Influenza Pandemic Response Plan
Version 2.0

Ohio Department of Health
Bureau of Infectious Disease Control
Immunization Program
September 2005

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Acknowledgments:

The Ohio Influenza Pandemic Response Plan has been developed following consultation with many individuals in public health. This version reflects the contribution of representatives from several local health districts and from colleagues in many programs at the Ohio Department of Health.

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I. Purpose

The purpose of this Influenza Pandemic Response Plan (IPRP) is to provide the framework for the Ohio Department of Health (ODH) to identify, respond to, and control an influenza pandemic. The IPRP addresses surveillance, emergency response, pharmaceutical delivery and communications. The plan also serves to inform other state of Ohio agencies, Ohio local health districts (LHDs), and other local agencies about ODH's management of an influenza pandemic.

II. Assumptions

A. Morbidity and mortality can be minimized by having a comprehensive plan in place.
B. A pandemic will occur; the unknowns are time, extent, and amount of warning.
C. The origin of the novel virus is unknown.
D. In our mobile society, multiple geographic areas may be affected simultaneously, incapacitating large numbers, including those responsible for both health and non-health related emergency services.
E. Shortages of essential resources will occur (e.g. pharmaceutical supplies for influenza as well as other chronic diseases, reagents for diagnostic services, life-saving equipment, hospital beds, decontamination and sterilization facilities and protective equipment, morgue sites, and refrigerated storage for bodies and perishable resources).
F. Given the shortages of essential medical resources, changes in the usual standards of health and medical care will be required. Rather than doing everything possible to save every life, it will be necessary to allocate scarce resources in a different manner to save as many lives as possible. Altered standards of care may include providing medical care without the usual equipment and trained personnel that is currently used in today's pre-pandemic status.
G. Critical to this response and its effectiveness will be the cooperative and coordinated efforts of many persons and organizations within the public and private sectors.
H. An influenza vaccine specific to the pandemic strain may not be available at the beginning of a pandemic as the current production process for influenza vaccine takes several months and is dependent on a limited number of vendors. Once a novel virus is identified, it may take as long as 6 to 8 months before vaccine is available for distribution.

I. If and when vaccine is available, it is expected that individuals will need an initial priming dose of influenza vaccine followed by a second dose about 30 days later to achieve protection.
J. The first vaccine produced probably will be purchased by the federal government and distributed to state agencies to vaccinate priority groups.
K. With the assumption that only a small percentage of the total vaccine need will initially be available to begin vaccination, not everyone will be able to receive vaccine when it first becomes available. ODH has developed an initial prioritization scheme regarding prioritization for early vaccination. This scheme may be adapted as needed based on recommendations from the Centers for Disease Control and Prevention (CDC).
L. If and when vaccine first becomes available, it may take 5 months or more for pharmaceutical companies to produce an adequate supply of vaccine for the entire U.S. population.
M. CDC will likely develop a standard vaccine information sheet (VIS) that details the risks and benefits of the disease and the vaccine.
N. Since prior influenza vaccination(s) may offer some protection (even against a novel influenza variant), the annual influenza vaccination program, supplemented by pneumococcal vaccination, when indicated, will remain a cornerstone of prevention.
O. The federal government will assume primary responsibility for: coordinating national and international disease surveillance and developing an adverse event surveillance system; assessing need for and scope of a vaccine liability program; developing a central information database; providing information templates for state use and guidelines for curtailing transmission.
P. Legal authority will be in place for addressing the variety of concerns precipitated by the pandemic itself and the Influenza Pandemic Response Plan document (IPRP).
Q. Consideration for the needs of special populations, like the pediatric population, will be addressed.

III. Concept of Operations

A. Command and control for the IPRP will be executed through the ODH Incident Command System (ICS).
B. Remediation efforts will span all World Health Organization (WHO) pandemic phases (please see the chart below) and will require the continued coordination of public and private sector, medical and non-medical, and volunteer organizations by the State. Interactions between state agencies will follow the procedures established in the Human Infectious Disease Annex to the Ohio Emergency Operations Plan (EOP).
C. Pandemic influenza response activities are outlined by pandemic phase. Evolution of the pandemic will be identified and declared by the federal government as the phases described below.

D. Modified to meet the demands of each of these phases, the components of the IPRP will function throughout the pandemic.

Pandemic Phase	**Definition**
Inter- or Pre-Pandemic (WHO Phase 0, Level 0)	• Level 0: The inter-pandemic phase with no recognized human infection caused by a novel influenza strain • Level 1: A case of human infection caused by a novel strain ("new virus alert") • Level 2: Two or more human cases but no documented person-to-person transmission and unclear ability to cause outbreaks • Level 3: Person-to-person spread in the community and an outbreak in one country lasting for more than two weeks
Novel Virus Alert (WHO Phase 0, Levels 1-2)	• Confirmation that the novel influenza virus is causing human infectious disease outbreaks in one country • Has spread to others • Disease patterns indicate that serious morbidity and mortality are likely to occur
Pandemic Alert (WHO Phase 0, Level 3)	• Outbreaks and epidemics occur in multiple countries with global disease spread • Community-level interventions and travel restrictions may decrease disease spread • Once vaccine becomes available, immunization programs will begin • Antiviral prophylaxis and therapy may be targeted to maximize impact • Local coordination of hospital and outpatient medical care and triage is necessary • Activation of emergency response plans to preserve community services will occur • Federal agencies and personnel will support response activities, monitor vaccine effectiveness and adverse events following vaccination and antiviral drug use, conduct surveillance to track disease burden, and disseminate information
Pandemic (WHO Phases 1-3)	• Signals the end of the first pandemic wave • Activities include recovery, assessment and refinement of response strategies, ongoing vaccine production and vaccination, and restocking supplies such as antiviral drugs
Second Wave (WHO Phase 4)	• A second seasonal wave of influenza activity may follow the initial wave of infection • Greater vaccine availability, experience with and

	improved strategies for pandemic response, and increased immunity to the pandemic strain should decrease the impact of the second pandemic wave
Post-Pandemic (WHO Phase 5)	• The pandemic will end as population immunity to the pandemic strain becomes high due to disease or vaccination, the virus changes, and/or another influenza strain becomes predominant

IV. Organization

- In the event of an influenza pandemic, ODH will respond through ICS. ODH response roles are detailed in the ICS job action sheets.

V. Functions and Associated Responsibilities

A. **Surveillance**

i. Influenza viruses are constantly changing their antigenic properties. Virologic surveillance, in which influenza viruses are isolated for antigenic and genetic analysis, and disease surveillance, in which the epidemiologic features and clinical impact of new variants are assessed, should be viewed as equally critical for pandemic preparedness.

ii. *Pre-Pandemic Period*

1. Continue to participate in the current national surveillance program.
    a. In the United States, national surveillance is coordinated by the CDC, with state and local health departments assuming primary responsibility for carrying out virologic, morbidity, and mortality surveillance components.
    b. The ODH Laboratory reports the number and type of influenza viruses each week and sends representative and unusual viral specimens to the CDC for comparative antigenic and genetic analysis. This information is updated weekly.
    c. ODH reports to the CDC the level of influenza activity in Ohio each week as ‘widespread’, ‘regional’, ‘local’, ‘sporadic’, or ‘no activity’. This information is updated weekly and is available online at http://www.cdc.gov/flu/weekly/usmap.htm
    d. A voluntary, statewide network of approximately 60 sentinel physicians report the number of patients presenting with influenza-like illness (ILI) and the

total number of patient visits by age group each week. This information is updated weekly.

e. Vital statistics offices in 8 Ohio cities (Akron, Canton, Columbus, Cleveland, Cincinnati, Dayton, Toledo, and Youngstown) report to ODH, on a weekly basis, the percentage of total deaths caused by influenza and pneumonia.

2. Expand and refine the ongoing surveillance system (e.g. sentinel physician, laboratory, and LHD reporting). Educate medical providers on the importance of influenza screening (e.g. rapid testing, culturing) and reporting.
3. Work to expand the year-round influenza surveillance program with testing for influenza virus. Currently 17 sentinel providers report on year-round influenza activity but do not submit specimens for culture.
4. Utilize the real-time outbreak and disease surveillance system (RODS) at this time in an attempt to detect a rise in ILI cases being seen at participating Ohio hospital emergency departments.
5. Assist LHDs with the investigation of influenza-related deaths, in particular deaths in children.
6. Consider a hospital-based system to monitor census, assess potential for making available additional beds, and extend surveillance to include all respiratory illness cases.
7. Work to enroll schools and school districts in a surveillance program where the schools/school districts report school absences. (School absenteeism can be a marker for influenza illnesses.) Many school districts in the 8 major cities in Ohio provide a text file of the number of student absences by school and by day. This data is used to help determine whether an increase in student absences is a reflection of an outbreak of disease (i.e. influenza).
8. Enhance communications with states contiguous to Ohio. ODH currently has relationships with the health authorities of adjoining states. These relationships ensure effective communication during a public health emergency and are maintained through on-going collaboration on public health activities that cross jurisdictions.
9. Assess current laboratory capacity and develop contingency plans for the additional burden posed by an influenza pandemic and its intensified surveillance needs.

iii. *Novel Virus Alert*

1. Ohio will continue to participate in national and international surveillance programs that carry on as during the pre-pandemic phase.

2. Utilize HAN (Health Alert Network) and OPHCS (Ohio Public Health Communication System) to notify laboratory directors, infection control practitioners (ICPs), physicians, hospital emergency departments, and other Ohio health care providers and request influenza testing.
3. Individuals that should be tested are patients presenting with ILI who have had a recent travel history to a region where the pandemic strain of influenza is circulating or who have unusually severe symptoms. Specimens should be sent to the ODH Lab for viral culture and typing.
4. Laboratories will be notified through the Ohio Laboratory Response Network System, when this system is fully developed. Laboratories will also be able to refer to the Client Services Manual for directions on submitting a specimen to the ODH Lab for influenza testing.
5. Remain abreast of new developments regarding virologic, epidemiologic, and clinical information about new variants with national and international sources.
6. Maintain supply of correct laboratory reagents necessary to handle novel strain(s), if feasible.
7. Initiate enhanced passive surveillance measures to include individuals who have been hospitalized with unexplained pneumonia, acute respiratory distress syndrome (ARDS), or severe respiratory illness AND who have traveled to countries where exposure to novel influenza virus might occur.

iv. *Pandemic Alert*

1. Once pandemic influenza has been identified as circulating internationally, work toward identifying the novel influenza virus circulating in Ohio.
2. Continue testing as in the novel virus alert stage, with facilities continuing to submit specimens for viral culture. (ODH Lab coordinates further testing as needed with CDC.)
3. Consider broadening enhanced passive surveillance to include day cares, long-term care facilities, and occupational sites. Unexplained deaths may also be investigated, including possible influenza testing by the coroner's office.
4. Evaluate and refine all aspects of surveillance. Consider starting active surveillance.
5. Send additional HAN message(s), as needed, to alert health care providers and hospitals about the pandemic alert and to continue to encourage testing and reporting of influenza and ILI.
6. Make and test IPRP modifications as needed.

7. Remain in contact with the LHDs.
8. Remain in contact with CDC and/or other federal agencies and communicate information back to the LHDs.
9. Participate in pandemic related studies as appropriate.

v. *Pandemic*

1. National and international surveillance programs should continue as during the novel virus alert stage.
2. Keep apprised of national and international pandemic trends, including WHO updates.
3. Continue to follow indications of antigenic drift variants.
4. Remain in contact with CDC and/or other federal agencies and communicate information back to the LHDs.
5. Remain in contact with other state agencies (e.g. Governor's Office, Ohio Emergency Management Agency [OEMA], Ohio Department of Agriculture [ODA]).
6. Revise surveillance activities as indicated.
7. Initiate syndromic surveillance appropriate to the clinical signs and symptoms of the pandemic influenza-infected patients to maximize detection and identification of new cases.
8. Depending on the epidemiologic features of the pandemic, may request that ILI reporters continue to collect viral cultures. However, if the number of individuals becoming ill with influenza during a pandemic is extremely large, ODH may limit the submission of specimens. If specialized typing equipment is available, ODH Laboratory may test a few specimens each week to assess for antigenic drift. In addition, if possible, several specimens may be tested for antiviral susceptibility.
9. Recommend the use of rapid antigen tests for the diagnosis of influenza.
10. Request that sentinel influenza reporters use the already established reporting website to provide outbreak information which would include the following information:
    a. Demographics
    b. Date of birth
    c. Symptoms
    d. Specimen collection date
    e. Vaccine history
    f. Severity of illness
11. Since the number of cases may be overwhelming, limit the completion of electronic ILI report cards, as needed. Certain cases should be accorded priority for reporting (e.g. possible vaccine failures, severe cases).

12. Inform the OEMA that ODH will be requesting the SNS or VMI. Request activation of the EOC (Emergency Operations Center) if needed.
13. Advise the governor on the need to request the Strategic National Stockpile (SNS) and/or Vendor-Managed Inventory (VMI). See Appendix E for Instructions for Requesting Antiviral Drugs from the SNS.
14. Request the SNS and/or VMI as necessary.
15. Request non-SNS/VMI (i.e. state asset) supplies as needed through OEMA.

vi. *Second Wave*

1. Continue surveillance.
2. Repeat steps for pandemic as dictated by circumstances.

vii. *Post-Pandemic*

1. Summarize data to provide a detailed retrospective characterization of the pandemic and to evaluate the efficacy of emergency management strategies.
2. Make recommendations for change.
3. Modify the IPRP accordingly for implementation in the next event.
4. Forward pertinent summaries as indicated to local, state, and federal levels.
5. Continue surveillance as needed.
6. Review death certificates statewide for deaths related to influenza and pneumonia.
7. Review hospital admission data for ILI.
8. As necessary, assist CDC in conducting retrospective studies of vaccine efficacy.
9. Conduct validation studies of influenza reporting.
10. Conduct retrospective studies of protective action recommendations.

B. **Strategies to Limit Transmission**

i. The ability of containment strategies to substantially slow the spread of pandemic influenza may be limited by the short incubation period for influenza, the large proportion of asymptomatic infections, and the non-specific nature of clinical illness from influenza infection. These challenges may lead to difficulty in identifying infected persons, in quarantining contacts of infected persons prior to the development of illness, and in marshalling the substantial resources that would be needed to initiate and monitor the use of containment measures. Nonetheless, during early stages of a pandemic, particularly if the novel influenza virus is not efficiently transmitted, use of containment measures may help to slow the spread of a pandemic influenza A virus and allow additional time for the development

and use of a vaccine and the production and use of antiviral medications. Strategies to limit transmission will be dependent upon: the observed characteristics of the pandemic strain; the observed mortality rate; its transmissibility; the characteristics of the affected population; and other observed epidemiological characteristics of the pandemic influenza strain. The availability of vaccine and the ability to immunize populations at risk will be considered in developing such strategies.

ii. The two main strategies for the prevention of transmission involve 1) decreasing contact between infected and uninfected persons; and 2) decreasing the probability that contact will result in infection if contact occurs. Please see Appendix D for a table with influenza transmission prevention strategies. Interventions to achieve these objectives can be implemented in healthcare settings and in the community.

iii. The ODH Bureau of Infectious Disease Control is developing a Limitations on Movement document that will provide details regarding limiting some persons' movement through such tools as isolation and quarantine to reduce disease transmission. Release of this document is expected in 2006.

iv. Depending on the number of ill patients and the level of care that these patients require, facilities other than hospitals may need to be used to provide patient care. This determination would be made collaboratively with input from multiple stakeholders (e.g. ODH, OEMA, Ohio Hospital Association [OHA], professional medical and nursing organizations).

v. *Pre-Pandemic Period*
    1. No use of community or individual containment measures outside of the health care setting is recommended at this phase and level.
    2. Continue to encourage the use of influenza vaccine for persons at increased risk of influenza complications, their household contacts, and health care workers. (See Appendix C for a template for Standing Orders for Administering Influenza Vaccine to Adults During a Typical Influenza Season.)
    3. Encourage the use and application of current recommended strategies to prevent health care-associated influenza.

vi. *Novel Virus Alert*
    1. This phase indicates laboratory confirmation of infection of humans with a novel influenza A virus. When a novel virus alert occurs, epidemiological investigations will be conducted and containment measures of persons in the affected area should be implemented. If the novel virus is a human/animal virus reassortant, the possibility of person-to-person transmission is elevated and containment

measures may be more important to limit spread of the novel virus. Non-reassorted viruses may be less efficiently spread, but spread should still be contained aggressively to prevent further cases and to decrease the possibility of co-infection with circulating human influenza viruses and reassortment. The following are possible containment measures if cases are first detected in the U.S.

2. Initial actions
    a. Notify laboratory directors, infection control practitioners (ICPs), physicians, hospital emergency departments, and other Ohio health care providers and request collection of respiratory specimens from persons with acute febrile and respiratory illnesses for subtyping of all influenza A isolates, particularly in the affected region. Specimens should be sent to the ODH Lab for viral culture and typing.
    b. Work with LHDs to ensure that persons who are positive for influenza A are placed in isolation until subtyping of their isolate can be accomplished. Isolation may be at home, or if medically necessary, in a hospital. Isolation should continue for at least 7 days or until viral shedding is no longer detected, whichever is longer, or until the isolate is laboratory-confirmed not to be a novel influenza A virus.
3. If an animal source is identified with ongoing transmission of a novel virus within the animal population:
    a. Remain in communication with ODA as they work with their agricultural partners (e.g. Ohio Department of Natural Resources, United States Department of Agriculture, Poultry Industry) to eliminate the source of the novel virus from animals as much as possible.
    b. Advise persons who may be in contact with potentially infected animals to
        i. Wear personal protective equipment (PPE).
        ii. Receive influenza vaccine to reduce the possibility of co-infection with novel influenza virus and circulating human influenza virus and their reassortment.
        iii. Use antiviral chemoprophylaxis.
    c. Work with LHDs to ensure that persons exposed to infected animals or the animals' contaminated environment are monitored for febrile, respiratory and conjunctival illness.

d. If persons exposed to the animal source of influenza become ill:
    i. Work with LHDs to ensure that these individuals are isolated at home or, if medically necessary, in a hospital for seven days or until viral shedding is no longer detected, whichever is longer, or until the viral isolate is laboratory-confirmed not to be a novel influenza A virus.
    ii. Coordinate with LHD officials to conduct rapid testing for influenza and arrange for viral culture or collection of respiratory specimens at designated facilities.
    iii. Work with LHD officials to ensure provision of antiviral medication for treatment. Its use would not affect isolation instructions since infected persons taking antiviral medication still may shed influenza virus (and possibly antiviral drug-resistant viruses).

4. If no animal source is identified:
    a. Work with federal and local health partners to initiate studies to determine epidemiologic links between infected persons.
    b. Work with LHDs to ensure that persons with known or suspected influenza are isolated at home or, if medically necessary, in a hospital for 7 days or until viral shedding is no longer detected, whichever is longer, or until the viral isolate is laboratory-confirmed not to be a novel influenza A virus.
    c. Quarantine contacts of infected persons at home for 7 days or until influenza is ruled out in their contact. (Contacts are defined as persons residing in the same home and persons working within 6 feet of a suspected person.)
5. The following are possible containment measures if cases are first detected <u>outside</u> of the U.S.
    a. Increase surveillance for influenza and ILI. Please see Surveillance Section of this document, Section V A.
    b. Work with LHDs on the management of persons who are recent (within 7 days) travelers to the implicated region. LHDs should consider isolation if these recent travelers have influenza-like illness and recommend testing for influenza A. If influenza is suspected or confirmed, ODH would

work with LHDs to ensure that the individual is isolated at home or, if medically necessary, in a hospital for 7 days or until viral shedding is no longer detected, whichever is longer, or until the viral isolate is laboratory-confirmed not to be a novel influenza A virus.

vii. *Pandemic Alert*

1. The short incubation period of influenza, the severity of illness caused by the novel virus, and the support of the community must be taken into account when considering containment measures at this stage. Possible containment measures if cases are detected in the U.S. include the following:
    a. Work with LHDs to ensure that persons with confirmed or suspected influenza are isolated at home or, if medically necessary, in a hospital for 7 days or until viral shedding has stopped, whichever is longer, or until the infection is confirmed by laboratory testing not to be caused by the novel influenza A virus.
    b. Quarantine contacts of cases. Such quarantine may be lifted after 7 days as long as the individuals do not become ill or if the individuals are taking antiviral medication known to be effective against the circulating pandemic influenza strain.
    c. Work with LHDs to discourage or cancel large gatherings in the affected region depending on the level of person-to-person transmission.
        i. If some cases are children, consider school closures in the affected region.
        ii. Closures of specific office buildings, colleges/universities or other groups should be considered based on the epidemiology of known infected case patients.
2. Possible containment measures if cases are occurring outside of the U.S. include:
    a. Support a travel advisory if federal health officials issue such an advisory. This advisory would recommend limiting travel to the affected region and screening travelers returning from the affected region for illness compatible with influenza.
    b. Work with federal and local health officials to notify persons arriving in the U.S. from the affected region that they should isolate themselves in their home or other lodging and notify their local public health officials if they become ill.

c. See recommendations for Novel Virus Alert, Section V B v.

viii. *Pandemic*

1. Containment measures are less likely to be effective at this stage as the efficiency of person-to-person transmission is likely to be greater, although such measures may help to slow the spread of influenza and allow time for vaccine and antiviral drug production and distribution. Use of such measures should be considered in the context of available vaccine and antiviral medication, the level of cooperation on the part of the public, resources available to implement and monitor compliance with containment measures, and the severity of illness. Assessment of compliance with containment measures and their effectiveness should be conducted on an ongoing basis and changes should be made based on these factors and on the emerging epidemiologic information. Possible containment measures if spread is occurring within the U.S. include the following:
    a. Work with LHD officials to discourage or ban large indoor gatherings (such as meetings and conferences).
    b. Work with LHD officials to consider school closures, including universities, or limiting class sizes and holding meetings outside when possible.
    c. Work with LHDs to ensure that persons with confirmed or suspected influenza A are isolated as in the Pandemic Alert Phase and persons exposed to suspected or confirmed cases are quarantined unless these individuals are taking antiviral medication known to be effective against the circulating pandemic influenza strain.
2. If spread is outside of the U.S., see recommendations for Pandemic Alert, Section V B v 2 for possible containment measures.

C. **Pharmaceutical Delivery**

i. Since LHDs will be administering any available vaccine or dispensing any available antiviral prophylaxis, their clinic plans may be used to detail pharmaceutical delivery in the event of an influenza pandemic. The Ohio Strategic National Stockpile (SNS) Mass Dispensing Plan may also be referenced.

ii. **Influenza Vaccine**

1. *Pre-Pandemic Period*
    a. Maintain continuing liaison with CDC and FDA to stay abreast of vaccine and antiviral medication

availability and plans for manufacture or stockpiling.

b. ODH has an initial prioritization scheme which is subject to modification based upon future CDC issued guidelines and consultation with experts. (See Appendix G.) When a Pandemic Alert stage is declared, the prioritization scheme listed below is the ODH template. The final prioritization scheme will be dependent upon: the observed characteristics of the pandemic to include the severity of the vaccine shortage; the observed mortality rate from the pandemic strain; the transmissibility of the virus; the characteristics of the most affected population; and other observed epidemiological characteristics of the pandemic influenza strain.
c. Establish and maintain a system for the receipt and distribution of vaccines and antivirals. For vaccine transport and storage, maintenance of cold chain must be addressed, with exploration of existing and emergency refrigerated storage. (See the ODH Immunization Program's Sample Protocol for Vaccine Administration for Vaccine Cold Chain information.)
d. Assist the LHDs in the development and exercise of their mass dispensing plans. These plans would be utilized for both for mass vaccination and mass dispensing clinics, if either influenza vaccine or antiviral medication became available for mass distribution.
e. Maintain Impact SIIS (Statewide Immunization Information System) as a tool to be utilized in the event of an influenza pandemic for the statewide tracking of vaccines/antiviral medication doses. The purpose of this process is to connect items dispersed in an SNS environment to patient-specific information in a central database.
f. Have in place a professional volunteer group that could assist in the administration of vaccine if needed.
g. Enlist the support of professional medical and nursing organizations, the OHA, and the media to maximize influenza and pneumococcal vaccine coverage.
h. Develop and provide educational programs and materials about vaccine storage, handling, and administration.

2. *Novel Virus Alert*
    a. Stay up-to-date on novel virus vaccine development.
    b. Review distribution procedures with key persons in the seven Ohio homeland security regions. Conduct training sessions as needed for all issues related to the vaccine.
    c. Establish a schedule for designated persons at the ODH Warehouse to take responsibility for maintenance and documentation of the vaccine cold chain (i.e. maintaining proper vaccine temperatures during storage and handling to preserve potency). Also, encourage the development/maintenance of schedules of designated persons at local health jurisdictions who will take responsibility for the maintenance and documentation of cold chain at their sites.
    d. Print copies of the VIS.
3. *Pandemic Alert*
    a. Provide assistance to LHDs and other pre-determined immunization sites in their implementation of plans for mass influenza vaccination clinics.
    b. Ensure that Impact SIIS, Secure Wireless Inventory and Pharmaceutical Emergency Response System (SWIPERS), and other approved electronic data-capturing systems, are functioning as needed for entry of influenza vaccination information.
    c. ODH has an initial prioritization scheme which is subject to modification based upon future CDC issued guidelines and consultation with experts. When a Pandemic Alert stage is declared, the prioritization scheme listed in Appendix G is the ODH starting template.
    d. LHDs will be required to estimate the number of individuals in each priority group. The total number of doses needed for each group (using as specific a number as possible) will be transmitted to ODH via assigned communication route (e.g. fax, OPHCS). ODH will apportion the available supply of vaccine and will distribute vaccine to vaccinate priority groups. Unique population characteristics will be considered during vaccine distribution.
    e. During an influenza pandemic, the supplies of antiviral medications will not be enough to provide for the treatment and/or prophylaxis of all affected

individuals. Because of this, a prioritization scheme for the distribution of antiviral medications will be developed by ODH, in consultation with its partners and CDC. The initial template for this prioritization list is the same as that for vaccine. As vaccine becomes available, the antiviral prioritization list may change. ODH will continue to revise its prioritization list depending on the characteristics of the pandemic to include the availability and effectiveness of influenza vaccination, the availability of antiviral medication, and other observed epidemiological characteristics of the pandemic influenza strain.

f. In the event of limited vaccine and antiviral medication during a pandemic influenza situation, the Director of Health will consider a Director's Journal Entry order to ensure compliance with these guidelines. The Director's Journal Entry should include guidance on verification requirements for the individual receiving vaccine and/or antiviral medication to identify the occupational, health, or personal reason that puts them in a priority group to receive vaccine and/or antiviral medication.
g. If vaccine is available, initiate vaccine and supply distribution in accordance with the SNS Plan, with an initial vaccine cold chain maintenance check for each site. (The distribution sites may be sites that were pre-determined during preparations for mass smallpox vaccinations or during other planning.)
h. As vaccine becomes available, expand immunization to additional target groups.
i. When influenza vaccination has begun, the ODH Immunization Program will designate a State Adverse Events Coordinator to monitor and investigate adverse events in Ohio due to influenza vaccination.
j. The ODH State Adverse Events Coordinator will report any reported case of an adverse event following vaccination to the national Vaccine Adverse Event Reporting System (VAERS).
k. Distribute antiviral medications to individuals according to prioritization scheme and as supply allows.
l. Maintain control measures to ensure appropriate use (i.e. storage, handling, and administration) of vaccine and antiviral medications.

m. Continue inventory control and adjust volume according to need as supplies allow.
n. Revise distribution plan as needed.
o. Coordinate activities with contiguous states as needed.

4. *Pandemic:* Continue distribution and use of vaccines and antiviral medications as appropriate and as supplies allow, maintaining all procedural standards to ensure safety and effectiveness.
5. *Second Wave:* Continue distribution and use of vaccines and antiviral medications as appropriate and as supplies allow, maintaining all procedural standards to ensure safety and effectiveness.
6. *Post-Pandemic*
    a. Inventory all vaccines, antiviral medications, and related supplies, involving all vaccine and/or antiviral medication dispensing sites.
    b. Assess entire pharmaceutical delivery system effectiveness, based upon input from all sites and persons involved.
    c. Prepare After-Action Report, including recommendations for changes and revisions for future events.
    d. Revise the ODH Influenza Pandemic Response Plan to include necessary changes.
    e. Forward reports to local, state, and federal agencies as appropriate.

iii. **Pneumococcal Vaccine**

1. Some individuals may develop secondary bacterial infections after becoming ill from influenza. Pneumococcal pneumonia is one possible bacterial infection. In those individuals that are at an increased risk for acquiring pneumococcal disease, pneumococcal vaccination is important.
2. *Pre-Pandemic Period:*
    a. Work to improve awareness about pneumococcal vaccination through active participation in immunization coalitions and education about immunization issues. Increased awareness about the indications and benefits of pneumococcal vaccination might lead to increased pneumococcal vaccination levels.
    b. Use standing orders where appropriate to actively vaccinate individuals against pneumococcal infection. (See Appendix C for a template for

Standing Orders for Administering Pneumococcal Vaccine to Adults.)

3. *Pandemic Alert:*
    a. Notify health care providers of the need to vaccinate at-risk individuals with pneumococcal vaccine as a method of decreasing morbidity and mortality associated with pandemic influenza. At-risk individuals are those that the Advisory Committee on Immunization Practices (ACIP) defines as belonging to high risk groups. (See Appendix C for a list of individuals at high risk for morbidity or mortality from pneumococcal infection.)
    b. Work with the media to inform the general public of the need for certain at-risk persons to receive the pneumococcal vaccine.
    c. Pneumococcal vaccine will be administered by private health care providers (as is currently done in Ohio). Pneumococcal vaccinations can be recorded in Impact SIIS.
4. *Pandemic:* Continue educational efforts to providers and at-risk persons about the importance for at-risk persons to receive the pneumococcal vaccine.
5. *Second Wave:* Continue educational efforts to providers and at-risk persons about the importance for at-risk persons to receive the pneumococcal vaccine.
6. *Post-Pandemic*
    a. Continue educational efforts to providers and at-risk persons about the importance for at-risk persons to receive the pneumococcal vaccine.
    b. Continue to work with immunization coalitions to improve the state's pneumococcal vaccination coverage levels.
    c. Continue to assess pneumococcal vaccination coverage levels and ways to improve those levels.

iv. **Antiviral Medications**

1. While antiviral medications for influenza are an important adjunct to influenza vaccine for the control and prevention of influenza, they are not a substitute for vaccination.
2. During an influenza pandemic, the supplies of antiviral medications will not be enough to provide for the treatment and/or prophylaxis of all affected individuals. Because of this, ODH, in consultation with its local and federal partners, will make recommendations on the use of antiviral medications, and on whether the medications should be used for treatment, prophylaxis, or both. The initial template for this prioritization list is the same as that

for vaccine. As vaccine becomes available, the antiviral prioritization list may change. ODH will continue to revise its prioritization list depending on the characteristics of the pandemic to include the availability and effectiveness of influenza vaccination, the availability of antiviral medication, and other observed epidemiological characteristics of the pandemic influenza strain.

3. Four currently approved antiviral agents are available in the U.S.: amantadine, rimantadine, zanamivir, and oseltamivir.
4. Amantadine and rimantadine are chemically related antiviral drugs (i.e. adamantines) with activity against influenza A viruses but not influenza B viruses. Because of their genetic usefulness against all known influenza A viruses, amantadine and rimantadine might be expected to play an important role in prevention and treatment of pandemic influenza, especially during a time when sufficient supplies of vaccine may not be available. However, there are formidable problems and limitations associated with widespread use of these antiviral agents:
    a. Under present circumstances, the supply of these drugs would be well below the anticipated demand during an influenza pandemic.
    b. Relative priorities regarding target groups and the use of limited supplies for chemoprophylaxis versus therapy have yet to be established.
    c. Widespread use of rimantadine and amantadine would lead to the widespread emergence of drug-resistant viral strains.
    d. Adverse reactions. Central nervous system (e.g. nervousness, anxiety, insomnia) and gastrointestinal side effects (e.g. nausea, anorexia) occur in 6-13% and 1-3% of individuals taking the two medications. More severe side effects (e.g. marked behavioral changes, delirium, hallucinations, seizures) have been seen in some individuals.
5. Zanamivir and oseltamivir are neuraminidase inhibitors with activity against both influenza A and B viruses. Both are approved for the treatment of uncomplicated influenza infections. Oseltamivir is also approved for chemoprophylaxis of influenza in persons aged 13 years and older. Since zanamivir and oseltamivir were only recently approved (in 1999), clinical experience to assess adverse effects and data regarding antiviral resistance are limited. Oseltamivir was added to the Strategic National Stockpile (SNS) in 2003. Analysis is ongoing to define optimal antiviral use strategies, potential health impacts,

and cost-effectiveness of antiviral drugs in the setting of a pandemic. Expanded availability of the neuraminidase inhibitors will spur evaluation of the relative benefits of these drugs, and their optimal use for influenza control in both treatment and prophylaxis.

6. CDC will assist with the determination of the susceptibility of the pandemic strain to existing influenza antiviral drugs. This will likely be assessed on an ongoing basis during the pandemic to watch for the development of antiviral resistance. ODH and the Ohio LHDs will educate physicians about the importance of avoiding the inappropriate use of antiviral medications to limit the development of antiviral resistance and to ensure that this limited resource is used effectively.
7. Currently the federal government is assessing the best use of antiviral medications during an influenza pandemic. Production estimates are not yet available for the neuraminidase inhibitors. The federal government is also considering the feasibility of stockpiling medications and/or the raw materials to make them. Until these assessments have been completed, it should be assumed that antiviral drugs will play a minimal role in reducing the impact of a pandemic and should be reserved for very high priority groups.

D. **Emergency Medical and Other Responses**

i. In the event of pandemic influenza, notification and response may be initiated at the national or international level, then state and local. ODH's IPRP will be rolled into the state Emergency Operations Plan (EOP) and ODH will coordinate with LHDs.

ii. *Pre-Pandemic Period*

1. Maintain a heightened awareness of the unique nature of an influenza pandemic [e.g. widespread, severe, vulnerability of all persons in the community including essential community servants (i.e. health care, law enforcement, fire protection, and other first responders)].
2. Evaluate existing health care infrastructure with attention to laboratory services, including adequacy during past influenza seasons.
3. Estimate staffing, equipment and supply needs during a pandemic to the degree possible.
4. Remain in conversation with the Ohio Funeral Directors Association Mortuary Operational Response Team (OFDA-MORT) about the OFDA-MORT Response Plan. In particular, participate in discussions regarding temporary

morgues, refrigeration units, and storage and burial decision-making.

5. Continue a viable state of emergency medical readiness with the capacity for expansion to an influenza pandemic status.
6. Develop contingency plans for closure and/or cancellations of public activities and/or sites as necessitated by the pandemic status.
7. Develop contingency plan for obtaining critical equipment and medications.
8. Recommend to other state agencies and organizations that they develop contingency plans for maintenance of essential community services during high absenteeism.
9. Assist LHDs with developing and exercising plans for mass vaccination and medication distribution. (See the Ohio SNS Dispensing Planning Guide.)
10. Coordinate with Ohio Citizen Corps, Ohio state agencies, and professional organizations the recruitment of professional volunteers into the Ohio Medical Reserve Corps. Reasons for needing professional volunteers during an influenza pandemic include the provision of medical coverage in areas with a shortage of health care providers and assistance with increased mental health counseling and treatment needs.
11. Develop recommendations for identifying the number of vaccines needed for each group in the prioritization scheme.

iii. *Novel Virus Alert*

1. Communicate status of event to key persons at ODH, including Public Affairs, Government Affairs, Legal, and ODH Leadership.
2. ODH will notify members of the Public Health and Medical Committee by phone of a novel virus identified in a single human case.
3. ODH will notify OEMA duty officer, infection control practitioners, laboratory directors, and emergency departments by the assigned communication route (e.g. fax, email, phone, OPHCS).
4. Utilize HAN/OPHCS to notify the HAN/OPHCS users about the situation regarding a possible influenza pandemic.

iv. *Pandemic Alert*

1. Communicate status of event to key persons at ODH, including Public Affairs, Government Affairs, Legal, and ODH Leadership.

2. Assess adequacy of available personnel. Perform an inventory of equipment and supplies.
3. Mobilize key representatives to form a statewide task force to respond to health needs during and precipitated by an influenza pandemic.
4. Coordinate activities with contiguous states as needed.
5. Consider implementing ICS as the situation necessitates.

v. *Pandemic*

1. Request OEMA open the state EOC and staff it accordingly.
2. Continue to coordinate statewide activities for emergency care.
3. Continue liaison with contiguous states.
4. Initiate limitations of movement, as needed.
5. Request state medical and pharmaceutical assets to respond to the situation.
6. Advise governor on need for SNS as indicated.

vi. *Second Wave*

1. Continue to coordinate statewide activities for emergency care.
2. Continue liaison with contiguous states.

vii. *Post-Pandemic*

1. Continue service to areas with residual needs.
2. Return to Pre-Pandemic Period operation as soon as possible.
3. Prepare report, including recommendations for changes and revisions for future events.
4. Revise ODH IPRP to include necessary changes.
5. Forward reports to local, state, and federal agencies as appropriate.

E. **Communications**

i. *Pre-Pandemic Period and Novel Virus Alert*

1. Establish a rapid communication system between LHDs and local health care providers.
2. Develop and maintain a current directory of public information officers for all LHDs.
3. Identify and train a spokesperson and back-up.
4. Communicate the need for proactive information which is more effective and credible than reactive information.
5. Establish a system for ensuring a common source of information to the public at large, including information for the visually and hearing impaired and information in multiple languages. Include local media in dissemination of that system. (See Appendix B.)

6. Develop a standard, easily recognized format for pandemic related news releases which are provided as often as needed.
7. Utilize HAN, OPHCS and the Multi-Agency Radio Communication System (MARCS) radios as appropriate for communication.

ii. *Pandemic Alert*

1. Establish a Web page for public access to updated information on the pandemic.
2. Communicate regularly with LHDs.
3. Communicate regularly with the sentinel physician providers. Ensure LHDs know what is communicated with the sentinel providers.
4. Establish an influenza information line, utilizing knowledgeable persons to answer questions and concerns from the public.
5. Proactively educate the general public about the priority groups for receipt of vaccine and/or antiviral medications, the rationale, how and by whom (agency and/or position) such decisions were made.
6. Educate the general public on other control measures that can be taken by individuals until such time when vaccine is available for everyone (e.g. avoiding crowds, staying home when sick). Many of these measures should also be encouraged even after an individual has been vaccinated. If the vaccine will not be able to be used in certain individuals (e.g. children younger than 6 months of age, persons with absolute contraindications), special emphasis will be given on how to prevent influenza in these individuals.
7. Remain cognizant that individuals often believe events that occur after vaccination are due to the vaccine. Include this concept in the education efforts, emphasizing the fact that events following vaccination are not necessarily caused by the vaccine.
8. Prepare the public, through education, for the development of post-vaccination cases of respiratory illness which are likely to be viewed as vaccine failure. Instead these cases could be due to causes such as being exposed before the vaccination could take effect.
9. Maintain ongoing communication with CDC for currency on all aspects of the pandemic.
10. Communicate information from CDC to the LHDs.
11. Provide regular updates to the public as planned.
12. Gather feedback information regarding climate and acceptance of information by the public.

13. Note: CDC has committed to the preparation of press materials, including bulletins and newsletters; however, pursuing the preparation of similar material might be prudent and would provide material in a timelier manner at the onset of such an event.
14. CDC will likely develop a standard VIS that details the risks and benefits of the disease and the vaccine. When one becomes available, ODH will ensure that it is widely distributed to both vaccine providers and the general public. This distribution may be done through a combination of methods (e.g. via HAN/OPHCS to state and local partners, faxed to media).

iii. *Pandemic and Second Wave:* Continue communication to LHDs, other state agencies, and the general public throughout this pandemic event, while constantly monitoring the perception and the needs of people and responding to those needs.

iv. *Post-Pandemic*
    1. Remain open to the information needs of the community, and continue the liaison with LHD officials to ensure the dissemination of accurate and credible information.
    2. Evaluate the process and events, and summarize documenting the need for modification should a similar event occur in the future.

VI. Annual Review

This plan shall be reviewed annually or as needed to account for advances in medical and technical knowledge, the nature of the causative organism, the recognized epidemiology of the disease, and resources available at the time. As a result of these reviews, any necessary modifications to the plan will be made and the appropriate partners will be notified of these changes.

Abbreviations

AARP:	American Association of Retired Persons
ACIP:	Advisory Committee on Immunization Practices
CDC:	Centers for Disease Control and Prevention
EOC:	Emergency Operations Center
EOP:	Emergency Operations Plan
FDA:	Food and Drug Administration
HAN:	Health Alert Network
ICS:	Incident Command System
ILI:	Influenza-like Illness
IPRP:	Influenza Pandemic Response Plan
LHD:	Local Health District
MARCS:	Multi-Agency Radio Communication System
MORT:	Mortuary Operational Response Team
OEMA:	Ohio Emergency Management Agency
OFDA:	Ohio Funeral Directors Association
OHA:	Ohio Hospital Association
ODH:	Ohio Department of Health
OPHCS:	Ohio Public Health Communication System
PPE:	Personal Protective Equipment
RODS:	Real-time outbreak and disease surveillance system
SARS:	Severe Acute Respiratory Syndrome
SIIS:	Statewide Immunization Information System
SNS:	Strategic National Stockpile
SWIPERS:	Secure Wireless Inventory and Pharmaceutical Emergency Response System
VAERS:	Vaccine Adverse Event Reporting System
VIS:	Vaccine Information Statement
VMI:	Vendor-Managed Inventory
WHO:	World Health Organization

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Appendix A: Influenza Fact Sheet

General Information

- Influenza (the flu) is an acute respiratory disease caused by influenza virus. The incubation period for flu is about one to four days.
- The period when an infected person is contagious depends on the age of the person. Adults may be contagious from one day before becoming sick and for three to seven days after symptoms develop. Some children may be contagious for longer than a week.
- Millions of people in the United States will get influenza each year. An average of about 36,000 people per year in the United States die from the complications of influenza, and 114,000 per year have to be admitted to the hospital as a result of influenza. Anyone can get the flu (even healthy people) and serious complications from influenza can happen at any age. The health impact (infections and deaths) of a flu season varies from year to year.
- In temperate climate regions, epidemics of influenza occur nearly every year in the winter (from November through March in the Northern Hemisphere and from April through September in the Southern Hemisphere). In the tropics, the flu can occur any time of year.

Transmission

- The flu is spread, or transmitted, when a person who has the flu coughs, sneezes or speaks and sends flu virus into the air and other people inhale the virus. The virus enters the nose, throat or lungs of a person and begins to multiply, causing symptoms of influenza. Occasionally a person may become infected by touching something with virus on it (a door handle, for instance) and then touching their mouth or nose.
- Children are important in the spread of influenza within communities and within households. Influenza outbreaks among school children can signal the start of influenza activity in a community.
- In addition to influenza exposure in households, exposure to influenza in other closed settings can also be associated with high attack rates (for example, cruise ships, ski hostels, dormitories and other settings).

Symptoms

- Influenza is a respiratory illness. Symptoms of flu include sudden onset of body aches, fever and respiratory symptoms (such as cough, sore throat and runny nose).
- Many people use the term “stomach flu” to describe illnesses with nausea, vomiting or diarrhea. These symptoms can be caused by many different viruses, bacteria or even parasites. While vomiting, diarrhea, and being “sick to your stomach” can sometimes be related to the flu (particularly in children), these problems are rarely the primary symptoms of influenza.
- Some persons can be infected with the flu virus but have no symptoms. During this time, these people can still spread the virus to others.

- Most people who get influenza will recover in one to two weeks; however, some people will develop life-threatening complications (such as pneumonia) as a result of the flu.
- Some of the complications caused by flu include bacterial pneumonia, dehydration and worsening of chronic medical conditions, such as congestive heart failure, asthma or diabetes. Children may get sinus problems and ear infections as complications from the flu.
- People age 65 and older, people of any age with chronic medical conditions and very young children are more likely to get complications from influenza.
- Uncommon complications of influenza include myositis, myocarditis and Reye syndrome (generally associated with the use of aspirin and other salicylate-containing medications in children and adolescents with influenza-like illness).

Diagnosis

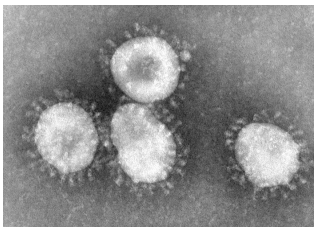
- It is very difficult to distinguish the flu from other viral or bacterial causes of respiratory illnesses on the basis of symptoms alone.
- A laboratory test can confirm that an illness is influenza if the patient is tested within the first two to three days after symptoms begin. In addition, a doctor's examination may be needed to determine whether a person has another infection that is a complication of influenza.

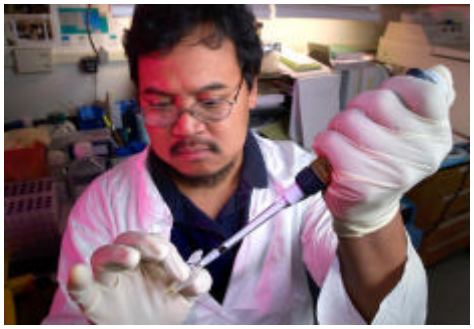
Prevention/Treatment

- The single best way to prevent the flu is for individuals, especially persons at high risk for serious complications from the flu, to get a flu shot each fall. The most important groups of persons who should get flu shots are those who are at highest risk for developing serious complications from the flu.
- Flu viruses change each year. A vaccine made against one flu virus may not protect against the newer viruses. Thus, the influenza vaccine is updated every year to include newer viruses and individuals need to get a flu shot every year.
- An individual who becomes sick with the flu should rest, drink plenty of liquids, avoid using alcohol and tobacco and take medication to relieve the symptoms of the flu.
- Influenza is caused by a virus, so antibiotics don't work to cure it or decrease symptoms.
- Although a flu shot is the best way to prevent the flu, antiviral drugs are other tools that can be used to help prevent and treat influenza. All of these drugs must be prescribed by a doctor. These drugs are effective against flu viruses, but they are not effective against other viruses or bacteria that can cause symptoms similar to influenza. These drugs are not effective for treating bacterial infections that can occur as complications of influenza.
- Never give aspirin to children or teenagers who have flu-like symptoms (and particularly fever) without first speaking to your doctor. Giving aspirin to children and teenagers who have influenza can cause a rare but serious illness called Reye syndrome.

Appendix B:

Ohio Department of Health
Pandemic Influenza Communications Plan





Draft

2005

Purpose
This document contains the general communications policies and procedures for the Ohio Department of Health (ODH) in dealing with an infectious disease outbreak including pandemic influenza.

Goals
The goals of the ODH Office of Public Affairs during an influenza pandemic are:

- Instill and maintain public confidence in the state's public health system and its ability to respond to and manage the appearance of pandemic influenza;
- Rapidly provide the public, health care providers, policymakers and the media access to accurate, consistent and comprehensive information;
- Address, as quickly as possible, rumors, inaccuracies and misperceptions and prevent stigmatization of affected groups;
- Provide accurate, consistent and highly accessible information and materials through the coordination of communication efforts with federal, state and local partners;
- Fulfill information requests from the media, public and staff;
- Eliminate or reduce public panic, fear or negative behavior and thoughts;
- Direct public action as determined by the governor, lieutenant governor, director of ODH or assigned designee.

Key concepts

- Coordination of messages and release of information among federal, state and local health officials and affected institutions is critical to avoid contradictions and confusion that can undermine public trust and impede containment measures;
- Education and training of health care workers and public health staff on how to recognize an individual infected with the pandemic strain of influenza and implement control measures is key to containing an outbreak of pandemic influenza.

Role of incident command structure
The director of health or his designee will, when appropriate, institute the Incident Command System (ICS) and appoint an incident commander. This Pandemic Influenza communication response plan shall be implemented as appropriate or whenever ODH implements ICS.

Spokespersons and public information officer
The designated spokesperson for the Pandemic Influenza response is the director of ODH. The backup spokespersons are the physician administrator in the Immunization Program, the Immunization Program Manager, the ODH state epidemiologist and the chief of ODH Bureau of Infectious Disease Control. The Public Affairs Office will

designate a lead public information office for the IPRP. Other personnel in the Office of Public Affairs will act as support and liaison to the media. A list of contact information for all members of the ICS and other related emergency contacts will be distributed among relevant ODH personnel.

Rules governing disclosure of patient information

As a matter of policy, ODH will routinely provide summary, statistical or aggregate information that does not reasonably identify an individual. The director shall release information obtained during an investigation or inquiry that is occurring and not yet complete if the director determines the release of the information is necessary to avert or mitigate a clear threat to an individual or public health. That release will be limited to those persons necessary to control, prevent or mitigate the disease or illness. Recognizing an informed population is more likely to protect itself against health threats, ODH seeks to balance this interest with a fundamental respect for the privacy of individuals in determining the time, place, manner and type of information disclosed. Accordingly, ODH will utilize the following guidelines:

- When disclosure of individual level data is in the best interest of the public's health, ODH will disclose only the age, gender, county of residence and classification of a case of pandemic influenza;
- ODH will not disclose additional information unless disclosing the information would have strong public health significance such as may be necessary to prevent, mitigate or abate a public health threat;
- To the extent practical and where it is appropriate, ODH will consult with staff, its public health partners and/or the individual or their family prior to any disclosure;
- The current or present condition or prognosis of the individual does not affect nor diminish the privacy concerns and rights of the individual.

Verification and approval

The following people will approve information before it is released to the public and media. When possible, this clearance will be completed simultaneously and in person.

ODH director or his designee	ODH director or designee
Subject matter expert	Designee as determined by the chief of the Bureau of Infectious Disease Control
Director of public affairs or his designee	Public affairs director or designee

Some material may require approval from the governor's office. The ICS PIO or designee will maintain contact with the governor's communication office and have access to governor's key staff pager and home phone numbers for 24/7 contact.

Limitation on movement
Limitation on movement falls into the category of direct intervention to prevent transmission of infectious diseases. It is one essential activity of infectious disease prevention and control commonly utilized in hospital and non-hospital settings.

ODH Policy: Limitation on Movement

- A limitation on movement may be ordered to protect the health of Ohioans by preventing or limiting the spread of disease. This is a necessary and legitimate action within the bounds of Ohio law based upon a comprehensive assessment of the situation and in conjunction with the epidemiologic investigation and input from medical professionals.
- The public health authority will support its emergency response partners to ensure needed health services will be provided and access to basic and essential services (e.g. food, water, medical supplies, utilities, garbage, etc.) is available.
- The limitation on movement order will be terminated when containment and control activities are successful; as identified through continued surveillance and signified by a lack of new cases in the affected area(s) and a demonstrated lack of spread to contiguous areas.
- Local and, if necessary, state and federal authorities will coordinate to institute the least restrictive means of limiting movement to contain and control the infectious disease.

In the case of a limitation of movement order, messages will be disseminated to the affected parties and the public in order to relate the importance of infection control.

Communications duties of local health departments and ODH during a crisis
During and after a public health emergency, the need for public information is critical. Heightened fear and misinformation can thwart efforts to reach affected populations and provide adequate control measures. Armed with factual information, the public can be a powerful ally in combating a public health emergency. Coordination between the local health department (LHD) and ODH is extremely important, particularly in multi-county situations.

The LHD is well-known and trusted within its jurisdiction. ODH has information on a wide range of public health emergency issues it makes readily available to LHDs. A consistent message must be provided to maintain smooth operations and credibility.

If a public health crisis involves multiple counties or is of significant importance, ODH will issue news releases and handle media inquiries. ODH Public Affairs staff may be dispatched to a central location in the affected area to assist and is equipped to manage the media response in the field. If the crisis occurs in one county or city, the LHD may elect to issue news releases and take media inquiries. LHDs should share copies of releases with ODH Public Affairs (FAX: 614-644-8208) prior to sending them to the media. Every effort will be made by ODH Public Affairs to notify all LHDs and partners

before it sends a news release. The ODH Office of Public Affairs is available to assist LHDs with media issues. We can be contacted at 614-644-8562.

Creating or joining a joint information center

In a major disaster or emergency, a joint information center (JIC) will likely be established as a central point for coordination of emergency public information, public affairs activities and media access to information about the latest developments. The JIC is a physical location where public affairs staff from involved agencies come together to ensure the coordination and quick release of accurate and consistent information to the media and the public.

The JIC serves as the primary point of contact for the media for information regarding all public health emergency response, recovery and mitigation programs provided by federal, state, local and volunteer agencies. This includes providing the media with accurate and timely information on disaster operations, working with members of the media to encourage accurate and constructive news coverage, monitoring media coverage to ensure critical messages are being reported and identifying potential issues or problems that could have an impact on public confidence in the response and recovery effort.

Before its release, disaster information from the various participating agencies will be coordinated to the maximum extent possible to ensure consistency and accuracy. That said, no editorial or policy control will be exercised by the coordinating agency over other agencies' release of information about their own policies, procedures or programs. All participating agencies may use their own mechanisms for releasing information.

Various government agencies as well as volunteer and private responding organizations are encouraged to participate in and share the resources of the JIC. If being together at the JIC is not feasible, all organizations are encouraged to conduct their information activities in cooperation with the JIC.

Pandemic Influenza communications tools

ODH general Web site and *ODH Pressroom.org* – updated with new case totals and their status daily; fact sheets and disease information updated as necessary; links to the Centers for Disease Control and Prevention (CDC) and World Health Organization sites will be posted.

Fact sheets – versions for the public and medical professionals will be sent via e-mail to partners/stakeholders and posted on ODH Web site.

Brochure – versions for the public and medical professionals describing difference between pandemic influenza and typical annual influenza will be printed and sent to partners and posted on ODH Web site.

Non-English information – links to CDC Web page will be posted on ODH Web site and shared with partners.

Information line (public, health professionals and CDC) – when ICS begins, ODH will launch telephone information line; determination will be made whether to launch information line specifically for medical professionals.

Information line reference manual – will be created for ODH staff handling info line calls; document will be e-mailed to partners.

Talking points – concise fact sheets for answering media inquiries will be created and shared with partners.

News conference or media availability – ODH will host news conferences as situations warrant; will make spokespersons available as needed/requested; will notify local health departments of media events.

News release template – a template to create a news release for an initial case of pandemic influenza will be shared with local health departments.

Infection control practices document – this document has been sent to local health departments; a link to an online version will be posted on the ODH Pandemic Influenza Web site.

Joint information center (JIC) document – procedures to launch and operate a JIC will be sent to local health departments.

Conference calls and telebriefings – ODH staff will participate in regularly scheduled conference calls with local health departments and the CDC; will facilitate other calls as needed.

Blast fax, e-mail – will be used to quickly disseminate news releases to media.

Media monitoring – ODH will continue daily scan of media Web sites for inclusion into news clips; will expand to real-time broadcast monitoring of TV and radio if conditions warrant.

Audiences

ODH will assign staff to act as a liaison with these groups.

Partners (Those working with ODH)

Medical

- Local health departments
- Association of Ohio Health Commissioners
- Emergency Management Services/ Emergency Medical Technologists
- Infection control practitioners
- Hospitals
- Centers for Disease Control and Prevention
- American Lung Association
- Pharmacists
- Professional organizations (e.g. Ohio State Medical Association, Ohio Nurses Association, Ohio Hospital Association)

Non-medical

- Emergency Management Agency

Law enforcement
Attorney general/county prosecutors

Stakeholders (Those who are interested or affected)
Media
Elected officials
Families of health care workers and ODH partners
Legal community
Schools, day care
Travel agents
Non-English cultural enclaves
Ohio Funeral Directors Association
Ohio Fire Chiefs Association
General public

Appendix C: Sample Standing Orders for Administering Influenza Vaccine to Adults During a Typical Influenza Season

Purpose: To reduce morbidity and mortality from influenza by vaccinating all patients who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy: Under these standing orders, authorized personnel may vaccinate patients who meet the criteria below.

Procedure:

1. Identify adults in need of influenza vaccination based on the following criteria:
    a. Age 50 years or older
    b. Age less than 50 years with any of the following conditions:
        i. chronic disorder of the pulmonary or cardiovascular system, including asthma
        ii. chronic metabolic disease (e.g., diabetes mellitus), renal dysfunction, hemoglobinopathy, or immunosuppression (e.g., caused by medications, HIV) that has required regular medical follow-up or hospitalization during the preceding year
        iii. will be pregnant during the influenza season
    c. Residence in a nursing home or other chronic-care facility that house persons of any age who have chronic medical conditions
    d. In an occupation or living situation that puts one in proximity to persons at high risk, including:
        i. a health care worker, caregiver, or household member in contact with person(s) at high risk of developing complications from influenza
        ii. a household contact or out-of-home caretaker of a child 0–23 months of age
    e. Wish to reduce the likelihood of becoming ill with influenza

2. Screen all patients for contraindications and precautions to influenza vaccine:
    a. **Contraindications:** serious reaction (e.g., anaphylaxis) after ingesting eggs or after receiving a previous dose of influenza vaccine or an influenza vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf Do not give live attenuated influenza vaccine (LAIV) to pregnant women or immunosuppressed persons. Use of inactivated influenza vaccine is preferred over LAIV for close contacts of severely immunosuppressed persons during periods when the immunocompromised person requires a protected environment.
    b. **Precautions:** moderate or severe acute illness with or without fever

3. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). Although not required by federal law, it is prudent to document

in the patient's medical record or office log, the publication date of the VIS and the date it was given to the patient. Provide non-English speaking patients with a VIS in their native language if available; these can be found at www.imunize.org/vis

4. Administer 0.5 mL inactivated influenza vaccine IM (22-25g, 1–1½" needle) in the deltoid muscle. Alternatively, healthy persons 5–49 years of age without contraindications may be given 0.5 mL of LAIV; 0.25 mL is sprayed into each nostril while the patient is in an upright position.

5. Document each patient's vaccine administration information and follow-up in the following places:
   a. **Medical chart:** Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. If vaccine was not given, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). This medical chart can be a paper or electronic chart; including the state's immunization registry Impact SIIS.
   b. **Personal immunization record card:** Record the date of vaccination and the name/location of the administering clinic.

6. Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications.

7. Report all adverse reactions to influenza vaccine to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

This policy and procedure shall remain in effect for all patients of the _____ (name of practice or clinic) until rescinded or until _____ (date).

Medical Director's signature: _____ Effective date: _____

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Sample Standing Orders for Administering Pneumococcal Vaccine to Adults

Purpose: To reduce morbidity and mortality from pneumococcal disease by vaccinating all patients who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy: Under these standing orders, authorized personnel may vaccinate patients who meet the criteria below.

Procedure:

1. Identify adults in need of pneumococcal polysaccharide vaccine (PPV) based on the following criteria:
    b. Age 65 years or older with no or unknown history of prior receipt of PPV
    c. Age 18 – 64 years with no or unknown history of prior receipt of PPV and any of the following conditions:
        i. chronic cardiovascular disease (e.g. congestive heart failure, cardiomyopathies)
        ii. chronic pulmonary disease (e.g. emphysema or chronic obstructive pulmonary disease [not asthma])
        iii. diabetes mellitus, alcoholism, chronic liver disease (cirrhosis), or cerebrospinal fluid leaks
        iv. functional asplenia or anatomic asplenia (e.g. sickle cell disease, splenectomy)
        v. immunosuppressive conditions (e.g. HIV infection, leukemia, congenital immunodeficiency, Hodgkin's disease, lymphoma, multiple myeloma, generalized malignancy)
        vi. immunosuppressive chemotherapy (e.g. alkylating agents, antimetabolites, long-term systemic corticosteroids)
        vii. organ or bone marrow transplantation
        viii. chronic renal failure or nephrotic syndrome
        ix. candidate for or recipient of cochlear implant

2. Identify adults in need of a second and final dose of PPV if five or more years have elapsed since the previous vaccination and the patient is:
    1. Age 65 years or older and received prior PPV vaccination when less than age 65 years
    2. At highest risk for serious pneumococcal infection and/or likely to have a rapid decline in pneumococcal antibody levels (i.e. categories iv. – viii. above)

3. Screen all patients for contraindications and precaution to PPV vaccine.

4. **Contraindications:** a history of a serious reaction (e.g. anaphylaxis) after a previous dose or PPV or to a vaccine component. For a list of vaccine components, go to www.cdc.gov/nip/publications/pink/appendices/a/excipient.pdf

5. **Precautions:** a moderate or severe acute illness with or without fever

6. Provide all patients with a copy of the most current federal Vaccine Information Statement (VIS). Although not required by federal law, it is prudent to document in the patient's medical record or office log, the publication date of the VIS and the date it was given to the patient. Provide non-English speaking patients with a copy of the VIS in their native language, if available. These can be found at www.imunize.org/vis

7. Administer 0.5 mL PPV vaccine either IM (22-25g, 1-2" needle) or SC (23-25g, 5/8-3/4" needle).

8. Document each patient's vaccine administration information and follow-up in the medical chart and personal immunization record card.
    a. **Medical chart:** Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. If vaccine was not given, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). This medical chart can be a paper or electronic chart; including the state's immunization registry Impact SIIS.
    b. **Personal immunization record card:** Record the date of vaccination and the name/location of the administering clinic.

9. Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications.

10. Report all adverse reactions to PPV to the federal Vaccine Adverse Event Reporting System (VAERS) at www.vaers.org or (800) 822-7967. VAERS report forms are available at www.vaers.org

This policy and procedure shall remain in effect for all patients of the _____ (name of practice or clinic) until rescinded or until _____ (date).

Medical Director's signature: _____ Effective date: _____

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Appendix D: Possible influenza transmission prevention strategies for healthcare settings and the community in response to an influenza pandemic

Droplet transmission is thought to be the predominant form of spread in a setting with an appropriate number of air exchanges and standard ventilation. In the absence of appropriate ventilation and air exchange, airborne transmission may play a greater role, such as in a crowded space where air exchange is limited. Observations in hospitals and nursing homes indicate that influenza outbreaks in these settings are more likely explained by droplet transmission or by contact with health care workers rather than by airborne transmission through the ventilation systems. Outbreaks of inter-pandemic influenza in these settings can be controlled through the use of a combination of control measures, including influenza vaccine, antiviral medications, and the use of standard and droplet precautions. Further, such outbreaks have been controlled without the use of negative pressure rooms and isolation precautions specific for airborne disease.

Recommended influenza isolation precautions in health care settings:

- The patient should be placed in a private room or a room with other influenza-infected patients.
- Although airborne spread is not believed to play a major role in influenza transmission, if feasible early in a pandemic, the patient should be placed in a negative air pressure room or placed together with other patients with suspected or proven influenza in an area of the hospital with an independent air supply and exhaust system. If the number of patients exceeds the capacity for airborne infection isolation, consider cohorting patients by nursing unit/wing/floor as a means to decrease potential transmission.
- Health care personnel should wear a surgical mask when entering the room of a patient with known or suspected influenza.
- Health care personnel should use standard plus droplet and contact precautions, including hand hygiene, use of gloves, and gown and eye protection if they are apt to come into contact with body fluids or contaminated surfaces.

Table. Possible influenza transmission prevention strategies for healthcare settings and the community.

	Healthcare setting	Community
Decrease potential for contact	• Private room or cohorting with other influenza patients • Droplet and contact precautions • Consider negative air pressure room, if feasible early in the pandemic • Designate specific wards or hospitals for	• Provide advisories or limit travel to areas where a novel influenza strain is causing disease • Screen travelers for febrile and respiratory illness on exit from an area where a novel influenza strain is causing disease or on entrance to the U.S.

	admission of case patients • Minimize transportation of patient outside of room • Limit number of visitors to influenza patients • Environmental decontamination for influenza following existing guidelines	• Cancel large group gatherings • Close schools • Encourage telecommuting • Limit availability of public transportation • Avoid unnecessary visits to hospitals • Discourage hand shaking • Identify cases early through public education and self-assessment for symptoms, including fever, leading to early isolation at home or in healthcare settings • Early quarantine of contacts of suspected cases
Decrease potential for infection if contact occurs	• Antiviral chemoprophylaxis (if available) for health care workers • Vaccination (if available) of health care workers • Hand hygiene • Respiratory hygiene/cough etiquette • Standard and droplet precautions including use of gowns, gloves and masks by healthcare workers or visitors to influenza patients	• Hand hygiene • Respiratory hygiene/cough etiquette • Antiviral chemoprophylaxis or vaccination if available

The following information can be found at the web address http://www.who.int/csr/disease/avian_influenza/en/Public_health_interventions.pdf. One of the working groups at an April 2004 WHO meeting dealt with public health interventions during an influenza pandemic. The working group wrote, "The effectiveness of many interventions will depend on the behaviour of the virus as determined by its pathogenicity, principal mode of transmission (droplet or aerosol), attack rate in different age groups, duration of virus shedding, and susceptibility to

antivirals… Apart from questions of effectiveness, the selection of appropriate measures will be driven by questions of feasibility closely linked to costs, available resources, ease of implementation within existing infrastructures, the broader impact of possible interventions and likely acceptability to the public." Prioritizing the importance of any or all of these recommended procedures for influenza prevention is hindered by the lack of data demonstrating their relative efficacy in various settings, particularly outside of a health care setting. All of these parameters may change in the course of a pandemic and would require frequent re-evaluation as a pandemic progressed.

The above material is from Department of Health and Human Services' Draft Version of the Pandemic Influenza Preparedness and Response Plan (Annex 8: Strategies to Limit Transmission) August 2004 and ODH does not endorse any specific action as preferred.

Appendix E: Instructions for ODH to Request Antiviral Drugs from the Strategic National Stockpile

Priority for use of influenza antiviral medications will be given to those individuals that are in priority groups as determined by ODH, in consultation with its local public health and CDC partners.

The United States has a limited supply of influenza antiviral medications stored in the Strategic National Stockpile (SNS) for emergency situations. Influenza antiviral medications in the SNS can be requested only by State or Territory Health Departments. Ohio health care institutions (hospitals or long-term care facilities) experiencing an urgent need for such medications should convey their request to the Ohio Department of Health. The CDC will use the following criteria to evaluate requests for antiviral medications submitted by the Ohio Department of Health:

1. ODH indicates that there is an urgent priority situation that can be addressed by use of antiviral medications.
2. ODH indicates that all reasonable efforts have been made to procure influenza antiviral medications from private distributors.

Available Influenza Antiviral Medications

The only influenza antiviral medications available from SNS are Rimantadine HCL 100mg tablets and Rimantadine HCL 50mg/5ml syrup.

For dosage information refer to *Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP)* (*MMWR* 28 May 2004;53[RR01]:1-40).

For SNS antiviral distribution planning purposes a treatment course is defined as follows:

Rimantadine HCL 100mg tablets: 1 treatment course = 10 tablets
1 bottle contains 100 tablets = 10 courses of treatment

Rimantadine HCL 50mg/5ml syrup: 1 bottle = 2.4 courses of treatment*

* This is a planning figure that meets the highest possible recommended daily dose. Age and weight will influence the actual daily dosage. When using the maximum dosage allowed there will be at least 2.4 treatment courses per bottle.

For ODH to Request Influenza Antiviral Medications

ODH will call the CDC 24/7 emergency number (770-488-7100) and request to order SNS antivirals.
The following information will then be gathered:

- Requestor information:
  - Name of state (Ohio)
  - Requestor's name
  - Requestor's title/position
  - Requestor's contact information (address, phone, email address)
  - An additional point of contact at the state (name, phone, email address)

- Order information:
  - Institution Name
  - Intended use of medication
  - Description of situation and number of persons affected at requesting institution
  - Type of antiviral needed (tablet/syrup)
  - Amount of antiviral treatment courses needed
  - 2 Points of contact for shipment (name, phone, email address)
  - Shipping address for medications (no PO Boxes allowed)
  - What private vendors were contacted prior to approaching SNS for medications?

The requestor will be notified when the request is approved. The shipment point of contact will be notified of the tracking number and expected delivery time once the shipment details are finalized. Approved requests will be shipped within 48 hours of CDC receiving the request.

Influenza Antiviral Shipping

The SNS will ship via major commercial shipping companies. Both shipping and delivery will take place 7 days per week and shipment points of contact and receiving locations must be ready to receive shipments on Saturday and Sunday. Deliveries will generally be done during the morning and expected delivery times will be provided to the shipment point of contact for each shipment. Contact the CDC at (770) 488-7100 for shipping questions and issues.

The above information is from the CDC information sheet "Influenza Antiviral Medications: Instructions for Requesting Antiviral Drugs from the Strategic National Stockpile", dated November 2, 2004.

Appendix F: Influenza Surge Capacity Guidance for Acute Care Hospitals

Ohio hospitals traditionally experience a surge in demand for services each year during the height of influenza season. Because it is not possible to predict the severity of the influenza season or the impact on each individual hospital, implementation of hospital surge capacity plans are dependent on multiple factors. This document provides guidance to hospitals to prepare for surges in health care demand.

Hospital administrators need to take into account the absolute number of patients seeking medical attention, the intensity of the services required by these patients, the availability of the hospital to staff the patient demands and the appropriate supplies necessary. When the availability of influenza vaccine is expected to fall short, hospitals will need to be ready to deal not only with the normal seasonal increased volume but also with the issue that a significant surge in patient volume will also occur.

A surge in influenza illness could significantly impair a hospital's ability to provide usual services. The activation of its disaster plan may become necessary and elective admissions may need to be curtailed. Any activation of the disaster plan due to influenza should initiate a call to the local health department.

This guidance presumes an activated disaster plan has been established within the hospital.

Surveillance

Healthcare facilities play an important role in the surveillance of influenza. Health care providers need to be on the alert for signs and symptoms of influenza when patients present to their facility. As discussed in the Surveillance Section of this Influenza Pandemic Response Plan, when a novel virus alert has been issued, hospital employees (e.g. infection control practitioners, emergency department staff) may be asked to consider laboratory testing for influenza in patients presenting to the hospital with influenza-like illness(ILI), especially those patients with a recent travel history to an area where the pandemic strain of influenza is circulating, or patients with unusually severe symptoms. These specimens may be sent to the ODH Laboratory for culture and typing, if the necessary laboratory reagents/equipment for typing is available. In addition, enhanced passive surveillance measures may be initiated at this point to include individuals who have been hospitalized with unexplained pneumonia, acute respiratory distress syndrome (ARDS), or severe respiratory illness AND have a history of travel to locations where exposure to novel influenza virus might have occurred. Diagnostic testing for influenza should be considered if patients present with pneumonia, severe respiratory illnesses, or ILI. Each facility needs to provide education to providers regarding the type of influenza testing available and the proper method of specimen collection. Diagnostic testing methods include the use of rapid diagnostic tests as well as viral isolation and/or more sensitive techniques, including polymerase chain reaction (PCR). Rapid diagnostic tests may assist the provider in deciding whether to offer antiviral prophylaxis to high risk contacts and may help the provider make a more rapid

determination in regards to patient treatment and disposition. Additionally early identification can be a valuable public health tool that might help to avert more widespread disease. Infection control professionals play a key role in surveillance and should be alerted to any positive influenza test result, any suspected cases of influenza, and any deaths related to suspected influenza in each facility.

Local health departments and the Ohio Department of Health are available for consultation regarding disease outbreak identification and management. All suspected and confirmed outbreaks of influenza are reportable to the local health department.

Transmission and Infection Control Strategies in the Health Care Facility

Observations in hospitals and nursing homes indicate that influenza outbreaks in these settings are more likely explained by droplet transmission or by contact with health care workers rather than by airborne transmission through ventilation systems. Although airborne spread is not believed to play a major role in influenza transmission, if feasible early in a pandemic, the patients should be placed in a negative air pressure room or placed together with other patients with suspected or proven influenza in an area of the hospital with an independent air supply and exhaust system. Influenza viruses are known to survive on non-porous surfaces for 24-48 hours after contamination and on porous surfaces for 8-12 hours. The typical incubation period for influenza is two days (with a range of one to four days). Generally, viral shedding peaks on the second day of symptoms, but might begin the day before symptoms start and usually lasts for five to seven days in adults.

Recommended Infection Control Precautions:

- Patients with ILI should be placed in a private room. If a private room is unavailable, patients with ILI can be cohorted. In an outbreak of influenza, most patients will not have a laboratory confirmed diagnosis; such patients can be cohorted with other patients with the same or similar symptoms of influenza. If the institution cannot achieve cohorting, at least 3 feet spatial separation between possibly infected patients and others should be maintained.
- Although airborne spread is not believed to play a major role in influenza transmission, if feasible early in a pandemic, the patient should be placed in a negative air pressure room or placed together with other patients with suspected or proven influenza in an area of the hospital with an independent air supply and exhaust system.
- Health care personnel should use standard plus droplet and contact precautions, including hand hygiene, use of gloves, and gown and eye protection if they are apt to come into contact with body fluids or contaminated surfaces. These precautions are outlined in the CDC Isolation Recommendations.
- Appropriate donning and doffing of personal protective equipment (PPE) should be reviewed with the staff.

- Limit the movement and transport of the patient from the room for essential purposes only. When transport is necessary, the patient should wear a surgical mask if possible. If the patient cannot wear a mask, then transporters should wear masks and should ensure that unmasked people along the planned route of travel are moved to a safe distance (at least three feet away from the patient) and out of elevators to be used .
- Efforts to decontaminate the environment should be maintained according to policy. Environmental surfaces (e.g. telephones, bedrails, over-bed tables) should be cleaned daily with an appropriate disinfectant.
- Staff education about influenza prevention and control should be conducted as needed. Methods such as mass mailing and teleconferencing should be considered. An extra effort should be made to ensure that ALL staff participates in influenza education. This includes non-patient care staff.
- Education should be provided to patients and their household members.
- Tissues, hand hygiene products and/or sinks with soap, water and equipment/materials for drying hands should be readily available throughout the facility.
- Patients presenting to the emergency department or for admission with ILI should be provided a surgical mask (if it can be tolerated) and tissues and instructed on appropriate infection control practices.
- Visitors with ILI should be asked not to visit hospitalized patients. Signs should be posted outside of the facility asking visitors with symptoms of influenza to defer visiting. If they must enter the facility, visitors with symptoms should be handed a mask or tissues at the door. Hospitals may consider restricting visitors (such as children) depending on the epidemiology and characteristics of the pandemic influenza virus strain.
- Hospitals should consider deferring elective admissions. This will protect uninfected individuals as well as allow resources to be used for the care of sick patients.
- Visitors to an area with influenza-infected patients should receive educational material, should follow appropriate infection control practices, and should be provided with appropriate PPE.

Emergency Department and Hospital Based Ambulatory Clinic Settings

Surges in patient volume and crowded waiting areas might be a source of influenza transmission. Infection control practices must be maintained for this area. Well trained personnel will play a key role in preventing disease transmission.

Management Strategies

- Upon arrival to the facility, patients should be asked if they have symptoms of ILI.
    - Signs should be posted that instruct individuals with fever and respiratory symptoms to immediately alert staff that they have these symptoms.
    - Patients should wear a mask or use tissues to cover mouth and nose while in the facility.

    - When patients call for an appointment, they should be asked if they have ILI.
    - Upon arrival to the facility, patients with ILI should immediately be taken to an exam room.
    - If no exam rooms are immediately available, consider establishing a separate seating section in the waiting area for individuals with ILI. This section should separate individuals with ILI from other individuals by at least 3 feet.
- Transparent plastic or glass barriers at the point of triage or registration should be considered to protect healthcare personnel from contact with respiratory droplets
- Waiting areas should have the following:
    - Information on respiratory etiquette
    - Ample supply of tissues
    - Receptacles for tissue disposal
    - Readily available hand sanitizer (e.g. disposable towelettes, hand pumps)
- Evaluate the use of objects that are shared by patients, such as pens, pencils and clip-boards.
- Movement of patients with ILI throughout the facility should be limited.
- Standing orders for basic laboratory evaluation of a suspected influenza case-patient might be created to speed an individual's progress through the system.
- Develop a standard set of questions to screen patients.

Deferred Hospitalization

Hospital administration, in conjunction with medical staff, should develop policies and recommendations for deferred hospitalization. These policies and recommendations may be covered in the hospital surge plan. Deferred admission during the time that the hospital is experiencing a high volume of influenza-related admissions may be prudent since hospital resources may be scarce and the potential for health care acquired spread of disease is possible. Unless patient care would be compromised, an alternative solution such as home health support may be ideal for patient management. Systems and partnerships should be developed in advance to ensure appropriate home health care management.

- Detailed written instructions should be developed to describe clinical course and where to direct questions and concerns.
- Written instructions should include the following:
    - Infection control guidance for the household care provider to help protect the health of others in the household
    - Systems for follow-up for those patients who do not have primary care providers
    - ? Availability of social services to help coordinate efforts for optimal patient care and safe discharge
    - ? Short stay outpatient areas within the hospital should be considered for patients to receive hydration and monitoring. Once the disaster plan

has been activated buildings outside of the hospital could be considered for these "short stay" areas.

- The importance of and methods for maintaining adequate hydration.

Intensive Care

Most facilities will have limited ICU beds available during an influenza pandemic, since many of the patients hospitalized with influenza will require an intensive care setting and many of these will require ventilatory support. This situation will stress hospital resources and the availability of skilled nursing staff. Issues that should be considered when planning for intensive care use during an influenza pandemic include the following:

- Develop and/or review policies for cohorting patients.
- Utilize criteria for admission into and transfer out of the intensive care setting. In a surge situation, criteria may be considered that differ from normal operating policies.
- Invasive respiratory procedures, such as bronchoscopy and sputum induction, should be minimized to the extent possible.
- Emergent intubations may be associated with increased transmission. Elective intubations should be considered under controlled circumstances.
- The institution's ethics committee and clinical staff will need to consider the ethical issues involved with the allocation of limited resources in a surge capacity situation.
- When the hospital disaster plan is activated, unconventional settings could be utilized to increase capacity.

Facility Planning for Inpatient Care

Hospital administration, facility managers, and clinical staff need to complete an assessment of their facilities and devise a plan for dealing with increasing numbers of patients with influenza. Some consideration should be given to the possible use of off-site alternative care facilities.

- Designating a particular area, unit or floor for the care of influenza patients in a surge situation is prudent. Consult with facility management professionals to ensure the safest use of ventilation systems.
- Limiting the geographic area within the hospital will make it easier to optimize infection control and limit exposure to staff.
- A low traffic area should be considered.
- The area chosen should have the potential for expansion as patient numbers increase.
- The plan should not necessitate moving large numbers of influenza-infected patients to a distant site. In reality the entire building may be used to cohort influenza patients adding one floor at a time. Relocating patients would increase the risk of infection transmission.
- Transportation of patients outside of the designated area should be discouraged. As many clinical services as possible should be provided in the

designated patient care area. If it is necessary for a patient to leave the room, a mask should be placed on the patient if possible. If the patient cannot wear a mask, then transporters should wear masks and should ensure that unmasked people along the planned route of travel are moved to a safe distance (at least three feet away from the patient) and out of elevators to be used .

- All patients admitted to other areas of the hospital should be screened for influenza symptoms.
- If a patient presents to the hospital with multiple medical conditions including ILI, the patient's other medical conditions may be addressed while the patient is in the influenza treatment area. However, there may be patients that present with ILI who need to be treated in a different area because their other medical conditions necessitate a different arrangement.
- Policies expediting the discharge or appropriate transfer and transport of patients not infected with influenza to alternate sites should be considered.
- Discharge planning and social services staff should be readily available to clinical staff to allow for the expeditious and safe transfer/discharge of patients.
- When the disaster plan is activated, identification of alternative places for patient care may need to be determined. This may include spaces where patient care is not typically provided (e.g. endoscopy suites, recovery rooms).

Staffing Issues

A large outbreak of influenza may also make human resources scarce. Staff members may not be able to work due to their own illness or that of a family member. Plans should include provisions for the maintenance of patient care in the face of scarce resources:

- Staff having scheduling difficulties because of child care or elder care responsibilities should be identified. Assistance with obtaining influenza vaccinations, medication, or medical care may ease scheduling difficulties.
- When possible, staff caring for patients with ILI should not be utilized to care for patients without ILI. Rotating staff to different services is more likely to spread influenza throughout the facility.
- Employee health services may be utilized to screen employees who are reporting to work for ILI symptoms.
    - Consider developing procedures to screen employees for symptoms of ILI when reporting to work. Consider what role, if any, for the use of rapid influenza testing of symptomatic health care workers.
    - Consider developing a policy for accepting employees back to work after an ILI.
    - Rapid influenza testing of symptomatic employees may help to make better-informed staffing decisions.
    - When employee health services determines that a staff member is symptomatic with influenza, that staff member should not return to work until he/she is no longer considered infectious (e.g. afebrile, symptomatically improved). Supervisors will be responsible for

ensuring the safe practice of their staff members. Employees that meet criteria for pneumococcal vaccine should be encouraged to be vaccinated.
    - Effective use of scarce antiviral medication and vaccine (if available) should be considered. Hospitals will need to work with their respective local health districts in the implementation of the federal and state recommendations regarding the prioritization and use of available antiviral medication and vaccine.
- Consider utilizing clinically-trained administrative staff who are not usually engaged in patient care. Before a situation occurs, consider offering "refresher classes" for these staff members in order to comply with licensure requirements regarding qualifications and orientation.
- Staff may need to consider having personal care kits at work (that includes personal items and medications) in the event there is an unforeseen circumstance that requires them to stay beyond a scheduled shift.
- Note: Rules limiting the imposition of mandatory overtime will not be relaxed unless the situation clearly qualifies as one of the exceptions provided for under the law governing mandatory overtime (the Federal Fair Labor Standards Act).
- When the hospital disaster plan has been activated, the facility should consider identifying a family member or friend of each in-patient to help with the personal care of the patient, thus alleviating the need for hospital personnel to perform non-medical duties. Instruction in the practice of infection control precautions must be provided for these individuals.

Nosocomial Transmission

Nosocomial (health care acquired infection) during a large outbreak is more likely to occur due to the large number of persons (patients, staff and visitors) with community acquired infection. Optimal infection control practices may be difficult to maintain due to increased patient load, staff shortages, and use of non-routine or volunteer staff. Active surveillance of health care acquired influenza and the initiation of enhanced infection control measures will need to be instituted.

- Implementation of surveillance for the onset of acute febrile respiratory illness or pneumonia (onset $\geq$ 48 hours after admission) in in-patients should be instituted.
    - Document new onset of fever.
    - Also note myalgia, malaise, or headache with one or more of the following symptoms:
        - Sore throat
        - Cough
        - Rhinorrhea or nasal congestion
- Obtain specimens for viral testing.
- Rapid influenza testing should be considered.

- Infection control personnel should identify potential causes of the nosocomial outbreak or factors contributing to ongoing transmission. Assess how well infection control practices are being implemented and supported by current systems. Work with management to support and improve practice. Re-educate as necessary.
- Implement control measures as indicated depending on the epidemiology of the nosocomial transmission.
- Communicate with the local health department when assistance and coordination are needed.
- If feasible in the pandemic situation, the hospital may need to divert patients to other facilities until the internal chain of transmission is broken.

Other Issues

- Ensure that adequate security is available to handle high volumes of patients in the emergency room.
- All patients over the age of 65 should be screened and offered vaccination against pneumococcal disease if they are eligible for vaccination. Other high-risk individuals should be offered vaccine according to guidelines.
- A plan for requesting additional supplies (e.g. ventilators, intubation equipment, intravenous, catheters, intravenous pumps) from alternative sources should be considered. Arrangements should be made in advance for these supplies.
- Some supplies may not normally be used in the facility and might need to bypass the usual committee and clinical engineering review.
- Patients with identified primary care physicians should be encouraged to contact their provider prior to presenting to an acute care facility.
- Primary care providers should make every effort to accommodate patients; physician groups might consider providing extended evening or weekend hours to alleviate the volume at acute care facilities.
- Information being released by the public information officer at each facility should be consistent with messages from local and state health agencies.
- Mental health providers should be available to help patients and staff deal with heightened stress and anxiety levels.
- Diversion of patients in a response to overcrowding should be used sparingly. In the event of a surge in patient volume as a result of influenza, all hospitals in the region are likely to be experiencing similar stresses; therefore, diversion will only place greater stress on the overall health care delivery system. Diversion policies may need review in regard to ambulance diversion in an epidemic or surge situation.

This appendix has been adapted from the *Influenza Surge Capacity Guidance for General Hospitals* (dated November 11, 2004) developed by the New Jersey Department of Health and Senior Services.

Appendix G: Prioritization Scheme for the Distribution of Influenza Vaccine and/or Antiviral Medication

With the assumption that only a small percentage of the total vaccine need will initially be available to begin vaccination, not everyone will be able to receive vaccine when it first becomes available. ODH has developed an initial prioritization scheme regarding prioritization for early vaccination. The final prioritization scheme will be dependent upon: the observed characteristics of the pandemic to include the severity of the vaccine shortage; the observed mortality rate from the pandemic strain; the transmissibility of the virus; the characteristics of the most affected population; and other observed epidemiological characteristics of the pandemic influenza strain. The scheme may be adapted as needed based on recommendations from the CDC.

When a Pandemic Alert stage is declared, the prioritization scheme listed below is the ODH template.

Initially, when extremely limited supplies of influenza vaccine exist, only individuals in the very first category will be eligible for vaccination. As more vaccine becomes available, individuals in subsequent groups will be eligible. This tiering of vaccine eligibility is necessary to ensure priority is given to those individuals who are needed to maintain health and critical services in Ohio, to minimize hospitalizations and deaths, to preserve critical infrastructure and to minimize social disruption.

Prioritization Scheme:

- Health care workers involved in direct patient contact and essential support; vaccine and antiviral manufacturing personnel.
- Highest risk group.
- Household contacts of children <6 months and severely immunocompromised; pregnant women.
- Key government leaders and critical public health pandemic responders.
- Rest of high risk. Most critical infrastructure and other public health emergency responders.
- Other key government health decision makers and mortuary services.
- Healthy 2-64 year olds not in other groups.

Local health jurisdictions will need to work with the Ohio Department of Health to determine how many individuals are in each group. Health care workers with direct patient contact and critical health care support staff need to be identified first, since it is likely that initial vaccinations will only cover this group. This group includes in-patient, out-patient, home care, EMS, blood collection, supporting laboratories, vaccinators, and public health providers with direct patient contact plus their critical support personnel. No more than 20% of persons targeted may be in administrative positions.

Persons in the highest risk group include persons >64 years of age with one or more high risk condition. Persons 6 months to 64 years of age with 2 or more high risk conditions, and persons who have been hospitalized in the previous year with pneumonia or

influenza or an ACIP high-risk condition. Persons at highest risk for developing complications from influenza may be individuals in groups that are typically at highest risk for developing complications from influenza during non-pandemic influenza seasons; or they may be individuals in different groups that are epidemiologically determined to be at highest risk from the specific pandemic strain of influenza. Some individuals at high risk for developing complications (e.g. severely immunocompromised individuals) who are not likely to respond to vaccination) may not be prioritized for vaccination because they are not likely to respond to vaccination. Instead, protection of these individuals will be focused on vaccinating their health care workers and household contacts.

Individuals that fall into the "other high risk" category include persons =65 years of age with no high risk conditions, persons 6 months to 64 years of age with 1 high risk condition, and persons 6-23 months of age.

Critical infrastructure groups include other public health emergency responders; public safety (e.g. fire, police, 911 dispatchers, correctional facility staff); utility workers essential for maintaining power, water and sewage systems; transportation workers critical for the transport of fuel, food, water and medical supplies and for public ground transportation; and telecommunications and information technology personnel essential for maintaining functional communication and network operations.

This appendix has been adapted from the draft priority groups discussed at the Joint Meeting for the National Vaccine Advisory Committee (NVAC) and the Advisory Committee on Immunization Practices (ACIP) on July 19, 2005, in Rockville, Maryland.

Appendix H: Home Care for Individuals Infected with Influenza

Persons who have a sudden onset of influenza-like symptoms (e.g. headache, fever, chills, cough, chest pain, sore throat, muscle aches, weakness, exhaustion) should do the following:

- Remain at home until all symptoms have resolved (approximately 4-5 days)
- Take medication as needed to relieve the symptoms of the flu
    - Never give aspirin to children or teenagers who have flu-like symptoms (and particularly fever) without first speaking to your doctor. Giving aspirin to children and teenagers who have influenza can cause a rare but serious illness called Reye syndrome.
- Drink lots of fluids (water and other non-alcoholic, non-caffeinated beverages)
- Get plenty of bed rest
- Do not smoke
- Restrict visitors to their home

Persons should seek medical attention at their physician's office, urgent care facility or hospital emergency department if:

- Fever persists for more than 4-5 days
- Difficulty breathing
- Chest pain
- Cough becomes productive of yellow sputum
- Onset of confusion or seizures
- Skin color changes (lip and hands)
- Vomiting persists – 2 to 3 times in 24 hours (vomiting is usually present in young children and elderly persons with influenza infection)
- At high risk for the development of complications
    - People age 65 and older, people of any age with chronic medical conditions and very young children are more likely to get complications from influenza.
    - Pregnant women also have an increased risk for pneumonia, lung insufficiency, and death after an influenza infection.

To protect the patients infected with influenza, individuals having contact with the patient, and the community in general, certain infection control measures should be practiced:

- Wash hands often with warm soap and water, scrubbing for 10-15 seconds
    - Persons entering the home of suspect influenza case should wash their hands after patient contact and before leaving the home.
    - Patients should cover their mouths and noses with tissue when coughing or sneezing, dispose of used tissues immediately after use and wash hands after using tissues
    - Family members should wash hands after contact with the patient
- Do not share eating utensils or drinks
- Do not rub eyes, touch nose or mouth

- Wash hands or use waterless hand sanitizer after shaking hands with someone

People should plan ahead and think about what they need to have in their house in case someone in their household were to become infected with influenza and need to receive care at home. If you live alone, are a single parent of young children, or are sole caregiver for a frail or disabled adult, it would be a good idea to have some items stored in your home in case of illness:

- Have enough fluids (e.g. water, juice, soup) available to last for 1-2 weeks.
- Have enough basic household items (e.g. tissues) to last for 1-2 weeks.
- Have acetaminophen and a thermometer in the medicine cabinet. Do you know how to use/read a thermometer correctly? If not, ask someone to show you how.
- Think of someone you could call upon for help if you became very ill with the flu and discuss this possibility with him or her.
- Think of someone you could call upon to care for your children if you were required to work and their school or day care was closed because of the influenza pandemic; discuss the possibility with them.

This appendix has been adapted from the Minnesota Pandemic Influenza Control and Prevention Guidelines (2001) developed by the Minnesota Department of Health and the Canadian Pandemic Influenza Plan (September 24, 2004) developed by the Public Health Agency.