THE SOUTHERN NEVADA HEALTH DISTRICT
EMERGENCY OPERATIONS PLAN

PANDEMIC INFLUENZA
ANNEX L

May 2009

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THE UNDERSIGNED STAFF IS IN CONCURRENCE WITH THE RESPONSIBILITIES OF THE FOLLOWING ANNEX TO THE SOUTHERN NEVADA HEALTH DISTRICT EMERGENCY OPERATIONS PLAN.

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THE UNDERSIGNED STAFF HAVE RECEIVED A COPY OF THIS DOCUMENT

Name	Department	Date
Executive Team	SNHD	7-13-09
Senior Management Team	SNHD	7-13-09
ET/SMT	SNHD	10-22-09

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SECTION: ANNEX L

TITLE: DOCUMENT CHANGE RECORD

Current Revision	New Revision	Description of Change	Page No.	Date	Author
A	B	Pandemic phases to WHO Alert Phases. Use of Antiviral medication. Business Recovery Plan to Continuity of Operations Plan.	All	5.6.09	Kay Godby
B	C	WHO alert phase update.	All	10-22-09	Kay Godby

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	SECTION:	**ANNEX L**
	TITLE:	**PANDEMIC INFLUENZA & HIGHLY INFECTIOUS RESPIRATORY DISEASES ANNEX**
	Standards:	**US National Vaccine Program Office (NVPO), National Incident Management System (NIMS), Centers for Disease Control (CDC), and World Health Organization (WHO)**

I. PURPOSE

The purpose of the Pandemic Influenza and Highly Infectious Respiratory Diseases Annex is to provide a guide for Southern Nevada Health District (SNHD) on how to respond before during and after a pandemic situation. This annex is intended as a companion to the Nevada State Health Division Pandemic Influenza Response Annex to the State Mass Illness Plan. It is imperative to interpret the SNHD Pandemic Influenza Annex in the context of the State plan, along with the SNHD Emergency Operations Plan (EOP) and the Mass Prophylaxis Annex (Annex K).

The Clark County Office of Emergency Management (CCOEM) is responsible for the Clark County EOP, an All-Hazards plan that encompasses all County agencies. Within this plan, the responsibilities of SNHD are identified as lead or support in an all hazard approach. The Pandemic Influenza Annex presented here is a part of the CCOEM Emergency Operations Plan.

II. AUTHORITY

See the SNHD EOP Section I.

III. EXPLANATION OF TERMS

A. Acronyms

AAR – After Action Report
ACIP – Advisory Committee on Immunization Practices
APIC – Association of Professionals in Infection Control
CCOEM – Clark County Office of Emergency Management
CCSD – Clark County School District
CDC – Center for Disease Control
CHO – Chief Health Officer
COOP – Continuity of Operations Plan
CRI – Cities Readiness Initiative
DOC – District Operations Center

DPCAC – Disease Prevention Control Advisory Committee
EHD – Environmental Health Division
EMS – Emergency Medical Services
EOC – Emergency Operations Center
EOP – Emergency Operations Plan
HAN – Health Alert Network
IC – Incident Commander
ICS – Incident Command System
ILI – Influenza-Like Illness
MOU – Memorandum of Understanding
MRC – Medical Reserve Corps
NIMS – National Incident Management System
NPI – Nonpharmaceutical Interventions
NRP – National Response Plan
NRS – Nevada Revised Statutes
NSHD – Nevada State Health Division
OOE – Office of Epidemiology
OPHP – Office of Public Health Preparedness
PIO – Public Information Office
POD – Point of Distribution
PSI – Pandemic Severity Index
RSS – Receive, Stage, and Store
SNHD – Southern Nevada Health District
SNPHL – Southern Nevada Public Health Lab
SNS – Strategic National Stockpile
VAERS – Vaccine Adverse Event Reporting System
WHO – World Health Organization

B. Definitions

After Action Report – A written summary of the exercise that reflects strengths, weaknesses and areas for improvement.

Antigenic Shift – A sudden, major change in the antigenic structure of a virus which is usually the result of a genetic mutation.

Disaster – An occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries.

District Operations Center – The protected site from which the Health District officials coordinate, monitor, and direct emergency response activities in an emergency.

Emergency – A condition of disaster or of extreme peril to the safety of persons and property within the area, caused by such conditions as air pollution, fire, flood, hazardous materiel incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations or disease, the Governor's warning of an earthquake or volcanic prediction, or an earthquake or other conditions, other than conditions resulting from a labor controversy.

Emergency Operations Center – Specially equipped facilities from which government officials exercise direction and control and coordinate necessary resources in an emergency situation.

First Responders – First responders in time of disaster, i.e. police, fire, EMS, Public Health.

Immunocompromised – Impaired or weakened immune system due to illness or drugs.

Incident – An occurrence or event, either human-caused or through natural phenomena, that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Commander – The individual responsible for the command of all functions at the field response level.

Incident Command System – A nationally used, standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. (See Attachment 7)

Influenza-Like Illness – An illness that presents with symptoms similar to influenza.

Medical Reserve Corps – A volunteer organization of Health Care Professionals who strengthen their communities by offering their expertise through the year as well as during times of community need.

Nonpharmaceutical Intervention – Mitigation measure implemented to reduce the spread of an infectious disease but one that does not include pharmaceutical products, such as vaccines and medicines. Examples include social distancing and infection control measures.

Novel Virus – New strain of virus resulting from antigenic shift.

Pandemic Disease – Epidemic over a wide geographic area and affecting a large proportion of the population.

Syndromic – Relating to a group of symptoms that collectively indicate or characterize a disease.

IV. SITUATION AND ASSUMPTIONS

A. Situation

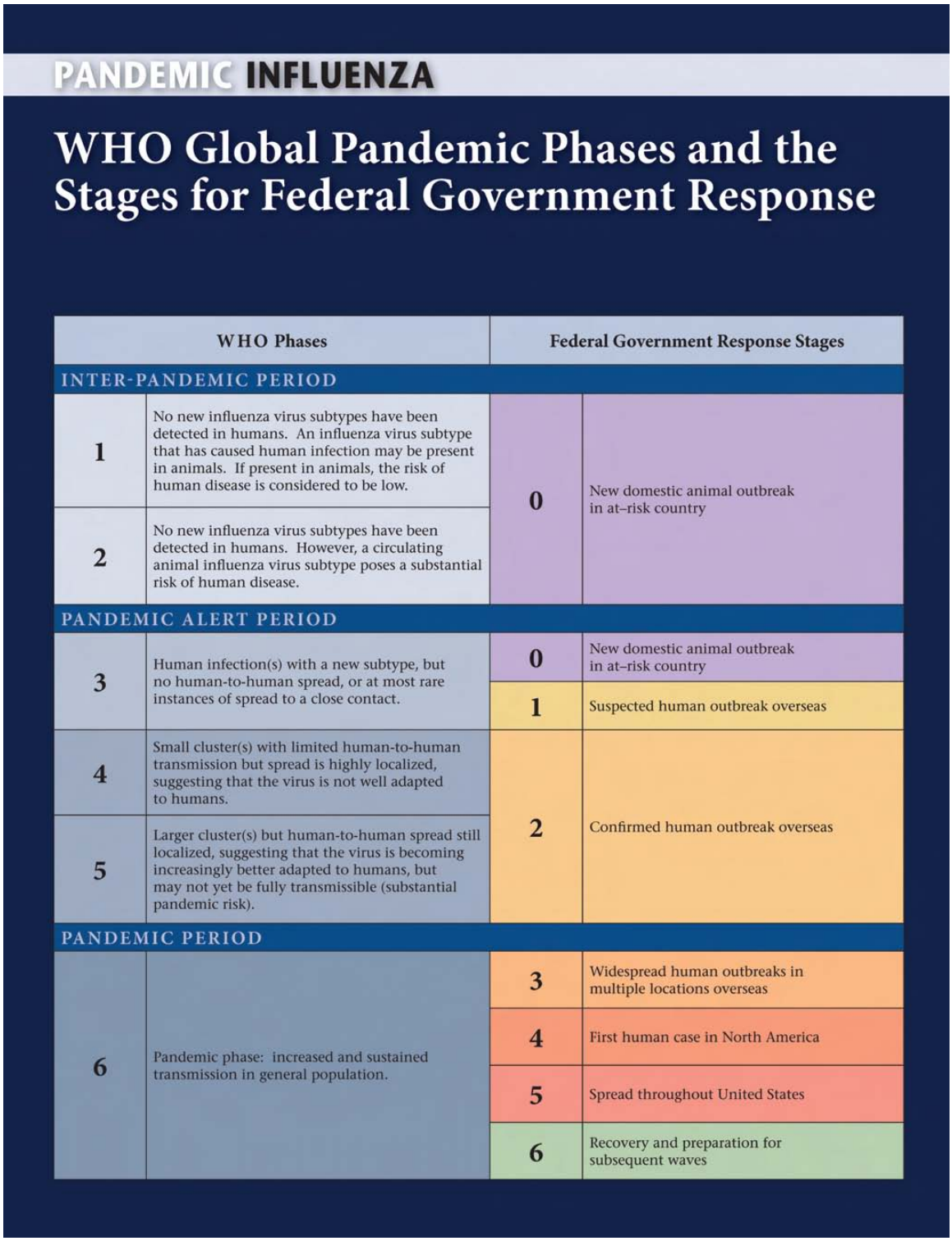
Influenza is a highly contagious viral disease with epidemics of influenza affecting hundreds of thousands of people nearly every year. The ability for influenza viruses to "drift" or frequently make slight structural changes over time results in the appearance of the different strains that circulate among the human population. Vaccines are developed to match the strains expected to circulate each year.

The potential for a pandemic exists if a novel virus has the ability to spread easily from person to person and can cause serious illness. The World Health Organization (WHO) and the US Government have defined phases of a pandemic to assist with the planning and response activities.

The World Health Organization (WHO) developed an alert system (http://www.who.int/csr/disease/avian_influenza/phase/en/index.html) to help inform the world about the seriousness of a pandemic. The alert system has six phases, with Phase 1 having the lowest risk of human cases and Phase 6 posing the greatest risk of pandemic.

The CDC has developed **Interim Pre-pandemic Planning Guidance** http://www.flu.gov/professional/community/community_mitigation.pdf to help define the severity category for pandemic.

For Category 1, 2, and 3 pandemics, *Alert* is declared during U.S. Government Stage 3, with step-wise progression by States and regions to *Standby* based on U.S. Government declaration of Stage 4 and the identification of the first human pandemic influenza case(s) in the United States. Progression to *Activate* by a given State or region occurs when that State or region identifies a cluster of laboratory-confirmed human pandemic influenza cases, with evidence of community transmission in their jurisdiction.



B. Assumptions

- The period of a pandemic influenza outbreak in a community will likely last from six to eight weeks. There may be more than one wave in a given community.

- Up to 25-30% of persons may become ill in a major pandemic influenza wave.
- Rates of influenza-related hospitalizations and deaths may vary substantially. Estimates based on past pandemic influenza events indicate that 0.01-8% of the population may be hospitalized and 0.00.-1% of the population may die.
- Influenza viruses are spread from person to person primarily through droplets generated by the coughing and sneezing of infectious persons.
- The incubation period for influenza is one to four days, with an average of two days.
- Adults typically are infectious from the day before symptoms begin through approximately five days after illness onset.
- Children can be infectious for greater than 10 days, and young children can shed virus for less than 6 days before illness onset.
- Severely immunocompromised persons can shed virus for weeks or months.
- Medical care services will likely be severely taxed or overwhelmed.
- Ten percent or more of the workforce may be out of work due to illness at the peak of a major pandemic influenza wave. This estimate includes work loss while caring for one's self or for ill family members.
- The time from candidate vaccine strain to the production of the first vaccine dosage could be six months or more.
- Once vaccine is available, it may take five months to produce an adequate supply of vaccine for the entire US population (currently production capacity is approximately five million doses per week).
- Two doses of vaccine administered 30 days apart may be required to develop immunity to a novel virus.
- The federal government will purchase all influenza vaccine during a pandemic.
- There is a limited supply of antiviral medications. Antiviral distribution to states will occur through the SNS.
- Local governments have the primary responsibility to provide public health, mental health and emergency medical services within their jurisdictions.
- SNHD will focus on non-pharmaceutical interventions (NPI) until vaccine is available.
- State government will augment public health, mental health and emergency medical services that exceed the capabilities of the local government.
- The National Response Plan (NRP) will support public health and medical activities as required by the State of Nevada in accordance with pre-established activation procedures.
- Refer to Attachment L-2 for more information regarding Federal and State roles during a pandemic.

V. CONCEPT OF OPERATIONS

A. General

- The SNHD will provide a consistent approach to the effective management of actual or potential pandemic outbreaks to ensure the health and welfare of the residents of Southern Nevada operating under the principles and protocols outlined in the National Incident Management System (NIMS).
- Provisions must be made for the following:

- Establishment of the Disaster Operations Center (DOC).
- Coordinating health and medical response team efforts.
- Identification, transportation, and disposition of the deceased.
- Holding and treatment areas for the infected.
- Isolation and treatment of the infected.
- Identifying infectious diseases, controlling their spread, and reporting their presence to the appropriate state or federal health authorities.
- Issuing health advisories to the public on such issues as drinking water precautions, waste disposal, the need for immunizations, and food protection techniques.

B. Operational Guidance

- The SNHD will employ the six components of the NIMS in all operations, which will provide a standardized framework that facilitates our operations in all phases of emergency management. Attachment 7 of the SNHD EOP provides further details on the NIMS and the Incident Command System (ICS).
- The SNHD will use its own resources, all of which meet the requirements for resource management in accordance with the NIMS, to respond to emergency situations, purchasing supplies and equipment if necessary, and request assistance if those resources are insufficient or inappropriate. If additional resources are required, the SNHD will request CCOEM to:
  - Summon those resources available to us pursuant to MOUs already in place. See Attachment 6 of the EOP for a complete listing of agreements.
  - Summon emergency service resources that we have contracted for.
  - Request assistance from volunteer groups active in disasters.
  - Request assistance from industry or individuals who have the necessary resources to deal with the emergency.
- SNHD will use the guidelines established by the Centers for Disease Control and Prevention (CDC) for determining trigger points for implementing non-pharmaceutical interventions. A list of trigger points can be found in Attachment L-3 of this Annex.

C. Activities by Phases of Emergency Management

- <u>Prevention</u>
  - Give immunizations.
  - Conduct specialized training.
  - Conduct epidemic intelligence, evaluation, presentation, and detection of communicable diseases.
  - Conduct pandemic awareness programs.

- <u>Preparedness</u>
  - Maintain adequate medical supplies.
  - Review emergency plans.
  - Train and exercise personnel.

- Response

    - Conduct public information programs regarding personal health and hygiene.
    - Conduct disease control operations.
    - Begin the collection of vital statistics.

- Recovery

    - Compile public health reports for state and federal officials.
    - Identify potential and/or continuing hazards affecting public health.
    - Distribute appropriate guidance for the prevention of the harmful effects of the pandemic.
    - Continue to collect vital statistics.

VI. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. Organization

The normal SNHD emergency organization, as described in Section V of the SNHD EOP, will plan and carry out operations during emergency situations.

B. Assignment of Responsibilities

All departments assigned in this annex to provide support are responsible for the following:

- Designating and training representatives from their department to include NIMS and ICS training.
- Ensuring that appropriate procedures are maintained.
- Maintaining current personnel information and after-hours notification procedures.

To ensure that emergency functions are available as needed, SNHD departments have been assigned responsibility for specific activities. Those activities and the assigned departments responsible for the activities are summarized below.

C. Task Assignments

Command and Control

SNHD will take the lead in planning for a public health response to a pandemic. Existing individual county agency command systems will be applied to pandemic influenza planning and response. These command structures will delineate operational priorities within their agencies for response activities before, during and after a pandemic. SNHD is responsible for educating agencies for preparation of their departments' pandemic response plan and other local partners (e.g. McCarran Airport, Las Vegas Metro Police Dept., Clark County Fire Dept., Las Vegas Fire Dept., etc.).

- **WHO Phase 1-3**

The Chief Health Officer (CHO) or designee will:

- Provide the Pandemic Influenza Annex to key policymakers and other stakeholders.

The Office of Epidemiology (OOE) will:

- Coordinate surveillance and epidemiological investigation activities including implementing ongoing influenza surveillance, planning for pandemic epidemiological investigation and coordinating specimen collection and testing with the Southern Nevada Public Health Lab (SNPHL).

The Disease Prevention and Control Advisory Committee (DPCAC) will:

- Define and quantify local priority population groups to receive vaccine or antiviral medications in case of a vaccine shortage during a pandemic.

The Immunization Program Coordinator will:

- Coordinate planning for the procurement of vaccines, antivirals and supplies through the Nevada State Health Division (NSHD). SNHD will continue to work with the vaccine distributors and immunization providers to identify existing vaccine stores in the county as well as gaps in the coverage for priority populations. This includes networking with resort properties, hospitals, ambulatory care clinics, long term care facilities and private vendors.
- Coordinate planning, along with the Office of Public Health Preparedness (OPHP), for distribution of vaccines, antivirals and supplies.

OPHP will:

- Coordinate planning, along with the Immunization Program Coordinator, for the distribution of vaccines, antivirals and supplies.
- Maintain contact with the Clark County Medical Examiner's Office regarding plans to address mass mortality events.
- Review and update the SNHD Pandemic Influenza Annex on an ongoing basis.

Emergency Medical Services (EMS) will:

- Maintain information about the capacity of hospitals and treatment centers through the EM System.

The Environmental Health Division (EHD) will:

- Coordinate activities related to planning for the public health response to an identification of a novel influenza strain in the animal population.

The Public Information Office (PIO) will:

- Coordinate the planning of communications activities for a pandemic response and collaborate with PIO's from other response agencies.

Medical Reserve Corps (MRC) Coordinator will:

- Continue to recruit medical and support volunteers.
- Coordinate training for existing and future volunteers.

- **WHO Phase 4**

  The CHO or designee will:
  - Initiate and maintain communication connectivity with local, state and national counterparts including CCOEM, State Health Officer, NSHD and the Center for Disease Control (CDC).

  The Office of Epidemiology will:
  - Monitor the Health Alert Network (HAN) and other channels of information and will provide ongoing assessments of the situation to the CHO and other key SNHD personnel.
  - Expand and enhance local surveillance activities and, if applicable, initiate case tracking activities.
  - Alert the health community through HAN, providing an advisory to area hospitals and health care providers to inquire about recent travel to affected areas among patients presenting with severe respiratory illness and to consider implementing severe respiratory illness precautions.
  - Coordinate with area hospitals to ensure samples are directed to the correct laboratory for testing.

  OPHP will:
  - Notify the Clark County School District (CCSD) and resort properties to inform them about the possibility of utilizing county schools, large venue and resort properties as mass vaccination sites in accordance with memoranda of understanding.

  The Environmental Health Division (EHD) will:
  - Conduct evaluations and provide guidance and advice to PIO, partners and licensees regarding development of EH measures to reduce viral transmission potential from environmental surfaces and other environmental means, as well as zoonotic sources.

  The Public Information Office (PIO) will:
  - Coordinate with the Joint Information Center (JIC) to develop and disseminate appropriate information to the public.
  - Activate the Crisis and Emergency Risk Communication Annex in the EOP.

- **WHO Phase 5-6**

  The CHO or designee will:
  - Activate the ICS to:
    - Monitor and respond to the results of surveillance and tracking activities.
    - Determine the need for and scope of mass vaccination activities.
    - Coordinate delivery of vaccine and/or antivirals with NSHD.
    - Carry out mass vaccination activities in accordance with the Mass Vaccination Annex and CRI-SNS Annex.
    - Develop and disseminate appropriate information to the public.

        - Ensure ongoing communication with local, state and federal authorities.
    - Consider implementing public health protective measures for residents of Southern Nevada as appropriate in accordance with the state statutes listed in Section X of the EOP.
    - Communicate the status of the response to appropriate local, state and federal authorities.

- **Post-Pandemic Period.**

  The CHO or designee will:
    - Convene relevant parties to debrief from response activities.
    - Communicate the status of the response to appropriate local, state and federal authorities.

  OPHP will:
    - Review and update the Annex based on lessons learned from response activities.

Surveillance

There are seven influenza surveillance components that are designed to provide a national picture of influenza activity. Refer to Attachment L-4 for a list of these components.

- **WHO Phase 1-3**

  The NSHD will:
    - Conduct passive surveillance of respiratory specimens received by the SNPHL for viral isolation, and identification of influenza type and subtype.
    - Forward positive cultures to the CDC for further sub-typing.
    - Conduct passive surveillance of influenza-like illness (ILI) outbreaks in long-term care facilities.
    - Receive reports on the number of patients presenting with ILI and the total number of patient visits each week from a voluntary statewide network of sentinel physicians.

  The SNHD OOE will:
    - Establish and coordinate the CDC sentinel surveillance system within Clark County
    - Collaborate with Quest Laboratories to establish a system whereby counts of positive rapid influenza test and influenza viral cultures are provided to OOE on a daily basis year round.
    - Collaborate with area hospitals to report ILI and syndromic surveillance counts from ILI weekly respiratory illness emergency room visits.

- **WHO Phase 4**

The OOE will:

- Ensure that all interpandemic influenza surveillance activities are underway regardless of the time of year, enhancing activities as needed based on information from HAN alerts, Epi-X alerts, communication from state and federal partners and other sources and investigating the epidemiology of early cases through case tracking activities and travel history.
- Monitor the HAN, CDC's Epi-X and other appropriate sources for updates regarding international, federal and state surveillance activities.
- Monitor and institute recommendations from CDC for any additional surveillance activities that will be undertaken given the specific circumstances.
- Report to state and federal partners about increased local surveillance activities. If necessary, OOE will request additional resources for local surveillance and case tracking activities (e.g. CDC Epidemiological Intelligence Officers, reagents to detect and identify the novel strain, instructions for safe handling and testing of a potential novel influenza virus).
- Utilize HAN to notify area hospitals, physicians, emergency rooms and urgent care centers, requesting that they increase laboratory diagnosis of influenza for persons presenting with ILI, especially those with recent travel history to regions where the pandemic strain of influenza is circulating or those with unusual or severe symptoms.
- Coordinate with area hospitals, physicians, emergency rooms and urgent care centers to provide instructions for directing samples from patients presenting with severe or unusual ILI to the appropriate laboratory for testing.
- Provide instructions for the collection and safe handling of a potential novel influenza virus.
- Assess, along with SNPHL, the completeness and timeliness of reports from all participating laboratories and sentinel providers.
- Issue regular alerts regarding surveillance and case tracking activities to the health community through HAN.

The SNPHL will:

- Communicate with local laboratories' staff regarding the testing and reporting of ILI specimens.
- Assess, along with SNHD OOE, the completeness and timeliness of reports from all participating laboratories and sentinel providers.

The CHO will:

- Recommend, in coordination with the Regional CDC Quarantine Officer, quarantine and the need to screen travelers arriving in the area from affected countries.

- **WHO Phase 5-6**

The OOE will:

- Enhance ongoing surveillance activities to include monitoring and reporting of:
  - Community health impacts, including deaths and hospitalizations.

        - Community impacts, including absenteeism in schools and essential services.
        - Antiviral resistance
        - Vaccine effectiveness.

- **Post-Pandemic Period.**

  The OOE will:
    - Prepare a detailed summary of the pandemic utilizing surveillance data to evaluate local response activities. Analysis may include:
        - Severity of influenza outbreaks among demographic groups.
        - Age-specific attack rate.
        - Morbidity and mortality.
        - Efficacy of vaccination distribution and implementation of infection control measures.

Prevention and Containment: Implementation of Community Level Control Measures

The goal of community level control measures is to slow the spread of pandemic influenza as much as possible and provide additional time for the development, manufacture, distribution and administration of influenza vaccine and antiviral medications. Public education about practicing cough etiquette and proper hand and respiratory hygiene is intended to decrease the probability that contact will result in infection.

Activities that include isolating suspected cases and quarantining case contacts, issuing travel advisories and canceling schools and large gatherings, are intended to decrease contact between infected and uninfected individuals.

- **WHO Phase 1-3**

  The PIO will:
    - Conduct ongoing education regarding the importance of hand hygiene, cough etiquette and annual influenza vaccination.
    - Maintain templates of documentation needed to enact public health protective measures including quarantine laws.
    - Maintain contact information to communicate information about public health protective measures to area hospitals, CCSD, private schools, parks and recreation departments, the child day care licensing authority, homeowners associations, chambers of commerce, resort properties, etc.
    - Develop plans for communicating information to the public about community level control measures including quarantine.

- **WHO Phase 4**

  The CHO will:

- Recommend isolation of persons who are recent travelers from affected regions if they have ILI. If influenza is suspected or confirmed, SNHD may recommend isolation at home or in a hospital until isolate sub typing is accomplished. Isolation should continue for at least ten days beginning with the first onset of symptoms, until viral shedding is no longer detected, or until the isolate is laboratory confirmed not to be a novel influenza A virus.
- Recommend quarantine for case contacts.
- Issue an advisory recommending limiting travel to the affected region and screening travelers arriving from the affected region for illness compatible with influenza.
- Implement Droplet Precautions for all persons with suspected or confirmed influenza. The virus is present in saliva, nasal secretions and feces.
- Recommend that persons who may be in contact with potentially infected animals wear appropriate personal protective equipment and receive an influenza vaccination if available.
- Recommend that citizens limit travel to destinations outside of Clark County as well as limit non-essential travel within Clark County.
- Recommend cancellation of large gatherings depending on the level of person-to-person transmission and effectiveness of current isolation and quarantine procedures. Based on the epidemiology of the known infected cases, the CHO may consider closure of schools including colleges, universities and closure of office buildings.

The PIO will:

- Increase education about the importance of hand hygiene, cough etiquette and annual influenza vaccination.

- **WHO Phase 5-6**

  The CHO will:

  - Recommend that all persons who are ill and their contacts remain in isolation at home.
  - Recommend limitation or suspension of large gatherings and recreation activities.
  - Recommend the closure of schools including colleges, universities and closure of office buildings.
  - Recommend the limitation of non-essential work activities designated by entity, encouraging telecommuting when possible.
  - Recommend area quarantine.

  The PIO will:

  - Prepare and disseminate infection control guidance to health facilities and providers, schools, childcare centers, etc.

- **Post-Pandemic Period.**

  The PIO will:

- Prepare a summary to include description of the community level control measures to implement.

The OOE will:

- Conduct an assessment of compliance with isolation and quarantine control measures and evaluation of their efficacy.

Prevention and Containment: Use of Antivirals

Appropriate use of antivirals for treatment or prophylaxis of viral respiratory illness or pandemic influenza may offer a potentially important strategy to decrease illness complications and reduce mortality, thereby minimizing the demands that will be placed on the healthcare system. The SNHD *Antiviral Distribution Plan* describes how the SNHD will prepare for and respond to an influenza pandemic using antiviral medication, including activities around allocation, distribution, storage, and monitoring the administration of the drug.

This plan is Appendix A to the: *SNHD Pandemic Influenza Plan*, *Annex L.*

Tamiflu (Oseltamivir) will likely be the primary antiviral utilized during a pandemic event. Relenza (Zanamivir) will likely be utilized for Oseltamivir-resistant viruses and for pregnant women.

The existing supply and production capacity for antiviral drugs is not adequate to provide treatment for the anticipated number of persons exposed during a pandemic event. Therefore, it is crucial to prioritize population groups to receive antivirals for therapy during a pandemic event.

- **WHO Phase 1-3**

  The Public Health Preparedness Planner will:

  - Review CDC guidance defining priority populations to receive antivirals for therapy and, where indicated, prophylaxis during a pandemic, before antivirals and/or vaccine is widely available to all citizens. See Attachment L-5 for the list of priority populations adopted by the CDC in July 2005.
  - Determine initial estimates of the number of persons within each priority population, revising the estimates during an actual event. The initial estimates are included in Attachment L-5.
  - Coordinate among Association of Professionals in Infection Control (APIC) members to ensure that plans are in place to provide antiviral therapy within their facilities.
  - Collaborate with NSHD and other area jurisdictions to coordinate plans for the provision of antiviral therapy. SNHD will coordinate with healthcare providers to distribute influenza antiviral therapy to patients acutely ill with influenza within 48 hours of onset of illness.

- **WHO Phase 4**

  The Public Health Preparedness Planner will:

- Review and modify its plan for the provision of antivirals as needed in response to the most current information received regarding the novel virus. Such updates may include recommended target groups and projected antiviral supply.

The SNHD Operations Section will:

- Notify the medical community of the status of antiviral availability and plans to distribute supplies to the established priority groups.

The PIO will:

- Disseminate antiviral use guidelines to the medical community.

- **WHO Phase 5-6**

The Incident Commander will:

- Communicate with NSHD regarding the availability and, if applicable, the delivery of antivirals through the SNS.

The NSHD will:

- Receive, stage, and store (RSS) the SNS.
- Deliver antiviral medications to designated local RSS site(s).

The Public Health Preparedness Planner will:

- Provide NSHD with an estimated number of persons within each priority population to receive antivirals as well as the population as a whole.
- Evaluate antiviral delivery and administration procedures and modify plans as necessary to include the local RSS site(s).

The SNHD Operations Section will:

- Coordinate with NSHD and area treatment centers to ensure that antivirals are appropriately allocated among treatment centers from the RSS.

- **Post-Pandemic Period.**

The Operations Section will:

- Discontinue and demobilize antiviral administration ensuring that supplies are inventoried and returned as appropriate to the local RSS site(s).

The Planning Section will:

- Prepare a summary describing and evaluating antiviral delivery and administration procedures, and modify plans as necessary.

Prevention and Containment: Use of Vaccine

Vaccine is the primary control measure during an influenza pandemic. Because current manufacturing procedures require four to eight months before large amounts of vaccine are available for distribution, there could be a large gap between identification of a pandemic strain and availability of vaccine. Further, once vaccine becomes available,

production capacity may allow for just one to two percent of the population being vaccinated per week. Therefore, it is necessary to plan for the allocation of vaccine based on priority population groups.

- **WHO Phase 1-3**

  SNHD Nursing/PIO will:
  - Initiate and/or continue activities to enhance annual influenza vaccination coverage levels in traditional high-risk groups, particularly subgroups in which coverage levels are low. Activities will be carried out prior to the beginning of the traditional influenza season each year and will include:
    - Evaluating and implementing epidemic control strategies, e.g. recommendations from NSHD and CDC.
    - Disseminating educational materials to area health care providers including a summary of the most current influenza vaccine recommendations, suggested strategies for reaching at-risk populations and a list of resources to help promote and deliver influenza vaccine to patients.
    - Providing education to area hospital staff about the importance of vaccinating healthcare workers and patients with high-risk medical conditions.
    - Providing education to area nursing home and assisted living facility staff about the importance of vaccinating persons over the age of 65.
    - Recommending that all healthy children over age 6 months receive the appropriate influenza vaccine and work with area pediatricians and school nurses to operationalize this recommendation.
    - Recommending that all persons responsible for community safety and security receive annual influenza vaccination including emergency medical personnel, police and firefighters.
    - Utilizing traditional and non-traditional communications channels to educate the general public about the importance of annual influenza vaccination.
    - Maintaining current information about influenza and influenza vaccination on the SNHD website. Information will be targeted to the healthcare community and to the general public.
    - Educating local businesses about the importance of a vaccinated workforce.
    - Advocating to state and federal partners the development of a standardized method to track and report vaccine shipments from private companies to local entities in order to quickly assess distribution during a vaccine shortage.
  - Initiate and/or continue activities to enhance pneumococcal vaccination coverage levels in traditional high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia. Such activities will occur in concert with the activities described in the bullets above.

  The Public Health Preparedness Planner will:
  - Review CDC guidance defining priority populations to receive vaccine for prophylaxis during a pandemic before vaccine is widely available to all

citizens. See Attachment L-6 for the list of priority populations adopted by the CDC in July 2005.
    - Determine and maintain estimates of the number of persons within each priority population, revising the estimates on an annual basis. These estimates are included in Attachment L-6.
    - Review and update the methodology within its Mass Vaccination Annex (To be developed) and Mass Prophylaxis Annex (Annex K) for providing vaccination during a pandemic in the event of a severe or moderately severe vaccine shortage.
    - Review and update its Mass Vaccination Annex and Mass Prophylaxis Annex to ensure that it addresses issues relevant to the provision of influenza vaccine. This plan includes information relevant to providing vaccination to the general public once vaccine becomes widely available, including:
        - Sites to use as mass vaccination clinics.
        - Staffing needs and duties.
        - Protocols for proper storage of vaccine.
        - Protocols for vaccine clinic operations.
        - Model clinic flow design.

- **WHO Phase 4**

  The Public Health Preparedness Planner will:
    - Review and modify the Mass Vaccination Annex and CRI as needed in response to the most current information received regarding the novel virus. Such updates may include recommended target groups and projected vaccine supply availability.
    - Assess its human resources and logistics capabilities using the staffing calculator to ensure that appropriate staff and supplies are available to support activities associated with the provision of vaccine at Points of Distribution centers, if necessary, and if available.
    - If SNHD is unable to staff, resources will be requested from CCEOC. A waiver will be requested from the Governor to allow non licensed personnel to distribute medication.

  The MRC Coordinator will:
    - Notify volunteer base to be on alert for the Emergency Notification System call-down.

- **WHO Phase 5-6**

  The Operations Section will:
    - Communicate with the NSHD office regarding the availability and delivery of vaccine.
    - Report vaccination activities to the Operations Section Chief ensuring that supplies are distributed, administered, inventoried and returned as appropriate.

  The Public Health Preparedness will:

- Provide NSHD with an estimated number of persons within each priority population.
- Evaluate vaccine delivery and administration procedures and modify plans as necessary.

SNHD Nursing will:

- Provide vaccine as it is available to priority groups based on the methodology described in Attachment L-6 prior to widespread vaccine availability.
- Track and monitor adverse vaccine reactions. SNHD will provide persons receiving vaccine with information about reporting such reactions to nursing. SNHD will report (via Adverse Reaction Line: 1-800-822-7967) any reactions to the CDC Vaccine Adverse Event Reporting System (VAERS).

The CHO or designee will:

- Fully activate mass vaccination activities according to the Mass Vaccination Annex and Mass Prophylaxis Annex upon widespread vaccine availability.

The MRC Coordinator will:

- Assign volunteers to tasks/locations as they check in and provide identification badges.

- **Post-Pandemic Period.**

The CHO or designee will:

- Discontinue and demobilize mass vaccination activities, ensuring that supplies are inventoried and returned as appropriate following the Mass Vaccination Annex.

The Planning Section will:

- Prepare a summary describing and evaluating vaccine delivery and administration procedures, and will modify plans as necessary.

Emergency Response: Health Systems and Critical Infrastructure

While the SNHD EOP addresses all hazards, pandemic influenza differs from many threats. Of great concern, during a pandemic event is its effect on the capacities of the healthcare system and other critical community services.

- **WHO Phase 1-3**

The Public Health Preparedness Planner will:

- Continue to work with area hospitals to ensure that policies, plans and protocols for mass dispensing for staff, family members and patients are developed and maintained.

- Collaborate with such partners as CCOEM and their Advanced Plan within the Mass Casualty Annex, and the City of Las Vegas Fire and Rescue to develop and maintain an inventory of the following resources:
  - Hospital and long-term care bed capacity
  - Intensive care unit capacity
  - Ventilators (through NHA and City of Las Vegas Fire Dept.)
  - Personal protective equipment.
  - Specimen collection and transport materials.
  - Sources of consumable medical supplies.
  - Medical personnel who may be utilized during an emergency situation.
  - Pharmacies and pharmacists.
  - Contingency medical facilities through CCEOC.
  - Mortuary/funeral services through Coroner's office.
  - Social services/mental health services/faith services.
- Coordinate with CCOEM to estimate the impact of pandemic influenza on healthcare services and critical infrastructure within Clark County.

The OOE will:

- Utilize the CDC FluAid program to derive these estimates.

- **WHO Phase 4**

The OOE will:

- Regularly provide updated information about the epidemiology and transmission of the novel virus to the local healthcare community including EMS and hospitals through HAN.

The CHO will:

- Recommend that EMS and hospitals activate severe respiratory illness protocols and provide guidance about the appropriate use of personal protective equipment through HAN.

The IC will:

- Establish regular communication with CCOEM, providing updated information about the epidemiology and transmission of the novel virus.

- **WHO Phase 5-6**

The IC will:

- Request CCOEM to activate the EOC to manage the needs of health, medical and essential service agencies during the pandemic.
- Designate a liaison to the EOC to communicate timely and accurate information about the epidemiology of the pandemic and the status of the public health response.

The OOE will:

- Continually review information about the epidemiology of the pandemic. Based on this data, the OOE will develop and provide the EOC with

protective action recommendations for the health, medical and essential services sectors.

- **Post-Pandemic Period.**

  The IC will:
  - Participate in recovery and demobilization efforts in coordination with the EOC.

  The After Action Reporting Committee will:
  - Provide CCOEM with an assessment of the health impact of the pandemic and an evaluation of the public health response.

Communicating with the Public

Communicating information to the public about pandemic influenza will be carried out according to policies and procedures described in the SNHD Crisis and Emergency Risk Communication Annex. This document details the means, organization and process by which SNHD PIO will provide information and instructions to the public before, during and after a public health threat or emergency such as pandemic influenza.

The PIO will provide information regarding the following during a pandemic event:

- **WHO Phase 1-3**
  - Hand and Respiratory hygiene (e.g. regular hand washing, cover your cough), self-isolation (e.g. staying home with flu-like illness), and care-seeking for high-risk adults with flu-like illness (e.g. "Call your physician if...").
  - Up-to-date web pages on influenza activity, prevention and control.
  - A webpage devoted to general influenza information, avian influenza and pandemic influenza including vaccine availability, updates and prevention information is available on the SNHD website.

- **WHO Phase 4**
  - The basis of influenza, high-risk populations and recommended preventive practices.
  - The epidemiology of the pandemic.
  - The symptoms that should prompt seeking medical assistance.
  - Concepts such as isolation and quarantine.

- **WHO Phase 5-6**
  - The availability of vaccines and antivirals and the rationale for providing medication to priority groups during vaccine and antiviral shortages.
  - The location and schedule of operations of mass vaccination sites to receive vaccine and/or antivirals.

- **Post-Pandemic Period.**
  - Coordinate with the CDC, State and Local agencies for appropriate information release messages to ensure consistency.

- Promptly respond to rumors and inaccurate information to minimize concern, social disruption and stigmatization.
- Re-release phone bank, web-sites and other points of contact for the public to address concerns.
- Communicate how people who were not immunized can still do so in the local area.

The SNHD has a dedicated hotline number, (702) 759-INFO (4636). This number can be staffed by volunteers and can be rolled to an internal phone bank consisting of multiple lines to handle a larger volume of calls. Additionally, if the numbers of calls warrant additional resources, the Health District has a contract with Rocky Mountain Poison and Drug Center and is able to forward calls to their call center. During this process SNHD will furnish Rocky Mountain Call Center personnel with update FAQs and updated response information as necessary.

The Crisis and Emergency Risk Communication Annex is maintained by the SNHD PIO.

VII. DIRECTION AND CONTROL

A. General

The CHO is responsible for establishing objectives and policies for emergency management and providing general guidance for disaster response and recovery operations, all in accordance with NIMS and ICS. During disasters, he/she may carry out those responsibilities from the DOC.

The Incident Commander (IC), assisted by a staff sufficient for the tasks to be performed, will manage the emergency response on-site.

B. Line of Succession

To ensure continuity of activities during threatened or actual disasters, the following line of succession is established for the CHO:

- Chief Health Officer
- Assistant Chief Health Officer
- Director of Community Health Services
- Manager of OPHP

VIII. READINESS LEVELS

As intelligence and information is gathered, a determination will be made by the Incident Commander regarding the readiness level that the district should be operating under to ensure appropriate response. The following activities will be performed for each readiness level:

- Level 0 – Normal conditions
  - Review and update plans.
  - Review assignment of all personnel.
  - Coordinate with local private industries on related activities.
  - Maintain a list of health and medical resources.

- Maintain and periodically test equipment.
- Conduct appropriate training, drills and exercises.
- Develop tentative task assignments and identify potential resource shortfalls.
- Establish a liaison with all health and medical facilities.

- Level 1 – Increased Readiness
  - Check readiness of health and medical equipment, supplies and facilities.
  - Correct any deficiencies in equipment and facilities.
  - Update Emergency Notification System contact list.
  - Notify key personnel of possible emergency operations.
  - Review procedures for relocating patients and determine the availability of required specialized equipment if evacuation of health and medical facilities may be required.

- Level 2 – High Readiness
  - Alert personnel to the possibility of emergency duty.
  - Place selected personnel and equipment on standby.
  - Identify personnel to staff the DOC if activated.

- Level 3 – Maximum Readiness
  - Mobilize health and medical resources to include personnel and equipment.
  - Dispatch health and medical representatives to the CCEOC when activated.

IX. ADMINISTRATION AND SUPPORT

A. Agreements and Contracts

- Should district resources prove to be inadequate during an emergency, requests will be made for assistance from other local jurisdictions, other agencies, and industry in accordance with existing mutual aid agreements and contracts and those agreements and contracts concluded during the emergency. Such assistance may include equipment, supplies, or personnel. All agreements will be entered into by authorized officials and should be in writing whenever possible. Agreements and contracts should identify the local officials authorized to request assistance pursuant to those documents.
- The agreements and contracts pertinent to emergency operations which SNHD is a party to, are summarized in Attachment 6 of the EOP.

B. Maintenance and Preservation of Records

- Maintenance of Records – Operational records generated during an event will be collected and filed in an orderly manner. A record of events must be preserved for use in determining the possible recovery of emergency operations expenses, response costs, settling claims, assessing the effectiveness of operations, and updating emergency plans and procedures.
- Documentation of Costs – All departments and agencies will maintain records of personnel and equipment used and supplies consumed during emergency operations.

- Preservation of Records – Vital health & medical records should be protected from the effects of a disaster to the maximum extent possible. Should records be damaged during an emergency situation, professional assistance for preserving and restoring those records should be obtained as soon as possible.

C. Training

It will be the responsibility of each department head to ensure that personnel, in accordance with NIMS and ICS, possess the level of training, experience, credentialing, currency, physical and medical fitness, or capability for any positions they are tasked to fill.

D. Post-Incident and Exercise Review

The EOP will remain in operation until full recovery is achieved as per the Continuity of Operations Plan (COOP). The COOP is activated when necessary as part of the EOP. The CHO is responsible for organizing and conducting a critique following the conclusion of a significant emergency event/incident or exercise. The After Action Report (AAR) will entail both written and verbal input from all appropriate participants. An Improvement Plan will be developed based on the deficiencies identified, and an individual, department, or agency will be assigned responsibility for correcting the deficiency and a due date shall be established for that action.

X. ANNEX DEVELOPMENT AND MAINTENANCE

A. Annex Development

The SNHD CHO is responsible for approving and promulgating this annex.

B. Review

The Plan and its annexes shall be reviewed annually by SNHD Office of Public Health Preparedness (OPHP). The CHO has designated the OPHP Manager to test, review and update this annex at least annually.

C. Update

This annex will be updated based upon deficiencies identified during actual emergency situations and exercises and when changes in threat hazards, resources and capabilities, or district structure occur.

The plan and its annexes must be revised or updated by a formal change at least annually. Responsibility for revising or updating this annex is assigned to the Public Health Preparedness Planner.

Revised or updated planning documents will be provided to all departments, agencies, and individuals tasked in those documents.

D. Resources

- A list of health and medical facilities is provided in Attachment 14.
- A list of deployable resources is provided in Attachment 15.

Pandemic Flu Plan at a Glance

	WHO Phase 1-3	WHO Phase 4	Who Phase 5-6	Post Pandemic Period
Command and Control	1. SNHD will take the lead in planning a Public Health Response 2. OOE will coordinate surveillance (pg. 6-7)	1. Communicate with CCOEM, NSHD, CDC and alert the health community via HAN. PIO will disseminate information through the JIC (pg. 7-8)	Activate the DOC. Carry out mass vaccination/distribution of antivirals or implement protective measures (pg. 8)	CHO will communicate the status of the response to local, state and federal authorities (pg. 9)
Surveillance	OOE conducts seasonal influenza surveillance and coordinates the CDC sentinel surveillance system locally. (pg. 9)	OOE assures all influenza surveillance is monitored via EpiX, HAN and CDC alerts including case tracking and travel history (pg. 9-10)	OOE will monitor deaths and hospitalizations, absenteeism from essential services, antiviral resistance and antiviral effectiveness (pg. 10)	OOE will analyze outbreaks according to demographic groups, age specific attack rate with morbidity and mortality, efficacy of vaccine and infection control measures (pg. 10-11)
Prevention and Containment	PIO will educate importance of hand hygiene and annual flu vaccination (pg. 11, 13, 15)	CHO will recommend Isolation and Quarantine for contact cases (pg. 11-12, 13-14, 16-17)	CHO will recommend social distancing and isolation of cases (pg. 12, 14, 17)	CHO will conduct an assessment of isolation and quarantine effectiveness (pg. 12, 14, 17)
Emergency Response	Assess the inventory of community resources. Instruct health care providers on protocol for mass vaccination (pg. 18)	Recommend PPE for health care providers and give updated information of transmission of the virus (pg. 18)	CHO will request CCOEM to activate the EOC (pg. 19)	Assess the health impact on the community with public health response (pg. 19)
Public Communications	Promote respiratory hygiene (pg. 19)	Educate about signs and symptoms that prompt seeking medical assistance and concepts of isolation and quarantine (pg. 19)	Direct the public to where they can receive vaccinations (pg. 20)	Provide information about recovery activities, ongoing health measures and other information after the public health threat (pg. 20)