

South Dakota Pandemic Influenza Draft Plan

South Dakota Department of Health
6 April 2005

Table of Contents

Acknowledgments	3
I. Introduction	4
II. Federal Roles	5
A. Assumptions	6
III. South Dakota Roles	6
IV. Executive Committee	6
A. Legal Issues	8
Table 1: Pandemic Stage Definitions and Actions	9
V. Main Components	11
A. Command and Control	
1. Background and Issues	11
2. Activities by Phase	11
B. Surveillance	
1. Background and Issues	15
2. Activities by Phase	16
C. Vaccine Delivery	
1. Background and Issues	21
2. Activities by Phase	22
D. Antiviral Medication Distribution	
1. Background and Issues	25
2. Activities by Phase	25
E. Communications	
1. Background and Issues	27
2. Activities by Phase	28
F. Emergency Response	
1. Background and Issues	30
2. Activities by Phase	30
APPENDIX 1 : Priority Groups	33
APPENDIX 2 : Vaccination Clinics	34
Table 2 : Proposed Vaccination Locations	36
Table 3 : Clinic Personnel Breakdown	44
Diagram 1 : Clinic Layout and Flow	48
Table 4 : Vaccination Documents	50
Table 5 : Clinic Supplies and Equipment	51
Attachment 1: VAERS Form	56

APPENDIX 3 : Antiviral Medication Distribution.....54

Table 6 : Antiviral Medication Use.....55

APPENDIX 4 : SD Emergency Operations Plan Responsibility Matrix.....52

**APPENDIX 5 : Enhanced Influenza-like Illness Report Card and
Laboratory Submission Form**.....57

Table 7: Estimated Health Impact on South Dakota.....58

XI. Glossary59

XII. List of Acronyms.....60

Acknowledgments:
This plan has been developed following consultation with numerous health professionals and organizations throughout South Dakota. The present version reflects the contribution of representatives of state and local organizations who participated in the development of the Guidelines.

I. Introduction

Influenza viruses are unique in their ability to cause sudden, pervasive infection in all age groups on a global scale. The importance of influenza viruses as biological threats is due to a number of factors, including a high degree of transmissibility, the presence of a vast reservoir of novel variants (primarily in aquatic birds), and unusual properties of the viral genome. Rapid rates of evolution in the genes which encode the major antigens of the virus -- the hemagglutinin (HA) and neuraminidase (NA) surface proteins -- lead to the emergence of annual influenza epidemics which kill, on average, approximately 20,000 Americans. More importantly, segmentation of the virus genome has periodically led to reassortment (exchange) of gene segments between animal and human viruses during chance co-infections, resulting in the sudden and unpredictable emergence of pandemics.

Three such pandemics have occurred in this century, one of which -- the infamous "Spanish flu" of 1918 -- was responsible for more than 20 million deaths worldwide and greater than 550 thousand deaths in the U.S. alone, primarily in young adults. Although mortality rates associated with the more recent pandemics of 1957 (A/Asia [H2N2]) and 1968 (A/Hong Kong [H3N2]) were reduced in part by antibiotic therapy for secondary bacterial infections and more aggressive supportive care, both were associated with high 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 1 to 3 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. Approximately twenty thousand people die each year in the United States 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 and sneezing.

There are 2 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 or small (antigenic shift or antigenic drift, respectively). Antigenic shift occurs only with Influenza A and has been linked to the three influenza pandemics of the 20th century. Both undergo constant, but relatively subtle mutations (antigenic drift), accounting for the different influenza epidemiology, strains, and vaccines seen from year to year. Pandemics occur when an entirely new subtype of influenza A virus emerges (antigenic shift) through recombination of human and animal antigens. Not all Antigenic shifts cause a pandemic, but if a novel subtype is virulent and easily transmitted, a pandemic is probable.

Many experts believe another pandemic is likely if not inevitable, yet no one can predict when. United States morbidity and mortality estimates for the coming influenza pandemic show 89,000-207,000 deaths, 314,000-734,000 hospitalizations, 18-42 million doctor visits, and 20-47 million additional cases who do not seek formal medical treatment.

The response to pandemic influenza will use much the same infrastructure as that needed for response to bioterrorism events, this guide highlights areas that are specific to pandemic influenza and therefore require specific additional consideration. These priority areas are surveillance, delivery of vaccine and antiviral medication, and communication. The plan

systematically addresses preparedness and response for each plan component for each of the pandemic influenza phases. This pandemic influenza plan is designed as an annex to the South Dakota All-Hazards Emergency Operations Plan and to the Strategic National Stockpile Plan.

Pandemic planning should be integrated with other ongoing public health emergency preparedness activities. Periodic exercising of parts of the plan at the state, regional, 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 neighboring tribes and bordering jurisdictions.

A. Pandemic Influenza Planning

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

- Influenza pandemics are expected but unpredictable and arrive with very little warning.
- Outbreaks can be expected to occur simultaneously throughout much of the U.S., preventing shifts in human and material resources that usually occur in the response to other disasters. Localities should be prepared to rely on their own resources to respond. The effect of influenza on individual communities will be relatively prolonged (weeks to months) in comparison to other types of disasters.
- Because of the high degree of infectiousness of pandemic influenza, the number of persons affected will be high.
- Health care workers and other first responders may be at higher risk of exposure and illness than the general population, further straining the health care system.
- Effective prevention and therapeutic measures, including vaccine and antiviral agents, will be delayed and in short supply.
- Widespread illness in the community could increase the likelihood of sudden and potentially significant shortages of personnel in other sectors who provide critical public safety services.

II. Federal Roles

The federal government is responsible for nationwide coordination of the pandemic influenza response. Specific areas of responsibility include the following:

- Surveillance in the U.S. and globally
- Epidemiological investigation in the U.S. and globally
- Development and use of diagnostic laboratory tests and reagents
- Development of reference strains and reagents for vaccines
- Vaccine evaluation and licensure
- Determination of populations at highest risk and strategies for vaccination and antiviral use
- Assessment of measures to decrease transmission (such as travel restrictions, isolation, and quarantine)
- Deployment of federally purchased vaccine
- Deployment of antiviral agents in the Strategic National Stockpile
- Evaluation of the efficacy of response measures
- Evaluation of vaccine safety

- Deployment of the Commissioned Corps Readiness Force and Epidemic Intelligence Service officers
- Medical and public health communications

A. Assumptions

- Liability protection for vaccine manufacturers and persons who administer influenza vaccine will likely be made available through Congressional legislation. Currently there exists coverage for investigational new drug (IND) influenza vaccine under the Vaccine Injury Compensation Program.
- Although antiviral agents can theoretically be used for both treatment and prophylaxis during the next pandemic, these agents will likely be available only for limited distribution.
- Resources can be expected to be made available from the national level for plan implementation.

III. South Dakota Roles

South Dakota will be responsible for coordination of the pandemic influenza response within our jurisdiction and in partnership with neighboring states in coordination between jurisdictions. Specific areas of responsibility include the following:

- Identification of public and private sector partners needed for effective planning and response.
- Development of key components of pandemic influenza preparedness plan: surveillance, distribution of vaccine and antivirals, and communications.
- Integration of pandemic influenza planning with other planning activities conducted under CDC and HRSA's bioterrorism preparedness cooperative agreements.
- Coordination with local officials to ensure development of local plans as called for by the state plan and provide resources, such as templates to assist in planning process.
- Development of data management systems needed to implement components of the plan.
- Assistance to local areas in exercising plans.
- Coordination with adjoining jurisdictions.

IV. The Executive Committee

The Executive Committee is responsible for planning, development, and review of the pandemic influenza plan. Committee members have been identified as the following:

- Governor's Office, As identified
- Secretary of Health, Doneen Hollingsworth
- Health and Medical Services Division Director, Laurie Gill
- State Epidemiologist, Lon Kightlinger
- Office of Emergency Management Director, Kristi Turman
- SD Public Health Laboratory Director, Mike Smith
- Public Information Officer, Barb Buhler
- Immunization Program Coordinator, Michelle Hudecek
- Office of Public Health Preparedness and Response Director, Bill Chalcraft
- Influenza Surveillance Coordinator, Josh Clayton
- State Veterinarian, Sam Holland, as necessary

- Attorney, Legal Services, Joan Schuller

The function of the committee will be to:

- Assure integration of pandemic influenza plan activities with other relevant plan activities
- Oversee planning, response, recovery and mitigation efforts
- Ensure that the pandemic plan is reviewed, exercised, and periodically revised

Collaboration with a wide variety of organizations in the private and public sector is a key component of the planning and review process. Some of the organizations identified for this process include:

- Communicable diseases personnel
 - Disease Prevention Field Services Supervisor, Susan Gannon (Aberdeen, Watertown, Sioux Falls, Rapid City, Pierre, Dupree field offices)
 - Community Health Services Administrator, Darlene Bergeleen (Community Health Nurses in all counties)
 - State Epidemiologist, Lon Kightlinger
 - Disease Surveillance Manager, Nick Hill
 - Disease Surveillance Coordinator, Linda Schaefer
 - Influenza Surveillance Coordinator, Josh Clayton
 - Office of Disease Prevention Administrator, Bonnie Jameson
- Infectious Disease physicians
 - Dr. James Keegan, Rapid City
 - Dr. Jorge Reyno, Rapid City
 - Dr. Aris Assimacopoulos, Sioux Falls
 - Dr. Wendell Hoffman, Sioux Falls
 - Dr. Veronica Sanchez, Sioux Falls
 - Dr. Rabiul Alam, Sioux Falls
 - Dr. Jawad Nazir, Sioux Falls
 - Dr. Asas Ansari, Sioux Falls
 - Dr. Manuel Arbo, Sioux Falls
- Laboratory personnel
 - SD Public Health Laboratory Director, Mike Smith
 - Medical Laboratory Administrator, Yvette Thomas
- Immunization program personnel
 - Immunization Program Coordinator, Michelle Hudecek
 - Immunization Registry Coordinator, Tammy LeBeau
 - Community Education Coordinator & VAERS Coordinator, Jean Salonen
- Pharmacists
 - State Pharmacist, Bob Coolidge

- Community immunizers
 - Administrator of Community Health Services, Darlene Bergeleen

A. Legal Issues

The Executive Committee will review as necessary, South Dakota's statutory provisions regarding:

- Quarantine laws and how they apply in a public health emergency.
- Statutes for vaccination during an infectious disease emergency.
- Laws and procedures for closing businesses or schools and suspending public meetings during a declared state of emergency.
- Medical volunteer licensure, liability, and compensation laws for in-state, out of state, and returning retired and non-medical volunteers.
- Workman's compensation laws as they apply to health care workers and other essential workers who have taken antivirals for prophylaxis.

These legal authorities are covered in the South Dakota Codified Laws and Administrative Rules of South Dakota: SDCL 34-22-41 to 34-22-44, SDCL 34-1-17, SDCL 33-15-8, SDCL 34-22-9, and ARSD 44:20.

Table 1. Pandemic Stage Definitions and Actions

WHO Phase	CDC Phase	Identified by	Explanation	SD Activities*
Phase 0, Level 0	Pre-Pandemic		No indications of any new virus type have been reported	C = Page 12 S = Page 17 V= Page 23 A= Page 26 M= Page 29 E= Page 31
Phase 0, Level 1	Novel Virus Alert	Appearance of new influenza strain in a human case	First report(s) of isolation of a novel virus sub-type without clear evidence of spread of such a virus or of outbreak activity associated with the new virus	C = Page 13 S = Page 18 V= Page 24 A= Page 27 M= Page 29 E= Page 32
Phase 0, Level 2	Novel Virus Alert	Human infection confirmed	Two or more human infections confirmed to have occurred with a new virus sub-type, but where the ability of the virus to readily spread from person-to-person and cause multiple outbreaks of disease leading to epidemics remains questionable.	C = Page 13 S = Page 18 V= Page 24 A= Page 27 M= Page 29 E= Page 32
Phase 0, Level 3	Pandemic Alert	Human to human transmission confirmed	Human transmission of the new virus sub-type has been confirmed through clear evidence of person-to-person spread in the general population, such as secondary cases resulting from contact with an index case, with at least one outbreak lasting over a minimum two week period in one geographic area.	C = Page 13 S = Page 18 V= Page 24 A= Page 27 M= Page 29 E= Page 32
Phase 1	Pandemic Imminent	Confirmation of onset of pandemic	It is confirmed that a virus with a new hemagglutinin sub-type compared to recent epidemic strains is beginning to cause several outbreaks in at least one country, and to have spread to other countries, with consistent disease patterns indicating that serious morbidity and mortality is likely in at least one segment of the population.	C = Page 14 S = Page 19 V= Page 25 A= Page 27 M= Page 29 E= Page 33
Phase 2	Pandemic	Regional and multi-regional epidemics	Outbreaks and epidemics are occurring in multiple countries, and spreading region by region across the world.	C = Page 14 S = Page 19 V= Page 25 A= Page 27 M= Page 29 E= Page 33
Phase 3	Pandemic	End of first pandemic wave	The increase in outbreak activity in the initially affected countries or regions has stopped or reversed, but outbreaks and epidemics of the new virus are still occurring elsewhere.	C = Page 14 S = Page 19 V= Page 25 A= Page 27 M= Page 29 E= Page 33

South Dakota Influenza Pandemic Draft Plan

Phase 4	Second Wave	Second or later waves of the pandemic	The new virus may cause at least a second wave of outbreaks and is expected to occur within 3-9 months of the initial epidemic in many countries.	C = Page 14 S = Page 20 V A= Page 27 M E
Phase 5	Pandemic Over	End of the pandemic (back to Phase 0)	Pandemic Period is reported over by appropriate agencies (may be 2-3 years)	C = Page 14 S = Page 20 V A M E
* C=Command & Control, S=Surveillance, V=Vaccine Delivery, A=Antiviral Meds., M=Communications, E=Emergency Response				

DRAFT

V. Main components

A. Command and Control

1. Background and issues

The state plan delineates operational priorities, establishes who will be responsible for making public health and health care decisions related to the response to pandemic influenza, who will be responsible for preparing and maintaining the state plan, who will be responsible for major policy decisions, ensuring coordination among affected units, maintaining lists of key partners, and mobilizing additional resources.

Pandemic Planning requires special emphasis on certain functions which are not specifically addressed in the South Dakota Emergency Operations Plan (EOP). Therefore, sections of the EOP have been modified and incorporated into the pandemic prevention and control guidelines.

2. Activities by pandemic phase

Phase 0, level 0 - *Inter-pandemic phase*

- The Governor of South Dakota may designate the Secretary of Health as the leader and decision maker of the state's public health and health care-related response to pandemic influenza.
- The Secretary of Health may designate the State Epidemiologist and HMS Division Director as the leaders and decision makers of the state's public health and health care-related response to pandemic influenza. The DOH Core Team will provide advice and expertise.
- The South Dakota Public Health Laboratory (SDPHL) will provide testing, technical support, and laboratory coordination for those with culturing capabilities to the SD-DOH pandemic response.
- The Executive Committee will address each operational priority annually (See sections V.B. [p16] - V.F. [p31]) and ensure that the state pandemic plan remains current.
 - Any identified gaps in state infrastructure, resources, laws and statutes which may interfere with an effective response, will be brought before key government officials, legislators, and various stakeholders to resolve them in advance of a pandemic.
- Each DOH Section has the following personnel and other resources to assist in the pandemic response:
 - Disease Prevention: epidemiologists, registered nurses and disease investigators
 - Public Health Laboratory: microbiologists, virologists, laboratory technicians, and other laboratory staff, together with laboratory testing equipment and facilities for a novel influenza virus
 - Community Health Services: registered nurses, licensed practical nurses, dietitians
 - Licensure and Certification: registered nurses and engineers
 - Health Protection: sanitarians
 - Public Health Preparedness and Response: response coordinators and risk communications staff
- Resource lists maintained by divisions are as follows:

- Disease Prevention: physicians by medical specialties, infection control practitioners, and community health service personnel.
- Public Health Laboratory: clinical and environmental laboratories, laboratory directors/managers, laboratory capacity, and key laboratory staff.
- Licensure and Certification: Licensed and certified health care facilities and services, Federally Qualified Health Clinics (FQHC), and Rural Health Clinics (RHC).
- DOH Administration: morticians, crematories, and medical examiners/coroners.
- Public Health Preparedness and Response: Physician list, HAN and Virtual Alert personnel lists.
- South Dakota's planning activities with bordering jurisdictions, including tribes, counties, neighboring states and unique populations (such as new immigrant populations, and religious enclaves) will be coordinated in collaboration with federal authorities.

Phase 0, levels 1 and 2 – *Novel influenza virus identified*

- The Secretary of Health will convene the SD-DOH core team to coordinate and implement the SD-DOH pandemic response activities. The core team may include staff from other affected divisions, as appropriate.
- The Administrator of the Office of Disease Prevention will track assigned responsibilities, perform follow-up, and provide administrative functionality.
- The SD-DOH Core Team will include:
 - Secretary of Health
 - State Epidemiologist
 - Health and Medical Services Division Director
 - Office of Disease Prevention Administrator
 - SD Public Health Lab Director
 - Disease Surveillance Coordinator
 - Disease Surveillance Manager
 - Influenza Surveillance Coordinator
 - Community Health Services Administrator
 - Immunization Program Coordinator
 - Office of Public Health Preparedness and Response Administrator
 - Public Information Officer
 - State Veterinarian, as appropriate.
- The core team and appropriate partners and stakeholders will review major elements of the plan, modify it as needed, and evaluate level of preparedness.
- SD-DOH will work to coordinate with federal agencies, neighboring tribes, and bordering states as needed.
- Pandemic response expenses will be documented by the Division of Administration's Financial Management Office.

Phase 0, level 3 -- *Human-to-human transmission confirmed*

- Consideration will be given to partially activating the State Emergency Operations Center (SEOC).

- The SD-DOH Core Team will convene to assess the extent of the pandemic to South Dakota and discuss the pandemic response including influenza vaccine and antiviral medication needs.
- If the core team determines the pandemic response requires more assistance than the assigned staff, unaffected divisions will be asked to provide assistance. Other division directors will determine what division priority activities must be continued and will re-assign staff to assist in the response effort. The core team will be responsible for directing the work of re-assigned employees.
- Enhanced surveillance and communications plan will be activated by appropriate personnel (i.e., influenza surveillance coordinator and State Epidemiologist, State Epidemiologist and OPHPR staff)
- Appendix 2: Vaccine Delivery, Page 35 and Appendix 3: Antiviral Medication Use, Page 57 will identify how the needs assessment and distribution activities will be undertaken when use/release is appropriate.
- The SD-DOH core team will activate the enhanced plans for operational priorities (See sections V.B. [p16] - V.F. [p31])
- Additional resources and other needs will be brought to the SD-DOH core team as necessary.
- Pandemic response expenses will be documented.
- Assessment of need for Information Technology development and personnel will be done.
- Evaluation of need for reapportionment of state funds for outbreak management will be initiated.
- The incident command system will be utilized throughout the pre-pandemic, pandemic, and post-pandemic periods.

Phases 1, 2, 3 and 4 -- *Confirmation of onset of a pandemic*

- In collaboration with OEM, SEOC may be fully activated.
- The SD-DOH Core Team will convene to assess the extent of the pandemic to South Dakota and discuss the pandemic response including influenza vaccine and antiviral medication needs.
- The core team will monitor staffing needs and reassign staff or request additional assistance as necessary.
- Material resource needs should be identified and item requests submitted to the Office of Emergency Management (OEM).
- SD-DOH will coordinate pandemic response activities with neighboring jurisdictions as needed.
- The core team will be responsible for regular communications with response partners and stakeholders regarding the status of the pandemic and SD-DOH's response.
- The core team will be responsible for regular updates to the administration.
- All other divisions will assume a supportive role, working with the affected division in ways appropriate to their program authority and responsibilities.
- Pandemic response expenses will be documented.

Phase 5 -- *End of pandemic*

- The SD-DOH Core Team will convene to discuss and plan for the post-pandemic response.
- The core team will be responsible for regular communication with administration regarding the post-pandemic status.

DRAFT

B. Surveillance

1. Background and issues

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

There are four main national surveillance components:

1. *Virologic surveillance*: Each week, approximately 75 U.S. collaborating laboratories that are part of the World Health Organization's Influenza Surveillance Network and 50 National Respiratory and Enteric Virus Surveillance System laboratories report the number of clinical specimens tested for influenza and the number of positive results by virus type (A or B) and subtype (A/H1, A/H3N2 or not subtyped).
2. *Surveillance for influenza-like illness (ILI)*: Approximately 1,100 sentinel health care providers/clinics located in 50 states regularly report the number of patient visits for ILI by age group and the total number of patient visits each week
3. *Surveillance for influenza and pneumonia deaths*: The Vital Statistics Offices of 122 U.S. cities report each week the percentage of total deaths that may be influenza-related.
4. State and territorial epidemiologists assess influenza activity levels in their respective states each week and reports it as "widespread", "regional", "local", "sporadic" or "no activity."

Six main components of South Dakota influenza surveillance:

1. Sentinel Sites – There are 31 sites across South Dakota that provides specimens to the SD Public Health Lab for testing. These sites typically submit a maximum of 6-10 clinical specimens for viral isolation and typing per week for culture confirmation and typing. (See Picture 1, Page 21)
2. Public Health Lab – Performs respiratory virus isolation and confirmation by culture. Influenza isolates are typed and Influenza A specimens are sub-typed. Selected isolates throughout the season are submitted to the CDC for antigenic characterization.
3. Rapid antigen reporting – The SD reportable disease list requires weekly reports of number of rapid antigen influenza positive tests and total number tested. Any facility conducting influenza rapid antigen testing must abide under this list as specified in SDCL 34-22-12 and ARSD 44:20.
4. CDC Sentinel Physicians – These sites also submit clinical specimens for viral isolation and typing. There are currently five participating physicians and physician assistants geographically dispersed across the state. (2-Sioux Falls, Pierre, Rapid City, Isabel) This amounts to 1 site per 150,000 population, which exceeds the national recommendation of 1 site per 250,000 population.
5. Laboratory confirmed cases of influenza are also reportable in South Dakota. Laboratories performing this testing report their results in aggregate.
6. Pediatric influenza-associated deaths became a reportable event in December 2004.

In addition, a variety of other sources such as nursing homes and schools will report influenza outbreaks or other influenza-associated events during the year.

Key questions South Dakota's surveillance section will need to answer during a pandemic fall into two main categories: 1) detection of the novel strain, and 2) disease monitoring, and include the following:

- Has the novel virus arrived?
- Where is disease activity increasing or decreasing?
- How many persons are estimated to be infected, hospitalized, and dead?
- Is the pandemic causing more and/or more serious disease than an annual influenza epidemic?
- Which population groups are most severely affected?

Enhancement of the current surveillance system is necessary to assure that the high demand for timely information that can be anticipated in a pandemic can be met.

2. Activities by pandemic phase

Phase 0, level 0 – *Inter-pandemic phase*

The essential requirements include:

- The South Dakota Public Health Laboratory (SDPHL) will isolate and subtype influenza viruses during the influenza season, and maintain the capability of isolating and subtyping influenza year-round.
- The SDPHL will continue to perform viral culture despite increasing usage of rapid influenza diagnostic tests and PCR testing. This offers definitive confirmation of influenza circulation within South Dakota.
- The SDPHL and other National Respiratory and Enteric Virus Surveillance System (NREVSS) participating laboratories (currently USD Clinical Virology Labs in Sioux Falls and Rapid City) will transmit their influenza data (positives and negatives) electronically to CDC via the Public Health Laboratory Information System.
- The influenza surveillance coordinator will work to recruit additional providers (1/250,000 persons or a minimum of 10 providers) that regularly report their weekly data to CDC via the Internet year-round. The providers will be encouraged to submit specimens collected from patients with ILI throughout the season to the SDPHL for viral culture at no charge.
- The influenza surveillance coordinator will:
 - Monitor sentinel provider data weekly for completeness and/or errors
 - Provide feedback and maintains contact with sentinel providers weekly to encourage reporting and follow-up on unusual reports
 - Contribute to state pandemic planning issues and activities
 - Establish and maintain strong working relationships with the SDPHL.
 - Encourage sentinel providers to submit specimens for viral culture to the SDPHL
 - Create a weekly assessment of overall influenza activity level in the state and report that data to CDC by noon each Tuesday.
 - Develop a means to count numbers of influenza-related deaths in South Dakota using the electronic death registry.
 - Develop a means to monitor hospitalized cases.
 - Explore interest of partners within South Dakota (such as academic institutions) to examine specific issues during a pandemic (such as document outbreaks, determine age-specific attack rates, morbidity and mortality, describe unusual

clinical syndromes, monitor ability of hospitals and outpatient clinics to cope with increased patient load).

Phase 0, levels 1 and 2 – *Novel influenza virus identified*

The Centers for Disease Control and Prevention continuously monitors surveillance data reported nationally and is in frequent communication with public health colleagues around the world so that novel viruses are detected and investigated as quickly as possible. Activities regarding this level of preparedness include:

- Increased case detection among persons who recently traveled to the outbreak area and present with clinical illness possibly caused by influenza including pneumonia, acute respiratory distress syndrome, or other severe respiratory illness. Those cases will have specimens collected to diagnose via culture influenza infection.
 - Includes notification of physicians, laboratory directors, infection control practitioners, emergency rooms, and urgent care centers.
- Three labs in the state perform viral isolation (SDPHL, 2-USD Clinical Virology Labs) and they should follow CDC recommendations on testing. (ex. 2004 H5N1 influenza strain seen in Asia is not to undergo viral culture without using biosafety level 3+ facilities because of the potential risk of spread) Influenza infection can be diagnosed within the state using antigen detection, immunofluorescence, or PCR. Guidance will be provided by CDC appropriate to each specific novel virus alert.
- Influenza surveillance coordinator and State Epidemiologist will ensure that all inter-pandemic influenza surveillance activities are underway regardless of the time of year and that all participating laboratories and sentinel providers are reporting data to CDC in a timely manner designated by CDC (e.g., weekly).
- SDPHL will subtype influenza A viruses identified in clinical specimens and reporting any influenza A viruses that cannot be subtyped to CDC immediately. CDC will provide instructions on the safe handling of a potential novel influenza virus.
- SDPHL will obtain reagents from CDC (when they become available) to detect and identify the novel strain.
- The influenza surveillance coordinator will actively recruit and enroll additional sentinel providers, if necessary, to reach the minimum of one regularly reporting provider for every 250,000 persons (minimum of 10 in states with smaller populations like South Dakota).
- SD-DOH core team will monitor and institute recommendations from CDC for any additional surveillance activities that should be undertaken given the specific circumstances.
- The State Epidemiologist and influenza surveillance coordinator will review current influenza surveillance measures and plans for further enhancing influenza surveillance if efficient person-to-person transmission of the novel virus is confirmed.
- Communication with healthcare providers and healthcare facilities will occur through the Health Alert Network administered by the Office of Public Health Preparedness and Response.
- The SD Public Health Laboratory Director will coordinate with influenza culture capable laboratories: USD Clinical Virology Labs in Sioux Falls and Rapid City.

Phase 0, level 3-- *Human-to-human transmission confirmed*

If efficient person-to-person transmission of a novel influenza virus is confirmed anywhere in the world, the following additional surveillance enhancements should be made:

- The SD-DOH core team will assess the need to screen travelers arriving in SD from affected countries.
- ODP will promptly investigate the epidemiology of early cases either originating in SD or that are imported. This will be done by using tools provided by the CDC including case forms and investigation protocol.
- At hospitals and emergency departments, increase laboratory diagnosis of influenza, including use of rapid antigen detection tests for persons with compatible clinical syndromes, particularly among those who may have had recent exposure at the site of an outbreak. Laboratories will institute plans for testing substantially more specimens than usual. CDC will provide guidelines to assist with triage of specimens for testing and for choosing which isolates to send to CDC.
- Secretary of Health will make all influenza deaths a mandatory reportable event by emergency order of the SD State Health Officer.
- Sentinel sites will be expanded to approximately 60 labs, clinics, and hospitals across the state to meet the heightened surveillance needs.
- Influenza sentinel physicians will be expanded to 20 sites.
- SD-DOH will actively encourage voluntary influenza-like illness (ILI) outbreaks in long-term care facilities (LTC) and educational institutions (schools and colleges).
- NREVSS participating laboratories should begin reporting test results daily to CDC.
- The completeness and timeliness of reports from all participating laboratories and sentinel providers will be monitored by the influenza surveillance coordinator and non-reporters contacted to improve their performance as necessary.
- Communication with healthcare providers and healthcare facilities will occur through the Health Alert Network administered by the Office of Public Health Preparedness and Response.
- In the absence of vaccine, primary response strategies include interventions to slow the spread of infection and quality medical care. The SD-DOH will utilize and modify as necessary its prevention message “Stop It, Don’t Spread It”.
- The influenza surveillance coordinator should issue daily influenza reports.

Phases 1, 2, and 3 -- *Confirmation of onset of a pandemic*

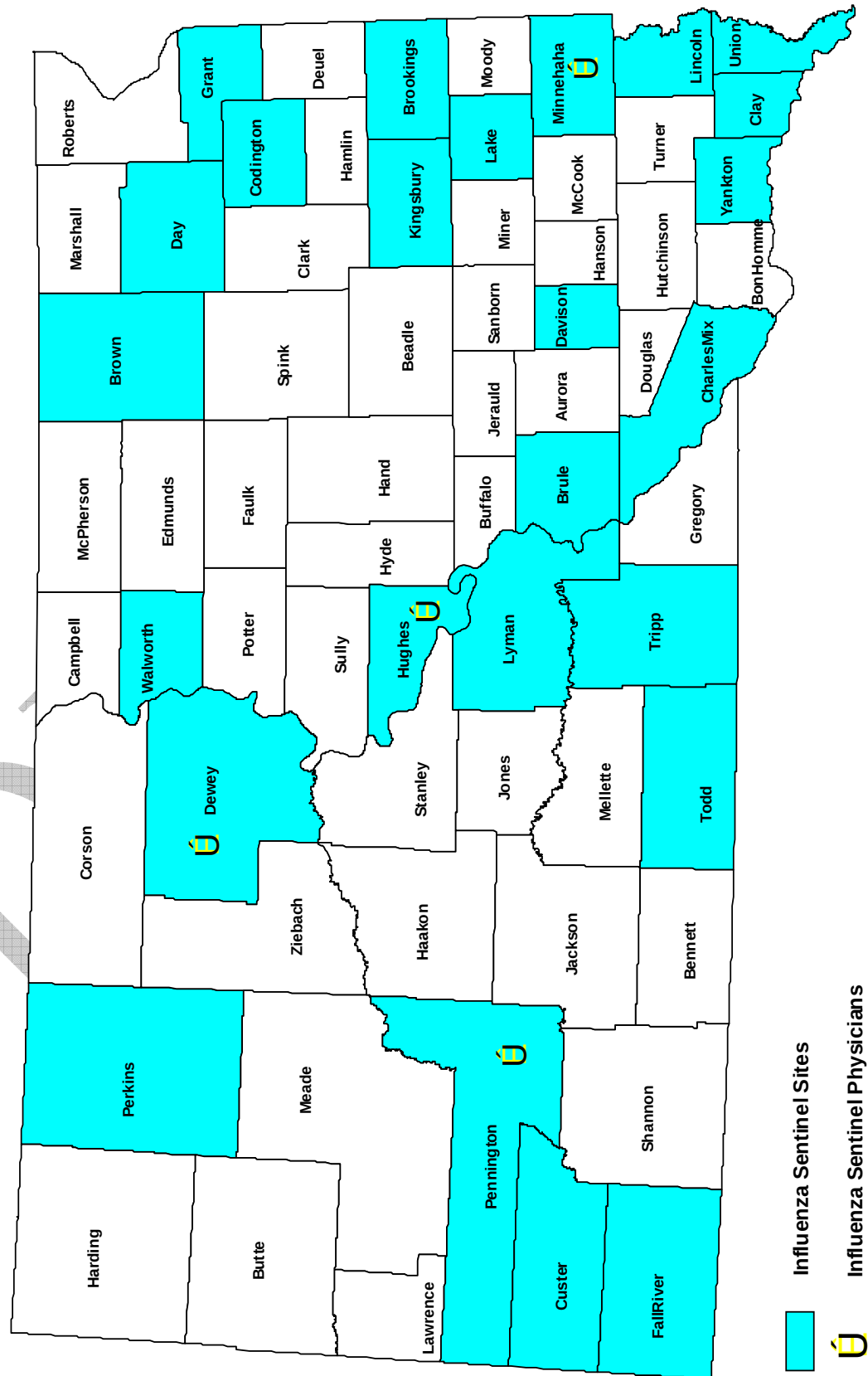
- Participate in CDC studies to monitor vaccine effectiveness and antiviral resistance.
- South Dakota surveillance of pandemic influenza will rely primarily on web-based reporting and sentinel physician sites. SD-DOH will request that sentinel providers obtain and submit a specimen for viral culture and an Enhanced Influenza-like Illness Report Card and Laboratory Submission form for a proportion of patients meeting the ILI criteria. Health care facilities may have to increase their staffing to comply with reporting. The Enhanced Influenza-like Illness Report and Laboratory Submission form will collect the following information:
 - Demographics (first and last name, address, phone, sex, race, occupation)
 - Date of Birth
 - Symptoms
 - Symptom onset date
 - Date of death, if applicable

- o Specimen collected (source, type)
 - o Specimen collect date
 - o Rapid Antigen test result
 - o Vaccination history
 - o Severity of illness
- Communication with healthcare providers and healthcare facilities will occur through the Health Alert Network administered by the Office of Public Health Preparedness and Response.
- PPHR and SDPHL Lab Director will coordinate additional specimen transport as necessary.

Phase 3, 4, and 5 – *End of first wave, Second wave, End of pandemic*

- Review death certificates statewide for influenza-related pneumonia and influenza deaths using the South Dakota Electronic Death Registry.
- Validate influenza illness reporting systems.
- Between pandemic waves, conduct an assessment of the key surveillance components and make recommendations for improvement.

2004-2005 Influenza Surveillance Sentinel Sites and Physicians



C. Vaccine Delivery

1. Background and issues

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. Annual delivery of influenza vaccine has become increasingly more accepted and wide-spread. Specialists detect and monitor new variants of influenza virus throughout the year for potential vaccine strains, which are then routinely chosen in early spring. The vaccine is administered beginning in September, and has been targeted primarily at high-risk individuals as defined by the Advisory Committee on Immunization Practices (ACIP).

The success of the pandemic influenza vaccination program will be determined in large part by the strength of vaccination programs during the inter-pandemic period for three main reasons: (1) increased acceptance of and public confidence in the vaccine; (2) stimulation of vaccine production by manufacturers to meet demand; and (3) strengthening of distribution channels.

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

Unlike annual production of influenza vaccine a pandemic strain could be detected at any time. Some of the contrasts between delivery of pandemic vaccine and the annual influenza vaccine include the following:

- **Vaccination Assumptions**
 - It will take 6 to 8 months after the pandemic virus is identified before the vaccine is available for distribution.
 - The target population will be modified according to the availability of vaccine. See Appendix 1: Priority Groups, Page 34.
 - Educating the public and the health care community about the rationale for priority groups will be an important aspect of public education.
 - The need to ration vaccine will require adequate security measures.
 - Once a pandemic imminent stage has been declared the SD-DOH core team will prepare for vaccine delivery and administration.
 - We expect South Dakota's share of the national vaccine stock distribution to be about 0.3% of the total stock.
 - Two doses (administered 4 weeks apart) will be required to develop immunity to the novel virus. This is due to the poor immunologic response of serologically negative individuals following initial vaccination which would occur with a novel influenza virus which has new hemagglutinin and/or neuraminidase antigens.
 - A final decision regarding the degree of federal vaccine purchase has not yet been made. South Dakota's vaccine delivery and administration plan will address the different possible scenarios including complete federal purchase and distribution to states, partial federal purchase with distribution to states, and minimal federal purchase (similar to the annual influenza vaccination program). See Appendix 2: Vaccine Delivery, Page 35.

- Once vaccine is available, it will take several months to produce an adequate supply of vaccine for the US population.
- CDC will develop a standard vaccine information statement (VIS) that details the risks and benefits of the disease and the vaccine.
- Monitoring of vaccine adverse events will be necessary during a vaccination campaign against pandemic influenza. Any vaccine adverse event reports will be made directly to the SD-DOH and investigated. These adverse event reports will also be submitted to the national vaccine adverse events reporting system (VAERS). The state adverse events coordinator will be involved in vaccination planning.

During the inter-pandemic period efforts to increase pneumococcal polysaccharide vaccination which can reduce the incidence of invasive pneumococcal disease secondary to influenza should be emphasized. Because large-scale pneumococcal vaccination may not be feasible once a pandemic alert has occurred, the inter-pandemic period is the ideal time to deliver this preventive measure.

2. Activities by pandemic phase

Phase 0, level 0 – Inter-pandemic phase

- South Dakota Department of Health will develop and distribute a written packet of materials to all health care providers. The packet will include a summary of the most current influenza vaccine recommendations issued by the ACIP.
- South Dakota Department of Health will distribute the most current CDC developed vaccine information statements (VIS) in English and other languages.
- The South Dakota Department of Health continues to participate in the South Dakota Adult Immunization Coalition. The group will continue to encourage the pneumococcal vaccination which will assist in preventing secondary bacterial infections.
- The SD Immunization program will work 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 will enhance pneumococcal vaccination coverage levels in traditional high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia.
- Modifications to the national recommendations for vaccine priority groups will be evaluated during the Executive committee's annual review of the pandemic plan. State-specific alterations will depend on local circumstances (i.e., specific groups whose absence due to influenza could affect public safety, security, or result in disruption of essential community services)
- OPHPR will be asked to periodically determine the size of SD's priority groups by conducting a statewide assessment
- Appendix 2: Vaccine Delivery, Page 35 provides optional plans for providing influenza vaccine to priority groups in the event of severe or moderate vaccine shortages.

Prioritization of the priority groups will be done by the SD-DOH core team with input from the Executive Committee.

- Appendix 2: Vaccine Delivery, Page 35 provides optional plans for mass vaccination of the general public once sufficient amounts of vaccine are available, including number of vaccine administration personnel needed.
- DOH legal counsel will review and close gaps in the legal authorities to allow for implementation of the proposed distribution plan.
- Appendix 2: Vaccine Delivery, Page 35 covers provisions for use of investigational new drugs (IND) such as inventory control, record-keeping, and signed consent forms.
- The SD-DOH will coordinate the proposed vaccine distribution plan with bordering jurisdictions, including states and unique populations (such as Native American tribes and certain religious enclaves) in collaboration with federal authorities.
- The state adverse events coordinator will be involved in vaccination planning and the monitoring and investigation of adverse events. Vaccine adverse events are a reportable condition in South Dakota and provider reports will be utilized to identify lot number, date of vaccination, and other pertinent information.
- Maintain the South Dakota Immunization Information System (SDIIS) access with the public health sites identified in Appendix 2: Vaccine Delivery, Page 35 (Proposed Influenza Vaccination Clinic Sites) to allow provider level entry of vaccine supply, tracking, and distribution. South Dakota Immunization Information System (SDIIS) may be used to track administration of two doses of vaccine (if recommended).
- Review, exercise, and modify vaccine distribution plans as needed or on a periodic basis.

Phase 0, levels 1 and 2 – Novel influenza virus identified

- The SD-DOH core team and appropriate partners and stakeholders will review major elements of the vaccine distribution plan (See Appendix 2: Vaccine Delivery, Page 35) and modify the plan as needed to account for any updates on recommended target groups, projected vaccine supply, and human resources availability.
- The source of and any supplies needed for a mass vaccination clinic will be identified.

Phase 0, level 3--Human-to-human transmission confirmed

- SD-DOH core team will ensure that human resources and logistics are in place to begin vaccination, taking into account need for additional staff due to illness.
- Coordination of planned activities with neighboring tribes and bordering jurisdictions will be enhanced.
- SD-DOH will conduct training for relevant agencies and partner groups regarding vaccine delivery protocols and procedures.
- Communication and distribution of influenza-related materials will be provided to the medical community through the Health Alert Network (SD-HAN) and media community through periodic press releases.
- Ordering and stockpiling of vaccine supplies (e.g., syringes, alcohol wipes, emergency anaphylaxis kits, etc.) and other supplies (VISs, consent forms, etc.) will begin.
- All health care providers in SD and the media will be notified of the need to vaccinate persons age >65 and others recommended by ACIP with pneumococcal vaccine as a method of decreasing morbidity and mortality associated with pandemic influenza complications (e.g., secondary bacterial pneumonia)

- The designated vaccination sites will be readied for activation.

Phases 1, 2, and 3 -- Confirmation of onset of a pandemic

- Fully activate the vaccination program (See Appendix 2: Vaccine Delivery, Page 35), including distribution, administration, monitoring of vaccine distribution and administration, and tracking of dose, appropriate storage and handling, and safety monitoring.
- Coordinate activities with neighboring tribes and bordering jurisdictions.
- Communication and distribution of influenza-related materials will be provided to the medical community through the Health Alert Network (SD-HAN) and media community through periodic press releases.

DRAFT

D. Antiviral Medication

1. Background and issues

Antiviral drugs for influenza are an important adjunct to influenza vaccine for the control and prevention of influenza. Because vaccine will likely not be available when the novel virus first affects communities, antivirals may play an important role in control and prevention, especially during the period before vaccine is available. Existing production capacity for influenza antiviral drugs is less than would be needed to provide prophylaxis or treatment for the entire population and the current supply of antivirals in the Strategic National Stockpile (SNS) is limited.

Four prescription medications with antiviral activity against influenza viruses are commercially available in the United States (amantadine, rimantadine, oseltamivir, and zanamivir). The four drugs are classified into two categories, the adamantane derivatives and the neuraminidase inhibitors, on the basis of their chemical properties and activities against influenza.

Prophylaxis

Adamantanes (amantadine and rimantadine) are best suited for prophylaxis (preventive care) because of the high potential for viral resistance to emerge during treatment, the potential supply, and their cost. The central nervous system side effects, although substantially less with rimantadine than amantadine, may preclude the use of these drugs for certain target groups. The neuraminidase inhibitor oseltamivir is an alternative option.

Identification of influenza within a community (based on either isolation of the pandemic strain or an increase in ILI) should be the trigger for initiating prophylaxis and should be continued until exposure has ceased. As with decisions about vaccine use, recommendations for priority groups for antivirals will be established at the national level, and South Dakota will need to review these recommendations and revise, as needed, based on local factors.

Therapy

Neuraminidase inhibitors (oseltamivir and zanamivir) should be used for therapy because of the potential for viral resistance while adamantanes are used for therapy. Therapy is effective at decreasing severe complications and may reduce hospitalizations but only if offered within two days of developing symptoms. Distribution of drugs for therapy is a challenge given the limited amount available, the large number of points of care, and the need to initiate the course of treatment within 48 hours of onset of symptoms.

Prioritizing within priority groups may be necessary given the limited supply. For antivirals purchased with public funds, the state will be responsible for local distribution in collaboration with the private sector. If there is no state or federal purchase, the state's role will largely be one of public and provider education around appropriate use of antivirals. As with vaccine, it will be critical for clear and coordinated communication and education of the private sector and general public regarding the rationale for priority groups.

2. Activities by pandemic phase

Phase 0, level 0 – Inter-pandemic phase

- SD-DOH will inventory pharmaceutical distributors to determine which facilities in South Dakota currently stock antiviral drugs and what the quantity and use timeframe is.
- National recommendations for priority groups will be obtained and considered by the SD-DOH core team in addition to the South Dakota priority groups identified in Appendix 1:

Priority Groups, Page 34. If no priority groups have been identified at the national level, the state may utilize those identified by the state. The priority groups can be modified to account for the epidemiology of the novel influenza virus.

- OPHPR and Office of Data, Statistics, and Vital Records will conduct an assessment to quantify the number of individuals in the high priority populations for prophylaxis and therapy.
- Drug distribution plans outlined in Appendix 3: Antiviral Medication Distribution, Page 57 can be modified for the different possible scenarios.
- Through current communication means (HAN, press releases, blast fax, etc.) healthcare providers and the general public will be educated about antiviral agents (includes prescribing information for healthcare providers).
- Coordinate with neighboring tribes and bordering jurisdictions.
- DOH legal counsel will be asked to review workman's compensation laws as they apply to health care workers and other essential workers who have taken antivirals for prophylaxis.
- Utilizing the vaccine management system as a model, develop an antivirals data management system to track supplies, distribution, and use.

Phase 0, levels 1 and 2 – Novel influenza virus identified

- SD-DOH core team will review major elements of the antivirals plan and modify to meet expected needs (recommended target groups, usage instructions, and projected supply).
- SD-DOH will be in continued communication with the healthcare community regarding the antivirals plan including availability, use guidelines, and distribution.
- Facilities identified as handling antivirals will be approached by the SD-DOH regarding possible redistribution.

Phase 0, level 3-- Human-to-human transmission confirmed

- Redistribution of identified antiviral supplies will be considered by the SD-DOH core team.
- SD-DOH core team will ensure that the human resources and logistics are in place to begin drug distribution and administration.
- Coordinate with neighboring tribes and bordering jurisdictions.
- SD-DOH will be asked to track adverse reactions to the antiviral medications.
- An assessment of the antiviral need within SD communities will be conducted by OPHPR.

Phases 1, 2, 3, and 4 -- Confirmation of onset of a pandemic

- SD-DOH core team with input from the Secretary of Health will fully activate the antiviral drug distribution plan.
- Continue coordination with neighboring tribes and bordering jurisdictions.
- Implement data management system for antiviral distribution, use, and supply.

Phase 5 -- End of pandemic

- Discontinue antiviral distribution system.

E. Communications

1. Background and issues

Through CDC's Bioterrorism Preparedness and Response cooperative agreement, South Dakota has been working to implement a 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 implementation is complete, this communication system will be used for all types of public health emergency, including pandemic influenza.

CDC will make a number of materials available before and during influenza pandemic, including:

- Basic communication materials (such as FAQs and fact sheets) on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages.
- General preventive measures such as “do's and don'ts” for the general public.
- Information and guidelines for health care providers:
 - Training modules (Web-based, printed, and video)
 - Presentations, slide sets, videos, documentaries
 - Symposia on surveillance, treatment, and prophylaxis

The department will need to develop focused messages for healthcare and the general public in anticipation of vaccine and antiviral shortage. Information about vaccine and antiviral availability, rationale for priority groups, influenza prevention, and preparation measures make up the most critical information needs. Other important topics include: basic information about influenza (including symptoms and transmission), frequently updated information 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.

Credible spokespersons such as the Secretary of Health and State Epidemiologist have been identified to represent the South Dakota Department of Health. Key stakeholders should also be identified and selected for their credibility among and ability to reach their constituency.

Timely sharing of new information with all communication partners will be important both in terms of actively engaging them and in terms of ensuring that consistent messages are sent by all agencies/partners involved.

Media relations will play an important role in information dissemination, particularly for the general public. The department's existing media relations infrastructure is already used to respond to crisis oriented situations, for example the 2004 influenza vaccine shortage. This system includes detailed policies and procedures, along with established communications mechanisms such as broadcast fax, email news release distribution, listservs, and informational web sites for media and the general public, and is continually reviewed and revised. The state's Emergency Operations Plan (EOP) also provides direction regarding communications in the event of a pandemic. Ultimate authority for activating the EOP rests with the Governor's office, which also maintains primary responsibility for release of public information items. 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 meeting with reporters.

2. Activities by pandemic phase

Phase 0, level 0 -- Inter-pandemic phase

- Identify a spokesperson (and backup) to the media and to the public. The SD-DOH has identified the Secretary of Health (or Health and Medical Services Division Director), State Epidemiologist, and Public Information Officer as the three primary points of contact.
- The Public Information Officer will review current pre-scripted materials and messages and develop or modify as appropriate.
- The Virtual Alert system will provide one of the major communication links between SD-DOH and healthcare professionals in the state. The second communications link is the Health Alert Network. Internet websites, other web-based communication systems, blast fax, digital radio, and phone will be used to communicate with healthcare professionals and SD-DOH staff.
- Review CDC materials and adapt or revise as needed.

Phase 0, levels 1 and 2 – Novel influenza virus identified

- Review CDC materials and adapt or revise as needed.
- Through current means of communications (e.g., blast fax, HAN, and press releases), disseminate information to public and partners on ongoing basis.
- Coordinate with neighboring tribes and bordering jurisdictions.

Phase 0, level 3-- Human-to-human transmission confirmed

- Consideration will be given to partially activating the State Emergency Operations Center (SEOC).
- The State Epidemiologist and SD-DOH core team will identify and notify appropriate SD-DOH staff and field offices.
- SD-DOH core team and partner and key stakeholders will review major elements of the plan.
- Continue to work with the public, health partners, and media to disseminate current information.
- Public Information Officer will monitor media coverage and address misinformation.
- Coordinate with neighboring tribes and bordering jurisdictions.
- SD-DOH will establish a website and discuss setting up a hotline to respond to pandemic inquiries (for instance, regarding the location of immunization clinics), and assure that surge capacity is in place to deal with high usage.
- SD-DOH core team and OEM will identify and notify appropriate state and local officials to coordinate pandemic response.
- SD-DOH core team and OEM will identify and notify other federal and state agencies and other appropriate organizations (volunteer and private sector groups) as necessary.

Phases 1, 2, and 3 -- Confirmation of onset of a pandemic

- OEM may be asked to fully activate the SEOC.

- Review and modify messages and materials as needed.
- Public Information Officer will continue to monitor media coverage and address misinformation.
- Information regarding the status of the pandemic and other key information will be periodically released to healthcare providers, the media, and general public.
- Staff will be made available to activate the information hotline.
- Coordinate with neighboring tribes and bordering jurisdictions.

The basis for these communication avenues can be found in Emergency Support Function 02 – Communications of the SD Emergency Operations Plan.

DRAFT

F. Emergency Response

1. Background and issues

All state governments are required to have an emergency management plan which addresses all hazards. Pandemic influenza, however, poses unique challenges not be addressed in these plans. For example, in most emergency situations notification and response is initiated at the local level, followed by state then federal notification and response. In the event of pandemic influenza, notification and response is most likely to be initiated at the national or international level, then state and finally local. Because of these unique challenges, emergency management plans should incorporate a pandemic influenza plan as an appendix to the existing plan. Some issues which should be addressed are outlined below.

Pandemic influenza differs from most bioterrorism threats in the magnitude and duration of its impact including the likelihood of second and later waves of disease. One of the greatest concerns is the limited surge capacity that currently exists in the health care system. Most important is the lack of readily available additional staff due in part to the nursing and other healthcare professional shortage. Identification of sources of back-up personnel is of paramount importance, given the increased demands on the system posed by the pandemic with concurrent reduction in the work force due to illness, absenteeism, and exhaustion. Additional emphasis on augmenting volunteer lists may be warranted. In addition to human resources, material resources will be strained as well, and a process for allocation of scarce resources should be defined.

Regional Hospital Bioterrorism planning will identify overflow locations which may be used for inpatient or outpatient care. Establishing health care facilities in temporary medical care sites is a significant task that requires that numerous issues be addressed including staffing, equipment, infection control, standards of care, and legal issues. Pandemic planners will need to determine specific needs that such buildings and facilities may have with respect to treatment of influenza (such as in relation to ventilators and instituting proper infection control). Advance planning protocols to triage to overflow locations will ensure a smoother process. In addition, home health care may play an important role, given the potentially high number of ill persons. In the event of a massive pandemic, the quality of material care (such as nursing, ventilators, nutrition, and hydration) will deteriorate. Advance consideration to approaches such as using family members to provide care should be considered. Both the magnitude and duration of a pandemic can cause severe stress within the population indicating a need to plan for its treatment or alleviation.

An influenza pandemic may pose significant threats to the human infrastructure responsible for critical community services due to widespread absenteeism and exhaustion in the workforce. Examples of such services (and personnel) in the non-health sector might include highly specialized workers in the public safety, utility, transportation and food service industries, and will likely vary from jurisdiction to jurisdiction. State and local officials should carefully consider which services (and key personnel within relevant firms or organizations) are "essential" (that is, which services, if interrupted, and which workers, if absent, would pose a serious threat to public safety or would significantly interfere with the ongoing response to the pandemic).

2. Activities by pandemic phase

Phase 0, level 0 – Inter-pandemic phase

- Assess the need, possible locations, and legal implications of temporary medical care sites as overflow facilities.
- Assess and develop plans for the coverage of mental health services for South Dakota.
- Using CDC guidelines, SD-DOH will adopt or modify as needed triage and treatment guidelines for influenza patients in the outpatient, inpatient, and temporary medical care sites.
- Annual review and periodic exercise of all emergency response plans to ensure that specific challenges posed by an influenza pandemic are addressed and updated.
- Periodically review pertinent legal authorities including quarantine laws and how they apply in a public health emergency, laws and procedures for closing businesses or schools and suspending public meetings during a declared state of emergency, and medical volunteer licensure, liability, and compensation laws for in-state, out of state, and returning retired and non-medical volunteers.
- SD-DOH will update and/or inventory medical supplies, facilities, and services. The following services/items will be inventoried:
 - Medical personnel, including but not limited to; currently licensed physicians, physician assistants, certified nurse practitioners, registered nurses, licensed practical nurses, medical assistants, and other persons who may be trained in the event of an emergency.
 - pharmacies and pharmacists
 - mortuary/funeral services
 - social services/mental health services/faith services
 - hospital and long-term care beds
 - ICU capacity
 - Ventilators
 - temporary medical care sites
 - mobile laboratory services
 - courier services
 - personal protective equipment (e.g., masks, gloves, gowns, PAPRs, fit testing)
 - medical supplies (e.g., syringes, dressings, other durable medical supplies)
 - specimen collection and transport materials
- Identify any other issues specific to pandemic influenza.

Phase 0, levels 1 and 2 – Novel influenza virus identified

- Members of the SD-DOH core team will be notified as to location and discuss potential threat.
- SD-DOH will notify all healthcare professionals of a novel virus detection if within the United States and ask for increased suspicion of influenza-like illness in those ill with recent travel to the affected area.

Phase 0, level 3-- Human-to-human transmission confirmed

- SD-DOH will notify all healthcare professionals of confirmation of human to human transmission and ask for heightened awareness and increased suspicion of influenza-like illness in those ill with recent travel to the affected area.
- SD-DOH core team will notify other entities such as CHS and OEM on an as needed basis.

- SD-DOH core team will convene to review key portions of the pandemic plan and formulate scenarios and strategies to manage an outbreak in South Dakota.
- Services/items cited to be inventoried and updated during the pre-pandemic period will be re-inventoried and assessed for readiness.
- Communication and network systems will be tested in preparation for expanded use during a pandemic situation.
- Assess the mental health services that may be needed during the pandemic.

Phases 1, 2, and 3 -- Confirmation of onset of a pandemic

- SD-DOH core team will consider restricting DOH activities to essential services. May include reassignment of staff to pandemic response activities with appropriate just-in-time training.
- Notify and provide routine updates to all healthcare professionals regarding the onset and progression of the influenza pandemic. Consideration will be given to activating the regional emergency medical response plans based on overall capacity to handle the additional medical need of the communities.
- With OEM consider fully activating the State Emergency Operations Center (SEOC)
- Consider stockpiling supplies as needed from the inventory assessment.
- Assign, stock, and staff temporary medical care sites and mobile laboratory as needed.
- Assess need for and coordination of mental health services.

APPENDIX 1: Priority Groups

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 the State 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.

Group One

Personnel involved in maintaining continuity of government, healthcare response, and vaccine/antiviral distribution:

- Emergency response decision makers: governor, attorney general
- Direct patient care staff including:
 - Acute care hospital workers
 - Long term care facility workers
 - Home health care workers
- Community health nurses and other essential public health employees
- Pharmacists
- Laboratory workers
- Emergency Medical Personnel (actively affiliated with a service)

Group Two

Includes personnel needed to carry out the pandemic influenza response plan (eligibility based on work/duties rather than position label):

- County Emergency Managers
- Police
- Fire-fighters
- National Guard
- Utility workers (water, gas, electricity and essential communications systems)
- Mortuary personnel
- People working with institutionalized persons (e.g., correctional, mental health facilities)
- Persons who are employed in public transportation and the transportation of essential goods such as food and fuel

Group Three

Encompasses people most likely to experience severe outcomes (may change depending on the epidemiology of influenza disease):

- Children 6 months to 23 months of age
- Pregnant women
- Persons over 65 years of age
- Persons aged 2–64 years with underlying chronic medical conditions
- Children aged 6 months–18 years on chronic aspirin therapy

Group Four

Healthy individuals who are at lower risk of developing severe complications.

APPENDIX 2: Vaccine Distribution

There are several vaccine distribution options that may be taken when pandemic influenza threatens the health of South Dakotans. The utility of these options will vary greatly depending on the amount of vaccine available from manufacturers.

Possible vaccine supply levels:

- No Vaccine – no vaccine available to immunize any of the priority groups
- Limited Vaccine – a limited number of doses which will not be adequate to vaccinate those in the high priority group and those who regularly receive their annual influenza immunization
- Adequate Vaccine – vaccine to immunize all high priority groups and those who annually receive immunizations
- Excess Vaccine – vaccine to immunize all high priority groups, those who annually receive immunizations, and an expanded number of doses for those who normally do not get vaccinated but may with the heightened awareness of a possible pandemic

No Vaccine

In the advent no vaccine is currently available from vaccine manufacturers the primary prevention strategies will revolve around antiviral use (prophylaxis to prevent illness and therapy to decrease the severity of illness), a robust hand hygiene/cough etiquette campaign (Stop It, Don't Spread It), avoiding people who are ill, and early access to quality medical care. Protocols will be put in place for use of investigational new drugs (IND) as deemed appropriate under the guidance of the CDC.

Adequate or Excess Vaccine

With the production of adequate vaccine, the current vaccine distribution methods of public and private providers inoculating the high priority groups and others wishing to receive vaccine should be utilized. SD-DOH will provide information from the CDC concerning appropriate antiviral usage to healthcare professionals, and encourage proper prevention techniques including cough etiquette and hand hygiene.

Limited Vaccine

In the advent that manufacturers cannot supply enough vaccine for all groups targeted for vaccination, the SD-DOH core team will convene to review CDC guidelines pertaining to priority groups. In the event no priority groups have been identified by national agencies, the core team may review, modify, and utilize Appendix 1: Priority Groups, Page 34 for the population of South Dakota.

The next key decision to be made is whether to distribute the limited supply of vaccine through the public or private sector supply chain.

Private Sector

- Various agencies including the SD State Medical Association, SD Association of Healthcare Organizations, Association of Clinic Managers, and others will be convened by the Secretary of Health and SD-DOH core team to discuss the distribution of vaccine

to hospitals and clinics across the state through either vaccine distributors or the SD-DOH.

Public

- Planning for the vaccination of individuals identified in the high priority groups will target the use of Community Health Service, Public Health Alliance, Local Health Department, and Indian Health Service facilities located throughout the state of South Dakota. These offices provide a network of facilities throughout the state able to administer vaccine.

The following table lists the proposed planning office location, name, and county served/population.

DRAFT

Table 2: Proposed Influenza Vaccination Clinic Coordinators

#	City/Town	Agency Name	County Served	County Pop.	Type Clinic	Primary Planner
1	Plankinton	Aurora County Community Health	Aurora	3,058	CH	Aurora County Courthouse Plankinton SD, 57368 Ph: 605-942-7163
2	Huron	Beadle County Community Health	Beadle	17,023	CH	Beadle County Community Health Huron, SD 57350-1813 Ph: 605-353-7135
3	Martin	Bennett County Community Health	Bennett	3,574	CH	Bennett County Courthouse Martin, SD 57551-0460 Ph: 605-685-1089
4	Tyndall	Bon Homme County Community Health	Bon Homme	7,260	CH	Bon Homme Co. Community Health Tyndall, SD 57066-0478 Ph: 605-589-4318
5	Brookings	Brookings County Community Health	Brookings	28,220	CH	Brookings County Community Health Brookings, SD 57006-3893 Ph: 605-688-5802
6	Aberdeen	Brown County Community Health	Brown	35,460	CH	Brown County Community Health Aberdeen, SD 57401-4127 Ph: 605-626-2649
7	Chamberlain	Brule County Public Health Services	Brule	5,364	PH	Mid Dakota Public Health Service Chamberlain SD, 57325 Ph: 605-734-0180
8	Ft. Thompson	Ft. Thompson IHS	Buffalo	2,032	IHS	Ft. Thompson IHS Ft. Thompson, SD 57339 Ph: 605-245-2285
9	Ft. Thompson	Buffalo County Community Health	Buffalo	2,032	CH	Buffalo County Community Health

South Dakota Influenza Pandemic Draft Plan

						Ft. Thompson, SD 57339-0200 Ph: 605-245-1539
10	Belle Fourche	Butte County Community Health	Butte	9,094	CH	Butte County Community Health Belle Fourche, SD 57717-1707 Ph: 605-892-2523
11	Lake Andes	Charles Mix Co Community Health	Charles Mix	9,350	CH	Charles Mix County Courthouse Lake Andes, SD 57356-0220 Ph: 605-487-7094
12	Platte	Charles Mix Co Community Health				Charles Mix County Courthouse Platte, SD 57369-0984 Ph: 605-337-3996
13	Wagner	Charles Mix Co Community Health				Charles Mix County Courthouse Wagner, SD 57380-0726 Ph: 605-384-3487
14	Wagner	Wagner IHS	Charles Mix	9,350	IHS	Wagner IHS Wagner, SD 57380 Ph: 605-384-3621
15	Clark	Clark County Community Health	Clark	4,143	CH	Clark County Courthouse Clark, SD 57225-0294 Ph: 605-532-3168
16	Vermillion	Clay County Community Health	Clay	13,537	CH	Clay County Courthouse Vermillion, SD 57069-2097 Ph: 605-677-6767
17	Watertown	Codington County Community Health	Codington	25,897	CH	Codington County Courthouse Watertown, SD 57201-3695 Ph: 605-882-5177
18	Custer	Custer County Community Health	Custer	7,275	CH	SD Department of Health Custer, SD 57730-1509 Ph: 605-673-2847
19	Mitchell	Davison County Community Health	Davison	18,741	CH	Davison County Community Health Mitchell, SD 57301 Ph: 605-995-8050
20	Webster	Day County Community Health	Day	6,267	CH	Day County Community Health Webster, SD 57274 Ph: 605-345-3882

South Dakota Influenza Pandemic Draft Plan

21	Clear Lake	Deuel County Public Health Services	Deuel	4,498	PH	Deuel County Public Health Services Clear Lake, SD 57226 Ph: 605-874-2555
22	Eagle Butte	Cheyenne River Tribal Health	Dewey	5,972	IHS	Cheyenne River Tribal Health Eagle Butte, SD 57625 Ph: 605-964-1193
23	Isabel	Dewey County Community Health	Dewey	5,972	CH	Dewey County Community Health Isabel, SD 57633-0073 Ph: 605-466-2474
24	Timber Lake	Dewey County Community Health				Dewey County Community Health Timber Lake, SD 57656-0312 PH: 605-865-3587
25	Armour	Douglas County Public Health Services	Douglas	3,458	PH	Douglas County Memorial Hospital Armour, SD 57313 Ph: 605-724-2758
26	Bowdle	Edmunds County Public Health Services	Edmunds	4,367	PH	Bowdle Healthcare Center Bowdle SD 57428 Ph: 605-285-6419
27	Hot Springs	Fall River County Community Health	Fall River	7,453	CH	Fall River County Community Health Hot Springs, SD 57747-1632 Ph: 605-745-5135
28	Faulkton	Faulk County Public Health Services	Faulk	2,640	PH	Faulk County Healthcare Network Faulkton SD 57438 Ph: 605-598-4321
29	Milbank	Grant County Community Health	Grant	7,847	CH	Grant County Courthouse Milbank, SD 57252-2499 Ph: 605-432-4596
30	Burke	Gregory County Community Health	Gregory	4,792	CH	Gregory County Courthouse Burke, SD 57523-0199 Ph: 605-775-2634
31	Philip	Haakon County Community Health	Haakon	2,196	CH	Haakon County Courthouse Philip, SD 57567-0396 Ph: 605-859-2467

South Dakota Influenza Pandemic Draft Plan

32	Hayti	Hamlin County Community Health	Hamlin	5,540	CH	Hamlin County Courthouse Hayti, SD 57241-0163 Ph: 605-783-3681
33	Miller	Hand County Public Health Services	Hand	3,741	PH	Hand County Memorial Hospital Miller, SD 57362 Ph: 605-853-2147
34	Alexandria	Hanson County Community Health	Hanson	3,139	CH	Hanson County Community Health Alexandria, SD 57311-0548 Ph: 605-239-4417
35	Buffalo	Harding County Community Health	Harding	1,353	CH	Harding County Courthouse Buffalo, SD 57720-0396 Ph: 605-375-3454
36	Pierre	Hughes County Community Health	Hughes	16,481	CH	Hughes County Community Health Pierre, SD 57501-3133 Ph: 605-773-3638
37	Freeman	Hutchinson County Public Health Services	Hutchinson	8,075	PH	Freeman Community Hospital Freeman, SD 57029 Ph: 605-925-2118
38	Parkston	Hutchinson County Public Health Services				St. Benedict Health Center Parkston, SD 57366 Ph: 605-928-4411
39	Highmore	Hyde County Community Health	Hyde	1,671	CH	Hyde County Courthouse Highmore, SD 57345-0379 Ph: 605-852-2450
40	Kadoka	Jackson County Community Health	Jackson	2,930	CH	Jackson County Community Health Kadoka, SD 57543-0564 Ph: 605-837-2240
41	Wessington Springs	Jerauld County Community Health	Jerauld	2,295	CH	Jerauld County Community Health Wessington Springs, SD 57382-0442 Ph: 605-539-1271
42	Murdo	Jones County Community Health	Jones	1,193	CH	Jones County Community Health Murdo, SD 57559-0152 Ph: 605-669-3012

South Dakota Influenza Pandemic Draft Plan

43	DeSmet	Kingsbury County Community Health	Kingsbury	5,815	CH	Kingsbury County Courthouse Annex Desmet, SD 57231-0196 Ph: 605-854-3853
44	Madison	Lake County Community Health	Lake	11,276	CH	Lake County Courthouse Madison, SD 57042-2940 Ph: 605-256-5309
45	Deadwood	Lawrence County Community Health	Lawrence	21,802	CH	Lawrence County Community Health Deadwood, SD 57732-0604 Ph: 605-578-2660
46	Spearfish	Lawrence County Community Health				Lawrence County Community Health Spearfish, SD 57783 Ph: 605-642-6915
47	Canton	Lincoln County Community Health	Lincoln	24,131	CH	Lincoln County Community Health Canton, SD 57013 Ph: 605-987-4138
48	Kennebec	Lyman County Community Health	Lyman	3,895	CH	Lyman County Courthouse Kennebec, SD 57544-0334 Ph: 605-869-2217
49	Britton	Marshall County Community Health	Marshall	4,576	CH	Marshall Community Building Britton, SD 57430-0082 Ph: 605-448-2744
50	Salem	McCook County Community Health	McCook	5,832	CH	McCook County Courthouse Salem, SD 57058-0354 Ph: 605-425-2671
51	Eureka	McPherson County Public Health Services	McPherson	2,904	PH	Eureka Community Hospital Eureka, SD 57437-0517 Ph: 605-284-2661
52	Faith	Meade County Community Health	Meade	24,253	CH	Meade County Community Health Faith, SD 57626-0082 Ph: 605-967-2150
53	Sturgis	Meade County Community Health				Meade County Courthouse Sturgis, SD 57785-1452 Ph: 605-347-5650

South Dakota Influenza Pandemic Draft Plan

54	Howard	Miner County Community Health	Miner	2,884	CH	Miner County Courthouse Howard, SD 57349-0067 Ph: 605-772-5381
55	Sioux Falls	Minnehaha County Community Health	Minnehaha	148,281	CH	Minnehaha County Community Health Sioux Falls, SD 57104-6419 Ph: 605-367-5360
56	Sioux Falls	Sioux River Valley Community Health	Minnehaha	148,281	LH	City of Sioux Falls Health Department Sioux Falls, SD 57104 Ph: 605-367-8793
57	Flandreau	Moody County Public Health Services	Moody	6,595	PH	309 North Prairie St. Flandreau, SD 57028-1253 Ph: 605-997-3779
58	Rapid City	Sioux San Hospital	Pennington	88,565	IHS	Sioux San Hospital Rapid City, SD 57702 Ph: 605-355-2500
59	Hill City	Pennington County Community Health	Pennington	88,565	CH	Pennington County Community Health Hill City, SD 57745-0254 Ph: 605-574-2225
60	Rapid City	Pennington County Community Health				Pennington County Community Health Rapid City, SD 57701-5720 Ph: 605-394-2516
61	Bison	Perkins County Community Health	Perkins	3,363	CH	Perkins County Community Health Bison, SD 57620-0236 Ph: 605-244-5978
62	Lemmon	Perkins County Community Health				Perkins County Community Health Lemmon, SD 57638-0447 Ph: 605-374-5962
63	Hoven	Potter County Community Health	Potter	2,693	CH	Potter County Community Health Hoven, SD 57450-0783 Ph: 605-948-2394
64	Sisseton	Coteau Des Prairies Clinic	Roberts	10,016	IHS	Coteau Des Prairies Clinic Sisseton, SD 57262 Ph: 605-698-7681

South Dakota Influenza Pandemic Draft Plan

65	Sisseton	Roberts County Community Health	Roberts	10,016	CH	Roberts County Community Health Sisseton, SD 57262-1544 Ph: 605-698-4183
66	Woonsocket	Sanborn County Community Health	Sanborn	2,675	CH	Sanborn County Courthouse Woonsocket, SD 57385-0366 Ph: 796-4510
67	Kyle	Kyle Health Center	Shannon	12,466	IHS	Kyle Health Center Kyle, SD 57752 Ph: 605-455-2451
68	Pine Ridge	Pine Ridge IHS	Shannon	12,466	IHS	Pine Ridge IHS Pine Ridge, SD Ph: 605-867-5131
69	Pine Ridge	Shannon County Community Health	Shannon	12,466	CH	Shannon County Community Health Pine Ridge, SD 57770-1988 Ph: 605-867-5911
70	Redfield	Spink County Community Health	Spink	7,454	CH	Spink County Courthouse Redfield, SD 57469-1266 Ph: 605-472-2434
71	Ft. Pierre	Stanley County Community Health	Stanley	2,772	CH	Stanley County Courthouse Ft. Pierre, SD 57532-0194 Ph: 605-223-7740
72	Onida	Sully County Community Health	Sully	1,556	CH	Sully County Courthouse Onida, SD 57564 Ph: 605-258-2750
73	Winner	Tripp County Public Health Services	Tripp	6,430	PH	Winner Regional Healthcare Center Winner, SD 57580 Ph: 605-842-7166
74	Viborg	Turner County Public Health Services	Turner	8,849	PH	Pioneer Memorial Hospital Viborg, SD 57070-0368 Ph: 605-326-5161 Ext. 3051
75	Elk Point	Union County Community Health	Union	12,584	CH	Union County Courthouse Elk Point, SD 57025 Ph: 605-356-2644

76	Mobridge	Walworth County Public Health Services	Walworth	5,974	PH	Mobridge Regional Hospital Mobridge, SD 57601 Ph: 605-845-8127
77	Yankton	Yankton County Community Health	Yankton	21,652	CH	Yankton County Courthouse Yankton, SD 57078-0844 Ph: 605-260-4400 Option 1
78	Dupree	Ziebach County Community Health	Ziebach	2,519	CH	Ziebach County Courthouse Dupree, SD 57623-0068 Ph: 605-365-5163

PH = Public Health Alliance Offices, CH = Community Health Services Offices, LH = Local Health Department, IHS = Indian Health Service

DRAFT

Table 3: Breakdown of Clinic Personnel per Vaccination Clinic***Clinic Personnel for a “Medium-Size” Vaccine Clinic**

Position	Number per 8-h Shift	Number per 16-h Day	Experience
Greeter/Registration	2	4	Non-medical
Medical Screeners	2	4	Physician or Nurse
Vaccination Assistants	3	6	Cross-trained to alternate vaccination, fill out vaccine card, and sign as witness
Vaccine Administrators	5	10	Physician or Nurse
Forms Collectors	1	2	Non-medical volunteers
Clinic Flow Controllers	1	2	Non-medical
Clinic Manager	1	2	Existing Vaccine Programs Personnel
Security Staff	3	6	Non-public health resource
Emergency Medical Personnel	1	2	Medical
Total Personnel	19	38	24 Medical/16hr day 28 Non-Medical/16hr day

Clinic Personnel for a “Small-Size” Vaccine Clinic

Position	Number per 8-h Shift	Number per 16-h Day	Experience
Greeter/Educator	1	2	Non-medical
Registration Staff	3	6	Non-medical
Medical Screeners	3	6	Physician or Nurse
Vaccination Assistants	1	2	Cross-trained to alternate vaccination, fill out vaccine card, and sign as witness
Vaccine Administrators	1	2	Physician or Nurse
Forms Collectors	1	2	Non-medical volunteers
Clinic Flow Controllers	1	2	Non-medical
Clinic Manager	1	2	Existing Vaccine Programs Personnel
Security Staff	2	4	Non-public health resource
Travel Team	3	6	Physician, Nurse, Administrative person
Emergency Medical Personnel	1	2	Medical
Total Personnel	18	36	16 Medical/16hr day 20 Non-Medical/16hr day

* Not intended for mass vaccination.

Obtain Authorization/Standing Orders: A physician in collaboration with the South Dakota Department of Health will issue Standing Orders to provide authorization for administration of the influenza vaccine (which may be in the Investigational New Drug (IND) phase). Standing Orders should also be obtained for responding to medical emergencies that occur during vaccination

clinics. In addition to providing standing orders, the physician or his/her designee will approve the content of informational materials and serve as a medical consultant for nursing staff.

Vaccine Clinic Flow: Individuals presenting themselves to a vaccine clinic will proceed through the clinic as described in this section. Small adjustments may be necessary to accommodate the layout of the facility being utilized.

1. **Orientation and Paperwork:** As vaccine recipients arrive, they are routed to the clinic entrance by security personnel who are handling outside traffic flow and parking. Upon entering the building, vaccine recipients go through an identity verification and are directed to a location where the greeter-educator briefs groups (up to 30) about what is going to take place during the clinic process, provides all required paperwork (preferably in a packet form) and instructs the vaccine recipients how to complete the necessary paperwork. Time is allowed for reading and filling in the required personal information (name, address, etc). The number of persons in the orientation briefings can vary to accommodate the rate at which people arrive. Orientation locations can also serve as holding locations if bottlenecks occur along the clinic line. This method will insure a steady flow of vaccine recipients to the next step.
2. **Registration:** After orientation and completion of the paperwork, the clinic flow coordinators direct vaccine recipients to registration tables where staff check each vaccine recipient's form for completeness and accuracy.
3. **Medical Assessment:** After ensuring that the paperwork is completed appropriately, vaccine recipients are directed by clinic flow controllers to the medical assessment area. Here medical screening personnel discuss with each vaccine recipient individually the medical conditions that would prevent receipt of the vaccine and determine if any such conditions are present. Each vaccine recipient is asked to sign the consent form before proceeding further. A parent or legal guardian will be required to sign the consent form if the vaccine recipient is under the age of 18.
4. **Vaccination:** After medical assessment, vaccine recipients with no medical contraindications are directed to the vaccination area. This area is a screened area that affords privacy to persons who find it necessary to remove clothing in order to expose the vaccination site. A vaccination assistant helps vaccine recipients expose their upper arm and cleanses the vaccination site. The vaccine recipient then proceeds to the vaccine administrator who administers the vaccine and completes the necessary documentation.
5. **Forms Collection and Exit:** Before leaving the clinic, vaccine recipients are routed to a forms collector stationed near the exit. This individual collects all required paperwork, answers any remaining questions and informs vaccine recipients that they are finished with the process.

Clinic Duties: *The following positions will need to be staffed for use in medium and small vaccination clinics described in this annex. The positions, with a description of the suggested responsibilities involved are provided.*

1. **Clinic Manager:** Oversees all clinic functions/problem solving (Department of Health Personnel will be assigned).
2. **Greeter-Educators:** Greet and conduct initial orientation of potential vaccine recipients upon their arrival; provide basic information (verbally or with a video presentation) about the vaccine and the vaccination process; distribute informational material and clinic document; explain how to complete the documents and answer questions (non-medical).

Greeter-educators should be able to explain the purpose of receiving the vaccine, outline the vaccination clinic process, and distribute and explain the clinic documents to vaccine recipients individually and in groups.

3. Registration Staff: Review each vaccine recipient's documents for completeness and accuracy; assist clients with completing documents (non-medical).

The registration staff should be familiar with each form that is distributed. They should be able to follow instructions on how to respond to exceptional situations such as non-English speaking patients or patients who are anxious, hostile, or disoriented. If the form has not been completed correctly or completely, registration staff should be able to address and correct these problems. They should be prepared to read the forms to illiterate or semiliterate persons needing their assistance.

4. Medical Screeners: Assess clients for contraindications to vaccination.

This role should be filled by a physician or nurse. If the vaccine is still on Investigational New Drug (IND) status, medical screening personnel should ensure that the consent form has been read, understood, and signed by each potential vaccine recipient.

5. Vaccination Assistants: Assist the vaccine administrator with all aspects of pre- and post-vaccination activities; ensure that vaccination station maintains adequate supplies; instruct recipients on location of vaccination; assist vaccine recipients in preparing the vaccination site (roll up sleeve, remove arm from shirt/blouse, etc.); clean vaccination site with alcohol preps.

Vaccination assistants should have a thorough understanding of the vaccination process and the necessary supplies, proper care in handling of vaccine in the clinic, how to disinfect contaminated surfaces and dispose of soiled materials, and where to access additional information if needed. Vaccination assistants are also responsible for entering the vaccine lot numbers on the patient's consent form and clinic record and providing the vaccine recipient with a vaccination card that documents when and where the vaccine was administered.

6. Vaccine Administrators: Oversee the vaccination process; administer the vaccine; sign the clinic record; observe vaccine recipients for immediate reaction or complications (medical).

Vaccine administrators can be nurses, physicians, or professionals authorized by South Dakota law. They should have in-depth understanding of proper vaccination techniques, methods to prevent contamination of the vaccine, the medical conditions that constitute contraindications for vaccinations, the risks of vaccination, and preparation of the vaccination site. Vaccinators will also be prepared to respond to medical emergencies that may occur within the vaccination area.

7. Forms Collectors: Verify that forms are correctly completed. Collect all necessary forms from recipients before departure (non-medical).

The forms collector is responsible for checking that the vaccination team has signed the clinic record and entered the lot numbers on the appropriate documents. As the last staff to have contact with vaccine recipients, the forms collector will have the ability to ensure a response by the appropriate staff to any remaining concerns that clients may have.

8. Clinic Flow Controllers: Direct vaccine recipients through the clinic process and monitors clinic flow (non-medical).

Clinic flow coordinators are responsible for continuously monitoring and directing client activity throughout the facility. They should be able to calmly manage and assist people who may be anxious and unable to follow directions. When congestion (backlog) is noted, flow controllers determine if staff at other locations are less busy and request assistance in the congested area as needed. They are also responsible for feedback of information

regarding number and rate of “upstream” clients to the vaccination assistants to enable them to maximize use of all vaccine doses in vaccine vials. Flow controllers may be in a position to provide early alert of situations that may require additional security personnel.

9. **Security Staff:** Ensure an orderly flow of traffic and parking at the clinic site; assist in maintaining orderly movement of vaccine recipients through the clinic process; provide necessary control if persons become unruly; assist supply officer in maintaining security of vaccines and other clinic supplies (non-medical).
10. **Emergency Medical Personnel:** Respond to medical emergencies (medical).
Emergency personnel should be able to respond to medical emergencies, including reactions ranging from the minor to anaphylactic shock and serious medical emergencies that are incidental and unrelated to vaccination but can be expected to occur whenever large groups of people congregate. For large operations, a physician, physician’s assistant, nurse practitioner or emergency medical technician should be on-site at all times during clinic operations.

Staff Training: The clinic manager will ensure all clinic staff receive a group orientation to the overall purpose, function, and flow of the vaccination clinic as well as specific verbal and written directions for their specific roles.

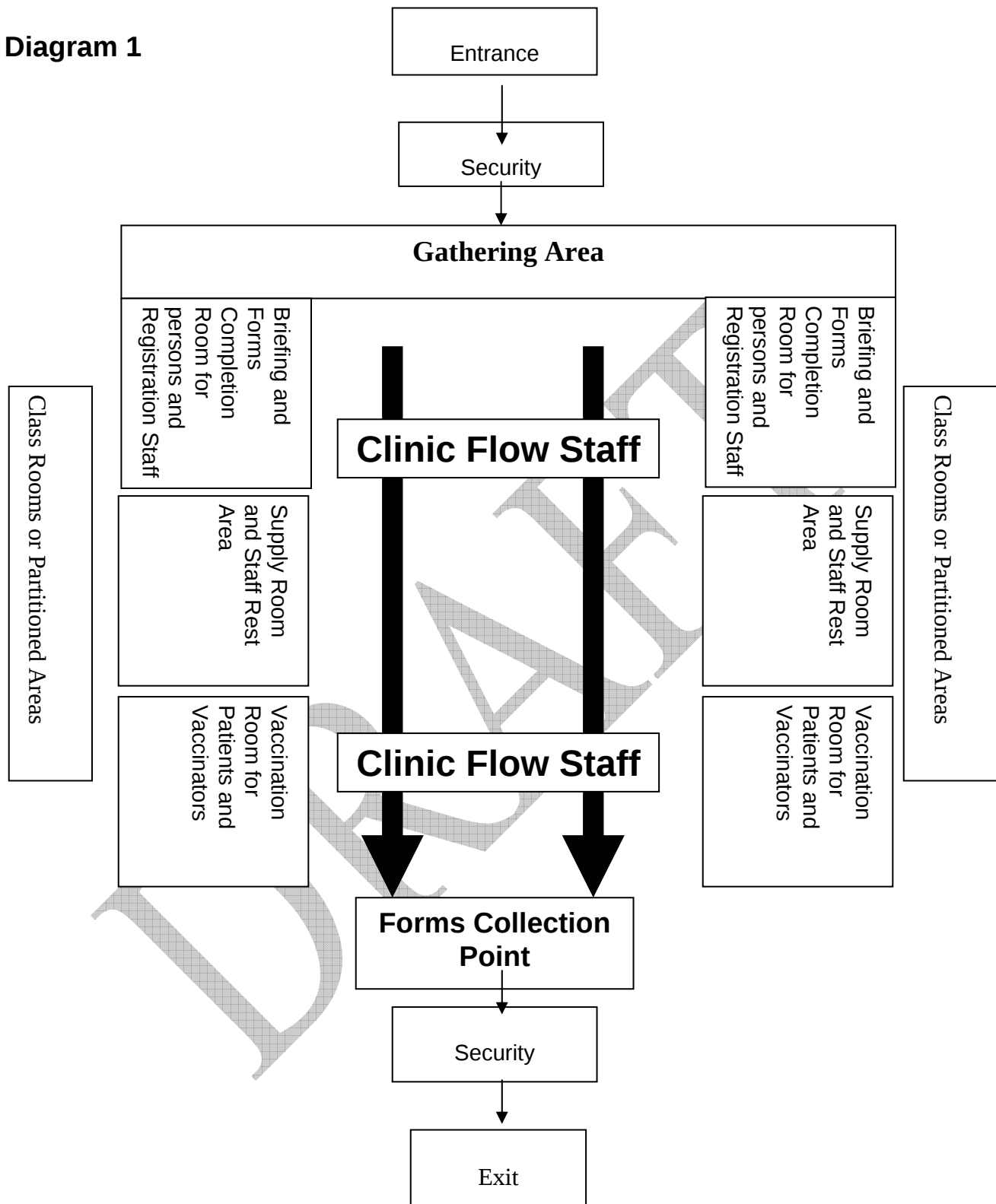
During the orientation, a diagram with annotations will be provided to show traffic flow (see Diagram 1: Clinic Layout Page 51), the functions of all clinic stations, and a list of staff assigned to each role and each station, if possible. The general responsibilities of each area of the vaccination clinic are reviewed with the entire staff. All staff need to know where they will work, where their supplies and resources are located, and who their consultants are as well as how to summon them. Emergency Medical personnel should also attend the group orientation to become familiar with the layout of the clinic site.

Daily post-clinic debriefings should be held to assess staff performance and ascertain if additional training or clinic reconfiguration is needed.

Clinic Layout and Flow: Clinics should have clearly marked entrance and exit points with adequate “waiting” space for queues of people seeking vaccination. Security staff may be posted at both locations to maintain order as needed. The traffic flow within the clinic should be controlled and should follow a logical path from entry into the clinic to exit from the clinic. A linear path of traffic flow from entry to exit on opposite sides of the facility is optimal. If time permits, easy-to-read signage should be provided to guide people through the clinic process. Diagram 1 on Page 51 is an example of a clinic flow diagram.

It is likely that the registration and medical screening processes will be the most time-consuming clinic activities. Sufficient staff should be assigned to move persons through these areas to keep a steady flow of persons to the vaccination areas.

Traffic in the area where vaccine is being administered should be kept to a minimum. Ideally, the vaccine administration tables should be set up so staff have their backs to the wall and patients are not congregating or walking behind them. The three steps of the actual vaccination process (site preparation, vaccination, and post-vaccination care) will all take place in a relatively small space in the same area. Since some vaccine recipients may need to remove shirts or blouses to be vaccinated, a separate, screened privacy area should be available out of view of other persons lined up for vaccination. The medical emergency area should be located as close to the vaccine administration area as possible.

Diagram 1

Vaccine Storage and Handling: The package insert should be consulted for optimal cold storage criteria (typically 2-8°C). Styrofoam containers and cool packs are adequate for local transport and day use. If the clinic lasts for more than one day, arrangements will be made to store the influenza vaccine in a secure location. Vaccine usage should be monitored closely, and arrangements should

be made to obtain additional vaccine, if needed. Arrangements should also be made for returning unused vaccine.

Disposal of Needles and Medical Supplies: All vaccination operators should observe universal precautions for preventing blood exposures and blood-borne pathogen transmission (i.e., hepatitis B and C viruses [HBV, HCV], and human immunodeficiency virus [HIV]). Specific guidelines for the proper disposal of instruments and other potentially contaminated material during an influenza clinic operation are summarized below:

- Medical waste sharps containers should be available in the area where the sharp is used.
- Syringes and needles should be deposited into a sharps container immediately after use.
- Arrangement should be in place for transport and destruction of filled sharps containers.

Medical waste, including gauze or cotton used during administration of vaccine, other potentially contaminated material, and empty vaccine vials should be bagged in appropriately marked biohazard bags and incinerated or autoclaved on-site if possible.

Vaccine Security and Tracking: Since the supply of influenza vaccine is limited and the demand for vaccine may be extremely high, care must be taken to protect the vaccine supply from theft and fraud. Because of this factor, each and every dose and vial must be accounted for before and after each clinic session.

Communication Systems: Each clinic should have a working phone, preferably with internet connectivity so that forms can be accessed and data entered directly into the South Dakota Immunization Information System (SDIIS). If available, two-way radios, cell phones, pagers should be distributed to the clinic staff. Ideally, replacement batteries and/or battery chargers for each device also should be made available. A list of important phone numbers should also be distributed to all clinic staff.

Clinic Supplies and Equipment: A secure area should be identified for maintaining clinic supplies. A list of clinic supplies should be kept on hand at the clinic site to be used for staff training, clinic set-up, and restocking. A list of pertinent vaccination documents is listed in Table 4. A check-off list of suggested supplies is provided in Table 5.

Post Clinic Activities: Post-clinic activities are necessary to ensure that the event is documented for the public record, to determine the cost of the operation and to enhance efficiency for future efforts. In this context, evaluation of influenza clinics should include review of expenditures and in-kind costs incurred in the operation, identification of gaps and problems, recommended changes in emergency response plans, and a description of implications for the public health infrastructure.

TABLE 4

VACCINATION DOCUMENTS**(Documents are under development)**

Document	Information Collected	How Used
IND Informed Consent	Name, Address, Age/DOB, M/F, lot number, date, other?	Information entered; Vaccine recipient reads and signs in presence of staff
Vaccine Information Statement	Verbal Yes/No: Have you read? Do you understand?	Given to vaccine recipients to take home
Clinic Vaccination Record	Name, Address, Age/DOB, M/F, SS#, lot number, date, other?	Official clinic medical record
Vaccination Card	Name, Address, Age/DOB, M/F, lot number, date, signature/stamp, other?	Information entered on card; Vaccine recipient receives/keeps card to verify receipt of vaccine

ADMINISTRATIVE WORKSHEETS
(Documents are under development)

Document	<i>Type of Information</i>	How Used
Staffing Assignment Sheet	Date of clinic Clinic roles Individuals assigned	Records staffing assignments

TABLE 5**INFLUENZA CLINIC SUPPLIES AND EQUIPMENT**

General Supplies and Equipment	Vaccine Administration Supplies	Emergency Supplies
----- Tables Chairs Water and cups Paper Pens, pencils Envelopes Rubber bands Tape Stapler/staples Scissors Post-it notes Clipboards File boxes Telephone Paper towel Kleenex tissue Table pads and clean paper to cover table for work site Garbage containers and trash bags ID badges for staff List of emergency phone numbers	----- vaccine cooler/refrigerator for vaccine Influenza vaccine Sterilized needles and syringes "Sharps" containers Latex gloves Latex-free gloves Antibacterial handwashing solutions Alcohol wipes Band-Aids Gauze Adhesive tape Spray bottle of bleach	----- Standing orders for emergencies Ampules of epinephrine 1:1000 SQ Ampules of diphenhydramine 50mg IM 3cc syringes with 1", 25-gauge needles 1.5" needles Tuberculin syringes with 5/8" needles (for epinephrine) Alcohol wipes Tongue depressors Adult and pediatric pocket masks with one-way valve Adult and pediatric airways Tourniquet Gurney Stethoscope, Thermometer Flashlight, Blood-Pressure Cuff Cots Blankets Pillows
	Crowd Management Supplies ----- Signs for clinic stations and between stations Queue partitions (to keep people in lines)	Computer Equipment and Supplies ----- Computers Printers Paper Internet access

STATE OF SOUTH DAKOTA EMERGENCY OPERATIONS PLAN RESPONSIBILITIES MATRIX (Defined by Agency Capabilities)		EMERGENCY SUPPORT FUNCTIONS 1 - 15	TRANSPORTATION (1) Systems (2) Transport	COMMUNICATION	PUBLIC WORKS AND ENGINEERING	FIREFIGHTING (1) Wildland (2) Structure	INFORMATION AND PLANNING	MASS CARE	RESOURCE SUPPORT (1) State (2) Wildland Fire	HEALTH SERVICES (1) Body (2) Mind	SEARCH AND RESCUE	HAZARDOUS MATERIALS	FOOD	ENERGY	ANIMAL HEALTH	DEBRIS CLEARANCE	LAW ENFORCEMENT
AGENCY			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agriculture						S	S					S			S		
Agriculture Wildland Fire Suppression				S		P1/S2	S		P2/S1								
Animal Industry Board							S			S		S	S		P		
Attorney General							S										S
Board of Regents				S			S	S		S		S	S		S		S
Bureau of Administration			P2		P		S		S					P			
Bureau of Information & Telecommunications				P			S		S								
Bureau of Information & Telecommunications State Radio				S			S										
Bureau of Personnel							S		S								
Commerce & Regulations				S	S		S		S	S		S					S
Commerce & Regulations Fire Marshal				S	S	P2/S1	S			S	S	S					
Commerce & Regulations Highway Patrol			S	S			S		S		S	S					P
Corrections						S	S	S	S				S			S	
Education & Cultural Affairs							S	S					S				
Environment & Natural Resources					S		S			S		P	S		S	S	
Game, Fish & Parks			S	S	S	S	S		S		S	S			S	S	S
Health				S			S	S	S	P1/S2		S	S		S		
Human Services				S			S	S	S	P2/S1			S				
Labor							S		S								
Military & Veterans Affairs Division of Emergency Mgmt.				S	S		P	P	P1/S2		P		P	S		S	
Military & Veterans Affairs South Dakota National Guard			S	S	S	S	S	S	S	S	S	S	S			S	S
Office Of The Governor				S			S		S								S
Revenue				S			S		S								S
Social Services							S	S		S			S	S			
South Dakota Housing Development Authority					S		S	S									
South Dakota Office of Tribal Government Relations				S			S										
Tourism				S			S										
Transportation			P1/S2	S	S		S		S			S				P	
Volunteer Organizations (State Support)				S			S	S		S	S		S			S	

DRAFT

APPENDIX 3: Antiviral Medication Distribution

As with influenza vaccine availability, there are several key issues which need to be addressed in reference to antiviral medications. The first is the availability within the state at the time a potential pandemic influenza strain starts to circulate (human-to-human transmission). There are several options which need to be considered:

- Federal purchase of existing supply and subsequent distribution to states
- Federal stockpile with distribution to states
- State government reserves
- State purchase of antivirals
- Expanded provider inventory
- Inventory monitoring

In addition, a set of controls for distribution of antivirals will be developed by the SD-DOH core team. These controls will disseminate information on the appropriate dosage of antiviral medication for treatment and therapy (following CDC recommendations and guidelines). The SD-DOH core team may also target priority groups for antiviral use (see Appendix 1: Priority Groups, Page 34), develop algorithms for administration (positive influenza rapid antigen test) and develop the ability to track antiviral supply, distribution, and use through an electronic data management system.

Federal purchase

At this time there has been little discussion at the federal level regarding this option. If the state does receive antivirals through this method, an antiviral distribution plan will be coordinated using the principles developed in Appendix 2: Vaccine Distribution, Page 35.

Federal stockpile

The United States has a limited supply of influenza antiviral medication stored in the Strategic National Stockpile (SNS) for emergency situations like outbreak situations or in the event of an influenza pandemic. The SNS currently stores the antiviral amantadine and is looking into the possibility of building a store of the neuraminidase inhibitor, oseltamivir.

State reserves

At this time the State of South Dakota has not conducted an assessment on the cost and effectiveness of storing antiviral medications in South Dakota. Two storage methods would need to be evaluated. While a central location would allow for easier inventory and stock rotation, several caches across the state would allow for quicker access during an emergency response.

State purchase

The State of South Dakota may purchase antivirals prior to and in preparation for the onset of an influenza pandemic.

Expanded provider inventory

Many pharmacies across the state carry antiviral medication in both over-the-counter and prescription forms. Voluntary expansion of these stores along with strict monitoring of stock and expiration dates would create an enlarged inventory among providers in South Dakota.

Inventory monitoring

If development, an antiviral monitoring system would provide an accurate accounting of the antivirals available within the state at any time and weekly/monthly use patterns can be identified which will help private providers

and public health determine the state’s need during a normal influenza season and allow for estimates of need during a pandemic.

Which ever method will be utilized, there is still the prerequisite to assess the antiviral medication need across communities within South Dakota before distribution can take place. Development of a web-based survey, utilizing the same properties as the vaccine assessment application currently under development, will drastically decrease the staff needed to conduct the assessment which may then be used for other activities.

After the assessment has been performed and needs identified in the community, distribution of the antiviral medication can then commence. Just as with the vaccine distribution, several approaches may be utilized depending on supply (limited vs. adequate), use (prophylaxis vs. therapy), and persons identified for treatment and prophylaxis (see Appendix 1: Priority Groups, Page 34). The vaccine distribution plan developed in Appendix 2: Vaccine Distribution, Page 35 may also be used for antiviral distribution planning.

Table 6: Antiviral Medication Use

Drug Name	Effective Against	Approved Use	Age Guidelines
Amantadine (Symmetrel)	Influenza A	Prophylaxis and Treatment	Persons 1 year of age and older
Rimantadine (Flumadine)	Influenza A	Prophylaxis	Persons 1 year of age and older
		Treatment	Persons 18 years of age and older
Oseltamivir (Tamiflu)	Influenza A and B	Prophylaxis	Persons 13 years of age and older
		Treatment	Persons 1 year of age and older
Zanamivir (Relenza)	Influenza A and B	Treatment	Persons 7 years of age and older

 VACCINE ADVERSE EVENT REPORTING SYSTEM 24 Hour Toll-Free Information 1-800-822-7967 P.O. Box 1100, Rockville, MD 20849-1100 PATIENT IDENTITY KEPT CONFIDENTIAL		For CDC/FDA Use Only VAERS Number _____ Date Received _____													
Patient Name: Last _____ First _____ M.I. _____ Address _____ _____ _____ City _____ State _____ Zip _____ Telephone no. (____) _____		Vaccine administered by (Name): Responsible Physician _____ Facility Name/Address _____ _____ _____ City _____ State _____ Zip _____ Telephone no. (____) _____													
Form completed by (Name): _____ Relation ☐ Vaccine Provider ☐ Patient/Parent to Patient ☐ Manufacturer ☐ Other Address (if different from patient or provider) _____ _____ _____ City _____ State _____ Zip _____ Telephone no. (____) _____															
1. State	2. County where administered	3. Date of birth mm / dd / yy	4. Patient age												
		5. Sex ☐ M ☐ F	6. Date form completed mm / dd / yy												
7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any _____ _____ _____		8. Check all appropriate: ☐ Patient died (date mm / dd / yy) ☐ Life threatening illness ☐ Required emergency room/doctor visit ☐ Required hospitalization (____ days) ☐ Resulted in prolongation of hospitalization ☐ Resulted in permanent disability ☐ None of the above													
9. Patient recovered ☐ YES ☐ NO ☐ UNKNOWN		10. Date of vaccination mm / dd / yy AM _____ PM _____ Time _____ PM													
11. Adverse event onset mm / dd / yy AM _____ PM _____ Time _____ PM		12. Relevant diagnostic tests/laboratory data _____ _____													
13. Enter all vaccines given on date listed in no. 10															
Vaccine (type)	Manufacturer	Lot number	Route/Site												
No. Previous Doses															
a. _____	_____	_____	_____												
b. _____	_____	_____	_____												
c. _____	_____	_____	_____												
d. _____	_____	_____	_____												
14. Any other vaccinations within 4 weeks prior to the date listed in no. 10															
Vaccine (type)	Manufacturer	Lot number	Route/Site												
No. Previous doses	Date given														
a. _____	_____	_____	_____												
b. _____	_____	_____	_____												
15. Vaccinated at: ☐ Private doctor's office/hospital ☐ Military clinic/hospital ☐ Public health clinic/hospital ☐ Other/unknown		16. Vaccine purchased with: ☐ Private funds ☐ Military funds ☐ Public funds ☐ Other/unknown													
17. Other medications _____ _____		18. Illness at time of vaccination (specify) _____ _____													
19. Pre-existing physician-diagnosed allergies, birth defects, medical conditions (specify) _____ _____		20. Have you reported this adverse event previously? ☐ No ☐ To health department ☐ To doctor ☐ To manufacturer													
21. Adverse event following prior vaccination (check all applicable, specify) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Adverse Event</th> <th>Onset Age</th> <th>Type Vaccine</th> <th>Dose no. In series</th> </tr> </thead> <tbody> <tr> <td>☐ In patient</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>☐ In brother or sister</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Adverse Event	Onset Age	Type Vaccine	Dose no. In series	☐ In patient	_____	_____	_____	☐ In brother or sister	_____	_____	_____	Only for children 5 and under 22. Birth weight _____ lb. _____ oz. 23. No. of brothers and sisters _____ Only for reports submitted by manufacturer/immunization project 24. Mfr./Imm. proj. report no. _____ 25. Date received by mfr./imm. proj. _____ 26. 15 day report? ☐ Yes ☐ No 27. Report type ☐ Initial ☐ Follow-Up	
Adverse Event	Onset Age	Type Vaccine	Dose no. In series												
☐ In patient	_____	_____	_____												
☐ In brother or sister	_____	_____	_____												

Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.

Appendix 5: Enhanced Influenza-like Illness Report Card and Laboratory Submission Form

~To Be Developed~

DRAFT

Table 7 : Estimated Health Impact on South Dakota

Estimated influenza-associated mortality (number of cases)

	Gross Attack Rate		
	15%	25%	35%
Minimum	194	324	455
Most Likely	321	536	750
Maximum	528	882	1232

Estimated influenza-associated hospitalizations (number of cases)

	Gross Attack Rate		
	15%	25%	35%
Minimum	489	870	1218
Most Likely	1362	2269	3176
Maximum	1746	2909	4073

Estimated influenza-associated outpatient visits (number of cases)

	Gross Attack Rate		
	15%	25%	35%
Minimum	47,923	79,872	111,820
Most Likely	61,131	101,884	142,637
Maximum	86,979	144,965	202,952

XI. Glossary

DRAFT

XII. List of Acronyms

DRAFT