



South Dakota Department of Health Pandemic Influenza Plan



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www.flu.sd.gov/pandemic

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Many people have contributed to the development of the South Dakota Department of Health Pandemic Influenza Plan. Collaboration with a wide variety of key partner and stakeholder organizations in the private and public sector is a critical component of the planning and review process. The plan will be further developed in consultation with numerous individuals and organizations throughout South Dakota (see Appendix 1 for a list of key potential collaborators).

If you have any questions concerning the South Dakota Department of Health Pandemic Influenza Plan, please contact Josh Clayton at 605-773-3737 or josh.clayton@state.sd.us.

See www.flu.sd.gov for the latest version of the South Dakota Department of Health Pandemic Influenza Plan.

See www.hhs.gov/pandemicflu/plan/pdf/part1/pdf for a copy of the U.S. Department of Health and Human Services Pandemic Influenza Plan.

I. INTRODUCTION

Influenza viruses are unique in their ability to cause sudden, pervasive infection in all age groups on a global scale. Although influenza is a yearly seasonal illness, three influenza pandemics have occurred in the 20th century. One of which – the infamous "Spanish flu [H1N1]" of 1918 – was responsible for more than twenty million deaths worldwide and greater than 550,000 deaths in the U.S. The more recent pandemics of 1957 (A/Asia [H2N2]) and 1968 (A/Hong Kong [H3N2]) had lower rates of morbidity and social disruption.

Influenza is a viral infection of the nose, throat, bronchial tubes and lungs. Typical flu symptoms include headache, fever, chills, cough, and body aches which occur within one to three days after exposure to an infected person. Although most people are ill for only a few days, some people have a much more serious illness, such as pneumonia, and may need to be hospitalized. In the United States, approximately 36,000 people die and 200,000 are hospitalized each year from the flu or related complications. Influenza is highly contagious and is easily transmitted through contact with droplets from the nose and throat of an infected person who is coughing, talking or sneezing.

There are two main types of Influenza virus – A and B. Influenza A can produce a mild to severe illness while Influenza B is typically mild or moderate. Each type includes many different strains which tend to change each year. These changes may be large (antigenic shift) or small (antigenic drift). Pandemics occur when an entirely new subtype of influenza A virus emerges (antigenic shift). Another pandemic is likely if not inevitable, yet no one can predict when.

Response to pandemic influenza will use the same infrastructure as seasonal influenza, other public health emergencies and response to bioterrorism events. This plan is designed as an annex to the South Dakota All-Hazards Emergency Operations Plan (EOP) (see Appendix 2 for responsibility matrix from EOP) and links into the Strategic National Stockpile Plan. The overall guidance used was the Health and Human Services (HHS) Pandemic Influenza Plan.

Periodically exercising parts of the plan at the state, regional, tribal, and local levels will identify weaknesses and provide a basis for further planning. In addition to recognizing the dynamic nature of planning, it is also important to recognize the importance of coordination with tribes and bordering jurisdictions.

Several features set pandemic influenza apart from other public health emergencies or community disasters:

- Influenza pandemics are expected but unpredictable;
- Multiple outbreaks will occur at the same time preventing resource sharing (limited federal or state resources);
- The pandemic phases will be declared by the World Health Organization (WHO);
- The effect of influenza on communities will be prolonged (weeks to months);
- The number of persons affected will be high; and
- Widespread illness and fear will cause personnel shortages in essential service workers (health and non-health sectors).

II. FEDERAL ROLES

Key federal roles during an influenza pandemic are outlined below.

Secretary of Health and Human Services (HHS)

- Direct all HHS pandemic response activities.

National Vaccine Program Office (NVPO)

- Coordinate communication between vaccine and antiviral drug manufacturers and HHS agencies.
- Coordinate development of after-action report and lessons learned.
- Maintain close communication with drug and vaccine manufacturers.

Centers for Disease Control and Prevention (CDC)

- Conduct and support clinical and virological influenza surveillance.
- Monitor pandemic health impacts.
- Implement travel-related and community containment measures as necessary to prevent the introduction, transmission, and spread of pandemic disease from foreign countries into the U.S., from state to state or in the event of inadequate local control.
- Coordinate pandemic response activities with state, local and tribal public health agencies.
- Investigate epidemiology and clinical characteristics of pandemic disease.
- Assist in vaccination program implementation and in monitoring and investigating vaccine adverse events.
- Assess vaccine effectiveness in population-based studies.
- Coordinate antiviral and other drug delivery from the Strategic National Stockpile (SNS).
- Monitor antiviral drug use, effectiveness, safety, and resistance.
- Monitor implementation/effectiveness of protective public health measures.
- Recommend and evaluate community measures to prevent and control disease.
- Make recommendations on diagnosis and management of influenza illness.

Food and Drug Administration (FDA)

- Evaluate and license pandemic vaccines.
- Evaluate and approve antiviral drugs for influenza.
- Facilitate development, evaluation and clearance/approval of diagnostic tests and devices.
- Prepare reference strains appropriate for vaccine manufacturing.
- Review antiviral drug and pandemic vaccine supply issues.
- Evaluate and issue Emergency Use Authorizations when appropriate.
- Monitor vaccine and antiviral adverse events.
- Maintain close communication with drug and vaccine manufacturers.
- Evaluate investigations new drug (IND) applications and investigational device exemptions (IDE) for medical products that diagnose, treat, prevent, or mitigate influenza.
- Evaluate new manufacturing sites and processes for antiviral drugs.
- Make necessary changes in prescribing and patient information, including dosing, target populations and other directions for use for antiviral drugs and pandemic vaccines, based on research and adverse events.

- Evaluate long-term stability of stockpiled antiviral drugs for purposes of shelf life extension.
- Monitor to protect against the distribution of counterfeit antiviral drugs and pandemic vaccines.

National Institutes of Health (NIH)

- Develop improved drugs against influenza.
- Support basic research, including structure/function studies of influenza virus proteins with the goal of identifying new therapeutic targets.
- Develop and clinically evaluate novel influenza vaccines and vaccination strategies (e.g., adjuvants, delivery systems).
- Develop sensitive, specific, and rapid diagnostic tests for influenza.
- Evaluate the immune response to infection and vaccination.
- Evaluate the molecular and/or environmental factors that influence the transmission of influenza viruses, including drug-resistant strains.
- Study evolution and emergence of influenza viruses including identification of factors that affect influenza host-range and virulence.
- Support virologic and serologic surveillance studies of the distribution of influenza viruses with pandemic potential in animals.
- Maintain close communication with drug and vaccine manufacturers.
- Prepare reference strains appropriate for vaccine manufacturing.

Federal Planning Assumptions

- ✓ Susceptibility to pandemic influenza subtype will be universal.
- ✓ Clinical disease attack rate will be 30% in the overall population. Of those who become ill with influenza, 50% will seek outpatient medical care.
- ✓ The number of hospitalizations and deaths will depend on the virulence of the pandemic virus.
- ✓ Risk groups for severe and fatal infections cannot be predicted with certainty.
- ✓ Persons who become ill may shed virus and transmit infection for one-half to 1 day before the onset of illness. Viral shedding and risk for transmission will be greatest during the first 2 days of illness.
- ✓ On average, about 2 secondary infections will occur as a result of transmission from someone who is ill.
- ✓ In an affected community, a pandemic outbreak will last about 6-8 weeks with at least 2 pandemic disease waves likely. Following the pandemic, the new viral subtype is likely to continue circulating and contribute to seasonal influenza.
- ✓ The seasonality of a pandemic cannot be predicted with certainty. The largest waves in the U.S. during the 20th century pandemics occurred in the fall and winter.

Agency for Healthcare Research and Quality (AHRQ)

- Communicate with and support federal, state, and local public health partners on mass vaccination and surge capacity healthcare delivery plans.

Health Resources and Services Administration (HRSA)

- Communicate with and provide technical assistance to support pandemic response activities of state primary care associations, health centers, and other community-based providers.
- Promote coordination with the National Hospital Bioterrorism Preparedness Program for surge capacity plans.

Indian Health Services (IHS)

- Communicate with and support state, local, and tribal pandemic response activities at HHS, tribal, and urban Indian sites serving American Indian and Alaska Native populations.

See the HHS Pandemic Influenza Plan at <http://www.hhs.gov/pandemicflu/plan/pdf/part1.pdf> for more details.

III. SOUTH DAKOTA ROLES

The State of South Dakota is responsible for pandemic response coordination within the jurisdiction and in partnership with neighboring states between jurisdictions. Specific responsibilities include:

- Involve public and private sector partners (includes healthcare and other infrastructure) in response planning;
- Integrate multiple planning activities for similar incidents;
- Provide technical expertise as local communities develop response plans;
- Develop data management systems to carry out the plan (e.g., isolation/quarantine database);
- Exercise local and state-level plans;
- Coordinate with neighboring jurisdictions and tribes;
- Perform evaluation of information technology infrastructure and planning; and
- Establish a Pandemic Preparedness Coordinating Committee that represents all relevant stakeholders (including governmental, public health, healthcare, emergency response, agriculture, education, business, communication, community based, and faith-based sectors, as well as private citizens) and that will assist South Dakota in articulating strategic priorities and overseeing the development and execution of the operational pandemic plan.

The Department of Health (DOH) Core Planning Group is responsible to plan, develop, and review the pandemic influenza plan. Identified committee members include:

- Secretary of Health
- Director, Division of Health and Medical Services (HMS);
- Director, Division of Administration;
- Director, Division of Health Systems Development and Regulation (HSDR);
- State Epidemiologist;
- DOH Pharmacist;
- Administrator, Office of Disease Prevention (ODP);
- Administrator, Office of Public Health Preparedness and Response (PHPR);
- Administrator, Office of Community Health Services (CHS);
- South Dakota Public Health Laboratory (SDPHL) Director;
- Public Information Officer (PIO);
- Immunization Program Coordinator;
- Influenza Surveillance Coordinator;
- Hospital Preparedness Coordinator;
- SNS Coordinator;
- DOH Legal Services;
- State Veterinarian (located in the Department of Agriculture); and
- Director, Office of Emergency Management (OEM) (located in the Department of Public Safety (DPS)).

The DOH Core Group will: (1) provide advice and expertise from respective areas; (2) oversee planning, response, recovery and mitigation efforts; (3) integrate plan activities with other plans (Smallpox, SNS, etc.); (4) addresses issues to keep plan current (gaps in infrastructure, resources, laws, administrative rules), and (5) ensure the plan is reviewed and exercised.

IV. LEGAL ISSUES

South Dakota laws and administrative rules afford the Governor and the Secretary of Health broad legal authority to declare and respond to public health emergencies (see Appendix 3). As necessary, the statutory and regulatory scheme will be reviewed in light of the myriad of legal issues involved in preparing for and responding to a pandemic situation. Relevant legal issues may arise in consideration of the following:

- Authority and procedures relating to isolation and quarantine;
- Due process implications;
- Advance drafting of key legal documents;
- Cooperation with other jurisdictions (federal, state, tribal, and local);
- Anticipation of practical problems;
- Engagement of the criminal justice system;
- Communication planning; and
- Legal liability and immunity.

V. PANDEMIC PHASES

The WHO has defined the pandemic phases to provide guidance on preparedness and response for pandemic threats and pandemic disease (see Table 1). The phases and definitions emphasize pre-pandemic phases when pandemic threats may exist in animals or infect people but do not spread efficiently.

Table 1. Pandemic Phases and Definitions with Activities Reference

PHASE	DEFINITION	ACTIVITIES*
Interpandemic		
Phase 1	No new influenza virus subtypes 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.	CC = Page 8 LS = Page 11 VD = Page 17 AD = Page 20 DC = Page 24 TR = Page 27
Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	HC = Page 32 WS = Page 35 EC = Page 41
Pandemic Alert		
Phase 3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	CC = Page 8 LS = Page 12 VD = Page 17
Phase 4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	AD = Page 21 DC = Page 24 TR = Page 27 HC = Page 33
Phase 5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	WS = Page 36 EC = Page 41
Pandemic		
Phase 6	Pandemic: increased and sustained transmission in general population.	CC = Page 9 LS = Page 13 VD = Page 18 AD = Page 21 DC = Page 25 TR = Page 28 HC = Page 34 WS = Page 37 EC = Page 41
Postpandemic		
* CC = Command/Control ; LS = Laboratory/Surveillance ; VD = Vaccine Distribution ; AD =Antiviral Distribution ; DC = Community Disease Control ; TR = Travel-Related Risk ; HC = Healthcare ; WS = Workforce Support ; EC = Education/Communication		

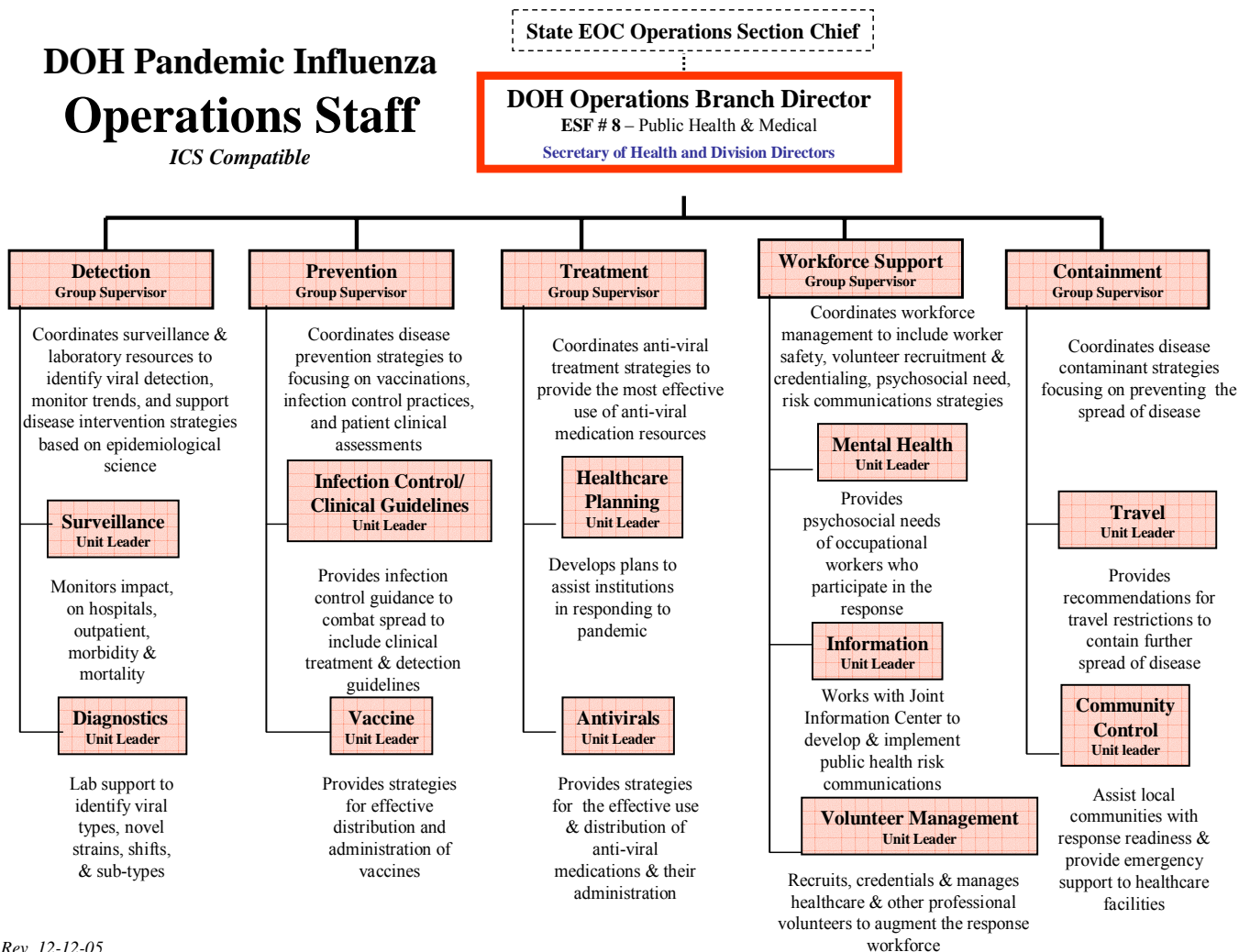
VI. MAIN COMPONENTS

A. COMMAND AND CONTROL

South Dakota Overview

The South Dakota Pandemic Influenza Plan delineates operational priorities, establishes who is responsible for: making public health and health care decisions; maintaining the state plan; major policy decisions; maintaining partner lists; and mobilizing resources.

The following diagram illustrates the DOH Pandemic Influenza Operations staff.



DOH staff appropriate for each position will be determined as events unfold and availability of personnel is identified.

DOH is part of the larger state agency pandemic influenza policy group led by DPS and OEM. This group includes representatives from all involved state agencies such as the Governor's

Office, Agriculture, Education, Human Services, and Labor and National Guard and is the primary means of pandemic influenza information sharing at the state level. In turn, each of the agencies represented on this group communicates pandemic influenza information to its respective constituents.

Activities by Phase

Command and Control: Phase 1 and 2 - *INTERPANDEMIC*

- DOH provides following resources:
 - ODP – epidemiologists, registered nurses, disease investigators;
 - SDPHL – microbiologists, virologists, laboratory technicians, other laboratory staff, laboratory testing equipment;
 - CHS – registered nurses, licensed practical nurses, dieticians;
 - Office of Licensure and Certification (OLC) – registered nurses, engineers, pharmacists, dieticians;
 - Office of Health Protection (OHP) – sanitarians; and
 - PPHR – response coordinators.
- DOH maintains following resource lists:
 - ODP – physicians, infection control practitioners, community health services personnel;
 - SDPHL – clinical and environmental laboratories, laboratory directors/managers, laboratory staff;
 - OLC – licensed and certified health care facilities and services, federally qualified health clinics, rural health clinics;
 - Office of Data, Statistics and Vital Records (DSVR) – funeral directors, crematories, and medical examiners/coroners; and
 - PPHR – physicians list, Health Alert Network (HAN).
- DOH coordinates planning and response activities with neighboring jurisdictions (states, tribes) and federal authorities.

State Planning Assumptions

- ✓ Governor may designate Secretary of Health as key leader and decision maker of the public health and health care-related response.
- ✓ Secretary of Health may use Division Directors and State Epidemiologist as leaders of response activities.
- ✓ The Incident Command System will be used throughout the pre-pandemic, pandemic and post-pandemic periods.
- ✓ DOH Pandemic Influenza Plan is an appendix to the South Dakota EOP.

Command and Control: Phase 3 and 4 – *PANDEMIC ALERT*

- Secretary of Health convenes DOH Core Group to coordinate and implement response activities.
- Staff member assigned to track responsibilities, perform follow-up, and perform administrative functions.
- DOH Core Group reviews and modifies plan activities, evaluates preparedness.
- Response expenses documented by Division of Administration Office of Financial Management (OFM).

Command and Control: Phase 5 – *PANDEMIC ALERT*

- Consider partial activation of State Emergency Operations Center (SEOC).
- DOH Core Group convenes to assess extent of pandemic and discuss response.
- Division Directors determine essential activities.
- DOH Core Group requests and directs assigned staff from other programs.
- DOH Core Group activates section plans (e.g., antiviral distribution),
- Resources and needs requested through DOH Core Group.
- Bureau of Information Telecommunication (BIT) assesses Information Technology development and needs.
- OFM evaluates need for reapportionment of state funds for outbreak management

Command and Control: Phase 6 – *PANDEMIC*

- Consider full activation of SEOC.
- As material resource needs identified, requests submitted to OEM.
- Secretary of Health responsible for regular updates to Governor.
- Other divisions assume supportive role working on response activities.

B. LABORATORY AND SURVEILLANCE

Influenza viruses have constantly changing antigenic properties. Both virologic surveillance and disease surveillance are critical for the following: (1) detection of the introduction of virus into an area; (2) detection of influenza-like illness (ILI) in an area; (3) monitoring the circulating virus for antigenic and genetic changes and resistance traits; and (4) identifying which population is most affected and how severely through outpatient visits, hospitalizations and deaths.

Based on the collected information, a determination can be made on which control measures are most effective and re-evaluation of priority groups for vaccine and antiviral drug can be completed.

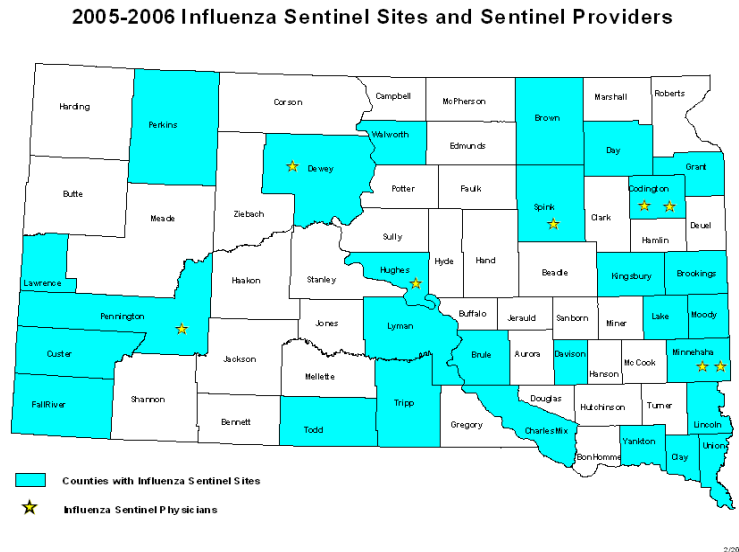
Federal Responsibilities

- Monitor preparedness and laboratory capacity for seasonal influenza and assess surge capacity.
- Work to ensure diagnostics for identifying "pandemic alert" strains are available and used safely and effectively.
- Provide guidance on biosafety and safe handling of respiratory specimens from potential pandemic influenza cases.
- Work to characterize new pandemic viruses in terms of antigenicity, RNA sequence, and drug sensitivities, and to monitor changes over time.
- Work to ensure availability and safe and effective use of diagnostic tests and reagents
- Conduct reference testing of positive samples, and perform viral isolation, especially at the beginning of a pandemic.
- Provide laboratory support for the selection of seed strains to be used in a vaccine against the pandemic virus.
- Coordinate and maintain National Influenza Surveillance System (NISS):
 - Virologic Surveillance;
 - Sentinel Provider Network;
 - Hospital Surveillance;
 - Mortality Surveillance; and
 - State-level Assessments.
- Identify and characterize influenza strains.
- Assist U.S. Department of Agriculture (USDA) in monitoring new influenza strains in poultry and swine.
- Work with state and local partners to implement enhancements to NISS and explore options for enhancements to improve pandemic surveillance.
- Provide technical support to ministries of health and WHO to track the pandemic virus, gather epidemiologic data and analyze novel influenza virus subtypes.
- Issue case definitions and guidance for laboratory testing and enhanced surveillance.
- Assist state and local health departments (LHD).
- Analyze influenza surveillance data on a regular and timely basis.

South Dakota Overview

There are seven main components to South Dakota's influenza laboratory and surveillance monitoring:

- *Influenza Sentinel Sites*: Thirty-one hospitals and clinics provide specimens to the SDPHL for testing.
- *Sentinel Provider Network (SPN) (Influenza Sentinel Providers)*: Eight physicians (Isabel, Pierre, Rapid City, Redfield, 2-Sioux Falls, 2-Watertown) provide ILI data to CDC and submit specimens to SDPHL for testing (see Appendix 4 for a copy of the form).
- *Virologic Surveillance*: SDPHL performs PCR and culture testing on all appropriately submitted samples. Influenza isolates are typed and sub-typed with selected isolates submitted to CDC for antigenic characterization.
- *Rapid Antigen Reporting*: Hospitals, clinics, and laboratories send weekly aggregate reports of rapid antigen influenza testing (total tested and total positive).
- *Laboratory Confirmed Cases*: Culture and direct fluorescent antibody (DFA) positive tests are reportable.
- *Mortality Surveillance*: Pediatric influenza-associated deaths are reportable events. Adult influenza deaths are identified by death certificate review.
- *Facility Reports*: Nursing home, daycare, school, and other institutional influenza outbreaks are reportable.



Activities by Phase

Surveillance: Phase 1 and 2 – INTERPANDEMIC

- SDPHL provides testing, technical support and laboratory coordination for culture capable laboratories.
- SDPHL performs PCR and culture including isolating and subtyping influenza viruses year-round as definitive confirmation of influenza activity.
- SDPHL and University of South Dakota – Clinical Virology Laboratories (USD-CVL) transmits influenza data (positives and negatives) electronically to CDC.
- SDPHL and USD-CVL tests surge capacity plan.
- SDPHL assesses testing proficiency in influenza testing laboratories.
- Influenza Surveillance Coordinator recruits providers who regularly report their weekly data to CDC.
- DOH works with Animal Industry Board (AIB), Animal Disease Research and Diagnostic Laboratory (ADRDL), Game, Fish, and Parks (GFP), and Animal and Plant Health Inspection Service (APHIS) to monitor avian influenza in domestic and wild animals.

- Influenza Surveillance Coordinator:
 - works with Sentinel Provider Network;
 - maintains Influenza Sentinel sites;
 - contributes to state pandemic planning issues and activities;
 - receives influenza testing data from SDPHL, USD-CVL, etc.;
 - provides weekly influenza activity reports;
 - tracks influenza-related deaths using electronic death registry;
 - monitor hospitalizations due to influenza; and
 - remains in close contact with CDC Influenza Branch.

Surveillance: Phase 3 and 4 – PANDEMIC ALERT

- DOH monitors and communicates CDC surveillance data to enhance case detection among travelers from an outbreak area:
 - Ensure specimens are collected to diagnose influenza infection via culture; and
 - Include notification of physicians, laboratory directors, infection control practitioners, emergency rooms, and urgent care centers.
- Laboratories performing viral isolation follow CDC recommendations on testing (Biological Safety Level (BSL)-2 laboratory for PCR testing and BSL-3 enhanced laboratory for virus isolation).
- SDPHL tests all specimens regardless of hospitalization.
- Influenza testing laboratories monitors staff for ILI.
- SDPHL maintains database of sentinel laboratories.
- SDPHL maintains web page and provide information on specimen collection, submission and reporting.
- Influenza Surveillance Coordinator and State Epidemiologist review current surveillance activities.
- SDPHL subtypes Influenza A viruses from clinical specimens and report isolates that cannot be subtyped to CDC immediately.
- DOH Core Group monitors CDC recommendations for specific surveillance activities.
- SDPHL director coordinates influenza culture capable laboratories.
- ODP investigates suspicious cases of influenza.

Surveillance: Phase 5 – PANDEMIC ALERT (*Efficient person-to-person transmission anywhere in world elevates status to Phase 5*)

- Secretary of Health issues emergency order requiring tracking of hospital bed capacity.
- Secretary of Health issues emergency order mandating reporting of all influenza deaths.
- DOH Core Group assesses need to screen arriving or departing travelers.

State Planning Assumptions

- ✓ SDPHL and USD-CVL in Sioux Falls and Rapid City are the only facilities in the state performing tests other than rapid antigen (DFA, culture).
- ✓ Rapid influenza tests are commonly used for presumptive diagnosis.
- ✓ No laboratory in South Dakota has a BSL-3 enhanced laboratory. All culture of novel viruses will be done at CDC.
- ✓ There are 3 NREVSS laboratories in South Dakota – SDPHL and USD-CVL in Sioux Falls and Rapid City.
- ✓ SDPHL received protocol and reagents for novel influenza detection from CDC.
- ✓ Surveillance for avian influenza is conducted by AIB and GFP in collaboration with the state's poultry industry and APHIS (see Appendix 5).

- Influenza Surveillance Coordinator expands SPN and Influenza Sentinel Sites to heighten surveillance.
- Influenza Surveillance Coordinator issues daily influenza reports.
- DOH encourages voluntary reporting of ILI outbreaks in long-term care (LTC) facilities and educational institutions (schools, colleges).
- National Respiratory and Enteric Virus Surveillance System (NREVSS) participating laboratories begin reporting test results daily to CDC.
- SDPHL director coordinates specimen transport as necessary.

Surveillance: Phase 6 – *PANDEMIC*

- DOH participates in CDC studies on vaccine effectiveness and antiviral resistance
- Specimens for testing at SDPHL have a completed enhanced laboratory submission form including:
 - Demographics (first and last name, address, phone, sex, race, occupation);
 - Date of birth;
 - Symptoms;
 - Symptom onset date;
 - Date of death, if applicable;
 - Specimen collected (source, type);
 - Specimen collect date;
 - Rapid antigen test result;
 - Vaccination history; and
 - Severity of illness.
- DSVR receives death certificates on influenza-related pneumonia and influenza mortality using South Dakota Electronic Death Registry.
- Between pandemic waves, State Epidemiologist and Influenza Surveillance Coordinator assess surveillance and recommend improvements.

C. VACCINE AND ANTIVIRAL DRUG DELIVERY

1. Vaccine Distribution and Use

Inactivated influenza vaccine has long been considered the cornerstone of influenza prevention and control. As such, vaccine will serve as an element of the preventive strategies during the next pandemic. The Advisory Committee on Immunization Practices (ACIP) provides recommendations for use of vaccine during influenza season. Success of the pandemic influenza vaccination program will be determined in large part by the strength of the vaccination programs during the inter-pandemic period for three main reasons: (1) increases acceptance of and public confidence in the vaccine; (2) stimulates vaccine production by manufacturers to meet demand; and (3) strengthens distribution channels.

A vaccine against the circulating pandemic influenza virus should begin to be available in four to six months after identification of the pandemic strain. The number of persons who may be protected by vaccination depends on the manufacturing capacity, the amount of antigen per dose needed for a protective immune response, and the number of doses required. A higher antigen concentration and/or two doses may be needed for pandemic vaccine where person have no previous exposure to the influenza subtype and lack any immunity. Vaccine stocks will be used to immunize priority groups based on supply level.

Federal Responsibilities

- Work with manufactures to expedite public sector vaccine purchasing contracts.
- Establish mechanisms for vaccine procurement and distribution.
- Develop guidance on priority groups for vaccination.
- Develop and stockpile vaccine for influenza strains with pandemic potential.
- Expedite rapid development, licensure and production of new influenza vaccines, as well as evaluate dose optimization strategies to maximize use of limited vaccine stocks.
- Estimate rates of reports of mild and severe adverse events following immunization that may occur with mass influenza vaccination, and improve capacity for responding to them.
- Identify mechanisms and define protocols for conducting vaccine effectiveness studies.
- Develop a system for monitoring state-specific vaccine coverage rates at regular intervals, using a pre-existing population-based survey.
- Develop reporting specifications for tracking data on vaccine administration and provide a vaccine database for optional use.
- Develop and distribute communication and education materials.
- Facilitate vaccine procurement, distribution and tracking, working with private partners.
- Guided by epidemiologic information, revise vaccination priority group recommendations.
- Provide guidance on reporting specifications for tracking administration of vaccine doses.
- Provide guidance on Investigational New Drug (IND) and Emergency Use Authorization (EUA) procedures if new influenza vaccines are developed but not FDA approved.
- Provide guidance on which adverse event reports are highest priority for investigation.
- Provide regulatory guidance for the manufacture and shipment of vaccines.
- Provide forecasts of vaccine availability from manufacturers.
- Continue to provide input into appropriate strain selection for seasonal influenza vaccine.
- Distribute public stocks of vaccines to state and large city health departments and to federal agencies with direct patient care responsibility.

- Implement protocols for assessing vaccine effectiveness.
- Monitor vaccine coverage rates.

South Dakota Overview

South Dakota has a strong tradition of flu vaccination. According to the CDC, South Dakota led the nation in 2002 for the rate of adults aged 50-64 receiving the flu vaccine at 49% and had the second highest for those over 65 years of age at 74%. South Dakotans have been encouraged to build on this tradition and receive an influenza vaccination each year.

The department's Immunization Program continues to enhance influenza vaccination coverage levels in traditional high-risk groups, particularly subgroups in which coverage levels are particularly low (e.g., minorities and persons younger than 65 years of age with chronic underlying medical conditions). Increasing routine, annual vaccination coverage levels in these groups will further reduce the annual toll of influenza and will facilitate access to these populations when the pandemic occurs.

The Immunization Program participates in the Adult Immunization Coalition which seeks to increase pneumococcal polysaccharide vaccination rates, which can reduce the incidence of invasive pneumococcal disease secondary to influenza. Pneumococcal vaccine is indicated for most persons for whom influenza vaccine is recommended.

South Dakota has adopted the HHS Vaccine Priority Group Interim Recommendation (see Table 2, below, and Appendix 6 for more information). South Dakota may convene the DOH Core Planning Group to review any changes to the priority groups. Changes in national recommendations may be made based on characteristics of the virus (i.e., transmissibility, virulence, initial geographic distribution, age-specific attack rates, and complication rates) and vaccine effectiveness.

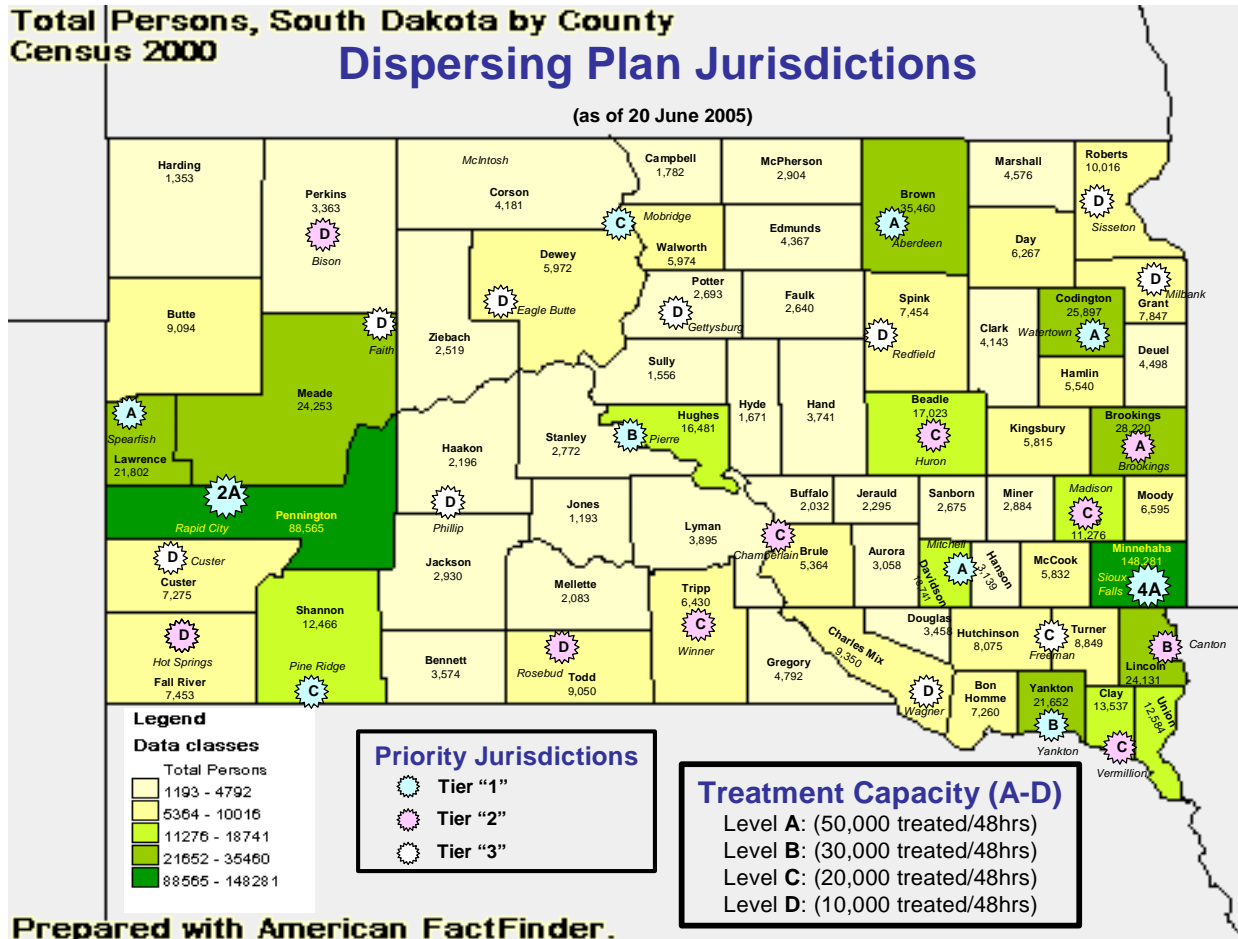
State Planning Assumptions

- ✓ Vaccine distribution plans will be enhanced during CHS influenza vaccination clinics.
- ✓ Vaccine against pandemic influenza subtype should be available 4-6 months after identification of a new virus. Quantities and availability are difficult to estimate.
- ✓ Influenza vaccine is shipped to DOH for distribution to facilities.
- ✓ DOH may distribute unlicensed vaccines under FDA's Investigational New Drug (IND) provisions.
- ✓ DOH Immunization Program policies and procedures on vaccine security, cold chain requirements, transportation, and storage issues will be used when distributing vaccine.
- ✓ Two doses of vaccine (administered 30 days apart) may be needed to develop protective immunity to the influenza vaccine virus.
- ✓ Liability protection for vaccine manufacturers and administrators is handled at the federal level.
- ✓ State law does not allow for mandatory vaccination.
- ✓ State law allows for non-licensed volunteers and health care workers to administer influenza vaccines.

Table 2. Vaccine Priority Group Recommendations

Tier	Subtier	Population
1	A	Vaccine and antiviral manufacturers and critical support
		Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinator
	B	Persons \geq 65 years with 1 or more influenza high-risk condition, not including essential hypertension
		Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension
		Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year
	C	Pregnant women
		Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine
		Household contacts of children <6 months
	D	Public health emergency response workers critical to pandemic response
		Key government leaders
2	A	Healthy and \geq 65 years
		6 months to 64 years with 1 high-risk condition
		Healthy 6-23 month olds
	B	Other public health emergency responders
		Public safety workers including police, fire, 911 dispatchers, and correctional facility staff
		Utility workers essential for maintenance of power, water, and sewage systems
		Transportation workers transporting fuel, water, food, and medical supplies as well as public ground transportation
Telecommunications/IT for essential network operations and maintenance		
3	Other key government health decision-makers	
	Funeral directors/embalmers	
4		Healthy persons 2-64 years not included in above categories

As part of the SNS plan, point of dispensing (POD) sites to administer vaccine, antibiotics, or other interventions are required to be in place. The DOH has begun this process by identifying 30 communities to develop POD plans to meet this goal (see map below).



Activities by Phase

Vaccine: Phase 1 and 2 – INTERPANDEMIC

- DOH coordinates vaccine distribution with bordering jurisdictions (states, tribes).
- DSVR quantifies priority group populations periodically.
- DOH Immunization Program maintains contracts with vaccine providers receiving state and federally funded childhood vaccines which call for facilities to have a protocol and area to store influenza vaccine, supplies to distribute vaccine, capabilities to dispose of bio-hazardous waste, and distribute Vaccine Information Statements (VIS).
- Vaccine need estimates for each county determined by DOH Core Group based on priority groups.

Vaccine: Phase 3 and 4 – PANDEMIC ALERT

- DOH Immunization Program conducts assessment to identify number of health care and medical workers in Tier 1A who will be vaccinated.

- DOH develops a screening and infrastructure identification tool to determine vaccinee priority group.
- DOH Immunization Program prepares to receive vaccine for distribution.
- DOH and health care partners responsible for vaccination as vaccine available:
 - Tier 1A – vaccinated by employee's facility;
 - Tier 1B, 1C, 1D – vaccinated at POD clinics; and
 - Tier 2A, 2B, 3, 4 – vaccinated at hospitals, clinics, nursing homes, public health, and other vaccine providers.
- South Dakota Immunization Information System (SDIIS) used to track priority group vaccination.
- SDIIS used to identify areas of vaccine supply and demand.
- SDIIS reminder/recall feature used for second dose notification.
- Home health agencies and POD travel vaccination teams reach special needs populations.
- Vaccine Adverse Events are reportable and followed by DOH Immunization Program.

Vaccine: Phase 5 – PANDEMIC ALERT

- DOH works with CDC to monitor vaccine coverage.

Vaccine: Phase 6 – PANDEMIC

- In collaboration with CDC, DOH assists in assessing vaccine effectiveness.
- Following a pandemic, DOH works with federal partners to evaluate vaccine-related response activities.

2. Antiviral Drug Distribution

Appropriate use of antiviral drug during a pandemic may slow the spread of a novel virus, reduce morbidity and mortality, and decrease the demands on healthcare providers. A huge and uncoordinated demand for antiviral drugs early in a pandemic could rapidly deplete supplies. It is therefore critical that planning activities address three key issues – procurement, distribution and targeted use.

There are four antiviral drugs licensed in the United States for treatment or prevention of influenza (see Table 3).

Table 3. Antiviral Drug for Treatment and Prophylaxis

Drug	Effective Against	Approved Use	Approved Age Groups
Amantadine (Symmetrel®)	Influenza A	Prophylaxis and Treatment	Persons ≥ 1 year of age
Rimantadine (Flumadine®)	Influenza A	Prophylaxis	Persons ≥ 1 year of age
		Treatment	Persons ≥ 13 year of age
Oseltamivir (Tamiflu®)	Influenza A & B	Prophylaxis and Treatment	Persons ≥ 1 year of age
Zanamivir (Relenza®)	Influenza A & B	Treatment	Persons ≥ 7 year of age

Source: CDC 2005-2006 Antiviral Use Recommendations (<http://www.cdc.gov/flu/professionals/antiviralback.htm>)

South Dakota has adopted the HHS Antiviral Drug Priority Group Interim Recommendation (see the Table 4, below or Appendix 6 for more information). South Dakota may convene the DOH Core Planning Group to review any changes to the priority groups. Changes in national

recommendations may be made based on characteristics of the virus (transmissibility, virulence, initial geographic distribution, age-specific attack rates, and complication rates) and antiviral drug effectiveness.

Table 4. Antiviral Drug Priority Group Recommendations

Group	Strategy
Patients admitted to hospital	Treatment
Healthcare workers (HCW) with direct patient contact and emergency medical service (EMS) providers	Treatment
Highest risk outpatients (i.e., immunocompromised persons and pregnant women)	Treatment
Pandemic health responders (public health, vaccinators, vaccine and antiviral manufacturers), public safety (police, fire, corrections), and government decision-makers	Treatment
Increased risk outpatients (i.e., young children 12-23 months, persons \geq 65 years, and persons with underlying medical conditions)	Treatment
Outbreak response in nursing homes and other residential settings	Post-exposure prophylaxis
HCWs in emergency departments, intensive care units, dialysis centers, and EMS providers	Prophylaxis
Pandemic societal responders (e.g., critical infrastructure groups as defined in the vaccine priorities) and HCW without direct patient contact	Treatment
Other outpatients	Treatment
Highest risk outpatients	Prophylaxis
Other HCWs with direct patient contact	Prophylaxis

South Dakota Overview

Antiviral influenza drug may come from one or more of the following sources – federal stockpile, state stockpile, hospital expanded inventory or pharmacy inventory.

- *Federal Stockpile* – The U.S. has a limited supply of influenza antiviral drug stored in the SNS for emergency situations like outbreak situations or in the event of an influenza pandemic. Currently, the SNS has enough oseltamivir capsules to treat approximately 2.26 million adults and oseltamivir suspension to treat more than 100,000 children. In addition, SNS contains enough rimantadine tablets to treat up to 4.25 million adults and enough rimantadine suspension to treat up to 750,000 children.
- *State Stockpile* – The Secretary of Health has signed a letter of intent to purchase 25,000 courses of oseltamivir capsules (Tamiflu®) from Roche Pharmaceuticals. This is a special program offered by Roche to states for stockpiling purposes only. The earliest estimate from Roche on the arrival of these antiviral drugs is late Fall 2006.
- *Hospital Expanded Inventory* – DOH is providing grants to hospital pharmacies to increase their current inventory. Approximately \$200,000 is being granted for purchase of oseltamivir, doxycycline, and ciprofloxacin.
- *Pharmacy Inventory* – Table 5 shows the courses of antiviral drugs in hospitals and retail pharmacies as of December 2005 (according to a DOH survey).

Table 5. Antiviral Drug in South Dakota

Drug	Apr 2005 Survey	Dec 2005 Survey	Treatment Course*
Amantadine	5,848 courses	5,758 courses	100mg bid x 7 days
Rimantadine	2,187 courses	1,891 courses	100mg bid x 7 days
Oseltamivir	1,348 courses	2,713 courses	75mg bid x 5 days
Zanamivir	7 courses	7 courses	10mg bid x 5 days

* Based on current CDC recommendation for antiviral use in persons > 13 years of age with influenza.

(<http://www.cdc.gov/flu/professionals/antiviralback.htm>)

Federal Responsibilities

- With Congress and States, work to acquire sufficient quantities of antiviral drugs to treat 25% of the U.S. population and stimulate development of expanded domestic production capacity sufficient to accommodate subsequent needs through normal commercial transactions.
- Develop national guidance on use of antivirals during a pandemic, including identification of priority groups for antiviral drug treatment and prophylaxis.
- Continue procurement and maintenance of antiviral supplies in SNS.
- Maintain a program to test and extend dating of stockpiled antivirals based on demonstration of continued potency
- Develop protocols for monitoring antiviral effectiveness, safety, and resistance.
- Develop and distribute communication and education materials about antivirals.
- Revise recommendations for treatment and prophylaxis with antivirals for priority groups guided by epidemiologic data.
- Provide guidance specifications for antiviral tracking distribution, effectiveness, and safety.
- Work with WHO and global partners to determine pandemic influenza drug susceptibilities and monitor changes over time.
- Provide information to health professionals and the public on availability and use of antivirals.
- Distribute antiviral drugs from the SNS to state and large city health departments and federal agencies with direct patient care responsibilities.
- Work with state and LHDs and healthcare partners to:
 - Evaluate the effectiveness of antivirals for treatment and prophylaxis;
 - Monitor the incidence of adverse events associated with antiviral use; and
 - Monitor the emergence of antiviral resistance.
- Issue updated national guidelines for appropriate use of antivirals as the pandemic continues.
- Continue to provide information to health professionals and the public, as the situation changes, on drug availability, distribution, administration, side effects, and the rationale for targeted drug use.

Activities by Phase

Antivirals: Phase 1 and 2 – *INTERPANDEMIC*

- DOH observes ACIP recommendations on seasonal influenza antiviral use.
- State pharmacist will monitor and rotate state stockpile to keep drug from expiring.
- DOH coordinates with neighboring state using multi-state organizations such as Mid-American Alliance.
- Hospital and retail pharmacies reviews plans to receive antiviral drug from DOH.

Antivirals: Phase 3 and 4 – PANDEMIC ALERT

- Physicians, pharmacists, and others focus antiviral use on disease containment and priority groups.
- DOH convenes meeting of key partners (infectious disease physicians, clinical pharmacists) to review and refine algorithms for antiviral drug use.
- DOH monitors CDC communication on updated antiviral drug recommendations.
- PPHR assesses antiviral need in communities.
- SNS plan distributes antiviral drug to hospital and retail pharmacies based on:
 - Outbreak location;
 - Priority group population; and
 - Number of courses.
- DOH optimizes antiviral use by collecting data on:
 - Weekly report of antiviral drug distribution by pharmacists including number of antiviral drugs given, priority group designation, age group, and gender;
 - Antiviral adverse events (www.fda.gov/medwatch/safety/3500.pdf); and
 - Drug effectiveness and resistance with CDC collaboration.
- Hospital and retail pharmacies prepare to receive antiviral drug from DOH.

Antivirals: Phase 5 – PANDEMIC ALERT

- Inform partners of any antiviral drug distribution from DOH or federal stockpiles.
- DOH prepares to administer medication under IND or Emergency Use Authorization.

Antivirals: Phase 6 – PANDEMIC

- Physicians, pharmacists, and others focus antiviral use to priority groups.
- DOH monitors CDC recommendations on new antiviral drugs for availability, use and side effects.

E. DISEASE CONTAINMENT AND TRAVEL-RELATED RISK

1. Community Disease Control and Prevention

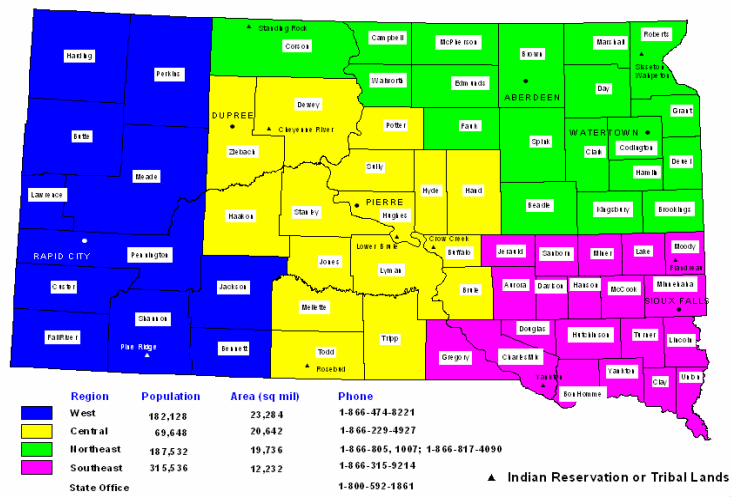
The initial response to the emergence of a novel influenza subtype that spreads between people should focus on containing the virus at its source. With introduction of the virus into the U.S., the foci of containment activities will be public health and individual measures that attempt to slow and limit viral transmission. The containment strategies might include measures that affect individuals (i.e., isolation of patients and monitoring contacts) as well as measures that affect groups or entire communities (i.e., cancellation of public gatherings, implementation of community-wide snow days) (see Appendix 7).

Containment measures applied to individuals may have limited impact in preventing the transmission of pandemic influenza. Nevertheless, during the Pandemic Alert Period these measures may have great effectiveness, slowing disease spread and allowing time for targeted use of medical interventions. In addition, implementing these measures early in a pandemic may slow geographical spread and increase time for vaccine production and implementation of other pandemic response activities. Later, individual quarantine is much less likely to have an impact and likely would not be feasible to implement. Thus, community-based containment measures (closing schools or restricting public gatherings) and emphasizing hand hygiene and cough etiquette may be more effective disease control tools. Both individual and community-based containment measures raise legal, logistic, and social challenges that can be addressed during the Interpandemic Period.

South Dakota Overview

ODP has six field offices with a total of 19 staff for disease identification and intervention activities. These staff will be the front-line responders for case investigation and contact studies for persons presenting with a case of novel influenza. The respective field offices and office coverage areas are identified on the following map.

OFFICE OF DISEASE PREVENTION REGIONAL AREAS



Activities by Phase

Community Disease Control: Phase 1 and 2 – INTERPANDEMIC

- Local community planning groups identify locations and resources for isolation and quarantine.
- DOH and infectious disease physicians establish evaluation and isolation or quarantine procedures for confirmed or suspected cases of pandemic influenza and their close contacts.
- DOH legal counsel periodically reviews emergency public health powers to ensure they are adequate to respond to modern disease.
- DOH maintains plans to implement *influenza hotlines* to provide information and advice to persons on whether to stay home or seek medical care.
- Local community planning groups identify optimal methods for delivering assessment and care to individuals with probable influenza including development of:
 - *Influenza triage clinics* to provide rapid medical assessment of potentially infected persons; and
 - *Community medical care sites* which provide limited off-site medical care to influenza patients when hospitals become overwhelmed.

Community Disease Control: Phase 3 and 4 – PANDEMIC ALERT

- Local community planning groups performs on-site evaluations of potential isolation and quarantine facilities to consider basic

State Planning Assumptions

- ✓ DOH will face logistic, economic, ethical, legal, social and psychological challenges in implementing disease control and containment measures during Pandemic Alert and Pandemic periods.
- ✓ Governor and DOH have ability to restrict movement of individuals for controlling communicable disease and effecting isolation or quarantine of ill or exposed individuals.
- ✓ The Secretary of Health, with the consent of the Governor, may declare a public health emergency.
- ✓ DOH will work with law enforcement and the Attorney General's office to enforce movement restrictions.
- ✓ The State and the 9 tribes will have primary responsibility for public health matters within their borders – including isolation and quarantine.
- ✓ Under the authority of Section 361 of the Public Health Services Act (42 USC 264), the HHS Secretary may make and enforce regulations necessary to prevent the introduction, transmission or spread of communicable diseases from foreign countries in to the U.S. or from one state or possession to another.
- ✓ A progressive approach, starting with the least restrictive and progressing to involuntary restriction of movement would be employed after assessing risk. A protocol identifying under what circumstance the least restrictive alternative would not be the first step is developed (ex. outbreaks in multiple locations at the same time).
- ✓ Isolation/quarantine locations/circumstances are identified.
- ✓ Basic necessities (i.e., shelter, food, medical, phone) are provided to persons under movement restrictions.
- ✓ Isolation/quarantine monitoring guidance is developed and carried out in collaboration with DOH hotlines and local community plans.
- ✓ DOH and local community planning groups have identified social support for disease control activities (i.e., isolation/quarantine, triage clinics, community medical care sites).
- ✓ Who can establish isolation/quarantine and notification requirements for affected individuals have been identified.

infrastructure requirements such as:

- Adequate sleeping rooms and bathrooms;
 - Access to food delivery or food preparation facilities;
 - Staff to monitor contacts at least daily for fever and respiratory symptoms;
 - Transportation for medical evaluation for persons who develop symptoms;
 - Mechanisms for communication (telephone required, internet if possible);
 - Adequate security for those in the facility;
 - Mechanism for addressing special needs; and
 - Access to mental health and other psychosocial support services.
- DOH maintains protocols for monitoring persons in isolation and quarantine and works with law enforcement and the Attorney General's office to enforce movement restrictions.
 - Local community planning groups identify resource needs for triage clinics and community medical care sites including staff members, volunteers, locations, and equipment.
 - DOH and infectious disease physicians maintain protocols for hotline workers that include training on triage algorithms.
 - DOH works with local community planning groups to activate isolation or quarantine sites as necessary.
 - DOH, law enforcement, the judicial system, and other groups review legal authorities which may be used during a pandemic.
 - DOH relies upon the HHS Pandemic Influenza Plan's Infection Control Recommendations for Care of Patients with Pandemic Influenza for home care, isolation and quarantine sites, and healthcare facilities (see <http://www.hhs.gov/pandemicflu/plan/pdf/S04.pdf>, Box 1, page S4-20 for more details).
 - DOH recommends appropriate measures to decrease social contact within groups or whole communities and measures that individuals can take personally to decrease their risk of infection (see Appendix 7).

Community Disease Control: Phase 5 – PANDEMIC ALERT

- DOH influenza hotlines work in coordination with influenza triage clinics to assist self-assessment of community members to detect potential flu cases and direct persons with symptoms to appropriate sites if indicated by the developed triage protocol.

Community Disease Control: Phase 6 – PANDEMIC

- Containment measures scaled back based on:
 - Consistent decrease in the number of confirmed cases; and
 - Reduction in the number of probable and known cases.
- Effective protective countermeasures are in place.

2. Travel-Related Risk of Disease Transmission

The 2003 severe acute respiratory syndrome (SARS) outbreak demonstrated how quickly human respiratory viruses can spread, especially in a world of modern air travel. Disease spread will likely be even faster during an influenza pandemic because a typical influenza virus has a shorter average incubation period (one to three days versus seven to ten days for SARS-associated coronavirus [SARS-CoV]) and is more efficiently transmitted from person to person.

If an influenza pandemic begins outside the U.S., public health authorities might screen travelers from affected areas to decrease disease importation. If a pandemic begins in or spreads to the United States, health authorities might screen outbound passengers to decrease exportation of disease. Early in a pandemic, DOH might also implement domestic travel-related measures to slow disease spread.

Because some persons infected with influenza will still be in the incubation period, be shedding virus asymptotically, or have mild symptoms, it will not be possible to identify all ill travelers and their fellow passengers. However, these activities might slow spread early in a pandemic, allowing additional time for implementation of other response measures such as vaccination.

Later as pandemic disease spreads in communities, ongoing indigenous transmission will likely exceed new introductions and DOH might modify or discontinue this strategy. Voluntary limitations on travel as persons decide to limit risk by canceling nonessential trips will also decrease the amount of disease spread.

State Planning Assumptions

- ✓ There is no way to differentiate a case of seasonal influenza from a novel strain of influenza without laboratory testing making screening of travelers difficult.
- ✓ The Governor and DOH have authority to restrict movement of individuals for controlling communicable disease and effecting isolation or quarantine of ill or exposed individuals.
- ✓ The Governor and DOH have authority to screen inbound and outbound travelers, restrict the use of mass transit systems, and cancel nonessential travel if necessary.
- ✓ AIB has authority to prevent the importation of infected birds or animals as necessary to suppress contagious disease.
- ✓ AIB collaborates with federal agencies responsible for inspecting imported animals, implementing/veterinary quarantine orders, and enforcing USDA trade bans, and HHS import bans (i.e., APHIS, HHS, CDC, Bureau of Customs and Border Protection, and U.S. Fish and Wildlife Service) (see Appendix 3).

Federal Responsibilities

- Work to prevent the importation of influenza-infected birds and animals into the U.S.
- Provide legal preparedness templates for use in implementing quarantine and patient isolation measures.
- Work with travel industry partners to ensure airplane and cruise ship captains and crew are familiar with procedures for identifying and managing arriving ill passengers.
- Coordinate with other countries and WHO to prevent spread of novel or pandemic influenza via international travel.
- Work with CDC quarantine stations to prevent importation and exportation pandemic influenza cases.
- Promote a process of active engagement and discussion to support decision-making on implementation of travel restrictions and other travel-related containment strategies.

South Dakota Overview

South Dakota receives no direct international flights. The state does receive direct flights from several states including Arizona, Colorado, Illinois, Minnesota, Nevada, Ohio, and Utah. The DOH maintains relationships with established CDC quarantine stations in Chicago, IL and

Minneapolis, MN where their airports have direct flights to South Dakota. Quarantine inspectors within those stations are responsible for evaluation of humans, animals, and other imported cargo (see www.cdc.gov/ncidod/dq/quarantine_stations.htm for more information).

Some ports of entry (with and without quarantine stations) have local physicians on call and HHS has an ongoing program to establish agreements with local hospitals that accept patients referred by quarantine station staff. CDC's quarantine program has entered into an agreement with Avera McKennan Hospital in Sioux Falls to function as the designated quarantine hospital for the Sioux Falls Regional Airport.

Activities by Phase

Travel-risk: Phase 1 and 2 – *INTERPANDEMIC*

- DOH recommends establishing planning groups for each regional airport to manage travel-related risk activities including:
 - First responders (firefighters, police officers, emergency medical services);
 - Legal community;
 - Emergency medical services and other emergency responders;
 - Hospital personnel;
 - Airport and transportation industry representatives;
 - Political leaders;
 - American Red Cross and other community organizations; and
 - Business services.
- Travel-risk planning groups work to:
 - Develop and maintain triage protocols for ill travelers including identifying need to meet reported ill passenger to assess illness and refer to local healthcare facility for evaluation and management; notifying local response agencies if case is referred for evaluation; referring cases evaluated by DOH for reporting to CDC; and taking appropriate action (quarantine, isolation) depending on level of suspicion.
 - Conduct exercises to assess plan readiness.
 - Ensure responders are trained in appropriate personal protective equipment (PPE).
- CDC, DOH and SD Department of Transportation (DOT) work with airlines offering service to South Dakota to receive flight passenger lists when exposure has occurred

Travel-risk: Phase 3 and 4 – *PANDEMIC ALERT*

- DOH monitors CDC travel recommendations
- DOH considers implementing the following containment measures to slow disease spread:
 - Distributing travel health alert notices to airports via HAN;
 - Isolating ill travelers and quarantining passengers and crew based on index of suspicion;
 - Limiting or canceling nonessential travel to affected areas;
 - Increasing disease surveillance activities in affected areas;
 - Closing mass transit systems (e.g., buses); and
 - Closing interstate bus and train routes.
- Airports post travel health alert notices for incoming and outgoing travelers.

Travel-risk: Phase 5 – *PANDEMIC ALERT*

- CDC assists DOH in implementing containment measures as the situation evolves.
- DOH considers the following factors when implementing containment measures:
 - Current transmission of pandemic influenza in the geographic area versus risk of introducing additional cases to South Dakota; and
 - Value of movement restrictions to decrease transmission versus societal disruption such restrictions would cause.

Travel-risk: Phase 6 – *PANDEMIC*

- De-escalating control measures made in consultation with CDC.
- CDC downgrades travel warnings for passengers when adequate updated reporting from the area shows limited or no recent cases.

E. HEALTHCARE PLANNING

An influenza pandemic will place a huge burden on South Dakota healthcare delivery (see Table 6, below).

Table 6. Estimates of Pandemic Influenza Impact on South Dakota*

Characteristics	National		South Dakota	
	Moderate (1958/68-like)	Severe (1918-like)	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million	90 million	236,262	236,262
Outpatient medical care	45 million	45 million	118,131	118,131
Hospitalization	865,000	9,900,000	2,271	25,989
ICU care	128,750	1,485,000	338	3,898
Mechanical ventilation	64,874	742,500	170	1,957
Deaths	209,000	1,903,000	549	4,996

* Estimates based on extrapolation from past pandemics in the U.S. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

Interpandemic planning by healthcare facilities is critical to providing uninterrupted quality care to patients. Effective planning should encompass hospitals, clinics, long-term care facilities, home health agencies and public health at the local level and the regional level. Even with planning there may be shortages of beds, medical equipment, and health care personnel.

All South Dakota hospitals, clinics, long-term care facilities, and home healthcare agencies will be encouraged to develop institutional plans to respond to pandemic influenza. The following eleven elements encompass planning issues which should be discussed during the updating of a facility's All-Hazards Plan – (1) surveillance; (2) decision-making structure (Hospital Emergency Incident Command System or equivalent); (3) communications; (4) education and training; (5) patient triage; (6) clinical evaluation and admission; (7) facility access; (8) occupational health; (9) vaccine and antiviral distribution; (10) surge capacity; and (11) mortuary issues. See HHS Pandemic Influenza Plan, Supplement 3, page S3-5 for details.

Federal Responsibilities

- Provide ongoing public health guidance on healthcare preparedness.
- Provide healthcare facilities with model protocols for early detection and treatment of influenza among patients and staff; these protocols can be piloted during routine influenza seasons.
- Assist on issues related to hospital infection control, occupational health, antiviral drug use and clinical management, vaccination, and medical surge capacity.
- Provide materials to states from SNS for further distribution to healthcare facilities.

South Dakota Overview

All hospitals and clinics participating in the HRSA Hospital Bioterrorism Preparedness Program are being asked to develop and submit a copy of their institutional plan to their regional planning group. Healthcare facilities should coordinate their plans at the local, county, and regional levels.

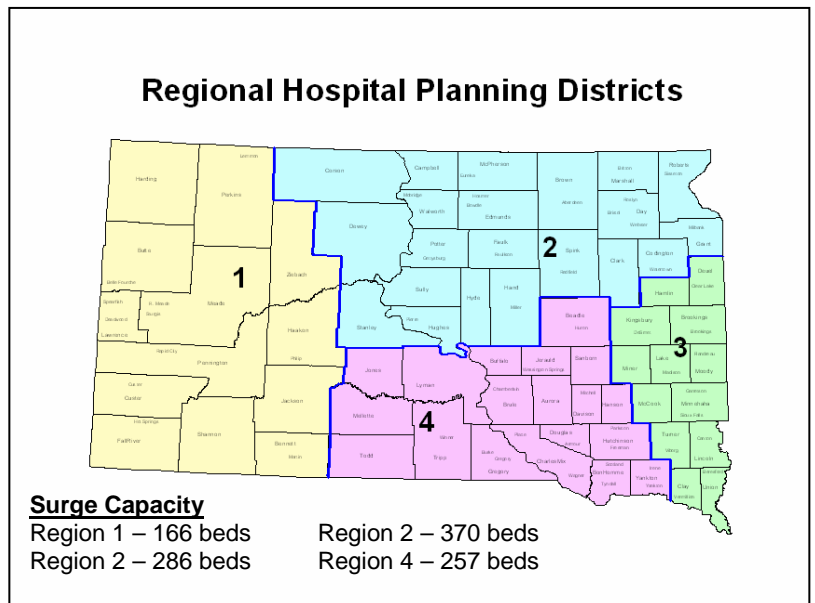
Participating HRSA hospitals are addressing infectious disease containment with the installation of isolation rooms. By the end of 2006, all hospitals with a 24/7 emergency department should

have at least one portable or permanent negative pressure isolation room. Avera McKennan Hospital will have a wing with 100 negative pressure isolation rooms. In addition, portable ventilators have been purchased in each of the four HRSA planning regions.

Every year more South Dakota hospitals reduce their number of licensed beds to qualify for Critical Access Hospital status. In addition, many operate and staff below that number of licensed beds. Historically, annual occupancy rates have been approximately 49%. This means there is available bed and equipment surge capacity that can be used during a disaster.

A survey in June 2005 asked hospitals to identify the number of beds above their current staffing and census level that could be added within 24 hours revealed 1,079 surge hospital beds (see map at right for regional breakdown). Also, approximately 1,200 LTC beds could be available to care for acute patients requiring less skilled care.

To assist with quickly identifying bed capacity issues, the DOH has purchased real-time bed tracking software. The software can be used as a tool for surveillance (pandemic influenza impact) and planners (better use of resources).



1. Infection Control

The DOH adopts the guidelines for Pandemic Infection Control recommended in Supplement 4 of the HHS Pandemic Influenza Plan (www.hhs.gov/pandemicflu/plan/sup4.html).

Primary strategies for preventing pandemic influenza are the same as those for seasonal influenza: vaccination, early detection and treatment with antiviral drugs, and the use of infection control measures to prevent transmission during patient care. However, when a pandemic begins, a vaccine may not yet be widely available, and the supply of antiviral drugs may be limited. The ability to limit transmission in healthcare settings will, therefore, rely heavily on the appropriate and thorough application of infection control measures. While it is commonly accepted that influenza transmission requires close contact – via exposure to large droplets (droplet transmission), direct contact (contact transmission), or near-range exposure to aerosols (airborne transmission) – the relative clinical importance of each of these modes of transmission is not known.

The infection control guidance provided in this supplement is based on routes of influenza transmission, pathogenesis of influenza, and effects of influenza control measures used during past pandemics and interpandemic periods. Given uncertainty about the characteristics of a new

pandemic strain, all aspects of preparedness planning for pandemic influenza must allow for flexibility and real-time decision-making that take new information into account as the situation unfolds. Specific characteristics of a new pandemic virus – virulence, transmissibility, initial geographic distribution, clinical manifestation, risk to different age groups and subpopulations, and drug susceptibility – will remain unknown until the pandemic is underway. If the new virus is unusual in any of these respects, HHS and its partners will provide updated infection control guidance.

South Dakota Overview

The DOH has developed an influenza prevention campaign similar to CDC's *Cover Your Cough*. The *Stop It – Don't Spread It* poster campaign was developed during the 2004-2005 influenza season vaccine shortage and has been distributed to numerous facilities including schools, churches, healthcare facilities, and other places where people congregate. It is estimated that over 312,000 posters were distributed during the 2005-2006 influenza season. The poster is included in Appendix 8.

2. Clinical Guidelines

The DOH adopts the guidelines for Clinical Guidelines recommended in Supplement 5 of the HHS Pandemic Influenza Plan (www.hhs.gov/pandemicflu/plan/sup5.html).

Healthcare providers play an essential role in the detection of an initial case of novel or pandemic influenza in a community. If implemented early, identification and isolation of cases may help slow the spread of influenza within a community. Clinical awareness of novel or pandemic influenza can also benefit the individual patient, as rapid diagnosis and initiation of treatment can avert potentially severe complications. Detection is complicated, however, by the lack of specific clinical findings and commercially available laboratory tests that can rapidly distinguish novel or pandemic influenza from seasonal influenza. In addition, neither the clinical characteristics of a novel or pandemic influenza virus strain nor the groups at highest risk for complications can necessarily be defined beforehand.

Therefore, clinicians face significant challenges in quickly identifying and triaging cases, containing the spread of infection, beginning an efficient and comprehensive workup, initiating antiviral and other supportive therapy, and anticipating clinical complications.

State Planning Assumptions

- ✓ Infected persons will present to clinics and emergency departments thus infecting other patients and healthcare providers.
- ✓ Health care workers and other first responders will be at higher risk of illness, further straining the health care system.
- ✓ Uninfected people will seek diagnosis and treatment out of fear and will place themselves at risk for true infection.
- ✓ There may be critical shortages of health care resources (i.e., staffed hospital beds, mechanical ventilators, medications, morgue capacity, and other resources).
- ✓ Home health organizations play an important role in monitoring individual and family health needs by bringing healthcare into homes and limiting outside exposure.
- ✓ Pandemic influenza impact assumptions (deaths, hospitalizations, intensive care unit (ICU) care, outpatient visits) are provided in Table 6 to facilitate local community and healthcare facility planning.

Federal Responsibilities

- Develop and disseminate recommendations on the use of influenza diagnostic tests, antiviral drugs, and vaccines during a pandemic.
- Develop a national stockpile of antiviral drugs for use during a pandemic.
- Work with partner organizations to discuss and resolve clinical issues related to pandemic influenza response.
- Assist ministries of health and WHO in characterizing cases of human infection with avian influenza A (H5N1) or other novel strains of influenza, particularly with regard to antiviral susceptibility, transmission parameters, and clinical outcomes.
- Work with state and LHSs to investigate and manage suspected cases of human infection with avian influenza A (H5N1) or other novel strains of influenza.
- Establish case definition and reporting mechanisms.
- Update and disseminate national guidelines on influenza diagnostic testing and use of antiviral drugs and vaccines during the pandemic.
- Develop a pandemic influenza vaccine.
- Work with healthcare partners to refine clinical management guidelines and issue regular updates on treatment issues.
- Conduct observational and interventional studies with partner institutions to investigate pandemic influenza pathogenesis and develop disease prevention and treatment strategies.
- Monitor pandemic influenza cases for antiviral resistance and transmission parameters.
- Monitor antiviral drug use and inventories.
- Collect information on clinical features, outcomes, and treatments.

South Dakota Overview

PHPR manages the Public Health Physician Leadership corps which serves as a framework for providing preparedness, training and leadership in order to effectively respond to a bioterrorism attack, infectious disease outbreak or other public health emergency or disaster.

Physicians of various disciplines from across South Dakota have volunteered and been selected to serve this special physician emergency response corps. These physicians ensure a cadre of trained and coordinated practitioners to rapidly respond to a public health event. They are available for immediate call-up by DOH in a large scale public health event.

These physicians will provide clinical and referral services during public health emergencies through activities such as mass vaccinations, mass prophylaxis operations or the care of biological, chemical or radiological agent casualties.

Public Health Physicians provide technical assistance, guidance and education to DOH as well as other physicians and healthcare professionals throughout the State.

Public Health Physicians work within their communities to ensure coordination and collaboration of local, regional and state disaster plans.

Activities by Phase

Healthcare: Phase 1 and 2 – *INTERPANDEMIC*

- DOH supports HRSA regional planning groups to conduct facility and regional planning.

- DOH maintains relationships with healthcare facility points of contact.
- Hospital Preparedness Coordinator periodically identifies available healthcare surge capacity.
- Healthcare facilities complete disaster preparedness needs assessment to identify planning issues.
- DOH recommends local community planning groups include:
 - Hospitals;
 - Emergency medical services;
 - Clinics;
 - Long-term care facilities;
 - Home health agencies;
 - HRSA regional planning group representative;
 - Behavioral mental health clinics;
 - Community organizations (volunteer groups, etc);
 - Businesses; and
 - DOH representative.
- DOH provides federal grant funding to healthcare facilities to purchase durable medical equipment (DME) (N-95 respirators and portable ventilators) to support healthcare infrastructure.
- Department of Social Services (DSS) and Department of Human Services (DHS) coordinate trainings for social workers, psychologists, psychiatrists, nurses, and leaders of faith and community organizations to assist with local community psychosocial support.
- Healthcare facilities train staff in Hospital Emergency Incident Command System (HEICS) or other decision-making structure.
- Healthcare facilities provide cross-training of job duties to expand workforce for key positions.
- Healthcare facilities address staffing issues of worker leave and retention.
- Hospital pharmacies receive HRSA funding to increase inventory of antibiotics and antivirals.

Healthcare: Phase 3 and 4 – PANDEMIC ALERT

- DOH provides PPE to participating healthcare facilities.
- DOH works to provide training for response preparedness (respiratory care using portable ventilators, isolation and transportation of infectious patients).
- DOH maintains supply of DME to be used in time of shortage.
- Healthcare facilities conduct inventory monitoring of supplies expected to be in high demand during an influenza pandemic and develop procedures for receipt of storage of SNS assets.
- DOH maintains plan to implement influenza hotlines to provide information and advice to persons on whether to stay home or seek medical care.
- Local community planning groups identify optimal methods for delivering assessment and care to individuals with probable influenza including development of:
 - *Influenza triage clinics* to provide rapid medical assessment of potentially infected persons; and
 - *Community medical care sites* to provide limited off-site medical care to influenza patients when hospitals become overwhelmed.
- DOH assists with pandemic influenza drills and exercises that test the facility and community response plans and conduct after-action reviews to implement improvements as identified.

- Healthcare facilities make educational resources (i.e., influenza and prevention, job-action checklists for workers in new roles, signs of distress, and coping strategies) from federal agencies and DOH available to staff, patients, family members, and others.
- Develop a plan for transportation and tracking of patients, and bed utilization.
- DOH identifies request process for DME from DOH or SNS.

Healthcare: Phase 5 – *PANDEMIC ALERT*

- Local community planning groups prepare to implement triage clinics and community medical care sites.
- Healthcare facilities prepare to receive DOH or SNS resources as requested.

Healthcare: Phase 6 – *PANDEMIC*

- DOH monitors implementation of triage clinics and community medical care sites
- DOH distributes updated guidance as it is made available from federal sources
- Facilitate enhancement of surge capacity in order to sustain healthcare delivery
 - Identify staff and supplies that may assist the surge capacity plans of hospitals or communities
 - Receive materials from SNS for distribution to healthcare facilities

F. WORKFORCE SUPPORT

The response to an influenza pandemic in South Dakota will likely pose a substantial physical, personal, social, and emotional challenge to the healthcare providers, public health staff, emergency responders and essential service workers. Specific pre-planned worker support activities may relieve some of the burden and help responders remain effective during the continuum of the pandemic. Pre-identified means of providing psychosocial support services to healthcare, state agencies, first-responders, and essential service agencies across the state are critical to sustain services. An essential part will involve the creation of alliances with community-based organizations and nongovernmental organizations with expertise in and resources for psychosocial support services or training.

Federal Responsibilities

- Create, collect, and provide educational and training materials on psychosocial issues related to pandemic influenza for use by hospital administrators, emergency department staff, safety and security professionals, behavioral health providers, social workers, psychologists, chaplains, and others.
- Provide guidance on development of self-care strategies and workforce resilience programs.
- Provide medical, public health, and community partners with educational and training materials on psychosocial issues related to pandemic influenza.
- Provide occupational health guidance on psychosocial issues related to the pandemic, including information on anticipated reactions to restrictive public health measures such as quarantine.

South Dakota Overview

South Dakota health care organizations, healthcare facilities, first responder organizations and agencies, and city, county and state agencies should develop psychosocial support plans that help workers manage emotional stress during the response to an influenza pandemic and provide resolution to related personal, professional and family issues. State agencies should coordinate with healthcare and first responders to disseminate current materials, develop additional informational material and establish workforce resilience programs for employees and their families.

Activities by Phase

Workforce Support: Phase 1 and 2 – *INTERPANDEMIC*

- Response and essential service providers (healthcare, firefighters, law enforcement, public health, utility) develop internal psychosocial support services.
- DOH encourages HRSA regional planning groups to include psychosocial services in the regional plans.
- Response and essential service providers provide prepared materials from CDC, HRSA, and Substance Abuse and Mental Health Services Administration (SAMHSA) to workers about:

State Planning Assumptions

- ✓ Workforce stress control/resilience teams will be a new concept to most agencies.
- ✓ Local governments, healthcare institutions, and businesses may look at state government for model institutional plans and templates.
- ✓ Community mental health centers will be extensively burdened with additional patient workflow, but will be available for individual referral.

- Signs of distress;
- Traumatic grief;
- Stress management and coping strategies;
- Building and sustaining personal resilience;
- Behavioral and psychological support resources;
- Working with highly agitated patients; and
- Family and individual planning checklists.
- Local community planning groups identify psychosocial resources.
- Local community planning groups include behavioral mental health clinics, community mental health centers, mental health associations, school counselors, psychiatrists, psychologists, university mental health programs, clergy and other trained mental health professionals to plan for workforce and community sustainability.
- Response and essential service providers convene administrators to develop psychosocial support plans to include:
 - Developing stress control and resiliency teams; and
 - Identifying support services (i.e., list referring clinics, monitor employee health and well-being, identify rest and recuperation sites, distribute information, address personal and staff issues).
- DOH works with DHS to sponsor psychosocial support services training (psychological first aid) to help response and essential service workers and the patients and families they will be in close contact with cope with grief, stress, exhaustion, anger, and fear.

Workforce Support: Phase 3 and 4 – PANDEMIC ALERT

- Response and essential service providers adopt workforce policies (staff leave, retainment).
- Response and essential service providers identify strategies to assist staff with child-care and elder-care responsibilities or special needs that affect staffing.
- Local community planning groups work with behavioral mental health clinics and community mental health centers to establish telephone support lines.
- Response and essential service providers maintain trained stress control and resiliency teams.

Workforce Support: Phase 5 – PANDEMIC ALERT

- Response and essential service providers inform workers about newly updated pandemic influenza progression, infection control practices to prevent spread in the workplace, employee issues related to illness, sick pay, staff rotation and family concerns.
- Response and essential service workers receive training and periodic updates that include:
 - Availability of vaccines and antiviral drugs;
 - Use of PPE and its availability;
 - Actions to address understaffing;
 - Infection control practices for home and workplace;
 - Approaches to increase patients' adherence to medical and public health measures;
 - Management of agitated or extremely stressed persons;
 - Distinguishing between psychiatric disorders and common stress reactions;
 - Management of those who fear they are infected (worried well); and
 - Psychosocial support for persons caring for influenza patients.

Workforce Support: Phase 6 – *PANDEMIC ALERT*

- Response and essential service providers review workforce policies (staff leave, retainment).
- Response and essential service providers implement stress control and resiliency teams.
- Response and essential service providers distribute facilities and telephone lines that provide psychosocial support and consultation.
- Healthcare workers, law enforcement, fire fighters, public health staff, essential service workers, and emergency responders should have information on who to contact if they or their families experience any discrimination or stigmatization because of their role in the pandemic influenza response.

G. EDUCATION AND COMMUNICATIONS

DOH is enhancing its current plan for connectivity of key stakeholders involved in public health detection and response, including hospital emergency departments, state public health officials, law enforcement, and other key participants. When complete, this communication system will be used for all types of public health emergencies, including pandemic influenza. There is also a Directory component which allows quick identification, by job role, individuals at the city, county, and state level.

Federal Responsibilities

- Develop a Communications and Public Engagement Strategy for Pandemic Influenza.
- Develop key messages and materials, conduct audience research and message testing, and share results with international, other Federal departments, state and local communications staff. Materials will be available on www.pandemicflu.gov.
- Coordinate pandemic influenza media messages to ensure consistency.
- Provide tools and resources through the www.pandemicflu.gov and www.cdc.gov/flu/ websites and other avenues to help educate state and local communications staff.
- Identify and train lead spokespersons.
- Provide guidance about developing and integrating communications aspects of preparedness plans.
- Work with state and local governments to incorporate communications preparedness as part of larger preparedness exercises.
- Provide regular updates about situations that pose potential pandemic influenza threats (e.g., through Health Alert Network [HAN] notices, Epi-X, and web postings).
- Distribute educational messages and materials about pandemic influenza and ways that people can protect themselves and their families.
- Distribute practical information, such as travel advisories, infection control measures, availability and appropriate use of antiviral drugs and vaccines, and specific public health actions that may be advised.
- Address rumors and false reports regarding pandemic influenza threats and related issues.
- Coordinate international information exchange and communication strategies with WHO and other international partners.

South Dakota Overview

Public Information – CDC had made a number of informational materials available to the states and will continue to do so throughout the phases of a pandemic. Materials include basic communication materials (such as FAQs and fact sheets) on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages as

State Planning Assumptions

- ✓ Basis for these communication avenues found in Emergency Support Function 02 – Communications of the state EOP.
- ✓ Risk communication activities are directed and coordinated by the DOH PIO and SEOC Joint Information Center.
- ✓ DOH and DPS will play the lead in risk communications.
- ✓ Governor, Secretary of Health, State Epidemiologist and PIO will serve as primary spokespersons in a pandemic.
- ✓ SEOC will coordinate interagency responses during the pandemic.

well as general preventive measures such as "dos and don'ts" for the general public. Information and guidelines is also available for health care providers such as training modules (Web-based, printed, and video); presentations, slide sets, videos, documentaries; and symposia on surveillance, treatment, and prophylaxis.

Using these CDC materials, DOH is drafting focused messages for healthcare and the general public in anticipation of shortages of vaccine and antiviral drugs. This information will address influenza symptoms, transmission and prevention, preparation measures underway at the state level and steps individuals and families can take; rationale for priority groups; and vaccine and antiviral availability. During the pandemic alert phase, the existing web site and electronic news releases to statewide media will be used to provide regular updates about the course of the pandemic (contagiousness, geographic spread, case counts), information about which symptoms should prompt seeking medical attention and which should be managed at home, information about school and business closures and suspended public meetings, and information about travel restrictions and quarantine laws.

Specific communications actions undertaken or occurring on an ongoing basis include:

- *Website* – DOH is building on its existing influenza web site, www.flu.sd.gov, to serve as a resource for providers, media and the general public on pandemic influenza. The existing site provides information about seasonal influenza, including prevention recommendations and surveillance data, and is routinely used by the media as a source of such information. During influenza vaccine shortage situations, the site has been used to provide supply information for the general public so it is already a recognized source of information on influenza.
- *Spokesperson Training* – Key spokespersons within DOH have been identified and provided with risk communication training. Identified spokespersons include the Secretary of Health, Division Directors, State Epidemiologist and other epidemiology staff, Risk Communication Coordinator, and public health preparedness staff. Training is planned on an ongoing basis and will be expanded to spokespersons in key partner agencies such as DPS, first response agencies and private health care facilities who can then share information with their respective constituencies.
- *Partner Education* – Informational presentations have been made to a variety of health care provider groups, including the South Dakota State Medical Association and the South Dakota Association of Healthcare Organizations. A standard presentation developed by DOH epidemiology staff is used for these events to assure that a consistent message is provided to all groups. The presentations are given on an ongoing basis and the secretary's office maintains a log detailing the groups presented to, materials provided, and follow-up needed. In addition to the electronic communications network, more traditional means of communication are being used to keep health care providers informed. The HHS Pandemic Influenza Plan's Clinical Guidelines were reprinted in the South Dakota Public Health Bulletin. The bimonthly publication is distributed to physicians, laboratories, school nurses, and others interested in public health. The circulation is approximately 3,000.
- *Respiratory Etiquette Campaign* – A respiratory etiquette and flu shot promotion campaign has been developed and is in its second year of use. The *Stop It, Don't Spread It* message is disseminated through newspaper ad slicks and inserts, posters, fliers and direct mail to partners such as health care facilities, schools, churches, senior centers and child care

facilities. The campaign promotes flu shots and basic hygiene measures such as hand-washing that could provide the basis for a pandemic influenza message.

- *Message Maps* – Draft message maps have been developed addressing pandemic preparedness. Key issues addressed include vaccine, vaccination priority groups, antiviral drugs, isolation and quarantine, and what individuals can do to protect themselves. The maps provide a tool for responding to questions, developing informational materials, and adapting materials available from CDC and HHS and are continually being refined.

Special Populations – Targeted approaches will be required to reach a number of special populations with public information about pandemic influenza, preparations, vaccine and antivirals, the course of the pandemic (contagiousness, geographic spread, case counts), which symptoms should prompt medical attention and which should be managed at home, school and business closures and suspended public meetings, and travel restrictions and quarantine laws.

Special populations include:

- *Native American* – At 9% of the total population, South Dakota's nine Native American tribes make up the largest minority group in the state. The DOH routinely collaborates with the Aberdeen Area IHS, the Tribal Chairman's Health Board, and individual reservations on a range of disease prevention and health promotion issues. DOH will use these same networks to deliver pandemic influenza information.
- *Refugee and Foreign Born* – South Dakota has a small but growing refugee population. In the past few years, refugees have come to South Dakota from such countries as Bosnia, Kosovo, the former Soviet Union, Sudan, Ethiopia, Somalia, Iraq, Iran, and others. This population is concentrated in Sioux Falls (the state's largest city) and receives a variety of services through Lutheran Social Services (LSS) and the Multi-Cultural Center. DOH works with LSS and the Center to reach this population with such programs as tuberculosis control and breast cancer screening and will use these same networks to deliver pandemic influenza information.
- *Disabled, Visually Impaired, Mentally Ill* – DHS delivers a variety of services to residents with mental illness, developmental and other disabilities through its local offices, state institutions and through the non-profit community agencies it helps fund. DOH will work with DHS to assess and meet the communication needs of these populations regarding pandemic influenza. DHS participates in the state agency pandemic influenza policy group.
- *Elderly* – At 14.3% of the total population, South Dakota has a higher percentage of elderly than the nation. As the regulatory agency for long-term care facilities, DOH has established channels of communication with the providers that serve the institutionalized elderly. Those elderly living at home receive a wide range of services through the DSS, such as homemaker, personal care, and meals and also have access to a network of senior centers. DOH regularly collaborates with DSS to deliver health information on issues ranging from West Nile Virus prevention to the need for seasonal flu shots and will use the same network to deliver pandemic influenza information to the elderly.

Media – During the interpandemic and pandemic alert periods, DOH will use its existing public information and communications infrastructure to provide the media and its audiences with basic information about influenza, its symptoms and transmission, vaccination, and preparedness efforts. This existing communications infrastructure includes detailed policies and procedures for conducting media interviews and well-established communications channels such as broadcast

fax, email news release distribution, listservs, and informational web sites for disseminating information to the media and the general public. Contact lists for newspapers, magazines, radio and TV stations in South Dakota and in neighboring state border communities are maintained in the public information office where they are routinely reviewed and updated.

In the pandemic period, the EOP would be activated and provide overall direction and guidance regarding media communications. Ultimate authority for activating the EOP rests with the Governor's Office, which also maintains primary responsibility for management of information release, with the assistance of public information staff assigned by involved agencies. The Governor's press secretary and/or other designated staff serve as liaison with state agencies on the development and release of all news items, monitor materials to assure accuracy and timeliness, and coordinate arrangements for news conferences and meetings with reporters. This system has had repeated real-world tests with events in recent years such as the 2005 blizzard response, the West Nile Virus aerial spray campaign, and wild land fire response.

Activities by Phase

Communications: Phase 1 and 2 – *INTER-PANDEMIC*

- Response and essential service providers identify a spokesperson (and backup) for media and public relations.
- PIO reviews current pre-scripted materials and messages and develops or modifies as appropriate.
- HAN provides the major communication link between DOH and healthcare professionals. Internet websites, other web-based communication systems, blast fax, digital radio, and phone may also be used to communicate with healthcare professionals.
- DOH, healthcare facilities, and others review CDC materials and adapt or revise as needed.
- DOH monitors CDC Travel Health website (www.cdc.gov/travel/) to receive travel notices and disseminate updates periodically.

Communications: Phase 3 and 4 – *PANDEMIC ALERT*

- DOH maintains networks to disseminate information to public and response partners.
- DOH prepares messages on influenza FAQs, vaccine, antiviral drugs, and other topics.

Communications: Phase 5 – *PANDEMIC ALERT*

- PIO works with the public, health partners, and media to disseminate current information.
- DOH maintains a website and sets up an influenza hotline to respond to pandemic inquiries.
- DOH Core Group provides updates on pandemic influenza activity and response activities at state agency pandemic influenza policy group meetings.

Communications: Phases 6 – *PANDEMIC*

- PIO will continue to monitor media coverage and address misinformation.
- DOH provides information regarding the status of the pandemic and other key information periodically released to healthcare providers, the media, and general public.
- DOH identifies staff to activate influenza information hotlines.
- DOH Core Group will convene to discuss and plan for the post-pandemic response.
- DOH Core Group will be responsible for regular communication with administration regarding the post-pandemic status.

Appendix 1.

Potential State Plan Collaborators

The South Dakota Department of Health Pandemic Influenza Plan is an ongoing project. The following is a partial listing of key collaborators who either have contributed or will be asked to contribute to the plan. The list is not inclusive.

Business/Industry Organizations

- South Dakota Retailers Association
- South Dakota Chamber of Commerce and Industry
- South Dakota Bankers Association
- Associated General Contractors of South Dakota
- South Dakota Farmer's Union
- South Dakota Farm Bureau

Education

- Board of Regents
- South Dakota Education Association
- Associated School Boards of South Dakota
- School Administrators of South Dakota

Health Care Facilities

- South Dakota Association of Healthcare Organizations
- South Dakota Healthcare Association
- South Dakota Clinic Managers Association
- South Dakota Association of Specialty Care Providers
- Assisted Living Association of South Dakota
- Avera Health System
- Regional Health System
- Sioux Valley Hospital and Health Systems

Infectious Disease Physicians

- James Keegan, MD, Rapid City
- Jorge Reyno, MD, Rapid City
- Aris Assimacopoulos, MD, Sioux Falls
- Wendell Hoffman, MD, Sioux Falls
- Veronica Sanchez, MD, Sioux Falls
- Rabiul Alam, MD, Sioux Falls
- Jawad Nazir, MD, Sioux Falls
- Asas Ansari, MD, Sioux Falls
- Manuel Arbo, MD, Sioux Falls

Laboratory Services Providers

- Animal Disease Research and Diagnostic Laboratory, Brookings
- Public Health Laboratory Courier Service
- USD Clinical Virology Laboratories in Sioux Falls and Rapid City

Law Enforcement

Division of Criminal Investigations
Federal Bureau of Investigation
South Dakota Police Chief's Association
South Dakota Sheriff's Association

Military Installations

Ellsworth Air Force Base

Media

South Dakota Broadcaster's Association
South Dakota Newspaper Association

Mental Health Service Providers

Disaster Mental Health Institute, USD
South Dakota Council of Mental Health Centers

Professional Associations/Organizations

South Dakota State Medical Association
South Dakota Foundation for Medical Care
South Dakota Nurses Association
South Dakota Pharmacy Association
South Dakota Veterinary Medical Association
South Dakota Association of Health System Pharmacists
South Dakota Association of Pharmacy Technicians
South Dakota Emergency Medical Technician Association
South Dakota Association of Funeral Directors

Professional Licensing Boards

South Dakota Board of Medical and Osteopathic Examiners
South Dakota Board of Nursing
South Dakota Board of Pharmacy
South Dakota Board of Veterinary Medicine
South Dakota Board of Funeral Services

Public Utilities

South Dakota Electric Utility Companies
South Dakota Municipal Electric Association
South Dakota Rural Electric Association
South Dakota Association of Rural Water Systems
South Dakota Telecommunications Association
South Dakota Public Utilities Commission

State/County/City Government

South Dakota Department of Labor
South Dakota Department of Military and Veterans' Affairs
South Dakota Department of Transportation
South Dakota Department of Tourism and State Development
South Dakota Department of Public Safety
South Dakota Department of Corrections
South Dakota Department of Game, Fish, and Parks

South Dakota Attorney General
South Dakota Department of Health
South Dakota Department of Education
South Dakota Municipal League
South Dakota Association of County Commissioners
South Dakota Association of Towns and Townships

Tribal Authorities

Aberdeen Area Indian Health Service
Tribal Chairman's Health Board
Cheyenne River Sioux Tribe
Crow Creek Sioux Tribe
Oglala Sioux Tribe
Yankton Sioux Tribe
Rosebud Sioux Tribe
Lower Brule Sioux Tribe
Sisseton-Wahpeton Oyate
Flandreau-Santee Sioux Tribe
Standing Rock Sioux Tribe
Bureau of Indian Affairs

Volunteer Organizations

Red Cross
Salvation Army
Citizens Corp.

Appendix 2.

South Dakota Emergency Operations Plan Responsibility Matrix

South Dakota State Emergency Operations Plan ESF Responsibilities Matrix	Transportation	Communication	Public Works & Engineering	Firefighting	Emergency Management	Mass Care, Housing, & Human Services	Resource Support	Public Health & Medical Services	Search and Rescue	Oil & Hazardous Materials	Ag & Natural Resources	Energy	Public Safety & Security	Long-Term Recovery & Mitigation	External Affairs
Agency ESF	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Department of Agriculture					S					S	P/S			S	S
Dept. Ag-State Forester				S	S									S	S
Wildland Fire Suppression				P	S									S	S
Animal Industry Board					S			S		S	P/S			S	S
Attorney General-DCI					S			S			S		S	S	S
Board of Regents		S			S	S		S		S	S			S	S
Bureau of Admin-Central Services					S		P							S	S
Bureau of Admin-Fleet	S				S									S	S
Bureau of Admin-State Eng.			P		S									S	S
Bureau of Admin-Energy Mgt					S							P		S	S
BIT		P			S		S							S	S
Bureau of Personnel					S		S							S	S
Department of Corrections				S	S		S							S	S
Department of Education					S	S					S			S	S
DENR			S	S	S			S		P	P/S			S	S
Game, Fish, & Parks	S	S	S	S	S				S	S	S		S	S	S
Department of Health		S			S	S	S	P		S	P/S			S	S
Human Services					S	S		S						S	S
Department of Labor					S									S	S
DPS-Emergency Management		S	S		P	P	S		P	S		S		P	P
DPS-SD Highway Patrol	S	S			S		S		S	S	S		P	S	S
DPS-State Fire Marshal		S	S	P/S	S					S				S	S
DPS-Homeland Security					S						S	S	S	S	S
DPS-Driver Licensing	S				S			S						S	S
DPS-State Radio Dispatch		S			S									S	S
DPS-Emergency Medical Svs.					S			S						S	S
South Dakota National Guard	S	S	S	S	S	S		S	S	S			S	S	S
Office of the Governor					S								S	S	P
Revenue & Regulation		S			S		S			S				S	S
Social Services	S				S	S		S			P/S	S		S	S
Tourism & State Development		S			S									S	S
S.D. Housing Dev. Authority			S		S	S								S	S
Transportation	P		S		S		S			S				S	S
Bureau of Finance&Mgt.					S		S							S	S
Legislative Audit					S		S							S	S
Public Utilities Commission		S	S		S							S		S	S
SDVOAD		S			S	S		S			S			S	S
Civil Air Patrol									S						

P= Primary S = Support

Appendix 3.
Applicable South Dakota Codified Law (SDCL) and
Administrative Rules of South Dakota (ARSD)

SDCL

CHAPTER 33-15. EMERGENCY MANAGEMENT

33-15-8. Authority of Governor in time of disaster, terrorist attack, or emergency. In the event of disaster, war, act of terrorism as defined in state law, or emergency that is beyond local government capability, the Governor:

- (1) May assume direct operational control over all or any part of the emergency management functions within the state which may affect all or any portion of the state;
- (2) May declare an emergency or disaster to exist in the stricken area and employ emergency management to assist local authorities to affect relief and restoration;
- (3) May call upon and use any facilities, equipment, other nonmedical supplies, and resources available from any source, other than personal or private funds, in order to carry out the purposes of this chapter by contributing to the expense incurred in providing relief in such amounts as the Governor shall determine. However, nothing in this subdivision may be construed to authorize the taking of firearms, as defined in subdivision 22-1-2(16), without the consent of the owner;
- (4) May suspend the provisions of any rules of any state agency, if strict compliance with the provisions of the rule would in any way prevent, hinder, or delay necessary action in managing a disaster, war, act of terrorism, or emergency, including fire, flood, earthquake, severe high and low temperatures, tornado storm, wave action, oil spill, or other water or air contamination, epidemic, blight, drought, infestation, explosion, riot, or hostile military or paramilitary action, which is determined by the Governor to require state or state and federal assistance or actions to supplement the recovery efforts of local governments in alleviating the damage, loss, hardship, or suffering caused thereby;
- (5) May control the ingress and egress in a designated disaster or emergency area, the movement of vehicles upon highways within the area, the movement of persons within the area, and the occupancy of premises within the area;
- (6) May procure, acquire, store, distribute, and dispense any pharmaceutical agents or medical supplies located within the state as may be reasonable and necessary to respond to the disaster, emergency, or act of terrorism;
- (7) May appoint and prescribe the duties of such out-of-state health care providers as may be reasonable and necessary to respond to the disaster, emergency, or act of terrorism;
- (8) May provide for the examination and safe disposal of any dead body as may be reasonable and necessary to respond to the disaster, emergency, or act of terrorism; and
- (9) May provide for the protection, construction or reconstruction, repair, and maintenance of public or private transportation facilities.

The powers granted to the Governor under this section shall remain in effect for a period of six months and may be restored for one or more successive six-month periods by declaration of the Governor that the conditions permitting such powers persist.

Source: SL 1949, ch 236, §6; SL 1951, ch 285, §6; SL 1955, ch 236, §3; SDC Supp 1960, §41.01C05 (1); SL 1977, ch 271, §4; SL 1989, ch 283, §1; SL 2002, ch 162, §§1, 2; SL 2004, ch 223, §1.

CHAPTER 34-1. STATE DEPARTMENT OF HEALTH

34-1-17. Orders, rules, and licensing for protection of public health – Matters covered. The Department of Health may adopt and enforce, subject to chapter 1-26, orders and rules necessary to preserve and protect the public health and may regulate, by requiring licenses or other appropriate means, control, and, in proper cases, prohibit and suppress any of the following matters:

- (1) The manufacture into articles of commerce, other than food, of diseased, tainted, or decayed animal or vegetable matter;
- (2) The location of cemeteries and the removal and burial of the dead;
- (3) The management of lying-in houses and boarding places for infants, and the treatment of infants therein;
- (4) The construction and equipment, in respect to sanitary conditions, of schools, hospitals, prisons, and other public institutions;
- (5) The treatment in hospitals and elsewhere of persons suffering from communicable diseases, the disinfection and quarantine of persons and places in case of such disease, and the reporting of sickness and deaths therefrom;
- (6) The distribution of biological products to be used for the prevention and treatment of communicable diseases;
- (7) The diagnosis, control, and treatment of tuberculosis; and
- (8) The minimum sanitation requirements for tattooing and body piercing as defined in §9- 34-17, including premises, equipment, methods of operation, and freedom from communicable disease.

Source: SDC 1939, §27.0104 (3); SL 1949, ch 105, §5; SDC Supp 1960, §27.0104 (4); SL 1963, ch 380, §10; revised pursuant to SL 1972, ch 15, §§3, 4; SL 1987, ch 29, §65; SL 1992, ch 239, §1; SL 1995, ch 189, §2.

CHAPTER 34-22. CONTAGIOUS DISEASE CONTROL

34-22-1. State system of quarantine – Inspection and isolation of conveyances of common carriers.

Whenever necessary the Department of Health may establish and enforce a system of quarantine against the introduction into the state of any plague or other communicable disease by common carriers doing business across its borders. Its members, officers, and agents may board any conveyance used by such carriers to inspect the same and if it be found infected, may detain such conveyance and isolate and quarantine any or all persons found thereon, with their luggage, until all danger of disease therefrom is removed.

Source: SL 1913, ch 109, §6; RC 1919, §7669; SDC 1939, §27.0107.

34-22-9. State-wide system for disease control and treatment – Scope of program. The Department of Health shall establish and direct the operations of a state-wide system for communicable disease prevention, control, and treatment. The department may promulgate rules pursuant to chapter 1-26 to:

- (1) Conduct communicable disease surveillance which includes detection, assessment, and analysis;
- (2) Prescribe criteria for communicable disease case definitions;
- (3) Prescribe procedures for communicable disease case and contact notification, referral, and management;
- (4) Prescribe methods and procedures for the prevention and control of communicable disease;
- (5) Prescribe methods and procedures for the control of communicable disease patients and carriers;
- (6) Prescribe medical and posttreatment supervision measures for communicable disease patients and carriers;

- (7) Prescribe methods and procedures for the prevention and control of occupationally-related communicable diseases; and
- (8) Prescribe procedures for universal precautions for communicable disease prevention by health care facilities and workers.

Source: SL 1963, ch 380, §5 (1); SL 1992, ch 246.

34-22-41. "Public health emergency" defined. For the purposes of §§ 34-3-26, 34-16-22 to 34-16-25, inclusive, and 34-22-41 to 34-22-44, inclusive, a public health emergency is an occurrence or imminent threat of an illness, health condition, or widespread exposure to an infectious or toxic agent that poses a significant risk of substantial harm to the affected population.

Source: SL 2002, ch 168, §1.

34-22-42. Secretary may declare public health emergency – Contents of order. The secretary of health, with the consent of the Governor, may declare a public health emergency as defined by §34-22-41. In declaring a public health emergency, the secretary shall issue an order that specifies:

- (1) The nature of the public health emergency;
- (2) The geographic area subject to the declaration;
- (3) The conditions that have brought about the public health emergency; and
- (4) The expected duration of the state of public health emergency, if less than thirty days.

Source: SL 2002, ch 168, §2.

34-22-43. Department primarily responsible for public health emergency response – Scope of authority – Promulgation of rules. The department shall have primary jurisdiction, responsibility, and authority for responding to a public health emergency declared pursuant to §34-22-42 including:

- (1) Planning and executing public health emergency assessment, mitigation, preparedness, and response;
- (2) Coordinating public health emergency response between state and local authorities;
- (3) Collaborating with relevant federal, state, tribal, and local authorities; and
- (4) Organizing public information activities regarding public health emergency response operations.

The Department of Health may promulgate rules, pursuant to chapter 1-26, to implement the provisions of this section.

Source: SL 2002, ch 168, §3.

CHAPTER 40-5. CONTROL OF CONTAGIOUS DISEASES AND PARASITES IN LIVESTOCK

40-5-8. Board powers in suppression of contagious diseases and parasites – Regulation of importation, release, sale, loan, lease, or distribution of animals – Violation as misdemeanor. If written notice is given to the owner or keeper of any animal that a quarantine is established, the Animal Industry Board may take any action necessary to control, prevent, suppress, and eradicate any contagious, infectious, epidemic, and communicable disease and infestation of destructive parasites among the domestic and nondomestic animals of this state. The board may regulate or prohibit the importation, release to the wild, sale, loan, lease, or other distribution or translocation of any animal into and within the state to ensure documentation as disease-free. The Animal Industry Board may regulate or prohibit such transactions between and among private entities, local government agencies, state government agencies, federal government agencies, and nonprofit and other corporations, including, but not limited to, game farms, game preserves, zoos, exhibitions, sales, humane societies, and rehabilitation facilities. A violation of this section is a Class 1 misdemeanor.

Source: SDC 1939, §40.0501; SL 1950 (SS), ch 9, §1; SL 1982, ch 282, §1; SL 1989, ch 349, §1; SL 1990, ch 325, §35.

CHAPTER 40-5. IMPORTATION OF LIVESTOCK

40-14-2. Certificate of health required for importation of livestock except for slaughter – Distribution of copies – Violation as felony. All animals brought into this state for any purpose except immediate slaughter shall be accompanied by a certificate of health, issued in duplicate by authority of the state or territory from which it originates, or by authority of the United States Department of Agriculture, setting forth that such animals are free from all contagious, infectious, epidemic, or communicable disease, and from infestation of destructive parasites and does not originate from a district of quarantine, infestation, or infection, and that it has been inspected within a period of not more than thirty days prior to the arrival of such stock. One of the duplicate certificates shall be mailed to the Animal Industry Board at Pierre, in time for it to be received before the animal arrives at its destination, and the other shall be attached to the bill of lading when the animal is brought into the state. Any person who brings animals into the state in violation of this section is guilty of a Class 6 felony.

Source: SDC 1939, §40.0301; SL 1950 (SS), ch 7, §1; SL 1977, ch 190, §483; SL 1979, ch 270, §1; SL 1990, ch 325, §226.

ARSD

ARTICLE 44:20. COMMUNICABLE DISEASE CONTROL

44:20:03:04. Application of public health measures to persons. The department may instruct a case or carrier of a reportable disease regarding public health measures for preventing the spread of the disease and of the necessity for treatment until cured or free from the infection. If the department knows or has reason to believe, because of medical or epidemiological information, that a person has a reportable disease and is a health threat to others, it may issue a public health notice directing the person to take one or more of the following actions:

- (1) To be examined or tested to determine whether the person has the disease in an infectious stage;
- (2) To report to a physician, health care worker, or authorized department representative for counseling on the disease and for information on how to avoid infecting others;
- (3) To receive treatment until cured or free from the infection and to follow measures for preventing reinfection;
- (4) To cease from specified conduct which endangers the health of others; or
- (5) To cooperate with the department in implementation of recommended public health measures.

The department may use restrictive public health measures only if other measures to protect the public health have failed, including efforts to obtain the voluntary cooperation of the person who may be the subject of such measures. The department shall apply public health measures as necessary to achieve the desired purpose of protecting the public health, using the least intrusive measures first.

Source: 20 SDR 69, effective November 17, 1993; 28 SDR 92, effective December 30, 2001.

General Authority: SDCL 34-1-17, 34-22-9, 34-23-13.

Law Implemented: SDCL 34-22-9, 34-22-24, 34-23-13.

44:20:03:05. Form and duration of public health notice. The department shall issue a public health notice pursuant to §§ 44:20:03:04, 44:20:03:07, and 44:20:03:10 in writing or, in urgent circumstances, as an oral statement followed within three days by a written statement and shall deliver the notice personally or by registered or certified mail to a person who is of legal age or to a person's parent or legal guardian if the person is not of legal age, except as otherwise provided in SDCL 34-23-15 to 34-23-18, inclusive. The notice is not effective after the person or animal is no longer infected with a reportable disease or, in the case of a suspected disease, after the longest usual incubation period. In cases involving a fomite or an animal, the notice is effective until there is no threat to the public health.

Source: 20 SDR 69, effective November 17, 1993; 23 SDR 60, effective October 31, 1996.

General Authority: SDCL 34-1-17, 34-22-9, 34-23-13.

Law Implemented: SDCL 34-22-9, 34-23-13.

44:20:03:06. Imminent health threat to others – Petition to circuit court. If the department has determined by medical or epidemiological information that a person has a reportable disease and is an imminent health threat to others, the department may petition the circuit court for a temporary restraining order pursuant to SDCL chapter 15-6 to enforce public health measures.

Source: 20 SDR 69, effective November 17, 1993.

General Authority: SDCL 34-1-17, 34-22-9, 34-23-13.

Law Implemented: SDCL 34-1-28, 34-22-9, 34-22-14, 34-23-13.

Appendix 4.
Enhanced Influenza-Like Illness Report and Laboratory Submission Form

3 Digit Test Code: VHI – Influenza Culture

Name: _____
 Last First MI

Date of Birth: _____
 Month Day Year

Collection Date: _____
 Month Day Year

Date of Onset: _____
 Month Day Year

Race: White
 American Indian / Alaskan Native
 Black
 Asian / Pacific Islander
 Other: _____

Sex: Male
 Female

Type Test Code

--	--

Source Test Code

--	--

<u>Type Reference Box</u>

SB – Swab
WA – Washing

<u>Source Reference Box</u>

TH – Throat
NP - Nasopharyngeal

Symptoms:

Fever ($\geq 100^{\circ}\text{F}$)

Cough

Sore Throat

Other: _____

If known or applicable

Rapid Antigen Test Result:

<input type="checkbox"/> Positive for Influenza A or B
--

<input type="checkbox"/> Negative for Influenza A or B
--

Vaccinated:

<input type="checkbox"/> Yes

<input type="checkbox"/> No

Date of Influenza Vaccination:

Submitter:

Name: _____

Address: _____

City: _____

Phone: _____

Zip: _____

Physician: _____

Appendix 5.

Avian Influenza Disease Incident Emergency Response Overview

Avian Influenza – Animals

(1) Background – AI in Birds

- (a) Avian Influenza (AI) in birds can be classified as Low Pathogenic (LPAI) or Highly Pathogenic (HPAI) depending on severity of disease in domestic poultry.
- (b) AI, especially various strains of LPAI, is endemic in migratory waterfowl with occasional occurrence of HPAI. Migratory waterfowl are quite resistant to AI and rarely experience significant mortality.
- (c) Migratory waterfowl are capable of being reservoirs and vectors for transmission of AI along natural flyways.
- (d) Domestic poultry are susceptible to AI and when infected with HPAI often experience significant morbidity and mortality.
- (e) Strains of LPAI in birds occasionally develop into HPAI and rarely will mutate to the extent they become zoonotic (capable of causing infection in humans) as in the case with H₅N₁ strains in areas of SE Asia and Europe.
- (f) Both AI infected migratory waterfowl and AI infected domestic poultry are capable of presenting risks for transmission of zoonotic AI to people. Such transmission is most often associated with very close contact between human bird handlers and birds affected with zoonotic HPAI.

(2) AI Control in Birds

- (a) Because of the potential for AI to change from LPAI to HPAI, and the potential for strains of AI in birds to become zoonotic, plans are in place to control and eliminate any AI in domestic poultry. These plans include on-going surveillance, response, and recovery efforts.
- (b) Plans addressing AI in domestic poultry in South Dakota are included in the state emergency operations plan (SEOP) consistent with the National Response Plan (NRP), Emergency Support Function (ESF) #11 (Food and Agriculture). The SEOP identifies the South Dakota Animal Industry Board (AIB) as the lead agency. The AIB has an Animal Health Emergency Plan (AHEP) with a specific annex addressing highly contagious disease in poultry.

Appendix 6. Priority Groups Recommendations

HHS VACCINE Priority Group Recommendations*:

Tier	Subtier	Population	SD Estimate
1	A	Vaccine and antiviral manufacturers and critical support	0
		Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinator	23,423
	B	Persons \geq 65 years with 1 or more influenza high-risk condition, not including essential hypertension	48,011
		Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension	18,202
		Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year	1,952
	C	Pregnant women	7,914
		Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine	7,123
		Household contacts of children <6 months	13,190
	D	Public health emergency response workers critical to pandemic response	396
		Key government leaders	Undetermined
	2	A	Healthy and \geq 65 years
6 months to 64 years with 1 high-risk condition			94,439
Healthy 6-23 month olds			14,773
B		Other public health emergency responders	791
		Public safety workers including police, fire, 911 dispatchers, and correctional facility staff	7,888
		Utility workers essential for maintenance of power, water, and sewage systems	960
		Transportation workers transporting fuel, water, food, and medical supplies as well as public ground transportation	10,024
Telecommunications/IT for essential network operations and maintenance	2,849		
3		Other key government health decision-makers	Undetermined
		Funeral directors/embalmers	164
4		Healthy persons 2-64 years not included in above categories	472,988

*Definitions and Rationale provided on Page D-15, Part 1: Appendices, HHS Pandemic Plan, which can be found at <http://www.hhs.gov/pandemicflu/plan/pdf/part1.pdf>

HHS ANTIVIRAL DRUG Priority Group Recommendations:

Tier	Group	Strategy	SD Estimate
1	Patients admitted to hospital	Treatment	26,380
2	Healthcare workers (HCW) with direct patient contact and EMS providers	Treatment	24,269
3	Highest risk outpatients – immunocompromised persons and pregnant women	Treatment	6,595
4	Pandemic health responders (public health, vaccinators, vaccine and antiviral manufacturers), public safety (police, fire, corrections), and government decision-makers	Treatment	8,705
5	Increased risk outpatients – young children 12-23 months, persons ≥65 years, and persons with underlying medical conditions	Treatment	225,546
6	Outbreak response in nursing homes and other residential settings	Post-exposure prophylaxis	Undetermined
7	HCWs in emergency departments, intensive care units, dialysis centers, and EMS providers	Prophylaxis	3,166
8	Pandemic societal responders (e.g., critical infrastructure groups as defined in the vaccine priorities) and HCW without direct patient contact	Treatment	26,907
9	Other outpatients	Treatment	474,834
10	Highest risk outpatients	Prophylaxis	6,595
11	Other HCWs with direct patient contact	Prophylaxis	21,104

Definitions and rationale provided on page D-22, Part 1: Appendices, HHS Pandemic Plan, which can be found at <http://www.hhs.gov/pandemicflu/plan/pdf/part1.pdf>

Priority groups will need to be reassessed and possibly altered to coordinate with CDC priority groups and as epidemiologic data on the specific pandemic virus becomes available to ensure consistency with the needs of South Dakota. Priority group assignments will meet the overall goals of the response plan, which include reduction of mortality and morbidity, limitation of social disruption, maintenance of health care systems, maintaining integrity of social infrastructure, and limiting economic losses.

Appendix 7. Community Disease Control Containment Measures

Containment Measures			
Containment Type	Measures	Examples	Consider When:
Individual level containment	Quarantine of groups of exposed persons	<ul style="list-style-type: none"> – Persons exposed to an influenza case – Healthcare providers in high-risk setting 	<ul style="list-style-type: none"> – Limited disease transmission in area – Cases can still be traced back to exposure case or setting – Intervention is still efficacious in limiting transmission
	Containment measures that apply to certain buildings	<ul style="list-style-type: none"> – Cancel public events – Close recreational facilities (gyms, pools) 	
Community level containment	Promotion of community-wide infection control	– <i>Stop It, Don't Spread It</i> campaign	<ul style="list-style-type: none"> – Moderate to extensive disease transmission in area – Cases cannot be traced to earlier case or exposure setting – Cases are increasing among contacts of flu patients – Significant delay between onset of symptoms and isolation of cases due to large numbers of ill
	Snow days	– Non-essential workers stay at home for a period of days	
	Closure of businesses	– Close offices, schools, malls, and public transportation to decrease social contact	
	Widespread community quarantine	– Legally enforceable action keeping people at home (except authorized personnel, e.g., health care workers)	

STOP  **IT**
DON'T SPREAD IT

Prevent flu, colds and other infectious diseases

- + Get your flu shot +
- + Wash your hands often with soap & water +
- + Use hand gel +
- + If you cough or sneeze, cover your mouth +
- + Don't touch your eyes, nose or mouth +
- + If you're sick, stay home +



A message from the S.D. Department of Health

Appendix 9. HHS Guidance

Surveillance

RECOMMENDATIONS ON EVALUATING PERSONS WITH SUSPECTED NOVEL VIRUS

<http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf>

CASE DETECTION AND MANAGEMENT IN THE PRE-PANDEMIC AND PANDEMIC PERIODS

<http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf>

CDC HUMAN INFLUENZA CASE SCREENING AND REPORT FORM

<http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf>

Laboratory

GUIDELINES FOR COLLECTING AND SHIPPING SPECIMENS FOR INFLUENZA DIAGNOSIS

<http://www.hhs.gov/pandemicflu/plan/pdf/S02.pdf>

Healthcare

HOSPITAL PANDEMIC INFLUENZA ACTIVITY TRIGGERS

<http://www.hhs.gov/pandemicflu/plan/pdf/S03.pdf>

Infection Control

HOME CARE INFECTION CONTROL GUIDANCE FOR PANDEMIC INFLUENZA PATIENTS AND HOUSEHOLD MEMBERS

<http://www.hhs.gov/pandemicflu/plan/pdf/S05.pdf>

Community Disease Control

EVALUATION OF HOMES AND FACILITIES FOR ISOLATION AND QUARANTINE

<http://www.hhs.gov/pandemicflu/plan/pdf/S08.pdf>

SUMMARY OF INFECTION CONTROL RECOMMENDATIONS FOR CARE OF PATIENTS WITH PANDEMIC INFLUENZA

<http://www.hhs.gov/pandemicflu/plan/pdf/S08.pdf>

GRADED IMPLEMENTATION OF COMMUNITY DISEASE CONTROL MEASURES

<http://www.hhs.gov/pandemicflu/plan/pdf/S08.pdf>

Travel-Related Risk

TRAVEL-RELATED INFLUENZA RESPONSE MATRICES

<http://www.hhs.gov/pandemicflu/plan/pdf/S09.pdf>

INBOUND AND OUTBOUND TRAVEL SCREENING MATRIX

<http://www.hhs.gov/pandemicflu/plan/pdf/S09.pdf>

Appendix 10

Glossary of Terms

- Characterization:** Identification of the strain of an influenza virus such as A/Panama
- Close Contact:** A person who has cared for or lived with the ill person or had a high likelihood of direct contact with respiratory secretions and/or body fluids of the ill person. Examples of close contact with an ill person include kissing or hugging, sharing eating or drinking utensils, talking within 3 feet, and direct touching. Close contact does not include activities such as walking by a person or briefly sitting across a waiting room or office.
- Community-based Measures to Increase Social Distance:** Include measures applied to whole neighborhoods, towns, or cities (snow days, establishment of fever clinics, and community-wide quarantine).
- Containment Measures That Apply to Use of Specific Sites or Buildings:** Include cancellation of public events (concerts, sports events, movies and plays), closure of office buildings, apartment complexes, or schools; and closure of subways or bus lines. These measures may also involve restricting entrance to buildings or other sites (requiring fever screening or use of face masks before entry to schools, worksites, or airplanes)
- DMORT:** A coordinated effort of forensic experts and mortuary personnel to effectively handle a mass fatality disaster
- Endemic:** A disease that is continually present in a community or a region
- Enzootic:** Affecting or peculiar to animals of a specific geographic area.
- Epidemic:** The occurrence of a disease in a community or region clearly in excess of normal expectations
- Epizootic:** Affecting a large number of animals at the same time within a particular region or geographic area.
- Focused Measures to Increase Social Distance (or Decrease Social Distance):** Includes measures applied to groups rather than individuals or whole communities (quarantine of exposed persons and measures that apply to the use of the specific sites or buildings).
- Health Alert Network (HAN):** An Internet based program used to communicate health and emergency messages
- In the News:** Notification by CDC of an occurrence of a disease of public health significance affecting a traveler or travel destination. The purpose is to provide information to travelers, Americans living abroad, and healthcare providers. "In the News" is issued when the risk for disease exposure is not increased beyond the usual baseline risk for that area, and only standard guidelines are recommended.
- Individual-level Containment Measures:** Include isolation of patients and management of their close contacts.
- Infection Control:** Measures practiced by healthcare personnel in healthcare facilities to decrease transmission and acquisition of infectious agents (e.g., proper hand hygiene, scrupulous work practices, use of PPE (masks or respirators, gloves, gowns, and eye protection); infection control measures are based on how an infectious agent is transmitted and include standard, contact, droplet, and airborne precautions.
- Influenza Clinics:** Special facilities that may be established during a pandemic to provide rapid medical assessment of potentially infected persons. Ill persons would be encouraged to call influenza hotlines that provide advice on whether to stay home or seek help at an

influenza clinic. Persons who come to an influenza clinic will be advised on whether they may be best served by hospital care or home care.

Influenza-like Illness (ILI): The presence of fever >100° F, with a cough and/or sore throat

Isolation: The separation and restriction of movement or activities of ill infected person (patients) who have a contagious disease, for the purpose of preventing transmission to others.

JIC: A central location for involved agencies to coordinate public information activities and a forum for news media representatives to receive disaster or emergency information

Novel Virus: A virus rarely, or not previously known to infect humans

Outbreak Notice: Notification by CDC that an outbreak of a disease is occurring in a limited geographic area or setting. The purpose is to provide information to travelers, Americans living abroad, and healthcare providers about the status of the outbreak and to remind travelers about standard or enhanced travel recommendations for the area. Outbreak Notices are issued when the risk for disease exposure is increased but well defined and limited to specific settings.

Pandemic: The occurrence of a disease in excess of normal expectations in extensive regions, countries and continents

Quarantine: The separation and restriction of movement or activities of persons who are not ill but who are believed to have been exposed to infection, for the purpose of preventing transmission of disease. Individuals may be quarantined at home or in designated facilities; healthcare providers and other response workers may be subject to quarantine when they are off duty.

Quarantine of Close Contacts: Refers to the quarantine of individuals exposed to patients with communicable diseases (family members, work or school mates, health care workers).

Quarantine of Groups of Exposed Persons: Refers to quarantine of people who have exposed to the same source of illness (a case of influenza at a public gathering, on an airline, train, or cruise ship, at a school or workplace or apartment complex, or at a recently visited store or office).

Self-shielding: Refers to self-imposed exclusion from infected persons or those perceived to be infected (by staying home from work or school during an epidemic).

Snow Days: Days on which offices, schools, transportation systems are closed or cancelled, as if there were a major snowstorm.

Strategic National Stockpile (SNS): A federal cache of medical supplies and equipment to be used in emergency and disaster situations

Subtype: Identification of influenza A viruses according to the hemagglutinin (H) and neuraminidase (N) components of the virus, such as H1N1 or H3N2

Surveillance: The collection, analysis and dissemination of data

Syndromic: Occurring as part of a complex of signs and symptoms suggesting the existence of an undesirable condition or disease

Travel Contact: A person on the same conveyance as the ill person.

Travel Health Precaution: Notification by CDC that a disease outbreak of significant scope is occurring in a large geographic area. The purpose is to provide information to travelers, Americans living abroad, and healthcare providers about the status of the outbreak (its magnitude, scope, and rapidity of spread), specific precautions to reduce the risk of infection, and what actions to take if they become ill. Travel Health Precautions are issued when the risk for the individual traveler is increased in defined settings or

associated with specific risk factors (e.g., transmission in a healthcare or hospital setting). Travel Health Precautions do NOT recommend canceling travel to the area.

Travel Health Warning: Notification by CDC that a widespread outbreak of a disease of public health concern is expanding outside the area or populations that were initially affected. The purpose is to provide information to travelers, Americans living abroad, and healthcare providers about the status of the outbreak (its magnitude, scope, and rapidity of spread), specific precautions to reduce the risk of infection, and what actions to take if they become ill. *Travel Health Warnings recommend canceling nonessential travel to the area* because the risk for the traveler is considered high (i.e., there is evidence of transmission outside defined settings and/or inadequate containment). Additional preventive measures may be recommended, depending on the circumstances (e.g., travelers may be requested to monitor their health for a certain period after their return; arriving passengers may be screened at ports of entry). A Travel Health Warning may reduce the volume of traffic to an affected area, which in turn can reduce the risk of disease spread to previously unaffected sites.

Travel Health Alert Notice: Notice with travel-related information and recommendations designed for inbound travelers.

Travel Notices: Different types of notices for international travelers. During the 2003 SARS outbreak, CDC issued two types of travel notifications about disease occurrences in specific geographic areas. A travel alert, a lower-level notice, provided information on the outbreak and informed travelers about how to reduce their risk of acquiring infection. When the health risk for travelers was thought to be high, CDC issued a travel advisory recommending against nonessential travel to the area. Travel advisories were intended to reduce the number of travelers to high-risk areas and the risk for spreading disease to other areas. The levels of notification have since been revised to include four types of travel notices: In the News, Outbreak Notice, Travel Health Precautions, and Travel Warnings.

Widespread or Community-wide Quarantine: Refers to the closing of community borders or the erection of a real or virtual barrier around a geographic area (a cordon sanitaire) with prohibition of travel into or out of the area.

Appendix 11.

List of Acronyms

ACIP	Advisory Committee on Immunization Practices
ADRDL	Animal Disease Research and Diagnostic Laboratory
AHRQ	Agency for Healthcare Research and Quality
AIB	Animal Industry Board
APHIS	Animal and Plant Health Inspection Service
BIT	Bureau of Information and Telecommunications
BSL	Biological Safety Level
CDC	Centers for Disease Control and Prevention
CERC	Crisis/Emergency Risk Communications
CHS	Office of Community Health Services
DFA	Direct Fluorescent Antibody
DHS	South Dakota Department of Human Services
DOH	South Dakota Department of Health
DOT	South Dakota Department of Transportation
DME	Durable Medical Equipment
DMORT	Disaster Mortuary Operations Team
DPS	South Dakota Department of Public Safety
DSS	South Dakota Department of Social Services
DSVR	Office of Data, Statistics and Vital Records
EIS	Epidemic Intelligence Service
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EOP	Emergency Operations Plan
ESF	Emergency Support Function
ESS	Epidemiological Services Section
EUA	Emergency Use Authorization
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
GFP	South Dakota Department of Game, Fish and Parks
HAN	Health Alert Network
HCW	Health Care Worker
HEICS	Hospital Emergency Incident Command System
HHS	Health and Human Services
HMS	Health and Medical Services
HRSA	Health Resources and Services Administration
HSDR	Health Systems Development and Regulation
ICP	Infection Control Professional
ICS	Incident Command System
ICU	Intensive Care Unit
IDE	Investigational Device Exemption
IHS	Indian Health Services
ILI	Influenza-like illness
IND	Investigational New Drug

JIC	Joint Information Center
LHD	Local Health Department
LRN	Laboratory Response Network
LSS	Lutheran Social Services
LTC	Long-Term Care
NIH	National Institutes of Health
NIMS	National Incident Management System
NISS	National Immunization Surveillance System
NRP	National Response Plan
NREVSS	National Respiratory and Enteric Virus Surveillance System
NVPO	National Vaccine Program Office
ODP	Office of Disease Prevention
OEM	Office of Emergency Management
OFM	Office of Financial Management
OHP	Office of Health Protection
PCR	Polymerase Chain Reaction
PHIX	Public Health Information Exchange
PHPR	Public Health Preparedness and Response
PIO	Public Information Officer
POD	Point of Distribution
PPE	Personal Protective Equipment
SAMHSA	Substance Abuse and Mental Health Services Administration
SARS	Severe Acute Respiratory Syndrome
SDIIS	South Dakota Immunization Information System
SDPHL	South Dakota Public Health Laboratory
SEOC	State Emergency Operations Center
SPN	Sentinel Provider Network
SNS	Strategic National Stockpile
USDA	U.S. Department of Agriculture
USD-CVL	University of South Dakota Clinical Virology Laboratory
VAERS	Vaccine Adverse Events Reporting System
VIS	Vaccine Information Statement
WHO	World Health Organization

Appendix 12. Internet Resources

U.S. Federal Departments

Department of Defense - <http://www.defenselink.mil/>
Department of Education - <http://www.ed.gov/>
Department of Energy - <http://www.energy.gov/engine/content.do>
Department of Health and Human Services - <http://www.hhs.gov/>
National Vaccine Program Office <http://www.dhhs.gov/nvpo>
Office of the Assistant Secretary for Public Health Emergency Preparedness (ASPHEP) –
<http://hhs.gov/asphep>
Department of Homeland Security - <http://www.dhs.gov/dhspublic/index.jsp>
National Disaster Medical System- <http://ndms.dhhs.gov/index.html>
Federal Emergency Management Agency (FEMA) - <http://www.fema.gov/>
Department of Justice - <http://www.usdoj.gov/>
Department of State - <http://www.state.gov/>
Department of Transportation - <http://www.dot.gov/>
Department of Veterans Affairs - <http://www.va.gov/>

U.S. Government Agencies

CDC – www.cdc.gov
Food and Drug Administration (FDA) - <http://www.fda.gov/>
HRSA - <http://www.hrsa.gov/>
National Institute of Health (NIH) - <http://www.nih.gov/>
NIH, National Institute of Allergy and Infectious Diseases- <http://www.niaid.nih.gov/>

Organizations

Association of State and Territorial Health Officials (ASTHO) - <http://www.astho.org/>
Infectious Disease Society of America www.idsociety.org
National Foundation for Infectious Diseases www.nfid.org
Institute of Medicine (IOM) - <http://www.iom.edu/>
World Health Organization (WHO) – www.who.org

Federal Government Pandemic Influenza Website: www.pandemicflu.org

Checklists available:

- State and Local Government
- Business
- Individuals and Families
- Faith-based and Community Organizations

Vaccine Adverse Events Reporting Website: www.vaers.hhs.gov

Antiviral Drug Adverse Events Reporting Website: www.fda.gov/medwatch/SAFETY/3500.pdf

South Dakota Department of Health
600 East Capitol Avenue
Pierre, South Dakota 57501
www.state.sd.us/doh