ANTIVIRAL PRIORITIZATION PLAN

I. OVERVIEW

Antiviral medications may play a key role in the response to pandemic influenza, especially prior to the availability of an effective vaccine. The primary goals of the national response to the emergence of pandemic influenza, including the use of antiviral medication, are to minimize the impact of the disease on health (i.e. reduce severe morbidity and mortality), society and the economy. In this document, the phrase “pandemic influenza” will be used to refer to avian or animal influenza strains that can infect humans and new or re-emergent human influenza viruses that cause cases or clusters of human disease. Once these strains are demonstrated to be transmitted from person to person they have pandemic potential.

The purpose of this document is to describe, and provide a rationale for, antiviral use and prioritization for pandemic influenza. Since use and prioritization vary depending on the extent of viral transmission, the first half of this document provides guidance for the earlier stages of a pandemic when cases are sporadic or transmission is limited, while the second half focuses on widespread transmission of pandemic influenza in the United States. Information on the storage, distribution and monitoring of antiviral medications are described in Community Disease Containment chapter of the Wisconsin Pandemic Influenza Plan.

Antiviral Medication

Four antiviral medications are currently available for prophylaxis and treatment of influenza A viruses. Amantadine and rimantadine are chemically related drugs (adamantanes) that interfere with the replication of influenza viruses. Oseltamivir (Tamiflu®) and zanamivir (Relenza®) are neuraminidase inhibitors that interfere with the release of viral particles from infected cells. Many studies have shown these drugs to be approximately 70%-90% effective in preventing illnesses caused by a variety of naturally occurring (seasonal) influenza A strains in both children and adults. Most experts believe that similar levels of efficacy can be achieved with novel influenza strains. Both adamantanes and neuraminidase inhibitors have been shown to modestly reduce the severity and duration of influenza A symptoms when administered within 48 hours of symptom onset. However, the effectiveness of these antivirals in the prevention and treatment of a novel influenza strain is unknown.

Viral resistance to adamantanes emerges quickly and has been identified among some H5N1 virus isolates. Consequently there are no plans to use the adamantanes in response to an influenza pandemic. Resistance to oseltamivir emerges more slowly, but treatment failure in patients with H5N1 influenza has been documented in a limited number of cases. Resistance to zanamivir has not been documented but requires further assessment since this drug is used infrequently.

Antiviral medication can be used for treatment of persons infected with influenza, for post-exposure prophylaxis of persons who may have been exposed to influenza through contact with an infected person, or for pre-exposure prophylaxis. Treatment and post-exposure prophylaxis both require a total of 10 doses, which is defined as 1 course. For the purposes of this
discussion, pre-exposure prophylaxis is assumed to require 40 doses (4 courses) since the medication needs to be taken throughout the duration of exposure, though in reality more may be needed if community outbreaks last for a longer period. Due to the significantly greater quantity of medication required for pre-exposure prophylaxis, the current Department of Health and Human Services (HHS) recommendation is to prioritize antiviral use for treatment over pre-exposure prophylaxis. New information presented at the World Health Organization (WHO) Consultation on Clinical Aspects of Human Infection with Avian Influenza A (H5N1) Virus suggests that some patients may require two-fold higher dosing for a longer duration, which would be determined on a case-by-case basis. The effect of increased dosing on Wisconsin’s antiviral medication allocation is being considered.

Ethical Considerations
Decision-making in an emergency situation is difficult, especially when prioritizing scarce resources or restricting individual freedom. Therefore recommendations related to the use and prioritization of antiviral medication should be based on the following ethical principles:¹

- Articulation of the goals, reasoning and value judgments used in the decision process
- Maximization of fairness and equity
- Public engagement and involvement in the decision process
- Responsibility to maximize preparedness
- Use of sound guidelines and available scientific evidence as the basis for decisions
- Balance of individual liberty and societal interests
- Diversity in ethical decision-making (i.e. individuals representing diverse communities should be involved in making decisions with a strong ethical component)
- Use of procedural justice to ensure fair outcomes (i.e. consistent application of standards for all people)

Assumptions
The following assumptions were considered during the development of the recommendations to follow:

General Assumptions
- Susceptibility to pandemic influenza will be universal.
- An effective vaccine will not be available for 3-6 months after the pandemic has begun.
- Current recommendations are based on the epidemiologic features of seasonal influenza strains or previous pandemic strains and may change as more information becomes available on the new pandemic strain.
- Viral shedding and the risk of transmission will be greatest during the first 2 days of illness.
- On average 2-3 secondary infections will occur as a result of transmission from someone who is ill.
- In an affected community, a pandemic outbreak wave will last about 6-8 weeks; at least 2 pandemic disease waves are likely.

Treatment Assumptions

- Analyses of clinical trials of neuraminidase inhibitors administered to patients with seasonal influenza suggest that early treatment (i.e. within 48 hours) may reduce the risk of hospitalization by 50%. There are no data on the effectiveness of neuraminidase inhibitors in preventing either serious morbidity or mortality.
- Early treatment is a more efficient use of antivirals than widespread pre-exposure prophylaxis.
- There will not be sufficient antiviral medication to treat all those infected by the pandemic strain, or to provide pre- and/or post-exposure prophylaxis to all essential personnel or the population at large.

Prophylaxis Assumptions

- The need for antiviral pre- and post-exposure prophylaxis may decrease once an effective pandemic influenza vaccine becomes available.
- Oseltamivir has demonstrated >70% efficacy as pre-exposure prophylaxis against laboratory-confirmed influenza illness during interpandemic periods in unimmunized adults.
- If sufficient antiviral supplies are available, pre-exposure prophylaxis should be used only during peak periods of viral circulation (e.g. 6-8 weeks) to protect small groups of front-line healthcare workers and other providers of essential community services prior to availability of a vaccine.
  - Prior to human-to-human transmission, antivirals should be used for pre-exposure prophylaxis in workers participating in the eradication and control of an avian influenza outbreak among poultry. For these individuals, antiviral medication could be given daily for the duration of the time during which direct contact within infected poultry or contaminated surfaces occurs, and 7 days post exposure.
- Post-exposure prophylaxis should be utilized only during the early pandemic phases when a case-management strategy is being implemented, or for those groups described in Table 2 (Attachment 2).

II. SPORADIC CASES/LIMITED TRANSMISSION OF PANDEMIC INFLUENZA

This section covers early pandemic phases when 1) pandemic influenza is reported abroad, or sporadic pandemic influenza cases are reported in the US, without evidence of spread; or 2) when there is limited transmission of pandemic influenza in the US. During these phases, interventions are case-based and involve both pharmaceutical and non-pharmaceutical interventions for cases and their contacts.

Treatment of Infected Individuals

Based on evidence of prolonged H5N1 virus replication, presented at the World Health Organization (WHO) Consultation on Clinical Aspects of Human Infection with Avian Influenza A (H5N1) Virus held March 19-21, 2007, the WHO recommends antiviral treatment even for case-patients who present to a healthcare facility more than 48 hours after the onset of symptoms.
While cases are still sporadic:
- Treatment decisions should be based upon laboratory-confirmed subtype identification of the pandemic strain by viral isolation, RT-PCR, or other means recommended by the CDC.
- A positive rapid antigen test for influenza A virus would be sufficient grounds for initiating treatment, with a confirmatory, definitive laboratory test required for the continuation of treatment.
- Negative results of confirmatory influenza testing would permit termination of treatment, given the overall low rate of infection in a particular community.

Once transmission occurs but is still limited:
- Treatment decisions should be based upon laboratory confirmation as described above, OR
- Detection of influenza A virus by rapid antigen test, OR
- Epidemiologic and clinical characteristics

Treatment prior to laboratory confirmation should be considered since early treatment is more likely to be effective. Once infection becomes more common, negative rapid antigen test results are more likely to represent false negative tests; therefore, treatment should continue while awaiting results from confirmatory testing.

**Contact Identification and Post-exposure Prophylaxis**

During the early phases of an influenza pandemic, outbreak prevention will depend in part on the identification and post-exposure prophylaxis of the contacts of infected individuals. When cases are sporadic or there is limited virus transmission, a contact may be defined as household members and others with face-to-face contact (within 3 feet) for at least 5 minutes with the case-patient. The state of Florida provided the following estimates of the number of contacts for each infected individual:
- 5 family contacts
- 25 school, neighborhood, waiting room, or work contacts
- 10 healthcare worker contacts

If we estimate that a case-based strategy for prevention and containment of influenza outbreaks would be invoked for the first 200-400 cases of pandemic influenza in a defined area (e.g. community or state), 40 contacts per case would require post-exposure prophylaxis and the 200-400 case-patients would require treatment. Thus 82,000-164,000 doses of antiviral medication (8200-16,400 courses) would be required. If only 20 contacts per case are provided post-exposure prophylaxis, 4200-8400 courses of antivirals would be required.

Consideration may also be given to pre-exposure prophylaxis of healthcare and animal care workers who investigate suspected cases of pandemic influenza.

**Data Collection**

Public health officials or designees should collect information on cases and contacts, including:
• Number of contacts identified per case
• Information on each contact, including relationship to case-patient, nature and time of
  exposure, vaccination/antiviral prophylaxis status of the contact, and underlying medical
  conditions
• Number of contacts who become ill
• Number of days between onset of symptoms and reporting to health officials

Non-pharmaceutical Interventions
Non-pharmaceutical containment measures, such as isolation or quarantine of cases and their
contacts, are described in the Community Disease Containment Chapter of the Wisconsin
Pandemic Influenza Plan.

III. WIDESPREAD TRANSMISSION OF PANDEMIC INFLUENZA

This section covers the phase in which pandemic influenza transmission is widespread in the
United States. In this phase, interventions are generally community-based and focus on early
treatment of infected individuals as well as community-based social distancing measures.

Once a medical decision group determines that a threshold has been reached, a shift will be made
from case-based to community-based containment measures. While the definition of the
threshold is in development, it will likely be reached when one or more of the following occur:
• There is moderate to extensive disease transmission in the area
• Cases are no longer traceable to contact with an earlier case or known exposure
• There are an increasing number of cases among contacts of influenza patients
• There is a significant delay between the onset of symptoms and the identification of cases
due to the large number of ill persons

A full list of potential indicators to be used to define the threshold is indicated in Attachment 1.
Examples from this list include:
• Number of cases, rate of incident cases, percentage of cases with no identified
  epidemiologic link, number of contacts under surveillance
• Staff resources, investigator to case/contact ratios, number of untraced/interviewed
  contacts, degree of compliance with voluntary individual quarantine

Treatment of Infected Individuals
Based on evidence of prolonged H5N1 virus replication, presented at the World Health
Organization (WHO) Consultation on Clinical Aspects of Human Infection with Avian Influenza
A (H5N1) Virus held March 19-21, 2007, the WHO recommends antiviral treatment even for
case-patients who present to a healthcare facility more than 48 hours after the onset of
symptoms.

• Treatment decisions should be based upon clinical features and epidemiologic risk factors, as
  well as any updated knowledge regarding the epidemiologic features of the pandemic strain.

Treatment should follow the prioritization recommended by the National Vaccine Advisory
Committee (NVAC) and Advisory Committee on Immunization Practices (ACIP), which is
based on the epidemiologic data pertaining to circulating seasonal influenza viruses. Use of antivirals should be prioritized for treatment of infected individuals, specifically among those who are hospitalized, healthcare workers, high risk outpatients or essential pandemic response and infrastructure personnel. The priority list for Wisconsin, based on the federal recommendations, is described in Attachment 2.

Non-pharmaceutical Interventions
Non-pharmaceutical containment measures, such as cancellation of public gatherings or implementation of community-wide snow days, are described in the Community Disease Containment chapter of the Wisconsin Pandemic Influenza Plan.

IV. SPECIAL CONSIDERATIONS

Use of Antivirals for Pre-exposure Prophylaxis
At this time, pre-exposure prophylaxis is recommended for healthcare workers (7th priority group) only if sufficient antiviral supplies are available to provide medication for the top 6 priority groups (treatment for the top 5 priority groups and post-exposure prophylaxis to the 6th group). Reasons for the lack of a recommendation for widespread pre-exposure prophylaxis include:

- Pre-exposure prophylaxis is an inefficient use of scarce resource as 4-5 patients could be treated with the amount of medication needed to provide pre-exposure prophylaxis for one individual.
- Scarce resources may be used to provide pre-exposure prophylaxis for individuals who would not have otherwise become infected.
- Healthcare workers may not be at increased risk in the health care setting because of their use of infection control precautions and personal protective equipment.
- A pre-exposure prophylaxis strategy includes the challenges of identifying eligible personnel, adjusting the timing to local epidemiologic features, compliance and the potential for drug diversion (e.g. to family members).

However, discussions are ongoing as to whether individuals who are essential to the provision of healthcare, public safety and the functioning of key aspects of society should receive higher priority in the distribution of antiviral medications. Arguments for the elevation of this group include:

- Onset of illness while employed in a healthcare setting could expose vulnerable patients, which would, in turn, lead to outbreaks.
- Pre-exposure prophylaxis of healthcare workers could help keep the healthcare workforce intact at a time of greatly increased need, and help maintain an effective early treatment strategy for the general public.
- Pre-exposure prophylaxis of healthcare and key infrastructure personnel may prevent absenteeism due to fear of acquiring illness at work.

Use of Antivirals Post-Vaccine Development
The administration of oseltamivir does not interfere with the development of antibodies to influenza viruses after administration of trivalent inactivated influenza vaccine. Therefore, persons receiving pre- or post-exposure prophylaxis can continue to receive oseltamivir during
the period between vaccination and the development of immunity. In addition, antiviral medications can continue to be used to protect persons who have an inadequate vaccine response as well as persons with contraindications to vaccination. Whether oseltamivir can interfere with the immune response elicited by a live-attenuated pandemic vaccine is unknown.

Use of Antivirals in Infants
None of the available influenza antivirals are currently approved by the Food and Drug Administration for use among children aged <1 year. In particular, the safety and efficacy of oseltamivir have not been studied in children <1 year for either treatment or prophylaxis of influenza. The decision by an individual physician to treat children aged <1 year in an emergency setting on an off-label basis with an antiviral medication must be made on a case-by-case basis with full consideration of the potential risks and benefits.
Attachment 1- Threshold Determinants for the use of Community Containment Measures

Data on cases and contacts, as well as on depletion of healthcare and public health resources during the course of a pandemic, can help authorities decide when to implement community-level containment measures. As part of preparedness planning, state and local health agencies and healthcare partners may estimate at what point in the pandemic more extensive measures may be imposed. During an actual pandemic, state and local departments may also evaluate social considerations, such as levels of community cooperation and mobility.

<table>
<thead>
<tr>
<th>Potential Parameters</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases and Contacts</strong></td>
<td>Number of cases (absolute or estimated)</td>
</tr>
<tr>
<td></td>
<td>Rate of incident cases</td>
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<tr>
<td></td>
<td>Number of hospitalized cases</td>
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<td></td>
<td>Number and percentage of cases with no identified epidemiologic link</td>
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<tr>
<td></td>
<td>Morbidity (including disease severity) and mortality</td>
</tr>
<tr>
<td></td>
<td>Number of contacts under surveillance and/or quarantine</td>
</tr>
<tr>
<td><strong>Healthcare Resources</strong></td>
<td>Hospital/facility bed capacity</td>
</tr>
<tr>
<td></td>
<td>Staff resources</td>
</tr>
<tr>
<td></td>
<td>Patient/staff ratio</td>
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<tr>
<td></td>
<td>Number of ill or absent staff members</td>
</tr>
<tr>
<td></td>
<td>Availability of specifically trained specialists and ancillary staff members</td>
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<tr>
<td></td>
<td>Availability of ventilators</td>
</tr>
<tr>
<td></td>
<td>Availability of other respiratory equipment</td>
</tr>
<tr>
<td></td>
<td>Availability of personal protective equipment and other measures</td>
</tr>
<tr>
<td></td>
<td>Availability of therapeutic medications (influenza and non-influenza specific)</td>
</tr>
<tr>
<td><strong>Public Health Resources</strong></td>
<td>Investigator to case and contact ratios</td>
</tr>
<tr>
<td></td>
<td>Number of contacts under active surveillance</td>
</tr>
<tr>
<td></td>
<td>Number of contacts under quarantine</td>
</tr>
<tr>
<td></td>
<td>Ability to rapidly trace contacts (number of untraced/interviewed contacts)</td>
</tr>
<tr>
<td></td>
<td>Ability to implement and monitor quarantine (staff member to contact ratio)</td>
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<td></td>
<td>Ability to provide essential services (food, water, etc.)</td>
</tr>
<tr>
<td><strong>Community Cooperation, Mobility, and Compliance</strong></td>
<td>Degree of compliance with voluntary individual isolation</td>
</tr>
<tr>
<td></td>
<td>Degree of compliance with active surveillance and voluntary individual quarantine</td>
</tr>
<tr>
<td></td>
<td>Degree of movement out of the community</td>
</tr>
<tr>
<td></td>
<td>Degree of compliance with community-containment measures</td>
</tr>
</tbody>
</table>
Antiviral Prioritization and Use Planning
The Department of Health and Human Services (HHS) and the World Health Organization (WHO) recommend stockpiling enough antiviral medication to treat 25% of the population. A clinical attack rate of 25% would indicate a pandemic of moderate severity and is consistent with the average clinical attack rate of the 20th century pandemics (30%). Subsequent to these recommendations, a 2005 article published in *Emerging Infectious Diseases* modeled various stockpile sizes and treatment strategies. The authors concluded that:

- “…Antiviral treatments for 20-25% of the population are likely to be sufficient to treat all patients for pandemics with characteristics that have been observed to date” (i.e. attack rates similar to 1918 or 1957 pandemics).”
- Treatment of 25% of the population was deemed to be more effective at reducing hospitalizations and deaths than a smaller stockpile targeted for specific risk groups (based on efficacy of antivirals in seasonal influenza).
- However, even small stockpiles (e.g. treatment of 10% of the population) could result in substantial reductions in hospitalizations with targeting to conventional influenza at-risk groups.
- The successes estimated with antiviral use will depend on the clinical attack rate and other transmission data.

Antiviral Priority Groups in Wisconsin
The table on the next page presents the antiviral prioritization in Wisconsin, using the federally recommended priority groups. In Wisconsin, a clinical attack rate of 30% was used. In addition, an updated version of this table is being constructed that would consider the effect of increased dosing among some percentage of case-patients on Wisconsin’s antiviral allocation.

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## Table 2. Antiviral Drug Priority Groups in Wisconsin

<table>
<thead>
<tr>
<th>Federal Priority Groups</th>
<th>Estimated Number of Individuals</th>
<th>Strategy</th>
<th>Number of Individuals Requiring Antiviral Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number (%) per Group</td>
</tr>
<tr>
<td><strong>1</strong> Patients admitted to the hospital</td>
<td>30,000</td>
<td>T</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>2</strong> Health care workers with direct patient contact and emergency medical service providers</td>
<td>187,200</td>
<td>T</td>
<td>56,200</td>
</tr>
<tr>
<td><strong>3</strong> Highest risk outpatients—immunocompromised persons and pregnant women</td>
<td>42,000</td>
<td>T</td>
<td>12,600</td>
</tr>
<tr>
<td><strong>4</strong> Pandemic health responders (public health, vaccinators, vaccine and antiviral manufacturers), public safety (police, fire, corrections), and government decision-makers</td>
<td>40,240</td>
<td>T</td>
<td>12,125</td>
</tr>
<tr>
<td><strong>5</strong> Increased risk outpatients—young children 12-23 months old, persons ≥ 65 yrs old, and persons with underlying medical conditions</td>
<td>1,389,000</td>
<td>T</td>
<td>417,000</td>
</tr>
<tr>
<td><strong>6</strong> Outbreak response in nursing homes and other residential settings</td>
<td>82,400</td>
<td>T/PEP</td>
<td>82,400</td>
</tr>
<tr>
<td><strong>7</strong> HCWs in emergency departments, intensive care units, dialysis centers, and EMS providers</td>
<td>21,600</td>
<td>P</td>
<td>86,400</td>
</tr>
<tr>
<td><strong>8</strong> Pandemic societal responders (e.g., critical infrastructure groups as defined in the vaccine priorities) and HCW without direct patient contact</td>
<td>183,600</td>
<td>P</td>
<td>55,080</td>
</tr>
<tr>
<td><strong>9</strong> Other outpatients</td>
<td>3,240,000</td>
<td>T</td>
<td>972,000</td>
</tr>
<tr>
<td><strong>10</strong> Highest risk outpatients</td>
<td>42,000</td>
<td>P</td>
<td>168,000</td>
</tr>
<tr>
<td><strong>11</strong> Other HCWs with direct patient contact</td>
<td>144,000</td>
<td>P</td>
<td>576,000</td>
</tr>
</tbody>
</table>

T = Treatment (2 doses/day for 5 days); PEP = post-exposure prophylaxis (1 dose/day for 10 days); P = pre-exposure prophylaxis (1 dose/day for 40 days); HCW = healthcare worker

*With the exception of those who are hospitalized, the number of individuals does not estimate the number who may become infected, but rather the number of individuals who meet the definition for each category.
Definition and Rationale for Prioritization

Treatment of hospitalized patients
- Includes persons admitted to traditional/non-traditional acute care facilities. Excludes persons admitted for bacterial super-infection or after viral replication and shedding has ceased.
- This group is at greatest risk for severe morbidity and mortality. Providing treatment to those who are most ill is consistent with standard medical practice.

Treatment of healthcare workers/EMS providers with direct patient contact
- Includes persons providing direct medical services in inpatient and outpatient care settings, and thus come within 3 feet of patients, or patient samples, with possible influenza.
- Treatment of healthcare providers may decrease absenteeism due to influenza illness and may decrease absenteeism from fear of becoming ill, given the knowledge that treatment can prevent serious complications of influenza. This will enable high quality patient care to continue, which is critical to reducing health impacts of pandemic disease and to preventing adverse outcomes from other health conditions that will occur during the pandemic period.

Treatment of high risk outpatients
- Includes individuals who are immunosuppressed or immunocompromised, who are on dialysis or who are women in their 2nd or 3rd trimester of pregnancy.
- These individuals are at highest risk for morbidity and mortality during seasonal influenza outbreaks and are the least likely to be protected by vaccination.

Treatment of pandemic health responders, public safety workers and government decision-makers
- Includes vaccine/antiviral medication manufacturers, public health workers, and those directly involved in vaccination and pandemic response; police, fire and corrections personnel; and chief executives at the federal, state, and local levels.
- Early treatment of pandemic responders will minimize absenteeism and ensure that vaccination and other critical response activities can be maintained. Public safety workers prevent intentional and unintentional injuries and death, are critical to maintaining social functioning, and will contribute to a pandemic response, for example by ensuring order at vaccination clinics. A small number of decision-makers at federal, state, and local levels are needed to for an effective pandemic response.

Treatment of increased risk outpatients
- Includes persons 6-23 months, persons >65 years old or those who have underlying illnesses defined by the ACIP as associated with increased risk (and are not included in Category 3).
- Early treatment has been shown to significantly decrease lower respiratory infections and to reduce the rate of hospitalization in elderly and high-risk populations.
Attachment 2- Antiviral Priority Group Recommendations

Post-exposure prophylaxis of institutional residents for outbreak prevention
- Includes use of antiviral medication to support public health interventions in closed settings where an outbreak of pandemic influenza is occurring.
- Influenza outbreaks in nursing homes are associated with substantial mortality and morbidity. Nursing home residents also are less likely to respond to vaccination.

Pre-exposure prophylaxis of healthcare workers
- Includes all staff in emergency departments, intensive care units, dialysis centers and emergency medical service settings who are required for effective functioning of these health care units.
- Optimally effective functioning of these units is particularly critical to reducing the health impact of a pandemic. Pre-exposure prophylaxis will minimize absenteeism in these critical settings.

Treatment of critical infrastructure groups and healthcare workers without direct patient contact
- Includes persons who provide services that must be sustained at a sufficient level during a pandemic to maintain public well-being, health, and safety. Included are workers at healthcare facilities who have no direct patient contact but who are important for the operation of those facilities; utility (electricity, gas, water), waste management, mortuary, and some transport workers.
- Maintaining certain key functions is important to preserving life and decreasing societal disruption. Heat, clean water, waste disposal, and corpse management all contribute to public health. Insuring functional transportation systems also protects health by making it possible for people to access medical care and by transporting food and other essential goods to where they are needed.

Treatment of other outpatients
- Includes persons not in one of the earlier priority groups.
- Treatment reduces the risk of complications and mortality, reduces duration of illness and shortens time off work, and decreases viral shedding and transmission. If sufficient antiviral supplies are available, providing treatment to all who are ill achieves the greatest equity in resource use.

Pre-exposure prophylaxis of high risk outpatients
- Prevents illness in the highest risk groups for hospitalization and death.
- Pre-exposure prophylaxis would only be considered if adequate antiviral supplies are available.

Pre-exposure prophylaxis of healthcare workers with direct patient contact
- Prevention would best reduce absenteeism and preserve optimal function.
- Pre-exposure prophylaxis would only be considered if adequate antiviral supplies are available.
Attachment 2- Antiviral Priority Group Recommendations

Federal Allocation of Antiviral Medications
The federal government has currently allocated enough antiviral medication for each state to cover 15% of their population. For Wisconsin, this amounts to 805,000 courses of medication. Per Wisconsin estimates (Table 2), the first 8 priority groups would be covered. More individuals could be treated if:

- The clinical attack rate is less than 30%.
- Less than 100% of nursing home residents are provided post-exposure prophylaxis, as is currently estimated.
- Wisconsin purchases additional antiviral medication (up to 574,763 courses) to allow treatment of 25% of the population.

Fewer individuals will be treated if:

- The clinical attack rate is greater than 30%.
- A significant number of courses are used during early case/contact management.
- The decision is made to offer pre-exposure prophylaxis to healthcare workers or other key infrastructure personnel.
Attachment 3- Resources Consulted

Department of Health and Human Services Pandemic Influenza Plan. Part I: Strategic Plan.  
http://www.hhs.gov/pandemicflu/plan/

Department of Health and Human Services Pandemic Influenza Plan. Appendix D:  
NVAC/ACIP Recommendations on Use of Vaccines and NVAC Recommendations on  
Pandemic Antiviral Drug Use.  
http://www.hhs.gov/pandemicflu/plan/

Department of Health and Human Services Pandemic Influenza Plan. Supplement 7: Antiviral  
Drug Distribution and Use.  
http://www.hhs.gov/pandemicflu/plan/

Department of Health and Human Services Pandemic Influenza Plan. Supplement 8:  
Community Disease Control and Prevention  
http://www.hhs.gov/pandemicflu/plan/

State Pandemic Plans.  
http://www.pandemicflu.gov/plan/states/stateplans.html

The Australian Health Management Plan for Pandemic Influenza. Appendix 1: Access to the  
Australian National Medical Stockpile during an Influenza Pandemic.  

The Canadian Pandemic Influenza Plan for the Health Sector. Annex E: Planning  
Recommendations for the Use of Anti-Influenza (Antiviral) Drugs in Canada During a  
Pandemic.  

UK Health Departments’ Influenza Pandemic Contingency Plan.  

Interim Guidance for Protection of Persons Involved in US Avian Influenza Outbreak Disease  
Control and Eradication Activities  
http://www.cdc.gov/flu/avian/professional/protect-guid.htm