical help if available as a preventive strategy for survivor guilt and blame
  - Checklist for dealing with dead bodies
  - Information regarding what to do if someone dies in home from autopsy, law enforcement point of view (such as move body or not, make a note about time of death, etc.)
  - Inform regarding impact of autopsy, death certificate on insurance, workers comp
  - Importance of telling people what not to do (example: do you want people to bring bodies to the hospital if no one can pick up in a reasonable period and what is a reasonable amount of time?)
  - Address issues of health and contagion related to dead bodies
  - Instruct regarding temporary burial if adopted as public policy
  - Dealing with stress, survivor guilt
  - Self care tips for caregiver's physical and emotional health
  - Teleconference funerals with plans for later memorial activities
  - Encourage people to write personal obituaries, gather meaningful objects, write down meaningful history, keep a journal

- Hotline specifically tailored to death issues, staffed by people prepared to deal with issue (call center can be remote location where staffing is not an issue or calls can be routed to people working from home)
  - Call center staff/volunteers should be trained in grief & bereavement support, traumatic grief and cultural competence
  - Need sensitivity to suicide risk issues and training on assessment and handling calls
  - Need to be aware of coroner guidance and funeral homes in area that are functioning and can accept bodies

- Should have fact sheets to send by email or mail to support people with death, grief issues

- Partner with faith communities and funeral industry for consistency of message, provision of emotional support and dissemination of factual information about bodies and grief
- Encourage people to keep a journal of symptoms and course of illness as well as time of death if known
- Encourage volunteer activities when possible that are safe and do not promote contagion such as:
  - Delivery of food and other items with no personal contact (i.e. drops)
  - Wellness checks for neighbors and family
  - Planned, routine checks
  - No show at expected location (work, scheduled activity, etc.)
  - Pets unattended or howling
  - Unusual smells
  - No activity seen or no affirmative evidence of life for some period of time
  - Wellness checks & pet care for animals whose owners are hospitalized or have died

- Guide families to use "flu recovered" persons who now have immunity to assume responsibility for those aspects of life requiring exposure to contagion being careful not to use children to take on adult responsibilities, especially if it involves death
- Educate families about the benefit of children remaining with parents even during very stressful events such as death since experience teaches us that separation from parents can have greater long term negative outcomes than exposure to trauma in an intact family
  - Decision making that balances risk of contagion and separation risks as well as exposure to death
  - Fact sheet addressing how to prepare and cope with death experiences with kids
  - Educate families about:
    - Trading off care giving to provide rest and stress breaks when safe
    - Safe practices to minimize risk to caretakers when caring for an ill family member
  - Minimize exposure to media

Recovery

- Plan for and encourage appropriate memorials, ceremonies, & reburials as necessary that are consistent with cultural and religious practices of the deceased
- Anticipate increased mental health needs and supports such as but not limited to:
  - Support groups for grief & bereavement
  - Suicide prevention activities
  - Relapse prevention for substance and gambling disorders
  - Family support for increasing numbers of blended families after the flu outbreak due to adoption, substitute caregivers, and remarriage
- Promote social re-connection and community cohesion when safe
- Prepare for anniversary events and future threats such as additional waves of illness or other contagious illnesses
- Anticipate surge in:
  - Funerals

- Weddings
- Family reunions, graduations and other milestones
- Requests for marriage, death and birth certificates, some expedited requests
- Applications for social security benefits, life insurance, workers comp and other death benefits
- Moves and relocation in housing and school attendance
- Bankruptcies and home foreclosures
- Job change

- Increased mental health risks due to:
  - Survivor guilt as a source of stress and anxiety
  - Domestic violence
  - Economic disruption and job loss
- Anticipate long term health and disability burdens for:
  - Physical health (limited endurance, compromised lung function, etc.)
  - Mental health (depression, anxiety, Post Traumatic Stress Disorder, etc.)

Coping With Illness & Death At Work

Pre-Event

- Conduct extensive Continuity of Operation / Continuity of Government (COOP/COG) planning including but not limited to:
  - Update notification and contact lists for all employees
    - Emergency situations
    - Beneficiary designations
  - Re-evaluate policies for:
    - Workers comp
    - Death notification if people die while at work or traveling for work
    - Death benefits
    - Funeral leave
    - Rapid replacement of staff
    - Functional cross training of staff
  - EAP support for grief and death issues associated with:
    - Coworker deaths
    - Family deaths
    - Caregiver stress

- Conduct pandemic flu or other exercises that anticipate death & grief issues as part of the scenario to increase virtual rehearsal, emotional readiness and to improve COOP planning and prepare employees particularly
  - Human Resources staff
  - Management

During Pandemic

- Establish leadership and implementation responsibility for functions with possible surge in activity
    - Being notified that employees have died and handling transition from active payroll to death benefits
    - Death notification if people become ill or die at work site
    - Appropriate recognition and employer outreach related to illness and deaths of employees and family members

Recovery

- Plan for appropriate workplace memorials and commemorative activities upon return to work
- Increased stress and anxiety associated with:
    - Increased workload due to illness and death
    - Increased training burden for employees new to expanded responsibilities
    - Survivor guilt for assuming positions held by colleagues who died
    - Reorganization
    - Threatened closure of business due to economic impact of pandemic
- Establish referral methodologies and easy access to mental health or support services related to:
    - Grief and bereavement issues
    - Depression
    - Substance use or relapse prevention
    - Suicide prevention