I. INTRODUCTION

A. An Influenza pandemic is an outbreak of a novel Influenza virus that has worldwide consequences. Influenza pandemics present special requirements for disease surveillance, rapid delivery of vaccines and antiviral drugs, allocation of limited medical resources, and expansion of health care services to meet a surge in demand for care.

B. Pandemics occur in the following six phases defined by the World Health Organization and the Centers for Disease Control and Prevention: Interpandemic Period (Phases 1 and 2), Pandemic Alert Period (Phases 3, 4, and 5), and Pandemic Period (Phase 6). Distinguishing characteristics of each phase are described below. The phases will be identified and declared at the national level for the purposes of consistency, comparability, and coordination of response.

C. The World Health Organization (WHO) has developed a global influenza preparedness plan, which defines the stages of a pandemic, outlines the role of WHO, and makes recommendations for national measures before and during a pandemic. The phases are:

Interpandemic period

Phase 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 infection or disease is considered to be low.

Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

Pandemic alert period

Phase 3: Human infection(s) with a new subtype but no human-to-human spread, or at most rare instances of spread to a close contact.

Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.

Phase 5: Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk).
Pandemic period

Phase 6: Pandemic: increased and sustained transmission in general population.

Notes: The distinction between phases 1 and 2 is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. Factors may include pathogenicity in animals and humans, occurrence in domesticated animals and livestock or only in wildlife, whether the virus is enzootic or epizootic, geographically localized or widespread, and other scientific parameters.

The distinction among phases 3, 4, and 5 is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain), and other scientific parameters. The four traditional phases of emergency management can be matched with the six phases of a pandemic in the following way:

1. Preparedness  Interpandemic (Phases 1 and 2)

2. Response  Pandemic Alert (Phases 3, 4 and 5)  Pandemic (Phase 6)

3. Recovery  Pandemic Over and Interpandemic (Phases 1 and 2)

4. Mitigation  Interpandemic (primarily) (Phases 1 and 2)

D. Assistance in response to an influenza pandemic consists of health and medical resources, including transportation assets, temporarily realigned from established programs having coordination or direct service capability for communication of medical information, disease surveillance, vaccine delivery, distribution of medications, public health authority and disease control.

1. COMMUNICATION OF MEDICAL INFORMATION refers to both the information flow within the public health community and the provision of critical information to the public. Appropriate and timely messages to the public are an essential element of Community Containment.
2. DISEASE SURVEILLANCE refers to the voluntary and required systematic reporting and analysis of signs, symptoms, and other pertinent indicators of illness to identify disease and characterize its transmission.

3. VACCINE PROGRAMS refers to acquisition, allocation, distribution, and administration of influenza vaccine, and monitoring the safety and effectiveness of influenza vaccinations. Vaccine programs are established as part of community containment measures.

4. DISTRIBUTION OF MEDICATIONS refers to the acquisition, apportionment, and dispensing of pharmaceuticals (other than vaccines) to lessen the impact of the disease and also to minimize secondary infection. This includes strategies involving both antiviral medications and antibiotics. These strategies are used as part of community containment measures.

5. PUBLIC HEALTH AUTHORITY AND DISEASE CONTROL refers to the aspects of pandemic response requiring executive decisions and recommendations for social distancing, such as:

   a. ordering and enforcing quarantine, which is the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious;

   b. ordering and enforcing isolation, which is the separation of persons who have a specific infectious illness from those who are healthy and the restriction of their movement to stop the spread of that illness;

   c. ordering the release of medical information for epidemiological investigation;

   d. expanding or lifting regulations and licensure requirements to allow for the expansion of medical services; and

   e. ordering expansion of medical services under emergency conditions

   f. issuing other lawful directives in support of the response.

   g. recommending other or additional non-pharmaceutical containment strategies and other measures applied to an
entire community or region, designed to reduce personal interactions and thereby transmission risk;

h. Recommendations for school and public institution closings.

II. MISSION

This plan is part of the South Carolina Mass Casualty Plan (Appendix 5) of the South Carolina Emergency Operations Plan. This attachment identifies critical influenza pandemic response functions and assigns responsibilities for those functions within the State of South Carolina.

III. SITUATION AND ASSUMPTIONS

A. Situation

1. Vaccination of susceptible individuals is the primary means to prevent disease and death from influenza during an epidemic or pandemic.

2. The State’s established vaccine delivery infrastructure consists of 46 county health departments, 20 community health centers, approximately 1700 private physicians’ offices (primarily pediatric practices), birthing hospitals, and universities with health centers or schools of medicine or nursing.

3. In the event of a pandemic, the Advisory Committee on Immunization Practices, a federal entity, will publish recommendations to state immunization programs on the use of the pandemic vaccine and priority groups for immunization. These recommendations will be distributed as national guidelines as soon as possible with the expectation that they will be followed in order to ensure a consistent and equitable program.

4. The U.S. Department of Health and Human Services, Centers for Disease Control and Prevention will control the allocation and distribution of influenza vaccine to the states during a pandemic period.

5. The South Carolina Department of Health and Environmental Control will control the allocation and distribution of influenza vaccine within South Carolina and will implement specific Advisory Committee on Immunization Practices recommendations regarding priority groups for immunization.
B. Assumptions

1. All persons will lack immunity and will likely require two doses of the influenza vaccine.

2. After receipt of the influenza vaccine, the goal is to vaccinate the entire population of South Carolina over a period of four months on a continuous, prioritized basis.

3. When influenza vaccine becomes available, initial supplies will not be sufficient to immunize the whole population and prioritization for vaccine administration will be necessary.

4. Public health clinics will be the predominant locations for influenza vaccine administration during the first month of vaccine availability, and a reduction or cessation of other public health programs may be necessary in order to provide supplemental personnel for specific immunization job actions.

5. South Carolina’s health care workers, emergency response workers, medical examiners, funeral directors, and morticians will face a sudden and massive demand for services and a possible 40% attrition of essential personnel.

6. The projected peak transmission period for a pandemic influenza outbreak will be 6 to 8 weeks.

6. Based on a population attack rate of 15-35%, South Carolina could anticipate between 560,000 and 1.32 million cases of influenza during the peak transmission period.

7. Outpatient visits due to influenza are projected to reach almost 533,000 (range 320,000 – 750,000), which translate to over 25 extra patients per day during the peak transmission period for every primary care physician in South Carolina.

8. Hospitalizations due to influenza and influenza-related complications may reach 12,000 (range 7,200 – 16,800 persons) – the elderly and those with chronic medical conditions could account for most of these admissions.

9. South Carolina is expected to experience almost 3,600 deaths from pandemic influenza (range 2,200 – 5,000), or nearly double the regular number of state’s expected deaths, during the peak transmission period.
10. The number of hospital beds and the level of mortuary services available to manage the consequences of an influenza pandemic will be inadequate.

12. Antiviral medications may play a significant role in disease control operations.

IV. CONCEPT OF OPERATIONS

A. The Department of Health and Environmental Control is responsible for the coordination of all Public Health measures in South Carolina, including coordination of Emergency Support Function-8 (Health and Medical Services). Beyond the traditional scope of medical care outlined in the Health and Medical Services Emergency Support Function (Annex 8), the priorities in an Influenza Pandemic response will be: communication of medical information, disease surveillance, vaccine delivery, distribution of medications, public health authority, disease control, and recommendations for community containment measures.

B. Certain key actions may be accomplished in these priority areas during each phase of an Influenza Pandemic. The following sections will discuss activation of the plan, local response to a pandemic, community containment measures and will give specific details on activities to be accomplished by phases during a pandemic.

C. Activation

This plan discusses many public health activities such as disease surveillance that are conducted during normal operations. The progression of small disease outbreaks into larger pandemics is tracked by the World Health Organization, the health organizations of other nations and the Centers for Disease Control and Prevention. The Centers for Disease Control and Prevention will identify, confirm and communicate to DHEC officials South Carolina’s pandemic phase status. Certain actions described in this plan will be taken by the relevant agencies before activation of the State Emergency Operations Plan. Full activation of this plan and activation of the State Emergency Response Team would be made in accordance with procedures outlined in the Basic Plan.

D. Local Response

Local Response to Pandemic Influenza is discussed in detail in respective Health Region Emergency Operations Plans and Regional Mass Casualty Plans. The primary actions and logistics requirements at the local level are supported in this state-level plan. Primary actions at the local level would include: communication of medical information, disease
surveillance, vaccine delivery, distribution of medications, implementation of public health authority, disease control, and implementation of community containment measures, including school closings.

E. Community Containment

1. Introduction

For each Pandemic Phase, non-pharmaceutical measures to limit the spread of disease in the general community are outlined. Pharmaceutical measures are included as containment strategies in the appropriate phases. The non-pharmaceutical containment measures include (but are not limited to) isolation, quarantine, infection control, and recommendations for community-based activity restrictions, including school closings. Additionally, planning for pre-event and event messages is included as part of community containment measures. Community containment measures as appropriate for each pandemic phase are included in the Public Health Authority and Disease Control sections of the plan.

2. Definitions

Isolation separates or restricts movement or activities of ill persons with contagious disease to prevent transmission to others.

Quarantine restricts movement and activities or separates well persons believed to have been exposed to infection, to prevent possible transmission to others. Individual quarantine control measures are most likely to be used primarily during the Pandemic Alert (Phases 4 and 5). Planning for this will include working with community partners to review steps involved in establishing and maintaining quarantine facilities and procedures.

Infection control protects individuals from coming in direct contact with infectious materials or agents to limit transmission and include physical barriers (e.g. masks, gloves), hygiene (e.g. respiratory and hand hygiene), and disinfection measures.

Community-based activity restrictions (also referred to as “social distancing”) increase distance between members of a community by restricting or limiting public gatherings, public events, or group activities. These measures may be beneficial and practical when there is a larger number of cases and more extensive viral transmission. In such settings, individual-level measures may no longer be effective or practical. To maximize
their effectiveness, a combination of non-pharmaceutical measures tailored to the epidemiologic context of each pandemic phase will be considered for recommendation.

3. Community Containment Strategies

Communication of medical and preparedness information is a key factor in the success of any community containment measures. Development of the messages to prepare communities for implementation of individual and community control measures begins in the Interpandemic (Phases 1 and 2) and continues through the end of the Pandemic (Phase 6). Messages should address how individual actions (hand washing, covering coughs, staying home when ill) and community efforts (school closings, telecommuting) can help reduce disease transmission.

Community containment measures during Phases 1 and 2 include planning efforts related to influenza prevention and control, a major part of which is communication of medical and preparedness information.

During Phase 3, response efforts include development of the recommendations for isolation and quarantine as deemed or that are deemed medically and legally appropriate. The recommendations should address:

1) symptomatic persons with travel risk factors or contact with others having travel risk factors (history of travel to a country with a novel virus subtype or novel strain of influenza documented in poultry, wild birds, and/or humans) or having occupational risk;

2) those with culture confirmed and identified novel strain;

3) symptomatic persons that are not yet confirmed.

Although individual containment measures may have limited impact in preventing the transmission of pandemic influenza (given the likely characteristics of a novel influenza virus), they may have great effectiveness with a less efficiently transmitted virus and may slow disease spread and buy time for vaccine development.

Used primarily in Phase 4 and, possibly 5, quarantine of individuals may include family members, work or schoolmates,
and healthcare workers. The individuals remain separated from others for a specified period (up to 10 days after potential exposure) during which the individual is regularly assessed for signs and symptoms of disease. This may be appropriate in situations in which the risk of exposure and subsequent development of disease is high and the risk of delayed recognition of symptoms is moderate. Persons in quarantine who experience fever, respiratory, or other early influenza symptoms require immediate evaluation by a healthcare provider.

Another containment measure that may be considered for implementation early in a pandemic is the targeted prophylaxis of disease clusters. This intervention includes the investigation of disease clusters, administration of antiviral treatment to persons with confirmed or suspected pandemic influenza and the provision of drug prophylaxis to all likely exposed persons in the affected community. Targeted prophylaxis also requires intensive disease surveillance to ensure coverage of the entire affected area, effective communication with the affected community, and rapid distribution and administration of antivirals because they are most effective when provided within 48 hours of symptom onset or when used as post-exposure prophylaxis before onset of illness. This intervention may be useful upon the recognition of the first cases or introduction in South Carolina, especially in a closed community.

In Phase 6, when there is sustained novel influenza virus transmission in an area of the state, with a large number of cases without clear epidemiologic links to other cases, focused measures to increase social distance would be considered and there would be consideration of community-wide activity restrictions. This may include selective use of group quarantine early in the pandemic when the scope of the outbreak is local and limited may slow the geographic spread. At this time, individual quarantine is much less likely to have an impact and likely would not be feasible to implement because of shortages in public health to track information and to verify monitoring and appropriate actions based on their findings. Additionally, there may be a shortage of law enforcement officials to monitor the isolations and quarantines.

At this time planning and implementation efforts should address community-based activity restrictions and emphasize what individuals can do to reduce their risk of infection, which may be more effective disease control tools. Communication of medical information should include recommendations for home care of those with pandemic influenza.
Measures that may be considered for implementation that affect communities include:

1) Promotion of community-wide infection control measures (e.g. respiratory hygiene and cough etiquette)

2) “Stay Home Days” (asking everyone to stay home for an initial 10-day period, with final decisions on duration based on an epidemiological and social assessment of the situation) and self-isolation

3) Closure of office buildings, shopping malls, schools and public transportation.

In Phase 6 of a pandemic, recovery-focused messages should be provided to the public.

In the Post Pandemic Phase, the decision to discontinue community-level measures will balance the need to lift individual movement restrictions against community health and safety. Premature removal of containment strategies can increase the risk of additional transmission. Generally, considerations will be made to withdraw the most stringent or disruptive measures first.

The following sections discuss state-level actions triggered by certain phases of an influenza pandemic.

E. Interpandemic (Phases 1 and 2)

1. Communication of Medical Information
   a. Communicate health advisories, alerts and updates through the Health Alert Network.
   b. Communicate educational messages regarding influenza prevention and surveillance to the media and the public.
   c. Prepare pre-event messages and materials on pandemic influenza for public dissemination.

2. Disease Surveillance
   a. Conduct Outpatient Influenza-Like Illness Sentinel Provider Surveillance, which is voluntary participation by South Carolina health care providers in the influenza-like
illnesses surveillance, under the guidance of the Centers for Disease Control and Prevention. During influenza season (October through mid-May), sentinel healthcare providers report the total number of patient with influenza-like illnesses symptoms seen each week.

b. Conduct Sentinel Laboratory Surveillance for viral isolates. The Department of Health and Environmental Control, Bureau of Laboratories maintains the Laboratory Influenza Surveillance Program, under the guidance of the Centers for Disease Control and Prevention. Participating institutions (physicians, colleges, hospitals and local health departments) submit influenza culture specimens for viral isolation and typing. Commercial and private clinical laboratories in South Carolina are required by law to report influenza viral isolates from South Carolina residents to the Department of Health and Environmental Control.

c. Conduct Rapid Diagnostic Testing Surveillance. Hospitals and private healthcare providers report positive rapid flu tests to the Department of Health and Environmental Control. Rapid flu test reports include influenza virus type detected and the numbers of patients testing positive. Positive rapid flu test reporting to the Department of Health and Environmental Control is required by South Carolina law.

3. Vaccine Programs

a. Develop tiered contingency plans for use of pandemic vaccine and targeted population groups for immunization.

b. Develop plans for storage, distribution, and administration of pandemic influenza vaccine through public health and other providers to nationally defined high-priority target groups – these plans should include:

1) mass immunization clinic capability within each Public Health Region;

2) locations of clinics (e.g., central sites, pharmacies, workplace, military facilities);

3) vaccine storage capability, including current and potential contingency depots for both state and region-level storage
4) numbers of staff needed to run immunization clinics;

5) procedures to deploy staff from other areas, from within and outside public health, to assist in immunization;

6) advanced discussions with professional organizations regarding tasks outside routine job descriptions during a pandemic;

7) training for deployed staff; and

8) measures to be taken to prevent distribution to persons other than those in the targeted population groups.

c. Determine how receipt of vaccine will be recorded and how a two-dose immunization program would be implemented in terms of necessary recall and record keeping procedures.

d. Determine the number of people within each Public Health Region who fall within each of the targeted population groups for vaccination.

e. Verify capacity of suppliers for direct shipping of vaccine and other medications to Public Health Regions and private health care providers.

f. Develop plans for vaccine security:

   1) during transport,
   2) during storage, and
   3) at clinics.

g. Coordinate proposed vaccine distribution plans with bordering Public Health Regions and States.

h. Enhance Vaccine Adverse Event Surveillance.

i. Determine what information needs to be collected and how this will be done, to facilitate evaluation of pandemic
influenza vaccine program activities in the post-pandemic period (including socio-economic evaluations).

4. Distribution of Medication

a. Obtain and maintain a current inventory of available medication of health care providers (i.e. Hospitals, clinics, pharmacies).

b. Obtain and maintain a current inventory of available medication at Department of Health and Environmental Control primary drug wholesaler and additional wholesalers in South Carolina.

c. Establish Memoranda of Agreement with agencies, organizations and individuals capable of providing assistance in obtaining and distributing medication such as the South Carolina Pharmacy Association.

e. Identify and establish locations for receiving, repackaging, staging, distributing and dispensing antivirals.

f. Develop and maintain standing orders and policies and procedures for antiviral stockpiles.

g. Ensure that public health regions develop antiviral distribution plans.

5. Public Health Authority and Disease Control:

a. Ensure legal authorities and procedures exist for various levels of movement restrictions.

b. Develop protocols for monitoring and enforcing quarantine measures.

c. Establish plans for diverting patients who require supportive but not advanced level care to non-traditional care facilities.

d. Establish and maintain a database of alternate non-traditional medical facilities and services to which patients could be diverted during a pandemic.
e. Develop public information about the appropriate use of personal protective devices like disposable masks that could be used during a pandemic.

f. Define risk groups by potential risk of exposure and develop guidelines and recommendations for the use of personal protective equipment by individual risk group or potential exposure setting.

g. Recruit medical volunteers for provision of care and vaccine administration to augment medical, nursing, and other healthcare staffing. Volunteer activities for disease containment will include administering antivirals or vaccinations.

h. Coordinate Public Health Orders and plans with bordering states, including isolation and quarantine orders and recommendations and orders related to social distancing and community containment measures.

i. Confirm that health region plans incorporate the capability to employ the recommended disease containment activities.

F. Pandemic Alert (Phase 3)

1. Communication of Medical Information – Communications same as in preparedness phase, with the addition of following:

a. Communicate with statewide stakeholders, partners, and healthcare providers regarding enhanced surveillance.

b. Communicate with statewide stakeholders and partners regarding actions to be taken if a person presents with severe respiratory signs and symptoms and a travel history from a high-risk global area.

c. Develop risk communication messages and education programs to improve public understanding of the dangers of pandemic influenza and the benefits of community-wide disease control practices, including social distancing measures.

2. Disease Surveillance – Sentinel provider, sentinel lab and rapid influenza test surveillance activities will continue as in preparedness phase, with the addition of addition of the following:
a. Enhance avian influenza surveillance.

b. Inform SC health care providers of the latest clinical and epidemiologic risk factors through the Health Alert Network.

c. Upgrade suspected human cases of avian influenza to an “urgently reportable condition.”

d. Expand viral isolate and syndromic surveillance reporting requirement to year-round reporting.

e. Enhanced surveillance that will include participation of stakeholders and partners, once novel strain identified in the U.S.

3. Vaccine Programs – Promote pneumococcal vaccination of high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia.

4. Distribution of Medication

a. Confirm current inventory of available medication of health care providers (i.e. hospitals, clinics, pharmacies).

b. Confirm current inventory of available medication at Department of Health and Environmental Control primary drug wholesaler and additional wholesalers in South Carolina.

c. Prepare to activate memoranda of agreement with agencies, organizations and individuals capable of providing assistance in obtaining and distributing medication such as the South Carolina Pharmacy Association.

d. Confirm credentialed personnel necessary to deploy the Pandemic Influenza Antiviral Distribution Plan.

e. Confirm the locations for reception, repackaging, staging, distributing and dispensing the Pandemic Influenza antivirals and other CDC approved counter measures in conjunction with the SNS assets.

f. If necessary, modify plans for the distribution of medications.
5. Public Health Authority and Disease Control.
   a. Review response plans.
   b. Confirm that notification lists are current for local agencies, the medical community, and decision makers,
   c. Confirm that the database for the Health Alert Network is current.
   d. Determine if a meeting of the Disease Control subcommittee or other decision makers is indicated to recommend courses of action for disease containment.
   e. Develop triggers for recommending implementation of specific community containment and social isolation actions.
   f. Develop messages for home care of pandemic influenza patients.

G. Pandemic Alert (Phase 4)

1. Communication of Medical Information
   a. Communications and education to health care providers, the media and the general public same as in Pandemic Alert phase 3.
   b. Also, disseminate influenza isolation and quarantine guidelines and social distancing measures.

2. Disease Surveillance – Surveillance activities, including enhanced surveillance, are the same as in Pandemic Alert phase 3, with the addition of the following:
   a. Upon notice of a suspect case of pandemic influenza, proceed with surveillance and case investigation of suspect case, including laboratory confirmation of diagnosis; as well as close contact investigation.

3. Vaccine Programs
   a. Conduct initial availability assessment of supplies (e.g., syringes, adrenalin, and sharps disposal units), equipment
and locations potentially required for a vaccine-based response (i.e., mass immunization clinics).

b. Develop a list of currently qualified vaccinators and sources of potential vaccinators.

c. Review educational materials concerning administration of vaccines and update as needed.

d. Collaborate on national and international vaccine development initiatives.

4. Distribution of Medication – Activities continue as in Pandemic Alert phase 3.

5. Public Health Authority and Disease Control.

a. The Disease Control subcommittee will meet.

b. Develop and communicate disease prevention, control, and containment guidelines for physicians providing care during a pandemic to address the provision of basic medical treatment in non-hospital settings.

c. Develop clinical guidelines for physicians and Emergency Medical Services personnel to direct patients to the appropriate level of care based on their clinical presentation.

d. Develop processes for patient assessment, communication between facilities, and direction of patients to available beds.

e. Coordinate triage logistics with hospitals and Emergency Medical Services including patient assessment, communication between facilities, and direction of patients to available beds.

f. Recommend employment of isolation and quarantine practices as deemed medically and legally appropriate.

g. Provide consultation and support on animal issues which impact public health and coordinate with Animal Emergency Response Agencies regarding culling infected animal populations or other animal disease containment activities during a pandemic.
H. Pandemic Alert (Phase 5)

1. Communication of Medical Information – Communication to health care providers, the media and the general public is the same as in the Pandemic Alert phase 4.

2. Disease Surveillance – Surveillance activities are the same as in the Pandemic Alert phases 3 and 4.

3. Vaccine Programs
   a. Ensure ongoing involvement in vaccine development initiatives.
   b. Review and modify if necessary, plans for storage, distribution, and administration of pandemic influenza vaccine through public health and other providers to high-priority target groups.
   c. Ensure staff is trained and infrastructure is in place to record immunizations, including requirements for a two-dose immunization program (i.e., recall and record keeping procedures).
   d. Review estimates of the number of people who fall within each of the targeted population groups for vaccination (i.e., high-risk groups, health care workers, emergency service workers, specific age groups).

4. Distribution of Medication
   a. Determine the most clinically effective and cost-effective strategies for use of antiviral drugs.
   b. Communicate to providers if and when the federal government moves to:
      1) purchase large quantities of drugs to provide for state-level public health distribution,
      2) purchase such drugs for private sector distribution according to prioritization rules communicated by state public health, or
      3) leaves distribution entirely to the private sector.
c. As necessary, provide for drug distribution.

d. If appropriate, activate Memoranda of Agreement with agencies, organizations and individuals capable of providing assistance in obtaining and distributing medication such as the South Carolina Pharmacy Association.

5. Public Health Authority and Disease Control.

a. Coordinate disease control activities with vaccination activities to ensure vaccination of essential workers and population who are either at high risk of spreading the influenza virus or who provide essential community services.

b. Advise the Governor on:

1) the most appropriate community-based infection control methods during the time period when no vaccines are yet available,

2) the most appropriate distribution priorities and systems during time when there is insufficient supply of vaccines and prioritization of distribution is necessary; and

3) the most appropriate uses of antiviral drugs during the time before vaccine is available.

4) the projected demand for health and medical care services.

c. Authorize required isolation and quarantine practices, as deemed medically and legally appropriate.

I. Pandemic (Phase 6)

1. Communication of Medical Information

a. Communication to health care providers, the media and the general public is the same as in Pandemic Alert phase 5.

b. Also, establish and communicate precautions needed for disposal of deceased persons.
2. Disease Surveillance

No epidemiologic investigations will take place due to resource depletion of epidemiologic staff. Continue surveillance activities and stop epidemiological investigations when adequate numbers of staff are no longer available to pursue investigations.

3. Vaccine Programs

a. General
   1) Ensure ongoing involvement in vaccine development, testing, and production initiatives.
   2) Purchase vaccine if necessary.
   3) Review and revise recommended priority groups for immunization based on available epidemiologic data.
   4) Modify or refine priority target groups depending on circumstances.
   5) Modify or refine other aspects of the Health and Human Services Center for Disease Control and Prevention Advisory Committee on Immunization Practices guidelines, as needed.
   6) Review and modify if necessary, plans for vaccine security (i.e., during transport, storage, and clinic administration)

b. When vaccine is available:
   1) Activate immunization clinic capability.
   2) Implement streamlined Vaccine Adverse Event surveillance.
   3) Arrange for direct shipping of vaccine to public health regions.
   4) Communicate with bordering states to facilitate awareness of the vaccine distribution plan and coordination of efforts as much as possible.
5) Collect and compile reports of total people immunized with one or two doses.

6) Monitor vaccine supply, demand, distribution, and uptake.

7) Recruit trained immunization staff from unaffected public health regions to augment regular staff in affected areas.

c. End of first wave:

1) Expand vaccine programs to cover population not yet immunized.

2) Summarize and report coverage data (with one or two doses) and Vaccine Adverse Event data.

3) Examine vaccine efficacy.

4) Continue Vaccine Adverse Event surveillance.

5) Restock supplies and resume routine programs.

6) Review and revise policies, procedures, and standing orders used during the mass immunization campaigns.

4. Distribution of Medication

a. Provide or coordinate obtaining pharmaceuticals other than vaccines.

b. Assist with the coordination of the distribution of these pharmaceuticals.

5. Public Health Authority and Disease Control.

a. Implement restrictions on travel, trade, and the prohibition of large public gatherings. Non-essential businesses that may result in large congregations of people will be closed as will schools and other public meetings will be suspended.

b. Individual isolation and quarantine may be authorized and employed.
c. Enforce isolation and quarantine measures.

d. Make decisions about culling infected animal populations or other animal disease containment activities during a pandemic.

e. Implement orders for expansion of medical care under emergency conditions.

J. Second Wave – Activities will continue as under Pandemic phase 6.

K. Pandemic Over / Interpandemic

1. Communication of Medical Information – Communicate to medical community, the media and the general public regarding decreasing trend of influenza attack rates data.

2. Disease Surveillance – Conduct studies of morbidity and mortality data, attack rates in South Carolina.

3. Vaccine Programs – Replenish medical supplies and initiate resumption of routine programs.

4. Distribution of Medication – Replenish medical supplies and initiate resumption of routine programs.

5. Public Health Authority and Disease Control: Lift or revoke public health orders which are no longer necessary.

L. Mitigation

1. Communication of Medical Information –
   a. Communicate with the medical community, stakeholders, the media, and the general public regarding decreasing trend of influenza attack rates.

   b. Communicate the lifting or revocation of public health orders which are no longer necessary to the affected populations through the Joint Information System.

2. Disease Surveillance – Conduct studies of morbidity and mortality data, attack rates in South Carolina.

3. Vaccine Programs
a. Review, evaluate, and take measures to improve or enhance respective roles.

b. Recommend post-pandemic studies to assist in evaluations of the pandemic influenza response capacities and coordinated activities.

4. Distribution of Medication – Review, evaluate, and take measures to improve or enhance respective roles.

5. Public Health Authority and Disease Control
   a. Evaluate effectiveness of statutory and regulatory authorities related to pandemic response.
   b. Make efforts to amend statutory and regulatory authorities to increase the effectiveness of pandemic response.

V. RESPONSIBILITIES

A. Department of Health and Environmental Control
   1. Communicate health advisories, alerts and updates through the Health Alert Network.
   2. Communicate educational messages regarding influenza prevention and surveillance and treatment to the media and the public.
   3. Prepare pre-event messages and materials on pandemic influenza for public dissemination.
   5. Communicate Influenza-Like Illness surveillance data as appropriate.
   6. Conduct Sentinel Laboratory Surveillance for viral isolates.
   8. Develop tiered contingency plans for use of pandemic vaccine and targeted population groups for immunization.
9. Develop plans for storage, distribution, and administration of pandemic influenza vaccine through public health and other providers to nationally defined high-priority target groups – these plans should include:

a. mass immunization clinic capability within each Public Health Region;

b. locations of clinics (e.g., central sites, pharmacies, work place, military facilities);

c. vaccine storage capability, including current and potential contingency depots for:
   1) state central vaccine storage depot, and
   2) each Public Health Region depot;

d. numbers of staff needed to run immunization clinics;

e. procedures to deploy staff from other areas, from within and outside public health, to assist in immunization;

f. advanced discussions with professional organizations regarding tasks outside routine job descriptions during a pandemic;

g. training for deployed staff; and

h. measures to be taken to prevent distribution to persons other than those in the targeted population groups.

10. Determine how receipt of vaccine will be recorded and how a two-dose immunization program would be implemented in terms of necessary recall and record keeping procedures.

11. Determine the number of people within each public health region who fall within each of the targeted population groups for vaccination.

12. Verify capacity of suppliers for direct shipping of vaccine and other medications to public health regions and private health care providers.

13. Develop plans for vaccine security:
a. during transport,
b. during storage, and
c. at clinics.


15. Enhance Vaccine Adverse Event Surveillance.

16. Obtain and maintain a current inventory of available medication of healthcare providers (i.e. hospitals, clinics, pharmacies).

17. Obtain and maintain a current inventory of available medication at the Department of Health and Environmental Control primary drug wholesaler and additional wholesalers in South Carolina.

18. Establish Memoranda of Agreement with agencies, organizations and individuals capable of providing assistance in obtaining and distributing medication such as the South Carolina Pharmacy Association.

19. Develop plans for the distribution of medications.

20. Identify, coordinate and credential personnel necessary to deploy the Pandemic Influenza Antiviral Distribution Plan.

21. Identify and establish locations for receiving, repackaging, staging, distributing and dispensing antivirals.

22. Develop and maintain standing orders and policies and procedures for antiviral stockpiles.

23. Ensure that public health regions develop antiviral distribution plans.

24. Ensure legal authorities and procedures exist for various levels of movement restrictions.

25. Develop protocols for monitoring and enforcing quarantine measures.

26. Establish plans for diverting patients who require supportive but not advanced level care to alternate care facilities.
27. Establish and maintain a database of potential alternate care medical facilities and services to which patients could be diverted during a pandemic.

28. Develop public information about the appropriate use of personal protective devices like disposable masks that could be used during a pandemic.

29. Define risk groups by potential risk of exposure and develop guidelines and recommendations for the use of personal protective equipment by individual risk group or potential exposure setting.

30. Recruit medical volunteers for provision of care and vaccine administration to augment medical, nursing, and other healthcare staffing. Volunteer activities for disease containment will include administering antivirals or vaccinations.

31. Coordinate Public Health Orders and plans with bordering states, including isolation and quarantine orders and orders related to social distancing and community containment measures.

32. Confirm that health region plans incorporate the capability to employ the recommended disease containment activities.

33. Upgrade surveillance reporting requirements as necessary.

34. Expand surveillance network during response phase.

35. Promote pneumococcal vaccination of high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia.

36. Confirm that notification lists are current for local agencies, the medical community, and decision makers.

37. Determine if a meeting of the Disease Control subcommittee or other decision makers is indicated to recommend courses of action for disease containment.

38. Develop procedures and triggers for recommending implementation of specific community containment and social isolation actions.

39. Develop messages for home care of pandemic influenza patients.

40. Confirm that the database for the Health Alert Network is current.
41. Disseminate influenza isolation, quarantine and social distancing guidelines.

42. Upon notice to DHEC of a suspect case of pandemic influenza, proceed with surveillance and case investigation of suspect case, including laboratory confirmation of diagnosis; as well as close contact investigation.

43. Conduct initial availability assessment of supplies (e.g., syringes, adrenalin, sharps disposal units), equipment and locations potentially required for a vaccine-based response (i.e., mass immunization clinics).

44. Develop a list of currently qualified vaccinators and sources of potential vaccinators.

45. Review educational materials concerning administration of vaccines and update as needed.

46. Collaborate on national and international vaccine development initiatives.

47. Develop and communicate disease prevention, control, and containment guidelines for physicians providing care during a pandemic to address the provision of basic medical treatment in non-hospital settings.

48. Develop clinical guidelines for physicians and Emergency Medical Services personnel to direct patients to the appropriate level of care based on their clinical presentation.

49. Develop processes for patient assessment, communication between facilities, and direction of patients to available beds.

50. Coordinate triage logistics with hospitals and Emergency Medical Services including patient assessment, communication between facilities, and direction of patients to available beds.

51. Recommend employment of isolation and quarantine practices as deemed medically and legally appropriate.

52. Review and modify if necessary, plans for storage, distribution, and administration of pandemic influenza vaccine through public health and other providers to high-priority target groups.
53. Ensure staff is trained and infrastructure is in place to record immunizations, including requirements for a two-dose immunization program (i.e., recall and record keeping procedures).

54. Review estimates of the number of people who fall within each of the targeted population groups for vaccination (i.e., high-risk groups, health care workers, emergency service workers, specific age groups).

55. Determine the most clinically effective strategies for use of antiviral drugs.

56. Communicate to providers if and when the federal government moves to:
   a. purchase large quantities of drugs to provide for state-level public health distribution,
   b. purchase such drugs for private sector distribution according to prioritization rules communicated by state public health, or
   c. leaves distribution entirely to the private sector.

57. As necessary, provide for drug distribution.

58. Coordinate disease control activities with vaccination activities to ensure vaccination of essential workers and population who are either at high risk of spreading the influenza virus or who provide essential community service.

59. Advise the Governor on:
   a. the most appropriate community-based infection control methods during the time period when no vaccines are yet available,
   b. the most appropriate distribution priorities and systems during time when there is insufficient supply of vaccines and prioritization of distribution is necessary;
   c. the most appropriate uses of antiviral drugs during the time before vaccine is available; and
   d. planning for expansion of the medical care system to meet the surge in demand for care.
60. Authorize required isolation and quarantine practices, as deemed medically and legally appropriate.

61. Establish and communicate precautions needed for disposition of deceased persons.

62. Purchase vaccine if necessary.

63. Review and revise recommended targeted population groups for immunization based on available epidemiologic data.

64. Activate immunization clinic capability.

65. Implement streamlined Vaccine Adverse Event surveillance.

66. Arrange for direct shipping of vaccine to public health regions.

67. Communicate with bordering states to facilitate awareness of the vaccine distribution plan and coordination of efforts as much as possible.

68. Collect and compile reports of total people immunized with one or two doses.

69. Monitor vaccine supply, demand, distribution, and uptake.

70. Recruit trained immunization staff from unaffected public health regions to augment regular staff in affected areas.

71. Expand vaccine programs to cover population not yet immunized.

72. Summarize and report coverage data (with one or two doses) and Vaccine Adverse Event data.

73. Examine vaccine efficacy.

74. Restock supplies and resume routine programs.

75. Review and revise policies, procedures and standing orders used during the mass immunization campaigns.

76. Provide or coordinate obtaining pharmaceuticals other than vaccines.
77. Implement restrictions on travel, trade, and the prohibition of large public gatherings. Non-essential businesses that may result in large congregations of people will be closed as will schools and other public meetings will be suspended.

78. Enforce isolation and quarantine measures.

79. Provide consultation and support on animal issues which impact public health and coordinate with Animal Emergency Response Agencies regarding culling infected animal populations or other animal disease containment activities during a pandemic.

80. Communicate to medical community, the media and the general public regarding status of pandemic.

81. Conduct studies of morbidity and mortality data, attack rates in SC.

82. Lift public health orders that are no longer necessary and communicate such actions to the affected populations through the Joint Information system.

83. Recommend post-pandemic studies to assist in evaluations of the pandemic influenza response capacities and coordinated activities.

84. Evaluate effectiveness of statutory and regulatory authorities related to pandemic response.

85. Make efforts to amend statutory and regulatory authorities to increase the effectiveness of pandemic response.

86. Communicate with the public regarding the potential impact and what to expect during a pandemic.

B. South Carolina Pharmacy Association

1. Assist with the procurement of medications.

2. Assist with obtaining volunteer pharmacists for distribution

3. Assist with storage, distribution, and administration of pandemic influenza vaccine to defined high-priority target groups.

4. Assist with development of list of currently qualified vaccinators and sources of potential vaccinators.

C. South Carolina Department of Transportation
1. Assist with storage and transportation of vaccine.

2. Assist with control of roads and transportation to support disease containment efforts.

3. Assist with enhanced surveillance efforts including assessment and consideration of isolation of symptomatic travelers from high-risk areas.

D. South Carolina Press Association – Assist with distribution of information to keep the public informed about disease containment and prevention measures and where to go for assistance.

E. South Carolina Hospital Association

1. Support disease surveillance activities.

2. Assist with coordination for the administration of pandemic influenza vaccine to defined high-priority target groups.

3. Assist with development of list of currently qualified vaccinators and sources of potential vaccinators.

4. Assist with development of plans for surge capacity and, along with the Department of Health and Environmental Control, establish acceptable standards of care when facilities are at or beyond capacity.

5. Assist with coordination of expansion of medical services to meet surge in demand.

F. South Carolina Ports Authority – Assist with enhanced surveillance efforts including assessment and consideration of isolation of symptomatic travelers from high-risk areas.

G. South Carolina National Guard

1. Assist with storage, distribution, and administration of pandemic influenza vaccine to defined high-priority target groups.

2. Assist with enforcement of quarantine measures and restrictions on travel.

3. Assist in the development of plans for vaccine security:
Annex 2

a. during transport,
b. during storage, and
c. at clinics.

4. Assist with vaccine security
a. during transport,
b. during storage, and
c. at clinics.

H. South Carolina Department of Labor, Licensing, and Regulations

1. Assist with development of a list of currently qualified vaccinators and sources of potential vaccinators.

2. Assist with establishing licensing privileges for out-of-state physicians, nurses and pharmacists.

I. South Carolina Department of Commerce

1. Assist with the acquisition of pandemic influenza vaccine.

2. Assist with developing collaborative relationships and Memoranda of Agreement with business and industries that have work-site health care facilities that can be used as mass vaccination clinics for their employees.

J. Department of Public Safety

1. Assist in the development of plans for vaccine security:
   a. during transport,
   b. during storage, and
   c. at clinics.

2. Assist with vaccine security
   a. during transport,
   b. during storage, and
c. at clinics.

3. Assist with enforcement of quarantine measures and restrictions on travel.

K. State Law Enforcement Division

1. Assist in the development of plans for vaccine security:
   a. during transport,
   b. during storage, and
   c. at clinics.

2. Assist with vaccine security
   a. during transport,
   b. during storage, and
   c. at clinics.

3. Assist with enforcement of quarantine measures and restrictions on travel.

L. SC Budget and Control Board

1. Assist with the acquisition of pandemic influenza vaccine.

2. Assist with procurement of medical supplies.

M. Clemson University Livestock and Poultry Health – Identify and assess livestock disease threats and animal related public health issues that may contribute to pandemic influenza spread.

N. Department of Natural Resources

1. Assist in the development of plans for vaccine security:
   a. during transport,
   b. during storage, and
   c. at clinics.
2. Assist with vaccine security
   a. during transport,
   b. during storage, and
   c. at clinics.

3. Assist with enforcement of quarantine measures and restrictions on travel.

O. South Carolina Department of Education

1. Assist with communication of the need for school closures to prevent the spread of disease.

2. Assist with designating school facilities for non-traditional health care facilities when needed

P. South Carolina Coroners Association

1. Assist with coordination of temporary morgue operations and final disposition of deceased persons.

2. Assist with documentation and recordkeeping relevant to pandemic influenza-related mortality.

Q. South Carolina Funeral Directors Association

1. Assist in coordination of next of kin notification operations.

2. Assist with coordination of temporary morgue operations and final disposition of deceased persons.

3. Assist with documentation and recordkeeping relevant to pandemic influenza-related mortality.

VI. FEDERAL INTERFACE

The Department of Health and Human Services is the principal Federal agency for protecting the health of all Americans. State response operations will interface with Federal response assets through ESF-8 and through liaison between the State Department of Health and Environmental Control and the Centers for Disease
Control and Prevention. The Centers for Disease Control and Prevention will also facilitate guidance and information flow between the State of South Carolina and the World Health Organization, which would have significant involvement during an Influenza Pandemic. Liaison between the State Emergency Operations Center and the Department of Homeland Security will provide access to additional Federal health and medical assets.