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Common Abbreviations Used in this Document

ACIP	Advisory Committee on Immunization Practices
CDB	Communicable Disease Branch
CDC	Centers for Disease Control
CIH	Cherokee Indian Hospital
CIHER	Cherokee Indian Hospital Emergency Room
EBCI	Eastern Band of Cherokee Indians
EM	Emergency Management
EMS	Emergency Medical Services
HMD	Health and Medical Division
HIS	Indian Health Service
ILI	Influenza-like Illness
JIC	Joint Information Centers
LEPC	Local Emergency Planning Committee
LHD	Local Health Department
NCDPH	North Carolina Department of Public Health
NC DETECT	North Carolina Disease Event Tracking and Epidemiologic Collection Tool
NCHAN	North Carolina Health Alert Network
NCHA	North Carolina Hospital Association
NCIB	North Carolina Immunization Board
NCIR	North Carolina Immunization Registry
NC SLPH	North Carolina State Laboratory of Public Health
NIMS	National Incident Management System
NPI	Nonpharmaceutical Interventions
NRP	National Response Plan
PIO	Public Information Officer
OPHP&R	Office of Public Health Preparedness & Response
PSI	Pandemic Severity Index
RLRN	Regional Laboratory Response Network
USG	United States Government
U.S. HHS	Department of Health and Human Services
WHO	World Health Organization

Section 1: Introduction

1.0 General Information on Eastern Band of Cherokee Indians

Tribal governments are responsible for protecting the health and safety of all citizens and visitors, Indian and non-Indian. The Eastern Band of Cherokee Nation is a sovereign nation within the larger nation of the United States. Currently the Eastern Band of Cherokee has a comprehensive Emergency Operations Plan and likewise the Health and Medical Division has a Comprehensive All Hazards Response Plan that integrates into the Tribal Plan. Although these plans currently exist, there has not been any concentrated effort to mesh these plans with the five county areas that serves the Eastern Band of Cherokee Indians.

The Eastern Band of Cherokee currently includes 56,572 acres in five counties of western North Carolina and 76.3 acres in two counties in eastern Tennessee. In North Carolina, tribal holdings include fifty-two tracts or boundaries, which are contained in thirty separate bodies of land. The majority of the land is in Jackson and Swain Counties. A small strip of land is in Haywood County, and scattered residential tracts are in Graham and Cherokee Counties. In addition, the Eastern Band is home to Harrah's Cherokee Casino that is located in the heart of the local lands in Jackson County. This facility has a current employee capacity of 1700. Harrah's is also host to millions of people from across the United States. A Pandemic Influenza epidemic originating from this site has a potential for a rapid transmission throughout many states.

Generally, funds under this scope of work will be used to assist EBCI in developing a comprehensive Pandemic Influenza Plan that integrates community and county systems, and exercises that will focus on a concentrated effort to collaborate with the Emergency Management System, health facilities, support programs, and surrounding county agencies. These Pandemic Influenza efforts are intended to support the National Response Plan.

1.1 Indian Health Service and the Eastern Band of Cherokee Indians

The Indian Health Service (IHS) is an Operating Division within the U.S. Department of Health and Human Services (HHS). IHS is responsible for providing medical and public health services to members of federally recognized Tribes and Alaska Natives. IHS is the principal federal health care provider and health advocate for Indian people, and its goal is to raise their health status to the highest possible level. IHS provides health care to American Indians and Alaska Natives at 33 hospitals, 59 health centers, and 50 health stations. Thirty-four urban Indian health projects supplement these facilities with a variety of health and referral services. All federally recognized Native American and Alaska Natives are entitled to health care. This health care is provided by Indian Health Service, either through IHS-run hospitals and clinics, or through tribal contracts to provide health care services. IHS-run hospitals and clinics serve any registered Indian/Alaska Native, regardless of tribe or income. Tribal contract health care facilities

serve only their tribal members, with other qualified Indians/Alaska Native being offered care on a space available basis (1).

1.2 Background

According to the World Health Organization (WHO), “an influenza pandemic occurs when a new influenza virus appears against which the human population has no immunity, resulting in several, simultaneous epidemics worldwide with enormous numbers of deaths and illness.”

Influenza is a highly contagious respiratory virus that is responsible for annual epidemics in the United States and other countries. It can spread easily from one person to another and is spread primarily through contact with small droplets and aerosols from the nose and throat of an infected person during coughing and sneezing. Each year, approximately 200,000 people are hospitalized and 36,000 die in the U.S. from influenza infection and secondary complication. Influenza viruses are unique in their ability to suddenly cause infection in all age groups. In the event of an influenza pandemic, the level of morbidity and mortality from influenza-related complications may rise dramatically.

The previous century brought three influenza pandemics which caused worldwide increases in mortality, morbidity, and social burdens. The “Spanish” influenza pandemic of 1918 killed over 500,000 people in the United States and had a total mortality of 20 to 40 million. The 1918 pandemic was notorious for striking young, healthy adults. In 1957, Asian influenza was the cause of 68,000 deaths in the U.S. and in 1968-1969 the Hong Kong pandemic resulted in 34,000 deaths.

The most recent pandemic outbreak of the flu began in 2009. The first documented cases of H1N1 (previously known as Novel A H1N1 Influenza and Swine Flu) in the United States occurred in April 2009, after unusually high levels of influenza-like illness (ILI) were detected in Mexico beginning in March 2009. The H1N1 outbreak was declared a pandemic by the World Health Organization in June 2009. The development of the pandemic has contradicted some previously-held assumptions. Three primary differences impact strategic planning:

- To date, the 2009 H1N1 strain is mild rather than moderate or severe.
- Death and severe illness for H1N1 are most common among children and young adults rather than the elderly.
- The H1N1 virus began in North America, contrary to assumptions that it would begin overseas

Throughout the plan, general severity classifications (mild, moderate, or severe) will be used in place of references to specific strains (e.g., H1N1, H5N1).

Two types of influenza viruses cause disease in humans: type A and type B. Influenza A viruses are composed of two major antigenic structures essential to vaccines and immunity: hemagglutinin (H) and neuraminidase (N). The structure of these two components defines virus subtype. Influenza viruses cause epidemics and pandemics because they are able to change genetically. Both influenza A and B can undergo minor genetic variations known as antigenic drift. A major change can occur in type A viruses

either by the exchange of a gene segment, resulting in a new subtype or an adaptive mutation, resulting in a major antigenic change. An antigenic shift may result in the emergence of a new subtype to which the human population has little or no immunity. An antigenic shift may be followed by an influenza pandemic. Other conditions needed for a pandemic besides an antigenic shift (1) new virus must cause severe disease and (2) it must be able to be transmitted among humans throughout the community in a sustained manner.(2)

1.3 Pandemic Influenza

Pandemic Influenza is a unique public health emergency. The impact of the next pandemic may have disastrous effects of the health and well-being of the public. The Centers for Disease Control (CDC) estimates that in the United States alone:

- Up to 200 million people will be infected;
- Fifty million people will require outpatient care;
- Two million people will be hospitalized; an
- Between 100,000 and 500,000 people will die

The potential for high levels of morbidity and mortality make planning for the next influenza pandemic crucial. The purpose for planning for pandemic influenza is to:

- Reduce mortality
- Reduce morbidity
- Minimize social disruption

<http://www.epi.state.nc.us/epi/gcdc/pandemic.html>

1.4 Primary Objectives of Pandemic Flu Plan

The Eastern Band of Cherokee Indians (EBCI) Pandemic Influenza Plan has five primary objectives:

1. Coordinate with local, state, and federal partners to assure adequate preparation for a pandemic.
2. Enhance communication and information sharing about pandemic related topics.
3. Enhance plans for surge capacity and patient care coordination.
4. Enhance plans for mass dispensing of vaccines and stockpiling of antivirals and other necessary medical supplies.
5. Provide infection control and clinical guidance to healthcare providers, tribal employees, and other identified groups.

Purpose/Scope

The purpose of the Eastern Band of Cherokee Indians (EBCI) Influenza Pandemic Plan is to provide a coordinated and comprehensive local response to an influenza pandemic in order to reduce morbidity, mortality, and social disruption and to help ensure a continuation of essential governmental functions. The plan encompasses various aspects of preparedness, emergency response, and the recovery and maintenance efforts to take place in the event of an influenza pandemic.

1.5 FluAid Estimates of Pandemic Influenza Disease Burden for Eastern Band of Cherokee Indians

FluAid is a modeling software designed by the U.S. Centers for Disease Control and Prevention to estimate potential impact of an influenza pandemic in specific localities. Although the software provides a range of estimates for deaths, hospitalizations, and outpatient visits, the table below includes only the mid-range values. The purpose of these estimates is to aid in planning.

To run the FluAid models, we used population estimates provided by the Tribal enrollment office. For EBCI, the total population is 8,140.

- Ages 0-17: 2,574
- Ages 18-64: 4,910
- Ages 65+: 656

The estimates for a mild pandemic were calculated using FluAid Special Edition (http://www.cdc.gov/h1n1flu/tools/fluaid/?s_cid=cs_000), which was developed using actual data from the 2009 H1N1 pandemic. Estimates for moderate and severe pandemics were calculated using FluAid 2.0, and do not include outpatient visits (<http://www.cdc.gov/flu/tools/fluaid/>).

All estimates are based on an attack rate of 20%.

Table 1. Estimated burden of pandemic influenza, by level of pandemic severity, for the Eastern Band of Cherokee Indians (EBCI) living on the Qualla Boundary.

	Mild (PSI = 1)*	Moderate (PSI = 3)†	Severe (PSI = 5)†
Deaths	0	3	25
Hospitalizations	8	17	140
Outpatient Visits	862		

PSI = Pandemic severity index

* Calculated using FluAid Special Edition

† Calculated using FluAid 2.0

1.6 CDC Triggers and Intervals Background

In November 2005, the President of the United States released the National Strategy for Pandemic Influenza, followed by the Implementation Plan in May 2006. These documents introduced the concept of “stages” for Federal Government response to pandemic influenza. [1] The six United States Government (USG) stages have provided greater specificity for U.S. preparedness and response efforts than the pandemic phases outlined in the World Health Organization (WHO) global pandemic plan. [2] The USG

stages have facilitated initial planning efforts by identifying objectives, actions, policy decisions, and messaging considerations for each stage

While the stages have provided a high-level overview of the US Federal Government approach to a pandemic response, more detailed planning for federal, state, and local responses requires a greater level of specificity than is afforded with the current USG stages. In developing more specific plans for pandemic response, four needed improvements on the current USG stages were identified:

1. Providing Greater Detail to Reflect the Progression of a Pandemic: While adequate for high-level strategy, the USG stages generally are too broad for detailed agency-level or community/regional planning. For example, USG Stage 4 is characterized by the detection of the first laboratory-confirmed human case of a pandemic strain of influenza in North America, and USG Stage 5 is characterized by the spread of pandemic influenza infection throughout the United States. Many public health actions will take place at the onset and within Stage 4 and Stage 5, so additional refining of the stages is needed to plan for specific activities which would occur at various points within the stages.

2. Considering that Pandemic Influenza May First Emerge in the United States: The USG stages assume that widespread overseas outbreaks of pandemic influenza will be identified prior to the detection of the first case in the United States. Because of the worldwide mobility of persons and limited surveillance systems in many countries, as well as the presence of animal reservoirs for influenza domestically, it is possible that cases of pandemic influenza may first be identified in the United States. Plans for response need to account for this contingency.

3. Improving Definitions to Identify the Transition Points Between the Stages: The points when a USG stage begins and ends have been interpreted differently by various organizations. As a consequence, there is the potential for uncoordinated or possibly conflicting perceptions of where the US is at a given time. Plans should have clearly defined triggers for action to inform decision making.

4. Representing the Potential Variation in Onset and Progression of a Pandemic in Different Jurisdictions: The stages do not account for the possibility that a pandemic will strike individual communities at varying points in time. At the moment the Nation enters a given USG stage, the specific actions to be taken by state and local health jurisdictions may differ. For example, some states may have numerous cases of pandemic influenza and fully implement community mitigation interventions, while a distant state may have limited, if any, cases and would apply case-based interventions to contain. Plans should reflect the *asynchrony* of pandemic cases occurring in different jurisdictions.

To address these concerns for pandemic influenza response planning, the Centers for Disease Control and Prevention (CDC) began working to construct a common framework from which CDC and other Federal, State, and local governments and agencies can plan and coordinate their actions in 2007. The development of this approach, including both more refined intervals and triggers for action, has included gathering input from various

CDC divisions, as well as of clinical, laboratory medicine, and public health partners. In addition, the approach was tested during four CDC agency level pandemic influenza exercises in 2007 and 2008. Based upon these experiences, the existing pandemic framework has been adapted to guide novel influenza A (H1N1) epidemic influenza response and planning.

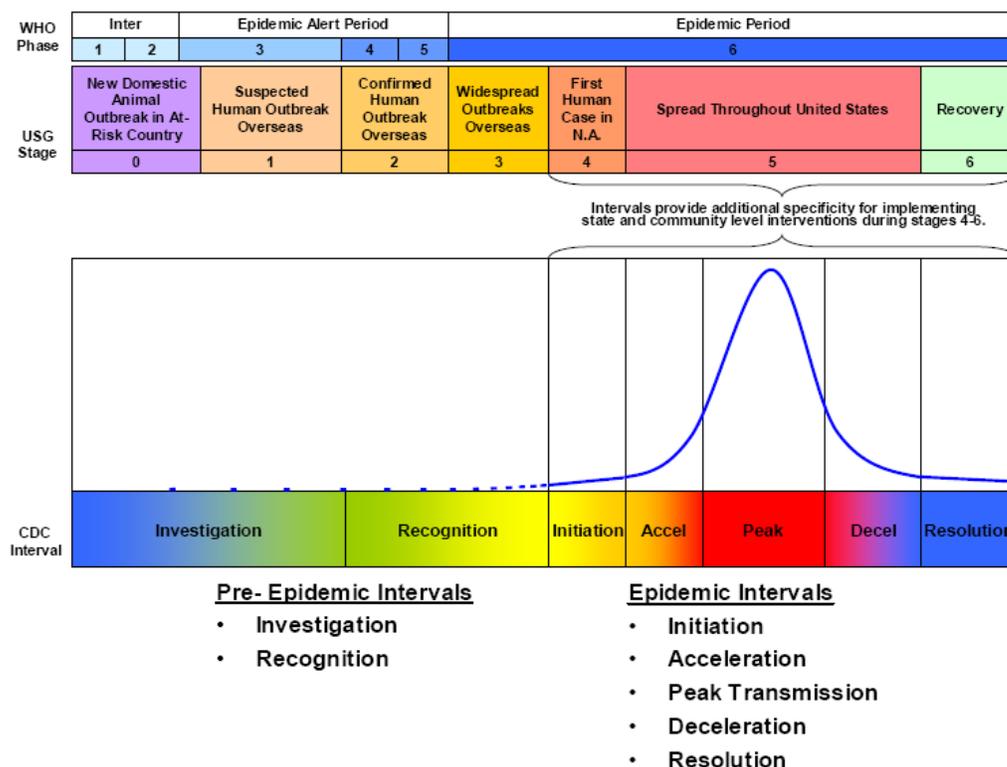
The Epidemic Novel Influenza A (H1N1) Influenza Intervals

The incorporation of known principles regarding epidemic influenza transmission, experience from this ongoing epidemic, along with the adoption of well-defined triggers for action, will enhance the development of more detailed plans and guidance for novel influenza A (H1N1). Moreover, these refinements will facilitate better coordinated and timelier containment and mitigation strategies at all levels, while acknowledging the heterogeneity of conditions affecting different U.S. communities during the progression of a novel influenza epidemic.

Typically, epidemic curves are used to monitor an outbreak as it is occurring or to describe the outbreak retrospectively. While epidemic curves are useful during an outbreak or retrospectively for noting the possible effects of interventions (graphically showing when they are or were implemented relative to the rise and fall of the epidemic), model epidemic or pandemic curves can also be used to describe likely events over time. These hypothetical models may be particularly valuable for anticipating conditions and identifying key actions that could be taken at certain points in time to alter the epidemic or pandemic curve. Classic epidemic curves have been described in the literature as having a growth phase, hyperendemic phase, decline, endemic or equilibrium phase, and potentially an elimination phase. [3,4]

For the purpose of novel influenza, CDC will use seven intervals to represent the sequential units of time that occur along a hypothetical pandemic curve. [5,6] For planning, use the intervals to describe the progression of the epidemic within your community to provide a framework for defining when to respond with various actions and interventions during U.S. Government stages 4,5,6.

Figure 1: Periods, Phases, Stages, and Intervals



While there will be one epidemic curve for the United States, the national curve will be the composite of the smaller curves representing each community. Therefore, the intervals serve as additional points of reference within the phases and stages to provide a common orientation and better epidemiologic understanding of what is taking place and when to intervene. Thus, state health authorities may elect to implement interventions asynchronously within their states by focusing early efforts on communities that are first affected. The intervals are also a valuable means for communicating the status of the epidemic by quantifying different levels of disease, and linking that status with triggers for interventions.

The intervals are designed to inform and complement the use of the Pandemic Severity Index (PSI) for choosing appropriate community mitigation strategies.[7] The PSI guides the range of interventions to consider and/or implement given the epidemiological characteristics of the pandemic. The intervals are more closely aligned with triggers to indicate *when* to act, while the PSI is used to indicate *how* to act.

Interval Triggers and Actions associated with them

We had previously proposed a set of triggers to mark the onset for each of the intervals providing a framework against which actions can be aligned. (Table 1) These have been modified to be applicable to the current novel influenza A (H1N1) epidemic. Multiple

secondary or sub-triggers will also need to be identified to add yet greater specificity and relevancy for specific functions, such as releasing communications, monitoring, recalling/ redesignation of assets, or distributing vaccines. The state-level and national-level triggers are different to reflect the varying scale and impact of events at the different levels. Some areas of the country, such as the Washington DC Capital Region, cross multiple jurisdictional boundaries. Coordination of public health authorities for a combined approach to implementing the triggers and actions will be needed. For this reason, "State Triggers" may be considered regional triggers for those areas where multiple public health authorities are planning for a coordinated approach.

Evaluation of whether these triggers are applicable to the current epidemic will be continually assessed as more data are available on the epidemiology of the epidemic.

WHO Phase	USG Stage	Influenza Interval	State Trigger	National Trigger			
1: Low risk of human cases	0: New Domestic Animal Outbreak in At-Risk Country	Investigation of Novel Influenza A Infection in Animals and Humans	Identification of animal case of influenza A subtypes with potential implications for human health within the state	Identification of animal case of influenza A subtypes with potential implications for human health anywhere in the world			
2: Higher risk of human cases			Identification of human case of potential novel influenza A infection within the state	Identification of human case of potential novel influenza A infection anywhere in the world			
3: No or very limited human-human transmission					1: Suspected Human Outbreak Overseas		
4: Evidence of increased human-human transmission	2: Confirmed Human Outbreak Overseas	Recognition of Novel influenza A (H1N1) Virus	Confirmation of human cases of novel influenza A and demonstration of efficient and sustained human-to-human transmission within the state	Confirmation of human cases of novel influenza A and demonstration of efficient and sustained human-to-human transmission anywhere in the world			
5: Evidence of significant human-human transmission							
6: Efficient and sustained human-human transmission	3: Widespread Human Outbreaks in Multiple Locations Overseas	Initiation of Epidemic Wave	Laboratory-confirmed case of defined Novel influenza A(H1N1) influenza detected within the state	Laboratory-confirmed case of defined Novel influenza A(H1N1) detected within the US			
	4: First Human Case in North America						
	5: Spread Throughout United States				Acceleration of Epidemic Wave	Increasing numbers of cases exceed resources to provide case-based control measures	At least one state in five of the ten FEMA/HHS regions have met the Acceleration criteria
					Peak/Established Transmission During Epidemic Wave	Half or more of geographical regions in a state are reporting novel influenza H1N1 activity	At least one state in five of the ten FEMA/HHS regions have met the Peak/Established Transmission criteria

				(includes states that have transitioned into the Deceleration Interval)
		Deceleration of Epidemic Wave	Less than half of geographical regions in a state are reporting novel influenza H1N1 activity	The majority of states have met the Deceleration criteria (includes states that have transitioned into the Resolution Interval)
	6: Recovery	Resolution of Epidemic Wave	Laboratory-confirmed novel influenza H1N1 cases are occurring sporadically; or, The health care system capacity is approaching pre-epidemic levels	The majority of states have met the Resolution criteria

With the adoption of the intervals and triggers, we can more effectively coordinate and more clearly delineate responsibilities and expectations across the different levels of government. Appendix 1 provides a listing of some of the key actions that would be expected to be taken during the different intervals. The appendix is designed to demonstrate the utility of the framework and does not provide a comprehensive listing of actions to be implemented (4).

1.7 Community Mitigation Interim Guidance

In February 2007, the CDC released a community mitigation interim guidance to help local communities make appropriate decisions about what actions to take to help delay or mitigate the spread of a pandemic, and when to take those actions. These community mitigation actions would be especially critical in the first six months of a pandemic. The interim guidance introduced a Pandemic Severity Index (PSI), akin to the National Weather Service’s hurricane intensity scale. Both scales move up from 1 to 5 as the severity of the situation increases.

The Pandemic Severity Index links information about the severity of disease spread (number of fatalities) to specific measures that could be implemented. These measures range from encouraging individuals to stay home voluntarily when they become ill, to more stringent “social distancing” measures such as closing schools and canceling public gatherings. By quickly adding these multiple actions, communities could help balance the need to protect the public’s health and the need to minimize a pandemic’s social and economic disruptions.

Pandemic mitigation is proposed is based upon an early, targeted, layered application of multiple partially effective nonpharmaceutical measures. It is recommended that the measures be initiated early before explosive growth of the epidemic and, in the case of

severe pandemics, that they be maintained consistently during an epidemic wave in a community. The pandemic mitigation interventions described in this document include:

1. Isolation and treatment (as appropriate) with influenza antiviral medications of all persons with confirmed or probable pandemic influenza. Isolation may occur in the home or healthcare setting, depending on the severity of an individual's illness and/or the current capacity of the healthcare infrastructure.
2. Voluntary home quarantine of members of households with confirmed or probable influenza case(s) and consideration of combining this intervention with the prophylactic use of antiviral medications, providing sufficient quantities of effective medications exist and that a feasible means of distributing them is in place.
3. Dismissal of students from school and school-based activities and closure of childcare programs, coupled with protecting children and teenagers through social distancing in the community to achieve reductions of out-of-school social contacts and community mixing.
4. Use of social distancing measures to reduce contact between adults in the community and workplace, including, for example, cancellation of large public gatherings and alteration of workplace environments and schedules to decrease social density and preserve a healthy workplace to the greatest extent possible without disrupting essential services. Enable institution of workplace leave policies that align incentives and facilitate adherence with the non pharmaceutical interventions outlined above.

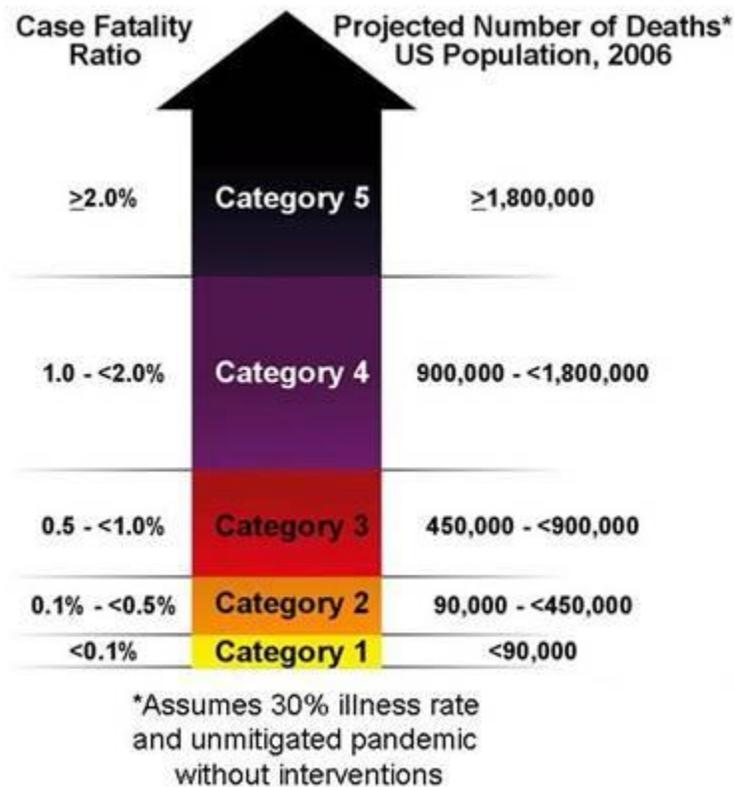
All such community-based strategies should be used in combination with individual infection control measures, such as hand washing and cough etiquette. Implementing these interventions in a timely and coordinated fashion will require advance planning. Communities must be prepared for the cascading second- and third-order consequences of the interventions, such as increased workplace absenteeism related to child-minding responsibilities if schools dismiss students and childcare programs close.

Decisions about what tools should be used during a pandemic should be based on the observed severity of the event, its impact on specific subpopulations, the expected benefit of the interventions, the feasibility of success in modern society, the direct and indirect costs, and the consequences on critical infrastructure, healthcare delivery, and society. The most controversial elements (e.g., prolonged dismissal of students from schools and closure of childcare programs) are not likely to be needed in less severe pandemics, but these steps may save lives during severe pandemics. As communities begin to plan and prepare for mitigating the effect of severe natural disasters (e.g., floods and snowstorms), they should also plan and prepare for mitigating the effect of a severe pandemic. EBCI has developed protocol on steps to take during the varying stages of severity which are outlined throughout this plan as stated above. See Appendix ___ for a rationale for using nonpharmaceutical intervention during pandemic planning

Pre-Pandemic Planning: the Pandemic Severity Index

This guidance introduces, for the first time, a Pandemic Severity Index, which uses case fatality ratio as the critical driver for categorizing the severity of a pandemic (Figure A, abstracted and reprinted from Figure 4 in the main text). The index is designed to enable estimation of the severity of a pandemic on a population level to allow better forecasting of the impact of a pandemic and to enable recommendations to be made on the use of mitigation interventions that are matched to the severity of future influenza pandemics.

Figure A. Pandemic Severity Index



Pandemics will be assigned to one of five discrete categories of increasing severity (Category 1 to Category 5). The Pandemic Severity Index provides communities a tool for scenario-based contingency planning to guide local pre-pandemic preparedness efforts. Accordingly, communities facing the imminent arrival of pandemic disease will be able to use the pandemic severity assessment to define which pandemic mitigation interventions are indicated for implementation.

Many Federal, State, and local governments are incorporating this community mitigation guidance into their pandemic planning processes, and they are distributing the guidance throughout their systems. The Community Strategy for Pandemic Influenza Mitigation is available at <http://www.pandemicflu.gov/plan/community/commitigation.html>.

2.0 Situations and Assumptions

Situations

An influenza pandemic is inevitable, and when it occurs in the U.S., it will certainly put Tribal members at risk. The goal of EBCI in the event of a pandemic is to minimize the impact of adverse events on Tribal members.

Assumptions

The development of the current plan is based on the following assumptions:

General

- Information will be exchanged rapidly as the science emerges, public opinion changes and the scope of the pandemic increases. This will require agencies to be agile and stay informed.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccines, antiviral agents, and other relevant topics; information and guidelines for health care providers, and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- An influenza pandemic will result in the rapid spread of the infection with outbreaks throughout the world. Communities across the state and the country may be impacted simultaneously.
- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge in the U.S., and possibly even in western NC.
- Pandemic severity may range from mild (Pandemic Severity Index [PSI~1]), to moderate (PSI~3), to severe (PSI~5). The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. We cannot predict a precise impact.
- The seasonality and progression of a pandemic cannot be predicted with certainty. In an affected community, a pandemic outbreak may last about 6 to 8 weeks or longer. At least two pandemic disease waves are likely.
- Susceptibility to the pandemic influenza subtype may be universal.
- People may be asymptomatic while infectious (e.g., one day before symptoms).
- On average about two secondary infections will occur as a result of transmission from someone who is ill. Some estimates from past pandemics have been higher, with up to about three secondary infections per primary case. The rate of subsequent infections is unpredictable.

- Risk groups for severe and fatal infections cannot be predicted with certainty. Infants, elderly, persons with chronic illnesses and pregnant women are commonly more at risk during annual seasonal influenza. Pandemic influenza virus (es) may affect unexpected population groups (e.g., generally healthy young adults).
- Populations at greater risk for more severe outcomes include those affected by overarching circumstances (e.g., poverty, limited access to healthcare).

Surveillance

- The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) will coordinate surveillance and communication efforts at the national and international level.
- Routine influenza surveillance systems may be overwhelmed as the pandemic progresses.
- Influenza surveillance systems will need to be flexible to accommodate the pertinent epidemiology of the identified virus (es).

Disease Containment

- Influenza containment efforts, illness and death will potentially disrupt community and national infrastructure, including transportation, commerce, utilities, and public safety systems.
- Strict containment measures (e.g., mandatory quarantine and isolation) are unlikely to prevent the introduction and spread of the novel influenza virus into the community.
- Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gather points and canceling public events may be implemented during a pandemic.
- Some persons will be unable or unwilling to comply with isolation directives. For others, social distancing strategies may be less feasible (for example, homeless populations who live or are sheltered in congregate settings). It will be important to develop and disseminate strategies for infection control appropriate for these environments and populations.
- The general public, healthcare system, response agencies, and elected leaders will need continuous updates on the status of the pandemic outbreak, impacts on critical services, the steps EBCI is taking to address the incident, and steps response partners and the public can take to protect themselves.

Healthcare

- The number of ill people requiring outpatient medical care and hospitalization could overwhelm the local healthcare system.
- In the event of an influenza pandemic the State will have minimal personnel resources available for on-site local assistance, and therefore local authorities and regional planners will be responsible for region-specific pandemic preparedness and response plans.

Vaccines

- Vaccine production will occur at a slower pace than the outbreak resulting in a lag behind demand.
- With the emergence of a novel influenza virus strain, it is likely that everyone will need two doses of the vaccine to achieve optimal response.
- To maximize the impact of limited supplies, vaccines will be distributed at the local level according to target groups identified by the federal government.
- The vaccine dispensing strategy will be related to the severity of illness.
- The federal government will assume the responsibility of influenza vaccine research, development, and procurement.
- It is possible that there will be a moderate to severe shortage of a vaccine especially early on in the course of the pandemic and it is even possible that there will be no vaccine available.

Antivirals

- Delays and shortages in the availability of antiviral drugs may occur. Resistance to the pandemic strain may limit antiviral effectiveness.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited and possibly targeted to specific populations.

PART A. COMMAND, CONTROL AND MANAGEMENT PROCEDURES

A. Statutory and Operational Authority

The State of North Carolina has in place legal authority necessary for preparedness, and operational authority is also in place for public health and other health-related emergency response entities at the state and local levels of government. The federal government has been granted authority to support affected states or jurisdictions as necessary, notably the Eastern Band of Cherokee Indians.

B. Federal Operational Authority

1. In general, the federal government has primary responsibility for preventing the introduction of communicable diseases from foreign countries into the United States, and states and local jurisdictions have primary responsibility for isolation and quarantine within their borders. By statute, the U. S. Department of Health and Human Services (US DHHS) Secretary may accept state and local assistance in the enforcement of federal quarantine and other health regulations and may assist state and local officials in the control of communicable diseases. Public health officials at the federal, state, and local levels may seek the assistance of their respective law enforcement

counterparts to enforce a public health order related to isolation and quarantine.

2. On April 1, 2005, by Executive Order, the President of the United States added novel influenza virus to the list of federally quarantinable diseases under the Public Health Service Act. [42 USC 264(b)]
3. The US DHHS released an updated version of the national Pandemic Influenza Response and Preparedness Plan in November 2005; this plan is available at <http://www.pandemicflu.gov>
4. The US DHHS is the federal government's lead agency for the preparation, planning, and response to an influenza pandemic. As such, the US DHHS will:
 - Coordinate the federal government's response to the public health and medical requirements of an influenza pandemic
 - Provide the US DHHS Secretary's Command Center (SCC) as the national incident command center for all health and medical preparedness, response, and recovery activities
 - Authorize the Centers for Disease Control and Prevention (CDC) primary responsibility for tracking an influenza pandemic and managing the operational aspects of the public health response
4. To this end, CDC will augment local and state resources for a pandemic response, as available, in the following areas:
 - Disease surveillance
 - Epidemiological response
 - Diagnostic laboratory services and reagents
 - Education and communication
 - Disease containment and control

C. State and Local Operational Authority

1. While this chapter serves as a guide for pandemic influenza intervention activities, during a pandemic the judgment of healthcare officials, based on knowledge of the specific virus, may alter the strategies that have been outlined.

2. Local officials provide the first line of response with respect to preparing and planning for a pandemic at their own jurisdictional level to:
 - Identify and manage local resources to deal with a pandemic.
 - Appropriately isolate ill persons and recommend appropriate resources within mass quarantine measures.
 - Impose other community containment measures as required.

D. Guidelines for Pandemic Influenza Planning

1. Planning for pandemic influenza encompasses a variety of activities and involves persons representing a range of disciplines and expertise.
 2. Planning for pandemic influenza needs to be done in the context of the responsibilities of particular health agencies and with an understanding the limits of jurisdictions.
- Pandemic Influenza Committee. An executive committee will be designated to oversee a pandemic influenza planning process, in cooperation with local health agencies and other partners. This committee is chaired by the Preparedness Coordinator and includes:
 - Program managers for Health and Medical Division
 - Representatives from Cherokee Indian Hospital
 - Office of Tribal Emergency Medical Services
 - County Representatives from contiguous counties
 - Tribal Emergency Management
 - Harrah's Casino representatives
 - Cherokee Central School representatives
 - Dora Reed representatives
 - Isolation and Quarantine. The legal preparedness plan includes authority for isolation and quarantine orders reside with the Deputy Director of Health and Medical Division. (Ord. No. 777 4-14-2003; Ord. No. 70, 1-19-2004).
 - Public Health Authority. Authority for declaration of a public health emergency resides with the Deputy Director of Health and Medical Division. (Ord. No. 777, 4-14-2003). See Appendix A-2 for community containment measures for non-hospital isolation and quarantine and home care.
 - Deputy Director and Other Tribal Program Managers. The roles of the Health and Medical Division and other tribal program managers are addressed in the *Tribal Emergency Operations Plan – Health and Medical Emergency Operations Plan* (Appendix A-1) in the event of an influenza pandemic that requires EOC activation.
 - Transportation Command and Control. Controlling authorities over intrastate and interstate modes of transportation in the event that these need to be

curtailed during an outbreak include the Chief, Deputy Director of Health and Medical division, Tribal Transportation, Tribal law enforcement agencies, and Tribal EM.

- Intra and inter-State Coordination. The NC DPH, led by the State Health Director and State Epidemiologist, will work cooperatively with the 85 local health jurisdictions, the Eastern Band of the Cherokee Indians (EBCI), the adjoining states of Tennessee, Georgia, South Carolina, and Virginia, the CDC, and other federal agencies to ensure effective communication and coordination of pandemic influenza response.
- Medical Personnel Coordination. Tribal Emergency Management Services has authority to coordinate different medical personnel groups during an outbreak. Medical surge capacity will be coordinated via the State Medical Assistance Teams (SMATs).
- Public Order and Control Measure Enforcement. Tribal law enforcement will assist in maintaining public order and enforcing control measures during an outbreak. In the event of the Chief's declaration of a state of emergency, Tribal EM can request the assistance of the surrounding counties to assist tribal law enforcement agencies if they deem necessary. Mutual Aid agreements of formal understandings with contiguous and volunteer organizations are on file at Emergency Management/911 Office.
- Additional emergency response resources are articulated in *Tribal Emergency Operations Plan – Health and Medical Emergency Operations Plan* (Appendix A-1).

E. Command and Control of Pandemic-related Activities

1. If an influenza pandemic is identified, The Deputy Health Director will recommend Local Emergency Planning Committee (LEPC) activation. It is likely that LEPC activation would be recommended during the Recognition Interval of pre-epidemic planning phase.
2. Agencies will be formed into the LEPC and organized in accordance with the National Incident Management System (NIMS). The lead technical agencies are outlined in the *Tribal Emergency Operations Plan* (Appendix A-1). During an influenza pandemic, the Deputy Health Director and the Chief of Emergency Medicine, or their designees, serve as lead technical advisors to the LEPC. The LEPC and other supporting agencies have divided activities into preparation, response, and recovery phases. Response phase actions to an influenza pandemic will be based on the size and severity of disease event.

3. The existing Emergency Operations Plan will be used to respond to a widespread public health threat posed by pandemic influenza.
4. Recommendations on control measures to prevent the spread of pandemic influenza and other emergency actions will be made by the Health and Medical Division through the Tribal Emergency Operations Center (EOC) and the Chief. Control measures may include mass quarantine measures such as closing schools and canceling large gatherings, or instigating “snow days”.

F. Information Systems

1. The success of efforts to rapidly detect, respond to, and contain an outbreak depends in large part on the availability of information systems. These systems can support and coordinate the activities generated within an Incident Management Structure.
2. Within the Qualla Boundary, the Public Health Information Networks includes the following components that are in use or under development:
 - a. The Health Alert Network (HAN) is a communications system designed to immediately alert key health officials and care providers in North Carolina to acts of bioterrorism as well as other types of emerging disease threats. In the event of an influenza pandemic, the NC HAN can be used to rapidly disseminate information on pandemic activity in North Carolina as well as WHO and CDC alerts regarding the pandemic.
 - b. The North Carolina Immunization Branch has developed an Immunization Registry (NCIR). The NCIR will include a function for tracking adult immunizations, including influenza vaccines. The Eastern Band of Cherokee Indians is currently working on using NCIR to track adult immunizations.
 - d. The North Carolina Hospital Emergency Surveillance System (NCHESS) is a system that enables electronic data from North Carolina hospital emergency departments to be transmitted to a central database. NC DPH monitors emergency department data for specific syndromes, such as influenza-like illness.
3. The *NC Emergency Operations Plan* (Appendix A-1) provides information on planning for public information releases and it is up to the Public Information Officer (PIO) to decide to use print and electronic media during activation. See Appendix A-3 for Public Information Release Forms

Part B. SURVEILLANCE

A. Introduction

The Eastern Band of Cherokee Indians participates in routine influenza surveillance annually from October through May. The Communicable Disease Branch (CDB) (formerly General Communicable Disease Control Branch) oversees and coordinates the influenza

surveillance activities. NC participates in many of the activities of influenza surveillance outlined by the Centers for Disease Control and Prevention (CDC). They include virologic surveillance by the NC State Laboratory of Public Health (SLPH), surveillance of influenza-like illness (ILI) by sentinel providers and the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT), influenza activity level in NC as reported by the State Epidemiologist, and the 122-Cities pneumonia and influenza mortality system, of which Charlotte, NC is one of the reporting cities.

Influenza surveillance in NC also includes the investigation of outbreaks of influenza, case investigations of severe illness and deaths in children associated with influenza, and enhanced surveillance for novel influenza viruses in certain situations (e.g. travelers, refugees, and poultry workers who meet specific epidemiologic criteria). NC added novel influenza virus infections in humans to the list of reportable conditions in 2006.

In 11 of the largest hospital systems in NC, ILI surveillance is augmented by hospital-based public health epidemiologists (PHEs). PHEs perform active surveillance for hospital admissions for ILI and investigate clusters of ILI with special attention to those involving increased severity or unusual populations. PHEs also assist with case investigations of hospitalized patients who have unusual clinical syndromes or severe morbidity associated with influenza.

In the event of an influenza pandemic, routine surveillance systems will need to be rapidly adapted to respond to the challenges of increased influenza cases. In the early phases of a pandemic, surveillance systems will need to have the sensitivity to detect early human cases of novel virus in the state. In the later phases, surveillance systems will need to assimilate large amounts of data to determine age-specific attack rates, morbidity, and mortality.

Syndromic surveillance for ILI is being conducted in nearly all hospital emergency departments (EDs) across the state. ED data is collected and analyzed for ILI trends with the NC Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). NCDPH monitors ED data for specific syndromes, such as ILI, on a daily basis. Laboratory data from the NC State College of Veterinary Medicine and data from a wildlife refuge are also downloaded in the NC DETECT system daily. NCDPH will rely heavily on NC DETECT to monitor ILI in hospital emergency departments across the state.

B. Interpandemic period (no corresponding CDC Pandemic Interval)

NC DPH will:

1. Maintain routine influenza surveillance, which is conducted from October to May each year. Current influenza surveillance is coordinated through the Communicable Disease Branch, Health and Medical Division, and Regional Public Health Response Team (PHRST 6), weekly reports are developed and disseminated and include
- b. **Syndromic Surveillance** utilizing Emergency Department visits from Cherokee Indian Hospital and Tribal Health Programs and the analysis of chief complaints, triage notes, and vital signs as they relate to ILI through the NC Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). This system monitors ED data for specific syndromes such as ILI on a daily basis.
- d. **Reporting of Outbreaks** in long-term care facilities, schools, and other settings of public health importance.
- e. **Investigations of deaths and severe illness in children less than 18 years of age.** The Tribe conducts active surveillance for influenza-associated deaths and cases of encephalopathy in

children less than 18 years of age. Pediatric deaths are on the list of immediately reportable conditions in NC.

C. “Investigation” Interval

(Sporadic cases of novel influenza occurring)

Trigger:

Identification of human case of potential novel influenza A infection

Actions:

If case is within the state:

- Assess case contacts to determine human to human transmission and risk factors for infection
- Share information with animal and human health officials and other stakeholders, including reporting of cases according to the Nationally Notifiable Diseases Surveillance System and sharing virus samples
 - Disease-based surveillance
 - Outbreak investigations
 - Case investigations of pediatric deaths and encephalopathy associated with influenza
 - ILI surveillance in hospital EDs (NC DETECT) and admissions (PHEs)
- The Health and Medical Division will regularly monitor bulletins from CDC and WHO regarding virologic, epidemiologic and clinical findings associated with new variants isolated within or outside the US

D. “Recognition” Interval

(Clusters of novel influenza cases identified and confirmation of sustained and efficient human-to-human transmission)

Triggers:

Confirmation of human cases of novel influenza A and demonstration of efficient and sustained human-to-human transmission.

Two or more laboratory-confirmed pandemic cases that are not epidemiologically linked to any previous case

Actions:

If within the state:

- Continue/initiate actions described for “Investigation Interval”
- Implement case-based investigation and containment
- Confirm all suspect cases at state public health laboratory
- Report cases according to Nationally Notifiable Diseases Surveillance System
- Conduct enhanced novel influenza A surveillance
- Activate an Incident Management Team and evaluate need for full activation of the EOC
This will establish a clear chain of accountability, meet staffing requirements for an extended period and establish communications/coordination plans with partner responding agencies.
- Contact the Local Emergency Response Team to assess if the Tribal EOC will be activated beyond routine operations
- Activate all current surveillance methods for influenza if outside of the regular influenza season
 - Virologic surveillance
 - Disease-based surveillance
 - Outbreak investigations

- Case investigations of pediatric deaths and encephalopathy associated with influenza
- ILI surveillance in hospital EDs (NC DETECT) and admissions (PHEs)
- The Health and Medical Division will continue to monitor updates from CDC and WHO frequently in order to maintain a high level of situational awareness
- The Health and Medical Division will produce at minimum weekly reports on flu activity in NC and updates to the status of the pandemic. This list will be distributed to all public health and tribal partners.
- Monitor school absenteeism due to ILI through reports from Local Health Departments or through statewide data if available from the NC Department of Public Instruction.

E. “Initiation” Interval

(First human cases of pandemic influenza virus in the US; if pandemic strain first emerges in US, “Recognition” and “Initiation” intervals are the same)

Trigger:

Laboratory-confirmed case of defined pandemic influenza detected within the US

Actions:

Health and Medical Division will:

- Continued enhanced surveillance for detecting additional or potential cases of the epidemic strain to determine when community mitigation interventions will be implemented.
- Continue all surveillance methods for influenza if outside of the regular influenza season
 - Virologic surveillance
 - Disease-based surveillance
 - Outbreak investigations
 - Case investigations of pediatric deaths and encephalopathy associated with influenza
 - ILI surveillance in hospital EDs (NC DETECT) and admissions (PHEs)
- Initiate collection of additional surveillance data as needed to meet state or federal surveillance needs. Such additional data may include some or all of the following:
 - In conjunction with CDC, local health department and other partners, design studies to Document outbreaks of influenza in different population groups
 - Determine age-specific attack rates, morbidity and mortality
 - Describe unusual clinical syndromes, risk factors and treatment
 - Describe factors associated with fatal cases
- The Health and Medical Division will continue to monitor updates from CDC and WHO frequently in order to maintain a high level of situational awareness
- The Health and Medical Division will produce at minimum weekly reports on flu activity in NC and updates to the status of the pandemic. This list will be distributed to all public health and responder partners.
- Health and Medical Division will implement tools to study the effectiveness of control methods and community containment measures.
- Prepare for investigation and response

Continue enhanced surveillance for novel influenza A

F. “Acceleration” Interval

(Public health officials recognize that containment efforts have not succeeded and onward transmission is occurring)

Trigger:

Increasing numbers of cases which exceed resources to provide case-based control measures.

Actions:

- Elevate the activation level the EOC to effectively manage Health and Medical Division resources over the extended period of a pandemic
- Communicate with the State Emergency Response Team regarding needed support
- Dispatch representatives, provide technical assistance and deliver reports as requested to the Tribal EOC.
- Transition surveillance from individual case confirmation to mortality and syndromic disease monitoring
- Monitor ILI in the hospital and satellite clinics through the NC DETECT and other appropriate tribal monitoring surveillance resources. Specific queries will be made based on pandemic needs.
 - The Health and Medical Division will report to the state who will report to CDC as requested for the numbers of cases and other required information in the frequency requested
 - Monitor effectiveness of community mitigation activities including school dismissal, large group participation, etc
 - Monitor vaccination coverage levels, antiviral use, and adverse events
 - Continue/initiate actions described for “Initiation Interval”

G. “Peak/Established Transmission” Interval

(Extensive transmission in the community)

Triggers:

Percentage of visits due to ILI reported by providers exceeds peak value averaged over the past three seasons or percentage of ED visits due to ILI reported through NC DETECT and general inpatient admission monitoring exceeds peak value averaged over the past three seasons **AND**

“Widespread” influenza activity is reported by the State Epidemiologist using CDC surveillance criteria and >20% of specimens from patients with influenza-like illness submitted to the state public health laboratory are positive for the pandemic strain during a seven day period

Health care system surge capacity has been exceeded

Actions:

Continue/initiate actions described for “Acceleration Interval”

Laboratory confirmation of only a sample of cases as required for virologic surveillance

Implement surveillance primarily for mortality and syndromic disease

H. “Deceleration” Interval

(Rates of pandemic influenza declining)

After the first pandemic wave, surveillance methods will return to a level utilized during early phases (decelerate) but may re-accelerate into a second wave. Surveillance will be directed at determining the onset of subsequent waves and to determine the efficacy of containment measures such as vaccine, antiviral medications, school dismissal and canceling large gatherings.

Triggers:

Percentage of visits due to ILI reported by providers falls below peak value averaged over the past three seasons and percentage of ED visits and hospital admissions due to ILI reported through NC DETECT and general hospital monitoring falls below peak value averaged over the past three seasons

<10% of specimens from patients with influenza-like illness submitted to the state public health laboratory are positive for the pandemic strain for at least two consecutive weeks

“Regional”, “local”, or “sporadic” influenza activity is reported by the State Epidemiologist using CDC surveillance criteria

Health care system utilization is below surge capacity

Actions:

Continue/initiate actions described for “Peak/Established Transmission Interval”

Transition surveillance from syndromic to case-based monitoring and confirmation

I. “Resolution” Interval

(Pandemic cases occurring only sporadically)

Triggers:

Laboratory-confirmed pandemic influenza cases are occurring sporadically

Health care system utilization is approaching pre-pandemic levels

Actions:

- Return to routine surveillance activities to verify resolution of epidemic wave
- Continue/initiate actions described for “Deceleration Interval”
- Resume enhanced virologic surveillance to detect emergence of increased transmission.
- Prepare for possible second wave
- Review and analyze epidemiologic data obtained during the pandemic
 - Age-specific mortality, morbidity and attack rates
 - Vaccine efficacy
 - Antiviral medication efficacy
 - Community containment measures

Part C. VACCINE PREPAREDNESS AND RESPONSE

Introduction

Vaccination is the primary control measure to prevent influenza. It is assumed that vaccine against a pandemic strain of influenza will not be available for four to six months after the start of a pandemic. When vaccine does become available, the demand will exceed the supply for some time. The key steps in the process of vaccine acquisition and delivery during an influenza pandemic will now be outlined. The Advisory Committee on Immunization Practices (ACIP) and the National Vaccine Advisory Committee (NVAC) have drafted vaccine priority group recommendations which are outlined in the US HHS

Pandemic Influenza Plan, released in November 2005. Priority groups recommended in the US HHS plan include personnel essential to the pandemic response (e.g., healthcare workers, first responders, public safety officers, etc) as well as those individuals at high-risk for influenza complications as defined by the ACIP. The rank order of these priority groups is subject to change. It is assumed that priority groups will be vaccinated sequentially. Project areas will have some flexibility in defining priority groups and sub-prioritizing within them.

A. Investigation Interval

1. Provide technical assistance, as needed, to Tribal Health and Medical Division Programs for vaccine-related program planning and policy development including:
 - Assess vaccine storage capacity within the boundary
 - Review vaccine storage and handling procedures
 - Estimate number people in each priority group
 - Discuss security provisions for vaccine supply
 - Provide information and tools for mass vaccination
 - Review adverse event reporting procedure
 - Clarify responsibilities of community partners in vaccination (e.g. hospitals, nursing homes)
 - Use of North Carolina Immunization Registry (NCIR) to record all doses of flu vaccine given regardless of source (public or private) and for reminder/recall for second doses of vaccine.
 - Provide information and/or vaccination to high-risk or vulnerable populations See Appendix A-4 for EBCI high risk and vulnerable populations.
2. Monitor pandemic influenza vaccine information provided by CDC.
3. Encourage seasonal influenza vaccination, particularly of health care workers and high-risk populations through support of campaigns.
4. Encourage pneumococcal vaccination of high-risk populations.
5. Work with various Tribal Health programs and Emergency Management to identify potential funding sources to support vaccine related activities during pandemic.

B. Recognition Interval

1. Continue activities of Investigation Interval
2. Provide technical assistance, as needed, to Health and Medical Division and other Tribal programs for continued program planning and policy development as well as exercising pandemic response plans, with particular emphasis on mass vaccination clinics.
3. Work with other stakeholders to develop pandemic-related educational programs for Tribal programs. Modify existing plans as needed to reflect new recommendations.

4. Assist Tribal programs in identifying sources of additional vaccinators if needed for surge (e.g. retired nurses and doctors, EMS personnel, nursing students, etc).
5. Continue to assist Tribal program with Pandemic Influenza Vaccine. Assist Tribal programs with estimating number of individuals who may need to receive pre-pandemic vaccine based on national guidance. See Appendix A-5 for Vaccination Estimation Worksheets
6. Vaccine Available for Distribution
 - Assist in vaccine distribution according to established federal plan.
 - Assist in the redistribution of vaccine as needed to provide an equitable geographic distribution of supplies.
 - Work with Tribal Public Information Officer to provide accurate public messages regarding vaccine availability and location of vaccine administration sites

C. Initiation Interval

First Human cases of novel influenza are identified

1. Continue to research and communicate new pandemic developments. Modify existing internal plans as needed to reflect new recommendations.
2. Work with CDC and other federal partners, vaccine manufacturers and county partners to establish plan for attainment and distribution of initial vaccine supplies. It is likely that strategies utilized for attainment and distribution will change as vaccine supplies increase in availability during this pandemic period. Per the CDC document "Pandemic Influenza Vaccination: A Guide for State, Local, Territorial and Tribal Planners (December 11, 2006) the following planning assumptions can be made regarding vaccine acquisition and distribution of vaccine in a pandemic situation:
 - If pre-pandemic vaccine is available it will be purchased by the federal government.
 - Pandemic vaccine will be purchased by the federal government through the first year.
 - Most pandemic vaccine will be allocated in proportion to population, though exceptions will be made for critical infrastructure personnel who are not evenly distributed across the nation.
 - Pandemic vaccine will be allocated to project areas in proportion to their total population.
3. Determine expected timeline for vaccine distribution.
4. Keep healthcare providers and other stakeholders apprised of timeline for vaccine distribution through use of conference calls, established listserves (e.g. Public Health Leaders and Local Health Directors), blast faxing, NCIR announcement page, websites of state government and professional healthcare organizations.
5. Work with Tribal Public Information Officer to continue to keep citizens informed about vaccine development and begin to craft messages about where, when and who will be vaccinated

6. Provide technical assistance for training of additional vaccinators, as needed, utilizing existing CDC resources.
7. Increase data storage capacity and number of support staff for NCIR.

D. Acceleration Interval

1. Health and Medical Division and Influenza Planning Committee will identify the containment efforts that have not succeeded and work on developing new educational materials as well as vaccination efforts. See Appendix E-1 for a list of the Influenza Planning Committee
2. The four primary community mitigation efforts will take place during this interval which include:
 - Isolation and treatment (as appropriate) with influenza antiviral medications of all persons with confirmed or probable pandemic influenza. Isolation may occur in the home or healthcare setting, depending on the severity of an individual's illness and/or the current capacity of the healthcare infrastructure.
 - Voluntary home quarantine of members of households with confirmed or probable influenza case(s) and consideration of combining this intervention with the prophylactic use of antiviral medications, providing sufficient quantities of effective medications exist and that a feasible means of distributing them is in place.
 - Dismissal of students from school and school-based activities and closure of childcare programs, coupled with protecting children and teenagers through social distancing in the community to achieve reductions of out-of-school social contacts and community mixing.
 - Use of social distancing measures to reduce contact between adults in the community and workplace, including, for example, cancellation of large public gatherings and alteration of workplace environments and schedules to decrease social density and preserve a healthy workplace to the greatest extent possible without disrupting essential services. Enable institution of workplace leave policies that align incentives and facilitate adherence with the non pharmaceutical interventions outlined above.

E. Peak/Established Transmission Interval

1. Transmission within the community will be widespread and extensive during this interval. The healthcare system will overwhelmed and overburdened. Tribal personnel will ask contiguous counties for assistance, the state, or in certain circumstances the federal government.

E. Deceleration Interval

1. Rates of epidemic infection are declining, providing an opportunity to begin planning for appropriate suspension of community mitigation activities and recovery.
2. Tribal officials may choose to rescind community mitigation intervention measures if new cases are not occurring or occur very infrequently.

E. Resoultion Interval

1. Determine total amounts of vaccine distributed, administered and wasted from data contained in utilized databases.
2. Evaluate internal agency plan
3. Solicit feedback from local partners and stakeholders regarding evaluation of plan.
4. Revise plan based on evaluation findings.

Part D. ANTIVIRAL PREPAREDNESS AND RESPONSE

Introduction

The antiviral armamentarium for chemoprophylaxis and treatment of influenza includes two main classes of antiviral agents, the adamantanes (amantadine and rimantadine) and the neuraminidase inhibitors (zanamivir and oseltamivir). Both adamatanes and neuraminidase inhibitors may play a role in chemoprophylaxis and treatment depending on the following factors:

- Susceptibility of the pandemic influenza strain to currently available antiviral medications
- Prophylactic and therapeutic efficacy of the respective antiviral agents against the strain
- Number of doses of the respective antiviral agents available via the public and private sectors
- Size of the target populations recommended to receive chemoprophylaxis or treatment
- Cost and reimbursement

The main goals of chemoprophylaxis and treatment are to reduce the human influenza infection rate and to reduce human morbidity and mortality associated with the pandemic strain. Reduction of the infection rate via chemoprophylaxis should be the last preventive option and should follow implementation of other recommended or indicated preventive efforts (e.g., restrictions on travel and communal events, isolation of ill persons, quarantine of exposed persons, implementation of infection control measures such as the use of masks and diligent hand washing, and vaccination).

If sufficient stockpiles of antivirals exist at the time the pandemic reaches the United States, chemoprophylaxis efforts in North Carolina should prioritize those persons deemed at high risk of exposure and indispensable to carrying out public health, clinical and public safety-related functions during the early stages of the pandemic while vaccine is being produced and vaccination clinics are being established and placed in operation. If there are insufficient stockpiles of antiviral agents for chemoprophylaxis, treatment should be directed toward those same groups and also target groups at increased risk of

morbidity and mortality, as prioritized by the CDC. Antiviral drug priority group recommendations have been drafted by the National Vaccine Advisory Committee (NVAC) and are outlined in the US DHHS Pandemic Influenza Plan, released in November 2005. These priority groups can be found and are described at <http://www.epi.state.nc.us/epi/gcdc/pandemic.html>. EBCI will most likely never turn to priority groups but will focus on mass vaccination efforts. However, should EBCI need priority groups they will follow the prioritization guidelines of the CDC.

The early epidemiology of disease associated with the next pandemic strain may identify high risk groups that are somewhat different from those identified during the prior pandemics and outbreaks due to novel influenza viruses. However, our knowledge of seasonal influenza indicates that infants and children 6 to 23 months, adults over age 65, and adults and children with malignancy, cardiopulmonary disease (such as asthma and other chronic lung diseases, congenital heart disease, congestive heart failure) and chronic renal disease (including those with renal failure on dialysis) are those primarily at risk for increased morbidity and mortality.

These historical data have guided the NVAC recommendations for specific target populations for antiviral treatment and prophylaxis during an influenza pandemic. Local level estimates of specific target populations were obtained by accessing specific demographic information through the Tribal Enrollment Office. Appendix A-6 can be used as a template to estimate the number of people in certain priority groups as outlined in the US DHHS Pandemic Influenza Plan.

A. Investigation and Recognition Intervals

1. The Health and Medical Division will provide technical assistance for planning and policy development to include:
 - Notification of CDC's assessment of high-risk populations (for morbidity and mortality) and recommended priority groups for chemoprophylaxis and treatment
 - Sharing of CDC's guidelines and recommendations for chemoprophylaxis and treatment, including criteria for identification and prioritization of specific priority groups.
 - Assistance in the calculation and review of specific priority groups that are considered high-risk.
 - Assistance in the calculation and review of -specific priority groups necessary to ensure immunization of the public, maintenance of health care capacity and quality, and maintenance of public health and safety.
 - Assistance in the calculation and review of specific antiviral doses required for chemoprophylaxis or treatment of identified priority groups
 - Education and training on the receipt, handling, transport, storage, security, and tracking of antiviral medications.
 - Review and assessment of county and Tribal plans for receipt, handling, transport, storage, security, and tracking.
 - Review and assessment of county and Tribal delivery/distribution plans for antivirals to hospitals, private health care providers, clinics and other points of care.
 - Review and assessment of distribution plans for antivirals to tribal authorities and bordering counties and states (mutual aid agreements).
2. Review the current *EBCI Strategic National Stockpile Plan* and update it as necessary for receipt and distribution of influenza antivirals. (Appendix B is the current SNS Plan for the Tribe).
3. Consider the indications and feasibility of procurement and maintenance (including availability of antivirals, shelf-life/expiration date issues, etc.) of local or state stockpiles of antiviral drugs versus establishment of institutional stockpiles in health care facilities versus emergency purchase from private sector distributors. Develop plans accordingly.

B. Initiation and Acceleration Intervals

1. Obtain from CDC the most current recommendations on daily dosage and duration of therapy of antivirals for treatment and chemoprophylaxis. Provide

this guidance to hospitals, health care providers, local health departments and other key stakeholders.

2. Enhance education and training for appropriate Tribal employees. Perform exercises with hospitals and health care providers at the local level that simulate receipt and distribution of antivirals so that roles and responsibilities are well understood. The medical community and public should be knowledgeable on the following topics:
3. a) the role of antivirals in responding to pandemic influenza, b) the need to prioritize the use of limited supplies of antivirals for treatment and chemoprophylaxis, c) rationale for identified priority groups d) importance of appropriate use to minimize the development of drug resistance.
4. 4. Refine and revise antiviral distribution plan based on current stockpile situation as well as any updates to priority group recommendations

C. Peak/Established Transmission Interval

1. Review updated geographic distribution of outbreaks with pandemic potential and determine, as best as possible, the estimated arrival date (or window) of the pandemic to the United States and North Carolina.
2. Review the -specific priority group data, amending the list if analysis of early epidemiologic and morbidity and mortality data suggest other high-risk groups
3. Determine the available supplies of indicated antiviral medication(s) in the public (federal SNS, state and any local and tribal stockpiles) and private sectors.
4. Review and update antiviral distribution plan within the tribal SNS plan to address preparedness at the state and local level for receipt, transport, storage, security, tracking, and delivery/distribution of antivirals.
5. 6. Review and update pandemic influenza antiviral chemoprophylaxis and treatment plan based on information obtained from 1 through 5 above.

D. Deceleration

Request, according to federal guidelines and the protocol set forth in the current *Strategic National Stockpile Plan*, antiviral medication delivery to the boundary.

1. 3. Communicate with Tribal health programs the expected delivery date(s).
2. 4. Obtain from CDC updated guidance and recommendations on the use of antivirals in the following scenarios:
3. a) sporadic reporting,
4. b) limited transmission
5. c) widespread transmission

6. Communicate guidance and recommendations to local health departments and health care partners. Review and modify tribal plans for chemoprophylaxis and treatment as necessary. Assist hospitals in implementing procedures for early detection and treatment of influenza in health care workers.

E. Resolution

1. If available and epidemiologic and clinical data indicate antiviral medications were successful in reducing infection and/or reducing morbidity and mortality, more antiviral medications will be ordered
2. Redistribute antivirals according to plan and experience gained from the first wave.
3. Determine total amounts of antivirals ordered, shipped, administered and wasted (if possible).
4. Determine type and frequency of any reported adverse reactions and review epidemiologic evidence for causal association.
5. Review epidemiology of the pandemic and data on the efficacy of antiviral chemoprophylaxis and treatment.
6. Update antiviral plan accordingly based on 2 and 3 above.

PART E. MEDICAL RESPONSE

Refer to Hospital policies as outlined in Appendix C or in the Cherokee Indian Hospital Emergency Operations Plan.

PART F. INFECTION CONTROL AND PREPAREDNESS IN HEALTHCARE FACILITIES

A. Introduction

Influenza is a common cause of respiratory illness, requiring health-care visits and hospitalization. During the influenza season, outbreaks of healthcare associated influenza affect both patients and personnel in chronic care facilities and hospitals. The purpose of this chapter is to help healthcare facilities prepare for the presence of a novel or pandemic influenza virus in their facility.

B. Background

1. Incubation Period

The incubation period for human influenza virus is short, usually 1 to 3 days (range 1 to 7 days). The incubation period of novel influenza viruses could be longer than for human influenza viruses. For example, the incubation period for the avian influenza A (H5N1) virus has been shown to be approximately 2 to 4 days, with ranges of up to 8 days.

2. Diagnostic Criteria

In the event of a pandemic, updates of clinical presentations, case definitions, and algorithms will be posted on the CDC influenza website (<http://www.cdc.gov/flu/>) and the WHO website (<http://www.who.int/en/>).

3. Cleaning and disinfection

Environmental cleaning and disinfection for pandemic influenza follow the same general principles used daily in healthcare settings. The influenza virus is inactivated by the standard EPA approved disinfectants (e.g., 1:10 dilution of bleach in water) commonly used in hospitals.

4. Types of Infection Control Precautions

Infection control precautions are transmission-based, depending on the clinical presentation or syndrome and likely pathogens, until the infectious etiology has been determined.

Standard Precautions should be routinely practiced by all health-care personnel. During the care of a patient with suspected or confirmed influenza:

- Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is expected.
- Wear a gown if soiling of clothes with patient's respiratory secretions is expected.
- Change gloves and gowns after each patient encounter and perform hand hygiene.
- Decontaminate hands before and after touching the patient, after touching the patient's environment, or after touching the patient's respiratory secretions, whether or not gloves are worn.
- When hands are visibly soiled or contaminated with respiratory secretions, wash hands with either a non-antimicrobial or an antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands in clinical situations. Alternatively, wash hands with an antimicrobial soap and water.

Contact Precautions should be understood by health-care personnel.

- Place patient into a private room if possible. If a private room is not available, place (cohort) patients with other patients either suspected or confirmed to have same diagnosis requiring contact precautions (e.g., resistant organism infection).
- Gloves and gown should be donned prior to entering room.
- Remove gloves and gown prior to leaving the patient's room and dispose of gloves and gown in a waste container.

Droplet Precautions should be understood and practiced by health-care personnel.

In addition to Standard Precautions, observe Droplet Precautions during the care of a patient with suspected or confirmed novel influenza:

- Place patient into a private room as soon as possible. If a private room is not available, place (cohort) suspected influenza patients with other patients suspected of having influenza; cohort confirmed influenza patients with other patients confirmed to have influenza. Negative pressure rooms are not necessary.
- Masks should be donned when entering the room within 6-10 feet of the patient. Remove the mask when leaving the patient's room and dispose of the mask in a waste container.
- Eye protection (e.g., goggles) should be considered if the patient is producing infectious aerosols and close contact (within 3 feet) is possible
- Until placement in a private room, and if patient movement or transport is necessary, place a surgical mask on the patient.
- Patient should be maintained on Droplet Precautions for a minimum of 5 days, unless there is a full resolution of illness or another etiology is identified.

Airborne Precautions control measures should be understood by health-care personnel.

- Place patient in a private room that meets airborne isolation requirements (i.e., private room, negative pressure, air exhausted directly to the outside, ≥ 6 air exchanges per hour). Staff should perform a "tissue test" or other appropriate test to confirm negative pressure before placing the patient in the room, and then daily to ensure negative pressure is maintained.
- Personnel should wear an N95 respirator (prior fit test clearance and instructions on respirator use) when entering the room. If N95 respirators are not available, other NIOSH-certified N-, R-, or P-class respirators may be used. Any change in the type of respirator used would require additional fit testing of personnel. Powered air purifying respirators (PAPRs) should be used for high-risk procedures, and should be considered for workers who have not been fit tested for an N95 respirator. Training is required to ensure proper use and care of PAPRs. The Infection Control Manager will be responsible for overseeing appropriate PAPR use.

Until placement in a private room, and if patient movement or transport is necessary, place a surgical mask on the patient. Additional precautions are advisable during a pandemic. Airborne Precautions may be necessary in the following special circumstances [see CDC October 2006 guideline at

<http://www.pandemicflu.gov/plan/healthcare/maskguidancehc.html>] :

- Airborne Precautions (including eye protection) should be considered for performing all procedures that generate aerosols (e.g., sputum induction, aerosol medication therapy, bronchoscopy, intubation). If possible, Airborne Infection Isolation Rooms (AIIRs) should be used when performing high-risk aerosol-generating procedures.

- i. Limit the use of aerosol-generating procedures on pandemic influenza patients to those that are deemed medically necessary.
 - ii. Use clinically appropriate sedation during intubation and bronchoscopy to minimize resistance and coughing during the procedure.
 - iii. Eye protection should consist of goggles that fit snugly around the eyes.
 - iv. A face shield may be worn over goggles to protect exposed areas of the face but should not be used as a primary form of eye protection for these procedures.
- Airborne Precautions should be considered for managing strains of influenza exhibiting increased transmissibility.
 - Airborne Precautions should be considered during the initial stages of an outbreak of an emerging or novel strain of influenza, as early in a pandemic, it may not be clear that a patient with severe respiratory illness has pandemic influenza.

Criteria for escalating Infection Control measures

During a pandemic, adherence to infection prevention and control policies and procedures is critical to minimize the transmission of pandemic influenza and other infectious diseases. Transmission risk in healthcare facilities (including hospitals, long-term care, and outpatient facilities) depends on the extent of pandemic influenza activity in the community and pandemic influenza activity in the facility. The pandemic influenza response for escalating infection control measures will be based on pandemic influenza activity and transmission risks. As the epidemiologic characteristics of the pandemic virus are more clearly defined, the state of North Carolina will, in conjunction with the CDC, provide updated infection control guidance.

- It is anticipated that immunization (for the pandemic influenza strain) will not be available in the early stages of a pandemic and perhaps not even available in later stages, necessitating an emphasis on infection prevention, control practices, and personal protective equipment (PPE)
- Strict adherence to hand hygiene recommendations is the cornerstone of infection prevention and, in conjunction with adherence to isolation precautions, may be the only preventative measures available during a pandemic.

The primary strategies for preventing pandemic influenza are the same as those for seasonal influenza: vaccination, early detection and treatment with antiviral medications, and the use of infection control measures to prevent transmission during patient care. However, when a pandemic begins, a vaccine may not yet be widely available, and the supply of antiviral drugs may be limited. The ability to limit transmission in healthcare settings will, therefore, rely heavily on the appropriate and thorough application of infection control measures.

C. Investigation and Recognition Intervals

1. Encourage Vaccination of All Healthcare Workers

It is recommended that all health care workers be vaccinated with the current recommended influenza vaccine. This is an important infection control measure to prevent the spread of influenza from healthcare workers to their patients. Ensure adequate supply of vaccine.

2. Respiratory Hygiene/Cough Etiquette

Respiratory Hygiene/Cough Etiquette Programs should be ongoing at the first point of contact with a potentially infected person to prevent transmission of all respiratory tract infections in health-care settings, including influenza.

Respiratory/Cough Etiquette Program includes:

- posting visual alerts and instructional materials to:
 - teach appropriate hand hygiene and Standard Precautions
 - instruct patients and visitors with symptoms of a respiratory infection to inform health-care personnel and report to a specified screening and/or evaluation site;
- providing tissues to patients and visitors to cover their mouth and nose when coughing and sneezing;
- providing hand hygiene materials in waiting room areas (e.g., alcohol-based agents);
- ensuring supplies for hand washing are available at sinks;
- providing surgical masks to persons who are coughing;
- designating a separate waiting area (at least 3 feet away) in waiting rooms where patients and visitors with respiratory symptoms may be segregated;
- encouraging coughing persons to sit at least 3 feet away from others; and
- having health-care personnel observe Droplet Precautions in addition to Standard Precautions

3. Education

Health-care personnel who would be involved in caring for a patient with a novel strain of influenza should receive training in the above Respiratory Hygiene/Cough Etiquette program, emphasizing modes of transmission, appropriate infection control precautions and exposure control.

4. Antivirals for Influenza

Some antiviral drugs are clinically effective and may be used for both treatment and prevention of uncomplicated influenza A infection. See Part D: Antivirals for further discussion. CDC often issues guidance during the influenza season regarding use of antivirals. For healthcare workers needing to receive antiviral prophylaxis to prevent influenza infection:

- Pre-exposure antiviral prophylaxis should be taken for at least 6 weeks.
- Post-exposure prophylaxis should be taken for at least 7 days and should begin as soon as possible after exposure.

5. Develop system-wide business continuity of operations plan to address potential personnel and bed shortages, as well as other issues that may arise during a pandemic.

D. Recognition Interval

1. During the Recognition Interval in which a novel strain of influenza A has been detected in humans, with no or minimal human to human transmission of the virus, consider screening all patients hospitalized with pneumonia for the following characteristics that might indicate a higher index of suspicion for novel virus infection:
 2. Assess availability of vaccines, antiviral agents, supplies, and equipment both consumable (e.g., PPE) and durable (e.g., ventilators).
 - Adequate supplies of vaccines, antiviral agents, supplies, and equipment will be determined and maintained within the facility.
 - Additional storage location for vaccines, antiviral agents, supplies, and equipment will be determined.
 - A 3 month surplus of consumable supplies (e.g., surgical masks, N-95 respirators) is recommended.
 3. Guideline for prioritization of laboratory services will be reviewed and/or developed.
 4. Vaccination
 - Vaccination of healthcare personnel with seasonal influenza vaccine should continue; vaccinating with seasonal human influenza vaccine reduces the risk of co-infection of healthcare personnel with a novel or avian influenza virus and a human influenza virus.
 - Healthcare personnel with direct patient contact and ancillary support staff are one of the highest priority groups to receive pandemic influenza vaccine once it is available. A complete list of recommended priority groups for pandemic influenza vaccine is in the US DHHS Pandemic Influenza Plan, released in November 2005. Estimating the number of personnel in certain priority groups should begin. Local health departments can be a resource in making these estimations.
 5. Identify source for back-up supplies of antivirals and plan for treatment and prophylaxis (both pre- and post-exposure) for selected healthcare personnel. Recent guidelines on the prioritization of antivirals during a pandemic are outlined in the US DHHS Pandemic Influenza Plan, released in November 2005. These recommendations should be utilized to determine how much antiviral medication would be needed for groups of healthcare personnel.
 6. All healthcare workers are expected to provide care for patients with known or suspected novel influenza A virus, as well as comply with all infection control and public health recommendations.

7. If a healthcare worker provides care at more than one facility, the healthcare worker will be instructed to notify their supervisor if one of the facilities is providing care to novel virus patients.

E. Initiation Interval

1. In the initiation interval in which a novel influenza virus has resulted in small or large clusters of limited human to human spread, signs will be placed outside the Emergency Department (ED) / outpatient facilities requesting that persons with certain epidemiologic criteria coupled with an influenza-like illness identify themselves to the ED receptionist (e.g., police, triage nurse).

- A mask should be placed on the patient prior to them entering the ED.
- Persons accompanying the patient for evaluation should be screened for symptoms of the novel virus ideally prior to entering the facility.
- Posted visual alerts will recommend “respiratory hygiene” precautions.

2. Intake and triage staff will be trained on how to assess risks for the pandemic strain of influenza and use any applicable tools (thermometers, signs/symptoms of pandemic influenza) to screen patients. The pre-identified pandemic influenza coordinator or designee will develop a strategy to assign responsibility.

3. Initiate active screening of symptomatic patients for either a personal or contact history of travel to geographic area with novel virus activity.

4. Adherence to infection prevention and control policies and procedures is critical to minimize the transmission of novel influenza virus and other infectious diseases. Transmission risk in healthcare facilities (including hospitals, long-term care, and outpatient facilities) depends on the extent of novel virus activity in the community and novel virus activity in the facility. Decisions regarding the need for escalating infection control measures will be based on novel virus activity and transmission risks.

5. During a potential pandemic of any size, existing staffing shortages may be amplified by illness among staff members, fear and concern about the novel virus, and isolation and quarantine of exposed staff or ill/exposed family members. Staffing shortages are likely to escalate as a pandemic progresses. The strain involved in patient care and prolonged use of personal respiratory protection may intensify staffing challenges. Determination of how staffing needs will be met as the number of patients increases and/or staff become ill or are quarantined should occur.

- The staffing needs for a patient with novel or pandemic influenza A virus may be greater (e.g., twice the normal staffing ratio) than that normally provided for patients.
- Example: The minimum number of staff and ancillary staff necessary to care for a single patient or group of patients on any given day is [-----] (i.e., 2 nurses and 1 assistant for 8 patients).
- Example: The minimum staffing requirements for providing care for two patients with novel influenza A will be [-----].

- If quarantine is used as an exposure management tool, some healthcare workers may be placed on ‘home/work restrictions’ to ensure sufficient staffing levels. Healthcare workers on home/work restrictions should travel only between home and the healthcare facility for the duration of the restriction.
- During a pandemic of any size, all infection control professionals will be needed to formally monitor and reinforce compliance with PPE measures and policies.

6. During a pandemic, a shortage of hospital beds may occur.

- Develop policies and procedures for shifting patients between nursing units to free up bed space in critical-care units or to cohort suspected or confirmed influenza patients.
- A pandemic may easily overwhelm hospital capacity. In this event, hospitals and communities will need to provide care in alternate care facilities (ACFs), such as school or university gymnasiums. (See Part E for more details).
 - Assist the local community and health authorities in developing policies and procedures for these ACFs. Ensure the following issues are addressed:
 - Bed capacity and spatial separation of patients
 - Facilities and supplies for hand hygiene
 - Lavatory and shower capacity for large numbers of patients
 - Food services (refrigeration, food handling, and preparation)
 - Medical services
 - Staffing for patient care and support services
 - PPE supplies
 - Cleaning/disinfection supplies
 - Environmental services (linen, laundry, waste)
 - Safety and Security

Cherokee Indian Hospital is currently working towards securing a MOU with an ACF.

F. Acceleration Interval

1. In the presence of increased and sustained human to human spread of a novel virus in the general population, but before there are cases identified in North Carolina, screening of patients entering the facility will escalate from passive (e.g., signs at the entrance) to active (e.g., direct questioning, respiratory symptoms, temperature monitoring).

2. Patients with suspected pandemic influenza virus requiring medical evaluation should be seen in the following designated area [Emergency Department] If possible, the designated area should be notified prior to the patient's arrival.
 - The patient will be requested to wear a surgical mask.
 - Persons accompanying the patient for evaluation should be screened for symptoms of the novel virus ideally prior to entering the facility.
3. Clinicians and intake and triage staff will be regularly updated (i.e., every 12 hours) on the status of the pandemic locally, nationally, and internationally (i.e., via email, memoranda, or meetings).
4. If a patient is confirmed as having the pandemic influenza virus, monitor for transmission of the pandemic strain of influenza within the healthcare facility.
5. Hospital access controls:
 - When pandemic influenza is present in the United States, preventing unrecognized pandemic influenza patients from entering the facility will be essential. Restricting access to the facility will assist in the implementation of effective surveillance and screening. Consider limiting hospital visitors and involve police services to enforce access limitations in the event when there are a few cases of pandemic influenza in the facility but work to achieve no transmission within the hospital.
 - Consider limiting hospital admissions, transfers, and discharges (in accordance with local/state recommendations and regulations) in the event that hospital transmission of a pandemic strain of influenza occurs. For example
 - i. consider limiting hospital admissions to those patients with the pandemic strain of influenza only
 - ii. consider early discharge of newborn infants to home in order to minimize exposure
 - Establish criteria and protocols for closing the facility to new admissions and transfers in the event that hospital transmission of a pandemic strain of influenza occurs (i.e., healthcare workers ill).
6. Communication and Reporting
 - A pandemic influenza will generate a need for rapid analysis of the status of patients and transmission in the healthcare facility and reporting of this information to employees and public health officials, as well as to the public, the media, and political leaders.
 - On an as needed basis (e.g., two times per day) the health care staff will have a conference call with tribal and local health departments to report and receive information on pandemic influenza activity in the healthcare facility and the community. This call may also discuss discharge planning of pandemic influenza patients with health department officials to ensure appropriate follow-up and case management in the community.

- The Hospital Emergency Incident Command System (HEICS) will be activated when there are one or more cases of pandemic influenza in the community.
- Healthcare facility numbers:
 - Infection Control: [828-497-9163 ext. 6498]
 - Nursing Supervisor: [828-497-9163 ext.6302]
 - ED Attending: [828-497-9163 ext. 6301]
 - Police: [828-497-7400]
 - Swain County Health Department: [Phone: (828) 488-3198, (828) 488-3199, (828) 488-6041]
 - Jackson County Health Department: [(828) 586-8994]
 - State General Communicable Disease Branch: [(919) 733-3419]

G. Peak Interval

1. Activate the Hospital Emergency Incident Command System (HEICS) under facility's existing disaster management plan.
2. In the presence of increased and sustained human to human spread of a novel virus in the general population, when cases are identified in the United States, institute a strategy to monitor the health of staff and patients who are potentially exposed to the pandemic strain of influenza. Exposure consists of providing care in the same room of a patient with pandemic influenza or being in the same room of a person with suspected pandemic influenza without proper PPE (personal protective equipment).
 - Exposure Reporting Processes: Establish an exposure reporting process that includes various methods for identifying exposed personnel such as self-reporting by employees, observation of non-compliance with PPE, and logs of personnel entering pandemic influenza patient rooms.
 - Employees will self-report to their supervisor.
 - Observance of non-compliance will be reported to their supervisor.
 - Logs will be maintained of all persons entering pandemic influenza patient rooms.
 - These logs will be provided to their supervisor.
3. Management of asymptomatic healthcare personnel exposed to pandemic influenza
 - Personnel who may have been exposed to pandemic influenza should be vigilant for fever or respiratory symptoms following exposure for 1-5 days. Persons who develop fever or respiratory symptoms should limit interactions outside the home and should not go to work, school, child care, church, or other public areas. Persons should notify their occupational health service provider.
 - Such examinations will be performed for 5 days following the last unprotected exposure.
 - Exposed unprotected healthcare personnel should monitor their own temperature twice per day and report any elevated temperature to their occupational health provider or designee.

4. Strict adherence to Droplet Precautions is to be practiced by all health-care personnel. In addition to Standard Precautions, observe Droplet Precautions during the care of a patient with suspected or confirmed strain of pandemic influenza:

- Place patient into a private room.
- Wear a surgical mask upon entering the patient's room or when working within 3 feet of the patient.
- Remove the mask when leaving the patient's room and dispose of the mask in a waste container.
- If patient movement or transport is necessary, patient must wear a surgical mask.

5. Cohorting of Patients

- A lack of Airborne Isolation Rooms (AIIRs), private rooms, or a need to concentrate infection control efforts and resources may lead to the following:
 - i. Cohorting patients in individual rooms on the same floor, rather than placing them on separate units or in AIIRs throughout the hospital.
 - ii. Converting private rooms/AIIRs to double rooms to accommodate more patients with pandemic influenza or those requiring Airborne Isolation. This strategy should only be implemented following approval from the Incident Commander, Federal and State authorities, and to the extent that staff could manage the number of patients on the unit.
 - iii. In the event that cohorting is necessary, cohort suspected influenza patients with other patients suspected of having the pandemic strain of influenza; cohort confirmed influenza patients with other patients confirmed to have pandemic influenza.
 - iv. Maintain 3 feet of separation between patients.

6. Movement and transport of patients with influenza should be limited as much as possible. If a patient must be transported, adhere to the following guidelines:

- Place surgical mask on patient.
- Always notify recipient area prior to patient transport.
- Follow alternate route designated for transport of influenza patients (separate from main traffic route).
- Dedicated pathways will be determined by the pandemic influenza coordinator or designee.
- The following corridors will be utilized:
- Consider limiting hospital admissions, transfers, and discharges (in accordance with local/state recommendations and regulations) in the event that hospital transmission of pandemic influenza occurs.

7. Visitors should be limited to reduce the likelihood of pandemic influenza transmission among visitors, patients, and health care workers.

- Guardians of minor children and no more than 2 significant others (e.g., spouse, sibling) may visit provided that they do not have fever or respiratory symptoms. An exception to the visitation rule can be made by the Clinical Supervisor/ ER Supervisor/ER Nursing Supervisor in consultation with state or local public health authorities.
- Symptomatic persons exposed to pandemic influenza patients will be excluded from visitation.

11. In-hospital post-mortem care:

- Health care workers must follow standard precautions when caring for a patient with pandemic influenza who is deceased.

H. Deceleration Interval

1. Maintain active screening and surveillance measures per Section E above and as directed by local/state health officials.
2. Maintain strict adherence to Droplet Precautions per above.

I. Resolution

1. Return to Investigation routine operations.

Appendix A-1:

There will be a hyperlink here to the Tribal Emergency Operation Plan when it becomes available.

APPENDIX A-2 COMMUNITY CONTAINMENT MEASURES INCLUDING NON-HOSPITAL ISOLATION AND QUARANTINE AND HOME CARE

Introduction

Pandemic influenza is a unique public health emergency and community disaster. It is considered a highly probable if not inevitable event, but no one can predict when it will occur. There may be little warning, but most experts agree that there will be one to six months between identification of a novel virus and widespread outbreaks in the U.S. Outbreaks will occur simultaneously throughout the U.S. and the effect on individual communities will last from six to eight weeks or more.

Pandemic influenza has the potential of affecting all elements of society. A large number of cases will add burden to hospitals and other health care systems already stressed with the normal day to day crises. Mortality is usually markedly increased. Health and medical personnel as well as other infrastructure workers, i.e., law enforcement, fire, public works, will not be immune. The effects on our communities could be staggering.

Immunization and respiratory hygiene are the best control measures available for influenza. Because no vaccine against a novel influenza strain will be available initially and it is likely that when vaccine becomes available it will be in short supply, there are few community control measures available in a pandemic influenza event.

Non-Hospital Isolation and Quarantine

Major Points:

1. Influenza is now included in the federal list of communicable diseases for which federal isolation and quarantine are authorized (Amendment to EO 13295).
2. States generally have authority to declare and enforce quarantine within their borders.
3. Quarantine is medically very effective in protecting the public from disease.
4. People in isolation may be cared for in their homes, in hospitals, or in designated health care facilities.
5. The Governor in N.C. may choose to utilize “snow days”.
6. Non-hospital isolation and quarantine is a non-issue in pandemic influenza due to a novel virus.

CDC Fact Sheet on Isolation and Quarantine-January 20, 2004

To contain the spread of a contagious illness, public health authorities rely on many strategies. Two of these strategies are isolation and quarantine. Both are common practices in public health and both aim to control exposure to infected or potentially infected persons. Both may be undertaken voluntarily or compelled by public health authorities. The two strategies differ in that isolation applies to persons who are known to have an illness and quarantine applies to those who have been exposed to an illness but who may or may not become ill.

ISOLATION: FOR PEOPLE WHO ARE ILL

Isolation refers to the separation of persons who have a specified infectious illness from those who are healthy and the restriction of their movement to stop the spread of that illness. Isolation allows for the focused delivery of specialized health care to people who are ill and it protects healthy people from getting sick. People in isolation may be cared for in their homes, in hospitals, or in designated health care facilities. Isolation is a standard procedure used in hospitals today for patients with tuberculosis (TB) and certain other infectious diseases.

In most cases, isolation is voluntary. However, many levels of government (federal, state, and local) have basic authority to compel isolation of sick people to protect the public.

QUARANTINE: FOR PEOPLE WHO HAVE BEEN EXPOSED BUT ARE NOT ILL

Quarantine refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious. Quarantine of exposed persons is a public health strategy like isolation that is intended to stop the spread of infectious disease.

States generally have authority to declare and enforce quarantine within their borders. This authority varies widely from state to state, depending on state laws. The Centers for Disease Control and Prevention (CDC), through its Division of Global Migration and Quarantine, also is empowered to detain, medically examine, or conditionally release persons suspected of carrying certain communicable diseases. This authority derives from section 361 of the Public Health Service Act (42 U.S.C. 264) as amended.

Whereas isolation and contact management strategies such as active monitoring are directed to individuals, broader community containment measures may be applied to groups of persons or to communities during outbreaks characterized by extensive transmission. These interventions range from measures to increase social distance among community members (e.g., cancellation of public gatherings, use of masks, and implementation of community-wide “snow days”) to community-wide quarantine.

Although all of these interventions are designed to prevent transmission by limiting social interactions and preventing inadvertent exposures, the less stringent actions may be easier to implement on a large scale. For example, in the “snow day” approach, community members are asked to stay home as they would during a major snowstorm. Schools are closed, work sites are closed or restricted, large public gatherings are cancelled, and public transportation is halted or scaled back. Implementation requires fewer resources than are needed to activate and maintain community-level quarantine. In addition, as snow days are a familiar concept in most communities, implementation can occur quickly. Implementation of quarantine, on the other hand, can be resource intensive, requiring mechanisms for enforcement and provision of necessities. Snow days and other measures to increase social distance are therefore the preferred community-level

responses, with quarantine reserved for situations in which less drastic measures have not been successful in containing an outbreak.

Home Care

Home Care will be the predominant mode of care for most people infected with influenza. During the Pandemic Alert Period, individuals should discuss with their health care provider specific recommendations for both vaccination and chemoprophylaxis.

The single best way to prevent influenza is to get vaccinated each fall. In the absence of vaccine, however, there are other ways to protect against influenza. Four antiviral drugs (amantadine, rimantadine, oseltamivir, and zanamivir) are approved and commercially available for use in treating influenza. Two of them (oseltamivir and zanamivir) are approved for prevention (chemoprophylaxis) against influenza. All of these drugs are prescription drugs and a doctor should be consulted before their use. Amantadine and rimantadine are discouraged due to rapid emergence of resistance to these drugs by influenza viruses.

The public should receive frequent and repetitive health communications that emphasize the simple steps that individuals and families may take to prevent the spread of respiratory illnesses like influenza:

Steps to Prevent the Spread of Respiratory Illnesses

1. Avoid close contact with people who are sick.
2. Wash hands often (hourly). If sick, stay at home and keep at least three feet away from others.
3. Cover mouth and nose with a tissue when coughing or sneezing.
4. Dispose of used tissue in appropriate waste receptacle.

Steps for Individuals Who are Cared For at Home

1. Get plenty of rest.
2. Drink a lot of fluids.
3. Avoid using alcohol and tobacco.
4. Consider taking over-the-counter medications to relieve the symptoms of influenza (but never give aspirin to children or teenagers who have influenza-like symptoms).
5. Stay home and avoid contact with other people.
6. Cover nose and mouth with a tissue when coughing or sneezing.
7. Dispose of used tissue in appropriate waste receptacle.

In a pandemic influenza event, some individuals who are cared for at home may develop complications. Should complications develop, these individuals should seek medical care immediately, either by calling the doctor or going to an emergency room. Upon arrival, the receptionist or nurse should be told about the symptoms so that precautions can be taken (providing a mask and/or separate area for triage and evaluation).

Warning Signs to Seek Urgent Medical Care

In children:

- High or prolonged fever
- Fast breathing or trouble breathing
- Bluish skin color
- Not drinking enough fluids
- Changes in mental status, somnolence, irritability
- Seizures
- Influenza-like symptoms improve but then return with fever and worse cough
- Worsening of underlying chronic medical conditions (Ex: heart or lung disease, diabetes)

In adults:

- High or prolonged fever
- Difficulty breathing or shortness of breath
- Pain or pressure in the chest
- Near-fainting or fainting
- Confusion
- Severe or persistent vomiting

Pandemic Influenza and Schools/Child Care Facilities

CDC Guidance: *Preventing the Spread of Influenza (the Flu) in Schools: Interim Guidance for School Administrators, Teachers, and Staff, January 12, 2004*, at <http://www.cdc.gov/flu/school/>.

Remind students and staff to clean their hands and make sure they have the supplies to do so.

Frequent hand washing with soap and water will help protect students and staff from viruses. Wash hands for 15 to 20 seconds (long enough to sing the “Happy Birthday” song twice). Alcohol-based hand rubs may be used as an alternative. Students and staff should be advised to rub their hands thoroughly until dry. Work with the school’s janitorial staff to ensure that restrooms are stocked with soap and paper towels or working hand dryers. Work with teachers to have a supply of alcohol-based hand rub in each classroom.

Remind students and staff to cover noses and mouths when coughing or sneezing and have tissues readily available.

Advise students and staff to cover their noses and mouths with a tissue when coughing or sneezing and to dispose of used tissues in appropriate waste receptacles. Make sure that tissues are available in all classrooms and common areas, such as libraries or lunchrooms. If hands become contaminated with respiratory secretions while coughing or sneezing, perform hand hygiene as soon as possible.

Encourage sick students and staff to stay at home.

Sick students and staff should stay home from school until they have been without fever for 24 hours to help prevent spreading illness to others.

Work closely with the local health department if making plans regarding school closures. Any decisions about closing a school due to increased influenza activity should be made in consultation with local and state health departments. It is unknown whether school closings are beneficial in controlling the spread of influenza.

In a pandemic influenza event, it may be necessary to close schools for administrative reasons (insufficient staff to meet the instructional and safety needs of students).

APPENDIX A-3: PUBLIC INFORMATION RELEASE FORMS

The following examples of statements to providers and to the media and public may be used as templates and revised as appropriate to the actual event.

Figure IV-G-1: Sample Provider Information Statement –Initiation Interval

Initiation Interval

As you are aware, one or more human cases of a new subtype influenza virus, for which there is no immunity in the general population, has been detected in _____. This could potentially, but not inevitably, be a precursor to an influenza pandemic.

EBCI Health and Medical and CIH are working closely with the State to monitor reports of disease progression and surveillance to detect the arrival of disease caused by the novel virus in North Carolina. Currently there have been no reported cases in EBCI.

The CDC has issued recommendations for enhanced influenza surveillance for state health departments. The purpose of these recommendations is to enhance the capacity to rapidly identify an importation of this virus. Current recommendations are at www.cdc.gov_____.

We will continue to provide you with updates on influenza activity and will distribute recommendations on any additional surveillance activities that may become necessary.

If you have any questions please call EBCI Health & Medical @ 828-497-7454
Cherokee Indian Hospital @828-497-9163.

Figure IV-G-2: Sample Provider Information Statement – Acceleration Interval

Pandemic Alert

The new subtype influenza virus is causing unusually high rates of morbidity and mortality in widespread geographic areas. Travel advisories remain in effect for the following areas:

If your patient is ill with influenza-like illness and has recently traveled to these areas, or is a close contact to someone who has traveled to these areas the following recommendations should be considered:

- 1) home isolation
- 2) antivirals for household contacts
- 3) self-monitoring of symptoms
- 4) report back to their provider

EBCI continues to work closely with the State and CDC regarding influenza vaccine. We do not have a manufacturer's release date at this time but continue to review plans for distribution.

Providers are encouraged to use antivirals for household contacts of confirmed or strongly suspected cases of influenza.

Enforcement of respiratory hygiene is essential. Continue to implement respiratory programs in your area of practice:

- At entry, triage, or registration, ask all patients with symptoms of respiratory illness to wear a surgical mask, and provide instructions on their proper use and disposal.
- Offer masks to all other persons who enter the emergency room to use voluntarily for their own protection.
- For patients who cannot wear a surgical mask, provide tissues to cover the nose and mouth when coughing or sneezing and a small bag for mask and tissue disposal.
- Encourage and provide access to hand washing or a waterless hand hygiene product and instruct patients to decontaminate their hands after handling respiratory secretions and before their contact with a healthcare worker.

- Separate patients with respiratory illness from other patients by either placing them into a cubicle, examination room, or some physical separation by at least 3 feet.
- See Respiratory Protection Plan—EBCI Health and Medical Division

EBCI has reported _____ deaths related to complications of influenza.

**Figure IV-G-3: Sample Provider Information Statement –
Pandemic Influenza Declaration**

Pandemic Influenza Declaration

A formal declaration was made today by the CDC regarding the influenza pandemic. Further spread with involvement of multiple continents has been reported.

The United States reported _____ hospitalizations or deaths to the CDC with _____ being from North Carolina.

EBCI has had _____ related to complications from influenza.

Manufacturers of flu vaccine report a release date of _____. EBCI continues to make plans for mass vaccination/prophylaxis/ public education. Current supply of antivirals remains low.

**Figure IV-G-4: Sample Provider Information Statement –
Pandemic Influenza Case Information**

Pandemic Influenza Case Information

The new subtype virus _____ has demonstrated sustained person-to-person transmission and multiple cases in the same geographic area.

Confirmed case definition:

Probable case definition:

Possible case definition:

The numbers of confirmed cases are _____. Number of deaths are _____.

The CDC and NC DPH has released a travel advisory

for _____ .

EBCI has reported _____ number of confirmed/ probable case (s) of influenza A _____ . No deaths have been reported.

Antivirals are recommended for household contacts of confirmed cases and strongly suspected cases of influenza.

Figure IV-G-5: Sample Provider Information Statement – Deceleration

Deceleration

Typically during a pandemic, the number of new cases of influenza will peak and then decline, giving the impression that the pandemic is over. Health care providers need to remain vigilant for the return of the epidemic activity. Health care providers must make use of the interim period to prepare for a resurgence of disease.

EBCI continues to urge providers to keep a respiratory hygiene program in place. They should inventory and order supplies that may be necessary for disease resurgence.

Figure IV-G-6: Influenza Alert for Public Release

FOR PUBLIC RELEASE

Influenza Alert

For Immediate Release

Contact: _____

Date: _____

Title: _____

EBCI Deputy Health office, CIH Health Director declared a public health emergency this morning/evening, alerting residents in the Qualla Boundaries to take precautions to minimize the spread of the influenza virus. There is new strain of influenza virus that is unusually virulent, which means that most people have little or no natural immunity to protect them from illness. This means that, not only have more people come down with the “flu,” the illness is likely to be more severe.

At this time, there is no vaccine available to prevent this new strain of the flu. Vaccine development may be delayed and vaccine may initially be in short supply. This makes prevention measures even more important.

Symptoms of the flu include abrupt onset of chills and fever, muscle aches, sore throat, and cough. Those who develop flu symptoms should notify their health care provider.

Influenza virus is contagious from person-to-person. Infection spreads when droplets from a cough or sneeze of an infected person reach another person’s mouth, nose, or eyes. The virus can also be transmitted if a person touches a surface or object (such as a doorknob or stair railing contaminated with infectious droplets and then touch their own mouth, nose, or eyes.

The risk of becoming ill can be reduced by frequent hand washing and keeping your hands away from your eyes, nose, and mouth. Also, try to avoid contact with people who have respiratory illnesses.

Those who become ill should stay home. This is crucial to preventing the spread of this disease to others, including co-workers and other people who would be encountered in public places.

If someone in the household has the flu, other family members can decrease their risk of becoming ill by wearing a mask over their nose and mouth whenever they come within three feet of the sick person. They should wear gloves whenever they come in contact with him or her or items they have handled and wash their hands after removing the gloves.

Attachment 1: “Snap-shot” Information for the Media

- Pandemics result from the emergence of influenza A virus that is novel for the human population.
- The hallmark of pandemic influenza is excess mortality --- the number of deaths observed during an epidemic of influenza-like illness in excess of the number expected.
- During the 20th century, pandemics occurred in 1918, 1957, and 1968.
- 1918-19 “Spanish flu” A caused the highest known influenza-related mortality: at least 500,000 deaths in the United States, and 20 million worldwide.
- 1957-58 “Asian flu” A: 70,000 deaths in the United States.
- 1968-69 “Hong Kong flu” A: 34,000 deaths in the United States.
- Although mortality rates associated with the pandemics of 1957 and 1968 were confined primarily to the elderly and chronically ill, both pandemics were associated with high rates of illness and social disruption, with combined economic losses of approximately \$32 billion (in 1995 dollars).
- The potential impact of an influenza virus in humans depends on its virulence (ability to cause severe illness or death) and on whether there is protective immunity in the population. Protective immunity will inhibit the virus’ ability to be passed from person-to-person and will decrease the severity of illness.
- Influenza viruses undergo two kinds of change. One is a series of mutations over time that causes a gradual evolution of the virus, known as antigenic drift. The other is an abrupt change in the surface antigen proteins, known as antigenic shift, thus suddenly creating a new subtype of the virus.
- When antigenic shift occurs, the population does not have antibody protection against the virus.
- Birds are the primary reservoir for influenza viruses. All 16 recognized influenza A subtypes have been found in birds.

In most years in the United States, influenza is responsible for 10,000-40,000 excess deaths, 50,000-300,000 hospitalizations, and approximately \$1-3 billion in direct costs for medical care.

APPENDIX A-4: EBCI HMD PRIORITY PROPHYLACTIC TREATMENT RECOMMENDATIONS AND PRIORITIZATION

- Hospital, health department staff and household members, community health providers
 - Hospital and health department clinic volunteers (would include all personnel assisting with clinic operations)
 - Emergency Medical Service personnel and household members
 - Law Enforcement
 - Fire Departments
 - Public Works
 - Identified Contacts
-

Persons necessary to provide legal authority to initiate activities not governed by current state laws including:

- County Manager

 - Individuals identified by stature to take charge of county functions in the event of the loss or incapacitation of the County Manager
 - Persons essential to maintain basic community infrastructure contingent on the epidemiology of the pandemic and the quantity of influenza vaccine available. (See options below)
-

- Medical laboratory workers
- Emergency management personnel
- Long-term care facility staff
- Utility field workers (gas, electric, water, sewer, etc)
- Communications personnel
- Fuel suppliers
- Food suppliers
- Waste management workers (general and medical)
- Public transportation drivers
- Corrections workers
- Morticians/coroners/medical examiners
- Pharmacists
- Red Cross field workers
- U.S. Postal Service workers
- Contracted persons involved in the transportation of vaccine

-
-
-
-
-

Appendix A-5 Influenza Vaccine Estimations Worksheet

http://www.epi.state.nc.us/epi/gcdc/pandemic/AppendixC1_2006.pdf

Appendix A-6: Instructions for Influenza Vaccine Estimations Worksheet

http://www.epi.state.nc.us/epi/gcdc/pandemic/AppendixC2_2006.pdf

Appendix A-7: Influenza Vaccine Doses Administered Worksheet

<http://www.epi.state.nc.us/epi/gcdc/pandemic/Appendix%20C-3%20web.pdf>

Appendix A-8: Instructions for Influenza Vaccine Doses Administered Worksheet

<http://www.epi.state.nc.us/epi/gcdc/pandemic/Appendix%20C-4%20web.pdf>

Appendix A-9: Antiviral Medication Estimations Worksheet

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http://www.epi.state.nc.us/epi/gcdc/pandemic/AppendixD1_2007.pdf

Appendix B: Tribal SNS PLAN

Will have a link here

Pandemic Influenza Vaccine Chain of Custody Form

Originating From:

Organization _____

Street Address _____

City _____ Phone number: _____

Delivered To:

Organization _____

Street Address _____

City _____ Phone number: _____

Contents of shipment:

Vaccine Type _____
Manufacturer/Lot# _____
Expiration date _____
vials/size vials _____

Vaccine Type _____
Manufacturer/Lot# _____
Expiration date _____
vials/size vials _____

Vaccine Type _____
Manufacturer/Lot# _____
Expiration date _____
vials/size vials _____

Vaccine Type _____
Manufacturer/Lot# _____
Expiration date _____
#vials/size vials _____

Total number of vials: _____

Temperature, quantity and condition of shipment should be checked on receipt prior to accepting custody of the vaccine.

Packed by/Date

Delivered by/Date

Received by/Date

Purpose: To provide a generic method for immunization providers to report wasted/expired vaccine to the North Carolina Immunization Branch.

Preparation:

1. Complete the form following the example. Include provider name and federal ID number.
2. Return all open and unopened vials and manufacturer's pre-filled syringes of spoiled or expired vaccine.
3. **Do not return drawn vaccine.** Dispose of the vaccine at your facility. Document on this form the vaccine was wasted and disposed of at your facility.
4. Place wasted/expired vaccine (even opened partial vials) in a plastic bag with the completed form.
5. Make a copy for your records.

Distribution: Send the wasted/expired vaccine **and** form to:

Immunization Branch Materials Area
2226 Capital Blvd STE A
Raleigh, NC 27604-1478

Disposition: Retain a copy of the completed form for one year or destroy when agency need ends.

Reordering: User may copy form as needed or call 1-800-344-0569 or fax 1-800-544-3058 for more copies.

If you have vaccine you can not use before its expiration date, call us at least four (4) months prior to the expiration date. **Do not return viable vaccine.**
Call 1-800-344-0569 if you have any questions.

WEEKLY H1N1 Influenza VACCINE USE

Note: Failing to submit this form every Monday will result in suspension of your H1N1 vaccine shipments.

Reporting Period: FROM ___/___/2009 TO ___/___/2009

ORGANIZATION: _____ CONTACT PERSON: _____
 PHONE #: _____ FAX #: _____ E-MAIL ADDRESS: _____

Please enter the TOTAL number of vaccine doses administered, by age category and dose #, in the boxes below:

H1N1

Age Category	Dose 1	Dose 2
6 – 23 months		
24 – 59 months		
5 – 18 years		
25 – 49 years		
50 – 64 years		
65+ years		

H1N1 – Live Attenuated Influenza Vaccine (LAIV)

Age Category	Dose 1	Dose 2
6 – 23 months		
24 – 59 months		
5 – 18 years		
25 – 49 years		
50 – 64 years		
65+ years		

FAX or EMAIL completed forms to the IMMUNIZATION BRANCH at 1-800-544-3658 or H1N1doses@dhhs.nc.gov by 12PM (noon) EVERY MONDAY. Please do not include a cover sheet.

Appendix D: Pandemic Flu Handouts



American Red Cross

The 6 Steps of Handwashing



Step #1:
Wet your hands with warm water.



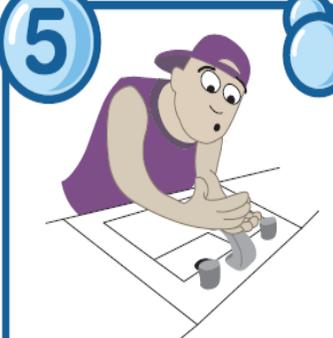
Step #2:
Apply soap.



Step #3:
Rub your hands together, and even get between those fingers for 20 seconds.



Step #4:
Don't forget your fingernails. Use a nailbrush if you have one.



Step #5:
Rinse the germs away.



Step #6:
Dry your hands.

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"BAC" Character copyright 2004 The Partnership for Food Safety Education.

www.scrubclub.org
(888) 99-SAFER

Be Red Cross Ready

Flu Checklist

Influenza, also known as the flu, is a contagious respiratory disease caused by different strains of viruses. In the United States, there is a flu season that begins every fall and ends every spring. The type of flu people get during this season is called seasonal flu. Flu viruses spread from person to person when people who are infected cough or sneeze.

Know the Difference

Seasonal Flu—A contagious respiratory illness caused by influenza (flu) viruses occurring every year. It affects an average of 5 percent to 20 percent of the U.S. population by causing mild to severe illness, and in some instances can lead to death. Adults may be able to infect others 1 day before getting symptoms and as long as 5 days after getting sick.

Epidemic—The rapid spread of a disease that affects some or many people in a community or region at the same time.

Pandemic—An outbreak of a disease that affects large numbers of people throughout the world and spreads rapidly.

H1N1 (swine flu)—H1N1, referred to as “swine flu” early on, is a new influenza virus causing illness in people. In the United States, this new virus was first detected in people in April 2009. This virus is spreading from person-to-person worldwide, probably in much the same way that regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization (WHO) signaled that a pandemic of H1N1 flu was underway.

It is important to stay informed about changes to guidance issued by the Centers for Disease Control and Prevention (CDC). The CDC Web site posts regular updates to public health recommendations regarding a number of public health threats, including H1N1 (swine flu).

H5N1 (avian flu)—Commonly known as bird flu, this strain of influenza virus is naturally occurring in birds. Wild birds can carry the virus and may not get sick from it; however, domestic birds may become infected by the virus and often die from it.

What should I do to avoid getting sick?



Get your flu shot every year for the best chance of protection.

- Always practice good health habits to maintain your body's resistance to infection.
 - Eat a balanced diet.
 - Drink plenty of fluids.
 - Exercise daily.
 - Manage stress.
 - Get enough rest and sleep.
- Take these common sense steps to stop the spread of germs:
 - Wash hands frequently with soap and water or an alcohol-based hand sanitizer.
 - Avoid or minimize contact with people who are sick (a minimum three feet distancing is recommended).
 - Avoid touching your eyes, nose and mouth.
 - Cover your mouth and nose with tissues when you cough and sneeze. If you don't have a tissue, cough or sneeze into the crook of your elbow.
 - Stay away from others as much as possible when you are sick.
- Anyone with a fever or other symptoms of the flu should stay home from work or school until at least 24 hours after the fever has gone (without medications).
- Get a flu shot every year. Vaccination is one of the most effective ways to minimize illness and death. Two shots will be needed for the 2009 flu season - one for seasonal flu and one for H1N1 flu.

Are you considered high risk for flu-related complications?

- The following groups of people are at an increased risk: people age 50 or older, pregnant women, people with chronic medical conditions, children age 6 months and older and people who live with or care for anyone at high risk.
- People at high risk should have their vaccinations updated every year and receive pneumococcal pneumonia vaccine if age 50 or older, as directed by their physician.

Do I have the flu?



The flu usually begins with the rapid-onset of a high fever and body aches. Be aware of other common flu symptoms:

- Headache
- Extreme tiredness
- Sore throat
- Cough
- Runny or stuffy nose
- Vomiting and/or diarrhea (more common in children than in adults)
- **NOTE: Having all of these symptoms doesn't always mean that you have the flu. Many different illnesses have similar symptoms.**

Diagnosing the flu:

- It may be difficult to tell if you are suffering from the flu or another illness.
- Your health care provider may be able to tell you if you have the flu.
- If you develop flu-like symptoms and are concerned about possible complications, consult your health care provider.

Potential risks and serious complications of the flu:

- Bacterial pneumonia
- Dehydration
- Worsening of chronic medical conditions
- Ear infections
- Sinus problems

What should I do when someone is sick?



- Designate one person as the caregiver.
- Keep everyone's personal items separate. All household members should avoid sharing pens, papers, clothes, towels, sheets, blankets, food or eating utensils unless cleaned between uses.
- Disinfect doorknobs, switches, handles, computers, telephones, toys and other surfaces that are commonly touched around the home or workplace.
- Wash everyone's dishes in the dishwasher or by hand using very hot water and soap.
- Wash everyone's clothes in a standard washing machine as you normally would. Use detergent and very hot water and wash your hands after handling dirty laundry.
- Wear disposable gloves when in contact with or cleaning up body fluids.

Terminology defined

Immunity to a disease is defined by the presence of antibodies to that disease in a person's system. Most people have some resistance to infections, either after they recover from an illness or through vaccination. Seasonal flu viruses change over time and immunity to them cannot be acquired unless vaccination is administered.

Quarantine is the physical separation of healthy people who have been exposed to an infectious disease from those who have not been exposed.

Isolation is a state of separation between persons or groups to prevent the spread of disease.

Social distancing is a practice imposed to limit face-to-face interaction in order to prevent exposure and transmission of a disease.



P A N D E M I C F L U

PUBLIC INFORMATION SERIES

Preparing for a Swine Flu (H1N1) Pandemic Family Preparedness Fact Sheet

The flu, also known as influenza, is a contagious respiratory disease caused by influenza viruses. In the United States, flu season begins every fall and ends every spring. The flu people get during this season is called seasonal flu. Sometimes, a new type of flu virus may emerge to which people have no resistance. When this happens, it can spread more easily from person to person around the world in a very short time, causing serious illness and death. This is pandemic flu.

The symptoms of pandemic flu are likely to be similar to those of seasonal flu, which are:

- Fever
- Sore throat
- Cough
- Runny or stuffy nose
- Extreme tiredness
- Headache
- Muscle aches and pains
- Stomach problems, such as nausea, vomiting and diarrhea (more common in children)

Contact a health care provider if you have any questions about specific symptoms. Visit www.cdc.gov/flu/keyfacts.htm for more detailed flu symptom information.

Pandemic Flu: the Disease

Pandemic flu is more serious than seasonal flu. Most people who get seasonal flu recover within a week or two and do not require medical treatment. The very young, the very old and the very sick are most likely to become seriously ill from seasonal flu. Pandemic flu is different because more people who get it might not recover, even with medical treatment, and people of every age may be at risk of serious illness or death.

Unlike seasonal flu, there may not be a vaccine for pandemic flu until researchers and pharmaceutical companies are able to create one. Vaccine development depends on the scientific understanding of the specific virus causing the disease. If a vaccine is developed for pandemic flu, it will be a challenge to produce enough for everyone and dispense it to all the people that need it in a timely manner.

Flu Pandemic: the Event

An influenza pandemic is a global outbreak of disease that occurs when a new influenza virus, to which people have little or no immunity, appears in the human population. It causes a serious illness that spreads easily from person to person worldwide.

Pandemics are different from seasonal outbreaks of influenza. Seasonal outbreaks are caused by subtypes of influenza viruses that are already in existence among people, whereas pandemic outbreaks are caused by new subtypes or by subtypes that have never circulated among people or that have not circulated among people in a long time.

In the 20th century, flu pandemics occurred in 1918, 1957 and 1968. The 1918 pandemic led to high levels of illness, death, social disruption and economic loss. It is estimated it killed more than 20 million people worldwide.

Flu Pandemic: Preparedness

During a flu pandemic, government officials may impose activity, movement or travel restrictions to prevent the flu virus from spreading. You may be asked to stay home for an extended period of time even if you are not sick. Schools, workplaces and public gatherings, such as sporting events or worship services, may close temporarily. Mass transportation such as subways, buses, trains and air travel—may be limited. You and your family and friends may need to rely on each other.

Think about how you handle stress and know your strengths. Take steps to plan for, get through and recover from a flu pandemic.

- Store a two-week supply of food that does not require refrigeration, preparation or cooking. Ensure that formula for infants and any child's or older person's special nutritional needs are a part of your planning. Plan for your pets as well.
- Store a two-week supply of water, 1 gallon of water per person per day, in clean plastic containers. Avoid using containers that will decompose or break, such as milk cartons or glass bottles.
- Ask your health care provider and health insurance company if you can get an extra supply of your regular prescription drugs and medical supplies, such as glucose monitoring supplies.

- Store a supply of any nonprescription drugs, such as pain relievers, cough and cold medicines, stomach remedies and anti-diarrheal medication, as well as vitamins and fluids with electrolytes (such as sports drinks).
- Store health and cleaning supplies, such as bleach, tissues, a thermometer, disposable gloves, soap and alcohol-based hand sanitizers.
- Talk with family members and loved ones about how they would be cared for if they got sick.
- Ask your employer about plans to have staff stay home when they are sick or a family member is. Request details on any special considerations regarding sick leave, benefits and wages if staying home.
- Find out your employer's plans to keep the business functioning if key staff can't come to work.
- Ask your child's school or day care if they plan to encourage sick children to stay home during a flu pandemic or if they will close, requiring children to remain at home.
- For hands that are not visibly soiled, use an alcohol-based hand sanitizer (60% - 95% alcohol), or wash with soap and water or do both.
- When using an alcohol-based hand sanitizer, use directed amount of sanitizer, rub thoroughly over all surfaces of the hands, including nail areas and between the fingers. Rub until product dries.
- Cover your mouth and nose with a tissue when you cough or sneeze and clean your hands afterwards with soap and water or an alcohol-based hand sanitizer. If tissueless, cough or sneeze into your elbow or upper arm, not your hands.
- Keep your hands away from your eyes, nose and mouth to keep germs from entering your body.
- Stay home if you are feeling sick. Get plenty of rest and drink lots of fluids.
- Avoid close contact with sick people. Respiratory droplets passed from one person to another spreads flu.
- Avoid sharing objects—such as utensils, cups, bottles and telephones—or disinfect objects before using them.
- Keep your living and work areas clean.

Pandemic Flu: Prevention

There are some things that everyone can do to slow the spread of the flu and reduce its impact, whatever kind it is. Some of these actions are:

- Wash your hands with soap and water or clean them with an alcohol-based hand sanitizer often. Wash hands for at least 20 seconds.
- For visibly soiled hands, first wash with soap and water.
- When using soap and water, first wet hands with water, apply an amount of product recommended by the manufacturer to hands, and rub hands together vigorously, covering all surfaces of the hands, giving attention to fingernails and surfaces where jewelry is worn. Rinse hands with water and dry thoroughly with a disposable towel. Use towel to turn off faucet.

Finding out the answers ahead of time will have a significant impact on your plans and decisions during a flu pandemic.

Contact your local Red Cross chapter for a pandemic flu family preparedness guide. Contact a health care provider if you have any questions. For more information, visit www.redcross.org, www.pandemicflu.gov and www.who.int.

Appendix E: North Carolina Pandemic Influenza Plan
<http://www.epi.state.nc.us/epi/gcdc/pandemic.html>