KANSAS PANDEMIC INFLUENZA PREPAREDNESS AND RESPONSE PLAN
Version 2.0
January 2009

Kansas Response Plan
Biological Incident Annex
Attachment 1

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GLOSSARY

Characterization	**Identification of the strain of an influenza virus such as A/Panama**
DMORT	**A coordinated effort of forensic experts and mortuary personnel to effectively handle a mass fatality disaster**
Endemic	**A disease that is continually present in a community or a region**
Enzootic	**Affecting or peculiar to animals of a specific geographic area.**
Epidemic	**The occurrence of a disease in a community or region clearly in excess of normal expectations**
Epizootic	**Affecting a large number of animals at the same time within a particular region or geographic area.**
Health Alert Network	**An Internet-based service used to communicate health and emergency messages**
Influenza-like illness (ILI)	**The presence of fever $\geq$100° F, with a cough and/or sore throat**
JIC	**A central location for involved agencies to coordinate public information activities and a forum for news media representatives to receive disaster or emergency information**
Novel virus	**A virus rarely or not previously known to infect humans**
Pandemic	**The occurrence of a disease in excess of normal expectations in extensive regions, countries and continents**
PCR	**Polymerase Chain Reaction is a laboratory method used to isolate and amplify a fragment or sequence of DNA. The technique allows for the rapid identification of organisms such as bacteria, fungi and viruses.**
Strategic National Stockpile (SNS)	**A federal cache of medical supplies and equipment to be used in emergency and disaster situations**
Subtype	**Identification of influenza A viruses according to the hemagglutinin (H) and neuraminidase (N) components of the virus, such as H1N1 or H3N2**
Surveillance	**The collection, analysis and dissemination of data**
Syndromic	**Occurring as part of a complex of signs and symptoms suggesting the existence of an undesirable condition or disease**

ACRONYMS

ACIP	**Advisory Committee on Immunization Practices**
BDCP	**Bureau of Disease Control and Prevention**
BIA	**Biological Incident Annex**
CDC	**Centers for Disease Control and Prevention**
CERC	**Crisis/Emergency Risk Communications**
COOP	**Continuity of Operations Plan**
CPHP	**Center for Public Health Preparedness**
DHS	**U.S. Department of Homeland Security**
DOH	**Division of Health**
DMORT	**Disaster Mortuary Operational Response Team**
EIS	**Epidemic Intelligence Service**
EMT	**Emergency Medical Technician**
EOC	**Emergency Operations Center**
EOP	**Emergency Operations Plan**
ESF	**Emergency Support Function**
FDA	**Food and Drug Administration**
FEMA	**Federal Emergency Management Agency**
HHS	**U.S. Department of Health and Human Services**
HAvBED	**Kansas Hospital Bed Availability System**
HSEEP	**Homeland Security Exercise Evaluation Program**
IAL	**Incident Action Level**
ICP	**Infection Control Professional**
ICS	**Incident Command System**
ILI	**Influenza-like illness**
IND	**Investigational New Drug**
JIC	**Joint Information Center**
KAHD	**Kansas Animal Health Department**
KBEMS	**Kansas Board of Emergency Medical Services**
KDA	**Kansas Department of Agriculture**
KDEM	**Kansas Division of Emergency Management**
KDHE	**Kansas Department of Health and Environment**
KHEL	**Kansas Health and Environmental Laboratories**
KS-HAN	**Kansas Health Alert Network**
LHD	**Local Health Department**
LIN	**Laboratory Information Network**
NIMS	**National Incident Management System**
NRP	**National Response Plan**
NREVSS	**National Respiratory and Enteric Virus Surveillance System**
OIE	**World Organization for Animal Health**
OLRH	**Office of Local and Rural Health**
OSE	**Office of Surveillance and Epidemiology**

OVS	**Office of Vital Statistics**
PCR	**Polymerase Chain Reaction**
PIPC	**Pandemic Influenza Preparedness Committee**
PHIX	**Public Health Information Exchange**
PIO	**Public Information Officer**
PSAP	**Public Safety Answering Point**
PPE	**Personal Protective Equipment**
RSS	**Receipt, Staging and Storage**
RT-PCR	**Real Time Polymerase Chain Reaction**
SEOC	**State Emergency Operations Center**
SNS	**Strategic National Stockpile**
SOG	**Standard Operating Guide**
USDA	**United States Department of Agriculture**
USG	**United States Government**
VAERS	**Vaccine Adverse Events Reporting System**
VIS	**Vaccine Information Statement**
VOAD	**Voluntary Organizations Active in Disasters**
WHO	**World Health Organization**

INTRODUCTION

Influenza viruses are unique in their ability to cause sudden illness among humans in all age groups on a global scale. The importance of influenza viruses as biologic threats is due to a number of factors including the high degree of transmissibility, the presence of a vast reservoir of novel variants (primarily aquatic birds) and the unusual properties of the viral genome. The infamous "Spanish flu" of 1918-19 was responsible for more than 20 million deaths worldwide, primarily among young adults. Mortality rates associated with recent pandemics of 1957 and 1968 were reduced in part by the use of antibiotic therapy for secondary bacterial infections and aggressive supportive care of infected patients. However, these later pandemics were associated with high rates of morbidity and social disruption. The Centers for Disease Control and Prevention (CDC) estimates the economic loss associated with the next pandemic will be in the billions of dollars.

Experts agree an influenza pandemic is inevitable. To prepare for the next pandemic, the Kansas Department of Health and Environment (KDHE) Center for Public Health Preparedness (CPHP), in cooperation with local and state partners, has developed this Kansas Pandemic Influenza Preparedness and Response Plan, which provides an overview of strategies to reduce pandemic influenza-related morbidity, mortality and social disruption in the state.

Influenza Background

Influenza is an illness caused by viruses that infect the respiratory tract of humans. Signs and symptoms of influenza infection include rapid onset of high fever, chills, sore throat, runny nose, severe headache, nonproductive cough and intense body aches followed by extreme fatigue. Influenza is a highly contagious illness and can be spread easily from one person to another. It is spread through contact with droplets from the nose and throat of an infected person during coughing and sneezing. The period between exposure to the virus and the onset of illness is

usually about two days, although it can range from 1-5 days. Patients are most infectious during the 24 hours before the onset of symptoms and for 3-5 days after onset of illness. Influenza is highly contagious and persons who are sub-clinically infected (show no signs of illness) can transmit the virus. Influenza is not an endemic disease, but in the Northern Hemisphere annual epidemics usually occur from December through April.

There are two types of influenza viruses that cause significant disease in humans: type A and type B. Only influenza A has been known to cause pandemics. Influenza A viruses are composed of two major antigenic structures essential to the production of influenza vaccines and the induction of immunity: hemagglutinin (H) and neuraminidase (N). Influenza A viruses are unique because they can infect both humans and animals; most influenza A viruses are considered to be avian in origin. Worldwide avian influenza control efforts are coordinated by World Organization for Animal Health (OIE), and the state animal agency (i.e., Kansas Animal Health Department (KAHD)) would play a role in these efforts.

Pandemic Influenza

Pandemic influenza is a unique public health emergency. No one knows when the next influenza pandemic will occur. However, when it does occur it will likely be with little warning. Since the novel virus may be identified in any region of the world, experts believe that no more than 1-6 months would pass from the identification of a novel influenza virus to widespread outbreaks in the United States. Outbreaks are expected to occur simultaneously throughout much of the nation, so re-allocation of human and material resources is not a practical option.

Historically, influenza pandemics have occurred in 'waves' and it is expected this will happen with future pandemics. A pandemic wave (a time period during a pandemic when increased numbers of people are becoming sick) can last as long as 6-8 weeks. Because of this, the World Health Organization (WHO) and the CDC have defined phases of a pandemic in order to facilitate coordinated plans. The United States has also established stages of federal government response that correlate with the WHO phases. These actions are described throughout this plan and are summarized on the PandemicFlu.gov website (www.pandemicflu.gov) under 'Federal Response Stages' (www.pandemicflu.gov/plan/federal/fedresponsestages.html).

In addition, Kansas is continually integrating the use of federally defined planning 'intervals' and 'stages.' Tied to surveillance, this integration will allow for a timelier response at the local and state levels. This "trigger" system further sensitizes the response infrastructures and ties actions directly to those already linked to the Pandemic Severity Index. Decision process algorithms will be utilized in conjunction with both local and state standard operating guidelines to better orient the state response to a pandemic.

The following are assumptions that provide a basis for preparedness activities pertaining to pandemic influenza:

- 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., making shifts in human and material resources that usually occur in response to other disasters untenable.
    - Localities should be prepared to rely on their own resources to respond.

    - As with many public health emergencies the effect of influenza on individual communities will be relatively prolonged (weeks to months) in comparison with other types of disasters.
- Because of the high attack rate associated with pandemic influenza viruses, the number of persons affected in the U.S. is expected to be similarly high and it is estimated that:
    - Up to 200 million people will become infected
    - Between 38 million and 89 million will be clinically ill
    - Between 18 million and 42 million will require outpatient care
    - Between 314,000 and 733,000 will require hospitalization
    - Between 89,000 and 207,000 will die
    - The national estimates for pandemic infections, illnesses, outpatient visits, hospitalizations, and deaths are taken from Meltzer MI, Cox NJ, Fukuda K. The economic impact of pandemic influenza in the United States. Emerging Infectious Diseases 1999;5:659-71. Available at http://www.cdc.gov/ncidod/EID/vol5no5/meltzer.htm.
- In Kansas it is estimated that:
    - Between 208,000 and 486,000 persons will require outpatient care
    - Between 4,600 and 10,700 will require hospitalization
    - Between 1,100 and 2,500 individuals will die
    - Kansas estimates are taken from a software program that uses 1999 census figures to calculate state-specific numbers. Meltzer MI, Shoemake HA, Kownaski M, Crosby R, 2000. FluAid 2.0: A manual to aid state and local-level public health officials plan, prepare and practice for the next influenza pandemic (Beta test version). Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.
- 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 that provide critical public safety services.
- Public and private partners have been brought into the planning process and systems for communications among the partners are in place.
- Pandemic influenza planning will be integrated into all-hazards preparedness activities.
- Influenza-like illness (ILI) surveillance is already in place.
- Mass prophylaxis clinic protocols are developed.

Federal Roles in Pandemic Influenza Preparedness and Response

- 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 national vaccination and antiviral use.
- Assessment of measures to decrease transmission (such as travel restrictions, isolation and quarantine).
- Purchase and deployment of federal cache of antivirals and vaccine.

- Evaluation of the efficacy of response measures.
- Deployment of the Commissioned Corps Readiness Force and Epidemic Intelligence Service officers.
- Medical and public health communications.
- Identification and training of Principal Federal Officers (PFO) and Federal Coordinating Officers (FCO) to work with State Coordinating Officers (SCO) during pandemic response.
- Provide federal guidance and expectations for exercises.

State Roles in Pandemic Influenza Preparedness and Response

- Identification of statewide public and private sector partners needed for effective planning and response.
- Development of key components of the pandemic influenza preparedness plan; planning and coordination, situation monitoring and assessment, prevention and containment, health system response, and communications.
- Epidemiologic investigations and analysis statewide.
- Identify priority groups for vaccination.
- Maintain influenza surveillance system.
- Maintain and store state purchased antiviral cache.
- Logistics planning for distribution of antivirals and vaccine.
- Integration of pandemic influenza planning with other planning activities conducted at the local and state levels.
- Coordination with local areas to ensure development of local plans as called for by the state plan and provision of resources, such as templates to assist in the planning process.
- Development of data management systems needed to implement components of the plan.
- Assistance to local areas in exercising plans.
- Participation with local areas in exercising their plans.
- Coordination with adjoining jurisdictions.
- Training state staff on roles and responsibilities identified in this plan.
- Conducting preparedness exercises to test plans, procedures, and training.
- Evaluating exercises and developing improvement plans to maximize response coordination.
- Cooperation with federal partners to enhance laboratory monitoring of seasonal Influenza viruses.
- Conducting year-round surveillance activities, including seasonal Influenza analysis and testing to detect novel subtypes of Influenza viruses.
- Education of laboratory staff on safe handling of specimens suspected to contain novel Influenza viruses and surveillance for Influenza-like illness among laboratory personnel.

Local Roles in Pandemic Influenza Preparedness and Response

- Identification of local public and private sector partners needed for effective planning and response.
- Coordination with adjoining jurisdictions.
- Maintain and exercise the ESF 8 component of the County Emergency Operations Plan (EOP), the Biological Incident Annex (BIA), and the Mass Dispensing Standard Operating Guide (SOG).

- Continue to emphasize annual influenza vaccine and the routine administration of pneumococcal vaccine for recommended risk groups during the preparation phases of the pandemic.
- Develop a system to estimate the number of persons in priority groups for vaccination and deliver vaccine.
- Assure the security of influenza vaccine during storage and delivery when it becomes available.
- Plan for the potential of civil unrest due to resource scarcity.
- Maintain the Risk Communications SOG and ensure coordination of information with local emergency management coordinators, hospitals and special populations in the area.
- Maintain media relations at the local Joint Information Center (JIC).
- Maintain a 24/7 contact list of key health department staff, local partners and media contacts.
- Work with the KHEL to address laboratory surge capacity issues.
- Train personnel in the management of respiratory specimens during an influenza pandemic.
- Institute surveillance for influenza-like illness among laboratory personnel working with influenza virus.
- Scale up to manage increased numbers of requests for Influenza testing.
- Send selected specimens from possible pandemic Influenza patients to KHEL.
- Clinical laboratories that receive diagnostic specimens from patients with suspected novel Influenza (based on clinical and epidemiologic data) should contact KDHE.

Organization of the Kansas Pandemic Influenza Preparedness and Response Plan

This plan is organized according to the World Health Organization (WHO) Pandemic Phases along with the corresponding U.S. Government Stages and CDC Intervals. The following functions are described in each applicable phase/stage: planning and coordination, situation monitoring and assessment, prevention and containment, health system response, and communications.

All state and local governments are required to have an emergency management plan, which addresses all hazards. However, pandemic influenza is likely to pose unique challenges that may not be addressed in current emergency management plans. Because of these challenges, emergency management plans will incorporate the pandemic influenza elements contained within the BIAs that are maintained by local and state health agencies. Some of the issues addressed within these annexes include:

- Medical services and healthcare workers may be overwhelmed during the influenza pandemic and medical supplies may be insufficient.
- Healthcare workers may not be able to provide essential care to all patients in need.
- Unlike the typical disaster, because of increased exposure to the virus, essential community services personnel such as healthcare personnel, law enforcement officers, firefighters, emergency medical technicians and other first responders may be more likely to be affected by influenza than the general public.
- An influenza pandemic may also pose significant threats to the human infrastructure responsible for critical community services. This threat will be due in part to widespread absenteeism in the workforce. Significant decreases in the workforce could impact

distribution of food, home meal deliveries, day care, garbage collection, utilities and other critical services.

- Physical infrastructure may be threatened or destroyed if there is civil disorder.

KDHE-CPHP staff have developed local and state SOGs that address details of implementing local and state response plans, including contact lists for partner organizations and resource owners, step-by-step operational procedures, job action sheets for key staff and notification procedures. Local health departments have completed the Mass Dispensing SOG, which describes how mass vaccination and pharmaceutical dispensing clinics will be conducted. They have also completed SOGs that describe specific actions regarding community disease containment, risk communications and continuity of operations.

WHO Phases		U.S. Government Stages		CDC Interval
INTERPANDEMIC PERIOD				
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk county	Investigation
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.			

Planning and Coordination

Kansas has adopted the Incident Command System (ICS) and National Incident Management System (NIMS) for responding to disasters and emergencies (Executive Order 05-03). The NIMS was published in March 2004 and the National Response Plan (NRP) became finalized in December 2004. Local and state agencies have revised plans to include NIMS-compliant activities and to align with the NRP. This is a challenging process that requires cross-agency and cross-jurisdictional coordination in order to be successful.

KDHE has established the current system of coordination based on the ICS to organize the response to public health and medical emergencies in Kansas. Throughout this plan, ICS titles are used to identify roles and responsibilities for responding to a pandemic influenza event. Day-to-day position titles are used in the preparation phases of the plan to clearly indicate planning responsibilities.

The State Health Officer will lead the state response to pandemic influenza or any other infectious disease emergency in Kansas. Local health departments will also develop and implement a structured parallel system of pandemic influenza preparedness.

The State Health Officer has designated a Pandemic Influenza Preparedness Committee (PIPC) to develop this Kansas Pandemic Influenza Preparedness and Response Plan and to provide guidance to local health departments regarding local plan development. The members of the PIPC will advise the State Health Officer on issues related to their specific areas of expertise for implementation of the state's public health response to pandemic influenza. Members of the PIPC are listed in Table 1.

Table 1
Pandemic Influenza Preparedness Committee (PIPC) Members

State Health Officer, Director KDHE Division of Health	Director, Office of Surveillance and Epidemiology
State Epidemiologist	Laboratory Response Network Coordinator
Deputy Director, KDHE Division of Health	Director, Kansas Health and Environmental Laboratories (KHEL)
Director, Center for Public Health Preparedness	Kansas Strategic National Stockpile Coordinator

Operations Director, Center for Public Health Preparedness	Director, Kansas Immunization Program
Director, KDHE Office of Communications	Surveillance Director, Office of Surveillance and Epidemiology

All of the members of the PIPC are housed within KDHE. Many other subject matter experts within and outside KDHE are available to provide advice and support to the PIPC.

The PIPC will review this Kansas Pandemic Influenza Preparedness and Response Plan at least semi-annually and recommend updates. The CPHP Operations Director will be responsible for updating the plan document.

The Kansas Pandemic Influenza Task Force was formed in 2005 and serves as the Executive Committee to provide feedback and agreement on the work products of the PIPC. Activities of the PIPC are also briefed at the Kansas Bioterrorism Coordinating Council, which meets quarterly. The Clinical Resource Network, a group of practicing physicians who are available for consultation during a public health emergency will also review the plan and provide feedback as needed. The agencies represented for each of these committees are listed in Appendix D.

This plan and the corresponding SOGs will be exercised at least annually. Evaluations of the exercises will be conducted and improvement plans will be developed in accordance with the Homeland Security Exercise Evaluation Program (https://hseep.dhs.gov/pages/HSEEP_Home.aspx). The recommended updates will be made to this plan and the corresponding SOGs upon completion of after-action reviews.

The KDHE utilizes Incident Activation Levels (IALs) to determine and iterate the proper levels of activation of the KDHE Departmental Operations Center and ICS. A chart outlining the IALs is provided in Appendix B. When conditions require a Level 3 activation, (which is not expected to occur in USG 0), KDHE will activate its ICS. This process will be further described later in this plan. CPHP has developed job action sheets and training materials for the Command and General Staff roles.

Local health departments are required to maintain and update plans and SOGs regarding response to public health emergencies. These plans and SOGs contain specific information regarding mass vaccination clinic activities, communications and treatment center coordination. The Local Mass Dispensing SOG Template can be found on the KDHE public website: www.kdheks.gov/cphp/operating_guides.htm.

The Kansas Division of Emergency Management (KDEM) is responsible for helping to promulgate standards for local emergency planning. Staff from KDHE and KDEM collaborated to develop the standards for Emergency Support Function (ESF) 8 – Health and Medical and for the local BIA template. Local pandemic influenza response is described in local BIAs. The Kansas Pandemic Influenza Preparedness and Response Plan is housed within the state BIA as Attachment 1.

Agencies of the State of Kansas participate in the Kansas Continuity of Operations (COOP) Committee. Through this committee, the Kansas Department of Administration has produced and released a reference guide to provide technical assistance on human resource topics to State of Kansas executive branch agencies. Executive branch agencies should use the information

contained in the guide during the development of their agency-specific Continuity of Operations Plan (COOP) to ensure the continuation of internal critical services should buildings/facilities and support infrastructure (staff, Information Technology, and business systems) become unusable or unavailable. In the event a COOP emergency is declared in the State of Kansas, individual agency human resource offices will be the central points of contact for state employees. State agency human resource offices will be required to determine which workers are essential, how payroll will be processed, what leave options will be granted, and how various staffing issues will be addressed. The reference guide provides material for agencies to evaluate against their own current COOP. This reference guide provides direction in the following areas: essential functions and staffing, telecommuting, human resource policies, and communication with employees.

The Kansas Department of Agriculture (KDA) is responsible for food safety in Kansas, and the food safety program is designated as a priority 1 essential service in the KDA COOP. Staff from a variety of programs outside of food safety may be utilized to conduct inspections and ensure compliance with federal statutes administered by United States Department of Agriculture (USDA) and KDA.

The contact for food safety issues in the event of a pandemic is the Homeland Security Coordinator, Office of the Secretary, Kansas Department of Agriculture. The KDA is currently revising the agency COOP to include a pandemic as a possible threat. This new plan will ensure that each position designated as critical will be backed up with at least three trained individuals. Currently, the KDA legislative researcher and the KDA Public Information Officer (PIO) serve as backup should the KDA Homeland Security Coordinator be unavailable during a food safety emergency. The KDA also works closely with KDHE Office of Surveillance and Epidemiology (OSE). The OSE will most likely receive initial notification of foodborne illness activity and will be a critical component to an effective response to a food safety emergency during a pandemic or any other time. These responsibilities occur on a day-to-day basis and are outlined in statute, the Kansas Response Plan, and agency protocols and procedures.

The KDA COOP ensures that two additional personnel are trained and identified for each position currently charged with essential food safety functions. A just-in-time training program is under development that can be used if more than twice the number of staff would be needed in the event of a pandemic.

Food Safety Reporting

In all emergencies in Kansas, local entities report problems and request resources through the local Emergency Operations Center (EOC). This process would not change in a pandemic. Issues are first resolved at the local level, and then mutual aid is utilized if available. Problems and resource requests that cannot be handled at the local level are reported to the Operations Section in the State EOC (SEOC). Issues with food safety specifically will be tasked to the ESF 11 desk.

Strategic Goal – Food Safety

Operating objectives for the Kansas Department of Agriculture:

- Ensure all food producers, transporters, retailers and consumers are aware of information and educational resources before, during and after a pandemic.

- Assist farm-to-fork operators with planning for the human resource challenges that may affect their businesses during a pandemic.
- Serve as a source of information for stakeholders regarding state and local actions and resources available to producers.
- Engage in vigorous continuity of operations planning to ensure that the department can continue to provide the necessary services in order to maintain the integrity and safety of the food supply.

The KDA Homeland Security Specialist serves as the coordinator assigned to prepare the state to carry out critical agriculture programs (ESF 11). The operating objectives for this goal are:

- Ensure that the KDA and KAHD COOPs are trained and tested on an annual basis.
- Ensure that USDA nutrition assistance programs are identified as priority programs within each responsible agency.
- Ensure that all COOPs relating to ESF 11 include the identification of backup personnel, cross-training, checklists and notification rosters.
- Ensure that local units of government, the public and agricultural producers are aware of assistance that will and will not be available from the state during a pandemic.

Many Kansans depend on nutritional assistance programs. These programs are managed by a variety of governmental and nongovernmental organizations. In the event of a pandemic, many people will be unable to report to work and this may have a major impact on the ability to carry out state-administered programs. The KDA Homeland Security Specialist is working with the various state program managers to develop and expand on alternate models of delivering these services. Agency COOPs are currently in development and these nutritional assistance programs will be a priority for each agency responsible for implementing these programs. Local guidance will be developed that describes alternate ways to implement nutritional assistance at the local level. Waivers and executive orders will be drafted that may be utilized to streamline some processes in the event of a pandemic.

Nutritional assistance program status will be reported on a weekly basis to the ESF 11 desk in the SEOC. If there are problems or needs, program managers will also report these to the ESF 11 desk as they occur. In the event of an agriculture emergency, the producers will notify their local EOC. Animal disease emergencies are reported to the local veterinarian and are reported to the SEOC based on diagnosis. Animal disease events will be also be coordinated through the SEOC, staff from the KAHD will respond to support the ESF 11 function. Requests for assistance will be routed to the ESF 11 desk in the SEOC.

Kansas has a decentralized system of 117 enhanced 9-1-1 centers, which serve as the Public Safety Answering Points (PSAPs) for Kansas communities. To facilitate local preparedness, KDHE has updated its website at www.kdheks.gov/cphp/download/Pandemic_Recommendations_for_Protocol_Development.pdf to include the U.S. Department of Transportation document "Preparing for Pandemic Influenza: Recommendations for Protocol Development for 9-1-1 Personnel and Public Safety Answering Points (PSAPs)." The Kansas Highway Patrol has agreed to allow its own agency pandemic preparedness and response plan to be utilized as a guide for local public safety planners. The Patrol has a central communication center that conducts activities similar to PSAPs (with respect to dispatching emergency responders) and may serve as a beneficial guide to local entities.

The Kansas Board of Emergency Medical Services (KBEMS) is currently writing EMS pandemic influenza operational procedures that define the role of EMS in preparing for, mitigating and responding to pandemic influenza. This plan will be a part of the overall all hazards response plan which forms the basis of the agency's internal and external operating procedures in a contingency environment for ensuring Emergency Medical Service Systems ability to respond to an emergency. A key mission of the agency is to ensure the provision of expedient, effective and efficient assessment, treatment, transport and accountability of casualties of natural or made disaster while ensuring employee health and safety.

The State of Kansas continues to build relationships with the private sector, including hospitals and other industries. Various outreach measures have occurred including forums with industry leaders to discuss further cooperation efforts as well as providing pandemic influenza specific information for industry on websites. CPHP has updated its website to include a section specifically targeting business and industry and preparedness efforts at www.kdheks.gov/cphp/business.htm. KDHE will continue to work with the Kansas Adjutant General's Department, Division of Homeland Security and the Department of Homeland Security Protective Security Advisor to share information relevant to protecting critical infrastructure, key resources, and industry in general to promote preparedness efforts and try to increase response cooperation and coordination.

Planning and coordination activities during the Inter-pandemic Period include:

- Identifying issues specific to pandemic influenza
- Meeting with the Pandemic Influenza Task Force and other emergency planners
- Ensuring that specific challenges posed by an influenza pandemic are addressed in hospital response plans
- Reviewing pertinent legal authorities including:
    - Isolation and quarantine laws
    - Laws and procedures for closing businesses or schools and suspending public meetings during a declared state of emergency
    - Medical volunteer licensure and liability
    - Compensation laws for in-state, out-of-state, and returning retired medical and non-medical volunteers.
- Conducting and participating in exercises with hospitals, local communities, EMS, industry, volunteer groups, state agencies, federal agencies, and private businesses.
- Incorporating lessons learned from exercises into improvement plans that are tracked and implemented.

Planning and Coordination – U.S. Government Stage 0		
State Health Officer, KDHE	Convene state-level task force to review plan and provide input	✓
	Provide direction and leadership to KDHE PIPC	✓
	Work with KDHE Attorney to review legal authorities	✓
SNS Coordinator, KDHE-CPHP	Identify warehouse space to be used for antiviral and vaccine storage and distribution	✓
	Train and exercise the distribution plans	✓
Operations Specialist, KDHE-CPHP	Ensure the KDHE Department Operations Center is functional	✓
	Track NIMS compliance of plans and training of staff at KDHE	✓

Operations Director, KDHE-CPHP	Coordinate distribution of pandemic influenza related planning information to critical infrastructure with Kansas Homeland Security and U.S. Department of Homeland Security (DHS) Protective Security Advisor	✓
	Revise this plan on an annual basis (January)	✓
	Work with state and local agencies to ensure all are aware of various roles and responsibilities identified in this plan and the Kansas Response Plan (KRP)	✓
Director, KDHE-CPHP	Lead the KDHE Continuity of Operations Planning group with the assistance of the CPHP Contingency Planner	✓
KDA	Ensure all food producers, transporters, retailers, and consumers are aware of information and educational resources before, during, and after a pandemic	✓
	Assist farm-to-fork operators with planning for the human resource challenges that may affect their businesses during a pandemic	✓
	Serve as a source of information for stakeholders regarding local and state actions and resources available to producers	✓
	Engage in vigorous continuity of operations planning to ensure that KDA can continue to provide the services necessary to maintain the integrity and safety of the food supply	✓
	Ensure that the KDA and KAHD COOPs are trained and tested on an annual basis	✓
	Ensure that USDA nutrition assistance programs are identified as priority programs within each responsible agency	✓
	Ensure that all COOPs relating to ESF 11 include the identification of backup personnel, cross-training, checklists and notification rosters	✓
	Ensure that local units of government, the public and agricultural producers are aware of what assistance will and will not be available from the state in a pandemic	✓
All local and state agencies	Continue continuity of operations planning efforts including training staff and exercising of COOPs	✓
KBEMS	Develop local EMS planning guidelines and templates	✓

Situation Monitoring and Assessment

Influenza viruses have constantly changing antigenic properties. Surveillance for pandemic influenza must include both laboratory 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. The goals of influenza surveillance are to detect the earliest appearance of a novel influenza virus in Kansas and to describe the epidemiologic features of novel virus circulation.

Since most influenza A viruses are avian in origin it is essential that KDHE work with KAHD and USDA in monitoring circulating animal viruses, especially highly pathogenic avian influenza. KAHD has developed a plan to cull poultry in response to detection of highly pathogenic avian influenza. Plans include the provision of personal protective equipment (PPE) and prophylaxis of workers at risk for exposure to the viruses. KDHE will work with KAHD to

ensure that workers who have been exposed and become symptomatic are treated, to decrease the risk of producing a pandemic strain of influenza by re-assortment of virus.

The OSE, in cooperation with the Kansas Health and Environmental Laboratories (KHEL), maintains Kansas' involvement in year round national influenza surveillance coordinated by the CDC. The OSE and KHEL assume primary responsibility for implementing and coordinating virologic, morbidity, and mortality surveillance components in Kansas and compliance with future recommendations for surveillance enhancement. Current national influenza surveillance activities include:

Virologic Surveillance: Each week, approximately 75 U.S. collaborating laboratories that are part of the WHO 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).

Surveillance for influenza-like illness (ILI): Approximately 1,100 ILI Net health care providers/clinics located in all 50 states regularly report the number of patient visits for ILI by age group and the total number of patient visits each week during the normal influenza season.

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.

State and territorial epidemiologists assess influenza activity levels each week and report it as "widespread," "regional," "local," "sporadic" or "no activity."

During the Inter-Pandemic Phase, KDHE will maintain Kansas' current influenza surveillance activities, which include:

- A state public health laboratory that:
    - Continues to perform viral culture and PCR analysis while providing guidance and interpretation on the increasing use of rapid Influenza diagnostic tests in private and public health care settings.
    - Isolates and subtypes Influenza viruses during the Influenza season.
    - Maintains the capability to isolate and sub-type Influenza viruses year-round and submits isolates to CDC for antiviral resistance analysis.
    - Transmits Influenza data (positives and negatives) electronically to CDC via the CDC/WHO Influenza Surveillance System Reporting Website (a secured site).
    - Provides regular updates on respiratory specimen testing status to the Influenza Coordinator throughout the Influenza season.
    - Conducts PCR testing for novel subtypes of Influenza viruses within BSL-2 biocontainment conditions.
    - Ensures prompt reporting of unusual or novel Influenza isolates, to facilitate control and management of local outbreaks to:
        - OSE, Influenza Surveillance Coordinator via phone, Fax, and/or email.
        - LRN Results Messenger for confirmed A/H5 strain.
        - CDC/WHO Influenza Surveillance System Reporting Website.
    - Submits increased numbers of Influenza isolates as requested to CDC for enhanced monitoring for antiviral resistance.

    - Is actively involved in contingency planning for surge capacity (staffing and reporting) and safety issues.
        - Implement enhanced cross-training of existing laboratory staff in PCR and viral culture methods.
        - Educating clinical laboratorians on the safety and handling of specimens suspected to contain novel Influenza viruses.
        - Instituting an Influenza vaccination policy and surveillance for Influenza-like illness among laboratory personnel.
- An ILI Net provider program with at least the minimum number of health care providers (1 per 250,000 persons) that report their weekly data to KDHE or directly to CDC via the Internet year-round. These providers are encouraged to send specimens collected from patients with ILI at the beginning, middle and end of the normal season to the state laboratory for viral culture at no charge to the provider or patient. A map of counties with ILI Net surveillance sites can be found in Attachment C.
- A disease reporting hotline that is available and is staffed at all times by an epidemiologist, including nights and weekends at 877-427-7317.
- Information on the Board of Healing Arts list of physicians.
- Kansas Health Alert Network system.
- An active State Influenza Surveillance Coordinator in OSE who:
    - Monitors ILI Net provider data weekly for completeness and/or errors.
    - Provides feedback and maintains contact with ILI Net providers weekly to encourage reporting and follow-up on unusual reports.
    - Contributes to state pandemic planning issues and activities.
    - Maintains a strong working relationship with the KHEL.
    - Encourages ILI Net providers to submit specimens for viral culture to the state laboratory.
    - Conducts a weekly assessment of overall influenza activity level in the state during the normal flu season and reports the data to the CDC.

Kansas uses WebEOC, a Web-based system to manage information and resource requests. Hospital data is collected in EMSystems. The current system can collect the following statewide data:

- Available (or needed) staffed beds (specifies adult or pediatric):
    - ICU/CCU beds
    - Medical beds
    - Emergency Department (monitored and unmonitored)
- Available or needed number of ventilators
- Available or needed negative-pressure air isolation rooms
- Number of cases (confirmed, suspect, probable)
- Number of cases under investigation
- Number of contacts under investigation
- Number of deceased individuals that met case definitions
- Number of individuals discharged that met case definition
- Number of individuals hospitalized that currently meet case definition
- Number of health care professionals affected
- Morgue capacity
- Available or needed medical supplies, equipment, and personal isolation equipment
- Number of hospitals on Emergency Department Diversion

- Number of patients waiting for inpatient beds (to include average wait time)

The electronic screens used to collect this data will be based on forms that will be available in paper format if the Internet-based system fails. Planners are currently working with vendors to integrate the two systems to reduce the need for data to be entered multiple times.

KDHE currently has a secure on-line Web-based death certificate system that is in use by funeral directors across the state. Funeral directors enter the demographic information of the deceased with KDHE Office of Vital Statistics (OVS) staff entering the cause of death upon submission by the local funeral director. KDHE is currently in the process of finalizing the software piece to allow physicians to enter the cause of death, pandemic influenza or otherwise, on the death certificate. This software is scheduled to be in place and operational by June 1, 2009. Both OVS and OSE can access the system and build queries regarding deaths from specific causes, such as influenza or pneumonia. In the event that the electronic death reporting system is not operational, influenza-associated deaths will be tabulated manually, using traditional, paper-based methods. OSE, with assistance from the OVS, may utilize bridged estimates from the National Center for Health Statistics to calculate estimated rates of influenza-associated hospitalization.

In the event of a suspect or confirmed case of pathogenic avian influenza, the KAHD Livestock Commissioner will contact the State Public Health Veterinarian directly or via telephone, in addition to contacting the Adjutant General's Department via email. This connection between KAHD and KDHE seeks to maintain a continuous and coordinated connection between animal and human health surveillance systems.

During this period, KDHE, KBEMS and PSAP representatives will discuss the utility of managing and collecting patient and system data for pandemic influenza surveillance. If developed, an EMS and 9-1-1 data collection and reporting system could become an enhanced component of a comprehensive influenza surveillance system. This collaborative effort may also address and define EMS policies, procedures and legal authorities for sharing EMS and 9-1-1 data with public health agencies as part of the comprehensive surveillance system and address any legal and technological barriers to participating in the disease surveillance process. The system should include a mechanism for rapid modification of data elements and reporting mechanisms based upon updated information on an emerging pathogen (e.g., during the SARS epidemic, questions pertaining to foreign travel were pertinent).

Improved situational awareness through information sharing regarding both patients and resources will enable better management of assets during a pandemic and provide for real time epidemiological analysis. KDHE will utilize the Kansas Health Alert Network (KS-HAN) to communicate relevant pandemic influenza information to health and medical providers. The need for a statewide patient tracking system continues to be demonstrated through many emergency incidents. KDHE and the state's regional homeland security councils continue to work on a patient tracking system that can be utilized at all levels of the medical system to track an individual from first contact with professional medical care through eventual dismissal from care.

An initial phase of data collection software and hardware is being disseminated to EMS providers throughout the state as well as training in the software to facilitate acquisition of patient data and its documentation. Information acquired can be used for patient care report

generation, individual system analysis and when submitted to KBEMS, specific casualty information such as monitoring of injuries, patient dispositions Additional funding is available from KBEMS to augment or enhance capabilities locally.

Situation Monitoring and Assessment – U.S. Government Stage 0		
Influenza Surveillance Coordinator, KDHE-OSE	Maintain the ILI Net surveillance program with providers	✓
	Maintain a strong working relationship with the KHEL	✓
	Participate in CDC training regarding surveillance and adverse events reporting	✓
Operations Specialist, KDHE-CPHP	Develop boards in WebEOC to interface with EMSystems and to track bed availability and other scarce resources	✓
KDHE-KHEL	Continue to isolate and sub-type influenza viruses year round and perform viral cultures	✓
KDHE-OVS	Finalize the software piece to allow physicians to enter cause of death into KDHE secure on-line death certificate system	✓
KBEMS	Continue development of the statewide patient care report system for use by local EMS agencies	✓
Surveillance Coordinator, KDHE-OSE	Development of a secure system for managing and collecting patient and system data	✓
	Development of a just-in-time training for use of surveillance system and associated tools	✓

Health System Response

Emergency response, including maintenance of critical services and surge capacity issues in the health care system, is addressed in the state and local response plans and SOGs.

There are 125 community hospitals in Kansas and the staffed beds in these facilities range from 10 to 1,451. The average daily census indicates that there are approximately 5,000 available beds in Kansas on any given day. It is estimated that during a pandemic influenza event, approximately 5,000 beds to 10,000 beds would be needed to provide care for influenza patients.

Hospitals in Kansas use a regional planning process to prepare for an increase in acutely ill patients. The state is divided into seven regions and each region has designated a regional planning hospital. The regional plans for increasing available bed capacity to accommodate a surge of 500 acutely ill infectious patients (per 1 million population) in the region over a short period of time includes the following steps:

- Hospitals will cancel non-emergency surgeries and other elective procedures.
- Hospitals will discharge non-infected patients to other acute care facilities out of the affected geographical area, or to long-term care or home care while assuring that the level of care required by these patients can be met.
- Hospitals will transfer patients to other hospitals in the region with available beds. Hospitals may need to send patients to several other hospitals depending on bed availability. Hospitals will start by transferring patients to hospitals in nearby counties, then to other hospitals in the region.
- If all hospital beds in the region are at capacity, then hospitals will transfer patients to hospitals in other regions.

- Finally, if hospitals in other regions are full, the hospital will send patients to alternate locations based upon their partnerships (Long Term Care (LTC) Facilities, schools, etc.).

Hospital and county emergency planners have identified and continue to identify alternate care sites. Home health care agencies will play an important role, given the potentially high number of ill persons. Family members will need to provide care to family members that are unable to be hospitalized. Instructions for home (family) care can be found in Appendix F.

In planning for an influenza pandemic, it must be recognized that persons with medical conditions unrelated to influenza will continue to require emergency, acute and chronic care. Alterations to an EMS system's practices during an influenza pandemic will likely impact all EMS patients, regardless of the nature of their illness. Planners should consider modifying PSAP call-taker and dispatch protocols and developing pandemic-specific pre-hospital triage and treatment protocols. It is important to keep the EMS system functioning as effectively as possible and to deliver optimal care to both these patients (e.g. motor vehicle crashes and cardiac events) as well as to patients with influenza related symptoms. Illness and absenteeism during a pandemic may impact an EMS agency's ability to satisfy demand for services.

One of the challenges that the medical system including hospitals and EMS may face during an influenza pandemic is to keep operations functioning despite increases in call volume, workforce shortages and absenteeism, supply chain disruptions and other threats to continued operations. The foundation of a viable COOP program is the development and documentation of a COOP that, when implemented, will provide for the continued performance of an organization's essential functions under all circumstances. Agencies should continue to develop, refine and test their COOPs based on guidance from Federal, State and local government. COOPs should be coordinated with emergency management agencies. Pre-established delegations of authority are vital to ensuring that all organizational personnel know who has the authority to make key decisions in a COOP situation. An order of succession is essential to an organization's COOP. Personnel should know who has authority and responsibility if the leadership is incapacitated or unavailable. COOPs should address workforce health protection. Health agencies should establish policies for flexible worksite (e.g. telecommuting) and flexible work hours (e.g. staggered shifts) whenever possible. Agencies should establish policies for employee compensation and sick-leave absences unique to a pandemic (e.g. non-punitive liberal leave).

Healthcare and pre-hospital systems might consider a variety of mechanisms to augment their workforce including:

- Mechanisms for temporary licensure of medical or EMS providers from other jurisdictions
- Innovative mechanisms to rapidly recruit, train and license new providers
- Consider non-traditional system configurations and alternate staffing configurations
- Utilization of retired EMS and healthcare personnel
- Coordination with local Medical Reserve Corps (MRC)
- Community Emergency Response Teams (CERT), or cross staffing between EMS, healthcare and other sectors
- Proactively determine competencies and bridge courses from other professions and levels of EMS licensure
- Temporary modification of licensure and credentialing procedures to meet the exigencies of the situation while assuring public health and safety
- Engaging temporary workers, contractors and recent retirees, and/or cross-training the

existing workforce
- Support telecommuting when feasible.

To protect the health of laboratory workers during a pandemic, public health, clinical, and hospital laboratories should maintain enhanced safety practices. These include:

- Conducting laboratory procedures under appropriate biocontainment conditions.
  - Commercial antigen detection testing for Influenza should be conducted using BSL-2 work practices.
  - If new or re-emergent human Influenza strains with pandemic potential are suspected, laboratories should conduct RT-PCR only under BSL-2 containment conditions and viral culture only under BSL-3 conditions with enhancements.
  - Because of the danger that HPAI strains present to the U.S. agricultural industry, USDA regulations require that HPAI strains such as H5N1 (which are classified as select agents) must be cultured using BSL-3 biocontainment conditions with enhancements.
- Encouraging routine vaccination of all eligible laboratory personnel who are exposed to specimens from patients with respiratory infections.
- Staffing and training laboratories for increased staffing needs.
  - Cross-training personnel during the regular Influenza season in the use of rapid diagnostic tests and RT-PCR protocols and in reporting results through existing surveillance systems.
  - Arranging to recruit and train temporary staff for employment during a pandemic.
- Supplies and equipment.
  - Laboratories are likely to require additional diagnostic supplies and equipment to process large numbers of samples during the initial stages of a pandemic. Some preparedness strategies include:
    - Establishing the current level of diagnostic supplies, including personal protective equipment for laboratorians (e.g., gloves, masks).
  - Assessing anticipated equipment and supply needs, and determining a trigger point for ordering extra resources.
- Specimen management.
  - State and local health departments should inform and educate public health staff (including laboratorians), local physicians, and hospital workers on safe and effective methods for specimen collection and management, making use of the guidelines detailed on KHEL's website, packaging and shipping section, under virus shipper guide (www.kdheks.gov/labs/packaging_and_shipping.html).
  - Procedures for specimen collection, handling, and shipping during a pandemic will be the same as those used for seasonal disease surveillance. However, laboratory staff should anticipate shipping a much larger number of specimens in a very short time, especially during the early stages of a pandemic.

Health System Response – U.S. Government Stage 0		
State Health Officer, KDHE	Continue to engage physicians and health care providers in the planning and preparedness process	✓
	Convene workgroups to make recommendations regarding prioritization of scarce medical resources	✓
	Continue to update individual hospital plans regarding medical surge, evacuation, transport and isolation precautions	✓

Kansas hospitals	Update EMSystems daily with bed information, participate in Kansas Hospital Bed Availability (HAvBED) system drills and exercises	✓
	Identify and coordinate planning of alternate care sites that may be used in the event of a pandemic	✓
SNS Coordinator, KDHE-CPHP	Ensure that state antiviral cache is stored in accordance with manufacturers' recommendations	✓
	Lead the Antiviral Distribution Work Group. Continue to monitor federal guidance to ensure appropriate planning for the use of the federally subsidized antiviral caches	✓
All health care and pre-hospital agencies	Develop and test COOP plans and procedures	✓

Communications

In an emergency, accurate, consistent and timely messages are key in notifying and educating the public, notifying and facilitating movement of emergency staff to their assigned duties and stations, and in activating the emergency plan as intended. The following delineates communication-related issues that pertain to pandemic influenza. Assuring adequate communication systems will be a joint responsibility of federal, state and local agencies.

- During a pandemic, the public will likely encounter some unreliable and possibly false information in the media and on the Internet. KDHE and local health departments will communicate accurate, reliable information regarding the influenza pandemic.
- Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on Kansas communities.
- KDHE will continually strive to communicate with all essential partners, realizing that this will be difficult during the pandemic.

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

- Basic communication materials (such as question and answer sheets and fact sheets) on influenza, influenza vaccine, antivirals and other relevant topics in various languages.
- General preventive measures such as "dos 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 and documentaries.
- Symposia on surveillance, treatment and prophylaxis.

Because of anticipated shortages of vaccine and antivirals, messages to inform the population about availability, the rationale for priority groups and measures to be taken will be critical. Other important topics include:

- Basic information about influenza (including symptoms and transmission).
- Information about the course of the pandemic (contagiousness, geographic spread, case counts).
- Information about which symptoms should prompt seeking medical attention and which symptoms should be managed at home.
- Information about school and business closures and suspended public meetings.

- Information about travel restrictions as well as isolation and quarantine laws.

KDHE will:

- Maintain KS-HAN to effectively communicate with public health officials, healthcare professionals and other target audiences.
- Establish lines of communication and define KDHE staff roles and responsibilities clearly to facilitate the best possible communication with partners.
- Regularly distribute informational updates to all appropriate partners.
- Maintain the list of media spokespersons and contact information from each state agency and the KHEL.
- Coordinate with KDEM to provide information to the media via the state JIC when activated.
- Develop an operational plan to distribute communications and educational messages to the public.
- Educate public health officials, elected officials and the media about what information will and will not be available during a pandemic.
- Review CDC materials and adapt and revise as needed.

The State Health Officer has convened the Kansas Pandemic Influenza Task Force to ensure that the medical community is made aware of issues related to pandemic influenza. This task force consists of representatives from public health, the state medical society, the nurses association, the pharmacy association, the hospital association, emergency management, corrections, long term care representatives, and a variety of other stakeholders (See attachment D for a list of agencies represented). The committee will address such issues as education for the medical community and the public, planning for pandemic at a community level, and medical surge capacity. During this Inter-pandemic Period, KDHE is coordinating with local and state Chambers of Commerce to ensure that private businesses and workers are informed about pandemic preparedness, prevention and response activities. This information will also be communicated to government workers across the state of Kansas.

The Kansas Department of Agriculture (KDA) is a regulatory agency that is charged by law to ensure: a safe food supply; responsible and judicious use of pesticides and nutrients; the protection of Kansas' natural and cultivated plants; integrity of weighing and measuring devices in commerce; and, that the state's waters are put to beneficial use. Communication with all of the regulated entities occurs on a regular basis. Regulated entities include: meat and poultry processors, grocery and convenience stores, restaurants, food manufacturers, food wholesalers, lodging facilities, wineries, bottlers, dairies, milk haulers, fuel stations, grain elevators, pesticide and fertilizer products, pesticide applicators, feed manufacturers, seed dealers, nurseries, and plant wholesalers and retailers. The department also is responsible for managing the state's water resources and for regulating manmade activities that impact the flow of rivers and streams. In the event of a pandemic, KDA will share information provided by KDHE with all appropriate stakeholders. The process for reporting status of facilities and resource requests will also be clearly communicated to stakeholders during all phases of the pandemic. KDA also coordinates with the Kansas Animal Health Department (KAHD) and the Kansas Department of Wildlife and Parks (KDWP) regarding animal health (domestic and wild).

The Kansas State Department of Education (KSDE) communicates with local educational agencies in the event of an emergency using the KSDE website, email listervs, automated phone

trees, fax, print media and commercial broadcasts. This communication takes place primarily with public schools and school districts, though some private schools can be contacted through the automated phone tree and listervs. KSDE's Communications & Recognition Team handles message creation and distribution, ensuing consistency and quality control of messages. The Director of KSDE's Communications & Recognition Team is the state-level education spokesperson for media relations and communication with local educational agencies.

Communications – U.S. Government Stage 0		
State Health Officer, KDHE	Review materials developed by staff to ensure medical accuracy	✓
	Provide informational presentations to stakeholders	✓
Director of Communications, KDHE	Develop educational materials to be distributed in later stages. Materials include: (1) Family (Home) care of symptomatic individuals, when to go to the hospital, infection control in the home, when to call the hotline (2) Information for businesses: Social distancing recommendations in the workplace, how to manage increased absenteeism. (3) Information regarding handling of human remains, hotline numbers, process for burial, death certificates, what to expect	✓
	Provide training and resources to local health and medical staff who may be called to speak to the media during a pandemic	✓
	Monitor the KDHE website to ensure that the preparedness and influenza information is up-to-date and accurate	✓
	Prepare "message maps" for anticipated questions	✓
	Continue to update the KDHE Crisis/Emergency Risk Communications (CERC) Plan	✓
	Establish a mechanism to activate hotline capabilities during a pandemic response	✓
	Develop just-in-time training for hotline operators	✓
KS-HAN Administrator, KDHE-CPHP	Assist KDHE Director of Communications with development and implementation of systems to facilitate communications with the public and key stakeholders	✓
	Conduct monthly tests of KS-HAN	✓
Exercise and Training Coordinator, KDHE-CPHP	Develop and conduct exercises to test the state's ability to use the systems developed to enhance communications. Monitor progress on improvement plans and retest capabilities and tasks that are not completed to standard	✓
Operations staff, KDHE-CPHP	Work with the CPHP Exercise and Training Coordinator to implement actions identified in Improvement plans as a result of exercise activities	✓
KDA	Maintain communication avenues with regulated entities for the provision of emergency information	✓
KSDE	Maintain communication systems with school districts and private schools	✓
Communications & Recognition Team, KSDE	Prepare message maps for anticipated questions regarding school dismissal and other pandemic influenza educational system related questions	✓

Prevention and Containment

There are three actions that can be taken to prevent and contain outbreaks of pandemic influenza: nonpharmaceutical interventions (NPI), use of antivirals and vaccination.

Nonpharmaceutical Interventions

The CDC has recommended an early, targeted, layered use of nonpharmaceutical interventions as a key strategy to mitigate the effects of a pandemic on a community. The guidance document can be found on the Pandemicflu.gov website. KDHE staff prepared a guidance document for local community planners that linked the CDC guidance to the Community Containment for Disease Tool Box that was provided to local health department planners in 2006. This guidance document is located at www.kdheks.gov/cphp/comm_containment_sog.htm. The interventions recommended by the CDC are:

- Isolation and treatment (as appropriate) with antivirals of all persons with confirmed or probable pandemic influenza
- Voluntary home quarantine of members of households with confirmed or probable influenza cases
- Dismissal of students from school coupled with social distancing
- Use of social distancing measures in the workplace and in the community

KDHE has established the Community Containment Workgroup to focus on issues related to public health interventions and report recommendations to the Pandemic Influenza Task Force. Projects being addressed include the development of:

- Algorithms to determine when to cancel large gatherings
- Algorithms to determine when to dismiss students
- Educational materials for employers regarding social distancing and infection control
- Training and educational materials for local health officers

Kansas planners recognize that community containment measures must be implemented at the local level. Staff from the CPHP worked with local health department representatives to develop the Community Disease Containment SOG. This SOG is provided as Attachment N to this plan. Local health department personnel worked with their community partners to develop guides and processes that were specific to their communities. These SOGs were exercised in 2006 and communities are now in the process of refining their plans and procedures based on improvement plans that were written as a part of the exercise evaluation process. This comprehensive community mitigation strategy is intended to slow the spread of pandemic influenza, ultimately saving lives and reducing demand on health care resources including EMS.

KDHE has worked closely with the KSDE and the Kansas Association of School Boards (KASB) to develop a Pandemic Action Kit for local school districts. The kit is posted on the KASB website located at www.kasb.org/panflu/. The kit contains sample parent letters, checklists for schools, media material, fact sheets, guidance documents, and other useful materials.

KSDE anticipates families will need to focus on basic, immediate physical and emotional needs during times of crisis, rather than on educational needs. Once a decision is made to dismiss a school and depending on when that happens, suggestions might include:

1. If the closing occurs during a school day, identify materials that could be easily and readily taken home. For instance, students could take library books, textbooks, journals, content notebooks, etc., for use during the time of a school closing.
2. Should the emergency closing occur during a time when students were not present, there might be some distribution of materials via the Internet. Each district could post items in the content areas by grade level on their website. KSDE resources could also be accessed at www.ksde.org. During a time of extended school closing, areas may be operating with limited availability of many things. Educational content could be made available through the state website and/or respective district websites.

Influenza Vaccine

During the initial months of an influenza pandemic, no vaccine will be available because it is not possible to produce a vaccine without knowing the characteristics of the novel virus. Unlike annual production of influenza vaccine, wherein strains are selected in the spring leading to vaccine distribution in the late summer, a pandemic strain could be detected at any time. Current manufacturing procedures require at least 6-8 months before large amounts of vaccine are available for distribution. Nevertheless, vaccine administration could become an important preventive strategy during the next influenza pandemic, once an effective vaccine is developed.

Contrasts between delivery of pandemic vaccine and the annual influenza vaccine include the following:

- The target population will be modified, possibly to include the entire U.S. population.
- It is impossible to predict how quickly the novel virus would arrive in the U.S. Because of the minimum 6-8 month period to produce a vaccine, it is anticipated that demand for vaccine will be greater than the supply early in the course of the pandemic. It is also possible that no vaccine will be available.
- Once vaccine is available, it will need to be distributed as quickly as possible.
- Immunologic responses following initial vaccination of serologically negative individuals is poor and represents a priming of the immune system. The emergence of a pandemic strain with new hemagglutinin and or neuraminidase antigens will likely require a second (booster) dose of vaccine to be administered 2-4 weeks after the first dose is given.

A final decision regarding the degree of federal vaccine purchase during a pandemic may not be made until the pandemic vaccine is being produced. The Kansas plan for delivery and administration of vaccine addresses many possible scenarios, including; complete federal purchase and distribution to states, partial federal purchase with distribution to states, and minimal federal purchase (similar to the current annual influenza vaccination program). Currently influenza vaccine is primarily administered through the private sector. Coordination with and education of the private sector is a key aspect of our planning.

Because a relative shortage of vaccine is expected early in the pandemic, vaccine recipients will be prioritized. Recommendations will be made at the national level, which will be adapted by the State Health Officer. The CDC released guidance on allocating and targeting of pandemic influenza vaccine in July 2008. The Federal Vaccine Priority Recommendations are provided as Appendix I. KDHE's Vaccine Prioritization Workgroup continues to review the federal recommendations related to adopting a plan specific to Kansas.

Eventually, it is assumed that sufficient vaccine will be available for mass vaccination of the total population. Local health departments have conducted detailed planning activities that have culminated in the creation of the local Mass Dispensing SOG. This guide explains the specific operations of large-scale clinic management and can also be used for developing the Smallpox, Chemo-prophylaxis, and Influenza Vaccination Clinic functions.

The KDHE Adverse Events Coordinator is actively involved in vaccination planning. KDHE is upgrading its immunization registration, inventory management and smallpox vaccination reporting infrastructures. KDHE will utilize the Kansas Immunization Registry to monitor adverse events related to the pandemic influenza vaccine.

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 include highly specialized workers in the public safety, utility, transportation and food service industries, and will likely vary from jurisdiction to jurisdiction. The CDC has issued guidelines recommending certain priority groups to receive vaccine and antivirals. The KDHE Vaccine Prioritization and Antiviral Distribution work groups are reviewing the guidelines and will make its recommendations in the next iteration of this plan. The CDC priority group recommendations can be found in Appendix I.

The success of the pandemic influenza vaccination program will be determined in large part by the strength of local and state 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.

During the Inter-pandemic Period, efforts to increase pneumococcal polysaccharide vaccination (which can reduce the incidence of invasive pneumococcal disease secondary to influenza) is recommended and 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.

Antivirals

Vaccine will likely not be available when the novel influenza virus first affects communities; antivirals might play an important role in the control of influenza, especially – but not only – 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 federal cache is limited to enough courses to treat 15 percent of the U.S. population. Kansas has purchased enough antivirals to treat another 10 percent of the state's population and so combined there are enough antiviral courses for one course of treatment for 25 percent of Kansans. Current federal guidance requires that antivirals in this program are to be used for treatment only.

Therapy is effective at decreasing severe complications and reducing hospitalizations 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.

Antivirals from the SNS will be distributed to points of care utilizing the distribution system that is detailed in the Kansas SNS Plan. The State Health Officer will determine whether controls for dispensing (such as positive rapid test) will be required. He or she will also provide guidelines on appropriate use of antivirals that are distributed. Public education will be very important given the scarcity of this resource.

Prioritizing within priority groups will be necessary given the limited supply. For antivirals purchased with public funds, the state will be responsible for local distribution of the antivirals in collaboration with the private sector. As with vaccine, it will be critical to clearly communicate with the public about the rationale for priority groups. Coordination with and education of the private sector is a key component of the plan.

Identification of influenza within a community (based upon either isolation of the pandemic strain or an increase in ILI) will be the trigger for initiating prophylaxis. In order to be effective, prophylaxis must be continued until the exposure has ceased. Use of antivirals for prophylaxis would be limited in scope and only at the direction of the State Health Officer.

Prevention and Containment – U.S. Government Stage 0		
State Health Officer, KDHE	Lead work group efforts to define and recommend containment activities to local communities	✓
	Enhance influenza vaccination coverage levels in traditional high-risk groups, especially 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	✓
	Enhance pneumococcal vaccination coverage levels in traditional high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia	✓
SNS Coordinator, KDHE-CPHP	Ensure vaccine distribution plans are coordinated with the bordering states of Missouri, Nebraska, Colorado and Oklahoma, as well as the Kansas City Metro Area.	✓
	Continue to review, modify and exercise the SNS SOGs at the state level and mass dispensing SOGs at the local level	✓
	Ensure that contingency plans have been considered for emergency distribution of unlicensed vaccines using emergency Investigational New Drug (IND) provisions	✓
	Train and exercise state and community partners on the antiviral distribution plan	✓
Attorney, KDHE	Ensure that state laws continue to allow for important elements of vaccination plans	✓
Immunization Program Director, KDHE	Maintain the Kansas Immunization Registry to track vaccine and facilitate reminder notification to track the administration of two doses per person (if recommended) and to track adverse events	✓
	Educate the medical community and the public regarding appropriate prescribing information during a pandemic event	✓

WHO Phases		U.S. Government Stages		CDC Interval
PANDEMIC ALERT PERIOD				
3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	0	New domestic animal outbreak in at-risk county	Investigation
		1	Suspected human outbreak overseas	
4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	2	Confirmed human outbreak overseas	Recognition
5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).			

During WHO Phase 3, the U.S. Government may be at Stage 0 or Stage 1. The assumption for the actions detailed below is that the federal government has declared Stage 1.

Planning and Coordination

The State Health Officer will meet with the PIPC and the Pandemic Influenza Task Force to review major elements of the plan and assess and evaluate the state and local levels of preparedness. Changes to the plan will be made as needed. Communication with the border states of Missouri, Oklahoma, Colorado and Nebraska, as well as the Kansas City Metro Area, should be maintained. Internal operating guides will be reviewed and updated to ensure that staff are available and contact information is current.

KDHE will initiate ICS at Level 2 – Watch in preparation for pandemic influenza response. Operations and Logistics Section staff will ensure that facilities listed in the plan are ready. The Finance and Administration staff will begin the process of documenting expenses related to pandemic response. Notification of a possible biological emergency will be communicated to KDEM and a Liaison Officer will be requested. Kansas Health Alert messages will be sent to all appropriate state and local response partners of preparedness activities.

According to the "Implementation Plan for the National Strategy for Pandemic Influenza," the federal government will be utilizing the National Response Framework as the primary mechanism for coordinating the federal response to a pandemic. Roles of key federal agencies are described in the implementation plan; the roles of U.S. Department of Health and Human Services (HHS) and U.S. Department of Homeland Security (DHS) are repeated here.

The U.S. Secretary of Health and Human Services will be responsible for the overall coordination of the public health and medical response during a pandemic, to include coordination of all federal medical support to communities; provision of guidance on infection control and treatment strategies to local, state and tribal entities, and the public; maintenance prioritization, and distribution of countermeasures in the SNS; ongoing epidemiologic assessment, modeling of the outbreak, and research into the influenza virus, novel countermeasures, and rapid diagnostics.

The U.S. Secretary of Homeland Security will be responsible for coordination of the federal response as provided by the National Strategy for Pandemic Influenza (Strategy), the Homeland Security Act of 2002, and Homeland Security Presidential Directive #5, and will support the Secretary of Health and Human Services' coordination of overall public health and medical emergency response efforts. The Secretary of Homeland Security will be responsible for coordination of the overall response to the pandemic, implementation of the policies that facilitate compliance with recommended social distancing measures, the provision of a common operating picture for all departments and agencies of the federal government, and ensuring the integrity of the nation's infrastructure, domestic security, and entry and exit screening for influenza at the borders.

The Incident Commander will convene the PIPC and review the plan and corresponding SOGs.

- Initiate KDHE Emergency Operations Procedures.
- Maintain surveillance.
- Activate the Crisis/Emergency Risk Communications (CERC) Plan.
- Begin vaccine and antiviral distribution (if available).
- Notify Kansas Emergency Management of the need for additional resources.
- Activate SOGs for operational priorities.
- Arrange for facilities use.
- Document expenses of pandemic response.

Planning and Coordination – U.S. Government Stages 1 & 2		
State Health Officer, KDHE	Convene the PIPC and the Pandemic Influenza Task Force to review major elements of the plan and assess preparedness level	✓
KDHE-PIPC	Review and revise KDHE operating guides and procedures including contact information	✓
KDHE Operations and Logistics Section	Ensure that facilities are ready and available	✓
KDHE Epidemiology Branch	Maintain surveillance	✓
PIO, KDHE	Activate CERC Plan	✓
KDHE Operations Section	Begin antiviral and vaccine distribution (if available)	✓
Liaison Officer, KDHE	Notify emergency management of response and needed support	✓
KDEM	Provide a Liaison Officer to KDHE ICS	✓

Situation Monitoring and Assessment

The CDC continuously monitors surveillance data reported nationally and frequently communicates with public health colleagues around the world so that novel viruses are detected and investigated as quickly as possible. If Kansas is notified by CDC that a novel influenza virus has been identified, but efficient transmission of the virus from person-to-person is not yet established (that is, a novel virus alert), Kansas will enhance inter-pandemic surveillance activities by:

- Increasing 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. Appropriate specimens will be collected to diagnose influenza infection. In some situations, if the novel influenza virus is a highly pathogenic avian strain, such as with the 2004 H5N1 influenza virus in Asia, local hospital laboratories should not attempt viral isolation because of the risk that the strain could spread. Specimens will be sent to KHEL or to CDC where isolation and sub-typing can be done under more stringent bio-safety conditions. Influenza infection can be diagnosed locally using antigen detection, immunofluorescence, or PCR; see Appendix M. CDC will provide guidance appropriate to each specific novel virus alert.
- The OSE will work with local health departments to investigate early cases and clusters of suspect pandemic influenza identified through ILI Net or passive surveillance. OSE will be responsible for forwarding case reports to the local health department, and for specifying which CDC form (e.g. the Pandemic Influenza Case Investigation Form, the Novel Human Influenza Case Report Form, or an alternative form suggested by the CDC) to use for case investigations, and for timely reporting. The local health department will be responsible for collecting the histories from the patient and/or the patient's physician as soon as possible, and for immediately forwarding complete case investigation forms to KDHE via fax or via Kansas' electronic disease reporting system, KS-EDSS.
- Reporting of early novel and pandemic influenza cases to CDC, likely via an on-line CDC case reporting system.
- Ensuring that all inter-pandemic influenza surveillance activities are underway regardless of the time of year and that all participating laboratories and ILI Net providers are reporting data to CDC each week.
- Sub-typing all influenza A viruses identified in clinical specimens and immediately reporting to CDC any influenza A viruses that cannot be sub-typed. CDC will provide instructions on the safe handling of a potential novel influenza virus.
- Obtaining reagents from CDC (as these become available) to detect and identify the novel strain.
- Reviewing contingency plans for further enhancement of influenza surveillance if efficient person-to-person transmission of the novel virus is confirmed.

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

- Assessing the need to screen travelers arriving in the U.S. from affected countries.
- Investigating the epidemiology of all early cases either originating in the U.S. or that are imported into the country.
- At hospitals and emergency departments, increasing laboratory diagnosis of influenza, including use of rapid antigen detection tests, for persons with compatible clinical syndromes, particularly those who may have had recent exposure at the site of an outbreak. CDC will provide guidance to assist with triage of specimens for testing and for choosing which isolates to send to CDC.
- The completeness and timeliness of reports from all participating laboratories and ILI Net providers will be assessed, and non-reporters will be contacted to improve their performance as necessary.

- The OSE will investigate outbreaks and increases in ILIs, including those detected through the ILI Net surveillance system and those reported through traditional passive surveillance.

Situation Monitoring and Assessment – U.S. Government Stage 1 & 2		
KDHE-OSE	Increase 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	✓
	Reporting of early novel and pandemic influenza cases to CDC	✓
	Monitoring and instituting recommendations from CDC for any additional surveillance activities that should be undertaken given the specific circumstances	✓
	Review contingency plans for further enhancing influenza surveillance if efficient person-to-person transmission of the novel virus is confirmed	✓
	Assess the need to screen travelers arriving in the U.S. from affected countries	✓
	Investigate the epidemiology of all early cases either originating in the U.S. or imported into the country	✓
	Investigate early cases and clusters of suspect pandemic influenza identified through ILI Net or passive surveillance	✓
	Forward case reports to the local health department, and specify which CDC form to use for case investigations and timely reporting	✓
	Ensuring that all Inter-pandemic Period influenza surveillance activities are underway regardless of the time of year and that all participating laboratories and ILI Net providers are reporting data to CDC each week	✓
	Investigate outbreaks and increases in ILIs	✓
	Assess the completeness and timeliness of reports from all participating laboratories and ILI Net providers and determine if improvement measures are necessary	✓
KDHE-KHEL	Isolation and subtyping of novel viruses	✓
	Subtyping all influenza A viruses identified in clinical specimens and reporting any influenza A viruses that cannot be subtyped to CDC immediately	✓
	Obtaining reagents from CDC (as reagents become available) to detect and identify the novel strain	✓
Kansas hospitals	At hospitals and emergency departments, increase laboratory diagnosis of influenza, including use of rapid antigen detection tests for persons with compatible clinical syndromes, particularly those who may have had recent exposure at the site of an outbreak	✓

Health System Response

Healthcare system providers will review their emergency plans and procedures and ensure they are current and workable. Medical surge portions of the plan may be exercised and improvement plans will be developed and implemented. Isolation procedures will be reviewed and

communicated to all staff. The importance of infection control procedures will be emphasized to staff, patients and visitors. PPE will be inventoried and additional stocks may be ordered.

The Planning Section within the KDHE ICS will monitor the Kansas Hospital Bed Availability (HAvBED) system. KDHE, in cooperation with the Kansas Hospital Association, will increase promoting use of this system by Kansas hospitals. Procedures for HAvBED use are in place and additional training will be made available to local hospital staff. Hospital bed availability, in concert with other situational data, will help planners at the local and state levels determine the need for additional care sites and supplies.

Additional training will be made available related to K-SERV. This system coordinates the deployment and tracking of volunteer medical and other professionals in an emergency and provides primary source verification for these professionals. The K-SERV system has been developed in accordance with the federal Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) standards. Requests for additional volunteers will be coordinated through the local EOCs, like other requests for additional support. Local volunteer coordinators have access to K-SERV and will be able to utilize the system according to procedures already developed and disseminated.

The PIPC will review this plan and the corresponding SOGs. Procedures and equipment in the KDHE Department Operations Center will be tested to ensure operational readiness.

Health System Response – U.S. Government Stages 1 & 2		
Kansas hospitals	Review emergency plans and procedures and ensure all facets are current and workable	✓
	Exercise and improve medical surge portions of hospital emergency plans and corresponding procedures	✓
	Inventory personal protective equipment and order additional supplies as identified	✓
	Provide additional infection control procedure training to staff, patients, and visitors	✓
Volunteer Coordinator, KDHE-CPHP	Provide additional training opportunities for K-SERV for county volunteer coordinators	✓
KDHE Planning Section	Monitor Kansas HavBED system for bed availabilities in hospitals	✓
Kansas Hospital Association	Promote the twice daily update of the Kansas HavBED system by hospitals	✓
KDHE-PIPC	Review Kansas Pandemic Influenza Preparedness and Response Plan and corresponding SOGs	✓
KDHE Logistics and Operations Sections	Review procedures and equipment in the KDHE Emergency Operations Procedures for operational readiness	✓

Communications

The KDHE Director of Communications serves as the PIO under the ICS. The PIO and his or her staff maintain a system to effectively communicate with public health officials, healthcare professionals and other targeted audiences. This system is described in the KDHE CERC Plan and describes the following activities that would be conducted by the PIO and his or her staff:

- Review materials and revise as needed.
- Activate public hotline, if needed
- Disseminate information to public and partners on an ongoing basis.
- Educate public health officials, elected officials, community leaders, and the media about what information will and will not be available during a pandemic.
- Prepare spokespersons.
- Coordinate with bordering jurisdictions.

Once sustained human-to-human transmission is confirmed anywhere in the world, the Public Information staff will:

- Review major elements of the CERC Plan with partners and stakeholders.
- Disseminate information to public, partners and the media on an ongoing basis.
- Monitor media coverage and address misinformation.
- Coordinate with bordering jurisdictions.

Communications – U.S. Government Stage 1 & 2		
Director of Communications, KDHE	Review materials and revise as needed	✓
	Activate public hotline	✓
	Disseminate information to public and partners on an ongoing basis	✓
	Educate public health officials, elected officials, community leaders, and the media about what information will and will not be available during a pandemic	✓
	Prepare spokespersons	✓
	Coordinate communications plan with bordering jurisdictions	✓
	Review major elements of the CERC plan with partners and stakeholders	✓
	Monitor media coverage and address misinformation	✓

Prevention and Containment

Local and state health authorities will meet with appropriate partners and stakeholders and review major elements of SNS plans and SOGs. Plans will be modified to account for any updates on recommended target groups, projected vaccine supply and human resources.

Once a novel virus has been identified, KDHE staff will review the distribution and priority prophylaxis and treatment plans to ensure they are updated. The medical community will be notified of the status of the plans and the availability of antivirals. KDHE will distribute guidelines to the medical community and conduct training for public health staff involved in antiviral distribution protocols and procedures.

Containment plans and SOGs will be reviewed and updated. State and local public health departments will continue to stress prevention messages and provide social distancing education to businesses, schools and community leaders.

Once human transmission is confirmed, local public health agencies will ensure that human resources and logistics are in place to begin vaccination, taking into account the need for additional staff due to illness and relief for workers. Refresher training will be provided to

relevant agencies and partner groups regarding vaccine delivery protocols and procedures. Activities will be coordinated with border states and the Kansas City Metro Area.

HHS will deploy the antiviral stockpile to state and tribal entities and to federal departments and agencies, along with prioritization and treatment recommendations. HHS will notify the Kansas SNS Coordinator to coordinate receipt.

Prevention and Containment – U.S. Government Stage 1 & 2		
SNS Coordinator, KDHE-CPHP	Meet with partners agencies and stakeholders to review state SNS plans and procedures	✓
Local health departments	Meet with partners agencies and stakeholders to review local mass dispensing plans and procedures	✓
KDHE-PIPC	Recommend target groups based upon projected vaccine supply and available resources	✓
State Health Officer, KDHE	Develop communications to the medical community convening the availability of antivirals and treatment protocols	✓
PIO, KDHE	Develop and release stress prevention messages included in the social distancing education to target areas	✓
Local health departments	Provide Just-in-Time refresher training to volunteers and assisting agencies for vaccination campaigns	✓

WHO Phases		U.S. Government Stages		CDC Interval
PANDEMIC PERIOD				
6	Pandemic phase; increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas	Recognition
		4	First human case in North America	Initiation
		5	Spread throughout the United States	Acceleration
				Peak
				Deceleration
		6	Recovery and preparation for subsequent waves	Resolution

Planning and Coordination

KDHE has developed pandemic influenza triggers that delineate staffing and appropriate actions for various trigger points during the pandemic alert period. Those trigger points are as follows:

1. World Health Organization declares Pandemic Alert, U.S. Government moves to Stage 3 and identifies the Pandemic Severity Index (PSI) for the particular causative virus. HHS notifies SNS Coordinator that they will ship the federal cache of antiviral medications to Kansas. Kansas identifies itself as Interval Investigation.
2. The Kansas Receipt, Staging, and Storage (RSS) Warehouse is activated to receive assets.
3. The U.S. Government declares Stage 4 – First Case identified in North America. Kansas identifies itself as Interval Investigation/Unaffected state.
4. The U.S. Government declares Stage 5 – Spread throughout the United States – First case in Kansas. Actions based upon federal guidance for respective stage, PSI and respective intervals.
    a. Kansas asynchronously identifies affected geographic area as Interval Investigation/Affected area with concomitant actions surrounding the initiation element. Kansas continues to identify the rest of the state as Interval Investigation/Unaffected.
    b. Kansas detects secondary clusters and identifies as Interval Recognition. Kansas continues asynchronous local and regional interval designations.
    c. Kansas declares "Mitigation Standby" if PSI 1-3, and "Alert" if PSI 4-5 identifies as Interval Initiation/Acceleration as surveillance warrants. Kansas activates community mitigation interventions for affected communities.
    d. Kansas declares Peak Interval and extensive community transmission as indicated by one or more of the three guidance based criteria for the interval. PSI based actions taken in affected areas.
5. The U.S. Government declares Stage 6 – Recovery and preparation for subsequent waves.
    a. Asynchronously within the state evident signs of infection rate reductions become apparent and affected areas are identified as Interval Deceleration.
    b. As cases become more sporadic, interval designations of resolution are declared for areas and communities of the state where surveillance supports the identified interval.

The complexity and variability of action surrounding the WHO phases, and the U.S. Government stages tied to the PSI and resulting intervals, will result in the development of "operational" decision algorithms. Appendix M represents a sample algorithm for use asynchronously within the state. It is based upon a WHO phase 4, U.S. Government-designated PSI 5 event, with resulting interval-based actions tied to state and local BIAs, resulting local SOGs and the Community Containment Tool Box and the school-based tool kit.

These trigger points were used for deciding staffing of the KDHE ICS. Since the antiviral shipment will necessitate activating an RSS Warehouse, KDHE will activate the Departmental Operations Center and additionally staff the ICS.

The KDA is responsible for all food safety programs in Kansas. Food Safety has been identified as the number 1 priority for KDA in the event of any crisis that would affect the ability of the agency to carry out essential functions, which would include a pandemic. Personnel assigned to food safety responsibilities are located throughout the state and cross-training has occurred with all staff. These staff will be used in place of current staff if they are unavailable to provide inspections. Inspections will be conducted during all phases of a pandemic.

All state-inspected slaughter/processing establishments will be directed to communicate problems and resource requests to their local EOCs. It is anticipated that many of these facilities will still contact their assigned inspector or the KDA directly, and that information will be shared with the local EOC. The ESF 11 coordinator in the SEOC, will coordinate resource requests with other ESF Coordinators and the logistics personnel, as needed. Status of food producers will be maintained by the ESF 11 Coordinator and provided to the planning section in the SEOC as requested. Due to the large number of regulated facilities, only those experiencing problems will be included in the status reports. Facilities able to continue business as usual will not be tracked or reported on.

It is unlikely that state-level response teams would be needed (or available) to carry out state-administered nutritional assistance and agriculture emergency response support responsibilities, during a pandemic. The nutritional assistance programs are managed by a handful of state-level managers on a day-to-day basis. The overwhelming majority of program implementation activity is done at the local level. School districts administer school nutrition programs, the local and state health departments manage WIC, hundreds of nongovernmental entities implement commodities programs, and the food stamp program is administered in Topeka. If the local agencies have not prioritized these programs in their continuity of operations planning, there is little that can be done from the state level. As mentioned previously, the newly formed group will be working to develop some guidance, but there are few regulatory avenues that would be available to require local entities to administer these programs during a pandemic, with the exception of the food stamp program. The state agency is required to accept and process applications, even in the event of a pandemic. Kansas Department of Social and Rehabilitation Services (SRS) field staff would carry out these functions with alternative methods as deemed necessary in a pandemic.

Agriculture emergency response support would be provided the same way in a pandemic as it is for other disasters and emergencies in Kansas. Critical response activities are prioritized in all state agency COOPs. It is anticipated that state agencies will be able to provide very little additional support to local jurisdictions during a pandemic. Plans are being developed to ensure that essential public safety and public health programs can continue, even with a potential

50 percent reduction in staff. It would not be prudent to assume that resources above and beyond that would be available.

The newly formed Nutritional Assistance group is currently working to develop procedures for alternative approaches for carrying out state-administered nutritional assistance during a pandemic. The KDA will serve as the ESF 11 coordinating agency in the event of a pandemic. Nutritional assistance program status will be reported on a weekly basis to the ESF 11 desk in the SEOC. If there are problems or needs, program managers will also report these to the ESF 11 desk as they occur. In the event of an agriculture emergency, the producers will notify their local EOC. Requests for assistance will be routed to the ESF 11 desk in the SEOC. Animal disease events will be also be coordinated through the SEOC and staff from the KAHD will respond to support the ESF 11 function.

The KDA and the KAHD are currently developing standard operating procedures as part of each agency's continuity of operations planning. The Food Safety and Agriculture Emergency programs are currently listed as priority-level critical functions in each agency. The procedures under development will include what actions each agency will take to ensure these programs are able to be continued in the event of a pandemic. Both agencies are responsible for functions that may not be critical and each is developing contingency plans to surge staff and resources into the priority programs.

After the KDHE Incident Commander advises the Governor through The Adjutant General of the State of Disaster Emergency, a recommendation that all state government agencies implement their COOPs will be made. A major focus of these COOPs shall include the limiting of personnel working to COOP functions and personnel. This limiting of state workers is expected to have the effect of limiting the disease spread among the workforce and be part of the state's overall layered disease mitigation strategy.

Planning and Coordination – U.S. Government Stages 3, 4 & 5		
KDA	Ensure all food producers, transporters, retailers, and consumers are aware of information and educational resources prior to, during, and after a pandemic	✓
	Assist farm-to-fork operators with planning for the human resource challenges that may affect their businesses during a pandemic	✓
	Serve as a source of information for stakeholders regarding state and local actions and resources available to producers during a pandemic	✓
	Engage in vigorous continuity of operations planning to ensure that the department can continue to provide the services necessary to maintain the integrity and safety of the food supply	✓
KDHE Incident Command	The Incident Commander will activate the KDHE Department Operations Center and fully activate the response plan	✓
	The Planning Section Chief will monitor staffing needs and recruit additional staff, if necessary	✓
	The Liaison Officer will ensure activities are coordinated with the bordering states of Missouri, Nebraska, Oklahoma and Colorado, as well as the Kansas City Metro Area	✓

	The Incident Commander will ensure that CDC is briefed on the actions occurring in Kansas	✓
	The Finance Section Chief will document the expenses related to responding to a pandemic influenza outbreak	✓
	The Operations Section Chief will ensure coordination of OSE response activities with those of the local health departments and the medical community	✓
	The Incident Commander will determine when to advise the Governor to declare a State of Disaster Emergency in response to the influenza pandemic	✓
	The KHEL will provide testing and technical support to the pandemic response, coordinate the response of the Kansas Laboratory Response Network, and provide guidance to clinical laboratories statewide	✓
	The Planning Section Chief will monitor staffing needs at the KHEL and within KDHE	✓

Situation Monitoring and Assessment

In an effort to reduce and delay the spread of infection through the state workforce, the KDHE Incident Commander will recommend the implementation of COOP measures to the Governor's Office, through the Adjutant General's Department, for all state agencies. The implementing of these measures will be dictated by the PSI and result in the reductions of state functions corresponding to that severity. Each agency implementing COOP measures will identify which services to reduce in coordination with the appropriate ESF Coordinator at the SEOC. ESF Coordinators will then provide all of the service reduction information to the SEOC Manager and the state JIC. The JIC will coordinate the release of this information with the Governor's Office to the citizens of Kansas.

Studies have demonstrated a dramatic increase in antiviral resistance in some commonly circulating Influenza strains to certain antiviral medications. The technology required to perform antiviral resistance testing is not available to most laboratories, including KHEL. In response, CDC has implemented an enhanced antiviral resistance testing and surveillance program. Each of the CDC Collaborating Laboratories is asked to submit a certain portion of Influenza isolates to CDC. KHEL is participating in this surveillance program and will submit an increased number of isolates for antiviral resistance monitoring.

The Epidemiological Branch Director in the KDHE ICS will ensure that studies are in place to monitor vaccine effectiveness as well as assess the quality of surveillance and make recommendations for improvement during the period between pandemic waves and after the pandemic. In addition, the Epidemiological Branch will be responsible for tracking adverse events to vaccine and treatment. The Epidemiological Branch Director will also coordinate the monitoring of health impacts, including deaths and hospitalizations, from influenza.

KDHE–OVS has implemented an electronic death reporting system. Both OVS and OSE can access the system, and build queries regarding deaths from specific causes, such as influenza or pneumonia. In the event that the electronic death reporting system is not operational, influenza-associated deaths will be tabulated manually, using traditional, paper-based methods.

During the early period of the pandemic, the Epidemiological Branch will use information gathered from local health departments' case investigations, WebEOC, and the Office of Vital Statistics electronic death reporting system to determine the disease's attack and case-fatality rates, the number and rate of pandemic-associated hospitalizations, the number of pandemic-associated deaths, and the numbers of newly isolated and quarantined citizens. Tabulated data may be transmitted to the CDC as requested.

The Epidemiological Branch, with assistance from the Office of Vital Statistics, may utilize bridged estimates from the National Center for Health Statistics to calculate estimated rates of influenza-associated hospitalization.

The Planning Section in cooperation with the Kansas Division of Homeland Security will measure absenteeism in key industries.

In the event of a suspect or confirmed case of pathogenic avian influenza, the Kansas Animal Health Department Livestock Commissioner will contact the State Public Health Veterinarian directly or via telephone, in addition to contacting the Adjutant General's Department via email.

Situation Monitoring and Assessment – U.S. Government Stages 3, 4 & 5		
KDHE Incident Command	Recommend the implementation of COOPs to the Governor's Office through the Adjutant General's Department for all state agencies	✓
KDHE-KHEL	Conduct enhanced monitoring for antiviral resistance	✓
KDHE Epidemiological Branch	Ensure that studies are in place to monitor vaccine effectiveness	✓
	Coordinate the monitoring of health impacts including deaths and hospitalizations from influenza	✓
	Determine the disease's attack and case-fatality rates	✓
	Assess the quality of surveillance and make recommendations for improvement	✓
	Track adverse events to vaccine and treatment	✓
KDHE Planning Section and Kansas Division of Homeland Security	Measure absenteeism in key industries	✓

Health System Response

KDHE will implement generic elements of the response plans and specific plans for identified pandemic influenza issues, including continuous collection of data concerning medical and material supplies and their allocation, in order to rapidly identify changing patterns of need and modify or redirect policy.

Depending upon the severity of the pandemic, communities may choose to utilize alternate care facilities for patients presenting with symptoms of pandemic influenza. These alternate care sites may be utilized to facilitate congregate care of similarly symptomatic patients whom do not require intensive medical treatments. The use of these facilities by communities could prove effective in maintaining the hospital for those with severe complications or other non-pandemic

related medical emergencies such as labor and delivery, traumas, and normal daily emergency room situations.

In the event of mass fatalities caused by a pandemic influenza, it may be necessary to have a virtual family assistance center where information can be received and disseminated by means other than personal contact to reduce exposure.

The Disease Containment Branch will coordinate the provision of infection control measure messages to health care delivery personnel as well as the general public. KDHE will coordinate best practice recommendations from the CDC, HHS, and Association of Practitioners of Infection Control (APIC). This information will be shared via a variety of avenues including the JIC and KS-HAN, in partnership with the Kansas Hospital Association, the Kansas APIC Chapter and KBEMS.

The role of behavioral health professionals in pandemic response is important for the health of Kansans. Continuity of operations planning efforts across all sectors describe the reduction of services during this time. This reduction of services will likely have many effects to the employment statuses of Kansans. Behavioral health providers will have a role in drafting messages and providing services to established clients and the general population during this time. These messages may also include the increased expectation of deaths outside of medical care facilities, depending on the severity of the pandemic.

Once the pandemic is underway and healthcare providers rely on clinical criteria rapid test kits, more diagnostic activities may be conducted locally and fewer shipments may be needed. Public health laboratories should continue to build partnerships with healthcare providers in their jurisdictions, including physicians who participate in the ILI Net during the regular influenza season.

Health System Response – U.S. Government Stages 3, 4 & 5		
KDHE Disease Containment Branch	Provide infection control messages to health care personnel	✓
	Coordinate best practice recommendations and share this information with the State JIC and local partners	✓
Kansas communities	Activate and staff alternate care sites, if applicable	✓

Communications

Using the communication systems identified during the Inter-Pandemic Period, public information staff will update appropriate agencies and the public at least weekly and as needed regarding any new information regarding the novel virus and its impact. Materials and messages will be reviewed and modified as needed with information from the CDC, HHS, and infection control specialists. When the SEOC is activated, the state JIC will also be activated. KDHE's PIO will serve with the JIC to ensure consistency of information from the State of Kansas. JIC activities will be coordinated with bordering states and the Kansas City Metro Region.

KDA will coordinate with partner agencies to ensure that all applicable nutrition assistance program information is provided to stakeholders during the pandemic period. In addition to the messages provided by KDHE, KDA will coordinate with the nutritional assistance program managers and advise the public regarding availability of nutritional assistance programs.

KDA will assume the role as the ESF 11 coordinating agency during the pandemic response. A key component of this role is to coordinate the response to agricultural emergencies. Should an agricultural emergency coincide with a pandemic, KDA will work with KDEM to assist KAHD with any needs identified in the animal producer sector. KDA will continue to monitor the agriculture sector and provide necessary information and resources, if available, to ensure the continuity of food production in Kansas.

KDA will ensure that all applicable food safety information is provided to stakeholders during the pandemic period. In addition to the messages provided by KDHE, KDA will advise the public regarding food product recalls, safe food handling procedures, and any issues regarding shortages, substitutions, etc. KDA will also communicate with agricultural producers and other regulated entities to help KDHE provide messages regarding disease containment in the workplace and updates on the status of the pandemic.

Communications – U.S. Government Stages 3, 4 & 5		
State JIC	Provide updated information to appropriate agencies and the public at least weekly and as needed regarding virus and impact	✓
KDA	Provide all applicable nutrition assistance program information to stakeholders	✓

Prevention and Containment

KDHE will activate the Department Operations Center and distribute vaccine and supplies necessary for influenza vaccine administration (e.g., needles and syringes) through a centralized distribution system to local health departments using SNS infrastructure. Distribution of a specified number of doses of vaccine and medical supplies is based upon population and distribution of prioritized essential services personnel. Supplies to support vaccination efforts may be shipped separately from vaccine, depending on the availability of supplies.

KDHE will consult with KDEM and SEOC staff to help coordinate the storage, security, and transportation of vaccine and supplies. As previously mentioned, this distribution effort will be in accordance to previously planned and exercised SNS infrastructure. It will be crucial to continue close coordination with local, state and federal partners.

KDHE will implement vaccination of those state government officials and state and federal personnel deemed as priority for maintaining essential services. Utilizing similar methodologies as local jurisdictions, the State of Kansas will have identified these personnel. Utilizing the medical staff available within the state government system, KDHE will coordinate the provision of vaccine to these individuals to promote continuity of government.

Epidemiological Branch staff will monitor adverse reactions to influenza vaccine using the Kansas Immunization Registry. This effort will be in coordination with the monitoring of infection and fatality rates associated with the virus. Epidemiological studies of cases, adverse reactions, trends, and effectiveness of containment measures will be conducted using standard epidemiological techniques and methodologies. This information will assist state planners and response staff in determining the effectiveness of the vaccine and the need for additional disease containment measures.

The Disease Containment Branch will assist in the distribution of pneumococcal vaccine for high-risk individuals. It is anticipated that there will also be a shortage of these supplies as well. Those high-risk individuals will be identified and prioritized at the local level in much the same way as the vaccine. The SNS infrastructure will be utilized for distributing these measures.

Once the onset of a pandemic is confirmed, KDHE will fully activate the antiviral drug distribution plan. These medications will be provided to healthcare facilities for the treatment of pandemic influenza patients.

Prevention and Containment – U.S. Government Stages 3, 4 & 5		
KDHE SNS and RSS Units	Distribute vaccine, supplies, antivirals, and other medical supplies	✓
KDHE Epidemiological Branch	Monitor adverse reactions to influenza vaccine	✓
KDHE Disease Containment Branch	Assist in distribution of pneumococcal vaccine for high-risk individuals	✓

U.S. Government – Stage 6

Recovery and preparation for subsequent waves

Improvement plans for the KDHE Department Operations Center, RSS Warehouse and SEOC will be made based on the after action reviews for each of those venues. Specific modification of the response plans and operating guides or procedures will be implemented as needed.

Epidemiological studies and reports will identify strengths and weaknesses of response measures.

Food supply system assets will be assessed on an as-needed basis. Inspections will be conducted on the same schedule as the Inter-pandemic Period, unless problems or issues are reported to KDA in accordance with current procedures. In the final stages of the pandemic, KDA will ensure that all applicable food safety, agriculture and nutritional assistance information is provided to the public and regulated entities to continue the precautions identified in previous phases.

It is important to recognize that an influenza pandemic will likely have a significant mental health effect on Kansas citizens, responders and government officials. During the times between pandemic waves, behavioral health professionals will be needed across all sectors of society to promote resiliency, and provide crisis counseling and stress management opportunities for individuals. Considering the likely economic impact workers will face as a result of the pandemic, behavioral health providers will likely be called upon by industry to assist with individuals being returned to work, or with workers displaced because of reductions in work load.

State ESFs will continue activities into the recovery phase as outlined in the base Kansas Response Plan. Restoration of services for the health and medical community, including

congregate living services, behavioral health, health care, public health, EMS, and laboratory services, will be coordinated by the State ESF 8 Coordinator. The focus will be to get local communities back to Inter-pandemic Period capabilities as quickly and efficiently as possible. ESF 8 will work with licensure entities in Kansas to restore applicable levels of oversight to those disciplines. Within the KDHE ICS is a Health Recovery Branch, which promotes coordinated community restoration efforts by working with the KDHE Division of Health. Regulatory inspections of hospitals and other KDHE-regulated entities will resume as scheduled and defined in procedure. Recommendations concerning standards of care for both medical care and pre-hospital care arenas will continue to be revised and released as information related to infection and best practices becomes available.

The SEOC will continue to monitor and coordinate with identified critical infrastructure and key assets. Recovery of these assets will promote recovery of the entire state. As assets begin to return to Inter-pandemic Period operations, the interaction with the SEOC will decrease.

Recovery and preparation for subsequent waves – U.S. Government Stage 6		
All responding organizations	Perform after action reviews and implement improvement plan action items	✓
Regulating agencies	Restoration of regulating activities to pre-pandemic schedule and procedure	✓
ESF 8 Coordinator	Coordination of restoration of health and medical services	✓
KDHE	Continue to revise and release recommendation concerning standards of care	✓
SEOC	Coordinate with critical resources and key assets to promote recovery and monitor degree of impact to operations	✓

POSTPANDEMIC PERIOD

When the pandemic has been declared ‘over,’ local and state response will return to Inter-pandemic Period activities.

Appendices

Appendix A- KDHE NIMS – Position Title Crosswalk

(First title listed is primary position, other position is the second shift/back-up)

Command Staff			
Incident Commander	**State Health Officer, KDHE**	**Deputy Incident Commander**	**Director, Center for Public Health Preparedness (CPHP)**
	Asst. Dir DOH, KDHE		**Operations Director, CPHP**
Political Liaison Officer	**Special Asst. to the Secretary**	**Departmental Liaison Officer**	**Director, Office of Local and Rural Health**
	Deputy Secretary, KDHE		**TBD**
Safety Officer	**KS TRAIN Administrator**	**Public Information Officer**	**Director, Public Information KDHE**
	Workforce Development Coordinator		**Communications and Training Specialist**
Operations Section Staff			
Operations Section Chief	**Operations Specialist, CPHP**	**Disease Containment Branch Director**	**Surveillance Director, OSE**
	Environmental Health Officer, OSE		**Adult Immunizations Epidemiologist, OSE**
Epidemiological Branch Director	**State Epidemiolgist, OSE**	**RSS Branch Director**	**Rural Planning Specialist, CPHP**
	Deputy State Epidemiologist, OSE		**Lead Prevention Specialist,**
Laboratory Branch Director	**KHEL Bioterrorism Program Manager**	**Mass Fatality Branch Director**	**Executive Director, KFDA**
	KHEL Laboratory Preparedness Coordinator		**Executive Secretary, BOMA**
Planning Section Staff			
Planning Section Chief	**Hospital and Volunteer Outreach Coordinator, CPHP**	**SNS Unit Leader**	**SNS Coordinator, CPHP**
	Contingency Planner, CPHP		**Training & Exercise Coordinator, CPHP**
Situation Unit Leader	**TBD**	**Resource Unit Leader**	**TBD**
	TBD		**TBD**
Logistics Section Staff			
Logistics Section Chief	**Grant Specialist, CPHP**	**Supplies Unit Leader**	**TBD**
	Public Service Administrator 1, BCCHF		**TBD**
Facilities Unit Leader	**TBD**	**Communications Unit Leader**	**Communications Interoperability Coordinator, CPHP**
	TBD		**TBD**
Finance/Administration Section Staff			
Fin/Admin Section Chief	**Director of Administration, CPHP**	**Procurement Unit Leader**	**CPHP Fiscal Officer**
	Administrative Specialist, CPHP		**TBD**
Cost Unit Leader	**TBD**	**Time Unit Leader**	**TBD**
	TBD		**TBD**

Appendix B – Public Health Emergency Activation Levels

Public Health Emergency Activation Levels

Level 1 – Normal Operations

- Day-to-day operations
- ESS monitors surveillance system statewide
- Epidemiologist-on-call is notified of reportable diseases or unusual events
- Contact with the Epidemiologist-on-call is made 24/7 via the Epi Hotline (1-877-427-7317)
- Influenza surveillance coordinator gathers information on ILI activity in the state n a weekly basis

Level 2 – Watch

- Passive and sentinel surveillance indicates that an unusual event or outbreak has occurred and further case ascertainment is needed
- Active and enhanced surveillance initiated at the State and/or Local levels
- Decision makers are able to mobilize internal resources to identify and contain diseases
- KS-HAN notifications sent to appropriate health departments, physicians, hospitals, and sentinel sites
- Epidemiological Investigation is conducted by state and local health department staff
- Law enforcement may be notified if the event has potential law enforcement implications

Level 3 –Response

- Emergency Public Health Response is necessary
- KDHE Department Operations Center is activated
- Limited outside resources needed
- Decision makers are able to mobilize internal resources to identify, contain, or mitigate the disease
- Public Information is handled through the KDHE Office of Communications
- Public Information Phone Bank may be activated

Level 4 –Full-Scale Activation

- Resources outside of Public Health and Medical agencies are needed
- State Emergency Operations Center is activated
- KDHE Emergency Operations Center is activated
- Kansas Emergency Response Team (KERT) is notified and activated if necessary
- Biological Incident Annex and ESF #8 are activated
- Governor may issue a proclamation declaring a state of disaster emergency
- Federal resources may be requested (e.g. SNS, NDMS)
- Joint Information Center is staffed and operational

Appendix C – Crosswalk of Activities

Response Phases	I Normal Operations	II Watch	III Response	IV Full-Scale Activation	V Recovery
WHO Pandemic Phases	Inter-pandemic Period Phase 1 & 2	Pandemic Alert Period Phase 3, 4 & 5	Pandemic Alert Period Phase 5	Pandemic Period Phase 6	Postpandemic Period
US Government Phases	USG Phase 0	USG Phase 1, 2	USG Phase 2, 3, 4	USG Phase 5	USG Phase 6
CDC Interval	Investigation	Investigation	Recognition	Initiation, Acceleration, Peak, Deceleration	Resolution
Planning and Coordination	Planning with state agencies and task forces. Training and exercising of plan	Notify KDEM and other partners. Activate Plan.	Minimal or Extended Response. DOH Resources. DOC and activated to Level 3, request KDEM Liaison	Ask for Governor's Declaration of Emergency	Demobilization and conduct AAR.
Situation Monitoring and Assessment (Disease Investigation)	Normal operation	Broad dissemination of case definition for active case finding of novel virus in KS resident.	Case finding of pandemic strain in KS residents	Case investigation limited to determining age-specific attack rates, morbidity and mortality	Epidemiological studies as outlined in the plan Return to normal case investigation.
Health System Response	Review and revise hospital emergency operations plans. Train and exercise surge portions of plan. Community planning for alternate care sites.	Review applicable surge sections of plan. Revise as necessary with community partners	Activate Hospital Incident Command System (HICS) in affected healthcare facilities	HICS continue to operate in hospitals. ESF 8 coordinates temporary facilities.	Continues until patient load normalizes and disease transmission is interrupted
Prevention and Containment (Vaccination/ Prophylaxis) (Quarantine/ Isolation)	PIPC review and update the Vaccine and Antiviral Delivery section of the plan as needed Prepare and distribute Isolation and Quarantine Order Templates to LHD.	Initiate vaccine and antiviral acquisition Advise hospitals and clinicians of control measures, including quarantine and isolation orders for novel virus cases.	Continue to identify high-risk groups for possible treatment with antivirals and prepare for mass vaccination. Review community control measures. Consider group isolation measures.	Conduct mass immunizations when vaccine is available. Continue treatment with antivirals if available. Implement community control measures including group isolation.	Assess the effectiveness of vaccine and antivirals. Review effectiveness of control.
Communications	Review and update CERC plan and the communications section of this plan	KDHE PIO will review CERC Plan with PIPC.	KDHE PIO conducts communication activities outlined in the plan.	KDHE PIO conducts communication activities outlined in the CERC plan.	KDHE PIO reviews communication strategies used during the pandemic.

Appendix D - State Preparedness Committees

Kansas Pandemic Influenza Task Force	
Director, Division of Health and State Health Officer	Kansas Hospital Association
Kansas Division of Emergency Management	Kansas Department of Transportation
The Adjutant General's Department	Kansas Department of Agriculture
Kansas Department of Corrections	Kansas Animal Health Department
Kansas Board of Emergency Medical Services	Kansas Corporation Commission
Kansas Highway Patrol	Kansas Association of Osteopathic Medicine
Kansas State Board of Nursing	Kansas Department of Wildlife and Parks
State Nurses Association	Kansas Medical Society
Kansas Board of Pharmacy	Kansas Chamber of Commerce
Kansas Pharmacists Association	Kansas Department on Aging
Kansas Health Institute	Kansas Dental Association
Kansas State Department of Education	Kansas State Fire Marshall
Kansas Association of School Boards	League of Kansas Municipalities
Kansas Association of Counties	Kansas Board of Healing Arts
Kansas Governor's Office	Kansas Department of Commerce
KS Association for the Medically Underserved	KS Assn. of Homes & Services for the Aged
Kansas Health Care Association	KS Dept. of Social and Rehabilitation Services
Kansas Home Care Association	Kansas Funeral Directors and Embalmers Assoc.
Kansas Juvenile Justice Authority	Kansas Respiratory Care Society
Kansas Association of Local Health Departments	Kansas Association of Public Safety Communications Officials

Kansas Bioterrorism Coordinating Council	
State EMS	American Red Cross
American Indian health care facilities	KS Society for Clinical Laboratory Science
Veteran's Administration	KSNA – Clinical Professional Society
State Trauma Coordinator (Advisory Council)	KMS – Clinical Professional Society
Local health departments	Poison Control Centers
State Primary Care Association	Community health centers
State Mental Health Agency	Police departments
Academic health centers	Local EMS
SRS – Health Care Policy	Association for Practitioners in Infection Control
KHA – Clinical Professional Society	Military treatment facilities
State Maternal Child Health Advocate	MMRS
State Emergency Management Agency	Community hospitals
Tertiary hospitals	Fire departments
pharmacist	Research organizations
State Office of Rural Health	

Clinical Resource Network (Specialties)	
Dermatology Infectious Disease Internal Medicine	Pulmunology Family Medicine Toxicology Psychiatry

Appendix E – Coordination List

COORDINATION OF PANDEMIC INFLUENZA PREPAREDNESS WITH STATE AND FEDERAL AGENCIES

State Agencies

Kansas Department of Health and Environment (KDHE)
Kansas Department of Transportation (KDOT)
Kansas Department of Social and Rehabilitative Services (SRS)
The Kansas National Guard (KSNG)
The Kansas Division of Emergency Management (KDEM)
The Kansas Board of Emergency Medical Services (KBEMS)
Kansas Department of Corrections (KDOC)
Kansas Highway Patrol (KHP)
Kansas Board of Emergency Medical Services (BEMS)
Kansas Department of Agriculture (KDA)

Divisions and offices within the Kansas Department of Health and Environment

The Office of the Secretary
The Division of Health
The Kansas Health and Environmental Laboratories
The Center for Health and Environmental Statistics
The Office of Surveillance and Epidemiology (OSE)
The Bureau of Disease Control and Prevention (BDCP)
The Bureau of Family Health (BFH)
The Office of Health Promotion (BHP)
The Office of Local and Rural Health (OLRH)
Center for Public Health Preparedness (CPHP)

Federal Agencies

The Department of Health and Human Services (HHS)
The Centers for Disease Control and Prevention (CDC)
The Federal Emergency Management Agency (FEMA)
The Food and Drug Administration (FDA)
The Department of Homeland Security (DHS)
The United States Department of Agriculture (USDA)

Other Agencies

Other State Health Departments
Kansas Veterinary Diagnostic Laboratory
Kansas Hospital Association
Kansas Medical Society
Salvation Army
American Red Cross
Kansas Association of Local Health Departments

Appendix F – Family (Home) Care for Symptomatic Individuals

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

The single best way to prevent influenza is to get vaccinated each fall. In the absence of vaccine, however, there are other ways to protect against influenza. Four antiviral drugs (amantidine, rimantidine, oseltamivir and zanamivir) are approved and commercially available for use in treating influenza. Three of them (amantidine, rimantidine, and oseltamivir) are approved for prevention (chemoprophylaxis) against influenza. All of these drugs are prescription drugs, and a doctor should be consulted before their use.

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

1. Avoid close contact with people who are sick.
2. Wash hands often. If sick, stay at home and keep at least three feet away from others.
3. Cover mouth and nose with a tissue when coughing or sneezing.

Individuals who are cared for at home should:

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

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

Warning signs to seek urgent medical care:

In children, these include:

1. High or prolonged fever
2. Fast breathing or trouble breathing
3. Bluish skin color
4. Not drinking enough fluids
5. Changes in mental status, somnolence, irritability
6. Seizures
7. Influenza-like symptoms improve but then return with fever and worse cough
8. Worsening of underlying chronic medical conditions (for example, heart or lung disease, diabetes)

In adults, these include:

1. High or prolonged fever
2. Difficulty breathing or shortness of breath
3. Pain or pressure in the chest
4. Near-fainting or fainting
5. Confusion
6. Severe or persistent vomiting

Appendix G – Legal Authority

Statute	Section	Authority
Disposition of Human Remains	65-123	Disposal of human remains during state of emergency relating to public health
Health, Administration and Supervision	65-101	Duties of the Secretary of Health and Environment
	65-Articles 1 and 2	Public health system
	65-101	Powers and duties of the department (KDHE) (Powers of the secretary)
	65-101	Powers and duties of the department as public health authority
Local Health Officials	65-201	Local board of health; powers and duties
	65-119 and 202	Local health officer; qualifications and duties
Communicable Diseases	65-101	Powers and duties of department (given as powers of the secretary)
	65-119	Duties of local health officers
	65-119 and 126	Isolation and quarantine
	65-118	Communicable diseases; suspected cases; protection of the public (reporting suspected case)
	65-127, 128, and 129	Violation of law relating to health
Investigation of Deaths	65-123	Funeral for someone who dies of communicable disease
Control of Communicable Diseases	65-118	Reports of communicable diseases (protection against liability and the necessity of reporting)
	65-119	Investigation and control of communicable diseases
	65-119	General statement of powers for control of communicable diseases

Appendix H – Internet Sites Referenced

CDC FluAid
FluAid is a test version of software created by programmers at the Centers for Disease Control and Prevention (CDC). It is designed to assist state and local level planners in preparing for the next influenza pandemic by providing estimates of potential impact specific to their locality.
http://www2.cdc.gov/od/fluaid/default.htm

Kansas State Statutes (index)
http://www.kslegislature.org/legsrv-legisportal/index.do

World Health Organization Pandemic Preparedness
http://www.who.int/csr/disease/influenza/pandemic/en/

Kansas Response Plan (KRP)
http://www.accesskansas.org/kdem/pdf/library/KRP_Sept2006.pdf

Mass Clinic (SNS) Standard Operating Guide Template for Local Health Departments
http://www.kdheks.gov/cphp/mass_dispensing_sog.htm

Federal website with Pandemic Influenza planning tools and resources
http://www.pandemicflu.gov/

Valuable Links from pandemicflu.gov

Antiviral Allocations for each state:
http://www.pandemicflu.gov/plan/states/antivirals.html

State and Local Planning Checklist
http://www.pandemicflu.gov/plan/states/statelocalchecklist.html

National Strategy for Pandemic Influenza: Implementation Plan
http://www.whitehouse.gov/homeland/pandemic-influenza-implementation.html

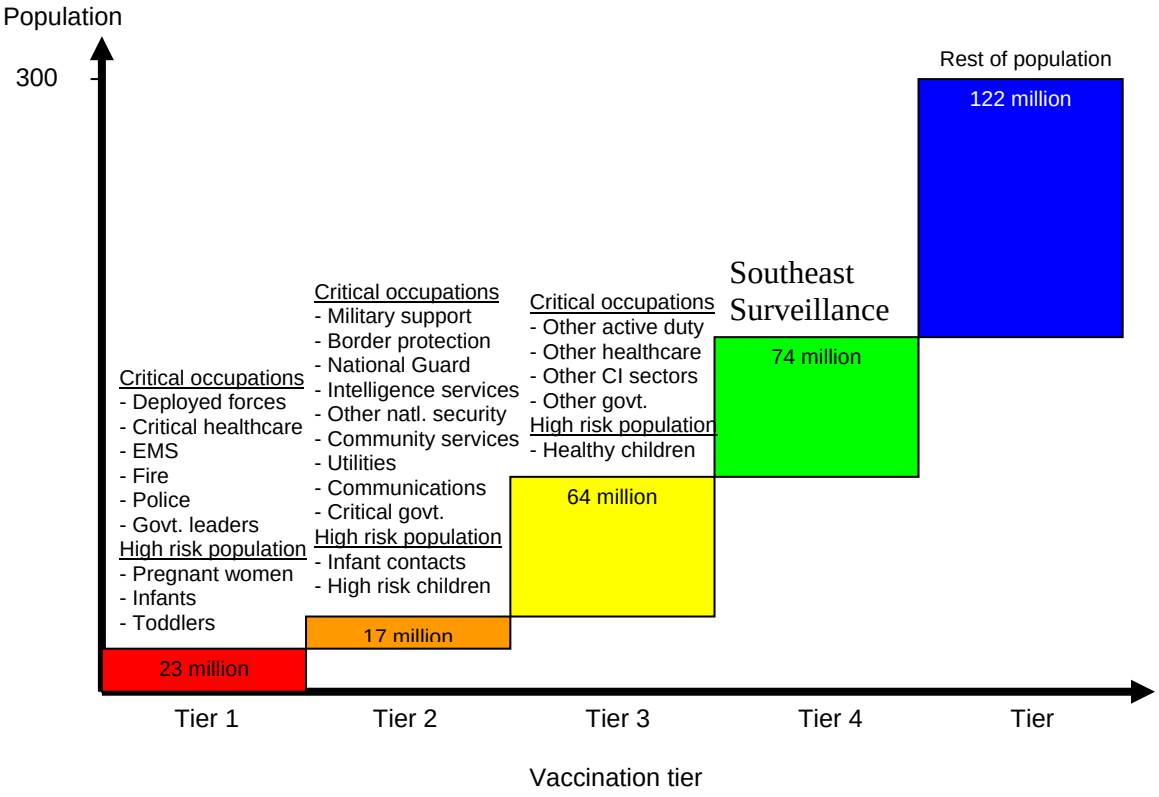
Appendix I – HHS Vaccine Priority Recommendations

Table 2. Vaccination target groups, estimated populations, and tiers for severe, moderate and less severe pandemics as defined by the Pandemic Severity Index (PSI).

Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Not targeted

Category	Target group	Estimated number	Severe	Moderate	Less severe
Homeland and national security	Deployed and mission critical pers.	700,000			
	Essential support & sustainment pers.	650,000			
	Intelligence services	150,000			
	Border protection personnel	100,000			
	National Guard personnel	500,000			
	Other domestic national security pers.	50,000			
	Other active duty & essential suppt.	1,500,000			
Health care and community support services	Public health personnel	300,000			
	Inpatient health care providers	3,200,000			
	Outpatient and home health providers	2,000,000			
	Health care providers in LTCFs	800,000			
	Community suppt. & emergency mgt.	600,000			
	Other important health care personnel	500,000			
Critical infrastructure	Emergency Medical Service personnel	2,000,000			
	Law enforcement personnel				
	Fire services personnel				
	Mfrs of pandemic vaccine & antivirals	50,000			
	Key government leaders	50,000			
	Electricity sector personnel	1,900,000			
	Natural gas personnel	to 4,400,000			
	Communications personnel				
	Water sector personnel				
	Critical government personnel				
	Transportation sector personnel	1,400,000			
	Food and agriculture sector personnel	to 3,500,000			
	Banking and finance personnel				
	Pharmaceutical sector personnel				
	Chemical sector personnel				
	Oil sector personnel				
	Postal and shipping personnel				
	Other important government personnel				
General population	Pregnant women	3,100,000			
	Infants & toddlers 6–35 mo old	10,300,000			
	Household contacts of infants < 6 mo	4,300,000			
	Children 3–18 yrs with high risk cond.	6,500,000			
	Children 3–18 yrs without high risk	58,500,000			
	Persons 19–64 with high risk cond.	36,000,000			
	Persons ≥65 yrs old	38,000,000			
	Healthy adults 19–64 yrs old	121,800,000			

Figure 1. Vaccination tiers and target groups for a severe pandemic. This figure illustrates how vaccination is administered by tiers until the entire U.S. population has had the opportunity to be vaccinated, and how tiers integrate target groups across the four categories balancing vaccine allocation to occupationally defined groups and the general population.



Appendix J – Local Pandemic Influenza Response Checklist

ACTION	☑
Inter-pandemic Period *Goals: Strengthen influenza pandemic preparedness, Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs*	
Establish a local health care task force as a focus for planning, preparedness and coordinated response. The task force should include representatives from hospitals, physician and nursing organizations, home health care, long-term care facilities, pharmacists, EMS and local public health officials.	
Develop strategies to increase the demand for influenza vaccine among your county's residents and especially healthcare workers.	
Continue to develop and refine the local Mass Dispensing SOG.	
Work with the local chamber of commerce and large employers to increase awareness in the community.	
Conduct training and exercises to ensure the local Mass Dispensing SOG is operational.	
Educate health department staff and health care providers about Pandemic Influenza.	
Estimate target populations (priority groups) of essential personnel, including health care workers, first responders and public safety workers.	
Pandemic Alert Period *Goal: Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases. Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures*	
Review Local Response Plan, Emergency Support Function 8 – Health and Medical Annex.	
Review Mass Dispensing SOG, ensure contacts are updated and potential vaccination clinic facilities are available.	
Review local Point of Dispensing sites on Pharmfinder and update, if necessary.	
Convene local health task force and brief on the status of the Pandemic Alert and local preparedness efforts.	
Review message maps relating to pandemic influenza and make sure they are current.	
Review priority group estimates.	
Ensure Mass Dispensing SOG addresses vaccine distribution to tribal entities, military installations, and correctional facilities, if applicable.	
Ensure city police departments and the county sheriff's offices are aware of the potential for civil unrest to occur in the event of a pandemic.	
Meet with adjoining jurisdictions to ensure actions will be coordinated in Phase 6. Special considerations include: priority group recommendations, vaccination clinic operations (hours of operation, locations, policies, and forms).	
Local health task force reviews the priority group recommendation of the State Health Officer and provides guidance to local health officer on any changes.	

Once priority groups are identified, estimate the number of local citizens in each group.	
Health department ensures that all agencies and volunteers tasked in the plan are aware of the Pandemic Alert Phase and the potential for escalation.	
Ensure all personnel who may have contact with the media are trained on the message maps.	
Ensure all media contacts are up to date.	
Log into WebEOC and familiarize staff with the system.	
Review security component of the SNS SOG and ensure security assets are available and briefed.	
Pandemic Alert Period *Goal: Minimize the impact of the pandemic*	
Activate local Emergency Operations Plan (EOP), Emergency Support Function 8.	
Activate local Emergency Operations Center (EOC) and the local Joint Information Center (JIC).	
Administer influenza vaccine as it becomes available. Ensure a second dose of vaccine is administered if necessary.	
Assist KDHE with obtaining data to determine age-specific attack rates, morbidity and mortality.	
Work with KDHE to determine vaccine efficacy.	

Appendix K – State Pandemic Influenza Response Checklist

ACTION	☑
Inter-pandemic Period *Goal: Strengthen influenza pandemic preparedness, Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs*	
Establish a state task force as a focus for planning, preparedness and coordinated response. The task force should include representatives from hospitals, physician and nursing organizations, home health care, long-term care facilities, pharmacists, EMS and local public health officials.	
Develop strategies to increase the demand for influenza vaccine among state residents; especially healthcare workers.	
Continue to develop and test the KDHE Internal Operating Guides.	
Ensure all KDHE – Division of Health staff with response roles are trained on the National Incident Management system. (Complete IS-700 through KS TRAIN or provide certificate to training staff)	
Establish the Pandemic Influenza Preparedness Committee (PIPC) to draft and maintain the plan for a coordinated state response to an occurrence of pandemic influenza.	
Conduct exercises to test the state's ability to respond to large-scale outbreaks at least annually.	
Continue passive surveillance of influenza-like illness using the ILI Net Surveillance System.	
KHEL will continue to isolate and sub-type influenza viruses year round and perform and perform viral cultures.	
Continue to transmit information on influenza-like illness and influenza viruses isolated to CDC.	
Continue to conduct training and exercises to ensure the plan and corresponding SOGs are operational.	
Educate health department staff and health care providers about pandemic influenza.	
Estimate target populations (priority groups) of essential personnel, including health care workers, first responders and public safety workers.	
Continue to conduct laboratory and disease surveillance activities described in Phase 1.	
Pandemic Alert Period *Goal: Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases. Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures*	
Review the Kansas Response Plan to include: Emergency Support Function 8 – Health and Medical Annex and the Biological Incident Annex.	
Review Mass Dispensing SOG, ensure contacts are updated and potential vaccination clinic facilities and state warehouses are available.	
Review local Point of Dispensing sites on Pharmfinder and ensure local entities have updated, if necessary.	
Convene state health task force and brief on the status of the Pandemic Alert and local preparedness efforts.	
Review message maps relating to pandemic influenza and make sure they are current.	

Review priority group estimates.	
Make contact with state health departments in Missouri, Nebraska, Oklahoma and Colorado to update on status of planning and preparedness efforts. Ensure contact numbers are updated.	
Continue to conduct laboratory and disease surveillance activities described in Phase 1. Monitor and institute recommendations from CDC for any additional surveillance activities that should be undertaken given the specific circumstances.	
Ensure state law enforcement agencies (KBI and KHP) are aware of the potential for civil unrest to occur in the event of a pandemic.	
Test the functionality of the health and medical boards in WebEOC and update if needed.	
Ensure pandemic influenza information is available on the KDHE website.	
Activate public hotline if needed.	
Begin case detection among people who have recently traveled to the outbreak area and present with influenza-like illness and/or pneumonia.	
Continue disease surveillance activities described in Phase 1 regardless of the time of year.	
Meet with adjoining jurisdictions to ensure actions will be coordinated in Phase 6. Special considerations include: priority group recommendations, vaccination clinic operations (hours of operation, locations, policies, and forms).	
State health task force provides the priority group recommendation to the local health officers.	
KDHE collects information from the local agencies regarding the estimated numbers of people in the various priority groups.	
KDHE ensures that all agencies tasked in the plan are aware of the Pandemic Alert Phase and the potential for escalation.	
Ensure all personnel who may have contact with the media are trained on message maps.	
Ensure all media contacts are up to date.	
Log into WebEOC and familiarize staff with the system.	
Review security component of the Mass Dispensing SOG and ensure security assets are available and briefed.	
Educate public health officials, elected officials and the media about what information will and will not be available during a pandemic.	
Assess the need to screen travelers arriving in the U.S. from affected countries.	
Investigate the epidemiology of all early cases either originating in the U.S. or that are imported into the country.	
Recommend that hospitals and emergency departments increase laboratory testing of influenza, particularly those who may have had recent exposure at the site of an outbreak.	
The Office of Surveillance and Epidemiology will investigate outbreaks and increases in ILIs.	
Pandemic Alert Period – Phase 6 *Goal: Minimize the impact of the pandemic*	

Activate Kansas Response Plan (KRP), Emergency Support Function 8	
Activate State Emergency Operations Center (SEOC) and the Joint Information Center (JIC).	
Distribute or administer influenza vaccine as it becomes available. Ensure a second dose of vaccine is administered if necessary.	
Assist local health departments with data collection to determine age-specific attack rates, morbidity and mortality rates.	
Work with CDC to determine vaccine efficacy	
Monitor health impacts of the pandemic including deaths and hospitalizations from influenza	
Assess the quality of surveillance and make recommendations for improvement during the period between pandemic waves and after the pandemic.	

Appendix L – Community Containment for Disease Tool Box

http://www.kdheks.gov/cphp/comm_containment_sog.htm

The link provided directs the user to the Kansas Community Containment Standard Operating Guide template developed by KDHE, the Kansas Association of Local Health Departments, and the Kansas Association of Counties. Included on this website is a template Standard Operating Guide (SOG) and the Community Containment Tool Box for local health department and community use in planning for any disease outbreak, including pandemic influenza.

Appendix M – Diagnostic Assays during Pandemic Influenza

Rapid Diagnostic Tests

a. Several rapid diagnostic test kits based on antigen detection are commercially available for Influenza. Laboratories in outpatient settings and hospitals can use these tests to detect Influenza viruses within 30 minutes. Some tests can detect Influenza A viruses (including avian strains); others can detect Influenza A and B viruses without distinguishing between them, and some can distinguish between Influenza A and B viruses. The type of specimens used in these tests (i.e., nasal wash/aspirate, nasopharyngeal swabs, or nasal swab or throat swab) may also vary. Like RT-PCR, rapid diagnostic tests do not require in vitro growth or isolation of virus. During a pandemic, rapid diagnostic tests will be widely used to distinguish Influenza A from other respiratory illnesses.

- **i.** Biocontainment level: BSL-2

b. RT-PCR Subtyping

- **i.** Influenza specimens may also be typed and subtyped using RT-PCR, which does not require in vitro growth or isolation of virus. As of October 2005, CDC has trained scientists from 48 states to use RT-PCR subtyping to identify human and avian HA subtypes of public health concern. APHL members can access protocols and sequences of primers and probes that can be used for typing and subtyping on the APHL website.
- **ii.** Biocontainment level: BSL-2

c. Virus Isolation

- **i.** Virus isolation—growing the viral strain in cell culture—is the "gold standard" for Influenza diagnostics because it confirms that the virus is infectious. During a pandemic, virus isolation followed by antigenic and genetic (sequencing) analysis will be used to characterize the earliest pandemic isolates, as well as to monitor their evolution during the pandemic. Laboratories that participate in the WHO Global Influenza Surveillance Network typically use virus isolation followed by hemagglutination inhibition (HAI), IFA staining, or RT-PCR to monitor circulating seasonal strains of Influenza. If clinical and epidemiologic data suggest that a human case of Influenza might be due to infection with avian Influenza A (H5N1) or another highly pathogenic avian Influenza strain (see Box 3), the virus should not be cultured except under BSL-3 conditions with enhancements. Laboratories that lack BSL-3 enhanced facilities may either perform RT-PCR subtyping using BSL-2 containment procedures or send the specimen to CDC for isolation and characterization.
- **ii.** Biocontainment level: Inter-pandemic and Pandemic Alert Periods – BSL-3 with enhancements; Pandemic Period – BSL-2

d. Immunoflorescence Antibody Staining

i. IFA staining following virus isolation can be used to identify Influenza types (A, B) and Influenza A HA subtypes using a panel of specific antisera. In some cases, IFA can be used for direct testing of cells pelleted from original clinical samples. CDC's Influenza Branch produces and distributes a reagent kit to WHO collaborating laboratories that includes monoclonal antibodies for typing and subtyping currently circulating Influenza viruses by IFA. Many laboratories use commercially available reagents to type Influenza viruses by direct immunofluorescence tests (DFA).

ii. Immunofluorescence Assays
Biocontainment level: BSL-2 when performed directly on clinical specimens; if used on cultures for earlier detection of virus, biocontainment recommendations for viral culture apply

e. Serological Tests

i. Tests based on detection of antibodies in patient sera—e.g., enzyme-linked immunosorbent assay (ELISA), HAI, and microneutralization assay—can be used to retrospectively confirm Influenza infection. Although microneutralization assay is the most comprehensive test for detection in humans of antibodies to avian Influenza viruses, it is available in only a few state public health laboratories.

ii. Hemagglutination Inhibition (HAI)
Biocontainment level: BSL-2

iii. KHEL does not perform these tests.

Appendix N – KDHE Sentinal Laboratories and ILINet Sites