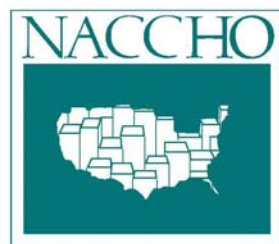


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# Local Health Department Guide to Pandemic Influenza Planning

Version 1.0



NATIONAL  
ASSOCIATION OF  
COUNTY & CITY  
HEALTH OFFICIALS

© NACCHO  
1100 17<sup>th</sup> Street NW  
Washington, DC 20036  
Phone 202 783 5550 • Fax 202 783 1583

[www.naccho.org](http://www.naccho.org)

NATIONAL ASSOCIATION OF COUNTY & CITY HEALTH OFFICIALS

# Local Health Department Guide to Pandemic Influenza Planning

Version 1.0

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**Public Health**  
Prevent. Promote. Protect.

NACCHO would like to thank the following agencies for sharing their pandemic influenza plans, drills and other related materials via the Internet. Their resources were reviewed and utilized to provide and improve the contents of this document:

Cochise County Health Department, Arizona  
Contra Costa Health Services, California  
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Multnomah County Health Department, Oregon  
Santa Clara County Public Health Department, California  
San Mateo County Health Department, California  
Seattle-King County Public Health, Washington  
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## Introduction

*“The local level is where the effects will be felt and where the response needs to occur.”*

–Department of Health and Human Services, Centers for Disease Control and Prevention Guidance for Pandemic Influenza Supplemental Cooperative Agreement, April 8, 2006.

*“Coming together is a beginning. Keeping together is progress. Working together is success.”*

–Henry Ford

Since 1997, more than 200 confirmed cases of humans infected with avian influenza have been reported to the World Health Organization.<sup>1</sup> More than one-third of those cases occurred in 2006 alone.<sup>2</sup> Health officials around the globe have regarded these developments with growing concern over the possibility that this virus could join predecessors from 1918, 1957 and 1968 in changing to become transmissible within the human population. While the 1918 Spanish Flu pandemic was by far the most deadly of the three, killing more than 40-50 million people worldwide, the 1957 Asian Flu and the 1968 Hong Kong Flu still resulted in approximately 2 million and 1 million deaths, respectively, and each caused tens of thousands of deaths in the United States.<sup>3</sup>

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<sup>1</sup> See the Centers for Disease Control and Prevention *Avian Influenza Infection in Humans* webpage at: <http://www.cdc.gov/flu/avian/gen-info/avian-flu-humans.htm>. (last accessed: July 18, 2006).

<sup>2</sup> See the World Health Organization *Confirmed Cases of Avian Influenza A (H5N1)* webpage at: [http://www.who.int/csr/disease/avian\\_influenza/country/cases\\_table\\_2006\\_05\\_29/en/index.html](http://www.who.int/csr/disease/avian_influenza/country/cases_table_2006_05_29/en/index.html) (last accessed: July 18, 2006).

<sup>3</sup> See the World Health Organization *Ten Things You Need to Know About Pandemic Influenza* webpage at: <http://www.who.int/csr/disease/influenza/pandemic10things/en/> (last accessed: July 18, 2006).

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Whether or not the current avian influenza ultimately changes to being transmissible from human to human, experts predict that it is only a matter of time before an influenza pandemic surfaces again. In December 2005, Congress appropriated \$3.8 billion to prepare specifically for pandemic influenza, \$350 million of which was targeted at supporting critical efforts at the State and local levels.

## The Challenge Ahead

When the first block of funds was released in early 2006, the guidance from the Centers for Disease Control and Prevention (CDC) noted that because the local level is the front line where a pandemic's impact will be first felt and responded to, the "vast majority" of the monies should be directed to activities there.<sup>4</sup>

If experts' predictions about an influenza pandemic are correct, indeed the impacts would be striking. Such an outbreak could last as long as a year or more, with cases surging, then ebbing, then surging once more in six to eight-week waves. Vaccine for a new strain of influenza could take months to develop, and the efficacy of existing antiviral medications is by no means certain. Schools and public gatherings could be cancelled. The workforce could be depleted by up to 40 percent of its capacity at a time, causing not only extreme stress on the healthcare system but also throughout the economy, potentially causing shortages in all sectors, leaving no aspect of American life untouched.<sup>5</sup>

The nation's more than 2,400 local health departments (LHD) are leading this effort to plan for and minimize the anticipated devastating impact such an event would have in their communities. Although all emergency planning involves collaboration among partners to some extent, the magnitude and possible duration of a pandemic requires the widest involvement of agencies and individuals at the local level in planning for a coordinated community response to best protect the public's health and ensure continuity of essential services.

As the organization representing local health departments at the national level, the National Association of County and City Health Officials is providing this guide to assist those departments and the communities they serve in the task of writing a new, or improving an existing, local pandemic influenza plan.

## What this Guide IS...

In formulating this guide, numerous local pandemic flu plans were reviewed. Many LHDs have been working on the challenge of pandemic influenza long before the

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<sup>4</sup> This guidance can be downloaded from the NACCHO website at: <http://www.naccho.org/topics/infectious/emerging/avian.cfm#supplement> (last accessed: July 18, 2006).

<sup>5</sup> See Ceci Connely, "US Plan for Flu Pandemic Revealed," *Washington Post*, April 16, 2006. Available at: [http://www.washingtonpost.com/wp-dyn/content/article/2006/04/15/AR2006041500901\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2006/04/15/AR2006041500901_pf.html) (last accessed: July 18, 2006). Additional information about US government predictions for a possible influenza pandemic can be found at: [www.pandemicflu.gov](http://www.pandemicflu.gov) (last accessed: July 18, 2006).

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recent federal government guidance and support arrived. The plans surveyed displayed a diversity reflective of the range of areas from which they came. In particular, they varied in approach, organization and level of detail.

At the core of this guide are plans developed by local health departments that host two of NACCHO's Advanced Practice Centers—cutting-edge learning laboratories that develop and test tools and resources that help local health departments continue to work on all-hazards preparedness. Santa Clara County, California and Seattle-King County, Washington, have both produced notably comprehensive, but very different, plans that describe their jurisdictions' approaches to the threat of pandemic influenza. NACCHO recognizes that these two health departments are not necessarily representative of LHDs nationwide in terms of size and resources available. However, in the writing of this guide, NACCHO extracted the elements common to each plan, highlighting key principles and planning elements applicable to the full range of LHDs. NACCHO recognizes that a one-size-fits-all approach will not be useful given the diversity of LHDs and the jurisdictions they serve. Individual local health departments can use, modify or reject the concepts and resources provided, depending on jurisdictional specific circumstances.

Utilizing a detailed analysis of these plans and incorporating language and observations of characteristics drawn from other local plans available online<sup>6</sup>, this guide endeavors to offer the following:

- ❖ An overview of key issues that should be considered for inclusion in a local jurisdiction's pandemic influenza plan.
- ❖ An examination within each issue area of questions that should be asked, ideas on where to find information that may be needed, and partners that could be consulted to address those topics within the plan.
- ❖ Examples of ways in which other jurisdictions have addressed the topics described in the guide.
- ❖ Links to information that can be used to further investigate the topics or resources that can be used to customize tools for individual jurisdictions.

This guide is intended for use by local health departments as part of a multi-sector effort to coordinate planning and response to a pandemic influenza outbreak.

## What this Guide is NOT...

While this guide provides a great deal of information, in order to achieve the greatest utility for the greatest number, there are purposeful limitations to what it attempts to achieve. To that end, this guide is not:

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<sup>6</sup> As these plans were drawn from open source information and many contain similar and sometimes identical approaches to material, sources are not directly cited unless they were specifically the only document referenced for a certain section of this guide. The health departments whose materials were used as supporting research for this document are listed after the title page of this document.

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- ❖ A template.

The diversity displayed among the plans that were reviewed in the preparation of this guide is not necessarily a weakness in the nation's preparedness for pandemic influenza. Rather, with the exception of some common planning elements ([see Chapter Two](#)), each jurisdiction's approach to pandemic influenza must reflect its own internal processes, community needs and organization. Integrating pandemic influenza plans within existing local plans and organizational structures is essential.

For reference, in the [appendices](#) of this guide are the two tables of contents from the Public Health—Seattle King County and Santa Clara County Health Department plans. While both cover many of the same core elements of pandemic influenza planning, their organizational styles are very different. Any jurisdiction reviewing/using this guide will likely find their plan will represent yet a third approach to this topic.

- ❖ An instructional manual on how to write emergency plans.

The organization of jurisdictional plans is the responsibility of each jurisdiction. Local areas should have existing emergency plans that pandemic influenza planning will need to reference and build upon. Therefore, this guide identifies [common elements that should be considered for inclusion during pandemic influenza planning](#), but does not take a stand on whether that plan should be a hazard-specific annex to the overall jurisdictional emergency operations plan, whether elements of flu planning should be included in functional appendices to the LHD emergency plan, or any other permutation.

For assistance in writing or reorganizing plans, LHDs are invited to review materials such as NACCHO's [BtPREP](#), a workbook and CD-ROM that provides guidance on writing bioterrorism response plans, or [FEMA's State and Local Guide \(SLG\) 101: Guide for All-Hazard Emergency Operations Planning](#) for ideas.

- ❖ A completely comprehensive treatment of every element necessary for influenza planning.

There is little doubt that planning for pandemic influenza is a dauntingly complex endeavor. While this guide provides a jumping off point for a number of subjects that are components of pandemic influenza planning, addressing any of the topics comprehensively would require such a level of detail as to defeat the overall goal of this document. Likewise, in many cases there are other dedicated resources that do explore those topics in much greater detail. Whenever possible, those documents will be referenced in the appropriate sections.

## Ready. Set. Plan.

In order to use this guide most effectively, NACCHO suggests that the following actions are taken prior to embarking upon the pandemic influenza planning process or making major additions/deletions to an existing plan:

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- ❖ **Gather a copy of all jurisdiction emergency operations plans** to review, cross-reference and integrate, whenever possible. There is no reason to write a new section on public information in a pandemic influenza plan, for example, if the bones of the system are established in the jurisdiction's emergency operations plan. This prevents both duplication of effort and the unfortunate possibility of two plans in the same jurisdiction contradicting one another. Pandemic influenza planning should focus on what is *different* about this type of emergency that will require a response unlike that needed for other hazards the jurisdiction may have planned for in the past.
  
- ❖ **Identify community partners** that will be critical to the development and execution of pandemic influenza plans. In addition to being required by CDC to obtain the initial influenza preparedness funding,<sup>7</sup> a multidisciplinary planning committee is key to addressing [the uniquely daunting scale of a pandemic](#). This local committee should feature representatives of not only traditional response partners, but also other local governmental agencies less commonly consulted (public works, sanitation), private partners (local businesses, volunteer organizations), and local associations (medical societies, chambers of commerce) who may identify unforeseen challenges and devise solutions that would otherwise remain undiscovered.<sup>8</sup> Engagement of community members could also help to determine how people's actions in a crisis might differ from assumptions made during planning.<sup>9</sup> Ultimately, while the public health response in the face of a pandemic will be critical, the corresponding response mounted by non-traditional partners will be crucial given the anticipated human toll and impact on a community's essential services.
  
- ❖ **Learn about pandemic influenza and be prepared to educate the planning committee and ultimately, the broader community** about the anticipated extended duration of a pandemic, likely shortages in medical treatment, widespread human impact; and the resulting challenges to the maintenance of essential community services.<sup>10</sup> The more that community

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<sup>7</sup> This guidance can be downloaded from the NACCHO website at: <http://www.naccho.org/topics/infectious/emerging/avian.cfm#supplement> (last accessed: July 18, 2006).

<sup>8</sup> Some resources with tips on engaging specific partner communities include: Montgomery County, Maryland's tip sheets on *How to Create a Partnership Between Your Public Health Agency and the Child Care Community* at: <http://www.naccho.org/equiph/detail.cfm?id=269> and *How to Create a Partnership Between Your Public Health Agency and Area Hospitals* at: <http://www.naccho.org/equiph/detail.cfm?id=270>.

<sup>9</sup> See the Center for the Advancement of Collaborative Strategies in Health's 2004 report, *Redefining Readiness: Terrorism Planning through the Eyes of the Public* at <http://www.cacsh.org/eptpp.html>. (last accessed: July 18, 2006)

<sup>10</sup> Numerous states and localities have already generated PowerPoint presentations to communicate this information. Some examples are: Virginia Department of Health at [http://www.vdh.virginia.gov/bt/Secure%20VA.%20Subpanel%20Meeting%202011.13.02/1\\_DHawkins.%20Pandemic%20Influenza.%20for%20JHilbert.ppt](http://www.vdh.virginia.gov/bt/Secure%20VA.%20Subpanel%20Meeting%202011.13.02/1_DHawkins.%20Pandemic%20Influenza.%20for%20JHilbert.ppt) (last accessed: July 18, 2006); Larimer County, Colorado at <http://www.larimer.org/health/cd/dec5meeting.ppt> (last accessed: July 18, 2006); Seattle-King County Public Health at <http://www.metrokc.gov/health/pandemicflu/multimedia/051806-presentation.ppt> (last accessed: July 18, 2006);

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partners and residents not normally a part of such activities can be made to understand the rationales behind pandemic planning, and the critical roles that they can play in mitigation and response as the outbreak unfolds, the easier it will be to elicit their participation and cooperation.

Given the anticipated impacts, local health departments cannot plan alone for pandemic influenza. While the nature of the challenge places the LHD at the center of responsibility for identifying the Key Actions of a plan, coordinated efforts with partners at all levels will be required to best protect the public's health during a pandemic. If the task of trying to assemble the right entities in your community in planning is encountering resistance, try a different tack. Think about whether existing committees or groups in the community might include the right mix (or close to it) of individuals to do this work and ask to have a regular place on their agenda. Work with the leadership in your jurisdiction. Get the support of your emergency manager. Talk to your State health department for ideas.

## Overarching Planning Elements

*“The greater part of all mischief in the world arises from the fact that men do not sufficiently understand their own aims. They have undertaken to build a tower, and spend no more labor on the foundation than would be necessary to erect a hut.”*

--John Wolfgang von Goethe

**B**efore a plan can define and assign specific tasks for preparing and responding to an emergency such as pandemic influenza, it must first establish the foundation on which this planning is based. The initial common planning elements provide the “big picture,” the context within which the specific tasks will be carried out. What does the plan seek to accomplish? What facts does it assume will be true if the emergency described were to take place? How much of the preparation and response is the plan intended to capture? What theoretical and organizational elements will be used to provide the structure of the plan? Inclusion of these aspects in a local plan should be in keeping with the style and organization of the other jurisdictional emergency planning documents that it references and complements. Therefore, while sample language is provided below for some of these key actions, each jurisdiction must make its decisions on what to include based on its own circumstances and needs.

### Purposes and Goals

What exactly does the jurisdictional plan aim to accomplish? Articulating the central purposes of the plan and its goals can help to clarify the planning process for all involved.

Some examples of this kind of language:

**This pandemic influenza plan has three main purposes. The plan will:**

- 1. serve as a planning guide for the health department and other county departments/agencies;**
-

2. **provide guidance and tools to the many partners in the community who will be involved in the response; and,**
3. **guide activities to educate and prepare the general public regarding this public health threat.**

**Ultimately, when implemented, this plan is intended to achieve the following goals:**

1. **Limit the number of illnesses and deaths.**
2. **Preserve continuity of essential government functions.**
3. **Minimize social disruption.**
4. **Minimize economic losses.**

## Defining Scope

Clearly articulating where a plan begins and ends is important in order for those involved in a response to know how to properly utilize it. In particular, it is essential to clearly demarcate what is *not* included in a plan because it exists elsewhere in another local or state planning document.

As a plan attempts to define its operational/definitional boundaries, some questions to consider include:

- Where does this pandemic influenza plan fit into, and how does it link to, other emergency plans in the jurisdiction?
- Does it address only the role of the LHD in the event of pandemic influenza while generically mentioning other local elements of the local response that are covered elsewhere? Or does it take a comprehensive approach and describe the overall jurisdictional approach to pandemic influenza and outline key roles and responsibilities of all response partners?
- Lastly, what doesn't the plan include that some might expect to be there? *Be sure to state this clearly.* Often what isn't in a plan is as notable as what is.

Seattle-King County's Plan provides the following scope for its plan:

**The Plan is an annex to Emergency Support Function 8 (Health and Medical Services) of the Regional Disaster Plan. Emergency Support Function 8 and its annexes are referenced in the Plan as they provide a broad description of the responsibilities, authorities and actions associated with public health emergencies.**

**The Plan primarily focuses on the roles, responsibilities, and activities of Public Health-Seattle King County (PHSKC). However, specific responsibilities for key response partners are included to highlight points of coordination between agencies during a pandemic. It is**

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**expected that health care facilities and health care professionals, essential service providers, local governmental officials and business leaders will develop and incorporate procedures and protocols addressing influenza preparedness and response activities into their emergency response plans.**

**The Plan currently does not address measures that would be taken to contain an outbreak of the avian influenza virus in birds or other animal populations occurring in King County. Federal and State departments of agriculture are primarily responsible for surveillance and control of influenza outbreaks in domestic animals, although agricultural control measures interface with public health actions to prevent transmission into humans. PHSKC will develop an annex to this plan that will identify the roles and responsibilities of local, State, and Federal agencies in response to an avian influenza threat to King County.**

Santa Clara County addresses similar concepts, but includes specific roles, responsibilities and tasks for community entities beyond the LHD and specifically references the interface between its pandemic influenza planning effort with specific annexes to the current departmental emergency operations plan:

**The scope of the Pandemic Flu Plan includes actions defined in each of the plans mentioned below, but makes them operational and specific to the pandemic flu context. Pandemic flu response efforts will likely trigger the activation of plans external to the (Santa Clara County Public Health Department), including the hospital's infection control and surge capacity plans, business continuity of operations plans, government continuity of operations plans, etc.**

**The Pandemic Flu Plan is an annex to the Santa Clara County Public Health Department Emergency Operations Plan (Volume 2, Annex G). The Pandemic Flu Plan will be implemented in tandem with the Emergency Operations Plan. Several portions of the existing Emergency Operations Plan are particularly relevant to pandemic flu response. These include:**

- 1. Risk Communication Plan (Volume 1, Annex C)**
- 2. Disease Surveillance and Disease Outbreak Investigation (Volume 2)**
- 3. Strategic National Stockpile Plan (Volume 2, Annex D)**
- 4. Mass Prophylaxis Plan (Volume 2, Annex E)**
- 5. Isolation and Quarantine Plan (Volume 2, Annex F)**
- 6. Mass Fatality Plan (Volume 2, to be developed)**

The section containing the scope may be as long or short, as detailed or concise as needed, to express the extent of what a user can expect to find within the document.

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## Planning Assumptions

Emergency plans or annexes specifically targeting a hazard often begin with a set of planning assumptions that set the parameters of the plan. In NACCHO's non-systematic survey of existing and available local pandemic flu plans, this component was frequently a part of the introductory material. These planning sections did not match each other verbatim, necessarily, but many contained variations on the following points as taken from the Santa Clara County, California, and Seattle-King County, Washington plans.

- 1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.**
- 2. Localities will not be able to rely on timely or effective mutual aid resources, State or Federal assistance to support local response efforts.**
- 3. An influenza pandemic may occur in waves and last for 12 to 24 months.**
- 4. Residents will be required to stay in their homes for a significant period during an influenza pandemic; thus, residents will need public information, education and tools so they are prepared to take responsibility for basic needs (food, water, prescription meds, over-the-counter medications, etc.).**
- 5. Antiviral medications will be in extremely short supply. Administration of local supplies of antiviral medications will be prioritized by \_\_\_\_\_ in accordance with \_\_\_\_\_. (Examples of specific language can be found in the footnote.)<sup>11</sup>**
- 6. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.**
- 7. The number of ill people requiring outpatient medical care and hospitalization will overwhelm the local health care system. In other words, the normal amount and level of hospital care will not be available.**
  - a. Hospitals and clinics will have to modify their operational structure to respond to high patient volumes and maintain functionality of critical systems.**

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<sup>11</sup> Seattle-King County's version of this assumption reads "Antiviral medications will be in extremely short supply. Local supplies of antiviral medications may be prioritized by (Public Health-Seattle King County) for use in hospitalized influenza patients, health care workers providing care for patients and other priority groups based on current national guidelines and in consultation with the Washington Department of Health."

Santa Clara County's version of this assumption reads "Antiviral medications will be in extremely short supply. Administration of local supplies of antiviral medications will be prioritized by the Santa Clara County Public Health Department."

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**b. The health care system will have to respond to increased demands for service while the medical workforce experiences 25-35% absenteeism due to illness or caring for ill family members.**

**c. Demand for inpatient beds and assisted ventilators could increase by ten-fold or more and patients will need to be prioritized for services.**

**d. There will be tremendous demand for urgent care services.**

**e. Infection control measures specific to management of influenza patients will need to be developed and implemented at health care facilities, out-patient care settings and long-term care facilities.**

**f. The health system will need to develop alternative care sites to relieve demand on hospital emergency departments and care for persons not ill enough to merit hospitalization but who cannot be cared for at home.**

**g. Emergency Medical Service responders will face extremely high call volumes, and may face 25% - 35% reduction in available staff.**

**h. The number of fatalities will overwhelm the resources of the Medical Examiner's Office, morgues and funeral homes.**

**i. The demand for home care and social services will increase dramatically.**

**8. There will likely be significant disruption of public and privately owned critical infrastructure including transportation, commerce, utilities, public safety and communications.**

**9. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering points and canceling public events will likely be implemented during a pandemic.**

**10. Some persons will be unable or unwilling to comply with isolation directives. For others, social distancing strategies may be less feasible (for example, homeless populations who live in congregate settings). It will be important to develop and disseminate strategies for infection control appropriate for these environments and populations.**

**11. Risk Communication will be critically important during all phases of planning and implementation of a pandemic influenza response. The general public, health care system, response agencies, and elected leaders will need continuous updates on the status of the pandemic outbreak, impacts on critical services, the steps being taken to address the incident, and steps the public can take to protect themselves.**

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While there are some jurisdictionally specific details within these assumptions, the basic concepts provide a solid universal overview of the challenges that pandemic influenza planning must address. The actual impact in any given jurisdiction will vary, but the Centers for Disease Control and the Department of Homeland Security have each provided estimates (see Table A) that could be used to generate numbers for communities.

Table A: Impacts of a Pandemic<sup>12</sup>

<b>Casualties</b>	DHS: 15% attack rate: 87,000 fatalities; 300,000 hospitalizations DHS: 35% attack rate: 207,000 fatalities; 733,800 hospitalizations CDC: moderate 89,000 fatalities CDC: severe: 207,000 fatalities HHS: Moderate: 209,000 fatalities; 865,000 hospitalizations HHS: Severe: 1,903,000 fatalities; 9,900,000 hospitalizations
<b>Infrastructure Damage</b>	None
<b>Contamination</b>	None
<b>Economic Impact</b>	DHS: \$70 to \$200 billion CDC: \$71 to \$166 billion HHS: up to \$450 billion
<b>Potential for Multiple Events</b>	Yes, would be nearly worldwide, with successive waves at intervals of months over several years

## Phases of a Pandemic

Perhaps the most critical information specific to pandemic influenza planning are the phases of a pandemic as characterized by the World Health Organization (see [Table B](#)). The majority of local pandemic plans surveyed for this guide (as well as federal and state plans as well) used these phases to designate how activities would expand and evolve when a phase change was announced. This format allows for the explicit description of how different actions will need to take place during the

<sup>12</sup> As summarized on GlobalSecurity.org at <http://www.globalsecurity.org/security/ops/hsc-scen-3.htm>. (last accessed: July 18, 2006)



different stages, performed by different community partners. As steps are taken throughout the evolution of a possible pandemic, jurisdictional entities involved in mitigation can act and prepare (through public information campaigns, activation of surveillance, and logistical preparation) before an actual response begins. Approaching planning in phases provides a useful framework not only for the plan but also in gradually working through the myriad issues involved in this daunting task. These phases will be addressed again in the issue-specific planning sections provided in [Chapter Three](#).

Table B: Phases of a Pandemic<sup>13</sup>

Phase	Public Health Goals
<b>Interpandemic Period</b>	
<b>Phase 1</b> – No new influenza virus subtypes in humans. A subtype that has caused human infection may be present in animals. Risk of human infection is considered low.	Strengthen influenza pandemic preparedness at all levels. Closely monitor human and animal surveillance data.
<b>Phase 2</b> - No new influenza virus subtypes in humans. However, circulating animal influenza virus subtype poses substantial risk of human disease.	Minimize the risk of transmission of animal influenza virus to humans; detect and report such transmission rapidly if it occurs.
<b>Pandemic Alert Period</b>	
<b>Phase 3</b> - Human infection(s) with a new subtype, no human-to-human spread or rare instances of spread.	Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases.
<b>Phase 4</b> - Small cluster(s) with limited human-to-human transmission. Spread highly localized.	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.
<b>Phase 5</b> - Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Maximize efforts to contain or delay spread to possibly avert a pandemic, and to gain time to implement response measures.

<sup>13</sup> As determined by the World Health Organization. For a simplified list and to check which phase the situation is currently at, see WHO's *Current WHO Phase of Pandemic Alert* at: [http://www.who.int/csr/disease/avian\\_influenza/phase/en/index.html](http://www.who.int/csr/disease/avian_influenza/phase/en/index.html) (last accessed: July 18, 2006).

## Pandemic

**Phase 6** – Pandemic: increased and sustained transmission in general population.

Implement response measures including social distancing to minimize pandemic impacts.

### Who Has the Authority?

Many of the actions that may be warranted during a pandemic influenza will require legal authority—most notably, enacting isolation and/or quarantine. In any jurisdiction, the various authorities that protect public health and safety will likely lie with a number of different elected and appointed officials who will need to work together in an emergency situation to mount a swift response. Plans that detail what officials or agencies possess which authority under what state or local codes can help to prevent missteps, oversteps and/or conflicts during an emergency. Sometimes this information is already detailed in other emergency operations or public health emergency plans and can simply be referenced, e.g. “Authorities: See Page 7 of the Katano County Emergency Operations Plan.” If not, this information could be a valuable inclusion in the pandemic influenza plan.

Santa Clara County and Seattle-King County take different approaches to presenting this information. Santa Clara County’s plan takes a functional approach, enumerating different tasks and then describing who possesses which authorities critical to accomplishing those actions. Seattle-King County, on the other hand, begins with the governor of Washington and proceeds through different State and local officials, concluding with the local health officer, describing for each what authority they possess under what statutes that may be relevant in a pandemic response. Either approach accomplishes the aim and being able to access the information both ways may be ideal.

### The National Incident Management System (NIMS)

As noted in the previous chapter, effective emergency planning must reflect and address the specific circumstances and environment of the jurisdiction for which the planning is taking place. However, by definition, pandemic influenza will affect many jurisdictions simultaneously. In an emergency, communities will benefit from sharing a standardized set of terminology and employing a uniform system of response. Since its creation in 2002, the Department of Homeland Security has been developing a multi-faceted system that attempts to encourage this type of standardization, guided by Homeland Security Presidential Directives 5 and 8.<sup>14</sup>

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<sup>14</sup> To read these documents, see the White House’s HSPD-5 webpage at: <http://www.whitehouse.gov/news/releases/2003/02/20030228-9.html> and the HSPD-8 webpage at: <http://www.whitehouse.gov/news/releases/2003/12/20031217-6.html> (last accessed: July 18, 2006).

Some of these federal initiatives will have an impact on local pandemic influenza planning.

At this point, most governmental agencies involved in emergency response in each local jurisdiction are working to become compliant with the country's National Incident Management System (NIMS). Currently, the largest component of this system that must be addressed at an operational level is the training and institutionalization of the Incident Command System (ICS) as the sole means of organizing an emergency response in every community in the United States. While this may strike some as rigid, the flexibility of ICS is one of the central reasons that it has been adopted by so many different types of agencies to manage the response to emergency events even prior to the government requirement. Training materials for ICS can be found online at the Federal Emergency Management Agency's (FEMA) Emergency Management Institute [Independent Study website](#). NACCHO has released an ICS course specifically for public health personnel that can be [purchased online](#). Other places to contact for training include your local and State emergency management and State health departments.

How can NIMS and ICS be integrated into pandemic influenza planning? The fact is, utilizing NIMS and ICS within any kind of jurisdictional emergency response should be a part of the larger local emergency operations plan. Where it is logical to refer to specific elements (e.g. convening of a joint information center), plans certainly can and should. However, if there is no particular part of the plan where it is appropriate to do so, a statement of intent can be included, such as "All pandemic influenza response activities will be conducted within an incident command structure and consistent with the National Incident Management System." Each jurisdiction then has the responsibility to ensure that intent is met by conducting regular training and exercises.

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## Key Issue Areas in Pandemic Influenza Planning

***“Plans are only good intentions unless they immediately degenerate into hard work.”***

–Peter F. Drucker

The following pages contain a wealth of information drawn from the analysis of a range of actual local health department plans and planning guidance. NACCHO has attempted to identify key planning and response elements for each of the issue areas. These overviews are meant to spur planning conversations in jurisdictional multidisciplinary planning committees. The final content and detail of your plan will inevitably differ from what is presented given the unique resources, qualities and organization of your jurisdiction and existing emergency operations plans.

### Key to Issue Area Sections

**Issue Area:** This will be the broad topic area to be discussed.

**Description:** Because there are many aspects to a topic as complex as “Public Information and Risk Communication,” for example, the description will endeavor to give a broad overview of what is included in the topic area and why it is important to pandemic influenza planning.

**Relevant Planning Assumptions (examples):** In [Chapter Two](#), this guide discussed the importance of clearly laying out assumptions upon which the plan is based and provided some examples of such assumptions in the context of pandemic influenza. Drawing from those examples, each worksheet will cite some of the assumptions that may be most relevant to planning in that area.

**Key Partners:** Each worksheet will offer some suggestions of what *community* partners (not those at the State or federal levels) may be instrumental in solving the challenges in the topic area. Some of these will be obvious, others may be less so.

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Likewise, some of these entities will not exist in some communities, while other communities may find necessary partners not mentioned. Remember that these sections are a tool to jumpstart the planning process, not to address every issue comprehensively for every jurisdiction.

**Key Actions by Phase (examples):** This section will provide some examples of tasks that select jurisdictions have chosen to include in their plans. The section will follow the organization that many jurisdictions have adopted, based upon the [phases of a pandemic](#), as discussed in Chapter Two. **These elements are neither comprehensive nor conclusive. Some jurisdictions may decide to conduct certain tasks in an earlier or later phase, or not at all. Again, these elements are offered as examples of items to include within a plan.**

**Questions for Consideration:** Some additional questions have been identified that may help in the effort to plan for each topic area, along with suggestions on who to consult for answers.

**Tools and Resources:** This guide attempts to link to some of the many materials that various entities and local health departments have created that other agencies may be able to reference or utilize.<sup>15</sup> If you have suggestions for materials that you have encountered that could benefit other local health departments, email NACCHO at [get\\_tools@naccho.org](mailto:get_tools@naccho.org) with a description, contact information, attachments and/or a link.

## Final Thoughts on Developing Your Plan

Some ideas for moving forward on the planning process:

- ❖ Some questions and suggestions may not apply to your jurisdiction. Dismiss them and move on, understanding that they are there because they may apply to others.
- ❖ Because of the complexity of pandemic influenza planning, the tasks included in these worksheets actually describe making additional plans to address certain subtopics. These additional plans typically address very specific activities. They may need to be developed as a part of the overall influenza planning process in the jurisdiction or they may be addressed through existing emergency plans.
- ❖ Tasks listed in one phase may carry through to future phases, but are not relisted.
- ❖ Many of the suggested tasks in the following worksheets are not the purview of health departments alone. Others in the community will need to assume responsibilities for pandemic influenza preparedness and response activities that are in their domain.

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<sup>15</sup> This guide does not provide specific, individual links to the many planning documents available on the federal pandemic influenza site, [www.pandemicflu.gov](http://www.pandemicflu.gov) (last accessed: July 18, 2006).

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- ❖ Designation of the parties responsible for tasks within the plan is imperative in order to make sure that everyone understands their roles and responsibilities when a pandemic unfolds.
- ❖ Communicate the plan's expectations of other agencies, groups and private entities that may not be present during initial planning efforts and make sure they know what you anticipate they will provide. For example, are you counting on the State to provide an informational hotline for the public? What does the State plan say?
- ❖ Be honest about where breaking points are and talk through how those will play out. If emergency managers are tasked with finding additional supplies, they need to be able to provide examples of whom they would consult. If certain supplies are unavailable for a period of time, how will that impact the response? What can be done?
- ❖ Depending on the scope and assumptions that the plan is based on and the needs and size of the community, writing a plan for a disaster on the scale of a pandemic may be a truly long term endeavor. Make sure that any workplan acknowledges that at the local level, all involved have other projects and efforts clamoring for their time. Frankly address the balance that needs to be struck between the real threat of a pandemic and the day-to-day pressures that all players face.
- ❖ Finally, maintaining that plan with the cooperation of partners is also a long term commitment. Writing an initial draft of a plan is a first step. Exercising and testing out that plan, identifying gaps, and creating strategies to improve the plan based upon those experiences is a cycle that must be sustained over time in order to keep plans so diligently created relevant and up to date.

NACCHO hopes this information provides a jumping off point for your efforts, or a framework through which to consider and improve your current plans.

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## **Issue Area: Surveillance and Epidemiologic Investigation**

**Description:** During a pandemic, early identification of the initial outbreak will be key to activating other aspects of the plan in a timely fashion to best contain the spread of the disease. This may be accomplished in many different ways—from computer-based, real-time syndromic surveillance systems to hospital, laboratory, and mortality surveillance to disease reporting conducted by astute clinicians.

Epidemiological investigations will provide vital information about both the potential spread of disease, with contact tracing identifying the most high-risk individuals who may require quarantine. Health departments without robust internal epidemiological capacity should consult with their State agencies to determine how such investigations will be conducted in the face of a pandemic.

Interactions with laboratories must be conducted according to clearly defined protocols, as these vital components to the pandemic influenza response will be taxed beyond their capacities regardless. Communication about what to expect in terms of prioritization of samples and turn-around times in the event of a 40% decrease in workforce or a shortage of reagents will enhance realistic planning. Likewise, laboratories should, when possible, be included in some manner in pandemic influenza exercises.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
  2. An influenza pandemic may occur in waves and last for 12 to 24 months.
  3. There will likely be significant disruption of public and privately owned critical infrastructure including transportation, commerce, utilities, public safety and communications.
  4. There will likely be significant disruption of public and privately owned critical infrastructure including transportation, commerce, utilities, public safety and communications.
  5. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering points and canceling public events will likely be implemented during a pandemic.
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**Key Partners:** Hospitals; Public Health and Clinical Laboratories, Medical Examiner/Coroner's Office; Community Health Centers; Long Term Care Facilities; Private Physicians; Pharmacies; Schools; Airports; Ports; Businesses with Large Campuses

**Key Actions by Phase (examples):**

Phases 1 and 2:

- Operate ongoing syndromic surveillance systems within the jurisdiction.
- Request regular reporting of unexplained deaths by the medical examiner or coroner's offices.
- Request absenteeism reports from schools, long term care facilities, or other entities within the community
- Ensure partners have appropriate data collecting tools.
- Ensure community clinician contact information is current for formats by which local health department will want to communicate in the event of an emergency.

Phase 3:

- Enact enhanced surveillance efforts.
- Expand surveillance to community entities such as schools, long term care facilities and military installations.
- Coordinate efforts with other local, state and federal entities.
- Expand seasonal influenza surveillance year round.
- Cross-train staff.
- Review surge capacity plans.
- Develop any additional data requests (travel, etc) to be integrated into health care information collection efforts.

Phase 4:

- Activate processes to track any possible cases identified in jurisdiction.
- Establish case definition in concert with the HHS, CDC, and the state health department.
- Disseminate surveillance guidelines to physicians, clinics and hospitals.
- Monitor local media and news sources for information related to pandemic influenza activity and forward that information to designated personnel.

Phase 5:

- Develop and/or refine protocol for active surveillance at hospitals and other facilities.
  - Provide physicians and other primary care sites with instructions about gathering samples from individuals who display symptoms of influenza-like illness (ILI) and who are at increased risk for infection according to established guidelines.
  - Investigate outbreaks of ILI in schools and at other community gathering spots.
  - Conduct epidemiological investigations and contact monitoring among any cases in the jurisdiction.
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- Disseminate information regarding status of outbreak to all health care providers and other facilities at regular intervals.
- Monitor workforce absenteeism within the community through reporting from major employers.

#### Phase 6:

- Screen and/or quarantine international travelers recently arriving in the jurisdiction from an area known and/or suspected to be infected (referencing any federal guidelines).
- Monitor workforce absenteeism within the community through reporting from major employers.
- Review surveillance data for potential risk factors that either prioritize or deprioritize infected individuals for receiving antivirals and/or vaccine.
- Set up unpublished call-in line for healthcare professionals to answer questions.

#### **Questions for Consideration:**

Is surveillance the purview of the local jurisdiction or of the State? Does the jurisdiction conduct routine seasonal influenza surveillance? What changes, if any, would need to be instituted to expand routine flu surveillance practices during each of the [pandemic phases](#)? How/when would partners expect to receive information about enhanced surveillance guidelines?

Are there any other sources from which it would be helpful to gather surveillance information? For example, are there major businesses in the community who have medical services on their campuses that would volunteer to monitor and report absentee rates?

Does the LHD possess sufficient staffing to handle a surge in analysis of incoming disease reporting? Where might additional personnel to assist in these efforts be located? Are there just-in-time training materials that could be developed in the earlier pandemic phases to address this issue?

Does the LHD possess sufficient staffing to handle a surge in outbreak investigation? Will epidemiological staff from State health departments that typically assist with local investigations be available to augment local efforts during a pandemic or will they be working at the state level?

If staffing is insufficient to handle all incoming disease reports or epidemiological investigations, how will efforts be prioritized?

Are all members of the epidemiological and laboratory staff prepared to don appropriate personal protective equipment (PPE) during an event? Where would information regarding appropriate levels of PPE be generated and how would it be provided to staff? What supplies will be needed and who will be responsible for obtaining them if a pandemic occurs? If there are insufficient amounts of PPE, how will prioritization take place?

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Would the jurisdiction begin to engage in systematically tracking travel of sick individuals during any of the phases? When would partners be notified about asking such questions and how would information be conveyed back through disease reporting channels?

How does submission of samples to laboratories change during each of the [pandemic phases](#)? How will updated information on routing and notification be conveyed to health care facilities as the phases progress?

### **Tools and Resources:**

**Weekly Epidemiological Record** from the World Health Organization, dated June 30, 2006, available at <http://www.who.int/entity/wer/wer8126.pdf> (last accessed: July 18, 2006). "This week's issue ...sets out results from the **first analysis of epidemiological data on all 205 laboratory-confirmed H5N1 cases** officially reported to WHO by onset date from December 2003 to 30 April 2006."

Information about the **National Retail Data Monitor**, a service that monitors sales of over-the-counter (OTC) healthcare products to identify disease outbreaks as early as possible, can be found at <http://rods.health.pitt.edu/NRDM.htm> (last accessed: July 18, 2006). The program is available free of charge to public health officials for the purposes of surveillance.

Gani R, Hughes H, Fleming D, Griffin T, Medlock J, Leach S. "**Potential Impact of Antiviral Drug Use During Influenza Pandemic**" *Emerging Infectious Diseases*, September 2005. Available at <http://www.cdc.gov/ncidod/EID/vol11no09/04-1344.htm> (last accessed: July 18, 2006).

**Laboratory information from the Health and Human Services Pandemic Influenza Plan Supplement 2**, available at <http://www.hhs.gov/pandemicflu/plan/sup2.html> (last accessed: July 18, 2006). Includes biosafety guidelines, guidelines for collecting and shipping samples, and interim enhanced surveillance and diagnostic evaluation for identifying human cases of H5N1.

"**Influenza 2005: The Laboratory's Role in Pandemic Preparedness and Response**" CDC webcast, conducted on December 6, 2005 with materials available at <http://www.phppo.cdc.gov/nltn/NPHTCS/influenzae120605.aspx> (last accessed: July 18, 2006).

**Notice and Order to Appear for Medical Examination**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=324> (last accessed: July 18, 2006).

Sample **Suspect Avian Influenza A (H5N1) Specimen Submittal Form**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=323> (last accessed: July 18, 2006).

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## Issue Area: Public/Partner Education & Risk Communication

**Description:** “Dissemination and sharing of timely and accurate information with the health care community, the media, and the general public will be one of the most important facets of the pandemic response. Advising the public in actions they can take to minimize their risk of exposure or actions to take if they have been exposed, will reduce the spread of the pandemic and may also serve to reduce panic and unnecessary demands on vital services.”<sup>16</sup>

Because a pandemic situation will, by its very nature, overwhelm all the resources that both the governmental and private sectors can bring to bear, citizens must be encouraged to be as self-sufficient as possible during the outbreak, before it hits. Such messaging may include how to best contain the disease through lessons like “cover your cough” or stress that in a pandemic, home health care of loved ones may be the more healthy choice.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
2. An influenza pandemic may occur in waves and last for 12 to 24 months.
3. Residents will be required to stay in their homes for a significant period during an influenza pandemic; thus, residents will need public information, education and tools so they are prepared to take responsibility for basic needs (food, water, prescription meds, over-the-counter medications, etc.).
4. Antiviral medications will be in extremely short supply.
5. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.
6. There will likely be significant disruption of public and privately owned critical infrastructure including transportation, commerce, utilities, public safety and communications.
7. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering

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<sup>16</sup> Tacoma Pierce County Health Department Pandemic Flu Plan, Revision 0. Available online at <http://www.tpchd.org/files/library/72ca976ea6db69b9.pdf> (last accessed: July 18, 2006).

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points and canceling public events will likely be implemented during a pandemic.

8. Some persons will be unable or unwilling to comply with isolation directives. For others, social distancing strategies may be less feasible (for example, homeless populations who live in congregate settings). It will be important to develop and disseminate strategies for infection control appropriate for these environments and populations.
9. Risk Communication will be critically important during all phases of planning and implementation of a pandemic influenza response. The general public, health care system, response agencies, and elected leaders will need continuous updates on the status of the pandemic outbreak, impacts on critical services, the steps being taken to address the incident, and steps the public can take to protect themselves.

**Key Partners:** Hospitals; Emergency Management; 911 Dispatch, Mayor's Office; Schools, Private Businesses; Red Cross; Community Service Organizations (Rotary, Kiwanis, etc); Local Media

**Key Actions by Phase (examples):**

When addressing public education and risk communication, most local pandemic influenza plans reference other emergency planning documents for the basics on who will oversee the efforts, how a Joint Information Center or other such collaborative effort will be convened, and the various methods by which information will be disseminated during an emergency.

Phases 1 through 3:

- Educate the community about the potential for an influenza pandemic, with a focus on the role that individuals must play in taking care of themselves and their families.
  - Communicate with partners about their role in a pandemic and what they might need to do to protect themselves and their families.
  - Educate physicians on pandemics and what they may expect in terms of clinical disease, surveillance and vaccination recommendations and the use of viral agents.
  - Educate local pharmacists on pandemics and their role.
  - Educate local businesses regarding pandemic influenza and the need for continuity of operations plans.
  - Develop materials in advance that can be quickly disseminated when an outbreak takes place with details on how to prevent against getting sick (cover that cough, wash hands), when to stay home and when to come to the hospital, how to get information about the situation, how to care for loved ones, etc.
  - Ensure that all materials developed in advance are available in the dominant languages of the jurisdiction.
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- Work with community and faith-based organizations to reach populations that may not access materials offered through traditional channels.
- Designate official spokesperson in the event of pandemic.

#### Phase 4:

- Distribute information developed in advance.
- Request that State health department set up public information hotline.
- Develop scripts for public information hotline based on federal and State guidelines.
- Consider activation of a Joint Information Center (JIC).
- Develop press releases drawing on federal and State information but tailored to local needs through inclusion of local phone numbers, websites, and healthcare information.
- Regularly update local websites with any developing information.
- Develop message map for communicating key talking points.

#### Phase 5:

- Participate in briefings with experts at CDC and the State department of health.
- Conduct briefings with emergency departments, infection control practitioners, and community providers providing identification criteria, laboratory testing protocols, case definition, diagnostic and treatment protocols, as relevant.
- Provide daily public briefings and regular media briefings on the status of the outbreak.
- Reassign public health staff to support flu-related services.

#### Phase 6:

- Establish a JIC.
- Update message maps as needed.
- Continue regular updates of the public of the status of the outbreak, including recommendations on care of the sick and contact information for questions.

### **Questions for Consideration:**

Can information be prepared in advance about key topics? Can this be translated? Could the State health department or colleges and universities in the state provide this service?

Is there one spokesperson in the community or are there different individuals who are more credible for different messages? If that or those individual(s) become ill, who will take their place? Are these key people trained in speaking to the press?

What populations in the community may not be reached through traditional public information methods? What alternative ways could information be provided? Which organizations in the community could provide assistance?

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How will messages be kept consistent with others being distributed from other levels of government, other neighboring communities? How will rumors be dispelled?

When and how does the jurisdiction wish to release information regarding delicate topics (e.g. the prioritization of scarce resources of either antivirals or vaccine, the need for isolation and quarantine, the growing number of dead)?

If the jurisdiction might potentially implement isolation and/or quarantine orders, how might residents of the community react? How should the need for such orders be presented and discussed?

Who develops information about home health care? What methods will convey the urgency of keeping individuals home unless meeting a certain threshold of symptoms that indicate need for medical care? Where will individuals be directed to go if they cannot use regular avenues for health care (primary physician not available, no primary physician)?

How will rumors be dispelled?

How will messages be kept consistent with others being distributed from other levels of government, other neighboring communities?

How will the jurisdiction communicate about delicate topics, such as growing numbers of dead that may overwhelm the community's day-to-day ability to process bodies? How will funeral homes and churches be engaged in this process?

Is there one spokesperson in the community or are there different individuals who are more credible for different messages? If that or those individual(s) become ill, who will take their place? Are these key people trained in speaking to the press?

What populations in the community may not be reached through traditional public information methods? What alternative ways could information be provided? Which organizations in the community could provide assistance?

Can information prepared in advance be translated? Could the State health department or colleges and universities in the state provide this service?

What information needs to be distributed to partners? How can the appropriate information help non-traditional parts of the community see the necessity for planning now for a pandemic?

### **Tools and Resources:**

[Links to several PowerPoint presentations on pandemic influenza are available here.](#)

**Pandemic Influenza Communications Strategy** from Dallas County, Texas, available at

<http://www.dallascounty.org/department/hhservices/services/publichealth/alert/documents/CommunicatingDuringaPandemic.pdf> (last accessed: July 18, 2006).

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**Pocket Flu Guide** created by Santa Clara County Public Health, available at <http://www.naccho.org/topics/demonstration/APC/documents/YourPandemicGuideENG-webversion.pdf> (last accessed: July 18, 2006). The guide outlines what the public should know about pan flu. Designed to be carried by the average citizen, the colorful guide describes the distinctions between seasonal flu and pandemic flu; provides information on what to expect during a pandemic event; explains how to control the spread of disease in the home; describes how to obtain emergency broadcast information; lists emergency contact numbers and more- all in a publication that can be easily folded and carried in a wallet.

**Letters to parents of school-age children**, developed by Seattle-King County Public Health (PHSKC), offered in customizable MSWord format in English, Chinese, Korean, Russian, Somali, Spanish, and Vietnamese, available at <http://www.metrokc.gov/HEALTH/pandemicflu/schools/index.htm> (last accessed: July 18, 2006).

**Checklists for schools on the topics of mitigation, preparedness, response and recovery**, developed by PHSKC, available in customizable MSWord format at <http://www.metrokc.gov/HEALTH/pandemicflu/schools/kc-schools-checklist.doc> (last accessed: July 18, 2006).

**Pandemic Flu School Action Kit**, developed by Contra Costa Health Services, California, that offers a range of items including parent letters and media materials, at [http://cchealth.org/topics/pandemic\\_flu/school\\_action\\_kit/](http://cchealth.org/topics/pandemic_flu/school_action_kit/) (last accessed: July 18, 2006).

**Family Health Information Sheet**, developed by PHSKC, to help citizens collect vital health data on family members and contact information for family health providers in advance of a pandemic, available at <http://www.metrokc.gov/HEALTH/pandemicflu/prepare/familyhealth.pdf> (last accessed: July 18, 2006).

**Household Flu Preparedness Checklist**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=325>.

**Common Myths and Misconceptions Factsheet**, developed by Dallas County, TX, available at [http://www.dallascounty.org/department/hhservices/services/publichealth/alert/documents/CommonMythsandMisconceptions\\_000.pdf](http://www.dallascounty.org/department/hhservices/services/publichealth/alert/documents/CommonMythsandMisconceptions_000.pdf) (last accessed: July 18, 2006).

**Bird Flu and You, a poster and a flyer** available in 8 languages in addition to English (Chinese, French, German, Japanese, Portuguese, Spanish, Thai, and Vietnamese) that promotes concepts like covering coughs and sneezes, washing hands, and social distancing. Available at [http://www.ndu.edu/ctnsp/Bird\\_flu.htm](http://www.ndu.edu/ctnsp/Bird_flu.htm) (last accessed: July 18, 2006).

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**Red Cross FAQ sheet on Pandemic Influenza** available at <http://www.bostonredcross.org/pandemic/PandemicFAQ.pdf> (last accessed: July 18, 2006).

**PowerPoint Briefing for Local Response Agencies** developed by PHSKC, available at <http://www.metrokc.gov/HEALTH/pandemicflu/multimedia/051806-presentation.ppt> (last accessed: July 18, 2006).

Lee Colwell, "**The Pandemic Influenza Plan: Implications for Local Law Enforcement**" in *Police Chief* available at [http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article\\_id=784&issue\\_id=12006](http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=784&issue_id=12006) (last accessed: July 18, 2006).

**Corrections Agency and IT Preparations for Pandemic Influenza**, PowerPoint presentation by Scott McPherson, CIO, Florida Department of Corrections, available at <http://www.correctionstech.org/2006Conference/presentations/Panflu.ppt> (last accessed: July 18, 2006)

**Outreach letter to the business community**, developed by PHSKC, available at <http://www.metrokc.gov/HEALTH/apc/docs/business-engagement-letter.doc> (last accessed: July 18, 2006).

Example **Flyer for Community Conference on Pandemic Influenza** from Hamilton County, Ohio, available at <http://www.hamiltoncountyhealth.org/pdfs/news/June2006/HCHD%20PanFlu%20Conference%20Flier%20Final.pdf> (last accessed: July 18, 2006).

**Outreach letter to Non-Profits, Faith-Based and Community-based Organizations**, from Dallas County, Texas Department of Health and Human Services, available at [http://www.dallascounty.org/department/hhservices/services/publichealth/alert/documents/faithbase\\_and\\_community\\_based\\_organizations/Pandemic\\_Influenza\\_Faith-Based\\_Letter.pdf](http://www.dallascounty.org/department/hhservices/services/publichealth/alert/documents/faithbase_and_community_based_organizations/Pandemic_Influenza_Faith-Based_Letter.pdf) (last accessed: July 18, 2006).

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## **Issue Area: Clinical Guidelines and Disease Management**

**Description:** The ability to provide effective treatment and disease management for individuals who become infected with pandemic influenza is a critical capacity within a pandemic flu plan. This section includes giving healthcare providers within a jurisdiction sufficient information to diagnose cases of pandemic influenza infection, provide proper care for those cases, and dispense antivirals (if effective ones exist).

If antivirals are effective against any novel form of influenza that causes a pandemic, providing information on those antivirals to healthcare partners and coordinating a jurisdictional plan for distribution of these medications will be crucial. Due to the fact that in a pandemic, any effective antivirals will be in limited supply, communities will need to develop priority groups to guide distribution. These policies should be made based upon guidance from CDC, State health agencies and community specifics.

Finally, because healthcare facilities will be overwhelmed in the event of an influenza pandemic, provisions must be made to help the public determine whether home care may be the best option for sick family members and loved ones. Information on what care should be provided and what symptoms would indicate a need to try to obtain more advanced healthcare will be important to relieve the stress upon the healthcare system.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
  2. An influenza pandemic may occur in waves and last for 12 to 24 months.
  3. Antiviral medications will be in extremely short supply.
  4. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.
  5. The number of ill people requiring outpatient medical care and hospitalization will overwhelm the local health care system. In other words, the normal amount and level of hospital care will not be available.
    - a. Infection control measures specific to management of influenza patients will need to be developed and implemented at health care facilities, out-patient care settings and long-term care facilities.
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b. The demand for home care and social services will increase dramatically.

**Key Partners:** Hospitals; Clinics; Clinicians; Home Health Care Providers; Pharmacies; Law Enforcement/Public Safety; Emergency Management; Community Facilities for Point of Distribution Use; Businesses

**Key Actions by Phase (examples):**

Many jurisdictions reference their existing mass dispensing plans when discussing distribution of antivirals during a pandemic, changing elements as necessary to fit the specific circumstances.

Phases 1 through 3

- Disseminate information to healthcare partners regarding:
    - ⇒ the clinical case definition of novel influenza infection in the alert period;
    - ⇒ evolving clinical case definitions and epidemiologic information as the pandemic progresses;
    - ⇒ reporting requirements, which may change from time to time as the pandemic unfolds;
    - ⇒ infection control standards for the home, outpatient clinic, and inpatient hospital settings;
    - ⇒ real-time updates regarding local clusters of disease in the early stages of the pandemic;
    - ⇒ clinical information regarding the evaluation and anticipated course of novel and pandemic influenza infections, based upon available information from CDC and WHO;
    - ⇒ information regarding availability and appropriate use of antiviral agents;
    - ⇒ information regarding availability and recommended use of strain-specific influenza vaccine; and/or,
    - ⇒ any recommendations for alterations in standards of care, which may be necessitated as available healthcare resources become overwhelmed.
  - Develop plans for antiviral medications.
  - Review existing recommendations on priority groups.
  - Convene meeting with community partners to develop distribution plan.
  - Determine methods for acquiring medications
  - Arrange for security of antiviral medications once received.
  - Develop and disseminate guidelines for medical providers regarding antivirals, based upon:
    - ⇒ any guidance issued by the CDC, the WHO, and State health agency;
    - ⇒ evolving information on the efficacy of antiviral medications for treatment and prophylaxis of the pandemic strain;
    - ⇒ evolving information on those individuals who are most likely to experience serious complications from infection with the pandemic influenza strain;
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- ⇒ changes in the supply of influenza antivirals; and/or
- ⇒ availability of strain-specific influenza vaccine.

#### Phase 4:

- Provide healthcare partners with triage protocol to assess individuals presenting with ILI.
- Develop public information messaging based on expected amounts of vaccine and priority groups.

#### Phase 5:

- Implement plans for requesting any available drugs through the Strategic National Stockpile.
- Activate plans for monitoring adverse reactions to antiviral medications.
- Distribute antivirals to priority groups, according to jurisdictional plan, CDC and State health department guidelines.
- Reference existing mass dispensing plans as relevant, depending on supply.
- Implement measures to monitor adverse reactions.

#### Phase 6

- Distribute antivirals to priority groups, according to CDC and State health department guidelines, while supply exists.
- Monitor adverse reactions as resources permit.
- Monitor any cases of resistance to antivirals

### **Questions for Consideration:**

What modifications may need to be made to existing dispensing plans to adjust for pandemic flu conditions?

Is contact information for all clinicians in the community updated and current? Are clinicians aware of who to call to answer questions or request additional information?

If the jurisdiction's supply of antivirals is not sufficient to supply all of even a single priority group, how will intra-group prioritizations be made? Will priority groups include first responders or essential services personnel?

How will the jurisdiction provide security for stocks of antivirals? What if law enforcement/public safety has insufficient personnel either to do the jobs assigned to them or because of absenteeism because of the pandemic, how will these tasks be accomplished? How will they be prioritized?

### **Tools and Resources:**

**Clinical Algorithm for Case Management (Phases 3, 4 and 5) and Clinical Algorithm for Case Management (Phase 6)**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=326>.

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Sample **listing of priority groups for antivirals**, taken from the PHSKC plan, available at <http://www.metrokc.gov/HEALTH/pandemicflu/plan/Appendix-B.pdf> (last accessed: July 18, 2006).

Sample **guidance on use of antivirals**, addressing when there is no vaccine and changes to be made when a vaccine becomes available, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=327> (last accessed: July 18, 2006).

**Clinical Triage Guidelines during Pandemic**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=328> (last accessed: July 18, 2006).

**How to Care for Someone with Influenza** guide, developed by PHSKC, available at <http://www.metrokc.gov/HEALTH/pandemicflu/prepare/prevention.pdf> (last accessed: July 18, 2006).

**Fluids Suitable for Maintenance of Hydration and Management of Mild Dehydration for Influenza Patients in the Home Setting**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=329> (last accessed: July 18, 2006).

**Red Cross Information Sheet: Home Care for Pandemic Flu**, available at <http://www.bostonredcross.org/pandemic/Pandemichomecare.pdf> (last accessed: July 18, 2006).

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## Issue Area: Healthcare System Planning

**Description:** The impact of an influenza pandemic upon the nation's healthcare system will be overwhelming. As the majority of healthcare entities exist in the private sector and many times in competition, this aspect of planning can be challenging and time consuming for all parties involved.

This section discusses healthcare system planning from the perspective of the jurisdiction, in terms of what planning needs and challenges may need to be addressed, and what technical assistance may be offered. It does not address in detail how healthcare entities should approach pandemic influenza planning within their facilities.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
  2. Localities will not be able to rely on timely or effective mutual aid resources, State or Federal assistance to support local response efforts.
  3. An influenza pandemic may occur in waves and last for 12 to 24 months.
  4. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.
  5. The number of ill people requiring outpatient medical care and hospitalization will overwhelm the local health care system. In other words, the normal amount and level of hospital care will not be available.
    - a. Hospitals and clinics will have to modify their operational structure to respond to high patient volumes and maintain functionality of critical systems.
    - b. The health care system will have to respond to increased demands for service while the medical workforce experiences 25-35% absenteeism due to illness or caring for ill family members.
    - c. Demand for inpatient beds and assisted ventilators could increase by ten-fold or more and patients will need to be prioritized for services.
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- d. There will be tremendous demand for urgent care services.
- e. Infection control measures specific to management of influenza patients will need to be developed and implemented at health care facilities, out-patient care settings and long-term care facilities.
- f. The health system will need to develop alternative care sites to relieve demand on hospital emergency departments and care for persons not ill enough to merit hospitalization but who cannot be cared for at home.
- g. Emergency Medical Service responders will face extremely high call volumes, and may face 25% - 35% reduction in available staff.
- h. The number of fatalities will overwhelm the resources of the Medical Examiner's Office, morgues and funeral homes.
- i. The demand for home care and social services will increase dramatically.

**Key Partners:** All Healthcare Facilities, Clinicians, Pharmacies, Emergency Management, Emergency Medical Services, Medical Reserve Corps/Volunteer Groups, 911/Dispatch, Medical Societies

**Key Actions by Phase (examples):**

Phases 1 and 2:

- Engage in community-wide planning:
  - ⇒ identify who is part of the healthcare system;
  - ⇒ determining capacity;
  - ⇒ establish MOUs; and/or
  - ⇒ recruit and maintain volunteers.

Phases 3 through 5:

- Convene an internal pandemic influenza planning task force to develop/revise a pandemic preparedness plan for the facility that includes:
    - ⇒ hospital use of the Hospital Emergency Incident Command System (HEICS) for sustained continuity of hospital operations and patient care services;
    - ⇒ specific pandemic influenza planning strategies that incorporate current local, state and federal guidance;
    - ⇒ triggers for activating the facility's internal pandemic emergency plan;
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- ⇒ assignment of authority and responsibility for aspects of the pandemic plan and response within the facility; and/or
  - ⇒ patient triage systems.
  - Review and revise high patient census protocols specifically to prepare for the intensity and duration of patient influx during a pandemic influenza, including isolation capacity.
  - Develop plans for use of overflow space to triage, transfer/discharge, and treat patients, including use of suspended beds, converting outpatient space to inpatient, using nonpatient areas, and obtaining appropriate permission from State licensing entities to use these spaces in an emergency.
  - Identify critical staff roles including healthcare workers, housekeepers, dietary, laundry, plant operations, security, chaplains, mental health staff and management, and develop plans to cover these critical roles.
  - Develop standardized pandemic physician orders.
  - Develop streamlined nursing notes/patient care records.
  - Develop work force preservation protocols to minimize absenteeism, which may include:
    - ⇒ Establishing a staff hotline with current information.
    - ⇒ Providing sick-care services for children of hospital staff.
    - ⇒ Developing rosters of staff teams to allow for rotation and rest over the duration of the pandemic.
  - Develop and conduct staff training on the facility's pandemic response plan.
  - Prepare to manage volunteer personnel, including:
    - ⇒ Granting emergency privileges;
    - ⇒ Establishing competency and monitoring staff performance for newly recruited and/or volunteer personnel;
    - ⇒ Assigning temporary personnel;
    - ⇒ Using retired and volunteer healthcare workers for some patient care roles;
    - ⇒ Using community volunteers for non-clinical roles such as transporting specimens, registration and supply handling;
    - ⇒ Training volunteers; and/or
    - ⇒ Develop just-in-time training and orientation modules for temporary and volunteer staff.
  - Inventory critical supplies needed for treatment of patients with pandemic influenza, including personal protective equipment (PPE):
    - ⇒ Determine usage levels and stockpile critical supplies.
    - ⇒ Develop memoranda of understanding with vendors for procuring additional supplies including masks, gloves, gowns, beds/cots, intravenous supplies, portable high efficiency particulate air filters, ventilators, etc.
  - Test systems for procuring and storing additional supplies and address rotational issues.
  - Repair durable equipment not currently in full working order on an expedited basis and shorten routine maintenance cycle.
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- Ensure availability of recommended laboratory processing, testing and reporting of results to the ordering physician and infection control team.
- Convene the infection control committee to review/revise infection control policies and procedures relevant to the pandemic response, including:
  - ⇒ containment strategies;
  - ⇒ respiratory hygiene;
  - ⇒ isolation;
  - ⇒ cohorting;
  - ⇒ workforce issues such as training, PPE and guidelines for “fitness for duty” status; and/or
  - ⇒ cleaning equipment/environment.
- Adopt aggressive “respiratory hygiene” programs in all patient and visitor waiting areas to include signs about respiratory etiquette, hand cleaning supplies, tissues, masks, and waste receptacles; require all coughing patients to don a mask.
- Plan for respiratory isolation
  - ⇒ Inventory respiratory isolation capacity and integrity of negative pressure isolation room systems.
  - ⇒ Develop strategies for expanding respiratory isolation capacity and cohorting infectious patients.
- Plan for vaccination program
  - ⇒ Review current vaccination program for pneumonia and influenza to assure that employees have access to vaccinations.
  - ⇒ Develop procedures to identify high-risk patients for vaccine/antiviral distribution, according to any local or state guidelines.
  - ⇒ Identify critical hospital personnel for vaccination and antiviral medication; collaborate with jurisdictional planning team on allocation plan for vaccine and antivirals.
- Train medical staff on treatment priorities, allocating limited resources, and “sufficiency of care” standard.
- Develop systems for timely distribution of updated guidance to clinical staff, and revise policies and standard operating procedures accordingly.
- Implement discharge for patients not requiring inpatient care.
- Establish specific triage and waiting areas for individuals presenting with ILI
- and those with risk for severe complications, such as pregnant women, and immunocompromised individuals.

Phase 6:

- Implement facility response plans.
- Coordinate any public messaging with community partners.

**Questions for Consideration:**

Is there a system in the jurisdiction or in the state for tracking capacity and available beds? By type? For coordinating care?

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Will admission/discharge policies be modified? How will these changes be communicated to the public?

What triggers will exist for canceling elective procedures?

Are there any circumstances wherein a facility might need to close its doors?

Will radiology and laboratory services be sufficient to meet demand? How will prioritization of these services be handled and when?

How will facilities address degradation of care issues? What triggers exist to change nurse to patient ratios? Does facility policy consider use of volunteers and/or patient family members?

Are there any circumstances wherein the facility might need to close its doors?

Will radiology and laboratory services be sufficient to meet demand? How will prioritization of these services be handled and when?

How well do essential non-healthcare staff understand the crucial role they would play in a pandemic? (Facilities management, food preparation, janitorial staff)

How will the jurisdiction deal with a surge in EMS calls, particularly in small jurisdictions? What criteria will be used to prioritize EMS calls?

How will the jurisdiction communicate the strain of EMS services to public? What alternatives will be offered?

Are there plans in place to increase security at hospitals/healthcare facilities? During a pandemic, are security staff or contractors dedicated to the facility or might they have other community roles?

How will the facilities handle critical non-flu cases? How will facilities separate those not suffering from respiratory illness?

What plans does the healthcare system have to manage financial burden of pandemic? As the system experiences a decrease in elective surgeries, increased overtime, loss of regular staff, higher volumes of patients, how will facilities pay bills?

How will facilities obtain additional supplies during a pandemic? Will facilities operate through a central entity, like the Emergency Operations Center in the jurisdiction?

How will facilities handle a disruption in blood supply?

What plans does the healthcare system have to manage financial burden of pandemic?

### **Tools and Resources:**

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**FluAid Software**: “is designed to assist state and local level planners in preparing for the next influenza pandemic by providing estimates of potential impact specific to their locality. FluAid provides only a range of estimates of impact in terms of deaths, hospitalizations, and outpatients visits due to pandemic influenza. The software cannot describe when or how people will become ill, or how a pandemic may spread through a society over time.” (From the [CDC website](#).)

**FluSurge Spreadsheet and User’s Manual**: A spreadsheet tool that allows users to generate a number of hospitalizations and deaths that could be expected over the period of a pandemic, based upon certain assumptions and data entered by the user about their jurisdiction (population, staffed hospital beds, ICU beds, number of ventilators). (Coordinates with Flu Aid, above).

**Avian (Bird) Flu Preparation and Response Brochure**, developed by the EMS Section of the International Association of Fire Chiefs, available at [http://www.iafc.org/associations/4685/files/birdflu\\_broch.pdf](http://www.iafc.org/associations/4685/files/birdflu_broch.pdf) (last accessed: July 18, 2006).

**Emergency Management (EM) Principles and Practices for Healthcare Systems**, from the Veterans Health Administration, available at: <http://www1.va.gov/emshg/page.cfm?pg=122> (last accessed: July 18, 2006).

**Clinical Triage Guidelines during Pandemic**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=328> (last accessed: July 18, 2006).

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## Issue Area: Limiting the Spread of Disease

**Description:** Preventing a novel strain of influenza from spreading once it has entered the community will be difficult. A number of different approaches, including adherence to infection control measures, non-medical interventions such as isolation and quarantine, social distancing and restriction of travel, as well as provision of vaccine, once available, can reduce if not prevent the spread of the disease within the community. Quarantine and Isolation (Q&I) measures are often referenced in this section. Frequently, local pandemic influenza plans reference existing jurisdictional emergency plans that outline the process for implementing Q&I, only addressing those aspects of planning specific to pandemic influenza. Other plans go into complete detail regarding authorities and processes to be implemented.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
  2. An influenza pandemic may occur in waves and last for 12 to 24 months.
  3. Residents will be required to stay in their homes for a significant period during an influenza pandemic; thus, residents will need public information, education and tools so they are prepared to take responsibility for basic needs (food, water, prescription meds, over-the-counter medications, etc.).
  4. Antiviral medications will be in extremely short supply.
  5. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.
  6. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering points and canceling public events will likely be implemented during a pandemic.
  7. Residents will be required to stay in their homes for a significant period during an influenza pandemic; thus, residents will need public information, education and tools so they are prepared to take responsibility for basic needs (food, water, prescription meds, over-the-counter medications, etc.).
  8. Isolations and quarantine restrictions will likely be imposed.
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9. Some persons will be unable or unwilling to comply with isolation directives. For others, social distancing strategies may be less feasible populations who live in congregate settings. It will be important to develop and disseminate strategies for infection control appropriate for these environments and populations.
10. Risk Communication will be critically important during all phases of planning and implementation of a pandemic influenza response. The general public, health care system, response agencies, and elected leaders will need continuous updates on the status of the pandemic outbreak, impacts on critical services, the steps being taken to address the incident, and steps the public can take to protect themselves.

**Key Partners:** Hospitals; Clinicians; Emergency Management; Mayor's Office; Media; Law Enforcement; Schools; Long Term Care Facilities; Correctional Facilities; Businesses; Volunteer Groups; Home Healthcare Services; Transportation Entities

**Key Actions by Phase (examples):**

Quarantine and Isolation (Q&I) measures are often referenced in this section. Frequently, local pandemic influenza plans reference existing jurisdictional emergency plans that outline the process for implementing Q&I, only addressing those aspects of planning specific to pandemic influenza. Other plans go into complete detail regarding authorities and processes to be implemented.

Phase 3:

- Conduct broad public education campaign about influenza pandemics and the possible necessity to use quarantine and isolation measures to prevent the spread of the virus.
  - Coordinate planning with relevant community partners, including, but not limited to law enforcement, home health services and the Red Cross.
  - Work with infection control professionals at local healthcare facilities to promote the use of practices that will prevent the spread of the virus.
  - Coordinate with community service agencies and organizations to establish plans that provide food, medicine and other necessities to households placed in quarantine or providing home health care to infected individuals.
  - Enhance coverage with vaccinations for seasonal influenza in groups at risk for severe influenza and in healthcare workers.
  - Enhance coverage with vaccines against *Streptococcus pneumoniae* among those for whom these vaccines are recommended.
  - Estimate the size of priority groups to be vaccinated.
  - Develop a plan for identification of persons in priority groups at vaccination clinics.
  - Refine plans for procurement and distribution of vaccine.
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- Develop a procedure to inform vaccine recipients about the need for a second dose, to track recipients and possibly to call them back for the second dose when vaccine supplies allow.

#### Phase 4:

- Work with CDC Quarantine Stations at jurisdiction ports of entry regarding management of passengers requiring isolation, quarantine or follow-up.
- Notify physicians and clinics to immediately report influenza-like illness in individuals arriving from or recently returned from specified regions.
- Isolate individuals suspected (or confirmed) to be infected with new influenza strain at home or in an available healthcare facility (if needed) for at least seven days after onset of illness, unless proven not to be new strain. Quarantine contacts of individuals for seven days as well.

#### Phase 5:

- Recommend that facilities with less mobile or immobile populations (long term care facilities, nursing homes, prisons) restrict access in order to prevent exposure.
- Provide technical assistance regarding management of healthcare workers who become infected with the new influenza strain.

#### Phase 6:

- Implement public health restrictions including curtailing travel; imposing curfews; closing of schools/churches/theaters/community centers/malls; canceling of public gatherings, with possible enforcement by law enforcement.
  - Limit provision of health care services to patients with urgent and emergent health problems.
  - Monitor effectiveness of social distancing strategies in controlling the spread of disease.
  - Review national recommendations regarding pandemic influenza vaccination and develop modifications or refinements to priority groups, as appropriate
  - When vaccine is available, modify plans for distribution based on:
    - ⇒ amount of vaccine available;
    - ⇒ identity and location of priority groups to be targeted for vaccination;
    - ⇒ availability of private and public entities to stage influenza vaccine clinics, as well as their ability to handle the necessary security needs and to follow health officer directives; and/or
    - ⇒ degree to which potential drop-off sites may already be overwhelmed by the demands of pandemic response.
  - Review national recommendations regarding pandemic influenza vaccination and develop modifications or refinements to priority groups, as appropriate.
  - Communicate the rationale for prioritization of selected groups for vaccination clearly to healthcare providers and to the general public.
  - Rapidly provide training in vaccination and data collection for public health staff and other partners responsible for vaccinating priority groups.
  - Monitor vaccine supplies, distribution and use.
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- Track recipients of influenza vaccine using the Immunization Registry, and calling back vaccine recipients for a second dose, as feasible.
- Monitor and investigate adverse events following vaccination, as feasible.
- After priority groups have been vaccinated and additional stocks of vaccine become available, work to ensure fair, orderly, and equitable distribution of vaccine to the rest of the population.

### **Questions for Consideration:**

Will quarantine and isolation orders be voluntary or enforced?

What are the triggers for closing schools and canceling public gatherings? What advice given about staying home? How will the jurisdiction cope with effects on workforce?

What is the role of law enforcement/public safety in providing security for mass vaccination clinics? How will vaccine be secured?

If law enforcement/public safety has insufficient personnel, either to do the jobs assigned to them or because of absenteeism because of the pandemic, how will these tasks be accomplished? How will they be prioritized?

Will the jurisdiction consider recruitment of those who have recovered from the flu to assist in staffing vaccination clinics?

### **Tools and Resources:**

Sample listing of **priority groups for influenza vaccination**, taken from the PHSKC plan, available at <http://www.metrokc.gov/HEALTH/pandemicflu/plan/Appendix-A.pdf> (last accessed: July 18, 2006).

“**Preparing for an Influenza Pandemic: Vaccine Prioritization**” in *Family Practice Management* on Medscape at <http://www.medscape.com/viewarticle/521509> (last accessed: July 18, 2006).

**Plan for Vaccination with Strain-specific Influenza Vaccine During an Influenza Pandemic**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=330> (last accessed: July 18, 2006).

**Disease Control Measures: Definitions, Examples and Considerations**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=331> (last accessed: July 18, 2006).

**Protective Measures to Reduce the Spread of Pandemic Influenza**, appendix from the PHSKC plan, available at <http://www.metrokc.gov/HEALTH/pandemicflu/plan/Appendix-D1.pdf> (last accessed: July 18, 2006).

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Sample **Quarantine Order** and **Home Isolation Order**, developed by Santa Clara County Health Department, available at:  
<http://www.naccho.org/equiph/detail.cfm?id=332> (last accessed: July 18, 2006).

Sample **Home Isolation Checklist**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=334> (last accessed: July 18, 2006).

Sample **Temporary Isolation Order**, developed by Santa Clara County Health Department, available at <http://www.naccho.org/equiph/detail.cfm?id=335> (last accessed: July 18, 2006).

Sample **Alert to Law Enforcement regarding Isolation and Quarantine Orders**, developed by Santa Clara County Health Department, available at  
<http://www.naccho.org/equiph/detail.cfm?id=333> (last accessed: July 18, 2006).

Charles Friend, "**Quarantines: The Law Enforcement Role**" in *Police Chief* available at  
[http://policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article\\_id=807&issue\\_id=22006](http://policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=807&issue_id=22006) (last accessed: July 18, 2006).

**Graded Implementation of Social Distancing Measures**, appendix from the PHSKC plan, available at  
<http://www.metrokc.gov/HEALTH/pandemicflu/plan/Appendix-D2.pdf> (last accessed: July 18, 2006).

**Threshold Determinants for the Use of Social Distancing Measures**, appendix from the PHSKC plan, available at  
<http://www.metrokc.gov/HEALTH/pandemicflu/plan/Appendix-F.pdf> (last accessed: July 18, 2006).

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## Issue Area: Mortuary Services & Mass Fatality Management

**Description:** Planning for the incredible number of deaths that have been predicted to result from an influenza pandemic is a challenge at all levels of government. Even the recent national response plan released by the federal government gives only short coverage to the topic.<sup>17</sup> This section gives a basic overview to consideration in this planning effort and should relate to a jurisdiction's existing mass fatality plan.<sup>18</sup>

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
2. Localities will not be able to rely on timely or effective mutual aid resources, State or Federal assistance to support local response efforts.
3. The number of fatalities will overwhelm the resources of the Medical Examiner's Office, morgues and funeral homes.

**Key Partners:** Healthcare Facilities/Providers; Emergency Medical Services; Medical Examiner/Coroner's Office; Emergency Management; Funeral Homes and Mortuaries; Cemeteries

### **Key Actions by Phase (examples):**

Phases 3 through 5:

- As additional information about the specifics of a pandemic become available, review jurisdictional mass fatality plans against mortality estimates and identify any areas requiring additional focus.

Phase 6:

- Based on how a pandemic impacts the jurisdiction, implement adjustments to regular processes such as the following:
  - ⇒ Identification and documentation of victims
  - ⇒ Activation and management of temporary temperature
  - ⇒ Controlled holding facilities
  - ⇒ Release of remains to family members
  - ⇒ Temporary internment of mass fatalities

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<sup>17</sup> Ceci Connelly, "A Grisly but Essential Issue: Pandemic Plan Skims Over How to Deal With Many Corpses," Washington Post, June 9, 2006, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/09/AR2006060900078.html> (last accessed: July 18, 2006).

<sup>18</sup> Special thanks to San Mateo County Health Department, California, whose plan provided the basis for much of this section.

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⇒ Cremation and burial of mass fatalities

- Following declaration of a state of emergency, the Health Officer will issue an order to the Coroner to abbreviate the regulations in the processing of people who have expired without a doctor in attendance for 20 days preceding death or without a diagnosis. If, in the opinion of the Coroner, a person appears to have died from influenza, no autopsy is needed.
- Safeguards must be in place to ensure the protection of all personnel handling deceased individuals who have succumbed to contagious influenza. It is recommended that face shields be worn to prevent accidental eye contact with airborne droplets of sputum or excreta. A standard surgical mask should be worn to prevent the inhalation of the same.
- The Coroner's department will continue to supply the Health Department with statistics regarding morbidity activity. During a pandemic influenza event, it is important that the Health Officer receive data that indicate geographic and community mortality rates.

### **Questions for Consideration:**

How will necessary supplies be obtained for mass fatality management?

Can bodies be managed safely for a time until jurisdiction is able to process them? Are there alternative sites in addition to morgues and funeral homes that have the capacity to be utilized for this purpose?

Where will additional staff to assist with fatality management be drawn from?

What guidance is given to individuals working with bodies to allow them to feel protected from infection?

What restrictions exist on mass internment within the jurisdiction?

Are there any existing legal requirements for autopsies or other processes (such as deaths at home)? What triggers would be used to indicate a need to change those requirements? Can these requirements be waived?

How will concerns regarding religious beliefs be addressed? How will the jurisdiction communicate any inability to provide usual level of care and speed during a pandemic to the bereaved?

How will memorial services be conducted in order to minimize potential spread of disease among attendees?

### **Tools and Resources:**

**Guidelines for the Management of Mass Fatalities During an Influenza Pandemic, Appendix to Canadian Pandemic Influenza Plan**, available at <http://www.phac-aspc.gc.ca/cpip-pclcpi/pdf-cpip-03/cpip-appendix-i.pdf> (last accessed: July 18, 2006).

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**Management of Dead Bodies after Disasters: A Field Manual for First Responders** from the Pan American Health Organization, available at <http://www.paho.org/english/dd/ped/DeadBodiesFieldManual.htm> (last accessed: July 18, 2006).

**Providing Relief to Families After a Mass Fatality: Roles of the Medical Examiner's Office and the Family Assistance Center**, available at [http://www.ojp.usdoj.gov/ovc/publications/bulletins/prfmf\\_11\\_2001/188912.pdf](http://www.ojp.usdoj.gov/ovc/publications/bulletins/prfmf_11_2001/188912.pdf) (last accessed: July 18, 2006).

**Handling of Disaster Victim Human Remains: A Quick Guide for Health Care Workers, Medical Examiners, and Funeral Services**, from the Florida Department of Health addressing the technical, legal, and medical aspects of mass fatality remains handling, available at: [https://www.femors.org/ssl/docs/FEMORS\\_Handling\\_of\\_Disaster\\_Victim\\_Human\\_Remains.pdf](https://www.femors.org/ssl/docs/FEMORS_Handling_of_Disaster_Victim_Human_Remains.pdf) (last accessed: July 18, 2006).

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## Issue Area: **Workforce Management and Support**

**Description:** Estimates of the percentage of the overall workforce that could be impacted at any given time by an influenza pandemic range from 15 to 40 percent, affecting every sector of the economy. Likewise, an emergency on the scale of an influenza pandemic will have an inevitable psychosocial impact not only on the individuals tasked with directly responding to the outbreak, but the broader population as well. The stresses placed on the workforce by illness-induced absenteeism, the long term nature of the emergency, and the mental health consequences will need to be factored into the planning of any local jurisdiction.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
2. Localities will not be able to rely on timely or effective mutual aid resources, State or Federal assistance to support local response efforts.
3. Antiviral medications will be in extremely short supply.
4. A vaccine for the pandemic influenza strain will likely not be available for 6 to 8 months following the emergence of a novel virus.
5. The health care system will have to respond to increased demands for service while the medical workforce experiences 25-35% absenteeism due to illness or caring for ill family members.
6. Emergency Medical Service responders will face extremely high call volumes, and may face 25% - 35% reduction in available staff.

**Key Partners:** Mental Health Providers, American Red Cross, Volunteer Groups, Churches/Faith-based Organizations, Medical Reserve Corps, Medical Associations, Schools of Medicine, Schools of Nursing, Schools of Public Health, Childcare Centers, Service Organizations. Hospitals, Community Health Centers, Private Physicians, Businesses

### **Key Actions by [Phase](#) (examples):**

Phases 3 through 5:

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#### Keeping workers at work:

- Work with public and private industry to discuss how employees will be supported if services such as home health care or child care are unavailable during a pandemic in order to ensure continued attendance at work.
- Identify and recruit potential volunteers to augment various areas during a pandemic.
- Develop just-in-time training materials to train volunteers in key tasks during a pandemic.

#### Addressing mental health issues:

- Ensure that administrators, managers, and supervisors are familiar with and actively encourage the use of tools and techniques for supporting staff and their families during times of crisis.
- Train staff (e.g., social workers, psychiatrists, nurses, psychologists, counselors) in behavioral techniques to help employees cope with grief, stress, exhaustion, anger, and fear during an emergency.
- Provide training in psychological support services to persons who are not behavioral health professionals (e.g., primary-care clinicians, emergency department staff, medical/surgical staff, safety and security personnel, behavioral health staff, chaplains, community leaders, and staff of cultural and faith-based organizations).
- Identify additional resources that can be available to employees and their families during and after a pandemic.
- Develop strategies to assist staff who have childcare or elder-care responsibilities or other special needs that might affect their ability to work during a pandemic.
- Identify and recruit potential volunteers to augment various areas during a pandemic.
- Develop just-in-time training materials to train volunteers in key tasks during a pandemic.
- Provide program administrators and counselors with information on:
  - ⇒ cognitive, physiological, behavioral, and emotional symptoms that might be exhibited by patients and their families (especially children), including symptoms that might indicate severe mental disturbance.
  - ⇒ self-care in the field (i.e., actions to safeguard physical and emotional health and maintain a sense of control and self-efficacy).
  - ⇒ cultural (e.g., professional, educational, geographic, ethnic) differences that can affect communication.
  - ⇒ potential impact of a pandemic on special populations (e.g., children, ethnic or cultural groups, the elderly).

#### Phase 6:

- Activate psychosocial workforce support plans in jurisdiction.
  - Implement plans to provide support care with community partners to essential personnel that are responsible for dependent family members.
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## **Questions for Consideration:**

In a time of scarce resources, how can a jurisdiction prioritize psychosocial care for the community? Are these efforts considered “essential services”?

What is the role of voluntary and faith-based organizations in providing both surge staffing and/or psychosocial support during a pandemic?

## **Tools and Resources:**

**Mental Health and Behavioral Guidelines to a Pandemic Flu Outbreak: Background on the Mental Health Impact of Natural Disasters, including Epidemics**, from the Center for the Study of Traumatic Stress, available at [http://www.centerforthestudyoftraumaticstress.org/downloads/CSTS\\_Pandemic\\_flu.pdf](http://www.centerforthestudyoftraumaticstress.org/downloads/CSTS_Pandemic_flu.pdf) (last accessed: July 18, 2006).

**Handout Materials about Coping**, taken from the San Mateo, California pandemic influenza plan, available at <http://www.naccho.org/equiph/detail.cfm?id=336> (last accessed: July 18, 2006).

**Brochure on Emotional Health Issues for Disaster Workers on Assignment**, from Smithers, British Columbia, available at <http://www.town.smithers.bc.ca/pdfs/fire/coping.pdf> (last accessed: July 18, 2006).

**Coping with Disaster**, webpage at City and County of Denver, <http://www.denvergov.org/DEHEP/template116113.asp> (last accessed: July 18, 2006).

**When Disaster Strikes: Managing Mental Health in the Workplace**, from the National Partnership for Workplace Mental Health, available at [http://www.workplacementalhealth.org/toolsandresources/APA\\_brochure\\_Aug02.pdf](http://www.workplacementalhealth.org/toolsandresources/APA_brochure_Aug02.pdf) (last accessed: July 18, 2006).

**Disaster Psychiatry Handbook** from the American Psychiatric Association’s Committee on Psychiatric Dimensions of Disaster, available at <http://www.psych.org/disasterpsych/pdfs/apadisasterhandbk.pdf> (last accessed: July 18, 2006).

**Information for Relief Workers on Emotional Reactions to Human Bodies in Mass Death** from the Center for the Study of Traumatic Stress, available at <http://www.psych.org/disasterpsych/links/Info4ReliefWkrnew.pdf> (last accessed: July 18, 2006).

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## **Issue Area: Maintenance of Essential Services**

**Description:** Unlike many other types of disasters, an influenza pandemic's consequences will span beyond those immediately affected by illness to almost all members of society, due to the disruption of all parts of daily life that will be affected because of the necessity of implementing social distancing measures and the impact on the workforce. All sectors will be stretched to their limits during a pandemic, and therefore plans to maintain those that are essential to the health and safety of the jurisdiction must be a part of any influenza planning process.

### **Relevant Planning Assumptions (examples):**

1. An influenza pandemic will result in the rapid spread of infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
  2. Localities will not be able to rely on timely or effective mutual aid resources, State or Federal assistance to support local response efforts.
  3. An influenza pandemic may occur in waves and last for 12 to 24 months.
  4. Residents will be required to stay in their homes for a significant period during an influenza pandemic; thus, residents will need public information, education and tools so they are prepared to take responsibility for basic needs (food, water, prescription meds, over-the-counter medications, etc.).
  5. There will likely be significant disruption of public and privately owned critical infrastructure including transportation, commerce, utilities, public safety and communications.
  6. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering points and canceling public events will likely be implemented during a pandemic.
  7. Risk Communication will be critically important during all phases of planning and implementation of a pandemic influenza response. The general public, health care system, response agencies, and elected leaders will need continuous updates on the status of the pandemic outbreak, impacts on critical services, the steps being taken to address the incident, and steps the public can take to protect themselves.
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**Key Partners:** Mayor's Office; County Board/City Council; Law Enforcement; Fire Service; Emergency Medical Services; Utilities; Transportation Services; Social Services

**Key Actions by Phase (examples):**

Phases 3 through 5:

- Define essential services in the jurisdiction.<sup>19</sup>
- Assign plan development to appropriate staff that will have access to decision makers in the organization. Delineate accountability, responsibility, capabilities and resources for key stakeholders engaged in planning and executing specific components of the operational plan.
- Review and revise existing contingency plans specifically for a pandemic.
- Examine whether core/essential business activities can be sustained over several weeks with the anticipated high absenteeism rates for prolonged periods of time.
- Plan for potential interruptions of essential government functions, like sanitation, water, and power, and disruptions to the food supply.
- Develop a list of personnel employed in these essential services whose absence would impair a response or daily operation of essential services and identify how their job responsibilities would be addressed in the event of absenteeism.
- Identify essential functions and the staff who perform them.
  - ⇒ If these individuals are absent, identify staffing and training/redundancy assuming absentee rates of 25-35% at any given time.
  - ⇒ Identify policy changes and/or other infrastructure, or tools, needed for alternative work schedules, worksites, and service delivery options.
- Enable employees to work from home with appropriate security and network access applications.
- Expand self-service options for customers and business partners.
- Establish Mandatory "work at home if sick with flu" policy. Establish policies for employee compensation unique to a pandemic.
- Update sick leave and family and medical leave policies to allow for staffing away from the workplace if an employee is ill with the flu, and/or needs to care for ill family member.
- Develop policy for curtailing business travel to and from affected areas.

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<sup>19</sup> Santa Clara Public Health defines "essential services" as meeting one or more of the following criteria:

- Have increased demand placed on them during a pandemic to fulfill basic necessities and social needs
- Directly support reduction in deaths and hospitalizations
- Function in healthcare sector or emergency services.

In that community, entities fitting that description have been identified as EMS provider organizations, fire service agencies, food suppliers (non-restaurant), key government agencies, law enforcement agencies, media organizations, mortuary services, public health services, public transportation services, and utility services. See page 221 of their plan at

[http://www.sccgov.org/SCC/docs%2FPublic%20Health%20Department%20%28DEP%29%2FAttachments%2FPanFluPlan\\_SCC.pdf](http://www.sccgov.org/SCC/docs%2FPublic%20Health%20Department%20%28DEP%29%2FAttachments%2FPanFluPlan_SCC.pdf) (last accessed: July 18, 2006).

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- Possible education on personal hygiene protection when traveling, if necessary.
- Determine which outside activities are critical to maintaining operations and develop alternatives in case they cannot function normally. Identify essential business inventory that needs to be built up as a resource to allow for continuation of business operations.
- Work with infection control professionals at local healthcare facilities to promote the use of practices that will prevent the spread of the virus.
- Assign plan development to appropriate staff that will have access to decision makers in the organization. Delineate accountability, responsibility, capabilities and resources for key stakeholders engaged in planning and executing specific components of the operational plan.
- Review and revise existing contingency plans specifically for a pandemic.
- Examine whether core/essential business activities can be sustained over several weeks with the anticipated high absenteeism rates for prolonged periods of time.
- Plan for potential interruptions of essential government functions, like sanitation, water, and power, and disruptions to the food supply.
- Conduct education campaign for employees to encourage preparedness and protection of employee health and safety.
- Promote a healthy worksite through encouragement of practices such as getting seasonal flu vaccinations and providing resources for good hand hygiene.
- Communicate to employees what workplace policy changes will occur during a pandemic, according to predetermined plans.
- Monitor flu like illness and overall related absenteeism and follow public health guidance in establishing social distancing measures if necessary.

#### Phase 6:

- Implement contingency plan.
- Reinforce operational policy changes.
- Enforce and monitor mandatory “stay at home if sick” policy. Promptly exclude staff or customers with influenza symptoms from the workplace.
- Implement healthy work environment:
  - ⇒ Modify the frequency and type of face-to-face contact among employees and between employees and customers.
  - ⇒ Evaluate employee access and availability of health care services.
  - ⇒ Evaluate employee access to availability of mental health and social services.
- Monitor flu like illness and overall related absenteeism and follow public health guidance in establishing social distancing measures if necessary.

#### **Questions for Consideration:**

How are “essential services” defined in the jurisdiction? Are owners of such services which exist in the private sector aware of their role in a pandemic event? How can these private entities be engaged?

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To what extent have continuity of operations plans been completed for government agencies within the jurisdiction? What guidance can be provided?

To what extent have continuity of operations plans been completed for businesses within the jurisdiction that provide vital services? What guidance can be provided?

### **Tools and Resources:**

**Continuity of government issues that should be addressed by local agencies guidance/checklist**, developed by PHSKC, available at <http://www.metrokc.gov/HEALTH/pandemicflu/gov/cog.pdf> (last accessed: July 18, 2006).

**Webcast on Maintaining Business Continuity after a Disaster**, originally broadcast by the Northwest Center for Public Health Practice on December 20, 2005, available at <http://www.nwcphp.org/training/hot-topics/2005-hot-topics/maintaining-business-continuity-after-a-public-health-disaster>. This recorded webcast compares and contrasts recovery and business continuity between cities that have experienced major disasters. The naturally occurring public health emergencies of SARS in Toronto and Hurricane Katrina in New Orleans highlight the significance of business continuity following major disasters. The presentation focuses on lessons learned and reinforces the need for public health to think about the role of business, large and small, and offer suggestions for establishing cooperative working arrangements between the sectors in order to support a successful recovery process.

Example of **Continuity of Operations Plan for an Influenza Pandemic**, developed by the Metropolitan King County Council, Seattle, Washington, available at <http://mkcclegisearch.metrokc.gov/attachments/20144.doc> (last accessed: July 18, 2006).

Online list of resources about **business emergency planning** at <http://www.cdc.gov/niosh/topics/prepared/> (last accessed: July 18, 2006).

**Pandemic influenza materials from the Business Continuity Planners Association**, Minnesota, available at <http://www.bcpa.org/metadot/index.pl?iid=3568&isa=Category> (last accessed: July 18, 2006).

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