



# PANDEMIC INFLUENZA WORKBOOK

for Long Term Care Providers

CALIFORNIA  
ASSOCIATION OF  
HEALTH FACILITIES





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## DISCLAIMERS

This *Pandemic Influenza Workbook for Long Term Care Providers* from the California Association of Health Facilities (CAHF) is exclusively intended to provide guidance. It does not contain or constitute legal advice in any form and does not make any assurance or representation that the guidance contained herein will be determined to constitute compliance with any state or federal law or regulation.

In addition, CAHF, the University of California, the Centers for Medicare & Medicaid Services, the California Department of Public Health and the individual authors are not responsible for any errors or omissions contained in the Workbook and assume no responsibility for the misuse or erroneous interpretation of its contents.

Furthermore, Dr. Wolfe's work as an author of this document was performed outside the scope of her employment as a U.S. government employee. This work represents her personal and professional views, and not necessarily those of the U.S. government.

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## Section One: Introduction

People who operate long term care facilities have a great deal to worry about. Issues related to staffing, reimbursement and regulations take much of their time and present constant challenges that require immediate attention. Disaster planning often gets put off in the interest of handling routine, everyday responsibilities. No one likes to think about disasters — particularly a severe pandemic that could strike millions of people around the world — with far greater impact than the 2009 H1N1 pandemic of influenza. But the problem with failing to think about and plan for disasters is that they do happen, and when they happen, it is the people who are least prepared who suffer the most. While there is no mechanism to predict when the next pandemic will hit or how severe it will be, the consensus is that it will occur. When it does, it will impact every aspect of our daily lives, and those who did not prepare will be hit the hardest.

A pandemic is an outbreak of an infectious disease that affects people or animals over an extensive geographical area. It is anticipated that influenza pandemics will continue to occur and spread across the populations in the world. In a pandemic, hospitals and other healthcare facilities and providers may be overwhelmed with the massive numbers of acutely ill persons. Long term care facilities will be impacted as they:

- may not be able to transfer their residents to hospitals.
- may need to expand current facility capacity to accommodate additional patients.
- could experience widespread absenteeism that affects their ability to staff their facilities and causes shortages in services and supplies.

For these reasons, long term care providers must develop proactive plans to prepare for the challenges that an influenza pandemic will bring.

A pandemic is not like an earthquake or a fire where the impact is localized and help can be shifted from one area to another. A pandemic hits everywhere at once, and every individual and community will need to maximize its own resources. While all levels of government have done a great deal to prepare for such an event and the 2009 H1N1 influenza pandemic has helped to increase that preparedness, the prudent long term care provider will do all she or he can to become as informed and as self-reliant as possible. The California Association of Health Facilities presents this *Pandemic Influenza Workbook for Long Term Care Providers* as a guide for those who want to know what actions they can take to protect the health and safety of the people who live and work in their facilities in the event of a pandemic influenza outbreak.

The intent of this *Workbook* is to explain to long term care providers:

- *Why* they need to prepare for a pandemic
- *What* they need to do to be prepared
- *How* they can go about making preparations

Note: At the time of this *Workbook* revision (July 2010), the Center for Disease Control and Prevention (CDC) has posted "Updated Guidance: Prevention Strategies for the Prevention of Seasonal Influenza in Healthcare Settings" which addresses potential changes related to the management of 2009 H1N1. When this guidance is released, it will almost certainly recommend droplet precautions for H1N1, except for during the performance of certain high risk procedures. As stated above, readers will want to check with CDC, state and local health departments for the most up-to-date recommendations related to the response to a specific circulating pathogen, however the general guidance in this *Workbook* will apply for all pandemic planning purposes.



## 2009 Influenza A H1N1 and Past and Future Influenza Pandemics

Last spring, 2009 H1N1 pandemic influenza struck, and it continues through the publication of this 2010 revision of the Pandemic Workbook for Long Term Care Providers. The experience of going through a pandemic, with various intervention, mitigation, communication and response strategies has confirmed many of our observations and validated many recommendations based on past influenza pandemics. It also has prompted us to update and revise certain recommendations in this document. Today there is a much larger body of research, evidence, and new resources to help guide long term care providers in their pandemic planning efforts. After experiencing the onset of the moderately severe H1N1 pandemic event, readers of the original version of the Pandemic Influenza Workbook for Long Term Care Providers may have a question regarding our recommendations to prepare for a “worst-case” scenario pandemic. Why did we, along with the World Health Organization (WHO), CDC, California Department of Public Health (CDPH) and others, recommend preparing for a severe, 1918-like pandemic, only to have a moderately severe pandemic of 2009 H1N1 pandemic influenza unfold?

The answer is that, until a virus capable of causing pandemic levels of infection in populations around the world appears, no one can predict the severity of the illness that it will cause in humans. The 2009 H1N1 pandemic flu strain has held several surprises for virologists and planners alike, and no one can be certain that the US has seen the last wave of this pandemic. The CDC states, “it’s possible that the United States could experience another wave either later in the 2010 winter, or later.”<sup>1</sup> It is very important for long term care facilities to note that the most important factors in illness severity seem to be age and co-morbidity. Age is usually a key determinant in seasonal influenza severity, with the oldest and youngest becoming the most ill and the elderly having the greatest incidence of mortality. However, in 2009 H1N1 pandemic influenza, persons age 65 and over make up only 3% of the cases, according to a recent report in BMC Infectious Diseases.<sup>2</sup> One reason for this may be that about 1/3 of adults over the age of 65 appear to have antibodies, and therefore some latent immunity, against 2009 H1N1<sup>3</sup> due to exposure to an earlier pandemic. This factor may cause some long term care facilities with predominantly elderly populations to perceive the current pandemic as very mild in its impact. Conversely, those long term care facilities that care for a higher proportion of younger people, particularly those with co-morbidities that put them at higher risk for 2009 H1N1 influenza, may be experiencing the current pandemic as more severe than the general population. Obese people, young children, and pregnant women are some of the groups that are at greater risk for severe disease.<sup>4</sup> Other co-morbidities that can make a patient particularly susceptible to severe illness or death include asthma, neurological conditions, chronic lung disease, heart disease, blood disorders (such as sickle cell), endocrine disorders (such as diabetes mellitus), kidney disorders, liver disorders, metabolic disorders, persons with weakened immune systems (such as those living with HIV/AIDS, cancer, or those who are on chronic steroids), and people under the age of 19 who are receiving long-term aspirin therapy.<sup>5</sup>

In light of the new information, do we still recommend planning for a severe pandemic? The answer is yes. If we arm ourselves with information and realistic plans for the “worst case” while being mindful of the lessons we continue to learn from the more moderate 2009 H1N1 influenza pandemic, we will be ready to protect the vulnerable people we serve in long term care. This update of the Pandemic Influenza Workbook for Long Term Care Providers captures the most beneficial new knowledge available from research and response to the H1N1 pandemic, combined with knowledge gained from past pandemics and severe influenza outbreaks to give the best current guidance for future influenza pandemics.

<sup>1</sup> Centers for Disease Control and Prevention (CDC). (February 10, 2010). *2001 H1N1 Flu (“Swine Flu”) and You*. Retrieved May 30, 2010 from <http://cdc.gov/h1n1flu/qa.htm>.

<sup>2</sup> CIDRAP. (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza’s Unpredictability*. Retrieved May 30, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).

<sup>3</sup> Centers for Disease Control and Prevention (CDC). (February 10, 2010). *2001 H1N1 Flu (“Swine Flu”) and You*. Retrieved May 30, 2010 from <http://cdc.gov/h1n1flu/qa.htm>.

<sup>4</sup> CIDRAP. (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza’s Unpredictability*. Retrieved May 30, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).

<sup>5</sup> Centers for Disease Control and Prevention (CDC). (February 10, 2010). *2001 H1N1 Flu (“Swine Flu”) and You*. Retrieved May 30, 2010 from <http://cdc.gov/h1n1flu/qa.htm>.



## INTENDED AUDIENCE

This *Workbook* is primarily intended for licensed long term care (LTC) facilities — those small and large residential institutions that care for the elderly, people with developmental disabilities or chronic mental illness and/or other medically fragile individuals who require 24-hour care and supervision. These settings include nursing facilities, intermediate care facilities, intermediate care facilities for the mentally retarded, adult residential and assisted living facilities. While these facility types are the target audience, information and the basic planning principles in this *Workbook* can be adapted as needed according to facility type and based on size and available resources. Small facilities may need to have one staff person who manages all aspects of pandemic planning, with help from external resources during the response, while larger facilities can divide this work among many staff members.

## HOW TO USE THIS DOCUMENT

The *Pandemic Influenza Workbook for Long Term Care Providers* is a tool to assist long term care providers and facilities in planning for and responding to an influenza pandemic.

Each chapter consists of detailed information and related worksheets on that topic. Readers are encouraged to review the *Workbook* in its entirety and excerpt the Worksheets included as needed for posters, handouts, or staff in-service. Also included are several addresses for Web sites where more detailed information on pandemic and other disaster-related issues is available. This *Workbook* and a review of the referenced Web sites will give long term care providers the basic information they need to develop a pandemic influenza section or “annex” to their existing disaster response plan. There is a great deal of information contained in this document, and most of it will require significant review and internal discussion with the facility staff.

## SUGGESTED STEPS FOR LONG TERM CARE PANDEMIC PLANNING

- Convene a multidisciplinary Pandemic Influenza (PI) Planning Committee for the facility. (Hereafter this committee will be referred to as the “Internal PI Committee”).
  - Convene a new committee or expand an already-existing committee (such as the quality improvement, infection control or resident rights committee) to include physicians and clinical, administrative, purchasing, engineering or maintenance personnel and others as needed and as available at your facility.
- Assign one person in your facility to be a pandemic influenza coordinator (PI coordinator).
  - It is important to assign one person to oversee the development and implementation of your facility’s Pandemic Annex.
  - The PI coordinator ideally will have clinical and infection control experience. Give this person the authority, resources and dedicated time to develop your facility Pandemic Annex.
  - The PI coordinator will work with the Internal PI Committee to develop your Annex and oversee the implementation of pandemic preparedness in your facility.
  - PI coordinator duties may include:
    1. Using this *Workbook* as a guidance document for planning. Using the resources identified in the *Workbook* to research pandemic influenza and current recommendations.
    2. Adapting the guidance and recommendations to the specific size of the facility, the type of people you serve and the availability of resources.
    3. Developing a timeline and outline for pandemic planning in the facility.
    4. Coordinating the Internal PI Committee meetings.
    5. Participating in the local community pandemic influenza planning meetings or committees, if available. If such a committee does not exist in your area, ask to participate in the standing healthcare emergency preparedness meeting or HPP (Hospital Preparedness Program) meeting. In part because of input from CAHF, many skilled nursing facilities and some assisted living facilities in California are able to participate in and obtain resources from the HPP grant. Contacting your local health department and/or your local



- hospital for types of community planning meetings to attend. This is an important step, both in terms of information gathering/sharing, and obtaining supplies and resources. While many communities may not be actively planning for pandemic influenza in 2010, they will almost all have up-to-date community pandemic influenza response plans that you can obtain for your own internal planning purposes.
6. Overseeing the completion of the planning tasks, purchasing, training and exercises.
  7. Informing facility administration of pandemic influenza developments and progress of the Internal PI Committee and pandemic preparedness progress.
  8. Advising management on status of pandemic activity as events develop.
- Develop the facility pandemic plan as an “annex” to the existing facility disaster plan.
    - Build on work that you have already done. Several of the recommendations in this *Workbook* are applicable to any large scale emergency and will help you in your general disaster preparedness efforts.
    - If your facility does not already have a complete and current all-hazards disaster plan, visit the California Association of Health Facilities Disaster Preparedness Program Web site at [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com) and click on preparedness topics in the top menu bar for helpful information, resources, templates and tools.

## HOW TO USE THE WORKSHEETS PROVIDED IN THE WORKBOOK

Many of the pandemic planning elements in this *Workbook* have been summarized and converted to worksheets to be used for response during a pandemic and for training of staff, families, residents and volunteers. The worksheets are intended as quick reference pages that can be reproduced as needed to provide guidance for specific pandemic preparedness and response activities.

## OVERVIEW OF PANDEMIC INFLUENZA AND THE CHALLENGE TO LONG TERM CARE FACILITIES

The World Health Organization (WHO) defines a pandemic as a worldwide spread of a new disease—particularly “an influenza pandemic occurs when a new influenza virus emerges and spreads around the world, and most people do not have immunity.”<sup>6</sup>

### Phases of a Pandemic

The WHO has developed a system of six phases.<sup>7</sup> Each phase represents a particular stage of influenza infection in the population, and facilities should respond as appropriate to the current phase. Changes from phase to phase are triggered by the behavior of the virus. The designation of phases, including decisions on when to move from one phase to another, is made by the director general of WHO. At this time (June, 2010) the world is at pandemic phase six<sup>8</sup>, with disease spread in multiple countries in all WHO Regions.

As of May 16, 2010, more than 214 countries and territories/communities have confirmed lab-submitted cases of 2009 H1N1 pandemic influenza—this includes more than 18,097 deaths<sup>9</sup> These numbers are base numbers and the WHO, and other experts do not believe that they reflect the entire disease picture. All numbers are dependent on individual countries WHO-reporting policies, including each country’s laboratory testing and confirmation process (and providers compliance), all of which may differ depending on the pandemic phase and severity.

<sup>6</sup> World Health Organization [http://www.who.int/csr/disease/swineflu/frequently\\_asked\\_questions/about\\_disease/en/index.html](http://www.who.int/csr/disease/swineflu/frequently_asked_questions/about_disease/en/index.html). (September 2006). *Global Pandemic Influenza Action Plan to Increase Vaccine Supply*. Retrieved May 26, 2010. Jan. 5, 2007, from [http://whqlibdoc.who.int/hq/2006/WHO\\_IVB\\_06.13\\_eng.pdf](http://whqlibdoc.who.int/hq/2006/WHO_IVB_06.13_eng.pdf).

<sup>7</sup> World Health Organization (September 2006). *Global Influenza Preparedness Plan*. Current WHO Phase of Pandemic Alert. Retrieved May 3, 2007, from [http://www.who.int/csr/disease/avian\\_influenza/phase/en/index.html](http://www.who.int/csr/disease/avian_influenza/phase/en/index.html).

<sup>8</sup> World Health Organization. *Current WHO Phase of Pandemic Alert*. Retrieved May 30, 2010 from [www.who.int/csr/disease/avian\\_influenza/phase/en/index.html](http://www.who.int/csr/disease/avian_influenza/phase/en/index.html).

<sup>9</sup> World Health Organization (May 21, 2010) *Pandemic (H1N1) 2009—Update 101*. Retrieved May 26, 2010 from [http://www.who.int/csr/don/2010\\_05\\_21/en/index.html](http://www.who.int/csr/don/2010_05_21/en/index.html)





See *Worksheet I: Phases of Pandemic Influenza with Recommended LTC Actions* (p. 11) for more information on the phases and suggested corresponding actions.

### **Pandemic Severity Index**

The world has faced many influenza pandemics throughout history, and some of them have been more severe than others in terms of the number of deaths they caused. During the Hong Kong flu (1968-69), for example, only 34,000 people in the U.S. died (approximately as many deaths as seasonal flu in the U.S. each year) as compared to the Spanish influenza (1918-19), which resulted in 675,000<sup>10</sup> deaths in the U.S. The World Health Organization (WHO) has classified the current pandemic of 2009 H1N1 pandemic influenza as moderate in severity.<sup>11</sup> No one knows how severe the next pandemic will be, so the U.S. Centers for Disease Control and Prevention (CDC) has developed a Pandemic Severity Index (PSI), based upon the percentage of likely deaths. The PSI is similar to the categories used to designate the severity of hurricanes and is used to help guide the response activities that should be taken. A Category 4 or 5 designates the greatest severity and indicates that extreme measures will be required. Depending on the severity of the pandemic, or PSI, government will recommend specific activities to slow or contain the spread of the pandemic, such as closing schools or isolating the ill.

See *Worksheet II: Pandemic Influenza Severity Index and Recommended Community Interventions* (p. 13)

### **Impact of the Pandemic**

It is anticipated that an influenza pandemic may last more than 18 months to two years, with three waves of illness sweeping through the general community followed by periods with less influenza activity.

At the beginning of a pandemic, there may be a prolonged period during which antiviral medications and vaccines are either completely unavailable or in limited supply. The federal government, state of California and local health departments have been stockpiling antiviral medications to cover a percentage of the population, but it is not clear how effective these antiviral medications will be in the event of a new strain of influenza. These antiviral medications will be controlled and distributed carefully by governmental agencies according to specific criteria during the pandemic. The vaccine for the next strain of pandemic of influenza (whenever it may emerge), while in initial development, cannot be fully developed and stockpiled until the pandemic viral strain is identified, and it may be up to six months before vaccines are widely available.

The societal impact of a pandemic will be experienced in all sectors of life. People may be unable to go to work or school due to illness, and many will have to stay at home to care for their loved ones, friends and neighbors. The local or state health departments may recommend school closures or maintaining a social distance (usually at least three to six feet) at work sites and social gatherings. These issues may directly impact staffing and staff availability at facilities, as well as normal supply chains for getting medications, food, supplies and utilities.

### **PLANNING FOR INFLUENZA**

In this very difficult situation, there are very few certainties. As with any potential disaster, preparations can be time-consuming and expensive, and if the disaster does not occur for a prolonged period, there is a tendency to feel such preparation is wasted and unnecessary. However, adequate preparation and planning are essential to survive a major event like a severe pandemic.

Hurricane Katrina (2005) resulted in tremendous loss of life, displacements of populations and severe financial losses. In the aftermath of Katrina, it was demonstrated that gaps in planning and insufficient follow-through on existing emergency plans resulted in a disaster that was, on some levels, preventable.

<sup>10</sup> U.S. Department of Health and Human Services (2007). General Information Section, Federal Pandemic Influenza Web site. Retrieved April 19, 2007, from <http://pandemicflu.gov/individualfamily/about/pandemic/history.html#1918>.

<sup>11</sup> World Health Organization (May 27, 2010). *Summary of Situation of Pandemic H1N1 2009*. Retrieved May 30, 2010 from [www.searo.who.int/en/section10/section2562.htm](http://www.searo.who.int/en/section10/section2562.htm).



Similarly, facilities that fail to plan for an influenza pandemic may experience even a moderately severe pandemic (such as 2009 H1N1) as having a significant impact on business as usual. Facilities that do not have a pandemic plan (particularly one that covers contingencies for various severity levels of pandemic) need to begin careful and methodical planning. Pandemic planning is not a waste of time or resources because the steps you must take to be ready for a pandemic will help you to be better prepared for all emergencies, in particular infectious disease outbreaks. Planning needs to be undertaken proactively, not reactively (after there is an acute crisis), because at that point options may become very limited.

Part of planning for any disaster includes a facility self-assessment of its own capacities, technical skills and flexibility to respond.<sup>12</sup> By preparing now, you increase the likelihood of your facility surviving the pandemic and minimizing the impact to staff, residents and your business. You may also be able to assist your community during the pandemic.

In our interconnected communities, it will be critical to help one another. There are a few ways in which you can do this:

### Self Sufficiency

The first thing that LTC facilities need to do is to prepare themselves for the impact of a moderate to severe pandemic of influenza — this will not be “business as usual.” Once the infection hits your community, you will likely experience:

- Disruptions to the supply chain for goods and services
- Decrease in staffing
- Difficulty in transferring residents to acute care facilities because these facilities will likely be operating well over capacity
- Higher levels of acuity within your resident population (both pandemic-infected residents and residents with illness/injury who normally would have been transferred to a hospital)

For these reasons, facilities need to plan on being far more self-sufficient than they currently are. How you will do this is covered in this *Workbook* under *Containment Strategies (p.22)* and *Sustainment Strategies (p. 46)*. Through effective infection control, you will prevent the inoculation of your population with the pandemic virus as long as possible. Through careful planning and implementation of your sustainment strategies, you will be able to manage most of your facility’s needs during a period of outbreak. Your ability to be self-sufficient will not only help your residents and staff, it will also help your community.

### Care of Sick Residents

During a pandemic, it is likely that the healthcare system will become saturated and that hospitals will be overwhelmed during the peak of the outbreak. There may come a point where you are told that you cannot transfer your sick residents to the hospital. Should this occur, you will need to be ready to manage the care of those residents whose clinical care needs may be greater than that which you typically provide. Plan with your Internal PI Committees and external emergency preparedness group on how you will manage the treatment of residents who may be suffering from respiratory complications, dehydration and other complications of pandemic influenza. Plan a system of collecting the most up-to-date clinical picture of the disease as this will help you to tailor your response. For example, with 2009 H1N1 influenza, some reports suggested that a third or even a half of the individuals infected with the virus showed no sign of a fever, and many had GI symptoms.<sup>13</sup> Skilled nursing facilities will probably be able to accommodate IV therapy, oxygen treatments and other special needs of these patients, but long term care facilities that have no medical or nursing personnel on a regular basis may be extremely

<sup>12</sup> More information as well as a tool for conducting a Hazard and Vulnerability Assessment (HVA) for your facility is available at <http://cahfdisasterprep.com/PreparednessTopics/AllHazardResourcesGuides.aspx>.

<sup>13</sup> CIDRAP. (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza’s Unpredictability*. Retrieved May 30, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).



challenged by a situation where their ability to transfer ill residents to higher acuity facilities/hospitals is reduced.<sup>14</sup>

There also may be non-influenza-related care issues (such as injuries) that in a normal situation would typically require a trip to the emergency room but during a pandemic event may need to be dealt with elsewhere. It is important to consider how you will manage these conditions if the situation arises where you cannot transfer residents out the the ER. Discuss this potential situation with your attending physicians. Talk to your medical consultants about what supplies you should keep in house to be ready to manage acute illness and injury.

In addition to following the advice of the medical and nursing consultants who serve these facilities, we recommend that all long term care facilities review *Good Home Treatment of Influenza* by Dr. Grattan Woodson, MD,<sup>15</sup> for advice on managing pandemic patients in a non-medical setting, which may be helpful for all types of facilities and settings.

### Surge Capacity

“Surge capacity” refers to the ability of the healthcare system to rapidly expand beyond its normal services to meet the increased demand for qualified personnel, medical care and public health in the event of a large scale disaster. “Surge capacity encompasses potential patient beds; available space in which patients may be triaged, managed, vaccinated, decontaminated or simply located; available personnel of all types; necessary medications, supplies and equipment; and even the legal capacity to deliver healthcare under situations which exceed authorized capacity.”<sup>16</sup>

Certain types of facilities, such as skilled nursing facilities (SNFs) that are licensed as a “distinct part” of a hospital, may be able to participate in a community-wide surge capacity plan once they have adequately planned for their own self-sufficiency. If you operate such a facility, consider participating in your community surge response during a moderate or severe pandemic.

Participating in a surge response may not be possible or appropriate for everyone — that is a decision that must be made at the individual facility level. Discuss with your city or county emergency preparedness group about what stockpiled supplies may be available to those facilities that are willing to take on a broader role within the community in a pandemic situation. This broader role may include:

- Taking hospital patients before the pandemic arrives in your community by accepting admissions of non-infectious patients whom hospitals are transferring out to make room for the predicted wave of pandemic patients. These would be the hospital’s less acute patients, but they may have a higher acuity than you are used to admitting.
- Participating as a “step-down” facility (from an acute care facility or a triage site) after the pandemic has arrived in your community. This could involve either providing care for recovering individuals before they are ready to go home or end-of-life care. Long term care facilities in California have been asked to take on this role during 2009 H1N1 pandemic influenza: the California Department of Public Health (CDPH) “recommends that 2009 H1N1 influenza patients being treated in an acute care hospital may be transferred to a long-term care facility (such as a skilled nursing facility) if medically appropriate, after they are free of fever (100° F [37.8° C] or greater) or signs of a fever for at least 24 hours without the use of fever-reducing medications.”<sup>17</sup>

In either scenario, unless the facility is adequately equipped and staff is trained on how to handle infectious persons, the patients you accept should be past the contagious stage.

<sup>14</sup> See *Altered Standards of Care* (p. 64) in this *Workbook* for more information.

<sup>15</sup> Grattan Woodson, MD, FACP, edited excerpt from *The Bird Flu Manual*, BookSurge Publishing SC, reprinted with permission. Copies can be downloaded at no cost from [www.BirdFluManual.com](http://www.BirdFluManual.com).

<sup>16</sup> Joint Commission on Accreditation of Healthcare Organizations (2003). *Healthcare at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems*. Retrieved April 23, 2007, from [http://www.jointcommission.org/PublicPolicy/Emergency\\_Preparedness.htm](http://www.jointcommission.org/PublicPolicy/Emergency_Preparedness.htm).

<sup>17</sup> CDPH (Feb. 4, 2010). *Infection Control Guidance for 2009 H1N1 Influenza in Long Term Care Facilities*. Retrieved June 4, 2010 from [www.cahfdownload.com/cahi/dpp/CDPH\\_InfectionControlGuidance2009\\_02042010.pdf](http://www.cahfdownload.com/cahi/dpp/CDPH_InfectionControlGuidance2009_02042010.pdf).



It is important to note that accepting patients who are beyond your licensed capacity or are of a higher acuity than you are currently licensed to care for could only be done under emergency permissions from the state and possibly federal government.<sup>18</sup>

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<sup>18</sup> The California Department of Public Health has developed standards and guidelines for healthcare surge capacity during large scale emergencies. The deliverables for this project include multiple *"Standards and Guidelines" manuals* (particularly vol. 1: *Foundational Knowledge*) with recommendations that will guide government decision-making for emergency orders, waivers and regulatory flexes that can be implemented in the event of a pandemic. This guidance can be found at: <http://bepreparedcalifornia.ca.gov/epo/cdphprograms/publichealthprograms/emergencypreparednessoffice/epoprogramsservices/surge/>.



# WORKSHEET I: PHASES OF PANDEMIC INFLUENZA WITH RECOMMENDED LTC ACTIONS

## World Health Organization Phases and US Federal Government Response Stages

We are currently (June 2010) in WHO Pandemic Phase 6, which is the Pandemic Period with disease spread in multiple countries in all WHO regions. This chart compares the WHO phases with the federal government phases and includes helpful actions for LTC providers to take in each phase.

WHO Phases		Federal Gov't Response Stages		Recommended Actions for LTC Providers
<b>INTER-PANDEMIC PERIOD</b>				
<b>1</b>	No new influenza virus subtype in humans, though one may be present in animals with a low risk to humans	<b>0</b>	New domestic animal outbreak in at-risk country	<ul style="list-style-type: none"> <li>Conduct emergency preparedness planning</li> <li>Conduct pandemic &amp; general infection control training and education (for staff, families, and residents)</li> <li>Conduct facility surveillance for influenza</li> <li>Post signs for respiratory hygiene/cough etiquette</li> </ul>
<b>2</b>	No new influenza virus subtype in humans, but a circulating animal strain poses a substantial risk of human disease			
<b>PANDEMIC ALERT PERIOD</b>				
<b>3</b>	Human infection(s) with a new subtype, but no or limited human-to-human spread	<b>0</b>	New domestic animal outbreak in at-risk country	<ul style="list-style-type: none"> <li>Refine facility EOP and Pandemic Annex (including establishing/updating contact with key public health, healthcare, OES, and community partners)</li> <li>Conduct facility surveillance activities</li> <li>Vaccinate residents and staff for seasonal influenza and pneumonia</li> <li>Stockpile recommended supplies (see <i>Worksheet IV: Suggested Pandemic Supply List</i>)</li> </ul>
		<b>1</b>	Suspected human outbreak overseas	
<b>4</b>	Small cluster(s) with limited human-to-human transmission—spread is highly localized suggesting virus is not well adapted to humans	<b>2</b>	Confirmed human outbreak overseas	
<b>5</b>	Large cluster(s) but human-to-human spread is still localized, suggesting virus is becoming increasingly well adapted to humans, but may not yet be fully transmissible (substantial pandemic risk)			
<b>PANDEMIC PERIOD</b>				
<b>6</b>	Pandemic phase: increased and sustained transmission in the general population <b>Continued on next page</b>	<b>3</b>	Widespread human outbreaks in multiple locations overseas	<ul style="list-style-type: none"> <li>Implement facility surveillance for new influenza strain (all incoming and previously admitted residents)</li> <li>Implement a system for early detection and treatment of healthcare personnel who might be infected</li> <li>Reinforce infection control procedures</li> <li>Accelerate staff training/cross training in accordance with the facility's Pandemic Annex</li> </ul>
		<b>4</b>	First human case in North America <b>Continued on next page</b>	<ul style="list-style-type: none"> <li>Implement activities to increase capacity, supplement staff and obtain supplies and equipment (contact your local jurisdiction for supply distribution updates, particularly if you are part of your local surge plan)</li> <li>Maintain close contact with healthcare facilities and with local health department</li> </ul> <b>Continued on next page</b>



# WORKSHEET I: PHASES OF PANDEMIC INFLUENZA (CONT.)

## World Health Organization Phases and US Federal Government Response Stages

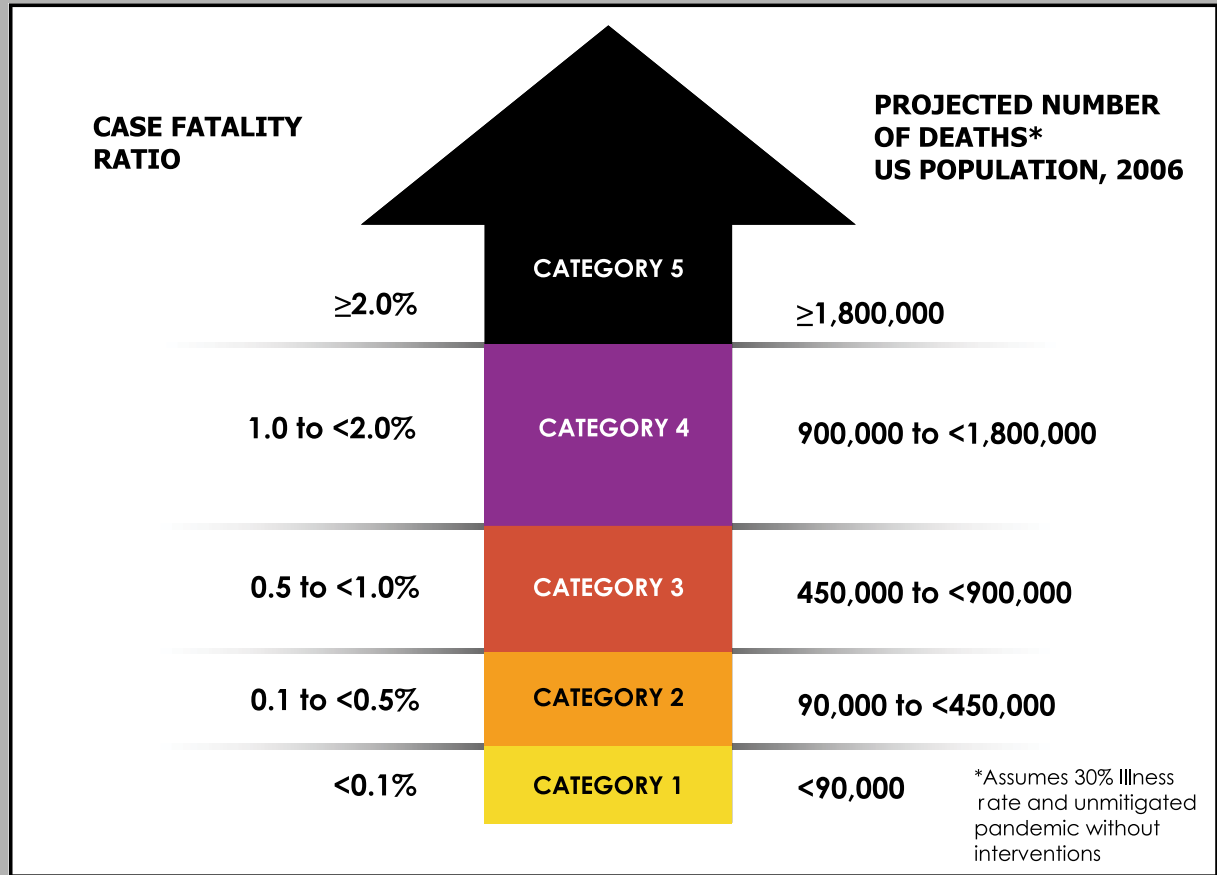
WHO Phases	Federal Gov't Response Stages	Recommended Actions for LTC Providers
<b>PANDEMIC PERIOD (continued from previous page)</b>		
<b>6</b> Continued from previous page Pandemic phase: increased and sustained transmission in the general population	<b>4</b> Continued from previous page First human case in North America	<b>Continued from previous page</b> <ul style="list-style-type: none"> <li>Maintain high index of suspicion that residents/staff presenting with influenza-like illness could be infected with pandemic strain</li> <li>Ensure that infection control signs and measures (such as hand sanitizer) are refreshed and highly visible</li> </ul>
	<b>5</b> Spread throughout United States	If the pandemic strain is detected within your facility (resident, staff, family member, etc.), implement the following: <i>At a minimum, implement Cal/OSHA's Aerosol Transmissible Disease Standard (CCR Title 8 § 5199)</i> <ul style="list-style-type: none"> <li>If present in a resident—implement droplet precautions for the resident and roommate(s) pending confirmation of pandemic strain infection</li> <li>Residents and roommates should not be separated or moved out of their rooms unless medically necessary—by the time a person is symptomatic, they have already been infectious for some time.</li> <li>Once a resident has been diagnosed with the pandemic strain, roommates should be treated as exposed cohorts</li> <li>Cohort residents and staff on units with known or suspected cases</li> <li>Limit movement within the facility (e.g., temporarily close the dining room and serve meals on nursing units, cancel social and recreational activities)</li> </ul>
	<b>6</b> Recovery and preparation for subsequent waves	

### ADDITIONAL CONSIDERATIONS

Precautions to take in the event of pandemic infection locally	<u>Limit/Control Access</u> <ul style="list-style-type: none"> <li>Limit number of visitors to those essential for resident support and well-being</li> <li>Screen all visitors at point of entry to facility for clinical signs and symptoms of influenza</li> <li>Limit points of entry to facility; assign clinical staff to provide entry screening</li> </ul> <u>Staffing practices</u> <ul style="list-style-type: none"> <li>Consider furlough or reassignment of pregnant staff and other staff at high risk for complications of influenza</li> <li>Consider re-assigning non-essential staff to support critical services, placing them on administrative leave, or allowing work from home</li> <li>Consider assigning staff recovering from the pandemic strain to care for your influenza patients</li> <li>As possible, provide staff with antiviral prophylaxis or vaccine following local distribution recommendations (participation in local surge planning may help you obtain limited supplies)</li> </ul>
Health Care Acquired Transmission	Infection in your facility: <ul style="list-style-type: none"> <li>Consider closing units where there has been nosocomial transmission</li> <li>Restrict new admissions (except other confirmed/suspected pandemic strain cases) to affected units</li> <li>Restrict visitors to the affected units to those essential for resident care and support</li> </ul>



# WORKSHEET II: PANDEMIC INFLUENZA SEVERITY INDEX & RECOMMENDED COMMUNITY INTERVENTIONS



Interventions by Setting	Pandemic Severity Index		
	Category 1	Categories 2 & 3	Categories 4 & 5
<b>HOME</b>			
Voluntary Isolation of the ill at home	Recommended	Recommended	Recommended
Voluntary quarantine of household members in homes with ill persons; consider this plus antiviral prophylaxis if effective, feasible and quantities sufficient	Gen. not rec.	Consider	Recommended
<b>SCHOOL</b>			
<b>Child social distancing</b>			
Dismissal of students from schools, school based activities; childcare closure	Gen. not rec.	Consider: $\leq 4$ weeks	Recommended: $\leq 12$ weeks
Reduce out of school contacts and community mixing	Gen. not rec.	Consider: $\leq 4$ wk.	Rec.: $\leq 12$ weeks
<b>WORKPLACE/COMMUNITY</b>			
<b>Adult Social Distancing</b>			
Decrease # of social contacts (e.g. encourage teleconferencing, non-face-to-face interaction)	Gen. not rec.	Consider	Recommended
Increase distance between people	Gen. not rec.	Consider	Recommended
Postpone/cancel selected public gatherings	Gen. not rec.	Consider	Recommended
Modify workplace schedules and practices (staggered shifts, telecommute)	Gen. not rec.	Consider	Recommended

Adapted from flu.gov (2007). Community Strategy for Pandemic Influenza Mitigation. Retrieved June 2010.



## Section Two: Clinical Overview

### Planning Assumptions

We do not currently know how infection with a new pandemic influenza virus will affect the human population, primarily because we do not yet know what specific virus will cause a pandemic. However, health professionals continue to be concerned that the current continued spread of a particular avian influenza virus (H5N1)<sup>19</sup> may still represent a pandemic threat.<sup>20</sup> In fact, it is unknown how or if 2009 H1N1 pandemic influenza will re-present itself in the Northern Hemisphere. As a result, the best we can do is make assumptions based on the history of past pandemics and current threats. All Pandemic Annexes (from the level of your individual organization through the county to the state and federal levels) must start with educated assumptions or our “best guess.” To give you some guidance on how to prepare for the disease, we have used historical information, information about the H5N1 virus now circulating among birds and some people in Asia, as well as parts of Africa, the Middle East, Europe, and observations of the currently circulating 2009 H1N1 pandemic influenza strain. While the H5N1 strain has only limited ability to spread from person to person, health officials are concerned because H5N1 is especially virulent, is being spread by migratory birds, can be transmitted from birds to humans, causes infection and death in humans, and continues to evolve.<sup>21</sup> Thus far there have been at least 498 H5N1 laboratory-confirmed human infections and 294 deaths. The pandemic strain 2009 H1N1 is also of some concern because it is possible the virus may return to the US for another wave of disease activity.<sup>22</sup> The following advice is based on these planning assumptions.

### PANDEMIC INFLUENZA VS. SEASONAL INFLUENZA

Influenza is a highly contagious disease, with a very brief incubation period lasting only a few days. Unfortunately, it is contagious even before any symptoms develop and continues to be contagious well into the period of clinical illness. Despite the contagiousness, not everyone gets very sick, and many cases are mild or even asymptomatic (without symptoms, despite infection).

It is not possible to predict with certainty the clinical differences between pandemic and seasonal flu. Both seasonal influenza and pandemic influenza are caused by an influenza virus. The newer a virus, the more impact it may have on a population. In the case of pandemic influenza, the human population may have no previous exposure to this particular virus and therefore may have no immunity to protect from infection. Because of this, healthy people can be at risk for serious complications from infection with pandemic influenza virus.

If an influenza pandemic occurs, current estimates suggest that approximately *30 percent of the entire human population will contract the disease*;<sup>23</sup> many of these people will become very sick. However, pandemics occur in waves over a period of months, so one-third of the population will not be sick all at once, and those who have recovered after the first wave will have developed immunity against that influenza strain. A person with immunity to a particular influenza strain cannot get sick from that strain again. Immunity can be gained either through infection or vaccination, although immuno-compromised individuals may not achieve full immunity even after exposure to the virus.

<sup>19</sup> CIDRAP (June 4, 2010). *News Scan: H5N1 Death in China, Blastomycosis in Wisconsin*. Retrieved June 6, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/jun0410newsscan.html](http://www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/jun0410newsscan.html).

<sup>20</sup> Time (Feb. 22, 2010). *After H1N1, Researchers Warn of Potential New Superbug*. Retrieved June 1, 2010 from [www.time.com/time/health/article/0,8599,1967118,00.html](http://www.time.com/time/health/article/0,8599,1967118,00.html).

<sup>21</sup> U.S. Department of Health and Human Services (2007). General Information Section, Federal Pandemic Influenza Web Site. Retrieved April 19, 2007, from [www.pandemicflu.gov/general/index.html](http://www.pandemicflu.gov/general/index.html).

<sup>22</sup> CIDRAP (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza's Unpredictability*. Retrieved June 6, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).

<sup>23</sup> Centers for Disease Control and Prevention (2007). *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States: Early, Targeted, Layered Use of Non-Pharmaceutical Interventions* (p. 10). Retrieved April 25, 2007, from: [http://www.pandemicflu.gov/plan/community/community\\_mitigation.pdf](http://www.pandemicflu.gov/plan/community/community_mitigation.pdf).





**Figure 1: Key Differences Between Seasonal Flu and Pandemic Flu**

Seasonal Flu	Pandemic Flu <sup>24</sup>
Occurs every year, mostly during the winter months.	Occurs three to four times a century and can occur in any season. May come in "waves" of flu activity that could be separated by months.
Affects 5-20 percent of the U.S. population.	Experts predict an infection rate of 25-50 percent of the U.S. population, depending on the severity of the virus strain.
Kills 500,000 to 1 million people each year worldwide; 36,000-40,000 die from flu in the U.S. annually.	The worst pandemic of the last century, in 1918, killed more than 500,000 people in the U.S. (at a time when the population was much smaller than now) and 50 million worldwide.
Most people recover in a week or two.	Usually associated with a higher severity of illness and consequently a higher risk of death or disability and complications, especially post-influenza pneumonia.
Deaths generally confined to at-risk groups, such as the elderly (over 65 years of age), the very young (children aged 6-23 months), those with existing medical conditions such as lung diseases, diabetes, cancer, kidney or heart problems, and people with compromised immune systems.	All age groups may be at risk for infection, not just high-risk groups. Otherwise fit adults could be at relatively greater risk, based on patterns of previous pandemics. For example, adults under age 35 (a key segment of the U.S. workforce) had the highest influenza death rates of any group during the 1918 pandemic. This is also true of the 2009 H1N1 pandemic influenza strain; 75% of H1N1 cases occurred in those age 30 and under, with the greatest incidence in the 10 -19 age-group. <sup>25</sup>
Vaccination is effective because the viral strain in circulation each year can be fairly reliably predicted and vaccine manufacturers have time to prepare for each year's flu season	A vaccine against pandemic flu will not be available at the start of a pandemic. New strains of the virus must be collected and identified before vaccine production can begin. The first doses of the vaccine may not be ready until six months or more after the strain is identified. Once a vaccine is available, it will be in limited supply. Decisions may have to be made on how to prioritize the distribution of vaccine within your facility, particularly for staff. Current Health and Human Services Department vaccine prioritization indicates that elderly in long term care and immunocompromised persons are not a priority group for vaccination. <sup>26</sup>
Antiviral drugs are generally available for those at greatest risk of serious illness.	Antiviral drugs may be in limited supply, and their effectiveness will only be known definitively once an actual pandemic is underway. Decisions may have to be made on how to prioritize antiviral medications within each facility, with reference to local, state and federal guidance. In 2007 HHS ranked the residents of long term care facilities sixth out of 11 priority groups to receive stockpiled antiviral medication for post-exposure prophylaxis and treatment (i.e. in response to an outbreak in a facility, antivirals may be given to treat influenza as well as distributed to asymptomatic residents to slow or halt the spread of the virus). <sup>27</sup>

<sup>24</sup> Adapted from Trust for America's Health and the American Medical Association (2005). "It's not the Flu as Usual." Retrieved May 17, 2007, from <http://healthyamericans.org/reports/flu/brochures/>.

<sup>25</sup> CIDRAP. (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza's Unpredictability*. Retrieved May 30, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).

<sup>26</sup> Elderly and immunocompromised persons are unlikely to be protected from the virus through vaccination and therefore have been excluded from the vaccine priority list. U.S. Department of Health and Human Services (May 15, 2007). *HHS Pandemic Influenza Plan, Appendix D*. Retrieved July 2, 2007. from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html).

<sup>27</sup> U.S. Department of Health and Human Services (May 15, 2007). *HHS Pandemic Influenza Plan, Appendix D*. Retrieved July 2, 2007 from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html).



## DISEASE PROFILE

### Signs and Symptoms

The signs and symptoms of influenza may vary, depending on the actual strain of the virus that causes the pandemic. Common symptoms include:

- High fever (although this is not necessarily characteristic of the 2009 H1N1 pandemic influenza strain)
- Shaking chills
- Severe body aches and muscle pain
- Headache
- Pain when eye movement occurs
- Fatigue
- Malaise (slowing down, lack of energy)
- Loss of appetite
- Dry and wet cough
- Runny nose
- Dry or sore throat
- GI symptoms (as noted in the 2009 H1N1 strain)<sup>28</sup>

In children, the symptoms may also include:

- Otitis media (ear infection/inflammation)
- Nausea
- Vomiting

It is important to note that symptoms have been reported in the on-going outbreak of avian influenza H5N1 that differ from the common ones listed above. These are:

- Watery diarrhea
- Profound shortness of breath
- Patchy areas revealed in the lung by X-rays

In the avian influenza H7 outbreaks (H7N3 in Canada in 2004<sup>29</sup> and H7N7 in The Netherlands in 2003),<sup>30</sup> one of the primary human symptoms was conjunctivitis (infection/inflammation of the outer layer of the eye and eyelids).<sup>31</sup>

Once the pandemic strain is identified, there will be widely available information about the particular symptoms that it causes. Check with your local public health department, the California Department of Public Health (formerly the California Department of Health Services) and the federal Centers for Disease Control and Prevention (CDC). The Web sites<sup>32</sup> of each of these organizations should have strain-specific information. See *Appendix C* for a list of Web sites referred to in this document.

<sup>28</sup> CIDRAP. (April 23, 2010). *H1N1 Lessons Learned: Pandemic Underscores Influenza's Unpredictability*. Retrieved May 30, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2310pandemic-jw.html).

<sup>29</sup> Centers for Disease Control and Prevention (Feb. 17, 2006). *Past Avian Influenza Outbreaks*. Retrieved April 1, 2007, from <http://www.cdc.gov/flu/avian/outbreaks/pdf/past.pdf>.

<sup>30</sup> Centers for Disease Control and Prevention (May 20, 2003). *Human Cases of Avian Influenza A (H7N7) Infection — The Netherlands, 2003*. Retrieved April 1, 2007, from [www.cdc.gov/flu/avian/h7n7-netherlands.htm](http://www.cdc.gov/flu/avian/h7n7-netherlands.htm).

<sup>31</sup> The reason it is important to review the common symptoms of seasonal influenza, as well as the more unusual symptoms that have been caused by avian influenza strains H5 and H7, to give us a starting point for our planning and preparedness efforts. If there is potential that a pandemic strain could cause extreme lung damage, we need to be ready for this. If a pandemic influenza strain turns out to cause watery diarrhea, it will be important to have a stockpile of incontinence supplies. Check the supply list worksheet for our recommendations on stockpiling for pandemic influenza.

<sup>32</sup> See *Appendix C: Useful Web Sites* (p. 89) in this *Workbook*.



### Clinical Course and Disease Incidence

The clinical course and disease incidence of a new pandemic influenza virus are largely unknown at this point and will be unknown until a new pandemic strain is identified. You should review your local public health department pandemic plan (often available on the county and/or public health department Web site and the California Department of Health Services Pandemic Influenza Preparedness and Response Plan <http://www.cdph.ca.gov/programs/dcdc/Pages/default.aspx>) in order to understand local and state-level planning for an influenza pandemic. There is also free modeling software called “FluSurge” available at <http://www.cdc.gov/flu/tools/flusurge/>. This software can help you predict the impact of a moderate or severe pandemic on your particular locale as you input specific variables.

Figure 2 shows the comparative impact of a moderate and a severe pandemic in the United States.

Figure 2:		
Potential Burden of a Pandemic in the U.S.		
	Moderate (1957-like)	Severe (1918-like)
Illness	90 Million (30%)	90 Million (30%)
Outpatient Medical Care	45 Million (50%)	45 Million (50%)
Hospitalization	865,000	9,900,000
ICU Care	128,750	1,485,000
Mechanical Ventilation	64,875	745,500
Deaths	209,000	1,903,000

### Complications

By far, the most likely complication of a flu pandemic is pneumonia, followed by respiratory compromise and failure. In the U.S. Department of Health and Human Services Pandemic Influenza Plan, health planners predict that 10 percent of those contracting influenza during the pandemic will develop post-influenza bacterial pneumonia. The exact clinical course, disease incidence and common complications cannot be predicted until the specific organism is known. However, as you can see in Figure 2, in a severe pandemic, the rates of hospitalization, ICU care and ventilation are all greatly increased compared with a moderate pandemic; in other words, the more severe the pandemic, the greater the risk of complications. Current hospital resources are inadequate to accommodate the projected increase in demand for inpatient services during a severe pandemic while continuing to provide care to severely ill non-influenza patients. This is why LTC facilities should prepare to treat critically ill residents within their facilities who would under normal circumstances be admitted to the hospital.

### Diagnostic Testing and Reporting

There are diagnostic (laboratory) tests that can be performed to identify influenza. When a pandemic influenza occurs, the local and state health departments will provide healthcare organizations with advice and decision-making on diagnostic testing for residents. Diagnostic testing will occur in the early phases of the pandemic, but once the pandemic is widespread, testing will be less frequent.

In LTC facilities, it is important to be alert to the signs and symptoms of influenza, whether during the regular flu season or a pandemic, and to report those symptoms to the resident’s physician as soon as possible. Early detection can reduce the spread of any type of influenza throughout your facility. It is also



important to be on the lookout for flu-like symptoms in staff or visitors who have recently returned from an area with known human cases of avian influenza H5N1<sup>33</sup>, or any other area with a novel influenza A virus or pandemic strain of influenza.

The CDC has developed recommendations for inpatient facilities with regards to seasonal influenza. These recommendations include developing a plan for collecting respiratory specimens and performing influenza screening using rapid diagnostic testing or immunofluorescence and viral cultures (although the viral culture is to measure changes in the virus and will not be helpful in clinical decision-making due to the prolonged wait for results) when there are clusters of respiratory illness or any suspected influenza in a patient or provider.<sup>34</sup>

If you suspect a novel influenza virus (one that is different from the currently circulating seasonal strains) in your facility, contact your local public health department — *Novel Influenza A continues to be on the national list of Reportable Diseases and Conditions.*<sup>35 36 37</sup>

### Transmissibility

Generally, influenza spreads mainly through the air, probably in droplet form, and is transmitted from person to person by sneezing, coughing, talking or by just breathing the same air in a room, bus, subway or other enclosed space. It is also spread by physical contact, touching any surface that may have live flu virus on it, including hands, recently-touched objects, door handles, telephones and so on. No one knows whether a new pandemic strain of virus will also have what is technically called “airborne spread,” which means small amounts of virus that can float through the air (independent of droplets) and make someone sick even if they were across a large room from a contagious person. The best idea is to plan for the worst-case scenario (a virus that has airborne, droplet *and* contact transmission) and hope for the best (a virus that does not have airborne transmission).

### PREVENTION AND TREATMENT

The best prevention of any type of influenza, either seasonal or pandemic, is by preventing exposure to persons sick with influenza — unexposed persons will not contract the disease. Strong attempts should be made to avoid exposure to people suspected of having influenza, whether residents, staff or visitors. Non-pharmaceutical methods of reducing exposure are discussed extensively below. Also discussed is information about vaccination and antivirals, two of the best ways of preventing or lessening the spread and severity of seasonal influenza but which have serious limitations in a pandemic situation.

Since post-influenza bacterial pneumonia is a common complication of pandemic flu, it is critical to ensure that all residents and staff of LTC facilities have up-to-date vaccination against Pneumococcal pneumonia with Pneumovax<sup>®</sup>. To help lower the risk of pneumococcal disease secondary to 2009 H1N1 influenza, the CDC recommends vaccinating:

- Children under 5 years of age (PCV7)
- Children and adults between the ages of 2 and 64 with high risk conditions (PCV23)
- All individuals over 65 years of age (PCV23)<sup>38</sup>

The CDC recommends re-vaccination after five years for immunocompromised individuals, including the elderly whose immune function becomes impaired.

<sup>33</sup> See [www.pandemicflu.gov](http://www.pandemicflu.gov) or [www.who.int/en](http://www.who.int/en) for the current disease incidence and case definition.

<sup>34</sup> Centers for Disease Control and Prevention (rev. Feb. 8, 2007). *Infection Control Guidance for the Prevention and Control of Influenza in Acute Care Facilities*. Retrieved April 3, 2007, from [www.cdc.gov/flu/professionals/infectioncontrol/healthcarefacilities.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/healthcarefacilities.htm).

<sup>35</sup> Visit <http://www.cdc.gov/ncphi/diss/nndss/phs/infdis.htm> for the complete national list of Notifiable Infectious Diseases. *Note: Avian influenza H5N1 is a novel influenza A virus, and so it, and any mutation of it, would need to be reported to your local public health department.* Check with your local public health department to understand all national, state and local reportable conditions.

<sup>36</sup> See *Appendix A: Communicable Disease Reporting* (p. 86) in this *Workbook* for additional important information you should know about reporting certain diseases and conditions to your local public health authority.

<sup>37</sup> Centers for Disease Control and Prevention (CDC) (2010). *Nationally Notifiable Infectious Diseases: United States 2010*. Retrieved on June 1, 2010 from [www.cdc.gov/ncphi/diss/nndss/PHS/infdis2010.htm](http://www.cdc.gov/ncphi/diss/nndss/PHS/infdis2010.htm).

<sup>38</sup> US Government (multi-agency influenza Web site, flu.gov). Retrieved June 8, 2010 from [www.flu.gov/individualfamily/vaccination/index.html#pneumococcal](http://www.flu.gov/individualfamily/vaccination/index.html#pneumococcal).



See *Appendix D: Preventing Pneumonia during Pandemic* (p. 92) for more information.

For information on influenza vaccination, please see *Section 3.4, "Vaccination for Influenza"* (p. 31)

Persons identified as having pandemic influenza should be isolated within the facility to the extent possible. In a more severe pandemic, they should be treated and cared for by staff, family members or friends who have as little contact as possible with other well residents or staff. In a moderate or low severity pandemic, they may be treated and cared for by staff who take contact and airborne precautions (gloving and masking with N-95 respirator or above being two of the most important safety measures). Fever should be treated with antipyretics such as acetaminophen (Tylenol®) or other fever medications. Hydration should be maintained with liquids by mouth if possible or IV if necessary.

See *Worksheet III: Oral Rehydration* (p. 20)

Pain may also be controlled to a great extent with acetaminophen or aspirin or other "anti-cold" medications. Consider stockpiling enough for six weeks (a minimum of two weeks is necessary, and ideally facilities should prepare for three months worth of supplies, including medication) with each resident receiving 600 mg ibuprofen (i.e., Advil®) every six hours and 650 mg acetaminophen (i.e. Tylenol®) every four hours either through pills, suppository or liquid. Be sure to check with the resident's physician before administering medication and understand the regulations (and how they might be flexed in an emergency) when attempting to stockpile medications.

See *Worksheet IV: Suggested Pandemic Supply List* (p. 21) of medications to consider stockpiling if you are able

Bed rest will be necessary. Respiratory distress and failure will have to be treated in a hospital setting, if available; otherwise facilities will have to do the best they can under the advice of physicians, nurses or nurse practitioners and public health officials. Antiviral medications, if available, may be helpful in treatment of those with active influenza infection, as well as persons exposed to the influenza virus. Before and during a pandemic, follow the advice of public health and governmental authorities.



## WORKSHEET III: ORAL REHYDRATION

### Oral Rehydration Solution

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#### PREVENTING DEHYDRATION IS CRITICAL!

If you suspect dehydration is developing, begin administering an oral electrolyte maintenance product such as Gatorade (for adults) or Pedialyte (for children), or use the simple home-made solution below:

- 1 quart clean water
- 1 level teaspoon table salt
- 3 tablespoons table sugar

*This can be drunk plain or with additional flavoring added, such as powdered drink mix from the grocery store or natural flavoring such as juice, tea, vanilla, cloves, cinnamon or mint.*

### Administering ORS to an Influenza Patient

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When an influenza patient is very weak, whichever solution you have chosen may need to be administered using a baby bottle or teaspoon. Persist until the patient has taken in at least 1 quart of fluids. This may take several hours.

Progress has been made when the patient becomes more alert and needs to urinate. Your patient will be very tired, and you need to allow him or her to sleep—however, don't stop pushing fluids with these very sick influenza patients.

*For more detail, see [Good Home Treatment of Influenza](#) by Dr. Grattan Woodson, available at [www.birdflumanual.com](http://www.birdflumanual.com).*



## WORKSHEET IV: SUGGESTED PANDEMIC SUPPLY LIST (IN ADDITION TO YOUR GENERAL DISASTER SUPPLIES)

### General infection control supplies

- Hand hygiene supplies (antimicrobial soap and ≥60% alcohol-based, waterless hand hygiene products)
- Facial Tissues
- Paper towels
- Heavy duty garbage bags
- Facility disinfectants (*see Worksheet X*)
- \*Positive air purifying respirators (PAPRs) or other equivalent

### Personal Protective Equipment

- Disposable N-95 respirators and surgical masks
- Face shields or goggles
- Gowns
- Gloves

### Respiratory care equipment

- Portable oxygen
- Regulators and flow meters
- Oxygen and ventilator tubing, cannulae, masks
- Suction kits
- Tracheotomy
- Vacuum gauges for suction and portable suction machines
- Ventilators
- Manual resuscitators (bag-valve mask)

### Medications (consider stockpiling a 6-week supply)

#### Over the Counter

- Nonsteroidal anti-inflammatory drugs (NSAIDS) such as ibuprofen 200mg—pill and liquid forms
- Acetaminophen (pills, suppository, liquid)
- Vasopressors such as diphenhydramine 25 mg and Robitussin DM or generic equivalent
- Loperamide 2 mg
- Meclizine 25mg

#### Prescription

- Antibiotics (consider ciprofloxacin, levofloxacin po and iv, vancomycin, piperacillin/tazobactam, ceftriaxone)
- \*Antivirals (oseltamivir, zanamivir as 2nd choice)
- Vaccines (seasonal influenza, pneumococcal, pandemic influenza strain vaccine *when it becomes available*)
- Benzodiazepines such as Valium, propofol
- Proton pump inhibitors
- Bronchodilators

### Food-type supplies

- Table salt
- Sugar
- Baking soda
- Caffeinated tea
- Bullion
- Pedialyte or similar (for children)
- Gatorade or similar (for adults)
- Clean water

### Mortuary supplies

*See Altered Std. of Care/Mass Fatality Care section*

- Morgue packs
- Plastic tarps (temporary screens, floor protection)
- Heavy rubber gloves
- Heavy rubber boots
- Unscented bleach or dry bleach used for swimming pool maintenance
- Basins
- Mops
- Buckets
- Cloths
- Labels or tags (for identification of the deceased)
- 20lbs/person sufficient to embalm 15% of your expected census of common roadway salt
- 20lbs/person sufficient to embalm 15% of your expected census of quick lime

### Other supplies

- Beds
- Stretchers/gurneys
- Syringes and needles (for vaccine administration)
- IV pumps & equipment
- Incontinence supplies (including adult diapers)
- Electronic thermometers
- An accurate scale to monitor weight loss
- Pill cutter
- Humidifier
- Automatic blood pressure cuff
- Cocoa butter (for suppositories and skin care)
- Petroleum jelly (lubrication of tubes, suppositories)
- 8 oz plastic baby bottles with rubber nipples
- Soda straws

*\* may not be possible/appropriate for all facilities*



## Section Three: Containment Strategies

Containment is a critical factor in preventing the spread of infectious diseases such as influenza. Many of the steps outlined below will benefit long term care facilities in reducing the spread and impact of seasonal influenza as well as pandemic influenza. For that matter, many of these same strategies can be applied to other infectious diseases with which long term care facilities need to be concerned.

One change in the way we respond to pandemic influenza came about as a result of practicing containment during the on-going 2009 H1N1 influenza pandemic. This change illustrated the importance of a multi-method approach (as we advocated in the first edition of the Workbook) was enhanced and organized by the CDC into a hierarchy of interventions to prevent infection spread. See Figure 3 below for more details.

### FIGURE 3. CDC's Hierarchy of Influenza Controls

1. **Elimination of Potential Exposures:** Eliminating the potential source of exposure ranks highest in the hierarchy of controls. Examples of interventions in this category include: taking steps to minimize outpatient visits for patients with mild influenza-like illness who do not have risk factors for complications, postponing elective visits by patients with suspected or confirmed influenza until they are no longer infectious, and denying entry to visitors who are sick.
2. **Engineering Controls:** Engineering controls rank second in the hierarchy of controls. They are particularly effective because they reduce or eliminate exposures at the source and many can be implemented without placing primary responsibility of implementation on individual employees. In addition, these controls can protect patients as well as personnel. Examples of engineering controls include installing partitions in triage areas and other public spaces, to reduce exposures by shielding personnel and other patients, and using closed suctioning systems for airways suction in intubated patients.
3. **Administrative Controls:** Administrative controls are required work practices and policies that prevent exposures. As a group, they rank third in the hierarchy of controls because their effectiveness is dependent on consistent implementation by management and employees. Examples of administrative controls include promoting and providing vaccination, enforcing exclusion of ill healthcare personnel, implementing respiratory hygiene/cough etiquette strategies, and setting up triage stations and separate areas for patients who visit emergency departments with influenza-like illness, managing patient flow, and assigning dedicated staff to minimize the number of healthcare personnel exposed to those with suspected or confirmed influenza.
4. **Personal Protective Equipment (PPE):** PPE ranks lowest in the hierarchy of controls. It is a last line of defense for individuals against hazards that cannot otherwise be eliminated or controlled. While providing personnel with appropriate PPE and education in its use is important, effectiveness of PPE is dependent on a number of factors. PPE is effective only if used throughout potential exposure periods. PPE will not be effective if adherence is incomplete or when exposures to infectious patients or ill co-workers are unrecognized. In addition, PPE must be used and maintained properly, and must function properly, to be effective.<sup>39</sup>

<sup>39</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 1, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#h](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#h).





*It should be recognized that individual interventions may have a level of importance different from that suggested by their classification within the hierarchy of controls. For example, vaccination is an administrative control that depends upon the actions of both management and employees. However, vaccination is one of the most important interventions for preventing transmission of influenza.<sup>40</sup>*

## SURVEILLANCE AND DETECTION

**Before the pandemic:** Keep alert to the news and any announcements from public health authorities regarding both avian and pandemic influenza. Report any unusual illnesses (including novel influenza A viruses) in your facility to public health and follow their guidance. See *Appendix A: Communicable Disease Reporting* (p. 86) for more details.

**During the pandemic:** During a pandemic, local public health will issue guidelines for reporting cases and conducting surveillance—follow this guidance.

## NON-PHARMACEUTICAL CONTAINMENT

Non-pharmaceutical containment refers to the measures that you can take to contain the spread of disease within your facility without the use of pharmaceuticals such as vaccine or antivirals.

**Before the pandemic:** All planning must occur in the “pre-pandemic” period. Understand and use infection precautions and learn about what you might expect to occur if a pandemic arrives. Before the pandemic is the time to develop policies, procedures and training materials for containment strategies. Decide, plan and practice the items given under the following “During the Pandemic” sections pertinent to this area of planning. A key task you can perform now is to decide on the “trigger” for the implementation of non-pharmaceutical containment measures.

### Triggers

- Decide on what events will “trigger” the implementation of your non-pharmaceutical containment measures and other aspects of your Pandemic Annex of your disaster plan.
- After the pandemic outbreak, no matter where in the world this occurs, experts predict that it will be virtually everywhere within one month, so this should be the trigger for activation of the Pandemic Annex of your facility disaster plan.
- A report of pandemic influenza anywhere in the state is a logical trigger for implementing full infection-control measures within your facility, which includes restricting access to it by visitors and canceling all unnecessary travel by residents outside the facility.

### During the pandemic:

1. **Reduce Social Interactions:** Reduce exposure to other persons, whether they are known to be sick or not, wherever possible. Reduce social interactions where possible; avoid crowds, public transport, crowded events, schools, emergency rooms, theaters, group picnics, etc. Anyone can give the flu to anyone else, and therefore limiting contact with others helps to minimize risk. Use common sense and avoid panic. If you are responsible for the care of others or are being cared for by others or are conducting a vital service for others, you should continue to do so whenever possible, using precautions described above. If your facility is participating in a higher level of surge capacity (see p. 9) and admitting non-infectious patients from the hospital, you still want to make a reasonable attempt to keep all residents distanced from one another within your facility. There may be some residents of LTC facilities who, in a pandemic, will be able to go to a family home, to stay with friends or to stay in a smaller or less crowded facility where more protection from infection can be afforded. These are important considerations for facilities, residents and families that can be decided well in advance of any outbreak

<sup>40</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 7, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#).



of pandemic flu in your locality. Reducing your census by implementing previously identified discharge plans for those individuals who can go to an alternate placement could help to make the situation more manageable from an infection control and staffing perspective.<sup>41</sup>

- 2. Shelter in Place:** As the name suggests, this concept refers to the fact that the preferable place for people in a difficult situation like a pandemic is usually in their *normal living situation*, at “home” in a long term care facility. Consider where the best care and shelter are available for your residents at the time of the outbreak and plan to stay there until the pandemic is over.

Planning carefully for disruptions in your supply chain and staffing patterns will increase your chances of being able to weather a moderate or severe pandemic without having to close your facility.<sup>42</sup> It is important, however, to have contingency plans should the situation become unmanageable. What if you have to close due to difficulties maintaining staffing levels? Is there an alternate place to go? How will you transport your residents, staff, equipment and supplies? Individual facilities should openly discuss and plan for these contingencies with their community/county emergency preparedness workgroup and be prepared to revise plans should the fundamental situation change.<sup>43</sup>

- 3. Self-Isolation Concept:** Keep sick<sup>44</sup> visitors and staff out of the LTC facility. This is both very important and very difficult. Signs and placards must be posted at all entrances. Families, friends, delivery people, repair people and staff must all understand and respect this goal. Persons who have been exposed to flu or who reasonably suspect that they have been exposed should also stay out of the facility.

**The right message to give all visitors and staff is: “If you have the flu or if you think you might have the flu or if you have been exposed to someone who has the flu (or even if you have been exposed to someone who became ill within two days of your exposure to them), PLEASE STAY OUT. If you MUST enter, please wear a mask, wash your hands frequently and avoid breathing or coughing/sneezing near anyone else. Please leave as soon as possible.”**

Again, remember that any signs you post should be posted in all the languages spoken by residents, families, staff and delivery people. If you are asking people entering the facility to wear a mask, they may be expecting you to provide them with masks. Have a box of surgical masks handy at all entrances for this purpose.

All essential visitors to the facility should be required to wash their hands upon entry and don a surgical mask to prevent unintended spread of influenza or other infectious disease by an infected but asymptomatic person to the facility’s residents. If the visitor will be touching a resident, consider supplying other contact barriers as well. After pandemic outbreak, under no circumstances should children 12 years of age and younger be permitted to enter the facility.

Cancel all unnecessary travel by residents outside the facility. Ideally, residents leaving the facility after this point should wear a properly fitted N-95 respirator mask (if they can tolerate a respirator) and latex gloves the entire time they are away from the facility and should strictly limit their contact with other people during their trip. If the resident

<sup>41</sup> See *Staff Preservation* (p. 55) in this *Workbook* for more information.

<sup>42</sup> See *Supplies* (p. 54) in this *Workbook* for more information.

<sup>43</sup> See *Business Continuity Planning* (p. 53) in this *Workbook* for more information.

<sup>44</sup> “Sick” means sick with flu or anything that resembles flu, like acute colds, coughs, fevers, feeling quite ill. It does not mean ill with a different, clearly diagnosed noninfectious disease, such as asthma, diabetes, allergies, etc.



cannot tolerate a respirator, a surgical mask is a good alternative, although it will offer less protection than a fit-tested N-95.

### ***Handling New Admissions During “Self Isolation”***

When pandemic outbreaks occur in your area, you will need to make decisions about whether to continue to accept new admissions. Plan to screen new admits for a history of exposure and/or signs and symptoms of pandemic influenza, before accepting them into the facility. Follow guidance for the California Department of Public Health (CDPH), federal Centers for Disease Control and Prevention (CDC) and your local health department for laboratory testing as part of this screening.<sup>45</sup> Alternately, you may also decide that while new pandemic cases are occurring in your geographical area, you will close your facility to new admissions.

As discussed earlier in this *Workbook*, LTC facilities, especially ones such as skilled nursing facilities with licensed medical and nursing staff, may volunteer or be asked by public health officials to participate in the “surge” response in their community by taking non-infectious hospital patients once the hospitals become full.<sup>46</sup> If your facility is asked to be available during a pandemic to take in non-infectious patients, consider this request very carefully. Ensure that your facility is at a level of preparedness that enables it to sustain this additional load. This type of capability may only be applicable to certain highly prepared facilities, including those that are a distinct part of a hospital.

To safely manage any new admits during a pandemic influenza outbreak will require aggressive planning and preparation of your facility involving all of the infection control strategies that have been discussed in this *Workbook*. Be sure that you are included in your city and county planning for local allocations for PPE, vaccines, antivirals and other medicines, emergency personnel, other surge supplies and resources that are being collected in your local area.

#### **4. Isolation and Quarantine: Limit the Access of Exposed or Sick Persons:**

“Isolation” means the separation of persons with actual flu. “Quarantine” refers to the separation of those who have been exposed or are likely to have been exposed to the pandemic influenza virus. The idea of both of these concepts is to break the chain of transmission as soon as possible. If staff are sick or have been exposed, they should separate themselves from non-sick and non-exposed people — they should stay home and stay away from their own families and friends as much as possible until they have recovered from their sickness or the incubation period has passed and they have not gotten sick. They should not re-enter the facility until they are well. The same is true for anyone who is likely to visit the facility. People who enter the facility inadvertently and find they are sick after arriving or within two days of leaving should let the facility know that the exposure has occurred, and the facility should attempt to quarantine (separate) the exposed persons. This may become impossible, if the exposure was broad within the facility. Be sure to communicate this message to visitors, staff and delivery people.

Isolation may also be recommended for patients exhibiting influenza-like illness during a pandemic. In addition to personal protective equipment measure (as described on p. 21), CDC guidance may advise (as it is for 2009 H1N1 influenza) placing them in an individual room with the door closed, where medically appropriate. Precautions for entry into the patient room should be posted on the door. Once roomed individually, patients should continue to practice respiratory hygiene and cough etiquette. When

<sup>45</sup> See *Appendix C: Useful Web Sites* (p. 89) in this *Workbook* for these links.

<sup>46</sup> See *Surge Capacity* (p. 9) under *1.6 Planning for Influenza* in this *Workbook* for the definition and additional details.



a single patient room is not available, consultation with infection control personnel is recommended to assess the risks associated with other patient placement options (e.g., cohorting, keeping the patient with an existing roommate).<sup>47</sup>

It is recognized by the California Department of Public Health (CDPH) that “although the current CDC guidance recommends a single patient room when feasible for 2009 H1N1 influenza patients, it is recognized that vacant single rooms are of limited availability in a long term care facility. The risk of transmission to a roommate of a 2009 H1N1 influenza patient depends upon the degree to which they have been in close contact with the infected resident at the time of onset of their illness. If the roommate is already infected, moving the roommate may further spread the disease. Therefore, decisions to move 2009 H1N1 influenza patients or their roommates should consider the risk of infection to the roommate as well as other consequences of the move.”<sup>48</sup>

- 5. When Quarantine Must Occur Within a Facility:** If a definite exposure has occurred in a limited part of the facility, with, for example, just a few residents, these individuals should be kept apart from the rest of the population as effectively as possible. This may mean keeping them in their own rooms, while also quarantining roommates who would also have been exposed to the quarantined individuals. This is a cumbersome process but is essential for limiting risk of infection within the facility.
- 6. Cohort the Sick in a Section of the Facility:** The placing together of patients in a care facility who have like symptoms and/or diagnosis for the purposes of infection control and efficiency is considered by some to be an extreme measure for an LTC facility to employ. However, when used early in the course of the pandemic and applied comprehensively, it can very effectively reduce the spread of influenza and its complications within the facility. This measure is usually only used in acute care hospitals with a specific physical layout and highly trained staff but can be adapted to the LTC facility.
- 7. Length of Time for Precautions:** Follow the advice elsewhere in this Workbook and the guidance public health officials will give you during a pandemic outbreak regarding the duration of the above precautions. Certain precautions need only remain in place while there are sick individuals in your LTC facility. Others may need to remain as long as there is new pandemic influenza activity in your broader community. Local public health will help you determine how long each measure should remain in place. Assure that food, water and utilities remain available as long as possible before breaking the isolation. Until and unless the flu gets into the facility and creates an internal outbreak, it is worth continuing to protect the residents, staff and their families from external introduction of the virus.

## GENERAL INFECTION CONTROL

General infection control measures are some of the most important steps your facility can take, and taking these measures is something that you can do right now. It is important to educate, post appropriate signs and remind all staff, all visitors and all residents to practice hand hygiene and respiratory etiquette. Because these measures may be complied with incompletely, it is even more important to rely on other strategies as well (see Figure 3 for more information). With some infectious diseases, including pandemic influenza, the use of masks, gloves and other barriers will help decrease disease transmission. Always keep the facility clean, sanitized and free of garbage.

<sup>47</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 7, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#h](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#h).

<sup>48</sup> CDPH (Feb 4, 2010). *Infection Control Guidance for 2009 H1N1 Influenza in Long Term Care Facilities*. Retrieved June 7, 2010 from [http://www.cahfdownload.com/cahf/dpp/CDPH\\_InfectionControlGuidance2009\\_02042010.pdf](http://www.cahfdownload.com/cahf/dpp/CDPH_InfectionControlGuidance2009_02042010.pdf).



See *Worksheet V: Infection Control Overview for Pandemic Influenza* (p. 35) for more details about how you can reduce the risk of infectious disease in your facility.

For example, for the currently circulating strain of avian influenza H5N1, it is recommended that full infection control measures remain in effect for seven days after the resolution of fever for adults >12 years and for 21 days after the onset of illness in children ≤12 years and immunocompromised adults. For 2009 H1N1 pandemic influenza, patients in a healthcare setting are instructed to follow a longer duration of isolation precautions than the general population. The CDC instructs, "Isolation precautions for patients who have influenza symptoms should be continued for the 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer, while a patient is in a healthcare facility."<sup>49</sup>

For staff who become ill or symptomatic with 2009 H1N1 pandemic influenza, the CDC guidelines instruct the following:

### Health Facility Guidelines for Sick Workers (Presumed or Confirmed 2009 H1N1 Influenza)<sup>50</sup>

#### 1. Healthcare personnel who develop a fever and respiratory symptoms should be:

- Instructed not to report to work, or if at work, to promptly notify their supervisor and infection control personnel/occupational health.
- Excluded from work for at least 24 hours after they no longer have a fever, without the use of fever-reducing medicines.
- All healthcare workers (including those described in 3 and 4 below) should be reminded of the importance of practicing frequent hand hygiene (especially before and after each patient contact) and respiratory hygiene and cough etiquette after returning to work following an acute respiratory illness.
- If returning to work in areas where severely immunocompromised patients are provided care, considered for temporary reassignment or exclusion from work for 7 days from symptom onset or until the resolution of symptoms, whichever is longer.\*

#### 2. Healthcare personnel who develop acute respiratory symptoms without fever should be allowed to continue or return to work unless assigned in areas where severely immunocompromised patients are provided care.

In this case they should be considered for temporary reassignment or exclusion from work for 7 days from symptom onset or until the resolution of symptoms, whichever is longer.\*

#### 3. Facilities and organizations providing healthcare services should:

- Ensure that sick leave policies for healthcare personnel (e.g., staff and contract personnel) are flexible and consistent with public health guidance and that employees are aware of the policies.<sup>51</sup>
- Ensure that sick employees are able to stay home without fear of losing their jobs.
- Consider offering alternative work environments as an accommodation for employees at higher risk for complications of 2009 H1N1 influenza during periods of increased influenza activity or if influenza severity increases.
- Not require a doctor's note for workers with influenza to validate their illness or return to work.

\*NOTE: Clinical judgment should be used for personnel with only cough as a symptom, since cough after influenza infection may be prolonged and may not be an indicator of viral shedding. Healthcare personnel recovering from a respiratory illness may return to work with immunocompromised patients sooner if absence of 2009 H1N1 viral RNA in respiratory secretions is documented by real-time reverse transcriptase-polymerase chain reaction (RT-PCR).

<sup>49</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings*, including Protection of Healthcare Personnel. Retrieved June 1, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#h](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#h).

<sup>50</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings*, including Protection of Healthcare Personnel. Retrieved June 1, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#h](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#h).

<sup>51</sup> See [www.cdc.gov/h1n1flu/business/guidance](http://www.cdc.gov/h1n1flu/business/guidance) for more information on developing policies for staff. Also see page 46 of this Workbook, "Sustainment Strategies".



During any pandemic, check with your local public health department or the CDC for current information on the route of transmission (i.e. airborne, droplet, etc.), the level of protection required and the infectious period. This will give you the specific information for implementing your infection control practices and planning for the stocking and disbursement of supplies.

Start implementing good infection control strategies now because they take a little practice. It is better for people to get used to modifying their behavior (cleaning their hands more regularly, coughing and sneezing into a tissue or into their sleeve) before there is an infectious disease outbreak, and these simple steps can greatly reduce the likelihood of having most infectious diseases spread throughout your facility.

### **Hand Hygiene**

Hand washing and sanitizing are critical to reducing the spread of any disease, and it is particularly important to practice good hand hygiene with influenza and influenza-like illnesses. Encourage staff, residents and all visitors to wash their hands frequently, especially when they are visibly soiled or have come in contact with mucous or other bodily secretions. When soap and water are not readily available, use an alcohol-based (60-percent alcohol) hand sanitizer when hands are not visibly soiled. If hands are visibly soiled, they must be washed with soap and water. Post reminder signs throughout your facility in the appropriate languages and establish and maintain hand hygiene stations throughout the facility stocked with hand sanitizer dispensers. You will be surprised how much hand hygiene improves when hand sanitizers are widely available! Remember, lots of hand washing or hand sanitizing can dry your hands, so it is important to keep them moisturized in order to prevent small cracks in the skin.

See *Worksheet VI: Sample Hand Washing Poster (p. 36)* — you can use this or draw from it to make your own

See *Worksheet VII: Sample Hand Sanitizing Poster (p. 37)*

Healthcare workers providing direct care for patients/residents with suspected or confirmed influenza should wear gloves. In a pandemic, for certain non-patient care related tasks, consider using another type of barrier, such as paper towels. This will help reduce the need for gloves, making them less of a scarce resource. Tasks that may be performed this way include picking up used tissues.

### **Respiratory Etiquette**

Respiratory etiquette is another good infection control strategy that all staff, visitors and residents should practice. Teach / remind all these groups about the “sleeve sneeze” and coughing into your elbow if you don’t have a tissue available. These practices reduce the amount of infectious material on your hands, which reduces the spread of the virus around the facility. Post signs in visible locations throughout your facility and provide tissues and wastebaskets. Make sure that signs are language-appropriate for your staff, visitors and residents.

See *Worksheet VIII: Sample Respiratory Etiquette Poster (p. 38)*

Keep tissues readily available throughout the facility and teach residents, staff and visitors the importance of throwing the used tissues into a trash receptacle immediately after use. If a resident is coughing, consider putting a surgical-type mask on the resident when he/she is in a group — but only if the resident can tolerate wearing the mask and it does not interfere with breathing. This will help decrease the spread of droplets to others by coughing.

### **Social Distancing**

Influenza is transmitted by droplets from the respiratory system, especially when you cough or sneeze, but can even be transmitted through speaking or singing. These droplets usually do not travel more than three feet from the person coughing, sneezing, etc., and therefore, keeping a “social distance” of three to six feet among the residents can reduce the spread of influenza, whether seasonal or pandemic. To accomplish this, long term care facilities could consider rotating times in common areas so they are not as crowded and placing residents at least three feet apart at meal times or during therapy.



## Contaminated Surfaces

It is critical to clean all surfaces that you suspect could be contaminated by a pandemic strain of influenza or an infectious disease. Increase the frequency of wiping down and disinfecting frequently-touched surfaces such as counters, table tops, door knobs, telephones, TV knobs, computer keyboards, etc. (see Worksheet IX, p. 39, and Worksheet X, p. 40, on environmental cleaning.) Also consider “soft,” or porous, surfaces such as linens, pillows, and furniture coverings and keep these items laundered as much as possible.

See *Worksheet IX: Environmental Cleaning and Disinfection* (p. 39)

See *Worksheet X: Environmental Cleaning and Disinfection Products* (p. 40). (Note: Influenza is an enveloped virus, so review the items in that category to see which cleaning products will be most effective in a pandemic.)

## Personal Protective Equipment, Including Masks

Personal protective equipment (PPE) plays an important role in reducing the spread of infectious diseases. PPE appropriate for healthcare worker use in long term care facilities includes gloves, gowns, masks and goggles/face shields. In the case of pandemic influenza, until the route of transmission is determined, it is recommended that **healthcare providers:**

- Practice good hand hygiene.
- Use gloves, gown and dedicated equipment.
- Use goggles or face shield.
- Use a respirator (mask) rated N-95 or higher for healthcare workers, cleaning staff and/or susceptible persons when coming within three to six feet (strain-dependent) of a suspected or confirmed case.<sup>52</sup>

In addition:

- To further reduce the risk of transmission, a facemask should be worn by any residents or visitors with respiratory illness consistent with influenza. If a facemask cannot be tolerated, they should be instructed to cover their mouth and nose while coughing/sneezing.<sup>53 54</sup>

See *Worksheet XI: Personal Protective Equipment for Pandemic Influenza* (p. 42) for more information about N-95s and surgical masks.

See *Worksheet XII: Sample Poster on How to Correctly Don an N-95 Respirator* (p. 43)

For healthcare personnel in close contact (6-feet or less) of suspected or confirmed cases of 2009 H1N1 pandemic influenza, the CDC and the California Department of Public Health recommend the use of a fit-tested N-95 or higher respirator,<sup>55</sup> as well as non-sterile gloves for any contact with potentially infectious material, followed by hand hygiene immediately after glove removal. In addition, the guidance specifies gowns and eye protection for any activity that might generate splashes of respiratory secretions.<sup>56</sup> The respiratory protection guidance particularly “applies uniquely to the special circumstances of the current 2009 H1N1 pandemic during the fall and winter of 2009-2010.”<sup>57</sup>

The CDC recognizes that there is a potential for N-95 shortages, as we have seen during peak times of 2009 H1N1 infection. If there is a shortage of N-95 or higher respirators, surgical masks should be made

<sup>52</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 6, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#).

<sup>53</sup> *ibid.*

<sup>54</sup> CDC (August 1, 2009). *Interim Guidance for the Use of Masks to Control Influenza Transmission*. Retrieved June 11, 2010 from [www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm).

<sup>55</sup> CDPH (Feb. 4, 2010). *Infection Control Guidance for 2009 H1N1 Influenza in Long Term Care Facilities*. Retrieved June 6, 2010 from [http://www.cahfdownload.com/cahf/dpp/H1N1-ICGuidanceHealthCareSettings\\_Feb2010.pdf](http://www.cahfdownload.com/cahf/dpp/H1N1-ICGuidanceHealthCareSettings_Feb2010.pdf).

<sup>56</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 6, 2010 from [http://www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#).

<sup>57</sup> *ibid.*



available to healthcare workers who are not provided a respirator and who provide care to suspected and confirmed 2009 H1N1 influenza cases.<sup>58</sup> Always check for current recommendations for transmission based precautions. Special care should be exercised when performing any aerosol-producing procedure. Discuss any types of treatments, including nebulizer use, with the ordering physician and refer to current guidance available on the CDC Web site. Upon exiting the room, always ensure the proper removal and disposal of all personal protective equipment in a receptacle for infectious wastes.

### **CAHF's Model Respiratory Protection Program for Long Term Care Facilities**

In June 2009, the California Association of Health Facilities developed a Model Respiratory Protection Program (MRPP) "to provide skilled nursing facilities and other long term care providers with tools and information needed to set up a respiratory protection program for their employees". By implementing the MRPP when it is needed, individual facilities will be able to reduce or limit morbidity, mortality, and the spread of disease among staff and patients. In California, LTC facilities are not required to have an on-going respiratory protection program for employees because they are considered by Cal/OSHA to be "referring employers". This means that, under normal circumstances, they will transfer out a resident with a suspected or confirmed case of aerosol transmissible disease within 5 hours to a facility that can manage respiratory isolation. But LTC facilities must still protect the staff that are caring for those residents while awaiting transfer, and, in a pandemic, this could be much longer 5 hours. For this reason, CAHF recommends that all LTC facilities be equipped with the knowledge and policies they need to implement a respiratory protection program quickly should the situation warrant. The MRPP provides information, training modules, sample policies and forms that will give providers the basics they need to set up this kind of program."<sup>59</sup> Two resources are provided free of charge on the Web site — a manual, and policies and administrative tools.

It should also be noted that Cal/OSHA has released (released October 22, 2009) the *Aerosol Transmissible Disease Standard* (CCR Title 8 §5199. Aerosol Transmissible Diseases), which includes provisions that apply to LTC facilities as "referring employers". This standard addresses employee protections from pandemic influenza and also has broader application to other droplet and airborne spread diseases. These requirements apply to staff that are at risk for occupational exposure to any airborne transmissible disease, and all LTC facilities are encouraged to review and incorporate the applicable elements of this standard into their facility occupational health policies and practices.<sup>60</sup>

See *Worksheet XIII: Sample Poster on How to Correctly Don Personal Protective Equipment* (p. 44)

See *Worksheet XIV: Sample Poster on How to Correctly Doff Personal Protective Equipment* (p. 45)

You will need to develop policies and procedures for determining who will be allowed to use the different types of personal protective equipment in a pandemic situation, particularly making sure that you plan for running short of protective supplies. Keep in mind that while PPE is inexpensive and widely available during non-peak influenza times, soon after the arrival of a pandemic, alcohol gel hand sanitizer, surgical masks, N-95 respirator masks and even latex gloves will very likely become scarce or even impossible to obtain. Preparing to cope with shortages of essential supplies like these needs to be part of all LTC facilities' Pandemic Annexes.

It is also important to consider the fact that direct care staff are not the only ones who come in close contact with the virus; for example, housekeeping staff are an at-risk group vital to your continued operations. Consider all the different types of staff within your facility that might need access to personal protective equipment to keep your facility functioning.<sup>61</sup>

<sup>58</sup> *ibid.*

<sup>59</sup> CAHF (June 2009). *Model Respiratory Protection Program* (Web site summary). Retrieved June 25, 2010 from <http://cahfdisasterprep.com/PreparednessTopics.aspx>.

<sup>60</sup> Cal/OSHA (October 23, 2009). *Cal/OSHA Interim Enforcement Policy on H1N1 and Section 5199* (Aerosol Transmissible Diseases). Retrieved June 27, 2010 from <http://cahfdisasterprep.com/PreparednessTopics/PandemicInfluenza/H1N1UpdatesDirectives.aspx>. Entire regulation available at [www.dir.ca.gov/title8/5199.html](http://www.dir.ca.gov/title8/5199.html).

<sup>61</sup> See *Staff Preservation* (p. 46) in this *Workbook* for more discussion and additional considerations.





## VACCINATION FOR INFLUENZA

Influenza transmission and illness can be dramatically reduced when a vaccine is available and vaccination guidelines are carefully followed. Your staff will be the most likely to directly benefit when vaccine is offered, although your residents will indirectly benefit from reduced exposure. One to two simple inoculations by IM injection or nasal spray will reduce the number of persons who become infected and therefore will reduce the number of persons who are actively spreading the infection to others. Additionally, the vaccine is likely to reduce the *severity* of the clinical symptoms in those individuals receiving vaccine, even if it does not completely prevent infection in all cases.

**Before the pandemic:** This section discusses three different influenza vaccines: one that currently exists for the multiple types of seasonal flu, a currently available vaccine for 2009 H1N1 pandemic influenza, and one that will need to be developed in response to any new pandemic-causing strain of influenza.

### ***Vaccines for Seasonal Flu and 2009 H1N1 Pandemic Influenza Strain***

Most public health experts believe that “a vaccine that is effective against circulating influenza viruses [i.e. regular seasonal flu vaccination] is the best public health intervention to prevent influenza.”<sup>62</sup> While long term care facilities are advised to follow the CDC’s hierarchy of intervention strategies on page 15 of this Workbook, facility management should plan to administer the seasonal flu vaccine annually (as recommended by CDC), and any available vaccine for a pandemic strain as well. The CDC noted a caveat in their hierarchy of influenza intervention strategies: although “promoting and providing vaccination” is listed under “Administrative Controls” (second to last in the hierarchy), this is only because it relies on the compliance of individuals, making it less reliable as a community strategy. Despite this, the CDC advises, “vaccination is one of the most important interventions in preventing the transmission of influenza.”<sup>63</sup>

On February 24, 2010, the CDC’s Advisory Committee on Immunization Practices (ACIP) voted to expand the recommendation for annual seasonal flu vaccination to include all people 6 months of age and older this coming flu season, rather than their usual recommendation of vaccinating people in priority groups and, with remaining vaccine, any individual interested in becoming vaccinated. In addition, ACIP also recommended a “universal” vaccine, one that offers protection from the 2009 H1N1 pandemic strain of influenza as well as 2 other seasonal flu viruses.<sup>64</sup>

### ***Vaccine for a New Pandemic-Causing Strain of Influenza***

Prior to the start of a new pandemic, and for some six months into it, no vaccine will be available for that particular pandemic-causing strain of influenza. When a vaccine becomes available, it will be in very limited supply and not available to the whole population at once. Public health authorities have established priorities for the use of the vaccine in various segments of the population, and you can expect these priority vaccination groups to be tailored to fit the need of the population for the particular strain of influenza causing the pandemic. It is expected that healthcare personnel, first responders or government authorities will have first priority to receive the vaccine when it becomes available. Your facility should develop internal protocols for the prioritization of vaccine among staff so that you will be ready once there is a vaccination available. Elderly and immune-compromised persons may have a lower level of priority on the list because they are unlikely to be protected by vaccination.<sup>65</sup>

<sup>62</sup> 1918 and 2009: *A Tale of Two Pandemics*. Redd, MD, Stephen C., and Thomas R Friedman, MD, MPH, Anne Schuchat, MD, and Peter A Briss, MD, MPH. *Public Health Reports: 2009 Supplement 3*, vol. 125. Page 3. Retrieved June 9, 2010 from [www.publichealthreports.org/archives/issueopen.cfm?articleID=2433](http://www.publichealthreports.org/archives/issueopen.cfm?articleID=2433).

<sup>63</sup> CDC (May 3, 2010). *Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel*. Retrieved June 7, 2010 from [www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm#](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm#).

<sup>64</sup> CDC (Jan. 27, 2010). *Seasonal Influenza (Flu)*. Retrieved June 8, 2010 from [www.cdc.gov/flu](http://www.cdc.gov/flu).

<sup>65</sup> U.S. Department of Health and Human Services (May 15, 2007). *HHS Pandemic Influenza Plan, Appendix D*. Retrieved July 2, 2007, from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html).



As an example of a priority vaccination list in use during a pandemic, the CDC's prioritization reproduced below is from winter 2009-2010 (currently anyone can access the vaccine due to surplus):

- Pregnant women
- Household contacts/caregivers for children 6 months of age or younger
- Healthcare and Emergency Medical Service personnel
- All people 6 months to 24 years of age
- Persons aged 24 to 64 years of age who have health conditions associated with higher risk of medical complications resulting from influenza<sup>66</sup>

There is no vaccine for "pandemic flu", per se, as a strain of influenza capable of causing pandemics must be identified before a vaccine can be developed to fight it. However, there is a vaccine for 2009 H1N1 pandemic influenza, and it is widely available in the US to all ages, regardless of original priority group.

Several "practice" vaccines have been successfully produced, distributed and administered against the present strain of H5N1 virus which is still circulating in Asia, and parts of Africa and the Middle East, which recently infected and killed a 22 year old pregnant woman in China (June 4, 2010).<sup>67</sup>

### Vaccination Preparedness

Although governments have been working to assure that a new and effective vaccine can be developed and deployed as rapidly and efficiently as possible at the start of a pandemic, there has been criticism levied at vaccine manufacturers for their slow production time of the 2009 H1N1 influenza vaccine. There were several reasons for this, all of which could apply to any future pandemics of influenza. Vaccine manufactures continue to rely on a fragile egg-based system as media in which to grow specific viral strains. This production system has not been significantly improved upon for the past 50 years. As we had seen before with certain seasonal flu strains, the 2009 H1N1 pandemic strain did not grow well in chicken eggs. Furthermore, long-recognized bottlenecks in flu-vaccine production, including lack of capacity in the post-manufacturing "fill and finish" step that puts vaccine into vials, slowed the industry's process for getting the new antigen out to the marketplace."<sup>68</sup>

The Department of Health and Human Services (HHS) granted vaccine manufacturer Sanofi-Pasteur \$97.1 million in March 2005 to help them develop mammalian cell-based technology for vaccine production. This method of vaccine production has many advantages over traditional egg-based production, including increased speed from isolation of virus to production of a vaccine and ability to vaccinate individuals allergic to eggs (previously unable to receive vaccine). Additionally, HHS awarded more than \$1 billion in 5 contracts to accelerate development and production of new vaccine manufacturing technologies.<sup>69</sup> The new mammalian cell-based technology is not expected to preview until at least 2011.<sup>70</sup>

**During the pandemic:** People should be vaccinated as soon as vaccine is available, following the governmental/public health mandated order of priorities. From our experience with seasonal flu, we understand that flu vaccines are often less effective in the elderly, and those with compromised immune systems. In the Health and Human Services vaccine prioritization strategy, residents of skilled nursing facilities were NOT prioritized to receive vaccination in the event of a pandemic. Residents of other types of residential care facilities were not included in this recommendation. The rationale behind not

<sup>66</sup> CDC (October 15, 2009). *2009 H1N1 Vaccine Recommendations*. Retrieved June 6, 2010 from [www.cdc.gov/h1n1flu/vaccination/acip.htm](http://www.cdc.gov/h1n1flu/vaccination/acip.htm).

<sup>67</sup> CIDRAP (June 4, 2010). *News Scan: H5N1 Death in China, Blastomycosis in Wisconsin*. Retrieved June 6, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/jun0410newsscans.html](http://www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/jun0410newsscans.html).

<sup>68</sup> CIDRAP (April 26, 2010). *H1N1 Lessons Learned: Vaccine Production Foiled, Confirmed Experts' Predictions*. Retrieved June 6, 2010 from [www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2610h1n1vax.html](http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/apr2610h1n1vax.html).

<sup>69</sup> US Federal Government on Flu.gov. Retrieved June 8, 2010 from [www.flu.gov/professional/federal/vproductioncells.html](http://www.flu.gov/professional/federal/vproductioncells.html).

<sup>70</sup> US Federal Government on Flu.gov. Retrieved June 8, 2010 from [www.flu.gov/individualfamily/vaccination/index.html](http://www.flu.gov/individualfamily/vaccination/index.html).



prioritizing SNF residents for vaccination is that the medical literature finds poor vaccine response in this group, and occurrence of outbreaks, despite high vaccination rates. "Other studies have suggested that vaccination of healthcare workers may be a more effective strategy to prevent influenza in this group. Further, surveillance for influenza can be conducted in this group and antiviral medications used widely for prophylaxis and treatment."<sup>71</sup> This means whether we are talking about seasonal flu or pandemic flu, the most important strategy is to keep the virus out of your facility.

## ANTIVIRALS

Antiviral drugs are different from a vaccine for pandemic influenza. Used prophylactically (in anticipation of or directly after exposure) these drugs *may* prevent some or many infections with the pandemic strain. Each strain of influenza may react differently to different types of antivirals, so until a new pandemic presents itself, it will be unclear which antivirals, if any, will be effective. Even if antivirals are initially effective in preventing infection with the pandemic-causing strain, and/or reducing the severity or duration of illness caused by it, there is still a potential for antiviral-resistance to develop. Additionally, these drugs may be in limited supply. It is unclear whether governmental and private entities will continue to stockpile antivirals now that we are in the midst of a moderate pandemic.

### ***Names and Types of Antivirals***

The specific class and type of antiviral with the greatest efficacy against a pandemic strain of influenza is also unforeseeable. As with several other preparedness measures discussed, the specifics will depend largely on the strain that develops. There are two classes of antivirals currently approved to treat influenza: the older M2 inhibitors (amantadine and rimantadine) and the neuraminidase inhibitors (oseltamivir and zanamivir).

### ***Antivirals and 2009 H1N1 Pandemic Influenza***

On September 22, 2009, the CDC published updated guidelines for the use of antiviral medication. The guidance indicated that while the final decision on whether or not to treat a specific patient with antivirals rested with the treating physician, the following patient categories should be given higher priority in receiving antivirals:

- People with more severe illness, such as those hospitalized with suspected or confirmed influenza
- People with suspected or confirmed influenza who are at higher risk for complications
  - Children younger than 2 years old
  - Adults age 65 and older
  - Pregnant women
  - People with certain chronic medical or immunosuppressive conditions
- People younger than 19 years of age who are receiving long-term aspirin therapy<sup>72</sup>

In addition, "children and adults presenting with suspected influenza who have symptoms of lower respiratory tract illness or clinical deterioration should also receive prompt empiric antiviral therapy, regardless of previous health or age."<sup>73</sup>

The CDC and the WHO both note that the 2009 H1N1 influenza virus was resistant to the M2 inhibitors and that oseltamivir (Tamiflu®) and zanamivir (Relenza®) were the antivirals recommended for chemoprophylaxis and treatment of infection.<sup>74 75</sup> Oseltamivir-resistant strains of 2009 H1N1 have been

<sup>71</sup> HHS (November 2005). *HHS Pandemic Influenza Plan, Appendix D "NVAC/ACIP Recommendations on Use of Vaccines and NVAC Recommendations on Pandemic Antiviral Drug Use."* Retrieved June 11, 2010 from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html).

<sup>72</sup> CDC (Nov. 17, 2009). *Questions and Answers: Antiviral Drugs, 2009-2010 Flu Season.* Retrieved June 10, 2010 from [www.cdc.gov/h1n1flu/antiviral.htm](http://www.cdc.gov/h1n1flu/antiviral.htm).

<sup>73</sup> *ibid.*

<sup>74</sup> *ibid.*

<sup>75</sup> WHO (December 22, 2009). *Antiviral Drugs for Pandemic (H1N1) 2009 Influenza: Definitions and Use.* Retrieved June 10, 2010 from [www.who.int/csr/disease/swineflu/frequently\\_asked\\_questions/antivirals/definitions\\_use/en/](http://www.who.int/csr/disease/swineflu/frequently_asked_questions/antivirals/definitions_use/en/).



verified by the WHO in nearly 300 human cases,<sup>76</sup> so providers should remain alert for any changes to the CDC's antiviral recommendation.

### **Other Considerations**

It should be noted that in a pandemic situation it may be quite difficult to take antivirals prophylactically due to the large amount required to be ingested in order for the drug to be effective, as well as the likelihood that exposure will be constant and therefore a single prophylaxis regimen would be ineffective.

Antiviral medication may also help lessen the effect of influenza when given to patients who already have the disease, thereby lessening the severity and duration of symptoms and *possibly* limiting the spread.

**Before the pandemic:** Oseltamivir (brand name Tamiflu<sup>®</sup>) and zanamivir (brand name Relenza<sup>®</sup>) were stockpiled against the threat of pandemic influenza, in advance of infection in humans of 2009 H1N1 influenza. While the US government has made no statements about replenishing any decrease in antivirals in the Strategic National Stockpile (SNS), providers may wish to maintain their own increased supply of these medications, within pharmaceutical guidelines. The State of California does not discourage this practice (as some states may). Providers may obtain the discounted state pricing from the manufactures of these medications, if allowed by your local public health department. It should be noted that these medications can be expensive and must be used correctly to be effective. Residents of skilled nursing and other long term care facilities *are* on the priority list (number 6 out of 11) to receive antiviral medication for treatment and prophylaxis against outbreaks occurring in LTC facilities.<sup>77</sup> Contact your local public health department and discuss this issue with the person in charge of disaster or pandemic planning.

**During the pandemic:** The local public health department *may* provide you with antiviral medications should they be needed during an outbreak in your facility. This will depend on availability and rank on the federal antiviral priority list with relation to other groups requesting antivirals. Contact your local public health department for information about antivirals during a pandemic.

<sup>76</sup> WHO (May 28, 2010). *Weekly update on oseltamivir resistance to pandemic influenza A (H1N1) 2009 viruses*. Retrieved June 11, 2010 from [www.who.int/entity/csr/disease/swineflu/oseltamivirresistant20100528.pdf](http://www.who.int/entity/csr/disease/swineflu/oseltamivirresistant20100528.pdf).

<sup>77</sup> HHS (November 2005). *HHS Pandemic Influenza Plan, Appendix D "NVAC/ACIP Recommendations on Use of Vaccines and NVAC Recommendations on Pandemic Antiviral Drug Use."* Retrieved June 11, 2010 from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html). U.S. Department of Health and Human Services (May 15, 2007). *HHS Pandemic Influenza Plan, Appendix D*. Retrieved July 2, 2007, from [www.hhs.gov/pandemicflu/plan/appendixd.html](http://www.hhs.gov/pandemicflu/plan/appendixd.html).



## WORKSHEET V: INFECTION CONTROL OVERVIEW FOR PANDEMIC INFLUENZA

### Contaminated Surfaces

#### Influenza can survive:

- Up to 48 hours on non-porous surfaces (i.e. bedrails, door knobs, TV remotes, telephones)
- Up to 12 hours on porous surfaces (i.e. tissues, cloth, linens)

#### Disinfection

- In general, diluted bleach or common healthcare setting cleaning products are sufficient
- Do not spray disinfectant or use aerosolizing cleaning methods
- Frequently-touched hard surfaces should be cleaned thoroughly and more often than general housekeeping practices
- Ensure soiled linens and laundry, and dishes and eating utensils, are washed with detergent at appropriate water temperature

See Worksheet IX: Environmental Cleaning and Disinfection for more details

### Hand Hygiene

Critical to controlling the spread of infectious diseases, this is a measure that EVERYONE (all staff, patients and visitors) can take part in. Post hand hygiene (hand washing and sanitizing) signs in common areas and staff break rooms. See Worksheets IV and V for sample posters. Make antimicrobial soaps available near sinks, and make alcohol-based hand rubs available in common areas, staff areas, and all other places that hand washing is not available.

#### Alcohol-based Hand Rubs

Use only when hands are not visibly soiled. Alcohol-based hand rubs reduce time required for hand disinfection!

- Use only 60-95% alcohol content sanitizers
- Rub hands together 10-15 seconds (hands should feel wet during this time)
- Rub hands together until dry

#### Hand Washing

In healthcare settings, use antimicrobial products (such as products containing 4% chlorhexidine gluconate) and water to cleanse hands before and after patient contact. Wash hands before gloving and after removing gloves.

- Rub hands together vigorously for 15-30 seconds
- Cleanse all sides
- Pay attention to nails, rings, watches
- Ensure hands are completely dry at conclusion—disposable paper towels are best

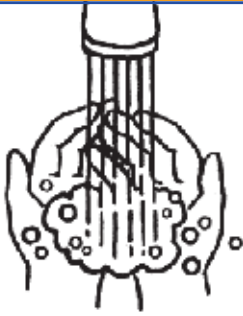
### Respiratory Hygiene

With education and reminders, staff, patients and visitors can all practice good respiratory hygiene. Hang posters (cover your cough, sleeve sneeze) in common areas and staff break rooms. See Worksheet VIII for sample poster. Keep facial tissues and wastebaskets available in patient rooms, common areas and break rooms.

- When coughing, place a tissue over nose and mouth
- Put used tissue in the trash
- If you don't have a tissue, cough or sneeze into your sleeve, not your hands
- Follow above steps on hand hygiene
- When possible, keep your distance (6 feet) from anyone coughing or sneezing

## WORKSHEET VI: SAMPLE HAND WASHING POSTER

# Hand Washing



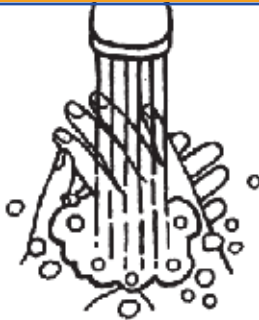
1. Wet hands.



2. Apply soap.



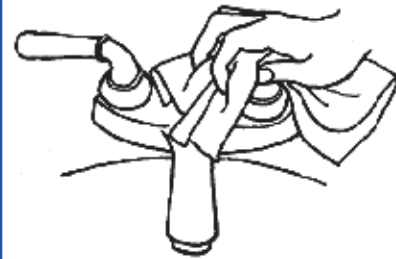
3. Lather for 15 seconds.  
Rub between fingers,  
back of hands,  
fingertips, under nails.



4. Rinse well under  
running water.



5. Dry hands well with  
paper towel or hot air  
blower.



6. Turn taps off with  
paper towel, if  
available.

## Stop the Spread of Germs!

### Always Wash Your Hands

#### After you:

- Sneeze, cough or blow your nose
- Use the bathroom or change diapers
- Handle garbage

#### Before AND After you:

- Prepare or eat food
- Touch a cut or open sore
- Touch hand to nose, eye, etc.

## WORKSHEET VII: SAMPLE HAND SANITIZING POSTER

# Hand Sanitizing



1. Apply sanitizer (minimum 60% alcohol-based).



2. Rub hands together.



3. Work sanitizer between fingers, back of hands, fingertips, under nails.



4. Rub hands until dry.

## Stop the Spread of Germs!

### Always Sanitize Your Hands

#### After you:

- Sneeze, cough or blow your nose
- Use the bathroom or change diapers
- Handle garbage

#### Before AND After you:

- Prepare or eat food
- Touch a cut or open sore
- Touch hand to nose, eye, etc.

**If hands are visibly soiled, use soap and water**

## WORKSHEET VIII: SAMPLE RESPIRATORY ETIQUETTE POSTER

# Cover Your Cough or Sneeze



1. Cover your mouth and nose when you cough, sneeze or blow your nose.



2. Put used tissue in the garbage.



3. If you don't have a tissue, cough or sneeze into your sleeve, not in your hands.



4. Wash hands with soap and water or hand sanitizer (minimum 60% alcohol-based).

## Stop the Spread of Germs!

### Always Cover Your Cough

- Covering your cough or sneeze can stop the spread of germs
- If you don't have a tissue, cough or sneeze into your sleeve
- Keep your distance (more than 6 feet) from people who are coughing or sneezing





## WORKSHEET IX: ENVIRONMENTAL CLEANING AND DISINFECTION

### Facility Disinfection in Detail—For All Staff

The transfer of bacteria and viruses from surfaces to people occurs when people touch an object and then touch their eyes, nose or mouth. In a pandemic, it is possible there will be a shortage of cleaning staff, and available staff may be working outside of their regular hours to lessen their exposure risk. Therefore, *it may become necessary for other staff to assist with cleaning.*

As mentioned on Worksheet V: Infection Control Overview for Pandemic Influenza,

#### Influenza can survive:

- Up to 48 hours on non-porous surfaces (i.e. bedrails, door knobs, TV remotes, pens)
- Up to 12 hours on porous surfaces (i.e. tissues, cloth, linens)

*Some of this information may be strain-specific, so during a pandemic outbreak, it will be necessary to check with the CDC, WHO, and California Department of Public Health for detailed information on environmental cleaning related to the newly circulating influenza virus.*

#### Cleaning Tasks

- Focus on cleaning surfaces/items that are frequently touched by many people in those areas of the facility where staff are working (not all areas of a facility may be in use during a pandemic)
- Avoid placing influenza patients in rooms with carpeting if possible
- If dusting is performed, use a damp towel, and do not spray cleaning solution
- If vacuuming is performed, it should be done using vacuum cleaners with high-efficiency particulate air (HEPA) filters
- Persons performing cleaning duties should wear cleaning gloves and should clean their hands after removing gloves, and wear additional PPE (such as masks) as necessary
- Trash from the rooms of residents known or suspected to be infected with pandemic influenza does not need to be handled as biohazardous waste unless it otherwise meets that definition\*

#### Frequent Disinfection of Your Facility is Necessary

- Shared work areas such as desktops and tables, and frequently touched surfaces such as door handles, stair rails, faucet handles, etc. should be cleaned and disinfected by cleaning staff or other staff at least once a day, and between shifts or more often if possible

#### Additional Measures to Reduce the Spread of Disease

- Telephones, pens, and other equipment should not be shared. If equipment must be shared it should be cleaned and disinfected between users
- Remove non-essential items (e.g., magazines/newspapers) from common areas (such as dining and group living areas)

#### Cleaning Supplies *(See Worksheet X: Environmental Cleaning and Disinfection Products for additional details)*

- Cleaning supplies should be made available for use by staff. Specialized cleaning solutions are not needed. Routinely used cleaning products (EPA-registered disinfectants or bleach solution) may be used
- If bleach solution is used, mixing ¼ cup household bleach with 1 gallon of water makes an adequate bleach solution. This solution should be mixed fresh daily

\*Under the California Health and Safety Code (section 117635), biohazardous waste is defined as waste that contains recognizable fluid blood, fluid blood products, containers or equipment containing blood that is fluid, or blood from animals known to be infected with diseases that are highly communicable to humans.





**WORKSHEET X: ENVIRONMENTAL CLEANING & DISINFECTION PRODUCTS (cont.)**

Characteristics of Selected Disinfectants										
Disinfectant Category	Alcohols	Aldehydes	Biguanides	Halogens: Hypochlorites	Halogens: Iodine Compounds	Oxidizing Agents	Phenols	Quaternary Ammonium Compounds (QAC)		
Sample Trade Names	Ethyl Alcohol Isopropyl Alcohol	Formaldehyde Paraformaldehyde Glutaraldehyde	Chlorhexidine Nolvasan® Chlorhex® Virosan®	Bleach Chlorox®	Betadyne® Providone®	Hydrogen peroxide Peroxycetic acid Trifectant® Vikron S® Oxy-Sept 333®	One-Stroke Environ® Pheno-Tek II® Tek-Trol® Pine-Sol, Lysol	Roccal® DQuat® Parvosol® Zepharin® D-256®		
Mechanism of Action	<ul style="list-style-type: none"> <li>Precipitates proteins</li> <li>Denatures Lipids</li> </ul>	<ul style="list-style-type: none"> <li>Denatures proteins</li> <li>Alkylates nucleic acids</li> </ul>	<ul style="list-style-type: none"> <li>Alters membrane permeability</li> </ul>	<ul style="list-style-type: none"> <li>Denatures proteins</li> </ul>	<ul style="list-style-type: none"> <li>Denatures proteins</li> </ul>	<ul style="list-style-type: none"> <li>Denatures proteins and lipids</li> </ul>	<ul style="list-style-type: none"> <li>Alters cell wall permeability</li> <li>Denatures proteins</li> </ul>	<ul style="list-style-type: none"> <li>Blinds phospholipids of cell membrane</li> <li>Denatures proteins</li> </ul>		
Advantages	<ul style="list-style-type: none"> <li>Fast Acting</li> <li>Leaves no residue</li> </ul>	<ul style="list-style-type: none"> <li>Broad Spectrum</li> </ul>	<ul style="list-style-type: none"> <li>Broad Spectrum</li> </ul>	<ul style="list-style-type: none"> <li>Broad Spectrum</li> <li>Short Contact Time</li> <li>Inexpensive</li> </ul>	<ul style="list-style-type: none"> <li>Stable in Storage</li> <li>Relatively Safe</li> </ul>	<ul style="list-style-type: none"> <li>Broad Spectrum</li> </ul>	<ul style="list-style-type: none"> <li>Good efficacy with organic material</li> <li>Non-irritating to skin</li> <li>Effective at high temperatures and high pH (9-10)</li> </ul>	<ul style="list-style-type: none"> <li>Stable in storage</li> <li>Non-irritating to skin</li> <li>Effective at high temperatures and high pH (9-10)</li> </ul>		
Disadvantages	<ul style="list-style-type: none"> <li>Rapid Evaporation</li> <li>Flammable</li> </ul>	<ul style="list-style-type: none"> <li>Carcinogenic</li> <li>Irritation to mucous membranes and tissues</li> <li>Only use in well ventilated areas</li> </ul>	<ul style="list-style-type: none"> <li>Only functions in limited pH range (5-7)</li> <li>Toxic to fish (environmental concern)</li> </ul>	<ul style="list-style-type: none"> <li>Inactivated by sunlight, some metals</li> <li>Requires frequent application</li> <li>Corrodes Metals</li> <li>Irritating to mucous membranes, skin</li> </ul>	<ul style="list-style-type: none"> <li>Stains clothes or treated surfaces</li> <li>Inactivated by organic debris and QACs</li> <li>Requires frequent application</li> <li>Corrosive</li> </ul>	<ul style="list-style-type: none"> <li>Damaging to some metals</li> </ul>	<ul style="list-style-type: none"> <li>Toxic to animals</li> <li>Can cause skin and eye irritation</li> <li>Not effective for FMD</li> </ul>	<ul style="list-style-type: none"> <li>Not effective for FMD or Johnes</li> </ul>		
Precautions	Flammable	Carcinogenic		Never mix with acids; will release toxic chlorine gas			Toxic to animals, especially cats			
Vegetative Bacteria	Effective	Effective	Effective	Effective	Effective	Effective	Effective	Effective	YES-Gram Positive Limited-Gram Negative	
Mycobacteria	Effective	Effective	Variable	Effective	Limited	Effective	Variable	Variable	Variable	
Enveloped Viruses	Effective	Effective	Limited	Effective	Effective	Effective	Effective	Effective	Variable	
Non-enveloped Viruses	Variable	Effective	Limited	Effective	Limited	Effective	Variable	Variable	Not Effective	
Spores	Not Effective	Effective	Not Effective	Variable	Limited	Variable	Not Effective	Not Effective	Not Effective	
Fungi	Effective	Effective	Limited	Effective	Effective	Variable	Variable	Variable	Variable	
Efficacy with Organic Matter	Reduced	Reduced	?	Rapidly Reduced	Rapidly Reduced	Variable	Effective	Inactivated	Inactivated	
Efficacy with Hard Water	?	Reduced	?	Effective	?	?	Effective	Inactivated	Inactivated	
Efficacy with Soap/Detergents	?	Reduced	Inactivated	Inactivated	Effective	?	Effective	Inactivated	Inactivated	

?: Information Not Documented  
**Disclaimer:** Use of trade names does not in any way signify endorsement of a particular product. For additional product names, please consult the most recent Compendium of Veterinary Products.



# WORKSHEET XI: PERSONAL PROTECTIVE EQUIPMENT FOR PANDEMIC INFLUENZA

## Personal Protective Equipment (PPE)

Until the route of transmission is determined, it is recommended that healthcare providers use:

- *Standard precautions:* hand hygiene before and after patient contact, use of gloves and facial protection, standard operating procedures to decontaminate rooms, equipment etc.
- *Contact precautions:* donning PPE (such as gowns) before entry/exit from patient room, dedicated equipment, limiting patient movement, cohorting

## Additional Respiratory Protection

- *Airborne precautions:* N-95 mask or higher on provider and/or susceptible persons when coming within 3-6 feet of a suspected case, surgical mask on patient if tolerated
- Special care should be exercised when doing any aerosol-producing procedure
- Ensure proper removal of all personal protective equipment upon exiting room

The length of time precautions must remain in place may differ dependent on the strain; review guidance from national and state health officials and Occ Health (CDC, HHS, CDPH, OSHA)

## Types of Masks

### NIOSH-Approved N-95 (and above) Respirator

<b>Purpose</b>	According to its name (N-95, N-99, N-100), particulate respirators are designed to filter out 95%, 99%, or 99.97% of inhalable particles, and also are named according to their resistance to degradation from oil. It is currently advisable for all healthcare providers coming within 3-6 feet of a suspected case of avian influenza H5N1 OR a pandemic flu strain to wear a fit-tested, NIOSH certified N-95 or higher.
<b>Considerations</b>	<ul style="list-style-type: none"> <li>▪ Respirator must be fit-tested and adjusted to face to be effective; wearer must be medically cleared</li> <li>▪ Several sizes should be ordered to facilitate fit-testing</li> <li>▪ Must form a tight seal over nose and mouth: may cause difficulty breathing, claustrophobia</li> <li>▪ Any facial hair will prohibit respirator from forming the necessary tight seal around nose and mouth</li> <li>▪ Must be safely removed and discarded</li> </ul>
<b>Supply</b>	You should be able to order N-95s, N-99s, or N-100s through your current medical supplier. For a list of NIOSH-certified disposable respirators, visit <a href="http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part">www.cdc.gov/niosh/npptl/topics/respirators/disp_part</a>
<b>Cost</b>	Approximately \$1.00 each
<b>Reusability</b>	Disposable masks and respirators ideally should be disposed of once used. However, in a pandemic situation, if respirator availability becomes limited, Cal/OSHA suggested (for 2009 H1N1) that if necessary, a non-contaminated respirator could be reused by a single wearer. It must be disposed of if: <ul style="list-style-type: none"> <li>▪ (1) it becomes contaminated with a hazardous substance; (2) it becomes contaminated with blood, respiratory/nasal secretions or other bodily fluid from patients; (3) it has been used during an aerosol-generating procedure or surgery; (4) it becomes wet, visibly dirty or fails to seal to face; (5) breathing through it becomes more difficult</li> </ul>

### Surgical or Procedural Mask

<b>Purpose</b>	Prevent organisms in the nose and mouth from falling into the sterile field of a surgical site; also provides droplet protection to wearer. In a pandemic, if N-95s are still available to providers, surgical masks might best be used on the patient to lower the risk of transmission whenever someone is within 3-6 feet of the patient
<b>Considerations</b>	Does not provide protection to wearer from diseases with airborne transmission
<b>Supply</b>	Order through your current medical supplier
<b>Cost</b>	\$0.10-\$0.20 each
<b>Reusability</b>	No recommendations at this time

## WORKSHEET XII: SAMPLE POSTER ON HOW TO CORRECTLY DON AN N-95 RESPIRATOR

### General Donning Instructions for N-95 Respirators

The following instructions must be followed **each time** the respirator is worn. Before donning, wash your hands and inspect the respirator to ensure the integrity of the components (see *Worksheet XI*), including the shell, straps and metal nose clip. Upon respirator removal, wash hands thoroughly.

- 1** Cup the nosepiece in your hand with the nosepiece at fingertips, allowing the headbands to hang freely below hands.



- 2** Position the respirator under your chin. The nosepiece should be over the bridge of your nose.



- 3** Pull the top strap over your head so it rests high on the back of the head.



- 4** Pull the bottom strap over your head and position it around neck below ears.



- 5** Using **both** hands, mold the metal nosepiece (if present) to the shape of your nose by pushing inward while moving fingertips down both sides of nosepiece.



- 6 SEAL CHECK:** The respirator seal **MUST** be checked before each use-to check fit, place both hands over the respirator and exhale. If air leaks out around nose, repeat step 5. If air leaks along the edges, adjust the straps at the back of your head. Check again.



**If you cannot achieve proper fit, DO NOT enter the contaminated area. See your manager.**

## WORKSHEET XIII: SAMPLE POSTER ON HOW TO CORRECTLY DON PERSONAL PROTECTIVE EQUIPMENT

### General Donning Instructions for Personal Protective Equipment

The type of PPE used will vary based on the level of precaution required (i.e. standard and contact, droplet or airborne infection). **Ensure that you correctly wash your hands before donning PPE.**

#### USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

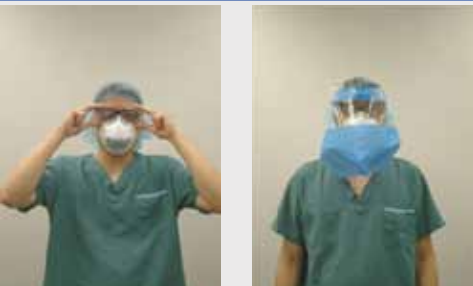
- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



**1.** Remove any eyewear or jewelry that could affect the respirator fit



**2.** Don respirator. Prescription eye-wear can be re-donned after fit-testing. See *Worksheet XII* for how to correctly don an N-95.



**3.** Don goggles or face shield—adjust to fit



**4.** Don fluid resistant gown. Fasten at back of neck and waist



**5.** Put on gloves—extend to cover wrist of isolation gown

## WORKSHEET XIV: SAMPLE POSTER ON HOW TO CORRECTLY DOFF PERSONAL PROTECTIVE EQUIPMENT

### General Doffing Instructions for Personal Protective Equipment

Except for respirator, remove PPE at doorway. Remove respirator after leaving patient room and closing the door.



#### 1. Remove gloves:

- **Outside of gloves are contaminated!**
- Grasp outside of glove with opposite gloved hand—peel off
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist
- Peel 2nd glove off over 1st glove
- Discard gloves in waste container



#### 2. Remove gown:

- **Gown front and sleeves are contaminated!**
- Unfasten ties
- Pull away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard



#### 3. Remove eye protection and discard or clean with disinfectant

- **Outside is contaminated!**



#### 4. Remove eye glasses (if present) prior to doffing respirator



#### 5. Remove respirator

- **Outside is contaminated!**
- Grasp bottom then top ties or elastics and remove



#### 6. Remove hair cover if present

- **Outside is contaminated!**



#### 7. Wash hands



## Section Four: Sustainment Strategies

### HOW CALIFORNIA AND THE NATION RESPOND TO DISASTER

All disasters in California are managed locally, which means that the local government holds the primary responsibility and is the lead agency for the response. All others (the region, the state and the federal government) act in support of the local response. It is important that the response be handled at the local level, because local officials are there first and know the area. It also helps to ensure that locally available resources are used first.

#### The Emergency Response System: SEMS/NIMS<sup>78</sup>

In California, the Standardized Emergency Management System (SEMS) dictates the way local and state governments manage disasters and provide support to local responders. SEMS was enacted by state law in 1991 as a result of the Oakland Hills Fires, during which it became clear that California needed to standardize the way that different organizations and agencies responded to disasters. The goal was to improve coordination among state and local response agencies. SEMS is used by all local, regional and state governmental agencies, as well as by many healthcare providers, to manage information and resources (supplies, equipment and personnel) and document the activities undertaken during the disaster. SEMS incorporates the Incident Command System (ICS) as the management tool for disasters.

The National Incident Management System (NIMS) was created in response to the attacks of September 11, 2001, to coordinate and manage disasters at the federal level. Like SEMS, NIMS uses ICS as the management tool and mandates development of systems to manage resources and public information and provide mutual aid (support). Local, state and federal government agencies are mandated to adopt NIMS, and healthcare organizations are beginning to adopt the principles of SEMS, NIMS and ICS into their disaster plans.

There are a few differences between SEMS and NIMS.<sup>79</sup> However, for the purposes of this *Workbook*, we will refer to the disaster response system as NIMS, although these particular statements also apply to SEMS.

NIMS helps local authorities with inter-agency coordination, priority-setting and the efficient flow of resources and information. Each of these elements is an important part of a coordinated response. Any agency wishing to receive disaster-related reimbursement (i.e., from FEMA or the state) must document its use of SEMS and NIMS.

#### Key Concepts in NIMS

There are four key elements of NIMS that are important for long term care organizations to understand:

1. Operational Area Concept
2. Multi-Agency Coordination System
3. Master Mutual Aid Agreement
4. Incident Command System

<sup>78</sup> Here we provide a brief overview of NIMS. It is not designed to teach everything there is to know about this complex but effective system. There are many Web-based resources that provide a much more detailed explanation of SEMS/NIMS, as well as educational courses (both online and in person) that can provide NIMS training. One place you can visit to learn more about SEMS/NIMS is [www.scc-ares-races.org/sems.htm](http://www.scc-ares-races.org/sems.htm). You may also check the Governor's Office of Emergency Services Web site for additional NIMS information and training.

<sup>79</sup> For more information and to compare and contrast SEMS and NIMS, visit [www.oes.ca.gov](http://www.oes.ca.gov), and review the SEMS/NIMS Crosswalk document.





Below, we discuss the first three of these concepts, and in the next section we present an overview of the Incident Command System (ICS). We also relate ICS to a system recently developed by CAHF, which is specific to nursing homes and long term care facilities: Nursing Home Incident Command System (NHICS).

### Operational Area Concept

The Operational Area (Op Area) is an intermediate response level designated by NIMS (Figure 4). The Op Area consists of the county and all its political subdivisions, including special districts. The county government is the lead agency unless otherwise specified. There are 58 Operational Areas (counties) in California. The Op Area manages and coordinates resources from its Emergency Operations Center (EOC). The purpose of the Op Area EOC is to support the response and coordinate obtaining resources and information. The Op Area does not manage the local response but supports the responders.

For example, a long term care facility is located within an Op Area and during a disaster conducts its own internal response to an incident, while the Op Area EOC may assist by providing information and resources (supplies, equipment, personnel, pharmaceuticals, etc.)

### Multi-Agency Coordination System

Because the objective of NIMS is to coordinate a disaster response, one of its important components is the creation of a Multi-Agency Coordination System. Agencies and disciplines at any NIMS level need to work together in a coordinated effort to develop joint plans, coordinate inter-agency resource use and facilitate decision-making. This is one of the reasons that CAHF stresses the importance of working on a disaster plan with your local partners — including your local health department, local OES and local Op Area EOC personnel (many of the command-level positions are pre-designated) — *before* a disaster occurs.

In most disasters, the Cal Emergency Management Agency (CalEMA) is the lead agency at the state level managing the response; in a pandemic, however, the California Department of Public Health (CDPH) has a key role to play. CDPH's *Pandemic Influenza Preparedness and Response Plan* states,

California's public health system is composed of local health departments with authority and responsibility for public health preparedness and response at the local level. CDPH leads, supports, and coordinates this effort and provides statewide policy guidance. CDPH provides cross-jurisdictional coordination during a multijurisdictional emergency and assistance if local resources are overwhelmed by the needs of the event. Although pandemic influenza may affect multiple jurisdictions simultaneously, all jurisdictional responsibilities are maintained. CDPH will provide additional support to leadership at the local level, without usurping the authority of local health departments.<sup>80</sup>

In general, decision-making authority with regard to the prevention of the spread of infectious diseases rests with the Local Public Health Department (LHD). They are in charge of local closures (of schools or events), and distribution of antivirals and vaccine. CDPH will usually provide support to the LHD in terms of communication of any State-specific refinement of CDC pandemic guidance, distribution (among, not within LHDs) of any Strategic National Stockpile (SNS) items received from the federal government, and development of any emergency orders for the governor, as required by the situation.

As mentioned in previous sections, contacting your local health department to talk to the person in charge of disaster preparedness/pandemic planning is a critical first step in your pandemic planning. Ask to join any pandemic planning committee or health facility emergency preparedness group that exists in your local area. Take this step in planning with other agencies, both public and private, to ensure that you are integrated with the organized (NIMS) response.

<sup>80</sup> CDPH (September 8, 2006). *Pandemic Influenza Preparedness and Response Plan*. Page 7. Retrieved June 11, 2010 from [www.cdph.ca.gov/programs/immunize/Documents/pandemic.pdf](http://www.cdph.ca.gov/programs/immunize/Documents/pandemic.pdf).

### Master Mutual Aid Agreement

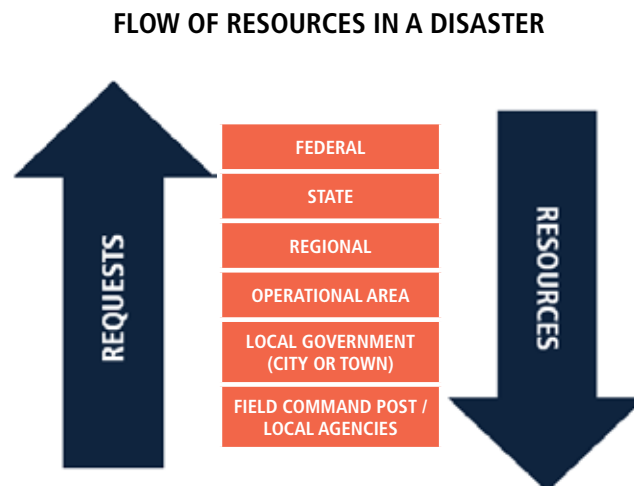
SEMS mandates the formation of a mutual aid system — the voluntary provision of services and facilities — when existing resources prove to be inadequate. Under this agreement, cities, counties and the state work together to voluntarily provide services, resources and facilities to jurisdictions when their local resources prove to be inadequate to cope with a given situation. Plans and procedures have been developed for several discipline-specific mutual aid systems, and these function within the Master Mutual Aid Agreement. Under SEMS/NIMS, if resources are needed locally, healthcare providers contact the local Op Area EOC medical and health coordinators to request those resources. These coordinators utilize mutual aid agreements to get those needed resources and allocate them appropriately. See “Requesting Help during a Disaster” below for more information. For more information about how medical mutual aid works in your locality, contact your local OES office or public health department.<sup>81</sup>

See *Worksheet XV: California OES Mutual Aid Regions Map (p. 69)*

### Requesting Help During a Disaster

It is important for long term care facilities to anticipate the flow of resources in a disaster, and knowing how to request resources through your local government or operational area will be essential. Figure 4 shows the resource request and receipt concept.

**Figure 4: Flow of Requests/Resources**



As you can see in Figure 4, your requests for resources usually should go to your local government EOC. In a pandemic, the local public health department is the lead agency in charge of response (for the cities of Berkeley, Long Beach, and Pasadena the city LHD is the lead; for all others, the county LHD is the lead). If your needs cannot be met at the local city or county level, your request will move up to the next level. If the capacity of the Op Area is exceeded, the request would go to the Mutual Aid Regional Area. If the Region cannot meet the need, the request goes to the State, and if the need still cannot be met, the request finally goes to the federal government. After the resources are secured at the lowest level possible, they will then flow downward to you. During a disaster, resources must be distributed appropriately and fairly to the responders, including healthcare providers. Sometimes this means that you may only receive a limited amount of the requested resource due to scarce supplies. In most cases, the Op Area EOC is responsible for assessing the needs and distributing limited resources accordingly.

<sup>81</sup> Mutual aid is also something that long term care facilities may agree to provide each other in times of need. Sample Memorandums Of Understanding or MOUs for this purpose are available on the CAHF-DPP Web site: [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).



When requesting resources, always explain what it is you want to accomplish rather than asking for a resource you think you need to have. For example, tell the Op Area EOC what you need to care for 10 critically ill residents whom you are unable to transfer to the hospital, rather than a general request for assistance or supplies. The Op Area EOC coordinators will decide how best to meet your needs with available resources.

### Depending on Mutual Aid During a Pandemic

Despite the considerable time, effort and resources devoted to disaster planning at all levels of government, many experts and officials are concerned that they will prove inadequate during a severe 1918-like pandemic. The reason for this concern is the potential for pandemic influenza to strike virtually every U.S. community at roughly the same time. Even with a more moderate pandemic, such as the one caused by the 2009 H1N1 strain, the disease has the ability to spread very rapidly across a broad geographic area.<sup>82</sup> It is unlikely that there will be any unaffected community able to provide help to its neighbors whether it is directly impacted at the beginning with disease activity or not. Regardless of the severity of a particular pandemic virus, in the initial outbreak (when severity is not known, or may be inaccurately judged) it is likely that all communities will be marshalling their resources for an outbreak in their local community.

“All hazards” disaster plans usually address a short-term event (with impact and then response perhaps taking a few days to a week, and then moving into the recovery phase) that is localized to a specific area. An influenza pandemic, however, is a long term emergency with very broad geographic impact. Plans designed for management of short term localized emergencies will prove ineffective in the management of long-term generalized disasters. Given this reality, LTC providers should not assume that they will be receiving help from any outside source. While it is likely that even with a severe pandemic, some assistance may well be forthcoming, the resources or services available may not be those you require. This is why we have stressed the importance of self-sufficiency throughout this *Workbook* and have encouraged facilities to develop a Pandemic Annex in addition to their all-hazards disaster plan to help manage the unique nature of a pandemic.

### COMMAND AND CONTROL IN YOUR ORGANIZATION: DETERMINING AUTHORITY AND USING NHICS

**Before the pandemic:** In any emergency response, it is critical that clear lines of authority (chain of command) are established within the facility to make sure there is timely and efficient decision-making. It is important that you define the chain of command and decision-making authority of the facility’s Incident Commander (IC) and identify who is appropriate to fulfill this leadership role at any given time of the day, night or week. This means that training for the key position of Incident Command should be given to at least 2-3 people (with only one on-duty IC at a time), particularly as the duration of a pandemic wave can be many months. Identifying the chain of command and the individuals responsible for each role is a critically important aspect of your base disaster plan, and should be followed through in your Pandemic Annex.

Early in the pandemic planning process in your facility, your Internal PI Committee should identify which individuals in your facility will act as the Incident Commander with authority to:

- a. **Authorize expenditure** for additional training, stockpiling of supplies, purchasing of personal protective equipment and other pandemic preparedness-related costs.
- b. **Activate the plan.** Activating your disaster plan and Pandemic Annex may change certain facility practices, such as the assignment of staff, the screening of admissions or acceleration of discharges.

<sup>82</sup> In the first several situation updates done by the World Health Organization (Situation Updates: Pandemic Flu (H1N1) 2009), the disease is traced from its origin in Mexico rapidly through the cases in California and then Texas (all reported by the WHO on April 26, 2009), followed immediately by additional infection in CA, TX, NY, KS, OH and Mexico. By April 27, 2009, cases were increasing in the US and Mexico, and also present in Canada and Spain. In the next two days it had spread to a total of 9 countries, with the additions of New Zealand, the UK, Israel, Austria and Germany.



These measures have clinical, administrative and financial implications, so the individuals with relevant authority must be identified.

- c. Approve modifications** to the plan based on current recommendations, new information and/or lessons learned during the course of a pandemic (including 2009 A (H1N1) influenza and any future influenza pandemic). Determine the best course of action based on changing circumstances.

In addition to the identification of an Incident Commander, the Incident Command system (ICS) is an approach to disaster planning provides that a framework for all the various roles and division of duties that need to be performed during a efficient response. First developed by the military, ICS (Incident Command System) was modified by fire and law enforcement agencies to manage their responses in the field and between and throughout their systems.

### The Nursing Home Incident Command System

LTC facilities interested in incorporating ICS principles into their disaster plan are invited to utilize the Nursing Home Incident Command System (NHICS). NHICS is a useful tool that adapts the principles of ICS to the unique requirements of LTC settings.<sup>83</sup> In the late 1990s, ICS was adapted to hospitals and called the Hospital Incident Command System (HICS). HICS was created to be a more relevant system for emergency response within a health care setting, and in 2009 CAHF and the Florida Healthcare Association, along with their advisors, comprehensively adapted HICs into a more streamlined version of ICS for LTC. This project includes a manual and training program that LTC staff can utilize in their own facilities. NHICS is available free of charge on the CAHF Web site [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).

NHICS is a tool which:

- Is useable for managing all emergencies or planned events of any size or type, by establishing a clear chain of command.
- Allows personnel from different agencies or departments to be integrated into a common structure that can effectively address issues and facilitates the delegation of responsibilities.
- Provides needed logistical and administrative support to operational personnel.
- Ensures key functions are covered and eliminates duplication.<sup>84</sup>

NHICS includes a system to assign personnel to roles during the response. It includes:

- Job action sheets that provide a distinct job title and description of the role of the various positions.
- Definition of the lines of authority (or chain of command) in the facility, with everyone assigned to a supervisor to whom they report in the chain.
- Expandable and contractible provisions to meet the size and scope of the emergency. Only needed positions are activated.

NHICS can be used at organizations both large and small — it can even be used by just one person! If you have a small organization, the same person may fill multiple spots in the NHICS organizational chart. Just be sure through practice and exercise that one designated person is not disproportionately overburdened with her or his roles. It is additionally important to note that the NHICS organization does not necessarily correlate to the daily administrative functions of your facility. This is done purposefully to avoid confusion with routine organization roles. For example, the individuals who hold senior administrative roles when it is “business as usual” may not always be is the most appropriate person to fulfill the role of incident commander in an emergency due to their responsibilities for managing planning, and public relations, or their lack of familiarity with day to day operations.

See *Worksheet XVI: Modified NHICS Organizational Chart — Incident Management Team for Long Term Care* (p. 70) This is a resource that you can modify and put into your disaster plan.

<sup>83</sup> California Association of Health Facilities (CAHF) (2009). *NHICS: Nursing Home Incident Command System*. Retrieved June 10, 2010 from <http://cahfdisasterprep.com/NHICS.aspx>.

<sup>84</sup> *ibid.*

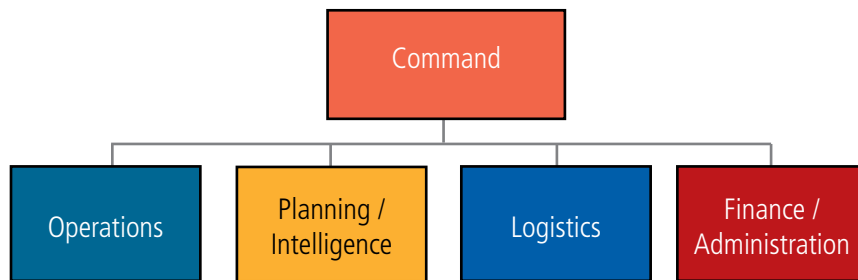
### Basic NHICS Job Action Overview

- **Incident Commander:** Leads the response, sets objectives, appoints team leaders, approves plans and key actions (CEO, administrator, nursing supervisor). This is the only position that always must be active if your plan/incident management is active.
- **Operations Team:** Handles key actions including first aid, securing the site, resident services, clean-up (direct care staff, housekeeping).
- **Planning Team:** Gathers information, thinks ahead, makes and revises action plans, keeps all team members informed and communicating, and maintains documentation for incident reports (Internal PI Committee).
- **Logistics Team:** Finds, distributes and stores all necessary resources; provides support and other essential services (maintenance supervisor, purchasing staff).
- **Finance Team:** Tracks all expenses, claims, procurement costs, personnel time and is the record keeper for the incident—provides cost analysis (controller, accounts dept, payroll).

See *Worksheet XVII: Main Modified HICS Positions with Suggested Missions (p. 71)* for more detail on what each position on the Incident Management Team chart does.

Figure 5 shows the main components of the Incident Command System. Please refer to the NHICS organizational chart worksheet included in this *Workbook* for greater detail.

**Figure 5: Incident Command System**



It is recommended that LTC providers practice NHICS when participating in drills and exercises—particularly those exercises conducted with local responders (such as EMS, fire, law enforcement, local public health departments, similar facilities, acute care facilities, etc.). Exercises can range from a table top exercise (where your management group meets to discuss the issues involved in a specific emergency and how the plans and procedures would work) to a full scale exercise with realistic play. In this case, you implement the procedure or plan and actually move personnel, equipment, supplies and even residents. Local hospitals, emergency services agencies and local public health departments periodically have exercises and will include you if you ask. Contact your local hospital, first responders or public health department for more information and to get involved in this process. Any time you conduct an internal or external drill or exercise is a good time to practice using Nursing Home Incident Command System.

See *Worksheet XVIII: Sample Modified NHICS Job Action Sheet (Incident Commander) (p. 73)* for a long term care-specific Job Action Sheet.

You can modify these NHICS job action sheets to use in your disaster plan and develop additional job action sheets following the same format. Refer to *CAHF's Nursing Home Incident Command handbook* for help in developing this important part of your disaster plan by visiting [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).



### Training Available Online

Trainings (and other resources) on Incident Command System are available free online through the FEMA Web site. Visit <http://training.fema.gov/EMIWeb/IS/ICSResource>.

- Click on the ICS Training Materials and Opportunities link.
- Scroll down to the “Independent Study” link.
- Click on “ISP Course List” in the menu box.
- Find the course you wish to take (you may want to print out the exam to review as you go through the course).
- You will receive a certificate of completion if you get 75 percent or more of the answers right (you may want to keep this in your files). You may be able to get CEUs for taking these courses. You don’t have to take the test unless you wish to receive the certificate.

### Here are some of the courses you may wish to take, depending on your level of interest and availability:

- IS-31 - Mitigation e-Grants for the Grant Applicant (new 8/31/2009)
- IS-100.HC - Introduction to Incident Command System I-100 for Healthcare/Hospitals (alternately, you could take IS-100: Introduction to Incident Command System)
- IS-200.HCa - Applying ICS to Healthcare Organizations (new course as of 6/11/2010)
- IS-235 - Emergency Planning (includes how to develop a properly structured Emergency Operations Plan)
- IS-520 - Introduction to Continuity of Operations Planning for Pandemic Influenza (new 8/31/2009)
- IS-700 - National Incident Management System (NIMS) and Introduction

**During the pandemic:** When a new pandemic develops and cases appear within the borders of your state, you may want to activate a basic level of your disaster plan and Pandemic Annex in stages, depending on the severity of the emergency. As the impact of the pandemic increases and your facility, residents and staff are affected, activate more of the plan and the Nursing Home Incident Command System positions. For example, depending upon your disaster plan, the Planning Section and the Logistics Section would be activated to prepare for the emergency before the illness actually hits your local area. The Operations Section and the Finance/Administration Section could then be activated when the pandemic impacts your facility and your daily operations. The level of NHICS activation will depend on the severity of pandemic disease and it’s impact on your facility and your local area.

For any level of activation of your plan, your first steps will be to review your job action sheets. The job action sheets provided here and in the CAHF’s Nursing Home Incident Command System guidebook can be modified to fit your particular facility’s needs in advance of any incident or emergency. The job action sheets will detail out each step that each position needs to take.

### BUSINESS CONTINUITY PLANNING

“Business continuity” means ensuring that your facility’s essential business functions can survive a natural disaster, technological failure, human error or other disruption. Your facility may already have a



business continuity plan (BCP). Business continuity planning is a HIPAA securities requirement (related to keeping protected health information accessible and secure) so at the very least, your facility should have a plan to protect your resident's health information from disaster-related disruptions. Ideally your facility will have a plan that preserves and sustains all your essential business-related systems and allows you to resume your operation as soon as conditions allow. A first step is to review your BCP/information security plan with your Internal PI Committee to ensure that it addresses the unique challenges of a pandemic. If you do not have a fully developed BCP for your facility, there are many easy-to-use resources available on the internet to help you create one.<sup>85</sup>

Your Pandemic Annex should address how your business will prepare to survive a "worst case scenario" of up to 50-percent absenteeism, significant delays, disruptions and increased costs of supplies and increased care needs of your residents. Begin by working with your Internal PI Committee to:

1. Identify your essential services/functions — those that, when not delivered or performed, create an impact on the health and safety of individuals and/or lead to the failure of the business.
2. Identify the number of staff needed and the necessary skills required to perform and maintain those essential services/functions.
3. Develop strategies to continue those essential services/functions during a pandemic and incorporate those strategies into the facility's Pandemic Annex.
4. Test the plan and modify as needed.

### Essential Service/Function of Long Term Care Facilities

Clearly, the essential service/function of any long term care facility is to *provide care for the people who reside there*. The next step in preparing for your pandemic business continuity is to identify what supplies, staff and administrative support are necessary in order to deliver the essential service of care provision. The information in the following sections on financial planning, supplies and staff preservation will help you to identify these needed resources.

See *Worksheet IV: Suggested Pandemic Supply List (in Addition to Your General Disaster Supplies)* (p. 21)

### Financial Resources

Business continuity includes planning to maintain critical internal facility services, such as paying your employees and ensuring that billing and reimbursement services are maintained. Identify the critical resources necessary to provide these essential business services and plan strategies to maintain basic business operations during a pandemic.

**Before the pandemic:** As previously stated, there may be delays or disruptions to various systems during a pandemic, including disruptions to financial institutions and potential delays in reimbursement for long term care provision. Additionally, it is possible that your facility may experience decreased revenues as a result of lower census and/or increased costs as a result of higher resident acuity, staff shortages, increased prices for goods, etc. Your Pandemic Annex should include strategies to withstand increased costs and temporary cash flow problems. These strategies could include:

- Access to corporate resources
- Lines of credit
- Savings
- Other sources of cash reserves
- Cash on hand in the event of bank closures, power failures or unsafe conditions for travel

Do this planning now so that the financial survival of your business is one less thing you have to worry about when a pandemic hits.

<sup>85</sup> We have included some of these Internet resources in *Appendix C: Useful Web Sites in this Workbook* (p. 89)



**During the pandemic:** Accounts receivable, billing and payroll are critical services that must continue so that you can fulfill your essential function of providing care to your residents. Consider setting up systems that enable your business office staff to perform these services from home during a pandemic. This will decrease their risk of contracting the disease. Also make sure backup staff are trained to do these services in the event that the office staff become ill.<sup>86</sup>

## SUPPLIES

In a pandemic, residents, other individuals and communities will be affected by widespread illness among people of all ages. Certain age groups, such as the young and previously healthy, may be at increased risk for severe illness, as we are seeing with 2009 H1N1 pandemic influenza, and as we saw with the 1918 pandemic. A pandemic therefore, can impact your workforce to an even greater degree than it impacts your residents. High rates of absenteeism are expected in all workplaces. This could mean that suppliers, truck drivers, food and drug manufacturers and even utility companies could be forced to reduce production and deliveries for some period of time. To cover the possibility that your regular deliveries may be delayed or become unavailable, we recommend that every facility prepare in advance. Planning carefully for disruptions in your supply chain will increase your chances of being able to weather the pandemic successfully.

### Before the pandemic:

Planning ahead is critical, and we recommend that each facility:

1. Develop a list of the essential materials and equipment needed to provide basic care to the residents.

See *Worksheet IV: Suggested Pandemic Supply List (in Addition to Your General Disaster Supplies)* (p. 21)

2. Estimate the quantities needed for a six- to eight-week period.<sup>87</sup>
3. Meet with your vendors to discuss their pandemic plans and strategies to keep you supplied during a six- to eight-week outbreak.
4. Develop a plan to stock a *minimum* of a two-week supply of food, medications and critical consumable supplies, such as incontinence briefs, masks and gloves in the building *at all times*. The more supplies that you can stockpile and store for your facility, the more self-reliant you will be. Many experts recommend that a three-month stock of essential supplies be stockpiled in the facility in anticipation of a pandemic outbreak, all though this may not be realistic for all LTC facilities because of lack of storage space and reimbursement limitations.
5. Identify alternate sources should the normal procurement channels be disrupted. Alternative sources could include:
  - Emergency resources through the city or county stockpiles
  - Local sources in place of regional vendors
  - Re-use of materials when safe to do so
  - Homemade substitutes, as safety permits

For examples of alternate sources see *Worksheet XI: Personal Protective Equipment for Pandemic Influenza* (p. 42) for strategies on N-95 use/re-use and *Worksheet III: Oral Rehydration* (p. 20) for home-made electrolyte solution.

**During the pandemic:** As previously stated, pandemic influenza may occur in waves of outbreaks in communities, with approximately six-week intervals between. A strain of influenza that develops into a

<sup>86</sup> See *Staff Preservation* in this Workbook (p. 55) for more information on cross training of staff.

<sup>87</sup> Center for Disease Control and Prevention (May 2006), *Long-Term Care and Other Residential Facilities Pandemic Influenza Planning Checklist*. Retrieved April 6, 2007, from <http://www.flu.gov/professional/pdf/longtermcare.pdf>.





pandemic can also supplant current seasonal influenza viruses during the winter, causing a region of the world to be impacted by waves that last for a season, usually winter (as with 2009 H1N1). If the former situation occurs, it *may* allow time to conduct an inventory, restock and get ready for the next wave, depending on how supply chains are faring.

### Requesting Resources

If at any time during the pandemic you are unable to acquire the critical supplies and equipment necessary to provide essential care through your usual supply channels, request resources through the local EOC according to NIMS.<sup>88</sup> The exact procedures for how to access the local EOC to request resources will vary from county to county and city to city. Talk to the local disaster planning committee, the county health department or the local OES to obtain contact information for those who receive resource requests during an influenza pandemic. Put that contact information in your disaster plan.

### Safeguard Deliveries

During the pandemic, it may become important to establish a secure and safe method of receiving deliveries of goods and supplies to the LTC facility that does not require direct contact between the delivery personnel and the facility staff. This will reduce your staff's risk of exposure during a severe outbreak. It is also important that supplies not be left unsupervised for any length of time. Thanks to your good planning, your facility may have supplies when others in the community do not. This may increase the likelihood of theft, so make sure you safeguard your supplies.<sup>89</sup>

## STAFF PRESERVATION

Providing essential care to your residents cannot be done without able-bodied staff. Depending on many factors, including the severity, level of impact on age groups and infectiousness of a pandemic-causing influenza strain, you could lose the services of 20 percent to 50 percent of your staff during an outbreak.<sup>90</sup> Even before the illness strikes your community, anxiety and concern may result in increased absenteeism. In addition, as we saw in the beginning of the outbreak of 2009 H1N1 in California, local public health departments may choose to close schools, which could further exacerbate absenteeism of employees with children. Be prepared to preserve the staff you have by developing policies to protect them — and strategies to get by with fewer of them.

Start with education and information as a way to fight fear. Educate your staff, families and residents about how your pandemic planning addresses their needs and how you will continue to provide essential services during a pandemic. Adapt the information in your Pandemic Annex to the language needs and cognitive level of your audience. It is essential to be transparent and honest about what you plan to do in an effort to ensure that all of the participants in your facility's daily function (staff, residents and families) have the information they will need to protect themselves and carry out their roles.

**Figure 6** on the following page is a brief overview of the many measures your facility can implement to reduce staff absenteeism and its consequences. These actions are divided into two groups: the first lists actions that a facility might make in rapid response to a severe pandemic and/or in response to a moderate- to low-impact pandemic. The second list is comprised of actions that a facility might take in response to a more severe pandemic. For a robust business continuity plan, it is essential to do some planning around each of the topics cataloged. Many of these concepts are further elaborated later in this section. Others have been discussed in previous sections of this *Workbook*.

<sup>88</sup> Refer to *How California and the Nation Respond to Disasters* (p. 46) in this *Workbook* for more details.

<sup>89</sup> Refer to *Facility Security* (p. 63) in this *Workbook* for more information.

<sup>90</sup> Centers for Disease Control and Prevention (Sept. 2006), *Pandemic Planning Assumptions*. Retrieved April 6, 2007, from <http://www.flu.gov/professional/pandplan.html>.

**Figure 6: Actions for Minimizing Absenteeism and its Consequences During A Pandemic**

Initial Actions or if the Pandemic is Mild or Moderate in Severity

Review Policies, Protocols; Contract and Statutory Requirements

- Leave Policies
- Pay Policies
- Suspending the requirement for a doctor’s note
- Encouraging sick workers to stay home
- Isolating and sending home symptomatic employees
- Statutory/labor contract issues
- Work-from home practices

Engage in Risk Mitigation

- Identify absentee patterns
- Reassign employees at higher risk for complications
- Conduct cross-training
- Increase inter-facility communication

Employee Protection (Addressed in Section 3.0, Containment Strategies, and in Section 5.0, Communications)

- Enhance environmental cleaning practices
- Provide vaccines
- Provide antiviral medications
- Provide personal protective equipment and training
- Enhance workforce/family communication
- Communicating with public health authorities

**Before the pandemic:** Develop staffing policies and procedures in the following areas:

**General Staffing Policies and Procedures**

*Pay Policies*

The hardship of unpaid time off can discourage workers from staying home when they need to due to illness. The following concepts may assist your facility in keeping probable and known cases of influenza out of your facility by supporting employees to stay home when ill (the focus here is on an outbreak of pandemic influenza).

**Figure 7**

*Some Strategies for Securing Employee Pay During a Pandemic:*

- Allow employees to exhaust paid time off (PTO) hours and go into negative balances (e.g. borrow on future vacation time)
- Advance sick time up to a year of accrual (if, for example, the employee normally accrues 7 days of sick time per year and has used all 7 days, then you may want to consider advancing another 7 days)
- Provide a special time off allotment for H1N1
- Allow employees to donate leave to others<sup>91</sup>

<sup>91</sup> *ibid.*



## Infection Control

This should be a large component of your policies and procedures on pandemic influenza. All staff and volunteers should be trained and assessed for competency in implementing the facility's infection control measures, including:<sup>92</sup>

- Respiratory hygiene measures
- Cohorting of residents and consistent staff assignments
- Posting of visual reminders
- Verbal reminders/in-services
- PPE, vaccine and antiviral distribution
- Restriction of visitors (to those only most essential for resident a resident's psych/social well-being; these visitors must be screened, masked and gowned if near bodily secretions such as mucus if they will be in close contact with a sick resident)
- Decisions on how to handle (and perhaps decline) new admissions and/or transfers
- Evaluation and management of ill staff

## Emergency Staffing Strategies

During normal operations, long term care facilities must comply with all the laws and regulations for staffing of the facility. However, in a pandemic, healthcare providers will probably experience staffing shortages (potentially severe) and, under specific emergency conditions, may need to use volunteers, retired healthcare professionals and trained unlicensed personnel to provide care.<sup>93</sup> This may involve the use of newly-recruited volunteers and staff and the reassignment of existing personnel to provide essential services that are outside of their current job description.

You must be given permission from the authorizing state agency before you can deviate from the current regulations and laws that describe staffing standards for your facility.<sup>94</sup> In a pandemic, you may be given that permission, so plan now on how you can utilize emergency staffing strategies with minimum risk to your residents.

The California Department of Public Health (CDPH) has developed standards and guidelines for healthcare surge during large scale emergencies.<sup>95</sup> The resources available from the standards and guidelines project include multiple manuals and tools that will guide decision-making for emergency orders, as well as waivers and regulatory flexes that can be implemented in the event of a pandemic. In addition, there is a volume that deals specifically with surge recommendations for long term care (also available on the Web site).<sup>96</sup>

### *Cross Training*

One emergency strategy to consider is the cross training of staff to provide essential services. Consider training two staff members for every one staff who will be needed to perform the critical functions of:

- Essential resident care<sup>97</sup>
- Food service
- Housekeeping (especially environmental disinfection)

<sup>92</sup> See *Containment Strategies* (p. 22) in this *Workbook* for more detail on implementing infection control.

<sup>93</sup> California Department of Health Services, *Pandemic Influenza Preparedness and Response Plan* (September 2006), Chap 4, Retrieved April 6, 2007, from <http://www.cdph.ca.gov/programs/immunize/Documents/pandemic.pdf>.

<sup>94</sup> These agencies may include the California Department of Public Health, the Department of Social Services Community Care and Licensing Division, the Centers for Medicare & Medicaid Services or other entities as determined by your facility type.

<sup>95</sup> CDPH. *Standards and Guidelines for Healthcare Surge During Emergencies*. Retrieved June 7, 2010 from <http://bepreparedcalifornia.ca.gov/EPO/CDPHPrograms/PublicHealthPrograms/EmergencyPreparednessOffice/EPOProgramsServices/Surge/>.

<sup>96</sup> *ibid.*

<sup>97</sup> See list of recommended core skills for patient care on next page.



- Laundry
- Essential administrative procedures, such as billing and payroll
- Any other functions that come to your attention as you complete your BCP

Plan how you will accomplish this training. We suggest you develop “just in time” training materials in the form of checklists and brief “how to” sheets for each critical staff position that you can use when it becomes necessary to implement your Pandemic Annex. However, it may be necessary to also implement some training in advance of any pandemic activity because, as we saw with the emergency of 2009 H1N1, a pandemic strain can emerge in North America and spread very rapidly, leaving little time for “just in time” activities.

#### *Reassigning Staff*

Develop policies and procedures that allow for and describe the reassignment of personnel under emergency conditions (as permitted by the regulatory oversight agency). This may involve collaboration with labor unions or employee organizations and a modification of job descriptions in your facility.

#### *Direct Care Staff*

California has many regulatory requirements governing the screening and training of direct care staff in LTC facilities. As stated earlier, it is possible that these requirements will be temporarily waived or modified to allow for emergency staffing strategies during a pandemic so that you can use reassigned, volunteer and/or newly-recruited staff to provide direct care.

For the training of staff in the essential service of direct care, we recommend the use of training materials for nursing assistants that are widely available in published teaching manuals. In skilled nursing facilities, most of these materials will be on hand, as these facilities are required to provide regular in-service education on basic resident care. For other long term care facilities, we recommend calling the local certified nursing assistant (CNA) training program or American Red Cross office to ask what materials they use and where they are available. They may be willing to share some of their training materials with you or at least give you the publisher information so you can order your own.

The following is a list of core skills for basic patient care that should be covered in the “just in time” training of reassigned or newly recruited staff/volunteers who will be providing basic care.

#### *Basic Patient Care Skills:*<sup>98</sup>

- Infection control, including airborne precautions and respiratory hygiene techniques (See *Worksheets V, VI, VII, VIII, IX and X*)
- Donning and doffing of personal protective equipment (See *Worksheets XI, XII, XIII and XIV*)
- Positioning a patient in bed
- Moving patients from bed to chair
- Assisting ambulation
- Making both an unoccupied and an occupied bed
- Brushing a patient’s teeth/dentures
- Mouth care for the unconscious patient
- Giving a patient a bed bath
- Assisting a patient with eating
- Assisting a patient with a bedpan/urinal
- Assisting a patient with using the bathroom
- Incontinence care
- Taking a patient’s temperature (oral and electronic)

<sup>98</sup> Adapted from the American Red Cross of Greater Los Angeles, *Nurse Assistant Review Manual, Preparation for Testing* (2000).



- Taking a patient's pulse
- Counting a patient's respirations
- Post-mortem care (some counties have mass fatality workgroups, usually with the county coroner. Participating may help you to understand the plans they are developing)

### Volunteers

Particularly for a pandemic with greater severity, plan for the use of volunteers and temporary healthcare personnel consistent with advice from the CDPH, and/or your specific regulatory oversight agency regarding how and when this can be allowed under state and federal law. Should you be given permission to use volunteers under emergency conditions, you will need policies and procedures to screen volunteers and temporary personnel before assigning them to resident care. This might include:

- Criminal record check or, at a minimum, a reference check
- Infectious disease screening
- Verification of credentials if the volunteer is to be utilized in a clinical capacity (i.e., nursing or medical license)
- Training and supervision by a "buddy-up" with experienced staff until trained
- Determination of competency through demonstration, observation and/or formal testing

You will also need to plan for the supervision of volunteers and temporary healthcare personnel. This might be best accomplished through pairing them with experienced staff, at least initially, to determine their competency and reliability and oversee their work.<sup>99</sup>

### Occupational Health

The health of your staff must be preserved in order to carry out the essential service of resident care. Sound employee health policies and procedures will help to ensure their safety and also to reassure them that their employer is doing everything possible to keep them safe. The latest recommendations from the CDPH, California Occupational Safety and Health Administration (Cal-OSHA) and CDC should be followed regarding the protection and management of employees during pandemic influenza. Here are some suggested occupational health policies to consider developing now:

1. Plan for the use, availability, access and distribution of PPE, vaccines and antiviral medications. With the most current recommendations of the U.S. Department of Health and Human Services, the California Department of Public Health and the External PI Committee, develop a prioritized list of staff for the distribution of limited supplies. Include PPE, strain-specific vaccine (once it becomes available) and antiviral medications. Direct care staff are in a high priority group for vaccine.
2. Set up systems for employees to work from home when performing essential business functions such as billing and payroll.<sup>100</sup> Test such systems by encouraging these employees to work from home for a day to see how this arrangement will work. By testing this ahead of time, the facility can make information technology or other adjustments to facilitate these employees working from home.
3. Provide education to employees on the importance of self-assessing and reporting influenza symptoms before they come to work. Figure 8 can be used by employees to screen themselves for symptoms during an outbreak before coming to work, and it can also be used to screen employees for symptoms at the beginning of each shift.
4. Develop policies for the isolation of employees who show up for work and are suspected of being infected until they can be sent home or to an appropriate level of care. This policy should include:
  - Instruct the symptomatic employee to don a surgical mask immediately to help to prevent further exposure of others.

<sup>99</sup> See *Additional Strategies to Stretch Limited Staff Resources* (p. 61) in this *Workbook* for more information.

<sup>100</sup> Center for Disease Control and Prevention (December 2005), *Business Pandemic Influenza Planning Checklist*. Retrieved April 6, 2007, from <http://www.flu.gov/professional/pdf/businesschecklist.pdf>.

- Isolate him or her in a room with a door that closes.
- Advise the employee to contact his or her healthcare provider and leave the facility immediately via private transportation if at all possible.
- Decontaminate any areas the person was in that day.<sup>101</sup> Notify the health department, and identify contacts of the sick employee if asked to do so by the health department.

### Figure 8: Influenza-Like Illness Screening Form

Ask the ill person if he or she has any of the following symptoms:

- Fever (feels feverish and hot)
- Headache
- Fatigue or weakness
- Sore throat, cough or difficulty breathing
- Muscle or joint aches or pains

During a pandemic, ill persons with any of the above symptoms should be suspected of having pandemic influenza.

5. Liberalize absentee policies for serious illness, family sickness and/or inability to work as a result of loss of caregivers for dependent family members. The Family and Medical Leave Act (FMLA) may apply to eligible employees who become ill with pandemic influenza.<sup>102</sup> Experts on the FMLA should be consulted to provide more detail prior to implementing these policies:

As a rule, if your organization is covered under FMLA, then FMLA regulations apply. As noted in the FAQ section on flu.gov:

The Family and Medical Leave Act protects eligible employees who are incapacitated by a serious health condition, as may be the case with the flu where complications arise, or who are needed to care for covered family members who are incapacitated by a serious health condition. Leave taken by an employee for the purpose of avoiding exposure to the flu would not be protected under the FMLA. Employers should encourage employees that are ill with pandemic influenza or are exposed to ill family members to stay home and should consider flexible leave policies for their employees in these circumstances. Experts said the key to whether a particular absence will be covered depends on a number of factors. The most relevant in the current context is whether a 2009 H1N1 influenza–related absence involves the employee’s or family member’s “serious health condition.” Although this determination must be made on a case-by-case basis, in most cases, the answer is likely to be that it does not. Bingham described why: a crucial issue is that the FMLA definition of a “serious” health concern refers to one that (1) requires inpatient care or (2) involves continuing treatment by a healthcare provider.<sup>103</sup>

Employers should review these pandemic absentee policies with their human resource and risk management consultants to ensure that they are consistent with fair labor standards and other legal requirements.

<sup>101</sup> See *Worksheets IX and X* for more information on environmental disinfection.

<sup>102</sup> U.S. Department of Labor. *Fact Sheet # 64: Application of Wage-Hour Laws during a Pandemic Flu Outbreak*. Retrieved Feb. 2, 2007, from [http://www.dol.gov/whd/healthcare/flu\\_FLSA.htm](http://www.dol.gov/whd/healthcare/flu_FLSA.htm).

<sup>103</sup> Adapted from CIDRAP & SHRM (November 2009). *Influenza Pandemic: Human Resource Policies, Protocols, Templates, Tools and Tips*. Retrieved June 15, 2010 from <http://www.cahfdownload.com/cahf/dpp/CIDRAP-DoingBusinessDuringPandemicToolkit.pdf>.



Make additional adjustments to leave policies to assist families that run into child/adult day care difficulties. During a pandemic, schools and child and adult day care facilities may be closed by order of the local Public Health Officer. While this may be of only limited benefit in a less severe pandemic, it may be instituted regardless, particularly if the local public health department has little warning time to see the impact of the specific strain on people.

6. Plan for protection of personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised workers) by placing them on administrative leave or altering their work location.
7. Develop return-to-work standards (based on current guidance) that allow employees to return as soon as they are healthy enough to do so. These staff will probably be immune to the pandemic strain they contracted and can be a valuable labor resource once they are strong and healthy enough to work.

**During the pandemic:** Assign a liaison to work with the Operational Area Emergency Operations Center to ensure that your facility's needs are considered when staffing resources are allocated. This person can also regularly communicate with the local health department, your regulatory agency and outside contractors, such as staffing registries, to make sure that you can take advantage of all the available resources in order to keep your staffing at required levels.

It is also essential to document your actions in attempting to keep adequate staffing levels. You may be asked at some point to describe your efforts to find staff in order to justify your actions in utilizing emergency staffing strategies.

Implement your carefully crafted policies, and be ready to use your common sense when the unexpected occurs. When staffing ratios can no longer be met and requested resources have not arrived, it is time to be creative.

## **Additional Strategies to Help Stretch Limited Staff Resources in LTC Facilities**

### **Alternate Care Sites**

Many counties have developed specific plans for what they will do when the local acute care hospitals are full and it is necessary to expand beyond the existing resources to meet the community's increased needs for medical care. These plans may include a temporary location called an "alternative care site" where medical services will be available to augment the healthcare system in your area. Find out from your public health office or your EOC liaison if there will be an alternative care site set up in your area where you can send your most critical or "comfort care" residents. If this resource exists, it will be coordinated through your local EOC. Your Internal PI Coordinator should explore what the plan is in your county and incorporate this information into your facility's Pandemic Annex.

### **Emergency Discharges**

Your Pandemic Annex should address what to do in the event that the number of sick residents in the facility, or the number of sick staff who cannot come to work, begins to seriously impair your ability to provide adequate care to your residents. As discussed earlier, one strategy that may work for some facilities is to determine which families have the ability to temporarily provide home care for their family members (currently your residents) for the duration of the emergency. While this concept will come as a surprise to many families and some providers, it is important to discuss with families that, under severe pandemic conditions, taking on this hardship may become a necessity. It is important that this discussion take place soon to permit the families that can provide home care adequate time both to accept this concept and prepare for it.

By reducing the facility's census to the lowest level possible during the emergency, you will be able to focus your limited staff and other resources on a smaller number of residents. This will extend the time



your LTC facility can operate safely under the adverse conditions expected during a pandemic.<sup>104</sup>

In the event that family members become unable to provide home care to a resident, determine whether they would be willing to volunteer within the facility to help care for their family member and other residents in the event of staffing shortages become severe.

### **Stretch experienced staff**

Use your experienced healthcare workers to supervise newly recruited and/or reassigned staff. They can oversee the care for many residents if they are not consumed with providing care to a few. Utilize the core skills listed above and organize resident care in the most efficient manner possible. Use this strategy to pair experienced staff with new staff in dietary, laundry, payroll and housekeeping as well if at all possible.

### **Consistent staff assignments**

Cohort sick residents, and assign consistent staff to them. Minimize the floating of staff in all departments but especially with staff who are caring for contagious residents. Ideally, the staff assigned to care for sick residents will be:

- Licensed
- The most experienced
- Vaccinated or given antiviral treatment or have recovered from the illness themselves so they are not at a high risk of infection

### **Staff dependants**

If feasible, organize a safe space at the facility for staff to bring their dependant family members who would otherwise be left unsupervised while staff are at work as a result of school closures, etc.

### **Keep expectations realistic**

Be realistic about what you can do. Focus on providing basic and essential care to the greatest number of people<sup>105</sup> and watch for staff burnout.

### **Staff burnout**

Recognize and prepare for caregiver burnout. Caregivers are not immune to the stress and grief of a pandemic, or in fact most medical/health emergencies. Facilitate access to mental health professionals, clergy and support groups and provide access at the facility if possible. Organize time for caregivers to rest, eat, relax and talk about what they are feeling if they need to. Consider providing literature on the signs and symptoms of burnout and ways to cope with it. It may not be possible to resolve caregiver burnout in a crisis situation, but it is important to recognize it, acknowledge that it exists and take steps to protect residents from it by supporting or replacing staff who have reached their limit of effectiveness.

### **Signs of Caregiver Burnout<sup>106</sup>**

- Being on the verge of tears or crying a lot
- Feeling helpless or hopeless
- Overreacting to minor nuisances
- Constant exhaustion
- Loss of interest/apathy
- Decreased productivity
- Social withdrawal

<sup>104</sup> See *Business Continuity Planning* (p. 53) in this *Workbook*, for more information.

<sup>105</sup> See *Altered Standards of Care* (p. 64) in this *Workbook* for more information.

<sup>106</sup> Adapted from Area Agency on Aging of Paso-Pinellas Inc.: *For Caregivers: Handbook and Resource Guide. Stage Three, Section 1, Preventing Caregiver Burnout*, Retrieved April 6, 2007, from [www.agingcarefl.org/caregiver/fourStages/stageThree/](http://www.agingcarefl.org/caregiver/fourStages/stageThree/).





- Increased use of alcohol or stimulants
- Change in eating or sleeping habits
- Inability to relax
- Scattered thinking
- Increased feelings of resentment
- Short temper
- Increasing thoughts of death

PsySTART is a rapid triage tool for assessment that teaches the longer an exposure to disaster conditions, and the worse those individual experiences are, the greater the need for rapid, early behavioral health intervention. Prioritizing the need for experienced behavioral health professionals can be done rapidly in a disaster, and the PsySTART system measures the impact and dose of exposure. Traumatic exposures include witness to death or the dying, delay in evacuation (when necessary), etc. It also concerns traumatic loss (i.e. missing family members), secondary stresses (such as the loss of home, relocation, and job/income loss), as well as personal injury or illness.<sup>107</sup>

Another issue for which watchfulness is required is resident burnout. Keep vigilant for the above-listed symptoms in your residents, and ensure that the proper behavioral health staff are on alert.

## FACILITY SECURITY

In widespread disasters, law enforcement resources may be scarce. During a pandemic, when the state of emergency may continue for months, the demands on law enforcement could be overwhelming due to their internal absenteeism and increased external demands related to community containment measures and/or social unrest. Your Pandemic Annex should include security measures to increase the protection of your residents, staff and resources during a pandemic.

Some security measures that you may want to add to your plan for periods of high risk<sup>108</sup> include:

### Before the pandemic:

- Develop a facility security plan that can be quickly implemented to limit access to the facility. If one is not already in place. Many facilities use a code to initiate their security plan, such as “Code Silver” or “Dr. Strong” on the public address system, which means that there is a security issue in an area of the facility and that help is required.
- Make sure staff are trained and drilled regularly on the security plan.
- Develop a checklist/job action sheet for facility security specific to your building.
- Develop policies and provide training in self protection strategies for staff traveling to and from the workplace.
- Work with your vendors to ensure safe delivery of your supplies during the pandemic. Many healthcare facilities create procedures to set in motion when faced with the arrival of goods that are of high value or in demand.

### During the pandemic:

- Assign security personnel. Ensure that these staff are adequately trained and equipped to do this job. If you normally have security personnel, consider increasing their numbers and/or hours of coverage during high risk times. If you contract with an outside agency for this service, talk with agency staff about their disaster plan and how they are planning to uphold your security contract

<sup>107</sup> Schriber, Chip PhD (date unlisted, recent). *Managing the Psychological Impact of Mass Casualty Events: the PsySTART Disaster System of Care Incident Management Model*. Retrieved June 18, 2010 from [www.isu.edu/irh/IBAPP/documents/Schreiberjan18.pdf](http://www.isu.edu/irh/IBAPP/documents/Schreiberjan18.pdf).

<sup>108</sup> “High risk” is defined as low availability of law enforcement and high probability of social unrest such as looting, rioting or increased incidents of theft and/or assaults in your area.



during a pandemic. Ensure you have staff assigned to security on every shift if at all possible. Request to see external security providers' policies for the continuity of their services during impact of a severe pandemic.

- Increase monitoring of the grounds - particularly outbuildings where supplies are stored.
- Direct all incoming staff, visitors and others to a single entrance and station someone to monitor and control access to the facility. You may also need to be concerned with any separate delivery entrances, particularly during delivery times.
- Limit visitors to one visitor at a time per resident.

### ALTERED STANDARD OF CARE

The increased demands for services, particularly during a severe influenza pandemic could challenge the capacity of the healthcare system to a level not previously experienced. It is to be hoped that when the next pandemic hits, it will be at a mild to moderate severity level such as 2009 H1N1 and the steps that we have taken to prepare as a county and as individuals will be adequate to meet the challenge. In a worst-case scenario, however, a severe pandemic will make "business as usual" impossible in long term care (or any healthcare) facilities. During a severe pandemic, the number of pandemic influenza victims will far exceed the current healthcare capacity, and personnel and supplies will dwindle. This is a situation that providers should prepare for by familiarizing themselves with the measures described in this section.

The implementation of altered standards of care means during an overwhelming disaster, the priority of those who provide care and allocate healthcare resources will shift to "the greater good" and a focus on how to save the largest number of lives rather than the use of scarce resources to save a few.<sup>109</sup> The goal in this kind of situation is to adjust expectations to a realistic level that allows for a "graceful degradation"<sup>110</sup> of care where the usual level of care slowly decrease in order to avoid a complete and sudden failure of the healthcare system.<sup>111</sup> In order to keep the healthcare system functional in a severe pandemic, and to preserve as many lives as possible, it may become necessary to:

- Focus on care delivery that is basic and essential
- Minimize the time spent on documentation
- Make difficult treatment decisions

The ethical and legal implications involved in a discussion of altered standards of care are beyond the scope of this *Workbook*, but we would be remiss if we did not attempt to address some of the practical planning elements related to this issue.<sup>112</sup> If readers are interested in further consideration of this topic, many excellent resources exist, as indicated in the reference section of this document.<sup>113 114</sup>

Although it is extremely difficult to the predict the potential severity and duration of a particular influenza

<sup>109</sup> Agency for Healthcare Research and Quality (April 2005), *Altered Standards of Care in Mass Casualty Events*, AHRQ Publication No. 05-0043.

<sup>110</sup> "The goal of graceful degradation is to avoid having the health system become a victim of the assault from becoming incapacitated and unable to deliver care of any kind. . . the [facility], in essence, must engineer its failures — those it can allow — while maintaining its ability to provide care." Joint Commission (2003). *Healthcare at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems* (p. 26). Retrieved May 17, 2007, from [http://www.jointcommission.org/PublicPolicy/Emergency\\_Preparedness.htm](http://www.jointcommission.org/PublicPolicy/Emergency_Preparedness.htm).

<sup>111</sup> Institute of Medicine of the National Academies et al (2009). *Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report*. Retrieved June 19, 2010 from [http://www.nap.edu/catalog.php?record\\_id=12749](http://www.nap.edu/catalog.php?record_id=12749).

<sup>112</sup> For more information on the legal and ethical issues related to altered standards of care in California, please refer to California Department of Public Health Surge Standards and Guidelines project at: <http://bepreparedcalifornia.ca.gov/epo/cdphprograms/publichealthprograms/emergencypreparednessoffice/epoprogramsservices/surge/>.

<sup>113</sup> California Hospital Association (multiple documents/dates vary). Retrieved June 19, 2010 from [www.calhospitalprepare.org/category/content-area/planning-topics/altered-standards-care/-crisis-care](http://www.calhospitalprepare.org/category/content-area/planning-topics/altered-standards-care/-crisis-care).

<sup>114</sup> Sandrock, Christian, Ellie Anderson, James Marcin, Tina Palmieri, Peter Yellowlees, Madan Dharmar, Joseph Galante (2009, unpublished). *Enhancing Surge Capacity and Partnership Effort (ESCAPE): Crisis Care Guidelines*. Retrieved June 19, 2010 from [www.healthcarereadiness.com/resources\\_and\\_publications](http://www.healthcarereadiness.com/resources_and_publications).



strain and a facility's (in)ability to maintain the required standards of care, there are some areas that have been identified as likely targets for altered standards during a severe pandemic. Some of the strategies for continuing operations in the face of dwindling resources and increased demands have already been described in *Supplies* (p. 54) and *Staff Preservation* (p. 55) of this *Workbook*. Some additional considerations are described below.

**Before the pandemic:** Work with the disaster/emergency preparedness committee to ensure that your facility's planning effort is compatible with the local pandemic plan, and their emergency management plans in general. Integrate your facility planning into the operational area or county plan(s) to ensure that you are not competing with other providers for the same resources and that your facility will be considered when resource allocations are made at the operational area level.

Find out what other healthcare providers (other long term care facilities, hospitals, clinics, etc.) are planning to do when critical resources in your community begin to dwindle. As much as possible, become part of local emergency management plans by incorporating the altered standards that are being/have been adopted by other healthcare entities in your area into your Pandemic Annex. Should you have to explain or defend the altered care decisions that you make at some later point, it could be critical to show that your actions were based on community practice and were part of an integrated community response.

As always, decide what events will trigger the implementation of the various sections of your facility's Pandemic Annex. When should you start to conserve resources, cut back on optional activities or stretch supplies? It is important that you do not wait until you are almost out of a critical supply to begin to conserve it (e.g., PPE, medications and staff), but it also is important that you do not change standards of care until there is a clear need to do so.

#### **Possible triggers for altered standards of care include:**

- Public health emergency declared by local or state health officer
- First documented case of pandemic influenza in your operational area
- Extreme increase in admissions to your facility due to widespread community illness or facility overload or closure
- Decrease in staff and inability to find replacement workers
- Hospital cancellation of elective procedures and/or limits on transfers due to implementation of their surge capacity response plan

#### **Consult with Experts**

Work with your medical director, the local health officer and your attorneys regarding the decision-making process and potential liability issues related to:

- Managing acutely ill residents in your facility due to an inability to transfer to acute care.
- Allocation of scarce resources (e.g., ventilators, respiratory therapy, IV therapy).
- Utilization of newly recruited, reassigned and volunteer personnel.<sup>115</sup>
- Criteria for a shift from treatment to comfort care for specific residents.
- Authorization to re-use disposable equipment (under specific safety guidelines defined at the outset of any influenza pandemic).
- Pronouncement, postmortem requirements and the issuing of death certificates in a mass fatality situation.<sup>116</sup>

<sup>115</sup> See *Staff Preservation* (p. 55) in this *Workbook* for greater detail.

<sup>116</sup> "Mass fatality" in this context refers to a situation in which the number of deceased residents at any one time exceeds the facility resources to manage them according to established routines and procedures.

## Medications

During a severe pandemic,<sup>117</sup> a disruption in the supply of pharmaceuticals will likely occur. This will place residents who are on certain critical medications at high risk for a severe complication of their underlying co-morbidity. Drug treatment for coronary heart disease, COPD, hypertension and even diabetes are a few examples of diseases that can be expected to deteriorate — resulting in severe complications or mortality — if the medication is stopped. On the other hand, there are many other medications prescribed by physicians to prevent complications of chronic diseases or for the comfort of the patient that may not be in the “must take” category. *Since only the patient’s physician can decide that temporary discontinuation of medication(s) creates a life-threatening or unacceptably high-risk situation, that decision should fall into their purview. Palliative care and pain management should also be left to the physician’s judgment.* Studies on this subject suggest a minimum of three decision-makers: the patient or resident’s own physician (acting always as an advocate), an administrator, and a physician with no ulterior motive should be involved in this kind of decision, however this kind of personnel may not be available under the circumstances. This relates not only to the administration of medication in a scarce resource environment, but also to the utilization of any other piece of equipment.<sup>118 119</sup> Although challenging to assemble, this kind of team is truly necessary for critical life/death situations, such as the removal of a ventilator in a scarce resource management situation.

If residents’ physicians are comfortable making recommendations about identifying the “must take” medications for your residents, these are the medications that you should consider stockpiling first.<sup>120</sup> Some categories of medications to consider are analgesics, antipyretics, cholesterol medications, etc. Additionally, providers should obtain a supply of medications for the routine treatment of influenza. Consult with your medical director or attending physician regarding which types of medications to stockpile for influenza treatment. (See *Prevention and Treatment* (p. 18) to review suggested medications for influenza treatment).

If possible under the existing reimbursement and regulatory structure, it is recommended that facilities stockpile a six- to eight-week supply of medications in the “must take” category to cover expected supply interruptions. Some experts say that a three-month stockpile of medications is ideal. At a minimum, providers should have a two-week supply of the “must take” medications in the facility at all times and a plan with their pharmaceutical providers to have an additional six- to eight-week supply available to their facility in an emergency. Talk to your pharmaceutical suppliers now about their ability to maintain an inventory that will allow them to supply your facility for several weeks in the event of a disruption to their supply chain.

Drug supply management of the stockpile medications involves the rotation of the stock and proper storage to ensure the integrity of the stored pharmaceuticals. See *Appendix E: Stocking up on Regular Medications* (p. 94) for more information.

See *Worksheet IV: Suggested Pandemic Supply List (in Addition to Your General Disaster Supplies)* (p. 21)

## Mass Fatality Care

During a severe pandemic, you may be faced with a large and prolonged loss of life among your residents. Providers should consider, plan and prepare for dealing with the deaths of up to 15 percent of the LTC facility’s residents during the pandemic (although the elderly are among the least affected age group

<sup>117</sup>See *Pandemic Influenza Severity Index* (p. 13) in this *Workbook* for more information.

<sup>118</sup>Sandrock, Christian, Ellie Anderson, James Marcin, Tina Palmieri, Peter Yellowlees, Madan Dharmer, Joseph Galante (2009, unpublished). *Enhancing Surge Capacity and Partnership Effort (ESCAPE): Crisis Care Guidelines*. Retrieved June 19, 2010 from [www.healthcarereadiness.com/resources\\_and\\_publications](http://www.healthcarereadiness.com/resources_and_publications).

<sup>119</sup>NYS Workgroup on Ventilator Allocation in an Influenza Pandemic and NYS DOH/ NYS Task Force on Life & the Law (March 15, 2007). Retrieved June 18, 2010 from [www.health.state.ny.us/diseases/communicable/influenza/pandemic/ventilators/](http://www.health.state.ny.us/diseases/communicable/influenza/pandemic/ventilators/).

<sup>120</sup>Stockpiling of medications may not be practical for all long term facilities due to storage, reimbursement and/or regulatory limitations. The authors of this *Workbook* suggest that you review the medication storage and drug reimbursement regulations for your facility type before actually purchasing medications for this purpose to ensure that you can do so within your regulatory and reimbursement parameters.



during 2009 H1N1). While we do not expect a pandemic will have an average case fatality rate this high, it is imperative to be ready and able to deal with outlier conditions that will occur in some facilities. Your Pandemic Annex must include the possibility that routine funeral home services will not be available and that the deceased's remains will have to be maintained at ambient temperatures on site for a prolonged period of time, possibly months, before they can be properly buried. While there is no precedent or generally accepted method for managing this situation in LTC facilities, or anywhere else for that matter, a few general guidelines can be recommended. In preparation, your Pandemic Annex should include:

- An identified area in your facility, preferably in an outbuilding, that could serve as a temporary morgue. Ideally this will be a cool area with good ventilation that is protected from high traffic and environment factors.
- Preparation for a severe pandemic includes procurement post-mortem supplies such as:
  - Watertight zippered body bags for up to 15 percent of the facility's expected census
  - Plastic tarps for temporary screens and floor protection
  - Protective clothing, face shields, heavy duty rubber gloves and boots
  - Cleaning materials — basins, mops, buckets, clothes, disinfectant (unscented household bleach or dry bleach used for swimming pool maintenance)
  - Heavy duty trash bags
  - Large cable ties
  - Labels or tags to identify the body<sup>121</sup>
  - 20 pounds of common roadway salt sufficient to embalm 15 percent of the expected census. This is a good choice for this purpose, is inexpensive and is available in bulk
  - 20 pounds of quick lime sufficient to embalm 15 percent of the expected census. This product can be obtained from gardening centers, is available in 40-pound bags and is inexpensive (See emergency embalming procedures described below)

Consider stockpiling these supplies now, or at least talk to your local healthcare disaster planning committee about the availability of these supplies through the EOC if needed. We also recommend that you identify a vendor who will supply you with adequate supplies should the time come that they are needed.

### **Suggested Emergency Embalming Procedure for Temporary Mortuaries**

In the event the deceased's remains cannot be removed from the facility in a timely fashion, place the body in the body bag and carry it to the temporary morgue. Cover the body entirely with salt and lime and close the bag.<sup>122</sup> Tag the bag including enough information to clearly identify whose remains are enclosed. While this is clearly far from an ideal, it is certainly preferable to not being prepared when confronted with this challenge.

Many local jurisdictions have completed mass fatality plans that generally involve the coroner's office. You should ask your local health department, local coroner's office or local OES for a copy of this plan, and adjust your planning procedures to meet it. Find out if you will have to transport the body to this site and, if so, what permits may be required and how you should obtain them.

### **Funeral Services for Deceased LTC Facility Residents during a Severe Pandemic**

Since traditional funeral services are unlikely to be available soon after the death of a facility resident, it will be important for the LTC facility to consider having memorial services for the deceased. Following this custom will be important to the morale of the residents and staff and be a comfort to all.

<sup>121</sup> Adapted from the World Health Organization (July 2005), *Disposal of Dead Bodies in Emergency Conditions*. WHO Technical Notes for Emergencies – No 7. Retrieved May 16, 2007 from: [http://www.who.int/water\\_sanitation\\_health/hygiene/emergencies/dead-bodies.pdf](http://www.who.int/water_sanitation_health/hygiene/emergencies/dead-bodies.pdf).

<sup>122</sup> The salt and lime will embalm the remains, kill bacteria, mold and viruses within the body, reduce bloating, lessen odors and absorb body fluids to some degree.



### Communication during Times of Altered Standards of Care

When it comes to altered standards of care, timely communication with concerned parties is critically important. Be ready for inquires from staff, families, regulatory oversight agencies and possibly the media should you have to implement altered standards of care. Make sure this is considered in the risk communication section of the Pandemic Annex to your disaster plan.<sup>123</sup>

**During the pandemic:** When the pandemic hits, your response will need to be geared to the circumstances you face, particularly with regard to the level of severity and the age-groups it impacts the most. Having a solid plan with pre-identified triggers for implementation will guide you to make sound decisions in difficult circumstances.

Conduct pandemic status meetings at least once a day to ensure that you have the latest information about conditions in your facility and in the community. Follow your incident command process<sup>124</sup> to ensure that your plan is being effectively implemented. Items to review at these meetings include:

- Pandemic status updates from the local, regional, state and national authorities
- New cases in the facility
- Status of current cases
- Deaths in last reporting period
- Staffing for the current and next shift
- Status of critical supplies
- Critical unmet needs

Furthermore, you will need to document all attempts to obtain adequate resources and report your status to the appropriate oversight agencies and the local health department as directed.

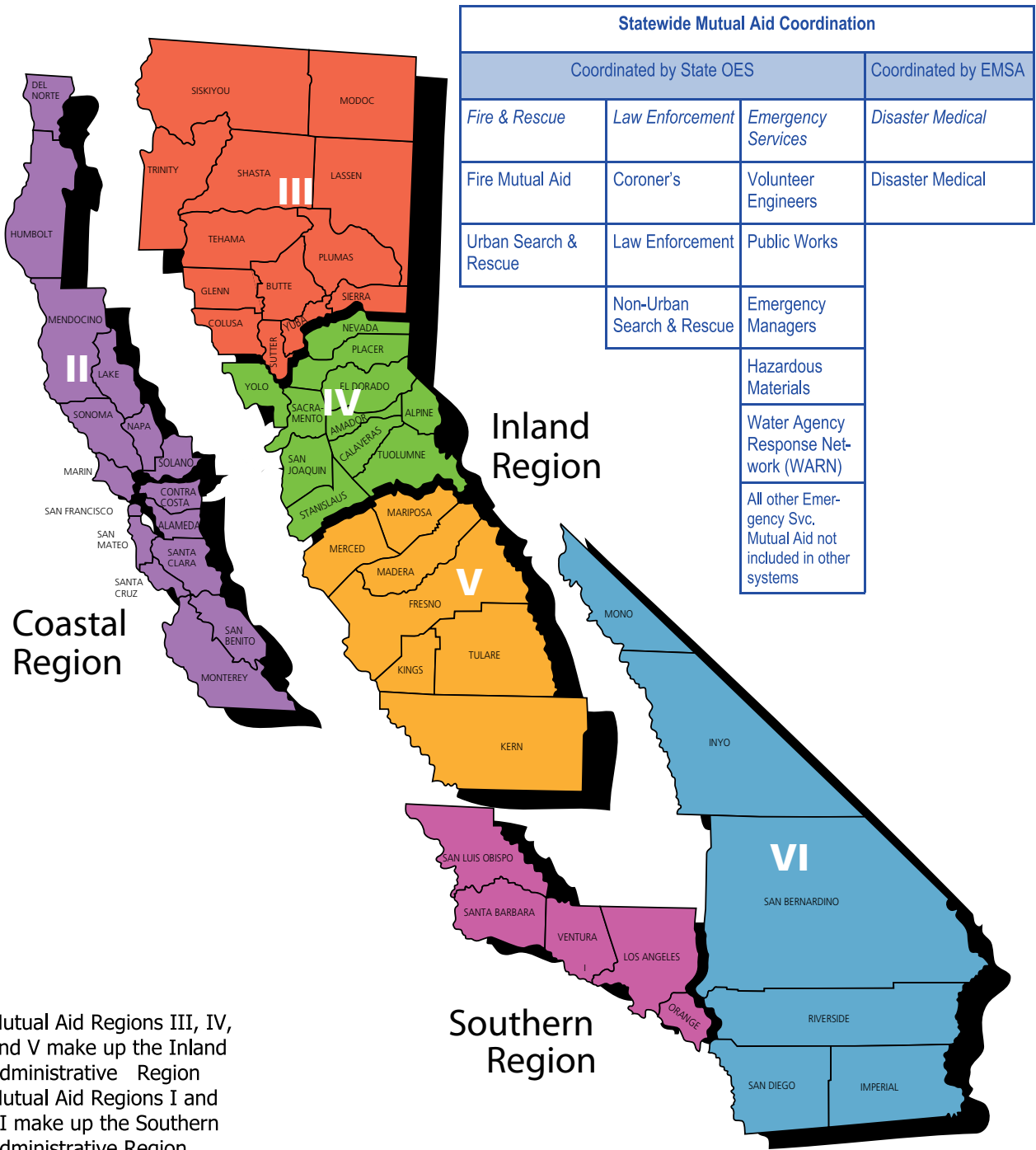
It is critical to communicate honestly with staff, families and residents. Listen to their ideas and concerns and assure them that your goal and actions are to provide the best care possible under the circumstances.

<sup>123</sup> See *Communications* (p. 76) in this *Workbook* for greater detail.

<sup>124</sup> See *Command & Control in Your Organization* (p. 70) in this *Workbook*.



# WORKSHEET XV: CALIFORNIA OES MUTUAL AID REGIONS MAP



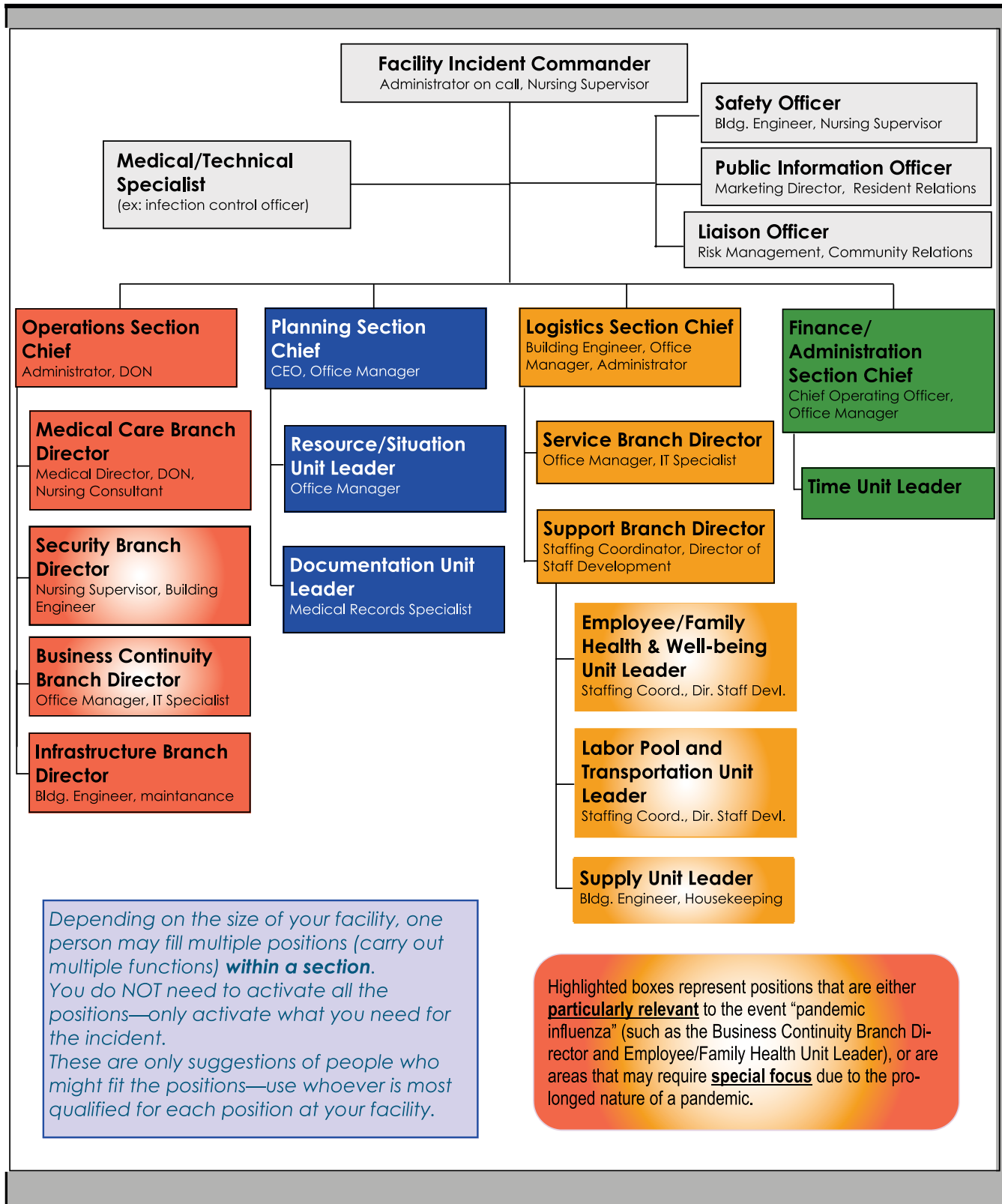
Coastal Region

Inland Region

Southern Region

1. Mutual Aid Regions III, IV, and V make up the Inland Administrative Region
2. Mutual Aid Regions I and VI make up the Southern Administrative Region
3. Mutual Aid Region II is also the Coastal Administrative Region

## WORKSHEET XVI: NURSING HOME INCIDENT COMMAND SYSTEM (NHICS) FOR PANDEMIC INFLUENZA







## WORKSHEET XVII: MAIN NHICS POSITIONS WITH SUGGESTED MISSIONS FOR PANDEMIC INFLUENZA

### INCIDENT MANAGEMENT TEAM POSITIONS AND THEIR MISSIONS

**Incident Commander** \_\_\_\_\_

**MISSION:** Organizes and directs the facility Command Center. Give overall strategic direction for incident management and support activities, including response/recovery. If needed, authorizes evacuation.

**Public Information Officer** \_\_\_\_\_

**MISSION:** Serves as the conduit for information to internal and external stakeholders, including residents, staff, visitors and families, and the news media, as approved by the Incident Commander.

**Medical/Technical Specialist** \_\_\_\_\_

**MISSION:** Advises the Incident Commander and/or assigned Section on issues related to the response in their area of expertise (example: in a pandemic, it might be an infection control officer).

**Safety Officer** \_\_\_\_\_

**MISSION:** Ensures safety of staff, residents, visitors and volunteers, monitors and corrects hazardous conditions. Has the authority to halt any operation that poses an immediate threat to life and health.

**Liaison Officer** \_\_\_\_\_

**MISSION:** Functions as incident contact person in the Command Ctr. for representatives from other agencies.

**Operations Section Chief** \_\_\_\_\_

**MISSION:** Develops and implements strategy and tactics to carry out the objectives established by the Incident Commander. Organizes, assigns and supervises Medical Care, Security, Business Continuity, Staging and infrastructure support.

**Medical Care Branch Director** \_\_\_\_\_

**MISSION:** Organizes and manages the delivery of resident care and support services.

**Security Branch Director** \_\_\_\_\_

**MISSION:** Coordinates all of the activities related to personnel and facility security such as access control, crowd and traffic control, and law enforcement interface.

**Business Continuity Branch Director** \_\_\_\_\_

**MISSION:** Ensures essential business functions are maintained, restored or augmented to meet designated recovery objectives with limited interruptions to continuity. Ensures access/preservation of business records, maintenance of IT business functions, maintenance of business/clerical functions, etc.

**Infrastructure Branch Director** \_\_\_\_\_

**MISSION:** Organizes and manages the services required to sustain/repair the facility's infrastructure operations including: power/lighting, water/sewer, HVAC, buildings and grounds, med gasses and devices, structural integrity, environmental services and food services.

**Planning Section Chief** \_\_\_\_\_

**MISSION:** Oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, develops alternatives for tactical operations, conducts planning meetings and prepares the Incident Action Plan (IAP) for each period.

**Resource/Situation Unit Leader** \_\_\_\_\_

**MISSION:** Maintains master list of resources (status, location and availability of personnel, facilities, supplies and major equipment). Collects, processes, and organizes ongoing situation information; prepares situation summaries; and develops projections and forecasts of future events related to the incident. Prepares maps, gathers and disseminates information and intelligence for use in the IAP.



## WORKSHEET XVII: MAIN NHICS POSITIONS WITH SUGGESTED MISSIONS FOR PANDEMIC INFLUENZA (CONT.)

### Documentation Unit Leader \_\_\_\_\_

**MISSION:** Maintains accurate and complete incident files, including a record of the facility's Command Center response and recovery actions and decisions; provides duplication services to incident personnel; and maintains and stores incident files for legal, analytical and historical purposes.

### Logistics Section Chief \_\_\_\_\_

**MISSION:** Organizes and directs those operations associated with maintenance of the physical environment and adequate levels of personnel, food and supplies to support incident-related activities.

### Service Branch Director \_\_\_\_\_

**MISSION:** Organizes and manages the services required to maintain the facility's communication systems, and is responsible for information technology and systems.

### Support Branch Director \_\_\_\_\_

**MISSION:** Organizes and manages the services required to maintain the facility's supplies, buildings, transportation and labor pool. Ensures the provision of support services to staff and dependents in accordance with facility policy.

### Employee/Family Health & Well-being Unit Leader \_\_\_\_\_

**MISSION:** Provides for medical screening, evaluation, care and follow-up of employees (and family members if dictated by facility policy). Ensures the availability of behavioral and psychological support for staff (and families) during and after an incident. Coordinates mass prophylaxis/vaccination/immunization of staff (and family members), if required. Provides arrangements for day care and pet care, as needed.

### Labor Pool and Transportation Unit Leader \_\_\_\_\_

**MISSION:** Maintains adequate numbers of personnel. Inventories all available staff and volunteers (or loaned staff, if Mutual Aid MOU exists); assigns them to meet Incident Action Plan Objectives. Organizes and coordinates the transportation of all ambulatory and non-ambulatory residents. Arranges for the transportation of human and material resources within or outside facility.

### Supply Unit Leader \_\_\_\_\_

**MISSION:** Acquire, inventory, maintain and provide medical and non-medical care equipment, supplies and pharmaceuticals.

### Finance/Administration Section Chief \_\_\_\_\_

**MISSION:** Monitors the utilization of financial assets. Oversees the acquisition of supplies and services necessary to carry out the facility's mission. Supervises the documentation of expenditures, claims and cost reimbursement activities, including personnel time keeping activities/collection of time sheets.

### Time Unit Leader \_\_\_\_\_

**MISSION:** Documents personnel time records, monitors and reports on regular and overtime hours worked/volunteered.



# WORKSHEET XVIII: SAMPLE NHICS JOB ACTION SHEET FOR PANDEMIC INFLUENZA (INCIDENT COMMANDER)

## Incident Commander

Assigned Position (possible): Administrator-On-Call, Nursing Supervisor, CEO

Position assigned to: \_\_\_\_\_ (Your name)

You report to: \_\_\_\_\_ (CEO, Board, etc.)

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Radio Title: \_\_\_\_\_

**MISSION: Organize and direct the facility Command Center. Give overall direction for incident management and support activities, including response and recovery and if needed, authorize evacuation.**

## Job Action Sheet

Date \_\_\_\_\_

Time in \_\_\_\_\_ Out \_\_\_\_\_

Your initials \_\_\_\_\_

Relieved by \_\_\_\_\_

*NHICS forms and additional Job Action Sheets can be obtained free of charge at [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com) (under NHICS)*

### IMMEDIATE (0-2 Hours) – Start here

Time	Initial	Actions
		<b>ASSUME ROLE OF INCIDENT COMMANDER AND ACTIVATE NURSING HOME INCIDENT COMMAND SYST (NHICS)</b>
		<b>ASSIGN FACILITY COMMAND CENTER SET-UP</b> to Administrative Assistant
		<b>READ THIS ENTIRE JOB ACTION SHEET AND PUT ON THE VEST</b> that identifies your position
		<b>NOTIFY</b> your usual supervisor and facility CEO, or designee, of the incident, activation of your EOP and NHICS, and Incident Management Team assignment
		<b>INITIATE THE INCIDENT BRIEFING FORM (NHICS FORM 201)</b> and include the following: <ul style="list-style-type: none"> <li><input type="checkbox"/> Nature of the problem (incident type, number of ill, type of illness)</li> <li><input type="checkbox"/> Safety of staff and residents</li> <li><input type="checkbox"/> Risks to personnel and need for PPE</li> <li><input type="checkbox"/> Facility status (any risks to facility, need to modify physical plant for infection control, closed to new admissions)</li> <li><input type="checkbox"/> Estimated duration of incident</li> <li><input type="checkbox"/> Need for modifying daily operating procedures</li> <li><input type="checkbox"/> IMT required to manage the incident</li> <li><input type="checkbox"/> Need to activate the facility Command Center</li> <li><input type="checkbox"/> Overall community response actions being taken</li> <li><input type="checkbox"/> Status of local, regional and state Emergency Operations Centers (EOCs)</li> </ul>
		<b>CONTACT OPERATOR/SWITCHBOARD AND ACTIVATE THE EMERGENCY OPERATIONS PLAN (EOP)</b>
		<b>DETERMINE NEED FOR AND APPOINT SECTION CHIEFS/BRANCH DIRECTORS.</b> Give them Job Action Sheets for their sections. Complete or assign the completion of the Branch Assignment List (NHICS Form 204)
		<b>APPOINT OFFICERS:</b> Information Officer, Liaison Officer, Safety Officer, Medical/Technical Specialist as needed. Instruct them to read their Job Action Sheets
		<b>BRIEF ALL APPOINTED STAFF</b> on the nature of the problem, immediate critical issues, and initial plan of action. Designate time for next meeting
		<b>ASSIGN CLERICAL STAFF</b> or make request to Logistics section for an incident Recorder/Aide (in Command Center)
		<b>DISTRIBUTE SECTION PERSONNEL TIME SHEET (NHICS Form 252)</b> to Command Staff
		<b>CONTACT LOCAL MUNICIPAL OR COUNTY EOC</b> to provide update on facility status, collect information on the status of the community, region and state



## WORKSHEET XVIII: SAMPLE NHICS JOB ACTION SHEET FOR PANDEMIC INFLUENZA (INCIDENT COMMANDER) (CONT.)

Incident Commander page 3

Job Action Sheet

### EXTENDED (Operational Period Beyond 12 Hours—could be weeks in a pandemic)

Time	Initial	Actions
		<b>ENSURE STAFF, RESIDENT, FAMILY BRIEFINGS</b> are conducted regularly
		<b>CONTINUE TO BRIEF COMMAND STAFF/SECTION CHIEFS</b> at a minimum once per shift. Regularly review and brief Command Staff/Section Chiefs on considerations referred to in the Operational Period briefing
		<b>CONTINUE INCIDENT ACTION PLANNING</b> in each operational period, and the IAP is reported at each shift change and briefing
		<b>REVIEW/REVISE IAP SAFETY ANALYSIS (NHICS Form 261)</b> and implement correction or mitigation strategies
		<b>MEDIA RELEASES</b> should be coordinated with the local JIC. Review/approve media communications specific to your long term care facility
		<b>ENSURE CONTINUED COMMUNICATIONS AND RESPONSE COORDINATION</b> with local EOC, MHOAC, and local long term care providers and hospitals as appropriate through the Liaison Officer. Coordinate with state Licensing and Certification, Department of Public Health, and long term care association as appropriate. Access stockpiled resources as needed
		<b>CONTINUE TO AUTHORIZE RESOURCES</b> as needed to carry out the response
		<b>EVALUATE OVERALL OPERATIONAL STATUS</b> and ensure that critical issues are addressed
		<b>ENSURE YOUR PHYSICAL READINESS, AND THAT OF THE COMMAND STAFF AND SECTION CHIEFS</b> through proper nutrition, water intake, rest periods and relief, and stress management techniques
		<b>OBSERVE ALL STAFF</b> and any volunteers for signs of stress, fatigue, and inappropriate behavior
		<b>BRIEF REPLACEMENT</b> upon shift change on the status of all ongoing operations, critical issues, relevant incident information, and the IAP for the next Operational Period
		<b>CONTINUE TO COMMUNICATE IAP/FACILITY STATUS</b> to CEO or designee, or to other executives and/or Board of Directors members as indicated by facility Emergency Operations Plan (EOP)

### DEMOBILIZATION/RECOVERY

Time	Initial	Actions				
		<p><b>ASSESS DEMOBILIZATION PLAN</b> developed by Planning and Operations for the gradual demobilization of the facility Command Center and emergency operations. Demobilize positions in the Command Center and return staff to their normal jobs (may be done in a phased manner) until the incident is resolved and there is a return to normal operations</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Brief staff, administration, Board of Directors</li> <li><input type="checkbox"/> Approve announcement of "ALL CLEAR" when incident is no longer a critical safety threat or can be managed using normal facility operations</li> <li><input type="checkbox"/> Ensure outside agencies are aware of status change</li> <li><input type="checkbox"/> Upon receiving notice that facilities can return to normal, declare facility safe</li> </ul>				
		<p><b>ENSURE RESOURCES ARE RETURNED TO PRE-EVENT STATUS</b> as appropriate</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Return equipment to original location</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Clean/disinfect facility</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Replace lost/broken items</td> <td style="border: none;"><input type="checkbox"/> Restock supplies, pharmaceuticals</td> </tr> </table>	<input type="checkbox"/> Return equipment to original location	<input type="checkbox"/> Clean/disinfect facility	<input type="checkbox"/> Replace lost/broken items	<input type="checkbox"/> Restock supplies, pharmaceuticals
<input type="checkbox"/> Return equipment to original location	<input type="checkbox"/> Clean/disinfect facility					
<input type="checkbox"/> Replace lost/broken items	<input type="checkbox"/> Restock supplies, pharmaceuticals					
		<p><b>ENSURE AFTER-ACTION ACTIVITIES ARE COMPLETED:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Collection of documentation by Planning Section Chief</li> <li><input type="checkbox"/> Coordination &amp; submission of response and recovery costs, and reimbursement documentation by the Finance/ Administration and Planning Section Chiefs</li> </ul>				



## WORKSHEET XVIII: SAMPLE NHICS JOB ACTION SHEET FOR PANDEMIC INFLUENZA (INCIDENT COMMANDER) (CONT.)

Incident Commander page 4		Job Action Sheet
<b>DEMOBILIZATION/RECOVERY</b>		
Time	Initial	Actions
		<p><b>AFTER-ACTION ACTIVITIES (CONT.)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Conduct staff debriefings</li> <li><input type="checkbox"/> Identify needed revisions to Emergency Operations Plan, including Job Action Sheets, operational procedures, records and/or other related items</li> <li><input type="checkbox"/> Ensure that the facility After Action Report and Corrective Action Report are written</li> <li><input type="checkbox"/> Participate in external debriefings with external (community and governmental) agencies and other post-incident discussions and after-action activities</li> <li><input type="checkbox"/> Post-incident media briefings and facility status updates</li> <li><input type="checkbox"/> Post-incident education and information for residents, staff and families</li> <li><input type="checkbox"/> Conduct stress management activities and services for staff</li> </ul>
<b>Your Toolbox</b>		
<input type="checkbox"/> 1 Vest for your assigned position	<input type="checkbox"/> 3 Facility Emergency Operations Plan	<input type="checkbox"/> 5 Facility Organizational Chart
<input type="checkbox"/> 2 NHICS Job Action Sheets (online)	<input type="checkbox"/> 4 Facility Pandemic Influenza Annex	<input type="checkbox"/> 6 Facility Phone Tree
<input type="checkbox"/> 7 NHICS Form 201 (Incident Briefing Form)	<input type="checkbox"/> 8 NHICS Form 204 (Branch Assignment List)	<input type="checkbox"/> 9 NHICS Form 207 (IMT Chart)
<input type="checkbox"/> 10 NHICS Form 213 (Incident Message Form)	<input type="checkbox"/> 11 NHICS Form 214 (Operational Log)	<input type="checkbox"/> 12 NHICS Form 252 (Time Sheets)
<input type="checkbox"/> 13 NHICS Form 261 (IAP Safety Analysis)	<input type="checkbox"/> 14 Communications equipment per your facility	
NHICS forms and additional Job Action Sheets can be obtained free of charge at <a href="http://www.cahfdisasterprep.com" style="color: white;">www.cahfdisasterprep.com</a> (under NHICS)		



## Section Five: Communications

### INTRODUCTION TO DISASTER COMMUNICATIONS

In any disaster, reliable, frequent and rapid communication is one of the primary needs of all involved. It is also one of the most difficult things to get right during a disaster, because the situation is ever changing, the process for communication is sometimes confusing and the usual types of communications equipment are not always reliable or available. From the facility standpoint, there are primarily two important audiences to whom you need to communicate — *internal* (staff, physicians, residents and families, suppliers and contractors) and *external* (families and visitors, media, community leaders, regulators and officials and other healthcare providers.)

This chapter will provide some guidance and thoughts on communications with all of the above-mentioned groups.

Effective communication in long term care settings, both before and during a pandemic, will be critical to mitigate the effect on your facility. Effective communication among communities and LTC facilities will require that health departments, hospitals and non-hospital providers communicate and plan together.

The following sections discuss how communication with residents, staff, government agencies and the media can ameliorate confusion and improve coordination of care during a pandemic.

### CONCEPTS IN RISK COMMUNICATION<sup>125</sup>

To avoid confusion early in a crisis, messages should be accurate, relevant, simple, fast, frequent and consistent. Research<sup>126</sup> shows that successful communication, especially in a crisis, requires the following steps:

- In a pandemic situation, it is highly likely that the JIC, or Joint Information Center (run predominantly on the county, state and federal levels of NIMS) will be operational and provide consistent key messages that you can use. Establish contact with your local JIC if possible.
- Develop a solid communication plan before the pandemic, with pre-written messages that can be modified when the pandemic occurs as needed.
- Work with the local public health department on messages so that you are consistent with what local officials are saying. You can find information on risk communication messages from the local public health Web site or the CDC at [www.pandemicflu.gov](http://www.pandemicflu.gov).
- Be the first source of information about the pandemic with regard to your facility for your residents, their families and your staff. People will want to know what is going on immediately, so be ready and be credible.
- Express empathy early and often (e.g., "I understand how frightening this is for you.").
- Show competence and expertise.
- Remain honest and open.
- Use the same spokesperson(s) throughout.
- Schedule regular briefings even if there is little new information.

<sup>125</sup> U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (Jan. 23, 2007). *Crisis & Emergency Risk Communication: Pandemic Influenza*. PowerPoint Presentation. Retrieved May 17, 2007, from <http://www.health.state.mn.us/oepp/comm/riskcomm/crisiscommunication.ppt>.

<sup>126</sup> Reynolds, B. (2004). *Crisis and emergency risk communication: By leaders for leaders*. Centers for Disease Control and Prevention Web site: <http://emergency.cdc.gov/cerc/pdf/leaders.pdf>.



### Five Communications Don'ts:

- Don't wait to release information by holding it until you have vetted it thoroughly. When people need information, they will find it somewhere, and it may not be the correct information.
- Don't give mixed messages. Be clear and correct and consistent with the messages from the JIC or local health department.
- Don't tell people not to be afraid. Acknowledge their fear and use the facts to fight it.
- Don't delay in addressing myths and rumors.
- Don't engage in public power struggles. This will add to the confusion — this will only make the situation worse.

Your initial message must be short and relevant, must give positive action steps and must be consistent and repeated. Do *not* use jargon, be judgmental, make promises that cannot be kept or include humor.

It is important not to over-reassure people during a crisis. It is much better to **give them something to do**. Express your wishes and ask more of people. Continue to do these things throughout the pandemic, not just at the beginning.

### An Example of Good Risk Communication: 2009 H1N1

The following is an actual example of good initial crisis communication from Dr. Richard Besser, the then-acting director of the CDC at the second press briefing concerning 2009 H1N1:

First I want to recognize that people are concerned about this situation. We hear from the public and from others about their concern, and we are worried, as well. Our concern has grown since yesterday in light of what we've learned since then.

I want to acknowledge the importance of uncertainty. At the early stages of an outbreak, there's much uncertainty, and probably more than everyone would like. Our guidelines and advice [are] likely to be interim and fluid, subject to change as we learn more. We're moving quickly to learn as much as possible and working with many local, state and international partners to do so.

I want to recognize that while we're moving fast, it's very likely that this will be more of a marathon than a sprint. I want to acknowledge change. Our recommendations, advice, approaches will likely change as we learn more about the virus and we learn more about its transmission.<sup>127</sup>

The message today (mid-June, 2010) might include the fact that there is still uncertainty about what will happen next, and that it is better to be over-prepared than under-prepared. The message could also state that we have not seen the last of this pandemic (we could see 2009 H1N1 re-emerge in the Northern Hemisphere). It should include an acknowledgment that the pandemic thus far has been moderate-mild, and importantly, it would need to recognize that 2009 H1N1 always has the potential to mutate into a severe pandemic.<sup>128</sup>

See *Worksheet XIX: Checklist for Crisis & Emergency Communications* (p. 82)

### COMMUNICATION TRIGGERS

The Centers for Disease Control and Prevention (CDC)<sup>129</sup> has suggested the following events as trigger points for federal, state and local public health authorities to increase their communication to the public regarding pandemic influenza. We have modified these slightly to account for the advent

<sup>127</sup> CDC (April 24, 2009). *CDC Briefing on Public Health Investigation of Human Cases of Swine Influenza*. Retrieved June 21, 2010 from <http://www.cdc.gov/media/transcripts/2009/t090424.htm>.

<sup>128</sup> Adapted from Sandman, Peter (January 17, 2010). *Swine Flu Pandemic: Communication Update*. Retrieved June 21, 2010 from [www.psandman.com/col/swinecomm.htm](http://www.psandman.com/col/swinecomm.htm).

<sup>129</sup> U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (August 2006). *Crisis Emergency Risk Communication: Pandemic Influenza*.



of 2009 H1N1. Provided that you update your current contact information with your local public health authorities, and/or enroll in emergency alert networks such as CAHAN (California Health Alert Network)<sup>130</sup>, your facility can expect periodic information following these particular events, which may then trigger your own internal and external communication process:

### In Birds (or Pigs)

- First detected case of pandemic-potential influenza (public health experts and virologists will determine) H5N1 or other influenza type virus in a wild bird or domesticated or wild pig in the Western Hemisphere.
- First case of pandemic-potential influenza H5N1 or other influenza type virus in a wild bird or domesticated or wild pig in the United States.
- First case of pandemic-potential influenza H5N1 or other influenza type virus in any domestic animal or bird in the United States.

### In Humans

- First human case of pandemic-potential H5N1 or other influenza virus identified in a person in the United States, acquired internationally.
- First human case of H5N1 or other potential pandemic virus identified in a person in the United States, acquired in the U.S. from an animal, without secondary transmission.
- First human case of H5N1 or other potential pandemic virus in the United States, acquired domestically, from another human.
- Sustained human-to-human transmission of H5N1 or other potential pandemic virus occurring somewhere other than the Western Hemisphere.
- First cluster of human H5N1 or other potential pandemic influenza virus transmitted person-to-person in the United States.

Note: Any of these triggers may occur rapidly or they may skip around. They are not necessarily in order. This list is given to provide you with “triggers” to think about while developing your risk communication plan.

## SPECIAL CONSIDERATIONS FOR THE POPULATION YOU SERVE

The people being served in a long term care facility — and by extension their families — are often considered a “special population,” and this is also true in planning communications for an emergency like pandemic influenza. A special population is any group that cannot be reached effectively during the initial phases of a public safety emergency with general public health messages delivered through mass communication channels. Residents and staff in the facility may constitute one of these populations, depending on the circumstances as outlined below. Challenges to communication include:

- Language barriers significant enough that the message could be incorrectly acted upon.
- Reaching people with cognitive impairment (if the proxy or guardian is not present to receive the messages).
- Reaching people with certain physical impairments.
- Strong challenges to cultural beliefs relevant to the event.
- Environmental barriers (lack of a TV or phone, for example).

<sup>130</sup> For more information on CAHAN, visit <http://bepreparedcalifornia.ca.gov/epo/cdphprograms/publichealthprograms/emergencypreparednessoffice/epoprogramsservices/surge/>.





- Pre-existing group social, political or legal contexts that could interfere with honest and respectful information exchange during emergencies.

Early in a crisis, communication resources could be limited and the potential for mixed messages great, resulting in a confused audience if the changing nature of a pandemic is not effectively described. A simple and consistent message is best with updates as they are received from reliable sources.

## WITH RESIDENTS

**Before the pandemic:** Communication with residents and visitors is an essential part of pandemic containment strategy. Based on your surveillance plan, determine how to screen for pandemic influenza in healthcare personnel and in the population served and how this information will be communicated to the residents and their families. Develop policies and procedures for managing pandemic influenza information among residents and staff.<sup>131</sup>

**During the pandemic:** Monitoring residents for pandemic influenza and instituting appropriate control measures are essential. Despite aggressive efforts to prevent the introduction of pandemic influenza virus, in the early stages of pandemic influenza, staff or visitors could bring it into the facility. Early detection of pandemic influenza in a facility is critical for ensuring timely implementation of infection control measures and appropriate communication of this information. Follow the recommendations in *Containment Strategies* (p.22) in this *Workbook*. Consider providing a telephone number for people to call for information on measures used to prevent the introduction of pandemic influenza — check with your external emergency preparedness committee to see if your health department is planning an influenza hotline.

## WITH STAFF

**Before the pandemic:** Educate and train your staff about your containment plan before you need to implement it. Examples of containment measures that will need to be discussed include:

- The screening procedures your facility expects to implement.
- Information about cohorting residents and assigning staff.
- How residents' movement may be limited (e.g., temporarily closing the dining room and serving meals on nursing units, canceling social and recreational activities, etc.).

In addition, reassure your staff about leave policies, sick time, containment plans, PPE and any other policies or procedures your administration will implement. Staff will also need to be educated about the role(s) they will play in a high-impact pandemic.

**During the pandemic:** As mentioned, consider posting visual alerts and having a system of communication among units in the event that certain areas of the facility are closed to visitors or additional staff. You should have staff briefings every shift, post situation updates in staff areas and develop a system for how to communicate with any absentee staff for updates on their situation.

## WITH VOLUNTEERS

**Before the pandemic:** As with the precautions taken with staff, ensure that volunteers are aware of the procedures that will be implemented during a pandemic. Be sure that volunteers know what facility number to call and/or set up a phone tree that, if necessary, can be kept current to prevent volunteers from coming in to work.

**During the pandemic:** At the start of any pandemic, it will be important to limit the interaction of

<sup>131</sup> See 3.0 *Containment Strategies* (p. 22) in this *Workbook* for more information.



unnecessary personnel, volunteers and families with residents of long term care facilities. Since the level of impact is not known at the outset, it may be prudent to err on the side of greater than necessary precautions. As with staff, ensure that volunteers are aware of the procedures that will take place or be implemented during a pandemic. Be sure that volunteers know what hotline number to call and/or set up a phone tree that can be kept current to prevent volunteers from coming in to work if necessary.

Once the pandemic has progressed, restrictions on visitors and volunteers may be modified in certain circumstances.<sup>132</sup> At this point, a system for recalling volunteers to the facility will need to be implemented. Family members or other volunteers may be an important resource to help in your facility in the later stages of a pandemic because isolation has a harmful mental health effect on residents.

### WITH GOVERNMENT AGENCIES

**Before the pandemic:** As described earlier, the federal government has adopted the NIMS/ICS structure for effective management of emergency events. This will be the organizing principle in a national influenza pandemic response.

Under NIMS and ICS, one of the duties of your facility liaison officer will be communication with government agencies. Your facility should have a pre-identified liaison officer and an alternate.

Determine how the facility will communicate and coordinate with healthcare partners and public health authorities during a pandemic. Make sure the facility has updated the appropriate contact information with the local public health agency.

**During the pandemic:** Early in the progress of a pandemic in the region, staff must maintain surveillance for influenza-like symptoms. Immediately notify state or local health department officials if a case is suspected and maintain open lines of communication with the appropriate local, state and federal agencies, following NIMS as outlined earlier.

Stay in close communication with your regulatory agency to ensure that you have the latest information on waivers, emergency permission and other special arrangements that will allow you greater flexibility in implementing your self-sustainment strategies.<sup>133</sup>

### WITH THE MEDIA

**Before the pandemic:** Again, in a pandemic influenza situation, all levels of government and many other types of agencies and facilities will be operating under the NIMS system described in the NHICS section.

Under NIMS and NHICS, the public information officer (PIO) is in a command position, responsible for ensuring the accurate and timely release of information to the public. Your facility should have a pre-identified PIO (and an alternate), but the lead for communicating with the external community will reside with the county PIO.

An influenza pandemic will generate immediate, intense and sustained demand for information. In this situation, some healthcare workers are likely to be involved in media relations and health communications. Whether media communication is a role that your organization intends to take on, there are advantages to doing a little planning so that you know what to do if the media come to you.

- Determine the message that will be given to the media about how the facility plans to communicate and coordinate with healthcare partners and public health authorities during a pandemic.
- Determine the message that will be given to the media about how the facility plans to communicate with residents, staff and families regarding prevention and control measures.

<sup>132</sup> See *Staff Preservation* (p. 55) in this *Workbook* for more information.

<sup>133</sup> See *Staff Preservation* (p. 55) and *Altered Standards of Care* (p. 64) in this *Workbook* for more discussion about possible emergency permissions.



- Utilize the resources of your professional or trade association, such as CAHF, to help draft your message.
- Provide media training to staff assigned the job of public information officer. Basic media training will be useful even without a pandemic event.

In larger organizations, it may be beneficial to have a communications team to assist your PIO.

In the event of a pandemic influenza outbreak, consider the following as you develop your plans for a response. If you were an information officer for your facility, what communication infrastructure would you want to have in place immediately? Before a pandemic, consider the following:

- Have you established a contact with the local public health department?
- Have you contacted your local Office of Emergency Services to ensure that you are included in the organized NIMS response?
- Do you know how to contact or have you established contact with, the local government Emergency Operations Center (EOC)?
- Are there clear lines of authority in your facility of which every staff member is aware (NHICS)?

Try to anticipate the questions that the media will ask you in a pandemic influenza situation. Examples of these may be: How are you managing the outbreak? How many deaths have you had? Why are family members not being allowed to visit? Prepare your PIO ahead of time to answer these questions.<sup>134</sup>

**During the pandemic:**<sup>135</sup> These specific tips are designed to help you consider how to organize your thoughts and conduct yourself during your interview with the media.

- 1. Think like a headline.** Give the broad, overarching thought first and then fill in the details.
- 2. Have the point you want to make formulated clearly in your mind, and make that statement.** Even if the reporter doesn't ask you the question that leads to that answer, make your statement anyway. This establishes you as the expert.

*See Worksheet XIX: Checklist for Crisis & Emergency Communications (p. 82)*

- 3. To the extent possible, always try to incorporate the reporter's question into your answer.** That will ensure that it cannot be taken out of context.
- 4. Make continuous eye contact with the reporter – not the camera** – even during a long interview. Although it may seem awkward, this is an important technique. If you make a key point while your eyes are cast away from the reporter's face, that portion of the interview may not be used. Even if the footage is used, you may appear less credible.
- 5. Monitor the pace at which you communicate information.** Speak slowly and clearly — and stop when you are out of up-to-date information. If you are unable to answer further questions or provide more detail, say so. Knowing when to say "I don't know" is just as important as having a detailed answer.

<sup>134</sup> Use the tips in the "During" section to start considering your communications now.

<sup>135</sup> Hite, Betsy. *Media Interview Tips*. California Association of Health Facilities.



## WORKSHEET XIX: CHECKLIST FOR CRISIS & EMERGENCY COMMUNICATIONS

Planning, research, training, and evaluation		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Does your organization have an emergency response/crisis communication operational plan for public information and media, partner, and stakeholder relations?
<b>Yes</b>	<b>No</b>	<i>If yes, does the plan have the following elements:</i>
<input type="checkbox"/>	<input type="checkbox"/>	Designated line and staff responsibilities for the public information team
<input type="checkbox"/>	<input type="checkbox"/>	Information verification and clearance/approval procedures
<input type="checkbox"/>	<input type="checkbox"/>	Agreements on information release authorities (who releases what/when/how)
<input type="checkbox"/>	<input type="checkbox"/>	Regional and local health authorities contact list and media contacts (including after-hours news desks)
<input type="checkbox"/>	<input type="checkbox"/>	Procedures to coordinate with the local EOC, and Joint Info Center (JIC) including after hours
<input type="checkbox"/>	<input type="checkbox"/>	Designated spokespersons
<input type="checkbox"/>	<input type="checkbox"/>	Contact numbers for emergency information partners (e.g. regional CMS information officer, local or state department of health services, Red Cross and other non-government organizations)
<input type="checkbox"/>	<input type="checkbox"/>	Identified vehicles of information dissemination (e.g., e-mail list-serves, broadcast fax, press releases) during a crisis to stakeholders (including families, staff, suppliers, and other partners),
<input type="checkbox"/>	<input type="checkbox"/>	Have you coordinated your planning with your local Public Health or Office of Emergency Services?
<input type="checkbox"/>	<input type="checkbox"/>	Have you coordinated your planning with other response organizations or competitors?
<input type="checkbox"/>	<input type="checkbox"/>	Have designated spokespersons received media training and risk communication training?
<input type="checkbox"/>	<input type="checkbox"/>	Do they understand emergency crisis/risk communication principles to build trust and credibility?
Message and audiences		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Have you <b>identified special populations</b> within your staff, residents, and families (i.e. cultural or linguistic differences, people with specific health needs that need specific information related to their need)
<input type="checkbox"/>	<input type="checkbox"/>	Have you <b>identified your organization's partners and stakeholder organizations who should receive direct information and updates</b> from your organization? Examples may include the Public Health Department, local acute care facilities, other local long term care facilities, licensing, your parent company, etc.
<input type="checkbox"/>	<input type="checkbox"/>	Will you be able to create messages for the media and your population under severe time constraints, including methods to clear these messages within the emergency response operations of your organization (include cross clearance)?
Do you have topic-specific pre-crisis materials for identified emergency issues, or have you identified sources of these materials if needed? Check the CDC and California DHS websites, as well as your county public health department website, for downloadable materials at the time of the crisis and as it develops.		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Topic fact-sheet (e.g., description of the disease, public health threat, treatment, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	Public Q/As
<input type="checkbox"/>	<input type="checkbox"/>	Partner Q/As
<input type="checkbox"/>	<input type="checkbox"/>	Resource fact-sheet for media/public/partners to obtain additional information
<input type="checkbox"/>	<input type="checkbox"/>	Web access and links to information on the topic
<input type="checkbox"/>	<input type="checkbox"/>	Recommendations for affected populations
<input type="checkbox"/>	<input type="checkbox"/>	List of subject matter experts outside your organization that would be effective validators to public/media regarding your activities during a public health emergency.



## WORKSHEET XIX: CHECKLIST FOR CRISIS & EMERGENCY COMMUNICATIONS (CONT.)

Public Information Team		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Have you identified people to work with your Public Information Officer that have skills in health education, internet research, writing skills, etc.?
<input type="checkbox"/>	<input type="checkbox"/>	Have you identified a spokespersons for media and public appearances during an emergency? <i>(Remember, even if you aren't planning on talking to the media during a crisis, they may be planning to talk to you!)</i>
<p><b>Note: The local Department of Public Health and local Office of Emergency Services will manage the official media communications for your area—you need only be concerned with messages as they relate directly to your facility, residents, staff, or families.</b></p>		
Media Spokesperson Preparation Tips		
<ul style="list-style-type: none"> <li>▪ Don't "step on" a reporter's question. When we are anxious to answer a question, we often begin to respond before the reporter has finished asking the question. This causes a couple of problems: first, it makes editing difficult and second, it can result in losing the best part of an interview, since the first sentence of a response is usually the most succinct and best explanation of the issue.</li> <li>▪ To make sure you give the media good sound bites, make a conscious one-and-a-half to two-second pause between key points of arguments. However, do not pause so long that the next statement can't follow without being edited.</li> <li>▪ Make the points you have prepared. If a reporter tries to take you down a questioning path where you don't want to go, it is perfectly acceptable to redirect them to the topic you want to cover. There are a number of ways to do this:                         <ul style="list-style-type: none"> <li>A. Give a quick two or three word answer to the question and then say "However, the more interesting/critical issue is _____, and we are doing _____ or I am committed to _____."</li> <li>B. Skip the answer to their question altogether and simply move into, "That does not concern me nearly as much as _____, which I am addressing through the following _____."</li> </ul> </li> <li>▪ If they ask you something so specific that a precise answer will paint you into a corner, respond by saying, "We can come back to that in a minute if you would like, but let me address your question in the context of a larger picture. We need to examine how we deliver health care as a state....." Then, if you have to, go back to the specific issue mentioned.</li> <li>▪ Particularly for women: use your hands more on camera than you usually would</li> <li>▪ Tuck the back of your jacket under you when you sit down to assure that you will not slump during seated interviews</li> <li>▪ Develop three or four power words and one "Notable quotable" before the interview and MAKE SURE IT GETS SAID. Examples include: "landmark", "precedent-setting", "first of its kind", "absolutely inexcusable", "completely preventable", etc.</li> <li>▪ In order to make sure your answer is comprehensive, the following are words to avoid using at the beginning of an interview:                         <ul style="list-style-type: none"> <li>"Because"</li> <li>"Sure"</li> <li>"They"</li> <li>"It depends"</li> <li>"I don't know"</li> <li>"And"</li> </ul> <p>Instead, remember to begin using full sentences. Often, it will sound like you are repeating the reporter's question, but that's ok because it's more important that you have a full sound bite.</p> </li> <li>▪ Use "Yes" or "No" only if you can immediately follow-up with an explanation ("Yes, the number of patients in county facilities has grown steadily.") But it is better to say, "The number of patients in county facilities HAS grown steadily. Some factors we believe contributed to this growth are....."</li> <li>▪ Speak a little more slowly than usual and use a stronger vocal inflection than in normal conversation—but not to the point that it is uncomfortable.</li> <li>▪ Assume that the camera is always on. An old, devilish trick which is still employed on occasion is for the reporter to chat "off the record" with the interviewee while the camera is "setting up." The comments you made during that interval may be used and cause problems.</li> </ul>		



# WORKSHEET XIX: CHECKLIST FOR CRISIS & EMERGENCY COMMUNICATIONS (CONT.)

## Media Spokesperson Preparation Tips (cont.)

- Remember to be sincere!
- Be aware of the needs and application of the sound bite. Does the reporter need a seven second bite (most television and radio) or does s/he need a twenty-five to thirty- second bite (public radio, live radio, investigative television.)
- Prior to the interview, make notes on your chosen key points and rehearse them out loud with someone, making eye contact just as you will during the interview. You may think you know exactly what you're going to say and are sure that it will fit the required "sound bite" time frame, but when you first rehearse it, you may discover you're not as articulate as you thought.
- In a crisis, don't speculate. Reporters love the juiciest of juicy gore and destruction. Give out only information you are sure of with regard to death, destruction, costs of damage, missing persons etc. Qualify the information that you are providing as "preliminary" and assuring the press that confirmation or adjustments will be forthcoming.

### CRISIS COMMUNICATION TIPS FOR YOUR FACILITY

- Within your organization, be very clear on who's responsible for communication to whom. There should be one key communicator to the media (usually your PIO). This provides a level of stability in a difficult time.
- Your Public Information Officer is a member of your Command staff (top 4-5 HICS positions) for a reason—be honest with this person. Let them know all aspects of the situation that you are aware of, and then work out together what should be communicated and when.
- The communicator should not be the same person who is in charge of directing the crisis operations. For example, in your facility, your Incident Commander should not be your PIO.
- Set up regular briefing periods to answer all questions at once, rather than having to answer the same question over and over. Provide written updates to hand out at each briefing so everyone has the same information. This greatly reduces the incidents of errors in reporting.
- Utilize the media. They are the most effective conduit of information between you and the public and they can play a vital role in getting your message out.

## Suggestions about Planning & Resources

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	<b>Contracts and memoranda of agreement:</b>
<input type="checkbox"/>	<input type="checkbox"/>	Consider a contract for administrative support, or consider how staff may be cross-trained to provide administrative support
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	<b>Suggested Equipment:</b>
<input type="checkbox"/>	<input type="checkbox"/>	Fax machine (number that's pre-programmed for broadcast fax releases to media and partners)
<input type="checkbox"/>	<input type="checkbox"/>	Computers (on LAN with e-mail list-serves designated for partners and media)
<input type="checkbox"/>	<input type="checkbox"/>	Copier (and backup)
<input type="checkbox"/>	<input type="checkbox"/>	Visible calendars, flow charts, bulletin boards, easels
<input type="checkbox"/>	<input type="checkbox"/>	Designated personal message board
<input type="checkbox"/>	<input type="checkbox"/>	Paper
<input type="checkbox"/>	<input type="checkbox"/>	TVs with cable hookup
<input type="checkbox"/>	<input type="checkbox"/>	VHS VCR
<input type="checkbox"/>	<input type="checkbox"/>	CD-ROM
<input type="checkbox"/>	<input type="checkbox"/>	Paper shredder



## Section Six: Conclusion

We are in the midst of an influenza pandemic: 2009 H1N1. As detailed in many sections in this *Workbook*, this pandemic could get worse or could turn into a seasonal influenza strain. Regardless of the eventual course of H1N1, the world is still at risk for another influenza pandemic. There is no predicting exactly where/when a pandemic will start, how severe it will be, or how fast it will spread. In the event of an influenza pandemic, all long term care facilities will need a great deal of guidance. This *Workbook* is offered as one source of that guidance. While not all recommendations are applicable to every site of care, the basic planning principles outlined in this *Workbook* are relevant to all long term care facilities and are presented as a basis for them to use in developing a Pandemic Annex to their existing disaster plan.

Adequate planning is essential to allow clear, careful, informed choices to be made at the appropriate time. LTC providers are encouraged to evaluate the effectiveness of their current disaster preparedness and infection control plans and to use this *Workbook* and the referenced materials to build a detailed Pandemic Annex to those existing plans. By doing so, you will be better prepared for disasters in general and in particular for infectious disease outbreaks such as norovirus that are already circulating in the general public.

In addition to planning within your facility, begin working with your local partners. Effective communication with your local public health department, Office of Emergency Services and the local Emergency Operations Center officials are essential to the preparedness of facilities and communities.

Threats are also opportunities, and the pandemic threat is an opportunity to improve all-hazard planning, infection control, self-reliance and crisis communication in long term care facilities. It also is an opportunity for improved coordination among LTC facilities and the Operational Area response network.



## Appendix A

### COMMUNICABLE DISEASE REPORTING

Because the state and counties are able to add to the national list of Reportable Diseases and Conditions (but not subtract from it), it is important to periodically review your own county's list. This way you will catch all nationally reportable diseases and conditions and all state requirements, as well as your own county's additions. Your county list can usually be found on your local public health department Web site (check in the communicable disease section) or by calling your local public health department. Please refer to the NACCHO Web site<sup>136</sup> for a list of all local public health departments in California.

According to California Code of Regulations (CCR), Title 17, Section 2500: *If you are a healthcare provider or administrator of a facility where known or suspected reportable diseases are present, you are responsible for their reporting within the designated timeframe.*<sup>137</sup> Your county public health department will be able to give you the communicable disease reporting form that you need to fill out for any suspected/known disease on the list; novel influenza A is an immediately reportable disease nationally.

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<sup>136</sup> See *Appendix C: Useful Web Sites in this Workbook* (p. 89).

<sup>137</sup> California Department of Health Services (June 15, 2007). *California Code of Regulations, Title 17, Section 2500*. Retrieved July 2, 2007, from <http://government.westlaw.com/linkedslice/default.asp?RS=GVT1.0&VR=2.0&SP=CCR-1000&Action=Welcome>.





## Appendix B

### INFLUENZA A TESTING

The following is additional information on testing for influenza A: *The optimal specimen for influenza A virus detection is a nasopharyngeal aspirate obtained within three days of the onset of symptoms, although nasopharyngeal swabs and other specimens can also be used.*

#### Influenza Testing Considerations

- Most patients with clinical illness consistent with uncomplicated influenza who reside in an area where influenza viruses are circulating do not require diagnostic influenza testing for clinical management.
- Patients who should be considered for influenza diagnostic testing include:
  - Hospitalized patients with suspected influenza
  - Patients for whom a diagnosis of influenza will inform decisions regarding clinical care, infection control, or management of close contacts
  - Patients who died of an acute illness in which influenza was suspected
- When a decision is made to use antiviral treatment for influenza, treatment should be initiated as soon as possible without waiting for influenza test results.
- Clinicians should be aware that the sensitivities of rapid influenza diagnostic tests (RIDTs) and direct immunofluorescence assays (DFAs) are lower than real-time reverse transcriptase polymerase chain reaction (rRT-PCR) tests and viral culture. A **negative RIDT or DFA result** does not rule out influenza virus infection. Further, these tests cannot distinguish between 2009 H1N1 and seasonal H1N1 or H3N2 influenza A viruses.
- If most circulating influenza viruses have similar antiviral susceptibilities (as is the case currently in the United States), information on the influenza A subtype may not be needed to inform clinical care.
- If identification of 2009 H1N1 influenza virus infection is required, testing with a rRT-PCR assay specific for 2009 H1N1 influenza or viral culture should be performed.
- Laboratory tests to diagnose 2009 H1N1 influenza, such as rRT-PCR, should be prioritized for hospitalized patients and immunocompromised persons with suspected influenza where RIDT or DFA testing is negative or to determine influenza A virus subtype in patients who have died from suspected or confirmed influenza A virus infection.<sup>138</sup>

Assays available for diagnosing influenza A virus infection are:

1. Rapid influenza diagnostic tests (RIDT) (results in 30 minutes or less) Commercially available RIDTs can either: i) detect and distinguish between influenza A and B viruses; ii) detect both influenza A and B but not distinguish between influenza A and B viruses; or, iii) detect only influenza A viruses. None of the currently FDA approved RIDTs can distinguish between influenza A virus subtypes (e.g. seasonal influenza A (H3N2) versus seasonal influenza A (H1N1) viruses), and RIDTs cannot provide any information about antiviral drug susceptibility. It should additionally be noted that compared to RT-PCR, the sensitivity of RIDTs for detecting novel influenza A (H1N1) virus infections ranged from 10-70%, so influenza should not be ruled out if the test is negative, particularly during a community outbreak.<sup>139</sup> With seasonal influenza, the range is more like

<sup>138</sup> CDC (September 29, 2009). *Interim Recommendations for Clinical Use of Influenza Diagnostic Tests During the 2009-2010 Influenza Season*. Retrieved June 21, 2010 from [http://www.cdc.gov/h1n1flu/diagnostic\\_testing\\_clinicians\\_qa.htm](http://www.cdc.gov/h1n1flu/diagnostic_testing_clinicians_qa.htm).

<sup>139</sup> CDC (August 10, 2009). *Interim Guidance for the Detection of Novel Influenza A Virus Using Rapid Influenza Diagnostic Tests*. Retrieved June 21, 2010 from [www.cdc.gov/h1n1flu/guidance/rapid\\_testing.htm](http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm).



50-70%. These tests are widely available on the commercial market.<sup>140</sup>

2. Direct and indirect immunofluorescence assays (DFA and IFA) Like RIDTs, direct immunofluorescence assays (DFAs) are widely available, have variable sensitivity (range 47 – 93%) for 2009 H1N1 influenza virus, and a high specificity ( $\geq 96\%$ ). DFAs detect and distinguish between influenza A and B viruses but do not distinguish among different influenza A subtypes.<sup>141</sup>
3. Viral isolation in tissue cell culture (results in 2-10 days). Widely available in laboratories but often does not yield results in time for treatment decisions (such as the use of antivirals).<sup>142</sup>
4. Nucleic acid amplification tests, including rRT-PCR, are the most sensitive and specific influenza diagnostic tests, but are not widely available, results may not be available in a timely manner for clinical decisions, and test performance depends on the individual rRT-PCR assay. PCR testing and lab work would need to be performed in conjunction with the local public health department. As with any assay, false negatives can occur. Not all nucleic acid amplification assays can specifically differentiate 2009 H1N1 influenza virus from other influenza A viruses. If specific testing for 2009 H1N1 influenza virus is required, testing with an rRT-PCR assay specific for 2009 H1N1 influenza or viral culture should be performed. For example, specific influenza diagnostic testing for 2009 H1N1 influenza with rRT-PCR may be important for patients with certain conditions, such as pregnancy or severe immunosuppression.<sup>143</sup>

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<sup>140</sup> CDC (September 29, 2009). *Interim Recommendations for Clinical Use of Influenza Diagnostic Tests During the 2009-2010 Influenza Season*. Retrieved June 21, 2010 from [www.cdc.gov/h1n1flu/guidance/diagnostic\\_tests.htm](http://www.cdc.gov/h1n1flu/guidance/diagnostic_tests.htm).

<sup>141</sup> *ibid.*

<sup>142</sup> *ibid.*

<sup>143</sup> *ibid.*



## Appendix C

### USEFUL WEB SITES

#### General Disaster Preparedness

- CAHF's Disaster Preparedness Program has developed a Web site with useful tools, best practices and disaster planning information specific to long term care at [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).

#### Personal Preparedness

##### General

- CAHF's Disaster Preparedness Program Web site also has personal preparedness information — visit [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com), go to the preparedness topic section and find the personal/staff preparedness page.
- [www.72hours.org](http://www.72hours.org) — San Francisco's personal and family preparedness Web site. It is extremely user-friendly and will guide you through all the components of a good personal plan in simple bite-sized steps. It is well organized and visually appealing.
- <http://www.getprepared.gc.ca> — an excellent Canadian Web site that walks you through simple forms so that you end up with a plan at the end. Also click on "prepare your emergency kit" to learn how to build your own kit or where to purchase one.
- [www.prepare.org](http://www.prepare.org) — a Web site produced by the American Red Cross that provides information and planning help specifically for vulnerable populations. Large print format is available, and there is information for seniors, people with disabilities, children and pet owners.

##### Pandemic-Specific

- [www.birdflumanual.com](http://www.birdflumanual.com) — will help you prepare at home for pandemic influenza. There are several guides available on this site; in particular, you may be interested in "Good Home Treatment of Influenza." Dr. Woodson, the author of these excellent planning manuals, is a reviewer for this *Pandemic Influenza Workbook for Long Term Care Providers*.

#### Public Health Officials

- Know your local public health officials: [http://www.naccho.org/about/LHD/state.cfm?adr\\_state=CA](http://www.naccho.org/about/LHD/state.cfm?adr_state=CA).
- Know your state public health contacts: [www.pandemicflu.gov/state/statecontacts.html](http://www.pandemicflu.gov/state/statecontacts.html).

#### Disaster Response Contacts

- Contact information for the local branches of the OES, the lead agency in disaster response (although in a public health emergency like a pandemic, responsibility will be shared between OES and public health) may be found through the Office of Emergency Services Web site, at <http://www.calema.ca.gov/WebPage/oeswebsite.nsf/0/1A7DB44D9234C13A882574130054A151?OpenDocument>.
- Know your local public health officials: [http://www.naccho.org/about/LHD/state.cfm?adr\\_state=CA](http://www.naccho.org/about/LHD/state.cfm?adr_state=CA).

#### Pandemic and Avian Flu Informational Resources

- Find copies of this Workbook and other important information for pandemic planning in the Pandemic Influenza section of CAHF's Disaster Preparedness Program Web site: [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).
- Find copies of Dr. Grattan Woodson's excellent pandemic planning guides for home (useful in helping your staff and residents' families prepare at home, as well as providing additional information that LTC providers will find useful) at [www.birdflumanual.com](http://www.birdflumanual.com).
- CDC and HHS have a very useful pandemic influenza Web site: [www.pandemicflu.gov](http://www.pandemicflu.gov). Access a variety of plans (including preparedness checklists), information about the pandemic threat,



and best practices and tools. To view the checklist for long term care, go to <http://www.flu.gov/professional/pdf/longtermcare.pdf>.

- Access California's pandemic influenza plan and other pandemic information at [www.dhs.ca.gov/ps/dcdc/izgroup/diseases/pandemic\\_flu.htm](http://www.dhs.ca.gov/ps/dcdc/izgroup/diseases/pandemic_flu.htm). For other states' plans, go to <http://www.pandemicflu.gov/professional/states/stateplans.html>.
- The World Health Organization has the most up-to-date information about the current avian influenza situation: [www.who.int/csr/disease/avian\\_influenza/en](http://www.who.int/csr/disease/avian_influenza/en).

### **Business Continuity Planning Resources**

Links to Free Business Continuity Planning Tools:

- [http://www.regional.niagara.on.ca/living/health\\_wellness/pandemic-planning/pdf/NR\\_Pandemic\\_WKBK.pdf](http://www.regional.niagara.on.ca/living/health_wellness/pandemic-planning/pdf/NR_Pandemic_WKBK.pdf).
- <http://www.cdc.gov/h1n1flu/business/guidance/smallbiz.htm>.
- <http://www.businesscontingency.com/checklist.php>.

### **Surge Capacity Information**

- Information on California's healthcare surge capacity project and the Surge Standards and Guidelines themselves will be posted at <http://bepreparedcalifornia.ca.gov/epo/cdphprograms/publichealthprograms/emergencypreparednessoffice/epoprogramsservices/surge/> and also on CAHF's Disaster Preparedness Program Web site: [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com).

### **Licensing and Regulatory Agencies**

- Facilities licensed under the California Department of Public Health Licensing and Certification Division should go to <http://www.cdph.ca.gov/programs/LnC/Pages/LnC.aspx>, and also visit your local district office Web sites (a list is available at <http://www.cdph.ca.gov/programs/LnC/Pages/LnC.aspx>).
- Facilities licensed/certified under the Department of Social Services Community Care Licensing Division should go to <http://ccl.dss.ca.gov>.
- The Web site of the federal Centers for Medicare & Medicaid Services is [www.cms.hhs.gov](http://www.cms.hhs.gov).

### **Allocation of Scarce Resources**

- Kushner, Ware G, John B Pollard and Stephen C Ezeji-Okoye (2007). *Ethical Triage and Scarce Resource Allocation During Public Health Emergencies: Tenets and Procedures. Hospital Topics: Research and Perspectives on Healthcare*. Copyright © 2007 Heldref Publications.

### **Helpful Training**

- The Agency for Healthcare Research and Quality (AHRQ), part of the federal Department of Health and Human Services, released a new training DVD on April 30, 2007, to teach medical professionals who are not respiratory care professionals how to provide respiratory care and ventilator management. It covers infection control, respiratory care terms and definitions, manual ventilation, mechanical ventilation, airway maintenance and airway suctioning. It was developed as part of project XTREME (Cross-Training Respiratory Extenders for Medical Emergencies). It is available for free by calling (800) 358-9295 or by sending an e-mail to [ahrqpubs@ahrq.gov](mailto:ahrqpubs@ahrq.gov).



- The California Healthcare Association with Kaiser Permanente developed an abbreviated course on SEMS and HICS in May 2007. This course will be archived on the CHA Web site at <http://www.calhospitalprepare.org/category/content-area/faqs/nims-/-ics-/-hics>.
- FEMA on NIMS and ICS [www.training.fema.gov/EMIWeb/IS](http://www.training.fema.gov/EMIWeb/IS). Click on "ISP Course List" link (right side) and find the course you wish to take (you may wish to print out the exam to review as you go through the course). Consider taking:
  - IS100.HC — Introduction to Incident Command System I-100 for Healthcare/Hospitals (alternately, you could take IS-100: Introduction to Incident Command System)
  - IS-200.HC — Applying ICS to Healthcare Organizations
  - IS-700 — National Incident Management

## Appendix D

### PREVENTING PNEUMONIA DURING A PANDEMIC

By Grattan Woodson, MD, FACP

#### The “old man’s friend”

Pneumococcal pneumonia has a long and infamous association with mankind. The disease is probably responsible for more human deaths through history than even influenza. The doctors of old dubbed this scourge “the old man’s friend” because of the quick and certain way in which it delivered the *coup de grace* to the elderly and infirm.

#### The advent of the antibiotic era

Alexander Fleming’s discovery of the effect a mold had on the growth of staphylococcus in 1928 led eventually to the development of penicillin for clinical use in the early 1940s. The widespread availability of penicillin later that decade changed medical history. While *S. pneumonia* was exquisitely sensitive to penicillin for almost 50 years, toward the end of the 20th century this began to change.

Today this bacterium is becoming increasingly resistant to penicillin and several alternative antibiotics, including erythromycin. It is thought that the practice of adding penicillin to cattle feed and its inappropriate use in humans combined to cause this unfortunate development.

#### The U.S. FDA Indications for Pneumovax®

After being informed of the difficulty people were having obtaining this vaccination from other doctors, I reviewed the U.S. FDA approved indications for Pneumovax® from its product circular, which include:<sup>144</sup>

##### Immunocompetent persons:

- Routine vaccination for persons 50 years of age or older.
- Persons aged  $\geq 2$  years with chronic cardiovascular disease (including congestive heart failure and cardiomyopathies), chronic pulmonary disease (including chronic obstructive pulmonary disease and emphysema) or diabetes mellitus.
- Persons aged  $\geq 2$  years with alcoholism, chronic liver disease (including cirrhosis) or cerebrospinal fluid leaks.
- Persons aged  $\geq 2$  years with functional or anatomic asplenia (including sickle cell disease and splenectomy).
- Persons aged  $\geq 2$  years living in special environments or social settings (including Alaskan Natives and certain American Indian populations).

##### Immunocompromised persons:

- Persons aged  $\geq 2$  years, including those with HIV infection, leukemia, lymphoma, Hodgkin’s disease, multiple myeloma, generalized malignancy, chronic renal failure or nephritic syndrome; those receiving immunosuppressive chemotherapy (including corticosteroids); and those who have received an organ or bone marrow transplant.

While it is true healthy adults under age 50 and healthy children are not included on the list, this in no way precludes their being given this vaccine.

Post-influenza bacterial pneumonias will complicate the clinical course of approximately 10 percent of those who contract a pandemic flu virus, according to the CDC. This amounts to about 10 million cases of pneumonia with many of these cases caused by *S. pneumoniae*. The U.S. Department of Health and Human Services Pandemic Influenza Plan states that, during the pandemic, access to commonly used

<sup>144</sup> Pneumovax® product circular, Merck.



antibiotics for treatment of post-influenza pneumonia could be in short supply or unavailable.<sup>145</sup> For this reason, it is recommended that Pneumovax<sup>®</sup> be given to healthy adults and children as part of a key prevention strategy. Below is an excerpt from the HHS PIP regarding this practice:

“Efforts to maximize vaccination coverage against *Streptococcus pneumoniae* is an important component of post-influenza bacterial community-acquired pneumonia prevention during the Interpandemic, Pandemic Alert, and Pandemic Periods. Current guidelines on the use of the 23-valent pneumococcal polysaccharide vaccine among adults and the 7-valent pneumococcal conjugate vaccine among children are available.”<sup>146 147</sup>

<sup>145</sup> U.S. Department of Health and Human Services, *Pandemic Influenza Plan*, November 2005, Appendix 3. *Guidelines for Management of Community-Acquired Pneumonia, Including Post-Influenza Community Acquired Pneumonia*.

<sup>146</sup> *Prevention of pneumococcal disease among infants and young children: Recommendations of the Advisory Committee on Immunization Practices*. MMWR Morb Mortal Wkly Rep. 2000;49(RR-9).

<sup>147</sup> Centers for Disease Control and Prevention. *Prevention of pneumococcal disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. MMWR Morb Mortal Wkly Rep. 1997; 46(RR-8).

## Appendix E

### STOCKING UP ON REGULAR MEDICATIONS<sup>148</sup>

By Grattan Woodson, MD, FACP

We may experience shortages or the temporary unavailability of many key drugs during a severe influenza pandemic. This scenario is likely to coincide with the height of the pandemic when drug production and distribution could come to a temporary halt. Pharmaceutical manufacturing during the pandemic period could experience production interruptions due to shortages of basic materials and absentee staff. Getting these complex facilities up and running again will take much longer than the time they were closed because of supply, staffing, safety, regulatory and legal concerns.

Some chronic medical conditions are of sufficient significance that great harm could occur to someone unable to continue their drug treatment. Other drug treatments, while important to long term health or present comfort may be ignored in the short or intermediate term without risk of significant harm. For critical medications, a prudent course for consumers is to stockpile a three-month supply to ensure that they will be able to maintain continuous therapy should we experience a severe influenza pandemic.

#### Stockpile rotation, expiration dates and storage

Those who are able to establish a stockpile would still purchase their regular 30- or 90-day supply of medications for day-to-day use. To keep the drug stockpile fresh, rotate supplies — each time a new prescription is obtained, put it in the stockpile and pull out a month's worth of the same drug with the least amount of time left before expiration. Drug expiration dates are printed on the container's label. These dates are very conservative, meaning that almost every drug is still good for years after its expiration date, especially if the drug has been stored properly.

To keep drugs in good condition, the most important consideration is proper storage. Humidity, temperature, air and sunlight are the factors that most affect drug longevity. It is usually best to keep drugs unopened in their original packaging, especially those provided by the manufacturer or the pharmacist. Store the drug stockpile in an airtight plastic container at room temperature. Keep drugs away from moisture and in the dark. Both heat and freezing temperatures can cause drugs to deteriorate and must be avoided.

#### Critical medications

Medications in the critical "must take" category include those for chronic medical conditions like diabetes, hypertension, emphysema, chronic bronchitis, asthma, coronary artery disease and hypothyroidism. This simple list is for illustration purposes only. There are many other conditions for which treatment must be continued during the pandemic period. Part of your planning activities should include a review of every resident's med sheet with your medical director or the resident's physician to determine critical medications. He or she is responsible for advising you on the need for stockpiling a particular drug. For the ones he or she recommends that you stockpile, you will need a prescription for a three-month quantity of the drug, not just a one-month supply with three refills. For instance, if you take one tablet daily, a three-month supply means obtaining a prescription for 90 tablets.

#### Patients with special medical problems

Patients with organ transplants, insulin-dependent diabetes, active rheumatoid arthritis, AIDS, active systemic lupus erythematosus and other connective-tissue diseases and those taking anti-coagulants will present special management difficulties during a pandemic emergency, especially if the drug supply chain is disrupted. This issue should be discussed with the resident's doctor who may be able to help find available options even during the emergency.

<sup>148</sup> Stockpiling of medications may not be practical for all long term facilities due to storage, reimbursement and/or regulatory limitations. The authors of this *Workbook* suggest that you review the medication storage and drug reimbursement regulations for your facility type before actually purchasing medications for this purpose to ensure that you can do so within your regulatory and reimbursement restrictions.





A person on major tranquilizers for psychiatric problems like bipolar disorder and schizophrenia also needs to establish a three-month supply of medication. Similarly, patients on antidepressants for either depression or anxiety disorders should try to continue these medications during the crisis. Discuss this with the resident's doctor and get his or her opinion.

### **Non-critical medications**

Chronic medical conditions for which medical therapy is optional — meaning that it may be possible to go without treatment in the short-term without much harm — include cholesterol lowering drugs, osteoarthritis treatment and medication for GERD (indigestion and heartburn), migraine headaches, sleeping pills, osteoporosis treatments and hormones. Some patients on anti-seizure medications may find that they can cope without their medication. They may have an occasional seizure, but as long as they are not driving, they can survive. If a patient's seizures are frequent without treatment, the patient should consider obtaining enough medication for three to six months.

### **Rely on the resident's doctor for advice and guidance**

Advice about what medications you need to stockpile for your residents ultimately needs to come from their doctors. The physician is the only person who can competently guide you in these matters. This information about pharmaceutical use is intended to notify facilities that this is an important issue which you and the doctor need to consider.

## Appendix F

### GLOSSARY

**Airborne spread** – A route of infection where small amounts of virus or particles can float through the air and travel through air currents. These particles can make someone sick even if they were across a large room from a contagious person.

**Alternate Care Site (ACS)** – A location designated by local/state/federal Emergency Management or Public Health officials where patients may be sent for treatment and/or observation should a disaster overwhelm capacity of healthcare facilities in and around the impacted area. The term does not refer to overflow buildings, tents or other spaces used by healthcare facilities on their own premises.

**Altered standard of care** – During an overwhelming disaster, the priority of those who provide care and allocate scarce healthcare resources will shift to “the greater good” and focus on how to save the largest number of lives in contrast to the traditional focus on saving individuals.

**Amelioration** – A process of making something more tolerable.

**Annex** – The section of a facility’s disaster preparedness plan that describes the specialized actions the facility will take in response to a specific hazard, such as pandemic or other infectious disease outbreaks, extreme hot weather, prolonged power outages, etc. Annexes are designed to augment the core disaster plan which describes the general actions the facility takes during all disasters such as activating the chain of command, communication, staff call backs, plant security, etc.

**Antigen** – Any substance capable of inducing a specific immune response and of reacting with the products of that response.

**Antipyretic** – Reducing or tending to reduce a fever.

**Antiviral medications** – Drugs used to prevent or cure a disease caused by a virus, by interfering with the ability of the virus to multiply in number or spread from cell to cell. Used prophylactically (in anticipation of, or directly after, exposure) these drugs *may* prevent some or many infections with pandemic influenza, but it is presently unclear which antiviral, if any, will be effective. There is also significant concern that these drugs will be in limited supply if a pandemic starts in the near future.

**Aspirate** – Secretions obtained during suction from the nose or throat used in the testing for influenza.

**Asymptomatic** – To be without symptoms, despite infection.

**Attenuated** – A thinned or weakened infectious organism.

**Avian influenza virus (H5N1)** – A strain of influenza A viruses found chiefly in birds. H5N1 is highly contagious in birds and can be deadly. While it does not usually infect people, more than 200 human cases have been reported. Most of those cases have occurred from direct or close contact with infected poultry or contaminated surfaces; however, a few cases of human-to-human spread have occurred. If the H5N1 virus were to gain the capacity to spread easily from person to person, an influenza pandemic could occur.

**Business continuity** – Ensuring that your facility’s essential business functions can survive a natural disaster, technological failure, human error or other disruption.

**BCP** – Business Continuity Plan.

**CAHF** – California Association of Health Facilities.

**Cal/OSHA** – California Occupational Safety and Health Administration, responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues.



**CDC** – U.S. Center for Disease Control and Prevention.

**CDHS** – California Department of Health Services, reorganized as the California Department of Health Care Services and the California Department of Public Health as of July 1, 2007.

**CDPH** – California Department of Public Health. Prior to July 1, 2007, its services were part of the California Department of Health Services (CDHS).

**Cohort** – To place together patients in a care facility who have like symptoms and/or diagnosis for the purposes of infection control and efficiency of care.

**Comfort care** – End-of-life care designed to provide comfort and dignity when curative therapy is no longer available or appropriate. It includes the process of relieving pain and suffering and controlling debilitating symptoms as much as possible while not preventing the patient from dying.

**Contact spread** – A route of infection where a person contracts a disease through direct contact with the saliva, nasal secretions or feces of infected animals or humans.

**Direct care staff** – Healthcare workers whose primary responsibility is to provide care to residents that requires them to come within three feet.

**Doff** – To remove an article of clothing.

**Don** – To put on an article of clothing.

**Droplet spread** – A route of infection where the coughing or sneezing of an infected person expels droplets into the air that carry small amounts of the virus that can make someone sick. The droplets travel only about three feet because they are too large to stay suspended in the air for any length of time. If a droplet comes in contact with a person's eyes, nose or mouth, it can cause infection with the illness.

**EOC** – Emergency Operations Center.

**External disaster planning committee** – In a county or city, a disaster planning committee often funded through the Hospital Preparedness Program (HPP) that deals with all hazards planning for that local entity. It is often convened by and associated with the local public health department.

**FEMA** – Federal Emergency Management Agency.

**Hospital Incident Command System (HICS)** – Originally developed in 1980s and known as Hospital Emergency Incident Command Systems (HEICS), it is an emergency management system for hospitals that incorporates the concepts and structure of incident command, NIMS and SEMS.

**Immunocompromised** – Incapable of developing a normal immune response, usually the result of disease, malnutrition or immunosuppressive therapy.

**Incident Command System (ICS)** – A management system used to organize emergency response. It was developed in the 1970s following a series of catastrophic fires in California. NHICS is the Nursing Home Incident Command System, and is likely a more appropriate command structure for long term care facilities.

**Incubation period** – The time from the moment of exposure to an infectious agent until the signs and symptoms of the disease appear.

**Inoculation** – The placement of an organism where it will grow or reproduce.

**Internal PI Committee** – A multidisciplinary Pandemic Influenza (PI) Planning Committee for the facility. This can be a newly formed a new committee or an expanded already-existing committee such as quality improvement, infection control or resident rights. This committee should include physicians and clinical, administrative, purchasing, engineering or maintenance personnel and others as needed and as available at the facility. This committee will oversee the development and implementation of the facility's pandemic plan.



**Isolation** – Separation of ill persons with a contagious disease from people who do not have the disease.

**“Just in time” training** – The technique of preparing newly recruited or reassigned workers to their task at the point in time when they are needed. This kind of training requires having training materials ready and trainers and supervision available so that new workers can be quickly and safely utilized in an emergency.

**Long term care (LTC) facilities** – Small and large licensed residential institutions that care for the elderly, people with developmental disabilities or chronic mental illness and/or other medically fragile individuals who require 24-hour care and supervision. They can be licensed by the California Department of Public Health or the California Department of Social Services, depending on the type of residents they serve and the services they offer.

**Mass fatality event** – An incident that causes more deaths than can be managed locally with available resources.

**N-95 mask (or respirator)** – A face mask that filters out 95 percent of the particles that are drawn to the mask by respiration. “N” means it is not resistant to oil. It is a physical barrier that fits over the mouth and nose and makes a seal so that air only passes through the filter. This air passage is what differentiates a mask, which is a physical barrier against droplets from a respirator. N-95s should be fit-tested to make sure that the seal is tight and air is not able to leak in from the sides.

**Nasopharyngeal** – The nose and pharynx or the nasopharynx area.

**Nebulizer** – A medical device used to humidify oxygen and/or deliver medications in the form of a fine spray that is breathed through the nose or the mouth.

**NHICS** – Nursing Home Incident Command System. This version of ICS has been developed by CAHF and is a valuable free resource available on their Web site, [www.cahfdisasterprep.com](http://www.cahfdisasterprep.com) in the NHICS section.

**NIMS** – National Incident Management System mandated by Homeland Security Presidential Directive 5 to provide a consistent nationwide approach for federal, state, local and tribal governments to respond to and recover from domestic incidents.

**Non-pharmaceutical** – Measures to prevent or limit the spread of a disease that do not include the use of drugs or vaccines. Non-pharmaceutical measures include isolation, quarantine, social distancing and infection control.

**Novel strain** – A microorganism that evolves or emerges to which humans have limited or no immunity.

**OES** – Office of Emergency Services. The Governor’s Office of Emergency Services is the state agency that coordinates the response activities of all local and state agencies. In addition, OES coordinates the integration of federal resources into state and local response and recovery operations.

**Operational Area (OA or Op Area)** – A county and all its political subdivisions, including special districts. The county government is the lead agency unless otherwise specified. There are 58 Operational Areas (counties) in California. The Op Area manages and coordinates resources from its Emergency Operations Center (EOC).

**Pandemic** – Worldwide outbreak of an infectious disease.

**Personal protective equipment (PPE)** – Equipment that prevents contact with potentially toxic or infectious substances. PPE refers to gloves, masks, respirators, face shields, eye protection and various protective suits.

**PIO** – Public information officer.

**Pneumonia** – A disease of the lungs resulting in inflammation and consolidation.



**Pneumococcal** – A bacterial (*Streptococcus pneumoniae*) organism that causes acute pneumonia in one or more lobes of the lung.

**PPE** – Personal protective equipment.

**Prophylactic** – Measures used in anticipation of, or directly after, exposure to an infectious disease intended to prevent or reduce the severity of infection in the exposed person (Ex: antibiotics, antiviral).

**PSI** – Pandemic Severity Index, developed by the U.S. Centers for Disease Control and Prevention (CDC) to indicate the severity of a pandemic, based upon the percentage of likely deaths. The PSI is similar to the categories used to designate the severity of hurricanes and will be used to help guide the response activities that should be taken. A Category 4 or 5 designates the greatest severity and indicates that extreme measures will be required.

**Quarantine** – Separation or restriction of movement of select person(s) who have been exposed to a disease but are not ill.

**Residents** – Generic term used to identify clients, patients, members, consumers and/or people who live in and receive care in a long term care facility.

**Respiratory etiquette** – An infection control strategy for respiratory illness that includes visual alerts to remind people to cover their coughs and sneezes, dispose of their tissues and wash their hands.

**SEMS** – Standardized Emergency Management System, enacted by state law in 1991 as a result of the Oakland Hills Fires, in an effort to standardize the way that different organizations and agencies respond to disasters in California.

**Social distancing** – Reduction or elimination of contact among people during periods of disease outbreak. This can be done through maintaining a distance of three feet or more when around others, and avoiding crowds and public gatherings whenever possible. Social distancing could also involve the cancellation of public events, school closures, telecommuting rather than reporting to the workplace and other measures.

**Surge capacity** – The ability of the healthcare system to rapidly expand beyond its normal services to meet the increased demand for qualified personnel, medical care and public health in the event of a large scale disaster.

**Vaccination** – A suspension of killed or attenuated microorganisms administered for the prevention, amelioration or treatment of an infectious disease. Vaccine is one of the most effective ways to minimize suffering and death from influenza. Efforts are underway to develop and manufacture a vaccine for pandemic influenza; however, experts agree that it will take several months after the emergence of a pandemic outbreak for there to be sufficient amounts of an effective vaccine available to the public.

**WHO** – World Health Organization.



# PANDEMIC INFLUENZA WORKBOOK

for Long Term Care Providers

CALIFORNIA  
ASSOCIATION OF  
HEALTH FACILITIES

