North Dakota
Pandemic Influenza
Preparedness and Response Plan

Annex to the North Dakota Department of Health
All-Hazards Emergency Operations Plan
Updated August, 2010

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*List of acronyms

DES/DHLS	Department of Emergency Services/Department of Homeland Security
PHEVR	Public Health Emergency Volunteer Responders
CERT	Citizen Emergency Response Team
SNS	Strategic National Stockpile
POD	Point of Dispensing
PIO	Public Information Officer
EHP	Environmental Health Practitioner
EPR	Emergency Preparedness and Response
PF	Pandemic Influenza (Pan Flu)
EOP	Emergency Operations Procedure (Plan)
LPHU	Local Public Health Unit
CDC	Centers for Disease Control and Prevention
NDDOH	North Dakota Department of Health
ISC	Influenza Surveillance Coordinator
DC	Division of Disease Control (NDDOH)
DOT	Department of Transportation
BTWAN	Bio-terrorism Wide Are Network for ND Hospitals
HAN	Health Alert Network
DMORT	Disaster Mortuary Operational Response Team

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Attachments (see http://www.ndhan.gov for these supporting documents)

Introduction
Each year, approximately 400 North Dakotans die due to complications associated with pneumonia and influenza. Although most deaths from influenza occur among the elderly, influenza results in significant morbidity among all age groups with substantial costs associated with health care and lost productivity.

Although the occurrence of pandemics of influenza is inevitable (three pandemics occurred during the 20th Century), it is impossible to predict the severity of an influenza pandemic before it arrives. Two of the pandemics during the last century were relatively mild, manifesting as an unusually severe seasonal influenza seasons, while the other, occurring in 1918-1919, was the most severe epidemic in recorded history. The burden of illness and mortality on the population will depend on the efficiency of transmission, the virulence of the strain, and the subpopulations at highest risk. In addition, the rapidity and effectiveness of the response and the compliance of the population with control measures will have a large impact on limiting the morbidity and mortality of a pandemic.

Purpose of the Plan
In the event of a pandemic, NDDoH will have the lead response role. This plan is a guide to NDDoH response to pandemic influenza, and is supplemented by response plans of other state agencies.

Assumptions (for a moderate or severe pandemic)
- The public health response will vary depending on the severity of the pandemic. Severe pandemics will require more severe measures to limit morbidity and mortality.
- North Dakota is unlikely to be the first state in the US affected by the pandemic. When the pandemic hits North Dakota, it will spread rapidly but unevenly, affecting some areas sooner than others.
- If North Dakota is the first state to have cases, the speed with which the disease is identified will determine the effectiveness of control measures and, to some extent, the impact.
- A large percentage of the workforce will be expected to become incapacitated through illness and/or death. Others may opt to not work to take care of ill family members and friends. The magnitude of the worker shortage will depend on the severity of the pandemic.
- State and federal resources for response will be stretched so thin, that communities will need to depend primarily on their own resources.
- No community will be spared.
- Vaccine will take at least 6-8 months to manufacture, from the time the pandemic strain has been identified. Each person will likely require two doses of the pandemic-strain-specific vaccine, likely 30 days apart, to be protected from influenza. The first dose may provide little if any immunity. This assumption remains despite deviation from this assumption for H1N1.
- Antivirals will be used almost exclusively to treat influenza and will not be used for prophylaxis except possibly in small quantities to slow spread when the virus first arrives in the state. To be most effective anti-virals must be initiated within

48 hours of symptom onset, meaning that for most persons treatment will be initiated as a outpatient. Supplies of anti-virals are expected to be sufficient to cover 25% of the population.

- Medical supplies, anti-virals and vaccine may require security to protect them from theft.
- Medical supplies, anti-virals and vaccines will be allocated by the NDDoH Department Operation Center according to need.
- Health care systems will be overwhelmed; personnel at these facilities will be at least as likely to become ill as the general public resulting in a markedly reduced health care workforce during the pandemic.
- Hospitals caring for greater than normal numbers of patients with reduced numbers of staff are unlikely to be able to provide care according to non-disaster standards.
- A moderate of severe pandemic will exceed hospital inpatient capacity. Community-based care of pandemic patients will be required when hospital can accept no more patients under any surge conditions. Community-based care will be limited to pandemic patients and consist of supportive care only.
- A moderate or severe pandemic will cause disruption of critical infrastructure, including transportation, economics, public safety, utilities and communication.
- Social distancing will be the most effective means of limiting the spread of pandemic influenza. The level of public compliance with social distancing measures is unknown and likely to be different depending on the level of public perceived risk.
- Certain high-risk groups will be less likely to have access to information and services during a pandemic. Planning must include methods to reach these populations.
- Response activity will require substantial interaction among state and local agencies beyond health departments and health care systems.
- Provision of vaccine, when available in substantial quantities, will require mass distribution through points-of-dispensing (PODs).
- Populations most vulnerable to pandemic influenza may not be the same population most affected by seasonal influenza. Indications of populations at greatest risk likely will be determined from epidemiologic data collected in other countries and other states.
- In a moderate or severe pandemic, vaccine will be prioritized to infrastructure first followed by populations at very highest risk. In a milder pandemic, vaccine will be targeted first to vulnerable populations.

Command and Control (Authorities and Responsibilities)

The North Dakota Department of Health (NDDoH) will be the lead agency for state response to a pandemic, and it will work directly with other state agencies, local public health units (LPHU), the Centers for Disease Control and Prevention (CDC) and the private healthcare system. During a pandemic, NDDoH disaster management will function under incident command coordinated through the Department Operations Center (DOC). In addition, a liaison from the department will be assigned to the State EOC.

The primary activities of the NDDoH, under the leadership of the State Health Officer, include:

- Surveillance (State Epidemiologist/Division of Disease Control);
- Diagnostic laboratory testing (Division of Microbiology);
- Vaccine management and distribution (Division of Disease Control/Strategic National Stockpile Coordinator);
- Antiviral distribution (Division of Disease Control/Strategic National Stockpile Coordinator);
- Health system response coordination including hospitals, clinics, and EMS (Emergency Preparedness and Response Section);
- Release of materiel from the state supply cache (Emergency Preparedness and Response Section);
- Support local public health management including mass fatality, mass dispensing and volunteer management (Emergency Preparedness and Response Section);
- Public Information/Communications (Public Information Office);
- Public policy related to social distancing, and potentially as the authority for individual isolation and quarantine (Division of Disease Control and State Health Officer).

LPHUs will have lead responsible for administration of certain intervention activities that are inherently local. In North Dakota, the 28 LPHUs are autonomous units from the state but cooperate closely with NDDoH. LPHUs are either county or multiple city/county units. Refer to the *North Dakota Local Public Health Units and the Local Public Health Unit Map* in the Base Plan Appendices Folder. Emergency planning and response activities are coordinated by the LPHUs within eight regional planning units Refer to the *EPR Regional Planning Areas* in the Base Plan Appendices Folder. In regions with more than one public health unit, a single public health unit acts as the regional lead. Each of the regions has an Emergency Preparedness and Response Coordinator (EPR) who assists in the coordination of local and regional planning activities and provides logistical response activities during emergency situations. The EPRs also act as liaisons for local public health response to the Emergency Preparedness and Response Section of the NDDoH, and for local public health response to local emergency management. Responsibilities of the LPHU during an influenza pandemic include:

- Assist NDDoH with local/regional surveillance activities;
- Coordinate local/regional response with local emergency management;
- Assist local/regional private medical care providers in the implementation of the influenza pandemic response;
- Assist local communities with planning and implementation of alternative health care and medical sheltering;
- Coordinate administration of influenza vaccination;
- Serve as backup depot site for antiviral medications.
- Assist local funeral home directors and coroners in the coordination of fatality management (according to the role assigned to LPHU by local emergency management);

- Assist with local management of volunteers, especially for public health and medical functions;
- Coordinate public information messaging with the NDDoH Public Information Officer and private information officers.
- Impose voluntary or mandatory isolation or quarantine, including the monitoring and coordination of management for those under isolation or quarantine.

Phases of a Pandemic

There are 3 periods associated with pandemic influenza. The first period is referred to as the "Interpandemic Period" and contains the 1st and 2nd WHO pandemic phases. The second period is the "Pandemic Alert Period" and contains the 3rd, 4th and 5th WHO pandemic phases. The 3rd period is the "Pandemic Period" which holds the 6th and final WHO pandemic phase. The following chart shows how the pandemic periods and WHO phases interface.

PANDEMIC PERIODS AND PHASES

Pandemic Periods	Impacts	WHO Phases
Inter-pandemic Period *New virus in animals, no human cases*	**Low risk of human cases**	**1**
	Higher risk of human cases	**2**
Pandemic Alert Period *New virus causes human cases*	**No or very limited human-to-human transmission**	**3**
	Evidence of increased human-to-human transmission	**4**
	Evidence of significant human-to-human transmission	**5**
Pandemic Period	**Efficient and sustained human-to-human transmission**	**6**

Inter-Pandemic Period

Surveillance - Inter-Pandemic Period

The following is applicable to both WHO Phases 1 & 2.

Following is a summary of surveillance activities that take place every year in North Dakota. The inter-pandemic period does not require any enhancements to this surveillance program. Surveillance of influenza, both routine, and peri-pandemic lies with the influenza program, which includes the program director and influenza surveillance coordinators, in the Division of Disease Control, NDDoH. This staffing will be increased as necessary during the peri-pandemic period through re-assignment of staff from other areas of the Division of Disease Control or from other parts of the Department of Health.

Year-round Surveillance: Providers around the state are periodically reminded that influenza is a reportable condition. The preferred reporting mechanism for influenza is the use of electronic reporting over the Internet; however, providers are allowed to use other methods including telephone, laboratory, fax and paper reporting during the inter-pandemic period. During the "off-season" (June through September), when a positive case is identified, DC staff works with providers to collect and submit specimens to the state laboratory (DLS) for influenza testing which includes viral isolation and typing.

At the beginning and end of the influenza season, the Division of Disease Control asks private laboratories to forward any rapid-test positive specimens, of interest, to the DLS for viral isolation and sub-typing.

Surveillance for influenza in North Dakota is primarily a function of the NDDoH, Division of Disease Control (DC). The Influenza Surveillance Coordinator (ISC) oversees influenza activities including surveillance, public education, case monitoring and outbreak management. The ISC works with the eight field epidemiologists who are DC employees located at the eight regional local public health units (LPHUs).

Position	Employee*
Influenza Surveillance Coordinator	[redacted]
State Epidemiologist	
Section Chief, Medical Services	
*Contact information can be found in the document callingtree.doc	

The ISC monitors influenza trends by the use of case finding and syndrome monitoring. This is accomplished using sentinel providers' reports, school absenteeism rates, laboratory test data. In addition, NDDoH receives daily emergency room-based syndromic surveillance for influenza-like illnesses (ILI) in selected North Dakota medical centers. All of these surveillance systems identify the level of influenza activity in the state, which may prompt collection of samples for laboratory confirmation.

The existing influenza surveillance system analyzes influenza information received from individuals who are required to report influenza cases to NDDoH (Please see Century Code 23-07-02). Influenza cases are reported throughout the year to DC. During the regular influenza season (October through May), state and territorial epidemiologists report the level of influenza activity in their states to CDC weekly as "widespread," "regional," "local," "sporadic" or "no activity".

Influenza surveillance activities include:

Sentinel Surveillance: From October through May, a voluntary network of medical providers report the number of patients presenting the influenza-like illness case definition* (ILI) broken out by age group along with the total number of patient visits. These numbers are reported to the ISC each week via fax, telephone or internet.

NDDoH maintains a minimum of 17 sentinel providers as influenza sentinel surveillance sites. The sentinel providers submit clinical specimens from all patients meeting the ILI case definition to the DLS for influenza testing, at each of the following stages during the influenza season:

- At the beginning of the season (usually October or November), when ILI first presents at a health care facility
- Midway through the season (usually late December and January)
- Toward the end of the season (usually March or early April)

Providers may also submit specimens from unusual clinical cases, unusually severe cases and outbreak-related cases at anytime throughout the year. Submitted specimens are tested with a respiratory virus profile.

Private Clinical Laboratory Surveillance: Private laboratories throughout the state participate in the influenza surveillance program. These laboratories submit influenza and respiratory syncytial virus (RSV) testing data in electronic format to the ISC on a weekly basis. The data received are aggregate numbers including the number of positive influenza and RSV tests and the total number of influenza and RSV tests performed each week. Most local clinical labs can only perform rapid influenza testing. [redacted] and [redacted] can perform PCR and [redacted] can perform viral isolation.

State Laboratory Surveillance

Approximately, 75 WHO collaborating laboratories and 50 National Respiratory and Enteric Virus Surveillance System laboratories, including one in North Dakota, report the number and type of influenza viruses isolated each week. These participating laboratories send a representative and/or unusual specimens to CDC for comparative antigenic and genetic analysis. DC staff investigates reported clusters of ILI at long-term care facilities and other institutions and coordinates with these facilities to obtain specimens, which are submitted to the Division of Laboratory Services (DLS) for viral isolation.

School Absenteeism Surveillance: A minimum of one school in each of the eight field epidemiologist regions is enrolled in the school absenteeism program. On a weekly basis, each school reports to the ISC the number of students absent each day due to illness along with the total number of students enrolled. During non-pandemic periods, school absenteeism has not been consistently reliable, although it is substantially better during a pandemic.

Syndromic Surveillance: Syndromic surveillance utilizing a commercial software program, [redacted].
This software identifies symptoms consistent with influenza within chief complaint data

entered into the hospital registration system upon check-in. The Syndromic Surveillance Coordinator developed specific search criteria for syndromes consistent with ILI. Utilizing historical data from these facilities, thresholds have been developed for recognition of potential ILI clusters.

Hospital Surveillance – During non-pandemic periods, likely 80-90% hospitalizations due to influenza are not identified. Emphasis on detection of hospital cases is in place during a pandemic.

Death Surveillance – Disease Control receives weekly reports of all deaths due to influenza and pneumonia.

Animal Surveillance – NDDoH automatically receives an access file from the states only veterinary laboratory (North Dakota State University) for all diseases that have human health implications including pathogenic influenza among animals. In addition, the ND Department of Agriculture monitors a web portal that is used by ranchers and local veterinarians to report clinical identification of animal diseases. From this system, information regarding any animal disease that poses a risk to human health results in a notification from the ND Department of Agriculture to NDDoH Division of Disease Control.

Laboratory and Diagnostics - Inter-Pandemic Period

WHO Phase 1

In Phase 1 of the 6 World Health Organization (WHO) Pandemic Phases, no new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low. In all phases, any uncharacterizable or unusual strain of influenza identified in laboratory that is known or believed to have caused a human case of influenza will result in immediate notification of CDC and referral of the specimen on to CDC laboratories.

WHO Phase 2

In Phase 2, as is the case in Phase 1, no new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease. In Phase 2, the virus is on the verge of jumping from one animal species to another in what is referred to as "antigenic shift." This sudden change, or antigenic shift, occurs when proteins on the surface of the virus combine in new ways as a result of mutation or exchange of genetic material between multiple influenza viruses. The virus may jump from a non-human animal directly to a human or it may involve an intermediate animal host.

During this phase, the North Dakota Department of Health (NDDoH) Division of Laboratory Services – Microbiology routinely offers three tests to confirm seasonal influenza virus present in North Dakota. These tests allow the NDDoH Division of Disease Control (DC) to compare between the influenza types circulating in the

community and those present in the vaccine. Specific information regarding influenza types present in the state will be used to determine recommendations for antiviral therapy.

Laboratories and hospitals that suspect novel strains of influenza should report to NDDoH laboratory and Disease Control. The lab will perform confirmatory testing and notify CDC and Disease Control and refer isolates to CDC if requested. In North Dakota, 95% of labs receive reports from NDDoH through STAR LIMS (Laboratory Information management System) by autofax as soon as NDDoH releases the report. NDDoH is connected to the CDC for reporting through Results Messenger and can also send to other states through Results Messenger.

All influenza specimens should be collected within **72 hours** of recognition of symptoms consistent with influenza-like illness (ILI). Following collection, samples must be delivered as soon as possible to the NDDoH Division of Laboratory Services-Microbiology located at [redacted].. Specimen collection instructions can be found in the Health Alert Network (HAN) Document Library. Isolation kits for nasopharyngeal swabs are available from the Division of Laboratory Services – Microbiology. The following link provides guidance regarding laboratory testing of humans with suspect infection: http://www2a.cdc.gov/han/ArchiveSys/ViewMsgV.asp?AlertNum=00246

The Division of Laboratory Services – Microbiology provides specimen collection supplies to submitting facilities upon request. The kits consist of:

- One 2-well microscope slide
- One carrier for Direct Fluorescent Antibody (DFA) testing
- Viral transport media, two swabs (1 throat and 1 nasopharyngeal swab)
- One small centrifuge tube

As recommended by Centers for Disease Control and Prevention (CDC), when avian influenza viral infection is suspected based on exposure risk, testing oropharyngeal swab and lower respiratory tract specimens is preferred. Specimens should be collected following infection control precautions for influenza A (H5N1) and testing done using standard BSL 2 work practices in a Class II biological safety cabinet. Viral culture should NOT be attempted on specimens from patients with increased risk for avian influenza A (H5N1), unless conducted under Biosafety Level 3 conditions with enhancements. A negative result with a rapid influenza A test should not exclude a diagnosis of influenza H5N1. *(Reference: Food and Drug Administration Office of In Vitro Diagnostic Device.)*

The Division of Laboratory Services – Microbiology provides instructions for free testing and specimen transport to each of the volunteer sentinel provider sites.

Specimen collection:
Specimen collection will follow CDC guidelines in the document Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) Virus in the United States (found at

http://www2a.cdc.gov/han/ArchiveSys/ViewMsgV.asp?AlertNum=00246 or more recent documents when they appear.

- **Culture:** The best specimens to collect for influenza virus isolation are nasopharyngeal washings or swabs with the latter as the preferred method. Positive results may be available within a few days after receipt by the Division of Laboratory Services – Microbiology; but in some instances, it may take several weeks for viral growth to be detected. Viral culture should **NOT** be attempted on specimens from patients suspected to have pandemic influenza, unless conducted under Biosafety Level 3 conditions with enhancements.

- **Direct Fluorescent Antibody (DFA):** A separate and additional specimen for slide preparation is required for DFA testing. The best specimen to collect for DFA is either a throat swab or a nasopharyngeal swab, although the latter is the preferred method. The slide must be prepared at the submitting facility. DFA results are generally available within 24 hours of receipt of the specimen. Test results are conveyed to the provider via electronic, auto fax or by hard copy through the mail.

- **Serology:** Acute and convalescent sera collected two to three weeks apart may be used to confirm influenza. Results of serologic testing generally are available about one week after receipt of the convalescent specimen. Serology testing for influenza generally is not ordered on a routine basis .

- **PCR:** Oropharyngeal swab specimens and lower respiratory tract specimens (e.g., bronchoalveolar lavage or tracheal aspirates) are preferred because they appear to contain the highest quantity of virus for pandemic influenza detection, as determined on the basis of available data. Nasal or nasopharyngeal swab specimens are acceptable, but may contain less virus and therefore not be optimal specimens for virus detection.

  Detection of pandemic influenza virus is more likely from specimens collected within the first 3 days of illness onset. If possible, serial specimens should be obtained over several days from the same patient.

  Bronchoalveolar lavage is considered to be a high-risk aerosol-generating procedure. Therefore, infection control precautions should include the use of gloves, gown, goggles or face shield, and a fit-tested respirator with an N-95 or higher rated filter. A loose-fitting powered air-purifying respirator (PAPR) may be used if fit-testing is not possible (for example, if the person has a beard). Detailed guidance on infection control precautions for health care workers caring for suspected pandemic influenza patients is available through NDDOH.

  Swabs used for specimen collection should have a Dacron tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not recommended. Specimens should be placed at 4°C immediately after collection.

For reverse-transcriptase polymerase chain reaction (RT-PCR) analysis, nucleic acid extraction lysis buffer can be added to specimens (for virus inactivation and RNA stabilization), after which specimens can be stored and shipped at 4°C. Otherwise, specimens should be frozen at or below -70°C and shipped on dry ice. For viral isolation, specimens can be stored and shipped at 4°C. If specimens are not expected to be inoculated into culture within 2 days, they should be frozen at or below -70°C and shipped on dry ice. Avoid repeated freeze/thaw cycles.

Sentinel provider labs currently include: [redacted]

The Division of Laboratory Services - Microbiology accepts nasopharyngeal or throat swab specimens from the sentinel providers from two to three patients from each sentinel provider site with ILI for influenza sub-typing, at each of the following stages during the regular influenza season:

1. At the beginning of the season (usually October or November), when ILI first presents at a health care facility;
2. Midway through the season (usually late December and January); and
3. Toward the end of the season (usually March or early April).

During these stages, the Division of Laboratory Services – Microbiology analyzes samples to determine antigenic drift.

The NDDoH Division of Disease Control (DC) will coordinate surveillance efforts. Laboratories and hospitals that suspect novel strains of influenza should report to our laboratory and Disease Control. NDDoH will perform confirmatory testing and notify CDC and Disease Control and refer isolates to CDC if requested. In North Dakota, 95% of labs receive reports from NDDoH through STAR LIMS (Laboratory Information management System) by autofax as soon as NDDoH releases the report. NDDoH is connected to the CDC for reporting through Results Messenger and can also send to other states through Results Messenger."

Isolation and Quarantine - Inter-Pandemic Period

Isolation and quarantine (I&Q) is not routinely implemented for individuals identified with non-novel influenza viruses during the first two phases. It is recommended that persons stay home until no longer ill to prevent the spread of seasonal influenza. However, for any person identified with a novel influenza virus during this phase, I&Q may be considered.

Interpandemic Plan Phase

For further clarification, refer to Pandemic influenza isolation and quarantine plans in document library. Activities during this phase related to a novel virus include:

1. Participate in discussions of triggers for school closings ("snow days"), cancellation of public gatherings, and other containment measures. Develop recommendations for trigger points for disease containment, which will be modifications of proposed triggers dependent on the epidemiology of the virus and local conditions. Triggers address both initiation and scaling back of containment measures.

2. Provide protocol for isolation and quarantine that may be used by local public health agencies/departments.

3. Provide policies of legal imposition of isolation or quarantine consistent with authority conferred by the North Dakota Century Code.

4. Assist LPHU with plan for essential services and monitoring in the event IQ is recommended.

5. Assess effectiveness of isolation and quarantine in preventing disease spread.

6. Work with Tribal Leadership to ensure adequacy of protocols for disease containment on Indian lands and passage of authorizing legislation on reservation land if not already available.

Social distancing - Inter-Pandemic Period

During the inter-pandemic period, planning is developed to define procedures for implementation of social distancing policies during a pandemic. This plan development includes:

1. Development of NDDoH policies for application of statewide social distancing measures, mandatory and recommended, in accordance with authority granted in the Century Code.
2. Development of public messaging for promotion of social distancing during a pandemic.
3. Assist local public health units in educating local stakeholders to include: pandemic influenza preparedness, practicing overall universal hygiene methods, worker protection policies, voluntarily isolation when ill, antiviral usage, discouraging mass gatherings during a serious disease outbreak, influenza self-diagnosis knowledge, utilization of PPE (Personal Protective Equipment), mask fit-testing, ICS training, and other skills as deemed necessary.
4. Develop guidelines for monitoring of social distancing at the local level by LPHU.
5. Assist the North Dakota Department of Public Instruction and North Dakota Department of Higher Education to develop protocol regarding surveillance and reporting, and communicating impact of expected pandemic related social distancing policy to schools.

6. Exercise plans for social distancing.
7. Assist local stakeholders to identify alternatives to large public gatherings during a severe pandemic (instructions for school children if schools are closed, church and funeral services if churches are closed, maintaining safe distances or telecommuting resources when working).
8. Track and apply federal policy related to social distancing.
9. Develop communication resources and protocols that will be needed for public emergency response communications during a pandemic.

Antivirals - Inter-Pandemic Period

During the inter-pandemic period, NDDOH will allow the normal prescribing, dispensing and distribution of antivirals to occur. Pandemic planning will include the following activities:

- Identification of resources to distribute antivirals and other PPE:
- Develop relationships with state, local and private partners to enhance antiviral management plan.
- Review and update existing antiviral management plan, located in *Attachment A-1: Antiviral Distribution Plan*.

Vaccines - Inter-Pandemic Period

During the inter-pandemic phase, vaccine related activity includes management of seasonal influenza vaccination and planning for mass vaccination during a pandemic. Seasonal influenza vaccine is directed by local public health (LPH) units, and vaccine management is directly from vaccine manufacturer to LPH, and State Public Health does not have a direct handling role except for management of small quantities of state purchased vaccine and management of VFC vaccine.

Disease Control (DC) works with LPHU and private providers to increase influenza vaccination rates in North Dakota to reduce the annual toll from influenza, enhance the existing vaccine delivery infrastructure, facilitate vaccination access to high-risk populations, and increase pneumococcal vaccination rates in North Dakota to reduce the incidence and severity of secondary bacterial infections.

Inter-pandemic initiatives have included:

- Education North Dakota providers on proper vaccine storage and handling procedures to maintain cold chain.
- Encouragement to providers to report all vaccine adverse events to the Vaccine Adverse Events Reporting System (VAERS),
- Methods to increase provider use and access to the North Dakota Immunization Information System (NDIIS) for tracking influenza and pneumococcal immunizations, including use of reminder/recall capabilities of the NDIIS to ensure that all vaccinated individuals receive all the necessary doses of vaccine.

Although most detailed pandemic planning has occurred during the pandemic alert phases, components are similar for inter-pandemic planning. Planning for mass vaccination of the population has components for which NDDoH takes the lead (e.g., application and oversight of SNS guidelines for development of plans for points of dispensing). The NDDoH reviews suitability and availability of designated points of dispensing (POD) sites annually and assists local planning with policy, documentation and integration of mass dispensing into broader pandemic influenza planning. Lead local planning components encompass most aspects of POD level logistical planning. Both are actively involved in exercises.

Tactical communications - Inter-Pandemic Period

Planning and exercising of communications systems are the principle tactical communication activities during the inter-pandemic period. Activities include:

1. Enhance current communication systems with health care providers (such as hospitals) and local public health units through HC Standard (data software for health care information), BTWAN (wide area network connecting hospitals and cross connected to the state wide area network), and Health Alert Network (HAN) (disaster messaging).
   - Promote regular use of tactical communication systems for planning purposes to promote high levels of competence and comfort.
   - Train health systems in the use of disaster management communication tools, and regularly exercise health providers in their use.
   - Assess and monitor readiness to meet communications needs in preparation for an influenza pandemic, including regular review, testing and update of communications plans.
2. System maintenance and enhancement
   - Develop and test procedures to ensure that communication systems such as networks, servers, and system backups are available, functioning, and integrated into response planning for pandemic influenza.
   - Provide IT support for local public health units (through contract with ND Association of Counties).
   - Prioritize communication system enhancements and upon acquisition, ensure full integration of new systems into existing systems and protocols.
   - Exercise communication systems with deficiency identification, remediation, and re-exercising.
3. Build policy level support for maintenance, enhancement and use of tactical communications systems.

4. Confirm any contingency contracts needed for communications resources during a pandemic. (priority restoration and essential service designation on HAN circuits)

5. Identify common communications opportunities or challenges with neighboring jurisdictions and build communication bridges to other jurisdictions.

6. Enhance communication approaches that increase state and local capacity to reach people in high-priority risk groups and groups isolated by geography or reduced access to communication systems.

Public information - Inter-Pandemic Period

1. NDDoH shall rely on communications and links with the World Health Organization, Center for Disease Control, Health and Human Services, and also refer to http://www.pandemicflu.gov and www.cdc.gov for timely and accurate pandemic influenza related information, tools, and guidance to assure consistent messaging at all levels of communication.

2. The North Dakota Department of Health Public Information Office serves as the lead division for disseminating risk communication information, messaging and public education regarding pandemic influenza. State PIOs, in conjunction with regional PIOs, will work to develop materials and events to help educate the public and other stakeholders about pandemic influenza and about the importance of planning now.

   Activities include:
   a. Pandemic Influenza Education Kit: Developed in 2007 to be used for educational purposes with the public. Kit was printed and disseminated to local public health units across the state. Participants of tabletop exercises around the state received a copy. Plans are to have the kit translated into multiple languages. The kit is available on the NDDoH website.
   b. www.ndpandemicflu.gov: A multi-agency website is under development to provide one consistent webpage for the public to find information about pandemic and avian influenza.
   c. Fact sheets and other materials located on the NDDoH website and document library (http://www.ndhan.gov). Translations are in seven different languages.

3. Refer to *Chapter 5: Crisis Communication Plan* in the State Public Health Plan Base Folder for more detailed guidance regarding public information.

Health care system - Inter-Pandemic Period

Substantial limitations in the structure and capacity of health care systems inevitably limit the surge response of these systems. Planning and preparedness intends to maximize the capacity of these systems though relationship building, inter-facility cooperation, training, response protocols and resource caching. Planning prioritizes resources first to

those actions and acquisitions likely to save the most lives during a pandemic. Detailed discussion of health care system planning and protocols can be found in Appendix A: Health System Response Plans.

Activity includes:

1. Engage healthcare providers, including behavioral health and clinics, in discussions about pandemic influenza planning for inter-facility cooperation. Topics include:
    i. Vaccine prioritization
    ii. Hospital surge response
    iii. Inter-facility patient transfer
    iv. Sheltering-in-place
    v. Minimum care facilities
    vi. State supply cache
    vii. Anti-viral access and utilization
    viii. Outpatient management
    ix. Health care worker mental health
    x. Public information management
    xi. Allocation of critical scarce resources
    xii. Standards of care during a disaster

2. Development of hospital specific pandemic influenza plans

3. Develop/implement statewide system for the advanced registration of volunteer health personnel.
    a. Collaborate with regions to develop/implement regional volunteer programs that are integrated into the statewide system.

4. Facilitate the integration of NIMS compliant ICS within health care facilities.

5. Training of EMS services in disaster protocols for surge management and at least periodic incorporation of START triage protocols into daily work in hospital EDs.

Public health services - Inter-Pandemic Period

During the inter-pandemic period, NDDoH does not plan to scale back public health services. All normal operations will continue; however, public health will engage in advance planning for pandemic influenza, including the lead role for management of some problems as discussed in this document.

Psychosocial support - Inter-Pandemic Period

Local Public Health in cooperation with local mental health agencies will take the lead in planning for pandemic influenza psychosocial services at the local level. NDDoH will have a support role to the North Dakota Department of Human Services. Because a severe pandemic would be expected to have a profound impact on population health and

response capability this is an area of concern for NDDoH. Planning that is likely to be affected includes:

- Mental health impact of isolation and quarantine;
- Psychosocial impact on health care providers and public health providers;
- Mental health impact on mass fatality responders;
- Impact of fatigue and grief on the population and on responders;
- Impact of clear public communication on mitigating psychological impacts;
- Implications of social distancing and supply chain integrity on economic health of families.

Mass fatality management - Inter-Pandemic Period

The North Dakota Department of Emergency Services recognizes NDDoH as the lead state agency for mass fatality response; however, the authority for local mass fatality response is embedded in local emergency management personnel. The extent to which local public health has been drawn into mass fatality response depends on the local jurisdiction. Because mass fatality is inherently a local issue (the bodies to be managed are local), planning for mass fatality response will be led by local public health, to the extent that it has been turned over to local public health by local emergency management. Through the Office of the State Forensic Examiner, NDDoH will assume a support role for the following issues:

1. Identification of remains;
2. Retrieval of remains and death scene investigation including team identification and training;
3. Sealing and cold storage of remains (morgue management)
4. Interment
5. Family assistance

The NDDoH electronic death registration system was implemented in January 2008. The system splits the certificate into two parts, the Facts of Death, which the funeral home is responsible for submitting, and the Cause of Death, which the physician or Coroner are responsible for submitting. The NDDoH Director of the Division of Vital records manages the program. All paper submissions have been transitioned to electronic submissions and entities responsible for electronic data submission at the local level have been trained. During an emergency paper submission will be accepted as an alternative if electronic data submission is not possible.

Legal Authorities - Inter-Pandemic Period

Review of legislative authority has not found major gaps and key provisions and can be summarized as follows:[1]

[1] For a listing of specific laws relevant to pandemic influenza, see the table at the end of this document.

Health care management – Other than licensure requirements, the state exerts little control over the private health care system. However, hospitals have agreed, in principle,[2] to cede limited authority to a state medical director (rotation of on-call private physician who will work for the NDDoH Department Operations Center) for key medical decisions that impact health care institutions including expected standard of care, cancellation of elective admissions, inter-facility transport, allocation of state resources, implementation of resource rationing, oversight of minimum care facilities)

Tort coverage – Current law allows NDDoH and other state agencies to designate volunteers as working for (on the behalf of) the State of North Dakota, thereby extending tort coverage to those persons. These persons must be "signed in" into the state volunteer data system and into the designated volunteer site (as on duty). They will also be signed up for workers compensation coverage.

Isolation and quarantine – Both local and state health officers have authority to enforce mandatory isolation or quarantine.

Mandatory social distancing – The State Health Officer has authority to enforce social distancing measures including the closure of any public or private venue, including businesses and churches, in order to protect the health of the public. The authority of the local health officer is less clear, but legal counsel believes it extends to the same.

Emergency powers – Certain measures will only be taken under executive powers granted during an emergency declaration. An executive order has been drafted that would extend key authority to the State Health Officer to take any or all of the following actions to the extent that he or she believes prudent at the time:

- Provider licensure – Inactive or retired providers can be granted authority to practice.
- Clinical privilege expansion – Health care providers (e.g., nurse, EMS) can be granted authority to deliver health care services prohibited by practice acts during non-emergency events. This extends to medical orders, drug prescribing, and declaration of death. This also may include dispensing by members of the general public working on behalf of public health.
- Ambulance transport requirements – Regulatory requirements controlling ambulance capabilities can be over-ridden to allow non-traditional vehicles and transport by non-certified individuals.
- Mass fatality management – Interment requirements (e.g., time lapse to interment) and rules controlling pollution from cremation can be over-ridden.
- Mandatory reporting – The State Health Officer can add mandatory reporting requirements to collect information not normally collected during non-emergencies.

Legislation on reservations – Current agreements between state and Indian reservations allow state employees to come onto reservation land to investigate cases. Reservations have taken additional steps to improve tribal authority over isolation and quarantine but action taken is not consistent between reservations.

[2] MOU ceding this authority is not in place at this time.

Financial support of persons under isolation or quarantine –. Currently employers have broad latitude to manage this issue according to their own policies. Specific provisions to prevent firing of employees in isolation or quarantine or provision of income replacement are not in place.

Federal law and regulation – The state has no authority to over-ride certain federal barriers to emergency response such as mandatory organ donation documentation and EMTALA. These issues will have to be addressed at the federal level.

Pandemic Alert Period

Surveillance - Pandemic Alert Period

The following is applicable to WHO Phases 3, 4 & 5.

Early in the pandemic alert phase (phases 3 and 4), the intensity of influenza preparedness is increased modestly, primarily with the intent to detect a strain of influenza that demonstrates potential for progressing to a higher risk strain. The extent to which surveillance is increased will depend in large part on the geographic distribution of the most concerning strains of influenza (those that have already demonstrated progressive adaptation to human hosts and increased capability of human-to-human transmission. With the introduction of high risk strains into North America, surveillance will increase proportionate to the risk. With progression to Phase 5, it is assumed that transformation to pandemic status is imminent and that the transformation could occur in any place where high risk strains have been identified.

In addition to the surveillance activities as described in the Inter-pandemic Period, NDDoH will increase surveillance activities during the late Pandemic Alert Period as described below. Surveillance partners, including hospitals, providers and laboratories will receive messages through the state Health Alert Network of the changes to surveillance, information related to disease recognition and testing, changes in reporting and critical surveillance results. To increase penetration of messages, high priority HAN messages are followed up with fax and email as well as personal contacts by regional epidemiologists by telephone or in person. During this period, providers will be asked to provide immediate reporting of suspected influenza cases (especially those meeting published case definitions for high risk); this level of reporting will continue through the initial part of the pandemic period (the period of pandemic containment during which control of individual cases and contacts has been implemented). Immediate reporting flows through the case manager system (or Department Operation Center if active) which provides 24/7 emergency contact coverage. (See Case Manager Protocol in NDDoH COG_COOP Plan).

During the pandemic alert period, any unusual case of influenza (epidemiologically unusual suggesting atypical transmission, clinically unusual, or unusual laboratory

characterization) will result in immediate discussion with CDC so that further evaluation can be undertaken, if indicated, and precautions against transmission can be taken until the threat level of the case is determined.

A. Outpatient surveillance:
During this period, it is anticipated that the highest risk areas for emergence of a pandemic strain or development of non-sustained transmission of pre-pandemic strains will be in other countries or other states (although the possibility of detecting the first case of pandemic in North Dakota is not excluded). Recommendations and information received from the CDC regarding risk factors, virus epidemiology, probable and confirmed case definitions and other factors will be needed to guide public health response. State policies for surveillance will evolve as the risk of pandemic evolves.

Disease Control may recruit additional North Dakota healthcare providers to participate in the Sentinel Provider Network. The number of specimens submitted for viral isolation will increase with individual providers deciding which patients to gather these specimens from. Based on current world status of the pandemic alert, policies regarding patient travel history and animal exposure as risk factors for potential pandemic strains will be disseminated to health care providers, and these policies may affect testing and public health response.

B. Private laboratory surveillance:

During the Pandemic Alert Period, DC may increase the number of laboratories participating in this program as well as the number of specimens submitted for viral isolation, as WHO phases increase.

In addition to testing data as specified in the inter-pandemic period, DC would request that laboratories submit rapid-test positive samples, from high risk individuals, to the DLS for viral isolation and sub-typing until novel strain has been identified.

C. School absenteeism:
Disease Control may increase the number of schools, grades K-12, enrolled in its Sentinel School Program. These schools will report absenteeism rates on a weekly basis, or more often as needed, to the ISC for monitoring purposes.

All schools will be requested to immediately report school absenteeism rates exceeding 25 percent for two consecutive days. DC will work with the N.D. Department of Public Instruction (DPI) regarding school absenteeism information collection and the distribution of educational materials including non-pharmaceutical intervention measures.

D. Syndromic surveillance:
As in the Inter-pandemic Period, the previously identified facilities will continue to submit syndromic surveillance data on a daily basis to DC. When surveillance software identifies red/orange respiratory syndrome flags for more than three consecutive days (more or less days as needed), the DC will provide guidance to these sites regarding

submission of respiratory specimens from patients meeting the developed case definitions.

In other area hospitals and emergency rooms, DC will conduct enhanced surveillance for suspected and probable influenza cases. On a daily basis, designated hospital contacts will report to their regional field epidemiologist or via an online reporting card the total number of patients treated at the emergency room or admitted to the hospital, who meet the case definition.

Rapid Case Identification - Pandemic Alert Period

The ability to rapidly identify cases of non-seasonal influenza becomes of heightened importance as soon as the emergence of a pandemic influenza virus becomes imminent. Limiting the spread of the disease requires rapid identification and characterization of potential cases beginning prior to a pandemic actually being declared, and continues until a point is reached in this state at which further individual level containment is no longer feasible.

Case definitions may change over the course of the pandemic alert to pandemic period (particular related to geographic and personal risk factors that may help distinguish a novel influenza virus from other causes of respiratory illness including seasonal influenza). When new guidelines are released, multiple methods of dissemination will be used as described below. Although the public will not use case definitions per se, the case definition will be interpreted through media messages to assist the public to recognize persons who may be ill with a novel influenza strain.

Cases may be potentially identified by providers, allied health professionals and the general public. Each requires education regarding symptoms to watch for and reporting pathway for communicating concerns to public health. Diagnostic evaluation is as follows:

1. During the period of potential disease emergence in North Dakota, outpatients are screened for possible respiratory illness prior to entry into emergency rooms or clinic settings. Patients with potential respiratory illnesses are immediately masked and isolated in a separate evaluation area.
2. Providers are instructed to contact public health on suspicion (not just confirmation) of a case consistent with pandemic influenza. All primary care providers should expect to initiate isolations measures and diagnostic evaluation on a substantial number of patients who do not ultimately turn out to have pandemic influenza. The extent to which "over testing" will be required to identify the first pandemic case will depend on:
    a) The specificity of the screening criteria available at the time (e.g., signs and symptoms specific to the anticipated strain, geographic exposures specific to the pandemic strain) which can be used without serious compromise of evaluation sensitivity; and,
    b) The prevalence of non-influenza respiratory illness and non-pandemic influenza in the community at the time.

3. Strategy will depend on local test availability at the time (sensitivity, specificity, time to result). Suboptimal test availability (unacceptably low sensitivity for tests available in less than two hours) may require discharging patients home under agreement of voluntary isolation until confirmatory tests are complete, with process for subsequent notification and release from isolation for those patients with negative confirmatory tests. Regional epidemiologists for the Division of Disease Control will need to engage and track any patients released under voluntary isolation pending confirmatory test results. During these periods of low prevalence, the number of false positive results may be substantial. The threshold for voluntary isolation of the sick individual, the threshold for treatment of putative case with antivirals, and the threshold for initiation of full case investigation and contact quarantine may not be all the same.

Because initial cases will have to be identified against the backdrop of routine medical illnesses, the initial identification is likely to occur in usual care clinics and emergency rooms. To avoid exposing large numbers of people in those settings, each outpatient visit area will need to implement triage based on guidance/training they receive from the state (see below) on recognition and management of persons in whom influenza needs to be ruled out. Part of inter-pandemic preparedness is the pre-identification of the location and integration of triage sites and protection of unaffected patients.

Provider training - Although little interest exists on the part of providers to participate in training related to the recognition of non-seasonal influenza strains in early phases, as the perceived risk becomes greater, this will change.[3] As occurred during the smallpox vaccination campaign, NDDoH will set up a series of trainings (noon hour and evening hours) using webcast and interactive video networking sites to reach the provider community. (These trainings are archived on the web for later access.) Emphasis will be on the constellation of history and clinical presentation that would trigger concern that a clinical presentation is a non-seasonal strain of influenza that needs testing and public health response to prevent transmission in addition to immediate clinical management. (The specific criteria that would be used to identify a suspect case, which may include critical geographic exposure variables, will not be known until closer to the time of an impending pandemic.) Local public health units and particularly regional emergency preparedness coordinators and regional epidemiologists will also attempt to fill training gaps though local hospital venues to reach providers. One-on-one contact may be needed with some providers.

In additional to trainings, providers will be targeted with direct mailings and health alert messages. All messages will provide guidance related to obtaining more detailed information over the Internet at both the NDDoH website and the CDC.

- Providers (physician and non-physician)–.
  Once a provider recognizes a potential case of concern, he or she can:

[3] During the interpandemic period, hospital and clinic preparedness is conducted with emergency preparedness personnel from those institutions in monthly planning meetings and special trainings sponsored by NDDoH and professional associations of the facilities.

- Enter the data into [redacted], the online surveillance system for the department of health;
- Communicate with a hospital infection control nurse (who commonly report disease to public health);
- Call the state (or local) health department. Phone numbers for state reportable disease notification as well as the on call case manager are published, but the system loops so contact of local or regional public health or local emergency management will achieve the same result. In addition, 211 can provide the connection from provider or public to the public health system.
- Call the state hotline (However, this would only be an option once the hotline is activated likely in phase 6).

Once contact is established between public health and the provider, the provider would be instructed in testing and a case investigator would respond.

- Allied health professions – Any allied health professional who recognized symptoms of possible non-seasonal influenza could initiate a public health response through a call to public health, as described above, or to the hotline if activated. In addition to clinic and hospital providers, EMS in particular will be purposely targeted with training. However, media messages would also be in play and be a potential source of information for EMS. Response would involve working with the patient's provider to assess the risk.
- Public – As public concern rises, the value of the public as a potential trigger point for case recognition increases. Although the messages are simpler than those given providers the general focus would be the same – recognition (focused on separating seasonal and non-seasonal influenza from each other and from other respiratory illness), reporting and response. The public would be able contact the local or state health department, emergency management or the public health hotline. In addition, information about influenza on the department website will be linked to email that will permit public reporting as well. The person reporting the illness could remain anonymous but public health would require sufficient information to permit identification the case of concern. Evaluation would be coordinated with the patient's local provider after initial contact with patient was made.

Laboratory and Diagnostics - Pandemic Alert Period

WHO Phase 3

In this phase, there are human infections with a new virus subtype but no human-to-human spread, or at most, rare instances of spread to a close contact.

Activities from Phases 1 and 2 continue. The North Dakota Public Health Laboratory Emergency Operations Plan (pandemic influenza) plan will be reviewed, and the Incident Command structure established. (See chart on page 8.) Additionally, pandemic plans and Incident Action Plans (IAPs) are reviewed by laboratory staff. A list of infectious disease shipper locations and a map of the ND Laboratory Response Network (NDLRN) can be

found on the Division's central server. (See chart on page 9.) Cross training of laboratory staff is on-going during this stage. Sentinel providers may submit specimens from patients with ILI; however, sentinel provider labs are needed in some of the largest medical facilities, Indian Health Service and the Air Force bases. Recommended new surveillance sites for NDLRN are as follows:

[redacted]

[redacted] currently, but high participation would become essential during the later part of the pandemic alert period particularly. MOUs with all federal facilities are not currently in place.

WHO Phase 4

In this phase, small cluster(s) of human-to-human transmission is limited and still highly localized.

The Division of Laboratory Services – Microbiology will begin actively monitoring for pandemic influenza strains using Polymerase Chain Reaction (PCR) methods approved by the CDC. Laboratory surge capacity and Incident Action Plans are implemented as soon as pandemic influenza influenza isolates are identified within the state or when the laboratory's same-day testing capacity is exceeded. After regular work hours, the laboratory's Crisis Event Telephone Tree will be used, as needed, to notify staff that extended laboratory testing hours are required to meet testing demand. The telephone tree is located on the laboratory's central server. Additional just-in-time and situational dependent training will occur whenever possible to respond to the surge in testing. Bio-Safety Level (BSL) 3 containment measures and protocols will be used for testing of all respiratory specimens at the Division of Laboratory Services – Microbiology. This information can be found in the CDC Biosafety Microbiology and Biomedical Laboratories Guide. Increased safety measures including the use of N-95 respirators and appropriate Personal Protective Equipment (PPE) will be recommended for specimen collection and all laboratory testing involving respiratory specimens.

Specimen collection, safety recommendations and transportation guidelines will be sent to all providers through use of the HAN. Messages will include recommendations to perform rapid influenza tests in a biological safety cabinet (BSC) with appropriate respiratory protection whenever possible. Additional laboratory supplies will be re-stocked and protocols will be initiated to expedite the ordering process so that the required reagents and supplies can be obtained as quickly as possible. No memorandums of understanding are currently in place between the Division of Laboratory Services –

Microbiology and vendors; however, the Division will implement open-ended purchase agreements with vendors to obtain needed supplies in a timely basis.

Increased numbers of nasopharyngeal specimens from patients with ILI will be accepted from the sentinel providers. Two to three specimens per week from each sentinel provider will be accepted during this phase. These specimens are collected from patients presenting with ILI regardless of rapid influenza test results. **A portion of both positive and negative rapid antigen tests results should be verified by the state laboratory because reliability of the rapid tests to detect new strains of a novel influenza virus will not be established**. In addition, specimens will be accepted from **all** patients with ILI who have traveled to areas known to be infected, have been exposed to persons or birds diagnosed with influenza or laboratory workers exposed to pandemic influenza virus. Information identifying communities infected with pandemic influenza virus will be disseminated through the HAN.

WHO Phase 5

In this phase, larger clusters of localized human-to-human spread are sustained.

To avoid accidental laboratory exposure, specimens will no longer be cultured for influenza virus at this stage. PCR testing will continue at the State Laboratory. The Division of Laboratory Services – Microbiology will accept specimens from additional sentinel providers. Specimens will be accepted from the following sentinel providers or other facilities with similar patient population and location.

Note: There are currently no written memorandums of understanding for flu sample collection between NDDOH and the aforementioned group.

Four to five specimens per week from patients with ILI will be accepted from each sentinel provider for PCR testing, or more as outlined in CDC recommendations or DC internal review. These specimens are collected from patients presenting with ILI regardless of rapid influenza test results. **A portion of both positive and negative rapid antigen tests results should be verified by the state laboratory because reliability of the rapid tests to detect new strains of a novel influenza virus will not be established**. In addition specimens will be accepted from all patients with ILI who have traveled to infected areas or have been exposed to infected persons, birds or laboratory specimens positive for pandemic influenza. Laboratory surge capacity and Incident Action Plans are implemented as soon as pandemic influenza virus isolates are identified within the state or when the laboratory's same-day testing capacity is exceeded. After regular work hours, the Division of Laboratory Services- Microbiology Crisis Event Telephone Tree will be used, as needed, to notify staff that extended laboratory testing hours are required to meet testing demand. The telephone tree is located on the laboratory's central server.

Additional just-in-time and situational dependent training will occur whenever possible to respond to the surge in testing. Approximately 15 to 20 specimens (60 – 80 tests) can be analyzed for the four PCR markers (H_1, H_3, H_5 and B) per day without significant disruption of laboratory services, provided the laboratory is running at full staffing capacity.

Isolation and Quarantine - Pandemic Alert Period

The success of voluntary isolation and quarantine efforts is dependent on how well the public understands and accepts the necessity of these actions. During the pandemic alert period, before isolation or quarantine are needed, educating the public on this issue is necessary; however, evidence suggests that information it is unlikely to make a large impact on public consciousness until late in this period with the public begins to worry about a pandemic event. Consequently, public education will increase as the WHO stage advances.

The need for I&Q for individuals identified with a novel-influenza virus will depend on what is known about the epidemiology of the virus circulating at that time. I&Q may be necessary during these phases on select/specific persons (i.e., those who are symptomatic and are returning from areas of high risk) in order to reduce the possibility of human-to-human spread.

For further clarification, refer to *Chapter 6: Isolation and Quarantine* in the State Public Health Base Plan Folder. Planning activities may accelerate to ensure all needed response procedures are as complete as possible. Specific areas of additional activity may include:

1. Completion of the identification of isolation facilities for people who cannot be isolated at home.

2. Additional refinement of legal protocols for court orders of IQ.

3. Refinement isolation and quarantine monitoring protocols including development of scripts and forms for pandemic influenza (scripts will include infection control recommendations for people in IQ).

4. Completion of instructions for individuals placed in isolation (outside hospital settings) and quarantine.

5. Confirmation that LPH agencies have essential service plans for isolation and quarantine, and monitoring plans complete.

Social Distancing - Pandemic Alert Period

Implementation of social distancing measures are not anticipated during this period. Activity will focus on completion of planning, adjustment of protocols based on new information about virus behavior, and preparation of public for implementation of social distancing measures during the pandemic period. These activities include:

1. Continuation of activities listed in Inter-pandemic Period WHO Phases 1 and 2 above.
2. Issuance of communications to the public on risk and risk avoidance social distancing preparatory information for the next pandemic period.
3. Exercise of training programs in local jurisdictions in regards to social distancing.
4. Provision of training to individuals in health care systems in local jurisdictions on use of ND Health Dept website resources for information.
5. Public encouragement to get seasonal influenza vaccinations.
6. Dissemination of information to response partners regarding tactical communications tools to be utilized by NDDoH during periods of social distancing during a pandemic.
7. Provision of additional training to field epidemiologists on protocol for filling out surveillance reporting for pandemic procedures.
8. Provision of additional training to response partners in ICS use.
9. Provision of recommendations to local jurisdictions, especially LPHU, to sign Memorandum's of Understanding (MOU's) for any resources that may be required in implementing social distancing plans.
10. Acceleration of volunteer recruitment and training.
11. Public communications on the importance of having emergency supply kits and emergency planning to be used in times of social distancing in a pandemic.

Antivirals (Pandemic Alert Period)

During the pandemic alert phase, activity will focus on completion of any state purchased inventories, planning to receive federal purchased inventories, distribution planning and plan exercising. Details of antiviral management planning can be found in that subsection of the pandemic influenza plan. NDDoH may pre-place or schedule pre-placement of antivirals at local public health units to ensure adequate supplies are available for treatment of influenza by the provider community and for possible provision to patients who are unable to afford an antiviral prescription given to them by their provider.

Vaccines - Pandemic Alert Period

During the pandemic alert phase, activity will focus on planning and exercising. Planning is based on best available evidence from CDC about expected shipment and receipt of vaccine as the primary plan with backup contingency planning. Planning includes response partners in priority infrastructure groups to maintain a level of readiness prior to a local pandemic situation. These groups would include, but are not limited to: state and local health officials, first responders and other medical personnel, disaster responders (e.g., coroners, community emergency managers), state and local law enforcement, fire and EMT services, and community utility workers.

Tactical communications - Pandemic Alert Period

NDDoH has

- Incorporated tactical communication systems into daily use for disaster planning and information transfer to ensure response partners are knowledgeable and comfortable with the technology, and to identify and correct technical problems with systems functioning.
- Provided specific training to hospitals and local public health units on the use of technology that is not used on a daily basis (e.g., HC Standard) and regularly test their capacity to use the systems correctly[4].
- Inventory, maintain and test equipment;
- Incorporate use of communication technology into exercises;
- Complete all planning for utilization of communication systems;
    - Ensure integration of all systems defining role for each technology;
    - Acquire technology to fill communication gaps including radio communications, 24 hour responder contact systems and data receipt and management technology;
    - Perform all planned upgrades with adequate lead time to ensure complete testing and trouble shooting of technology before pandemic onset;

Public information - Pandemic Alert Period

The NDDoH Office of Public Information will

- Complete all planning and materials preparation to the extent that the need can be anticipated prior to the event;
- Ensure anticipated critical decision making (e.g., related to health care) has been adequately communicated to the public and discussed to the degree that the public will engage pre-event. Use opportunity of increase public anxiety about impending pandemic to conduct public dialogue regarding response.
- Ensure all secondary persons potentially tasked with public information tasks, are fully informed of plans, persons and resources they will need if primary responders are unavailable.
- Exercise public information response plans.

Refer to Chapter 5: Crisis Communication Plan in the State Public Health Base Plan folder for more detailed guidance regarding public information activities.

During the pandemic alert period (increasing in intensity as the WHO phase progresses) and extending into the pandemic period, employees of state government will receive information specifically about

- How they can protect themselves from being exposed to influenza at home and in the workplace (see document Preventing Influenza Transmission in the Workplace).

[4] NDDoH tested the communications systems extensively during the spring floods of 2009 and 2011.. Transmission of information related to specific patients, institutional status, action planning, policy and resources were transmitted effectively.

- How personnel policy will be affected by the response to a pandemic crisis, including specific work assignments specific to crisis intervention
- The pandemic response plan. Employees that are expected to be assigned to pandemic response roles (e.g., NDDoH employees) will begin an education process in details of plans related to the specific roles to which they will be assigned (e.g., SNS, ICS, epidemiology).

Employee communication and education will be provided in multiple venues including:
- NDDoH employee website – this will contain general information about pandemic influenza and work procedures
- Hands-on training – this will make each employee familiar with response roles to which they can be expected to be assigned.
- Webcasts and archived presentations – employees will be notified of training opportunities and where to access training they need if they missed it.

Health Care System - Pandemic Alert Period

Preparations during the pandemic alert phase will
- Ensure completion of planning;
- Ensure adequate awareness of response protocols and policies across institutions, not just in emergency response personnel and upper administration;
- Use heightened interest of health care community to discuss clinical and epidemiologic management of pandemic influenza, particularly within the expectations of constantly changing health system capacities during the pandemic;
- Ensure that anticipated executive orders required for health care response are drafted prior to the pandemic and that triggers for use of the executive orders are anticipated;
- Ensure private individuals responsible for filling role of medical director during the pandemic are fully informed of policies that will impact decision making of that position during a pandemic;
- Ensure local planning for minimum care facilities is sufficient to cover the anticipated severity of disease, to the extent that can be estimated pre-pandemic;
- Exercise health care response plans with both public health and health care participants.

Public Health Services - Pandemic Alert Period

During the pandemic alert period, NDDOH will continue normal operations. Based on the epidemiology of the circulating virus and its impact on the community, NDDOH may divert staff to support pandemic preparedness. This decision will be made jointly by the Office of the State Health Officer, the Division of Disease Control, and the Emergency Preparedness and Response Section.

Psychosocial Support - Pandemic Alert Period

Because NDDoH is not the lead state agency for managing psychosocial support during a pandemic, NDDoH preparation during the pandemic alert period will be largely dependant on supporting the lead role of the Department of Human Services (DHS) per planning documents developed by that agency. Areas of particular concern to NDDoH were previously summarized, and response detail will be found in plans from DHS that are not fully defined at this time.

LPHUs have been instructed to coordinate planning with the appropriate regional DHS staff. LPHU Disaster Mental Health Emergency Response Plans outline policies used in a Public Health Emergency. Partners such as schools, faith based organizations, and other civil society institutions have been a part of the planning process at the local level to provide support for family members who experience deaths of individuals in their homes.

Mass Fatality Management - Pandemic Alert Period

As previous described, NDDoH will act in a supporting role to local planning efforts for mass fatality management; however, NDDoH recognizes its designated lead state role in assisting local planned action. Actions taken by NDDoH to facilitate local planning include:

1. Provision of guidance;
2. Assistance with coordination between with the State Forensic Examiner, funeral directors, coroners, DMORT, Hospice, law enforcement and other mass fatality responders;
3. Incorporation of mass fatality management into state exercises with local involvement of solutions.
4. Upgrades and application of state data systems for tracking patients from the time they enter the pandemic care system until the person is released to permanent residence or person is permanently interred.(see documentation for patient tracking system).
5. Provision of training for physicians (including local health directors) and other health care providers, funeral directors, and coroners on use of the electronic death certificate registration.
6. Supply acquisition into state cache for items needed to manage mass fatality management, including PPE, body bags, identification tags, and equipment for movement of remains.
7. Development of training materials for use by mass fatality response teams in the community;
8. Provision of key policies to be applied statewide including policies related to remains identification, documentation, handling of unidentified bodies, identifying flu victims, and suspicious cases/scene investigation.

Pandemic Period

Surveillance - Pandemic Period

The following is applicable to WHO Phase 6.
Any chance of implementing effective control measures to control the spread of pandemic influenza using isolation/quarantine and treatment/prophylaxis (patient level disease containment) depends on the rapid identification of the first and any subsequent cases of influenza. Any delay in cases identification will result in subsequent generations of spread with reduced likelihood of control. Identification of the initial case may occur by:

- Follow-up of a contact of a case identified in another state
- Health care worker reporting a suspect case
- Member of the public reporting a possible case

Case identification will use a combination of pandemic year-round influenza surveillance, enhanced provider education and reporting and public information. At the point at which the disease has become well established in the state, the approach to reducing disease transmission changes from the use patient level disease containment to community social distancing measures. Public health will no longer need to identify each case of influenza; rather case surveillance will seek to obtain approximate counts of incident cases and health care service provision that can assess disease progression and impact on communities and on the state as a whole.

During the period immediately before and during initial introduction of the pandemic strain into the state, communications will be directed to both the professional community and the general public regarding cases that should be considered suspicious for pandemic influenza. Both communities will be provided opportunity to report suspicious cases – the professional community will report through existing surveillance methods, and the general public through hotlines established at NDDoH to address public concerns. Guidelines for recognizing suspicious cases will be based on information provided by CDC at the time (possible case definitions). Reports that suggest a possible case will be investigated and confirmed through laboratory testing with implementation of individual level control measures.

During the period in which the pandemic is well established in the state, the task of recognizing pandemic influenza will be complicated by the inability to obtain confirmatory testing on all ill persons. The ability to recognize a case will affect how an ill individual is treated. Persons who are suspected of having influenza will be diverted away from traditional outpatient settings (assuming their condition is not emergent) to evaluation sites that are dedicated to pandemic patient care. Over diagnosis will result in persons being referred to influenza clinics where exposure is almost certain. Under diagnosis would allow a person to enter an area where unexposed individuals may be inadvertently exposed by a pandemic case. No set of case screening criteria will prevent the mislabeling of some persons who are triaged to an influenza care site. However, NDDoH will look to CDC to provide triage screening criteria that represent the best trade

off between sensitivity and specificity. This coupled with general precautions to prevent transmission (e.g., masking, maintaining distance between patients) and unique distancing procedures (e.g., telephone-based triage and prescribing) should minimize the risk of misdiagnosis.

Communication of specific guidelines to both professionals and public is discussed in planning elements related to public and tactical communications. This communication will cover dissemination of guidelines, case reporting, laboratory testing and guidance for public behavior.

In addition to continuing surveillance activities as described in the Inter-pandemic and Pandemic Alert Periods, NDDoH will enhance surveillance in the Pandemic Period as described below. Surveillance partners, including hospitals, providers and laboratories will receive messages through the state Health Alert Network of the changes to surveillance, information related to disease recognition and testing, changes in reporting and critical surveillance results. During the period when isolation and quarantine is still an option, providers will be asked to provide immediate reporting of suspected influenza cases; this level of reporting will continue throughout the containment period (during which control of individual cases and contacts has been implemented). Immediate reporting will flow through the case manager system (or Department Operation Center if active) which provides 24/7 emergency contact coverage. Once the pandemic is well established and individual level containment has been abandoned, surveillance will focus on assessment of disease burden rather than individual case reports.

The introduction of the pandemic strain of influenza into North Dakota will result in notification of CDC. The pandemic strain will continue to mutate during the pandemic; consequently, even when pandemic disease transmission is well established, evidence of unusual cases will result in an immediate consultation with CDC. Evidence of unusual symptom complexes (e.g., involvement of organ systems not associated with the pandemic strain), higher than expected mortality or unusual complications may be an indication of a change in the pandemic virus.

It is assumed that the case definition for pandemic influenza will not be the same pre-pandemic as during the pandemic, and that the working definition may change during the pandemic. NDDoH will use the proposed definition at the time and distribute these to professionals statewide as described for tactical communications.

A. Outpatient surveillance:
Sentinel Provider Network: To the extent possible, NDDoH will continue to coordinate the healthcare providers statewide who report the number of weekly outpatient visits for ILI and submit specimens from a subset of patients to the State Laboratory for influenza virus isolation. As positive test results are identified for the virus, influenza testing will be discontinued in the impacted areas. Thresholds for discontinuation will be based on testing capacity and situational/real-time knowledge of virus characteristics.

DC staff will record the number of patients that meet probable and confirmed case definitions (e.g., ICD 9 weekly data dumps, online reporting, etc).

B. Private laboratory surveillance:
All providers and laboratories will report all positive influenza tests to Disease Control (DC). Note that although rapid tests may not be available for the novel strain, it may still identify other possible strains circulating at the same time.

If warranted, as positive samples are identified, providers may submit additional specimens to NDDoH, Division of Laboratory Services (DLS) for viral isolation. All positive cases should be reported, according to the guidelines provided by the Division of Disease Control. As positive test results are identified for the virus, influenza testing will be discontinued in the impacted areas. Thresholds for discontinuation will be based on testing capacity and situational/real-time knowledge of virus characteristics.

C. School absenteeism:
Disease Control may continue to increase the number of schools, grades K-12, enrolled in its Sentinel School Program. These schools will report absenteeism rates on a weekly basis, or more often as needed, to the ISC for monitoring purposes.

All schools will be requested to immediately report school absenteeism rates exceeding 25 percent in a single day. Disease Control will consult with the N.D. Department of Public Instruction, local public health units and school administrators regarding school closures.

If sentinel schools remain open, they should continue to report absenteeism rates on a weekly basis to DC.

D. Syndromic surveillance:
As in the Inter-pandemic and Pandemic Alert Period, the previously identified facilities will continue to submit syndromic surveillance data on a daily basis to Disease Control. When surveillance software identifies red/orange respiratory syndrome flags for more than three consecutive days (more or less days as needed), Disease Control will provide guidance to these sites regarding submission of respiratory specimens from patients meeting the developed case definitions.

In other area hospitals and emergency rooms, Disease Control may conduct enhanced surveillance for suspected and probable influenza cases. One example may be; on a weekly basis, main hospital contacts will report to their regional field epidemiologist or via an online reporting card the total number of patients treated at the emergency room or admitted to the hospital who meet the case definition..

E. Inpatient Surveillance:
For hospitals, Disease Control staff will conduct enhanced surveillance for suspect and probable influenza cases. Surveillance activities may include having hospital contacts report to their regional field epidemiologist or via an online reporting card the total

number of patients admitted to the hospital who meet the ILI case definition, on a weekly basis. As occurred during the H1N1 pandemic, Disease Control may request a demographic breakdown of hospitalized cases to help characterize the infecting organism.

F. Mortuary Surveillance:
Mortuaries throughout the state will also be asked to support surveillance activities. One example may include, mortuary contacts reporting the total number of bodies delivered to the morgue that meet the influenza-related death case definition.

Daily Summary Data:
The DOC Data Unit (Planning Section) of the Department Operations Center may be activated to assist the DOC and Disease Control with data management and processing. It will be primarily staff with epidemiologists and analysts drawn from non-acute programs. Each day activated the Unit will:
1. Check status of data sources from which data is expected each 24 hour period. Some of the data will come from monitoring of real time reporting. These data will include
    a. Hospital patient data – new influenza admissions, bed status, deaths
    b. Minimum care facilities - new influenza admissions, bed status, deaths
    c. Anti-viral drug supplies at dispensing locations
    d. Vaccine supplies at dispensing locations, progress toward population coverage
    e. Requests for medical supplies
    f. Morgue reports of new deaths, space assessment and final dispositions
    g. Cached supply report (medical supplies, antivirals)
    h. Estimates of new case counts
    i. Status of case investigations, line listings, persons under isolation/quarantine. During the containment period, cases and contacts will be tracked using the Outbreak Management software.
    j. Case reports from nursing homes
    k. Unmet health care needs in outpatient settings (clinic overload or capacity)
2. Collect data that has not been received by making contact with non-reporting data sources, and review and clean data including confirm outlier values.
3. Process and aggregate data into standard data reports for transmission to the DOC including calculation of rates and measures (hospital overload, mortality rates), trends, responses required (e.g., proposed shipment lists), and mapping as indicated.
4. Collect or process special data runs requested by the DOC. This would include:
    a. Attack rate – This will be estimated from data provided for case and contact investigations (e.g., percentage of households getting ill) plus some estimates of attack rate will be calculated from certain institutions for which causes of absenteeism are being reported (e.g., NDDoH).
    b. Case fatality rate - As for attack rate, except the smaller number of events will mean the result will be less precise.
    c. Rate of hospitalization – As for attack rate, numerators and denominators will be obtained primarily from defined populations for which surveillance data is available.

5. Monitor surveillance systems for sentinel occurrences (e.g., critical thresholds, requests for supplies) requiring DOC action or further investigation.

Laboratory and Diagnostics - Pandemic Period

WHO Phase 6

In this final phase, there is a sustained transmission in the general population.

When cases begin to appear in the United States, the Division of Laboratory Services – Microbiology will accept nasopharyngeal swabs from all patients presenting with ILI who have a recent history of travel to areas already infected or who have been exposed to ill persons from infected areas. Laboratory surge capacity and Incident Action Plans will be implemented.

Once influenza has been confirmed in a particular community, specimens will no longer be accepted from that area, for public health testing. At that point, diagnosis of influenza will be clinical. The exception to this may be cases that appear unusual, or in pandemics in which death is not common, specimens may be received from patients who die.

Once the pandemic influenza virus is confirmed in North Dakota, specimens will continue to be accepted for PCR testing from sentinel providers in uninfected North Dakota communities from patients presenting with ILI regardless of travel to infected areas or exposure to known cases. Public health PCR testing of patients from uninfected areas will be necessary to confirm pandemic strains in hopes of preventing further spread of the influenza virus. The HAN will be used to disseminate notifications of discontinued testing.

Once specimen numbers exceed the laboratory's same-day capacity, laboratory surge capacity and Incident Action Plans will be implemented at the Division of Laboratory Services – Microbiology. Essential laboratory functions are outlined on the chart on page 10. Non-essential laboratory functions will be identified by the Incident Command staff and temporarily discontinued or delayed. Approximately 15-20 specimens (60 – 80 tests) can be analyzed for the four PCR markers (H_1, H_3, H_5 and B) per day without significant disruption of laboratory services provided the laboratory is running at full staffing capacity. Once the laboratory exceeds these numbers, testing will convert to single marker PCR protocols to detect the pandemic influenza strain only, and significant delays and discontinuation of non-essential laboratory functions will occur. Maximum surge capacity capabilities are estimated at 150 single marker PCR tests per day for approximately four weeks with 15 and ½ analysts (the one half position refers to the Safety Officer) working 5-day work weeks and 10-12 shifts.

The 15 and ½ analysts mentioned above will be tasked to activities related to pandemic testing. Eleven additional staff members will be required to maintain essential laboratory functions beyond pandemic testing, such as; HIV, Chlamydia/GC, TB, Rabies, and BT.

H5N1 testing and maintenance of essential lab functions will require **all** of the microbiology staff plus; one Kelley temporary employee, five people from the Chemistry Division and at least one individual from Disease Control.

Memoranda of Understanding are being developed through the Midamerica Alliance to share resources (facilities, equipment and people) in the event something should cause NDDoH's lab to be unusable or overwhelmed by demand. MAA is a 10 states cooperative effort: North Dakota, South Dakota, Wyoming, Utah, Iowa, Nebraska, Montana, Colorado, Kansas, and Missouri. NDDoH has MOUs with NDSU Vet Diagnostic lab for surge capacity and may use that facility if NDDoH's lab is compromised.

Once pandemic influenza is identified in a ND community, the Division of Laboratory Services – Microbiology will send initial representative and unusual virus isolates to CDC for appropriate testing, including antiviral resistance studies.

Disease Control will coordinate with the Division of Microbiology to ensure the proper collection, transport and testing of influenza specimens throughout all stages of pandemic influenza.

Case Investigation – Pandemic Period

When the initial case(s) of influenza due to the pandemic strain are identified, NDDoH will attempt to contain the virus using isolation/quarantine, and possibly prophylactic antivirals. (This assumption may be false if these efforts have been determined to be ineffective at limiting spread of pandemic influenza when used in other geographic areas.) Identification of the initial case may occur by notification of a contact identified by another state, by identification of illness reported by the health care system or by reporting of suspicious illness from a member of the general public.

As soon as a potential case is identified, a regional surveillance team headed by the epidemiologist assigned to that region of North Dakota will interview the case, assess the likelihood of it being a pandemic case and obtain diagnostic testing, identify all potential contacts of cases meeting criteria of a suspect case, determine the indication for treatment with antivirals and place the person under isolation, either voluntary or involuntary. All identified potential contacts will be located and interviewed to assess their exposure risk, determine for each whether quarantine is indicated (voluntary or involuntary) and determine whether the use of prophylactic antivirals is indicated. The epidemiology team will also provide education for the patient and the patient's close contacts and ensure information is forwarded to the local public health agency to coordinate ongoing monitoring and response to needs.

Data will be collected using the influenza case investigation form (to collect disease surveillance data) and the form "Tracking and Monitoring Those in Isolation and Quarantine**"** to collect information required for isolation and quarantine (see Community Containment document). Data will be entered into a master patient database for epidemiologic containment and I&Q management. The data collected will include

collecting basic demographic information about the patient. This will include name, date of birth, address, race, ethnicity and additional contact information. Clinical and epidemiological information, including, but not limited to date of symptom onset, observed symptoms, and diagnostic tests and procedures will be documented. Clinic information will be obtained from both the healthcare provider and the patient.

Travel history will be investigated. If there is travel, the field epidemiologist will attempt to determine the country(s) visited, arrival date in each country and departure date from each country. Additional risk factors will also be investigated. In addition to clinical information, laboratory information will also be obtained through the investigation. Laboratory investigation will include specimen source, specimen collection date, report date, laboratory performing test, type of test and result of test.

All persons under isolation or quarantine will be monitored to identify progression to disease or progression of disease that would indicate the need for additional intervention.

When a case has been confirmed, the Health Alert Network will provide to health care and public health communities information regarding the status of the investigation and any additional information needed regarding surveillance or diagnosis of additional cases. Mass media will also be provided information regarding the investigation to include messages to the general public on social distancing measures. Information from the investigation will be used by the Department Operations Center (DOC) of NDDoH to determine if additional policy/action is indicated to control the spread of disease.

As case numbers expand, the investigation team will be expanded, or supplemented by additional teams working in other regions, to rapidly investigate and respond to suspect cases as long as person-specific control measures are to be continued. Teams would be withdrawn at the point that the DOC determines that further efforts at person specific control are unlikely to yield further benefit over population-based control efforts (social distancing).

Isolation and Quarantine - Pandemic Period

The need for I&Q for individuals identified with a novel-influenza virus will depend on what is known about the epidemiology of the virus circulating at that time; such as how well I&Q is working, who are the risk groups, etc. I&Q may be necessary early in this phase on select/specific persons (i.e. symptomatic individuals returning from areas of high) in order to reduce human-to-human spread. However, as the number of cases increases, I&Q may no longer be feasible or practical due to volume of cases, personnel needed to implement I&Q protocols, enforcement activities, etc. However, it will always be recommended that persons stay home until no longer ill to prevent the spread of pandemic influenza.

The duration of quarantine for a person who has been exposed will depend on what is known about the particular strain's maximum incubation period. For seasonal influenza this is four days, but may be different for a pandemic strain A person with influenza will need to be under isolation as long as they remain infectious which is usually for 7- 10

days if an adult. Children potentially shed the virus for a much longer period of time. Recent guidelines from WHO provide the following guidance:

Adults and children > 12 years of age: precautions to continue for 7 days past resolution of fever
Children < 12 years of age: precautions should continue for 21 days after onset of illness.

Social distancing - Pandemic Period

Pandemic Phase (WHO Phase 6)
See separate documents related to community containment.

1. NDDoH will provide guidance and information regarding social distancing to local jurisdictions.
2. NDDoH will work with local public health units and law enforcement in carrying out the implementing social distancing measures at the local level.
3. NDDoH will implement Just-In-Time training to train staff and volunteers.
4. NDDoH will recommend voluntary home confinement of symptomatic persons.
5. NDDoH will give information to the public on symptoms to try to encourage self-diagnosis to reduce interval between symptom onset and treatment.
6. NDDoH will coordinate informing the public of avoiding travel to infected areas.
7. NDDoH will continue with some of the measures from the other 2 periods shown above regarding hygiene, disinfection, use of PPE, antiviral usage, and others as deemed appropriate.
8. NDDoH will advise the public to avoid contact with high-risk environments.
9. NDDoH will coordinate with bordering states and provinces on social distancing measures.
10. NDDoH will be in close contact with local jurisdictions to ensure coordination of recommendations or orders for social distancing with implementation at the local level.
11. NDDoH will utilize phone triage, mental health data, hospital overflow-MCF, etc to monitor secondary and tertiary effects of community mitigation interventions.
12. NDDoH Disease Control will monitor disease rates and trends, need for MCF, monitor flu activity nationwide, hospital census data.
13. NDDoH Disease Control will monitor disease rates and provide information based on CDC guidance to PIO/JIC for recovery/reopening guidance to businesses, workplaces and large venues for sporting events and other activities that closed during a pandemic.
14. Disease Control will monitor disease rates, calls, hospital census data, [redacted], mortality data, etc. to monitor the effects of the cessation of community mitigation interventions.

NDDoH Exposure Assessment - Pandemic Period

An exposure risk assessment for NDDoH employees demonstrates that almost all would be considered to be in the low risk category. Exceptions to this are:

- Laboratory workers in State lab handling influenza specimens (Very high risk)
- Morgue workers in Medical Examiners Officer (High risk)
- Epidemiologic investigators (High risk)

- Vital statistics provision of birth and death records (public contact) (Moderate risk)

Policies adopted by NDDoH to minimize risk associated with unavoidable occupational exposure are consistent with guidance provided by OSHA (See Continuum of Government Plan, Attachment B). Department staff at very high and high risk are trained in protection, fit tested for N95 wear and have equipment needed to minimize professional risk of exposure. Management of persons in medium risk occupations will use a combination of education (practices to limit exposure), physical barriers (plexiglass), public education (signage) and surgical masks. Personnel protective equipment required by staff to minimize risks will be provided from the state medical cache located in Bismarck.

Materiel Management - Pandemic Period

See documents specific to the SNS program.
The RSS sites designed by the North Dakota SNS program will serve the following functions during a pandemic:

- Receiving, management and distribution site for SNS materials;
- Receiving site for special federal shipments (e.g., antivirals, medical supplies pre-pandemic);
- Holding site for material in excess if of that which can be held by private vendor shipping warehouses (medical supplies, antivirals);
- Site for large scale repackaging of vaccine;
- Backup site for primary shipment of antivirals or medical supplies in the event that private vendor functions partially or completely collapse during a pandemic.

Any federal material received through the RSS will be collocated with state cache material and available for selection/distribution.

Antivirals - Pandemic Period

During the pandemic period, the CDC has indicated that it will push antivirals and other medical supplies to the states. NDDoH will expect to receive these supplies through the SNS system and distribute those supplies to designated local dispensers through a private distributor or directly from the warehouse site depending on the type of material being distributed. In the case where the private distributors cannot deliver, NDDoH will use the NDDoH drivers (or DOT drivers as backup) to ship these antiviral supplies to designated warehousing sites at the local level from which dispensers may obtain antivirals that they have been approved to receive.

Implement the antiviral distribution plan as is written in *Attachment A-1: Antiviral Distribution Plan*. This plan also discusses:

- Stockpiles of antivirals at the state and federal levels
- Usage guidelines
- Adverse event tracking

Private distribution plan

- Receipt and Storage: Antivirals will be received through the SNS system at the central warehouse which will serve as the primary RSS site.
- Security: For the RSS site, refer to the state *SNS plan.* Security at the private vendor's distribution site will be provided by the vendor.
- Distribution: Normal distribution channels. For more detail, refer to *Attachment A-1: Antiviral Distribution Plan*.
- Dispensing: Dispensing sites (i.e., sites providing the drug directly to patients) are expected to be private pharmacies, pandemic influenza clinics and hospitals; however, ongoing planning for use of alternative strategies for mass dispensing that reduces the risk of person-to-person contact and reduces the burden on the health care system may be implemented with activation of telephone based prescribing and mass dispensing at selected sites with drive up windows.

Contingency plan

- Distribution: This will occur following the protocols of the state SNS plan. For more detail, refer to *Attachment A-1: Antiviral Distribution Plan*.
- Security: Security will be provided by Highway Patrol and local law enforcement. For more detail, refer to the state *SNS plan*.
- Dispensing: Local dispensing sites will not be affected by a change of distributor from private to state managed.

Vaccines - Pandemic Period

Depending on where the strain is identified and how it moves, pandemic specific vaccine may or may not be available by the time it reaches North Dakota. The working assumption is that vaccine will not be available at the beginning of the first wave, and when vaccine does become available, it will be shipped initially in very small quantities, insufficient to initiate mass vaccination. Some amount of non-pandemic specific vaccine may be available (i.e., vaccine to the Hemoglutinin and Neuraminidase defined viral subtype (e.g., H5N1), but not to the specific strain responsible for the pandemic. Details needed for planning for use of this pre-pandemic vaccine will be obtained from CDC at the time of the pandemic.

Attachment A-2: Vaccine Management Plan describes the system that North Dakota will use to order, store, distribute and track influenza vaccine during a pandemic. The NDDoH DOC will coordinate statewide influenza vaccination activities during a pandemic, and local DOCs associated with each LPHU will coordinate implementation of local and regional vaccination programs including acting as the lead vaccine broker for priority vaccination (with hospitals acting as vaccine brokers for their own employees) and lead role in establishing and running mass vaccination clinics.

The primary plan for vaccine distribution is shipment directly from the manufacturer to points of vaccination, which will be provided to the manufacturer through CDC by NDDoH. NDDoH will expect to break boxes and repackage vaccine when the assigned quantity of vaccine for that site is less than a full carton. Materials for repackaging vaccine including extreme cold weather shipment using temperature controlled vehicle climates are prepared in the warehouse. Plans for temperature controlled retrieval of

vaccine from the distributor when ambient temperatures make routine commercial shipment risky are included. Refer to the *Appendix A-2 Vaccine Management Plan* for further details.

Contingency planning for Investigational New Drug Use

Current unlicensed vaccines are distributed under the FDA's Investigational New Drug (IND) provisions. IND provisions require strict inventory control and record-keeping, completion of a signed consent form from each vaccine recipient, and mandatory reporting of specified types of adverse events. IND provisions also require approval from Institutional Review Boards (IRBs) in hospitals, health departments, and other vaccine-distribution venues. The FDA regulations permit the use of a national or "central" IRB. A treatment IND is one IND mechanism that FDA has available for use and is especially suited for large scale use of investigational products.

IND protocols are impractical for mass dispensing during a disaster, and will require the federal government to develop an alternate means for distribution. As an alternative to IND use of an unapproved antiviral drug, HHS may utilize the drug product under Emergency Use Authorization procedures as described in the FDA draft Guidance "Emergency Use Authorization of Medical Products" (http://www.fda.gov/cber/gdlns/emeruse.pdf).

Priority Vaccination

Because initial shipments of pandemic specific vaccine are expected to be small, what vaccine is available will be allocated to critical infrastructure (primarily in a moderate or severe pandemic when infrastructure is anticipated to be seriously impacted). This is consistent with information received from CDC; however detailed information on allocation will be specific to the pandemic. NDDoH has identified five priority infrastructure groups for vaccination in a pandemic situation. These priority groups will receive vaccinations as soon as vaccine is available early in a pandemic situation according to the prioritization algorithm in place at that time. The amount of vaccine received will be too little for complete vaccination of even vaccine priority groups from critical infrastructure requiring prioritization within these infrastructure groups.

Lists of specific positions under each of these infrastructure groups have been identified during the Inter-pandemic Period and are located in the Pandemic Influenza Annex on http://www.ndhan.gov. The infrastructure groups are:

- Health Care Delivery (local) – Hospitals, clinics and other health care facilities providing diagnostic and treatment services. This group also includes emergency medical services. This group is targeted primarily through hospitals that represent 80% of health care workers statewide.
- Public health (state and local)
- Emergency Responders (local) – Fire and police services
- Utility worker (local) – Water, sewer, electricity, gas workers, transportation, garbage collection.
- Private infrastructure (e.g., grocer, morticians)
- Disaster responders (state and local) – Policymakers, incident command structures.

Recommendations for within group prioritization have been completed for local public health and health care; however, recommendations provide guidance only with final decision making arising from the DOC during a disaster.

The North Dakota Immunization Information System (NDIIS) is the anticipated mechanism for tracking who is vaccinated and receipt of second dose. Vaccination information would be entered into the system at the time of vaccine administration. Adverse events data related to vaccine receipt will be entered into the VAERS system. Systems for rapid data entry into the NDIIS system were revised in response to barriers that were identified during the 2009-2010 H1N1 response.

Mass Vaccination Priority Groups

The CDC guidelines will provide the basis for determination of the general population priority groups to be vaccinated. It is likely the priority groups will be based upon those at greatest risk of influenza-related complications or transmission of influenza. Although target groups have been defined for seasonal vaccination, it is not assumed that priority groups for mass vaccination during a pandemic will be the same. Once vaccination has reached all priority populations, vaccination of the remainder of the general public will be initiated. The size a particular vaccine shipment will determine whether LPHU open POD sites for vaccination or whether the vaccination is carried out within the LPHU.

The following issues are detailed in local guidance:

- Vaccine storage and handling procedures
- POD management
- Training of vaccine POD staff
- Security

Information entry into the NDIIS and VAERS are the same for mass vaccination as for priority vaccination as discussed above.

Tactical communications - Pandemic Period

1. Each communication technology would be employed into its designated primary functions depending on the severity of the pandemic, including:
   a. HAN message will be sent out to notify personnel that they need to report to the DOC and the state EOC.
   b. HAN alert messages would be routinely broadcast to public health stakeholders with current information.
   c. The DOC will hold frequent, regularly scheduled videoconferences with local public health, hospital systems and long term care using the BTWAN
   d. Surveillance partners (e.g., hospitals, schools) will be notified what surveillance data to submit over the Internet.
   e. Hospitals will notified of what data to update in HC Standard on what schedule
   f. Patient tracking software will be activated.

g. Communication between DOC and State EOC will be initiated through WebEOC when those entities are stood up.
h. Communication pathways remain open between entities exterior to NDDoH using the BTWAN and StageNet Systems (hospital, public health and local government).
i. Transmission of electronic death certificates will continue over the Internet but revert to back up paper submission if the electronic system fails.

2. Change system maintenance and upgrade schedules to eliminate planned downtime of systems during crisis response.

Public information - Pandemic Period

1. State PIOs and back-up PIOs will operate as part of the Incident Command Team. During an influenza pandemic, the designated PIO will coordinate and deliver risk communication and public health information to the public through every available channel, including:
   - The media (through a Joint Information Center [JIC] if activated)
   - The NDDoH website as the website under development www.ndpandemicflu.gov shall include North Dakota pandemic and avian flu information.
   - The Health Alert Network (HAN)
   - Distributed flyers
   - Through partners/stakeholders

2. Alternative methods for delivering information will be considered during a pandemic in order to achieve social distancing. This may include:
   - Conducting news conferences via telephone or video feeds (if possible); distribution of materials through channels such as the Post Office (inserting information into mailboxes.)

3. Education efforts will intensify throughout the state including topics on antiviral treatment, vaccinations (if available), social distancing and other topics, as identified. These efforts will include increased education to special populations.

4. Refer to *Chapter 5: Crisis/Risk Communication Plan* in the State Public Health Base Plan folder for more detailed guidance regarding public information activities during a response period, including guidance on communicating with special populations.

5. Maintain a website with current information and include a link to the http://www.pandemicflu.gov/ website.

6. Begin disseminating messages and materials to increase public's knowledge and understanding about:
   a. Unique aspects of pandemic influenza in comparison to seasonal flu.
   b. Social distancing and disease prevention methods
   c. Antivirals and methods of distribution
   d. Vaccine and methods of distribution

e. Community education that includes an expectation of death at home rather than in a health care institution.

7. NDDoH has developed a special population's communication plan to address those with special needs. This includes a contract with a translation service and an interpreter company. Existing documents have been translated into Spanish, Vietnamese, Bosnian, Russian, Kurdish, Somali and Arabic. All translated documents are posted on the Health Alert Network website (www.ndhan.gov). Click on the "translations" tab on the left side of the screen.

Communication of Health Care Information

During the pandemic response, messages about community specific clinical care will be constantly changing requiring release of updated information on a continuing basis using multiple media as described in the all hazards communications plan. Aspects of the health care system that will be changing include:

- Inpatient care capacity and the conditions of patients that will or will not likely result in admission to the hospital;
- Outpatient care capacity including locations for influenza and non-influenza clinics, who should be seen by a provider and availability and access to antivirals.
- The level of care quality that can be expected for inpatients and at minimum care facilities.

Other types of health care information may be relatively stable through the course of the pandemic but need to be frequently repeated (e.g., how to access prescription refills, how to care for sick family members at home, how to avoid illness while caring for sick family members, and social distancing measures). One of the roles of the information distribution will be to discourage provider visits by those who are least likely to profit from them including alternatives for obtaining anti-virals without seeing a provider. Discouraging provider visits not only will increase provider availability for those who need to be seen, but also limit the anti-social distancing effects of population aggregation at provider sites.

Health care system - Pandemic Period

Detail can be found in *Appendix A: State Health Care Plan*.

1. Health care facility will activate facility response plans

2. A Medical Director will be assigned on a rotating schedule to the DOC in the operations section to management inter-facility coordination including activation of statewide hospital response plans as they are needed including:
    a. Surge management
    b. Standards of care
    c. Cache management
    d. Outpatient pandemic influenza management
    e. Anti-viral distribution
    f. Hospital surveillance
    g. Mental health care of health care workers

Complicated or high impact decisions will be referred to a meeting of as many of the medical directors as can be available.

3. Enhance staffing needs of the healthcare system with volunteer health professionals.

4. Coordinate with EMS system to facilitate transport of patients as resources become limited (see protocols for surge management of EMS patients).

5. Keep public informed regarding care expectations and alternatives.

Emergency Medical Services - Pandemic Period

Coordination of EMS services with the health care system has been assumed as a state function within NDDoH which has assumed the primary role for meeting the needs of the health care during a pandemic. (During previous state crises such as the Grand Forks Flood in 1997, NDDoH coordinated mass mobilization of the state EMS system to evacuate hospital patients from the city.) Of the approximately 140 ambulance services in the state, 89% of ambulance services are fully or partial supported by unpaid volunteers; mobilization of the capacity that remains during a pandemic must occur across jurisdictions and be allocated to transport services with the highest criticality. This will occur through the Operations Section of the NDDoH Department Operations Center. Procedures are described in the ND EMS Regional Response Plan.

Public health services - Pandemic Period

During the pandemic period, LPHU and NDDOH will scale back usual services to assume new duties required by pandemic management.

LPHU will assume lead responsibility for:

- Mass fatality
- Brokerage of priority vaccination
- Mass vaccination
- Local volunteer coordination for health care and public health
- Isolation and quarantine, including legal action for mandatory isolation or quarantine
- Public information (shared with NDDoH)
- Supporting community management of minimum care facilities
- Ensuring availability of food and medicine by community members

NDDoH will assume lead responsibility for:

- Laboratory services
- MRC database management
- Surveillance
- Health care system coordination

- Vaccine allocation
- Cache supply management
- Antiviral management
- Public information (shared with LPHU)
- Statewide tactical communication systems
- Orders for mandatory social distancing
- Authorizing opening of minimal care facilities

Volunteer Management – Pandemic Period

Procurement of Staffing: The NDDoH has mechanisms in place to generate a verified list of credentialed and trained healthcare volunteers within 12 hours of request being issued and for deploying volunteers. ESAR/ VHP (includes PHEVR and MRC) information can be found at the state

Volunteers are recruited locally, but input their data into the PHEVR/MRC database accessible on the Internet and managed at ND DoH. NDDoH is responsible for maintenance including notification to persons on the list to update their information periodically. When those persons are needed, the state will notify persons on the list that they are needed and provide instructions to them regarding where to report. Once volunteers report to the designated site, they will be managed locally.

Arrangements have been made with the state workers compensation system that when personnel are activated, including volunteers, payment of a fee for each worker at the time of activation and a sign-in roster will provide workers compensation coverage for any worker not already covered. This will be part of the routine operation procedures.

Psychosocial support - Pandemic Period

People may be confined to their homes by choice, or out of "fear of being exposed and becoming ill", or by direction from state or local health officials in order to reduce transmission in the community. Local Public Health will monitor individuals placed in isolation or quarantine for behavioral health issues, and refer to mental health support networks.

The ND Department of Human Services Division of Mental Health and Substance Abuse Services will assist in assessing mental health needs to local public health units via the eight regional human service centers. Services may include; providing disaster emergency mental health training materials for disaster emergency workers; and providing liaison with assessment, training, and program development activities undertaken by state and local mental health officials. Initial and immediate services should include:

- Meeting basic needs (food, shelter, clothing)
- Provide “Psychological First Aid” (safety, comfort, consolation, and clear information)
- Provide need assessment
- Monitor the recovery environment (conduct surveillance)
- Provide outreach and information dissemination
- Provide technical assistance, consultation, and training
- Foster resilience, coping, and recovery
- Provide triage
- Provide treatment

The provision of food, medical and other essential support for persons confined to their homes and/or persons affected by the pandemic will be the responsibility of LPHU and local communities. Food and hydration will be provided to pandemic influenza victims and response workers through a combination of fixed sites, mobile feeding units, and bulk distribution via local agencies including; American Red Cross, Salvation Army, Meals On Wheels, etc). Such operations will be based on sound nutritional and food safety standards, and will include meeting requirements of disaster emergency victims with special dietary needs. Support services may include:

- Shelter
- Caregivers
- Food and meal preparation
- Medications
- Childcare
- Essential shopping
- Social diversion (tv, radio, reading activities, etc)
- Work or school arrangements
- Pet care
- Faith/clergy support
- Communication (telephone)
- Water
- Electricity
- Mental Health/behavioral issues/psychosocial support
- Special population needs (language, disability, elderly)
- Heating/cooling issues
- Refuge disposal
- Available hygiene products (masks, gloves, tissues, etc)
- Legal support
- Adequacy of emotional support systems
- Assistance with funeral planning due large number of pandemic deaths
- Referrals for dealing with long term event reminders

LPH will work with community partners to identify who (agency, type of staff) will provide which essential services and with what frequency based on availability of staff and local resources as identified in LPH plans.

Vulnerable Populations - Pandemic Period

Vulnerable populations include those populations whose living situation may decompensate due to a loss of care or services (whether provided by family members or by the social service system) and those with reduced access to pandemic specific resources or services. This includes the chronically ill, those with physical, cognitive or sensory impairments, isolated and homebound, mentally ill, the economically fragile, homeless, those with impaired communications (e.g., non-English speaking), and at least some children.

Pandemic Assumptions for Pandemic of Moderate Severity or Greater:

- A large number of persons who usually provide all types of services, both volunteer and professional, will be ill or caring for family members and hence unavailable.
- Home health care nursing services will be additionally reduced by the need for health system to mobilize personnel into the hospital who can support in-patient care.
- A substantial number of family caregivers may be ill and unable to provide their usual care for vulnerable individuals.
- Outpatient health care resources will be overwhelmed; patients needing care for all types of health care problems will have difficulty obtaining it.
- Some households will have no one well enough to leave the home to obtain material resources.
- Prolonged periods off work and delays in fiscal processing will result in some persons exhausting their available financial resources.
- Particularly in the event of closure of schools and non-essential businesses, a large number of those not ill potentially will be able and willing to assist with volunteer duties as long as the duties do not substantially increase their risk of illness.

Role of Public Health

The role of public health in meeting needs of vulnerable populations is not to assume all social service provision. Although exact role may vary by local jurisdiction through community coalition decision making, roles for public health include the following:

- Convener and facilitator of social service networks;
- Coordination of data systems for tracking need;
- Operation of informational hotlines and coordination of public information;
- Coordination of services to those under imposed confinement;
- Coordination and direct services related to health care and preventive health.
- Service gap and solution identification (Public health may step into a social service gap as a provider of last resort.)
- Supply of PPE from state cache, including PPE conservation;

Likely Problems Faced by Vulnerable Populations

Most of the new problems faced by vulnerable will be caused by loss of ability to compensate for their vulnerability, and their needs will be predictable based on their vulnerable. Those needs are likely to arise from:

- Reduced access to food
- Reduced access to in-home assistance
- Reduced access to transportation
- Reduced access to medication including antivirals
- Reduced access to financial resources
- Reduced access to information
- Reduced access to health care
- Reduced personal protective measures and social distancing[5]
- Reduced ability or willingness to comply with isolation and quarantine
- Reduced access to mental health services
- Reduced access to vaccine

Social Service System Description

A large percentage of the vulnerable populations are likely to fall under one of four local or regional agencies that provide local social services:

- County Social Service – Cares for elderly and persons with physical disability;
- Senior Center – Provision of meals and transit to elderly;
- Regional Service Centers – Services for those with developmental disabilities or mental health problems; or,
- Children and Families – Child protective services.

Some vulnerable populations will not fall under the mission of a local social service provider (e.g., those with language barriers, some patients with chronic medical conditions) or may not be connected with the community social support structure because their social situation is supported adequately by family members.

All sites have paid staff caregivers. In addition, county social service offices and seniors centers make use of community volunteer staff to provide some care. It is these offices that would be extending services to the community vulnerable either directly, through volunteers or by working with local organizations (e.g., faith based). Much of the social service provision at the community level is contracted out (particularly for county social services and senior centers). Approximately 1700 care givers working for 125 different contracting agencies provide services; approximately 500 of those caregivers are providing care to family members only.

Issues Addressed During a Pandemic

Modification of services

Agencies will become impaired to a varying extent by loss of staff during the course of the pandemic. Agencies will compensate by curtailment of some services (e.g., cleaning in the home) with reassignment of personnel to other more critical duties and by

[5] Some vulnerable individuals, because of isolation (e.g., rural farm elderly), may be at reduced risk of coming into contact with someone who can transmit the virus. Others, because of limited resource options, crowded living arrangements, or reduced access to information, may be at increased risk of becoming ill.

increased use of volunteers. For some types of vulnerable individuals (e.g., medically complicated patients), re-arrangement of care will be needed to extend available care services (e.g., moving some of these patients into the homes of caregivers for the duration of the pandemic wave.)

Identification of vulnerable individuals
A large number of vulnerable persons are known in the communities because they already receive services. In addition, in small communities other vulnerable individuals who are not receiving services are generally known. However, no master list exists, rather each agency has records of those individuals to whom they provide care. Those individual residing in large cities[6] cared for only by family members would not all be known and contact would most likely identify those individuals through call lines from those individuals, their families or other concerned individuals (neighbor, church member). See below.

Volunteers
Assuming staffing in social agencies is markedly reduced, even those that do not routinely use volunteer would likely need volunteer staff to help extend services. Because some volunteers would likely need to make contact with persons who were ill, the ability to provide PPE in addition to priority vaccine to those individuals becomes necessary.[7] Although no policy has been made for use of antiviral prophylaxis for these workers, access to PPE and priority vaccine may be important inducements to assist with social outreach[8].

Coordination of services and tracking social needs of individuals
No central coordinating center oversees the community-based social service delivery although the regional service centers probably come closest to fulfilling that function. Community coalitions for pandemic/disaster planning in many communities have defined coordination for purposes of a pandemic.

A central database will be used in each community that can be used to track:
- Individuals who need care;
- Location;
- Access instructions;
- Dispatching of care and completion of service;
- Payment options (e.g., for food, pharmaceutical refills, etc.)[9].

[6] If larger cities include all North Dakota cities with populations over 2,000, that would include 23 cities with a total population of 317,936.
[7] Federal guidelines for priority vaccination place community social agencies and outreach workers (including non-professional) in Tier 2 for receipt of vaccine.
[8] State caching of material in ND has focused heavily on PPE to the exclusion of large ticket items (e.g., ventilators). Volunteers providing direct care to ill are not the highest priority for PPE but are considered an eligible population; access to PPE would occur through the LPHU.
[9] In ND, which has a large number of very small communities, data tracking may be on paper for small population areas.

It is expected that several different call receiving entities will be functioning during a pandemic. While these entities will have primary functions, it is anticipated all types of calls will be received and need to be transferred to the appropriate level for response. These calllines include:
NDDoH hotline (available during disaster)– the hotline will be primarily intended to be provide information related to influenza, care of sick individuals, receipt of health care and receipt of preventive services.
211 (continuous availability) – This service provides community information and connects people to services. It has been identified by the Department of Emergency Services as the preferred information clearinghouse for public inquiry and services.
Aging and Disability Line (continuous availability) - This line is intended to assist a substantial part of the vulnerable population to reach services; However, during the Grand Forks flood of 1997, this line received a large volume of calls of all types.
Local public health hotlines (available in some communities during a disaster)– These lines will be set up by some local public health agencies to provide informational services similar to that provided by the NDDoH hotline.

Infection control and worker protection - Pandemic Period

Certain categories of workers have been recognized by OSHA as having occupationally elevated risk. NDDoH resource cache PPE is available to critical infrastructure workers who fall into the very high or high risk of occupation risk for exposure to pandemic influenza. This primarily includes health care workers and public health workers who have direct patient exposure. NDDoH is working directly with these agencies to assist them in planning for exposure risk reduction, fit testing and request and receipt of PPE through from the state cache.

The cache is not robust enough to provide N95 masks workers at medium risk due to face-to-face exposure to the general public. NDDoH recommends use of surgical masks by persons who support critical infrastructure (see federal document: Draft Guidance on Allocating and Targeting Pandemic Influenza Vaccine for lists of priority infrastructure). NDDoH has prepared messages targeting both general population as well as specific occupational groups on measures to follow to decrease personal risk of exposure in the workplace and the home, including the making of reusable cloth mask which should provide adequate protection for workers not in the high or very high risk exposure category. These messages will be provided through media and through the HAN during a pandemic.

Mass fatality management - Pandemic Period

Refer to NDDoH Mass Fatality Plan, particular section on open events.

Management of mass fatality is primarily a local public health role, is outlined in local public health plans. The role for NDDoH will include:

1. Provide guidance, information and coordinated assistance regarding mass fatality management to local jurisdictions through the State EOC, Department Operations Center and Joint Information Center.
2. Establish policies related to mass fatality management
3. Implementation of patient tracking system
4. Assist local responders with electronic death registration as needed. .
5. Respond to requests for supplies from the State stockpile and transport them to local jurisdictions. These supplies may include: PPE, body bags, backboards, and other items as needed.
6. Coordinate mutual aid use of crematoriums and/or cemeteries throughout the state.
7. Advise the Governor and local Chief Elected Officials in necessary emergency actions that may need to be implemented to facilitate final disposition of the deceased.

During a pandemic, NDDoH will receive daily surveillance information from community morgues across the state that receive and process bodies from health care sites and homes. This will include daily counts of new deaths. In addition, each patient who dies will have been entered into the patient tracking system and tracked using the bar code ID on an assigned START triage tag. Deceased patients who have not been tagged prior to discharge to morgue must be tagged upon arrival to the morgue. These patients will continue to have an active record in the patient tracking system until they have a final disposition in an interment site; at that time the record will be come inactive but be retained for archival referral (e.g., family enquiries).

Security - Pandemic Period

Security services during the pandemic are coordinated through the Department of Emergency Services. All law enforcement functions, including local and state law enforcement services are managed cooperatively through a section of incident command called the LE-MACC. The Department of Emergency Services looks to the LE-MACC to determine the best way to respond to the request such as mobilization of local law enforcement from a neighboring jurisdiction or mobilization of National Guard to the area. Need for additional law enforcement services to support local or state disaster public health response functions is forwarded by NDDoH to the Department of Emergency Services. In addition, local law enforcement, if unable to fully respond to requests for a law enforcement presence (e.g., requests by hospitals, pharmacies), will forward a request through the local EOC to the LE-MACC. The need is determined by threat assessment made by law enforcement services on the ground at the location. Judicial services outside of law enforcement are managed by Department of Emergency Services through the Office of Attorney General. This includes the courts and correctional systems.

If law enforcement agencies need additional personnel resources or specialized equipment, local emergency management will contact the Department of Emergency Services (DES) and make a request. This may include a request for personnel, heavy equipment, transportation support, aircrafts, hazardous materials specialists, and facilities.

If NDDoH believes that the involvement of federal law enforcement is required, the NDDoH Department Operations Center Incident Commander will discuss the need with DES which will either forward the request to federal law enforcement officials (e.g., regional offices of the FBI in North Dakota) or request NDDoH to make the contact directly depending on the nature of the concern. Requests for military assistance will arise from the Office of the Adjutant. It is recognized that federal law enforcement response may be substantially less available during a pandemic than it would be during other disasters that are localized to a small geographic area.

Airports in North Dakota do not receive commercial flights directly from international sites; however, the state does have a long international border with Canada. No federal quarantine station is located in the state. Law enforcement issues that may have international implications, such as quarantine of an international traveler during a pandemic, will be referred to the state EOC. In the event quarantine is needed at an airport or along international borders, the US Transportation Security Administration or US Customs and Border Protection would contact the EOC or NDDoH. Quarantine is a local function in North Dakota; consequently, the response would be handled by the local health officer/ local public health unit and local law enforcement if possible. If the task exceeds local capacity, NDDoH would assist with quarantine management and LE-MACC would mobilize additional law enforcement.

Nutritional Support (WIC) – Pandemic Period

The WIC program for North Dakota is managed at a state level by NDDoH; it is considered to be a vital service that must be restored within 72 hours if interrupted. It provides the following services to women and children who meet eligibility criteria.[10]

- nutrition information, counseling and support
- breastfeeding information and support
- nutritious foods
- health screenings
- referrals to other services

WIC services are located at the local level within local public health units and maintenance of these service during a pandemic is covered under the local public health unit COG-COOP. State resources can supplement or replace local WIC functions if they become impaired or disabled during a pandemic. The lead coordinator for pandemic preparedness for maintenance of WIC services is the state WIC director of NDDoH.

Implementation of alternative procedures, which could include any of the following depending on the specific impairment, would be triggered by interruption of local WIC services at any location statewide or evidence of impaired access to WIC services identified through hotlines or media reports.

- Supplementation of local staff

[10] To be eligible for WIC a person must be pregnant woman or breastfeeding up to one year after giving birth or a new month up to six months after giving birth or the parent or guardian of a child less than five years old. In addition, a nutrition risk must be present and income criteria must be met.

- Relocation of WIC services
- Delivery of services through alternative means
- Delivery of alternative services

NDDoH will remain in communication with local WIC service providers throughout the duration of the pandemic wave through the recovery phase. Alternative methods, sites and/or personnel supplementation will be ended when all local programs report that they can resume normal functioning. Assessment of the adequacy of return to pre-pandemic functioning will be determined by the ability of the each program to meet fully the needs of the service population.

Post-Pandemic Period

After a pandemic wave has occurred and as soon as is feasible, NDDOH will revert back to its activities in either the Pandemic Alert or the Inter-Pandemic period. The determination on which period to revert to will depend on the epidemiology of the disease and the imminence of another pandemic wave. The decision to return to normal or near-normal operations will be determined by NDDOH Operations Center. Specific recovery efforts will include re-stocking of supplies, re-staffing of positions as workers return, and correction of planning deficiencies identified during the response.

North Dakota Laws Relevant to Pandemic Influenza		
Issue:	**Laws**	**Summary**
Closure of public events and businesses	N.D.C.C.* § 23-01-05	*"Issue any orders relating to disease control measures deemed necessary to prevent the spread of communicable disease"* with specific mention of closure of business and public events.
School Closure	N.D.A.C.** § 33-06-03-03	Authority for SHO or LHO to close any school – public, private, parochial or Sunday school
Authority of Local Health Officers	N.D.C.C. § 23-35-12(2) N.D.C.C. § 23-35-08	Gives authority to the local health officer as follows: "*May take any action necessary for the protection of public health and safety."* *"May make and enforce an order in a local matter if an emergency exists."*
Isolation and Quarantine	N.D.C.C. § 23-07.6-01	Gives authority to the State Health Officer (SHO) or local health officers (LHO) to order an individual or group into confinement.
Mass Fatality	N.D.C.C. § 23-06 N.D.C.C. § 11-19.1	Care and custody of the dead including burial transit permits and time to burial (with exemptions to burial time from state or local health officer) Defines authority of county coroner and state forensic examiner
Waiver of Medical Practice Act	N.D.C.C. § 43-12.1-04(1) N.D.C.C. § 37-17.1-16(2) N.D.C.C. § 37-17.1-14.2(5)	Exemption Medical Practice Acts in disaster Authority of out of state practitioners to practice during a disaster
Disaster and liability	N.D.C.C. § 32-03.1-01(4) N.D.C.C. § 32-12.2-03(2) N.D.C.C. § 32-12.2-01(6) and (8) N.D.C.C. § 32-12.2-02(1) N.D.C.C. § 32-12.2-03(4) and (6) N.D.C.C. § 37-17.1-16(1) and (2) N.D.C.C. § 37-17.1-17 N.D.C.C. § 37-17.1-04(2) N.D.C.C. § 37-17.1-05(2) and (3) N.D.C.C. § 37-17.1-14.5	Good Samaritan Act State tort coverage for state employees acting within scope of assigned duties Exempts state from "duty to care" liability arising from emergency response legislation Makes all emergency management a function of the state Exempts from liability owner of property used during a disaster without compensation Extends disaster worker status to any person responding at the request of the state or local government Provides authority of Governor to issue executive orders during a disaster Authorizes EMAC
* N.D.C.C. = North Dakota Century Code ** N.D.A.C. = North Dakota Administrative Code		