Apache County Public Health Services District
Non-Pharmaceutical Interventions Plan
March 11, 2016

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Performance Deliverables

This plan is written in performance of the Arizona Department of Health Services, Public Health Emergency Preparedness, *Sub-Awardees Requirements and Deliverables Document*, Ebola/Infectious Disease Preparedness and Response, Period of Performance: April 1, 2015 – September 30, 2016, Activity 4: Non-Pharmaceutical Interventions sub-awardee output requirements.

The plan supports the Arizona Department of Health Services (ADHS), Public Health Emergency Preparedness (PHEP), *County Requirements and Deliverables Document, Budget Period Four (BP4),* Period of Performance July 1, 2015 – June 30, 2016. County outputs include:

1. Local health shall develop and/or review local NPI plans. Written plans should include documentation which identifies public health roles and responsibilities related to the jurisdiction's identified risks, that was developed in conjunction with partner agencies (e.g., state environmental health, state occupational health and safety, and hazard-specific subject matter experts) and emergency managers. This documentation should identify the protective equipment, protective actions, or other mechanisms that public health responders shall have to execute potential roles. Roles for consideration may include the following elements:

    - Conducting environmental health assessments;
    - Potable water inspections; and
    - Field surveillance interviews.

2. Local Health Department shall complete the biannual performance measure report form distributed by ADHS for use in identifying gaps in planning and implementation of interventions in the jurisdiction.

The plan aligns with the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Public Health Preparedness and Response, *Public Health Preparedness Capabilities: National Standards for State and Local Planning,* March 2011, Public Health Preparedness Capability 11: Non-Pharmaceutical Interventions. Capability 11 supports the 2015-2018 National Health Security Strategy and Implementation Plan's Strategic Objective 2: Enhance the National Capability to Produce and Effectively Use Both Medical Countermeasures and Non-Pharmaceutical Interventions. Capability 11 is described below.

Capability 11: Non-Pharmaceutical Interventions

Non-pharmaceutical interventions are the ability to recommend to the applicable lead agency (if not public health) and implement, if applicable, strategies for disease, injury, and exposure control. Strategies include the following:

- Isolation and quarantine
- Restrictions on movement and travel advisory/warnings
- Social distancing
- External decontamination
- Hygiene

- Precautionary protective behaviors

The plan also supports the Mission Areas and Core Capabilities outlined below from the U.S. Department of Homeland Security, *National Preparedness Goal, Second Edition,* September 2015.

Prevention Mission Area

Core Capabilities:

- Planning
- Public Information and Warning
- Operational Coordination

Response Mission Area

Core Capabilities:

- Planning
- Public Information and Warning
- Operational Coordination
- Environmental Response/Health and Safety
- Operational Communication
- Public Health, Healthcare, and Emergency Medical Services
- Situational Assessment

Record of Changes

Change	Date	Part Affected	Date Posted	Who Posted
Original	03/11/2016			

Record of Distribution

Plan #	Office/Department	Representative	Signature
1			
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Introduction

The U.S. Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), Office of Public Health Preparedness and Response (OPHPR), *Public Health Preparedness Capabilities, National Standards for State and Local Planning,* March 2011, describes Capability 11: Non-Pharmaceutical Interventions and its components and measures. Non-pharmaceutical interventions (NPI) are strategies for disease, injury, and exposure control that may be used alone or in tandem with medical countermeasures.

NPI include actions, excluding administration of vaccines or medications, which people and communities can take to help slow the spread of infectious diseases. NPI strategies are different for different diseases. CDC organizes NPI into three broad categories: individual, community, and environmental. Individual NPI may include actions such as staying home when sick or using an insect repellant. Community NPI include keeping people apart in congregate settings, such as schools and workplaces, and temporarily closing places where people gather, such as schools or concerts. Environmental NPI may include actions such as surface cleaning, using recommended waste disposal methods, and mosquito abatement activities.

Characteristics of an infectious disease incident that must be considered in non-pharmaceutical interventions preparedness and response planning include:

- Simultaneous impacts in communities across the County which would severely limit the ability of any jurisdiction to provide support and assistance.
- An overwhelming burden of ill persons requiring hospitalization or medical care.
- Probable disruption of community infrastructures including transportation, commerce, utilities and public safety.
- Possible delays or shortages of antibiotics, vaccines, or other medical countermeasures.

The Apache County Public Health Services District (ACPHSD) Non-Pharmaceutical Interventions (NPI) Plan provides the operational guidelines for recommending and implementing NPIs before and during disease incidents so that disease burden and transmission can be reduced. The plan utilizes an all hazards approach and is typically activated in concert with other ACPHSD emergency plans. For the purposes of planning, NPIs are effectively considered mitigation strategies.

ACPHSD is the lead agency in Apache County for the coordination of NPI development and implementation within the jurisdiction. ACPHSD works closely with Arizona Department of Health Services (ADHS), jurisdictional entities, and regional healthcare partners.

The healthcare system provides the framework for maintaining individual and public health within the jurisdiction. In Apache County, these organizations include, but are not limited to, ACPHSD, hospitals, behavioral health providers, physicians, Emergency Medical Services (EMS), 9-1-1 dispatch centers, pharmacies, long-term health providers, home health agencies, and medical clinics. Working together, public health and healthcare partners can reduce the impact of disease burden by coordinating NPI activities as needed throughout the healthcare system.

Purpose

This plan has been developed to address emerging pathogens, such as Ebola virus, and reemerging diseases, such as tuberculosis. It is a guideline for addressing and coordinating basic NPI recommendations. This plan also facilitates collaboration among local and regional partners, such as those in the Northern Healthcare Coalition, in addressing emerging disease pathogens.

This plan provides ACPHSD with an organizational framework and operational guidance for NPI before or during an infectious disease incident. The plan is intended as incident independent, broadly applicable, and scalable guidance for assisting NPI recommendations development, implementation, and coordination. This plan is meant to be co-activated with other county emergency plans and in coordination with other agencies' plans. It is not intended as an emergency operations plan for individual agencies.

This plan is intended to supplement other ACPHSD emergency plans as needed. In a public health emergency, it is not unusual for several emergency plans to be activated simultaneously to address various aspects of the emergency. For example, during a Pandemic Influenza event, this plan may be activated in conjunction with the Apache County EMP, ACPHSD Pandemic Influenza Response Plan, Medical Surge Plan, Epidemiology Response Plan, and Medical Materiel Management and Distribution/Point of Dispensing Plan. It is intended to provide guidance for NPI during any public health emergency where NPI is recommended to protect the public's health.

This plan outlines the coordination needed to facilitate collaboration with state, jurisdictional, and regional partners, assess incidents, respond appropriately, and guide procedures to enable the scalable implementation of NPIs when medical countermeasures, such as vaccines, antivirals, or antibiotics, are delayed or unavailable. While several NPI strategies are documented in this plan, different or additional NPI mitigation strategies may be needed or recommended for specific incidents based on the disease agent, incident scale, and availability and administration of medical countermeasures. ACPHSD will work closely with ADHS to determine NPI recommendations for specific disease incidents.

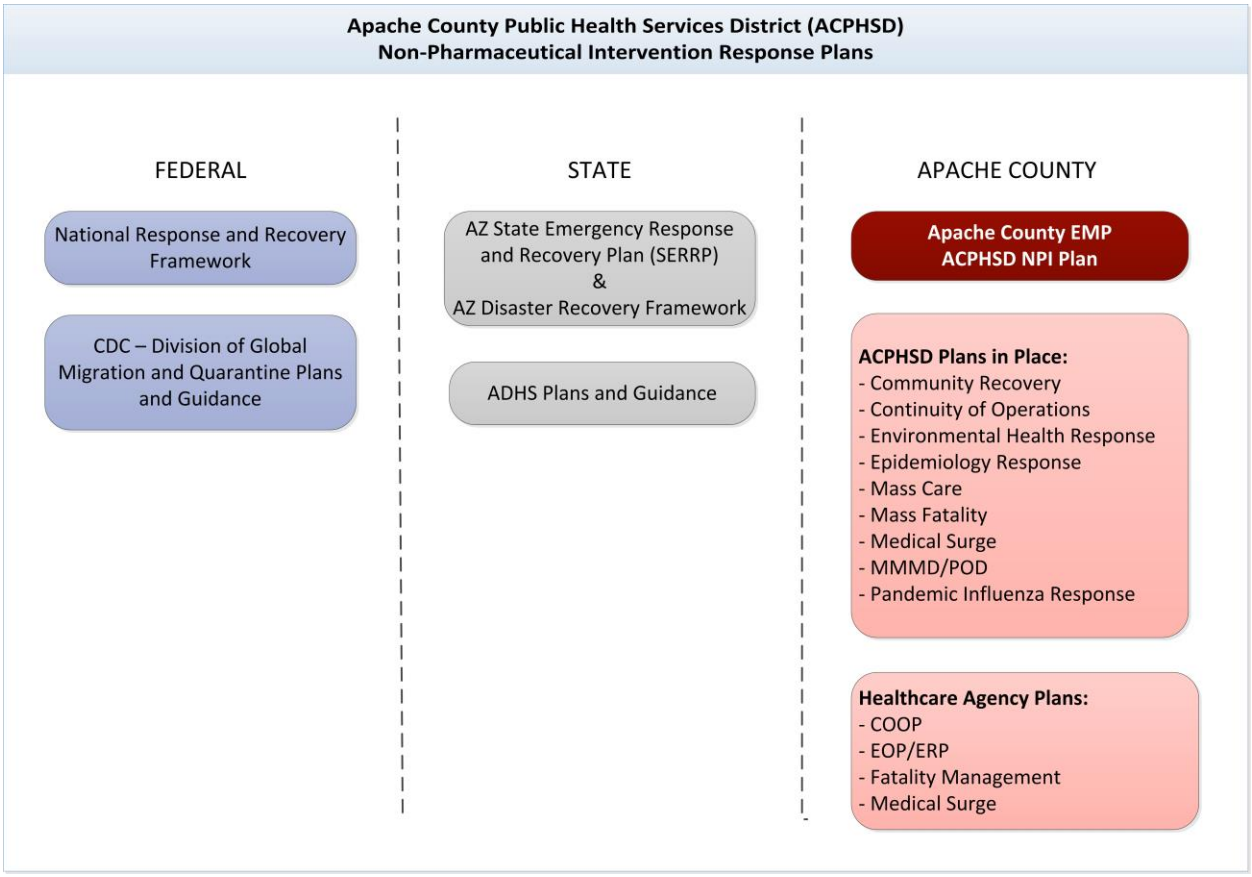
Plan Objectives

In developing this plan, stakeholders have identified the following plan objectives:

1. To provide ACPHSD a response structure for developing, recommending, and implementing NPIs in the event of an infectious disease incident or other public health emergency.
2. To identify the Concept of Operations structure, information flow, processes, and activation criteria needed to implement the ACPHSD NPI plan.
3. Clarify the roles and responsibilities for public health, healthcare, county administration, and other stakeholders, such as schools and childcare centers, and tribal partners that are needed to implement NPIs.
4. To coordinate NPI recommendations and implementation with all identified community partners, County administration, and County Attorney's Office.
5. To provide updated plan information based on current public health preparedness standards and emerging pathogens.
6. To describe how the plan will be exercised, updated, and maintained.

Applicability

This plan has been developed to support the Apache County Emergency Management Plan (ACEMP) and its annexes and appendices, ACPHSD incident-specific response plans, and other local agency emergency response plans. The ACPHSD NPI Plan will be co-activated with other ACPHSD emergency response plans as appropriate. The ACPHSD NPI Plan is not intended to be activated as a stand-alone plan, but is intended to be co-activated as necessary depending on disease and incident specific circumstances. The diagram below displays the relationship of the ACPHSD NPI Plan to the Arizona State Emergency Response and Recovery Plan (SERRP), the ADHS Emergency Operations Plan (ADHS EOP) as well as local and jurisdictional plans.



Scope

The ACPHSD NPI Plan applies to jurisdictional agencies and organizations, including healthcare organizations, government agencies, city managers, county administrators and attorneys, law enforcement agencies, schools and child care centers, Indian Health Service (IHS), correctional facilities, and local businesses involved in implementing NPI recommendations in Apache County. The plan lists the organizations involved in NPI activities and processes. It describes the concept of operations, roles and responsibilities, NPI operations (recommendations development, coordination, and implementation), information flow, and available resources. The plan supports the coordination

of agencies and resources needed to identify and implement appropriate and effective NPIs. It is not intended to be an Emergency Operations Plan (EOP) for individual agencies.

Performance Expectations

During the planning process, stakeholders have identified the following performance objectives:

1. During an infectious disease incident, or prior to an emerging disease incident as appropriate, ACPHSD will collaborate with ADHS to coordinate identified recommendations including isolation and quarantine, restrictions on movement and travel advisory/warnings, social distancing, external decontamination, hygiene, and precautionary protective behaviors.
2. ACPHSD will work closely with healthcare partners and other stakeholders to coordinate recommendations, activities, and information.
3. ACPHSD will coordinate public information with Apache County Division of Emergency Management (ACDEM) and ADHS during NPI operations.
4. ACPHSD will conduct environmental health assessments and sampling, potable water inspections, and field surveillance interviews as recommended.
5. ACPHSD will coordinate with ACDEM for law enforcement support requests for NPI, as needed.
6. Coordinate NPI with county attorneys and county administration as needed.

Planning Assumptions

A disaster or emergency incident may result in reduced capacity of public health and/or healthcare system service provision. The scope of a public health emergency may be local, regional, statewide, or national. A public health emergency may last from several weeks to several months. Introduction of an emerging disease into Apache County may be considered imminent and/or medical countermeasures may be delayed or unavailable. In either case, NPI strategies may mitigate the number of disease cases that actually occur. While this plan outlines general strategies for NPI, NPI recommendations may vary according to specific disease causing agents as well as the availability of medical countermeasures.

1. ACPHSD will develop NPI recommendations in collaboration with ADHS.
2. ACPHSD will coordinate public health information and resources with ADHS and healthcare partners, and stakeholders during NPI operations. However, agencies and organizations are expected to have their own emergency plans and protocols.
3. Agencies and organizations involved in NPI operations will work within the Incident Command System (ICS) and coordinate and collaborate with ACPHSD and the Apache County Emergency Operations Center (ACEOC) as specific incidents require.
4. ACPHSD will coordinate support and resource requests through ACDEM and the ACEOC, if activated.

Authorities and References

Arizona Department of Health Services, Public Health Emergency Preparedness, *Sub-Awardees Requirements and Deliverables Document*, *Ebola/Infectious Disease Preparedness and Response*, Period of Performance: April 1, 2015 – September 30, 2016

Arizona Department of Health Services (ADHS), Public Health Emergency Preparedness (PHEP), County Requirements and Deliverables Document, Budget Period Four (BP4), Period of Performance: July 1, 2015 – June 30, 2016.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Public Health Preparedness and Response, *Public Health Preparedness Capabilities: National Standards for State and Local Planning*, March 2011

U.S. Department of Homeland Security, *National Preparedness Goal,* Second Edition, September 2015

Federal Authorities:

U.S. Public Law 93-288 Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, 42 U.S.C. 5121 et seq. See http://www.fema.gov/media-library-data/1383153669955-21f970b19e8eaa67087b7da9f4af706e/stafford_act_booklet_042213_508e.pdf. Provides federal government authority to respond to emergencies and provide assistance to protect public health; implemented by the Federal Emergency Management Act.

The federal government derives its authority for isolation and quarantine from the Commerce Clause of the U.S. Constitution. In summary, federal government:

- Acts to prevent the entry of communicable diseases into the United States. Quarantine and isolation may be used at U.S. ports of entry.
- Is authorized to take measures to prevent the spread of communicable diseases between states.
- May accept state and local assistance in enforcing federal quarantine.
- May assist state and local authorities in preventing the spread of communicable diseases.
- If a quarantinable disease is suspected or identified, CDC may issue a federal isolation or quarantine order.
- Public health authorities at the federal, state, local, and tribal levels may sometimes seek help from police or other law enforcement officers to enforce a public health order.
- U.S. Customs and Border Protection and U.S. Coast Guard officers are authorized to help enforce federal quarantine orders.
- Breaking a federal quarantine order is punishable by fines and imprisonment.
- Federal law allows the conditional release of persons from quarantine if they comply with medical monitoring and surveillance.
- Federal isolation and quarantine are authorized for these communicable diseases:
    - Cholera
    - Diphtheria
    - Infectious tuberculosis

    - Plague
    - Smallpox
    - Yellow fever
    - Viral hemorrhagic fevers
    - Severe acute respiratory syndromes
    - Flu that can cause a pandemic
- Federal isolation and quarantine are authorized by Executive Order of the President. The President can revise this list by Executive Order.

Listed below are specific, applicable sections of the Public Health Service Act:

Public Health Service Act (42 U.S. Code § 264), Section 361
The U.S. Secretary of Health and Human Services is authorized to take measures to prevent the entry and spread of communicable diseases from foreign countries into the United States and between states. The authority for carrying out these functions on a daily basis has been delegated to the Centers for Disease Control and Prevention (CDC). As per 42 Code of Federal Regulations parts 70 and 71, CDC is authorized to detain, medically examine, and release persons arriving into the United States and traveling between states who are suspected of carrying these communicable diseases.

Public Health Service Act (42 U.S.C. 247d) Section 319(a)
Authorizes the HHS Secretary to declare a public health emergency.

Other provisions in Title III of the PHS Act permit HHS to establish quarantine stations, provide care and treatment for persons under quarantine, and provide for quarantine enforcement. Section 311 of the PHS Act provides for Federal-state cooperative activities to enforce quarantine and plan and carry out public health activities. Section 311 also authorizes the Secretary to make available the resources of the PHS to help control epidemics and deal with other public health emergencies. HHS may also engage in certain international activities under section 307 of the PHS Act. Statute 42 U.S.C. § 97, which provides that the Secretary of Health and Human Services may request that Customs, Coast Guard, and military officers aid in the execution of quarantines imposed by states. The Secretary also has the authority to implement disease control measures in Indian country, if necessary. (25 U.S.C. 198, 231; 42 U.S.C. 2001)

Additional website references:

- http://www.cdc.gov/quarantine/aboutlawsregulationsquarantineisolation.html
- https://www.law.cornell.edu/cfr/text/42/part-70
- https://www.law.cornell.edu/uscode/text/42/264

State Authorities:

The state and local government role is to enforce isolation and quarantine within their borders. The following table highlights authorities vested in the state and local government by the Arizona Administrative Codes (A.A.C.) and Arizona Revised Statutes (A.R.S.).

Legal Authorities for Non-Pharmaceutical Interventions (NPI) Arizona Administrative Codes (A.A.C.) and Arizona Revised Statutes (A.R.S.)

A.A.C. R9-6-303
Isolation and Quarantine-Supplement 13-3, September 30th 2013, pages 20-21
These rules give the local health agency a process from which to issue isolation and/or quarantine orders that are congruent with A.R.S. § 36-624, A.R.S. § 36-788 and A.R.S. §36-789. Additional rules require specific control measures for certain diseases. E.g., A.A.C. R9-6-390 (viral hemorrhagic fever).

A.R.S. § 26-303
Provides Governor authority over state agencies and the right to exercise police power; allows Governor to delegate authority to adjutant general.

A.R.S. § 35-192
Allows Governor to declare a state of emergency.

A.R.S. § 36-311
Allows mayors or chairmen of the board of supervisors to declare a local emergency.

A.R.S. § 36-624
This statute:

- Gives the counties the authority to conduct isolation and quarantine measures.
- Must be consistent with the due process requirements that are specified under A.R.S. § 36-788 and 36-789.

Reference:
http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/36/00624.htm&Title=36&DocType=ARS

A.R.S. § 36-627
Allows county health departments to assume control of hospitals and other places where infectious or contagious disease exists; allows county health departments to provide temporary hospitals or places of reception for persons with infectious or contagious diseases.

A.R.S. § 36-628
Allows county health departments to employ physicians and others they deem necessary to provide care for persons afflicted with contagious or infectious diseases.

A.R.S. § 36-782
The Governor may, in consultation with the ADHS Director, issue an enhanced surveillance advisory.

A.R.S. §36-787 through § 36-789
A.R.S. 36-787 thru 789 provides the governor, in consultation with the Department, the Department, and the local health authority with isolation and quarantine authority during a state of emergency or state of war emergency.

References:
A.R.S. §§ 36-787 (Public health authority during state of emergency or state of war emergency):
http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/36/00787.htm&Title=36&DocType=ARS

Local and Tribal Authorities:

A.R.S. §§ 36-624 (Quarantine and sanitary measures to prevent contagion):
When a county health department or public health services district is apprised that infectious or contagious disease exists within its jurisdiction, it shall immediately make an investigation. If the investigation discloses that the disease does exist, the county health department or public health services district may adopt quarantine and sanitary measures consistent with department rules and sections 36-788 and 36-789 to prevent the spread of the disease. The county health department or public health services district shall immediately notify the department of health services of the existence and nature of the disease and measures taken concerning it.

Reference:
http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/ars/36/00624.htm&Title=36&DocType=ARS

Tribal health authorities may enforce their own isolation and quarantine laws within tribal lands, if such laws exist. Tribes also have police power authority to take actions that promote the health, safety, and welfare of their own tribal members.

Reference:
http://www.cdc.gov/quarantine/aboutlawsregulationsquarantineisolation.html

Concept of Operations

Primary, Coordinating, Secondary/Support, and Non-Governmental Agencies

Primary Agency:

Apache County Public Health Services District (ACPHSD)

Coordinating Agencies:

Apache County Division of Emergency Management (ACDEM)
Arizona Department of Emergency and Military Affairs (AZ DEMA) Emergency Management (EM)
Arizona Department of Health Services (ADHS)

- Health Emergency Operations Center (HEOC)
- Division of Behavioral Health Services (BHS), until July 1, 2016 when services transition to AHCCCS
- Division of Public Health Services (PHS)
    - Bureau of Public Health Emergency Preparedness (PHEP)
    - Bureau of Epidemiology and Disease Control (EDC)
    - Bureau of Emergency Medical Services and Trauma System
    - Bureau of State Laboratory Services
    - Public Health Licensing
- Tribal Partners

Secondary/Support Agencies:

County and Local Law Enforcement
Apache County Government, including Board of Supervisors, County Manager, County Attorney, and other Administrators
Municipal Governments, including City Managers
Fire Departments/Emergency Medical Services (EMS)
School Health Partners
Correctional Health Partners

Non-Governmental Organizations (NGOs)

Regional Behavioral Health Authority (RBHA)
Northern Healthcare Coalition
Health Care Facilities
Long Term Care Agencies
Community Health Centers

Federal Agencies

United States Department of Homeland Security
United States Department of Health and Human Services (HHS)

- Indian Health Service (IHS)
- Centers for Disease Control and Prevention (CDC)
    - National Center for Emerging and Zoonotic Diseases, Division of Global Migration and Quarantine (DGMQ)

Roles and Responsibilities

Apache County Public Health Services District:

Public Health Emergency Preparedness

1. Provide immediate notifications to and coordinate with the Public Health Director.
2. Act as the primary point of communication for hospitals, hospitals and other healthcare partners.
3. Coordinate NPI activities with Tribal Partners.
4. Communicate and coordinate NPI recommendations to healthcare partners, stakeholder organizations, and the public.
5. Provide public health Emergency Support Function (ESF) 8 support to Apache County Division of Emergency Management (ACDEM) as needed, including provision of staff to the ACEOC as appropriate.
6. Maintain public health and healthcare system situational awareness and provide regular status reports to ADHS.
7. Provide an exchange of medical and healthcare information, efficient medical resource allocation, and management of policy/regulatory issues.
8. Coordinate public health and health care resource requests with ADHS and ACDEM.

9. Coordinate public health information with the county Public Information Officer (PIO).
10. Coordinate requests for behavioral health resources and agencies with ADHS to provide specialized behavioral and emotional support to the community and responders, including Critical Incident Stress Management (CISM).
11. Make recommendations for implementing corrective actions to mitigate damages from future incidents.

Clinical Services

1. Coordinate NPI recommendations with ADHS.
2. Consult with ADHS for incident/disease specific recommendations and information.
3. Conduct surveillance and epidemiology activities.

Environmental Health Services

1. Assign staff to the ACPHSD HEOC as requested.
2. Coordinate public information within the Apache County Joint Information System (JIS) as appropriate.
3. Coordinate emergency response activities with PHEP.
4. Conduct environmental sample collection and submission.
5. Collaborate with ADHS Environmental Health (EH) in developing environmental NPI recommendations.
6. Coordinate environmental, food, water, sanitation, vector, and zoonotic NPI recommendations with PHEP and ACPHSD Clinical Services.
7. Investigate reports of foodborne and waterborne illness.
8. In coordination with ACDEM and PHEP, inspect emergency shelter facilities.
9. In conjunction with Arizona Department of Water Resources (ADWR), provide inspection services for new wells, repairs to wells, and deepening of wells to assure proper setbacks and protection of local aquifers.
10. Provide citizens with information on how to disinfect a well.
11. Conduct surveillance activities for mosquitoes and other insect vectors.
12. Provide public education about insects and animals that could pose public health threats.
13. Conduct mosquito or other vector abatement activities as appropriate.
14. In addition, provide the following services:

    - Provide education and routine inspections of a variety of food facilities in the County.
    - Provide education and routine sanitary inspections of public and semi-public swimming pools.
    - Routinely inspect hotels, motels, and trailer/RV parks to ensure proper sanitation.
    - Investigate citizen complaints and nuisance situations to ensure a safe and healthy environment for all residents.
    - In conjunction with ADHS provides complaint investigation services of Proposition 201 (Smoke Free Arizona).

Apache County Division of Emergency Management:

1. Activate the appropriate Apache County Emergency Management Plan (EMP), Annexes, and Appendices, depending on the type and scope of an incident.
2. Communicate situational reports and assessments to involved agencies, providing updates as they are available.
3. Coordinate activities with involved agencies.

4. Maintain Emergency Operations Center (EOC) activation as appropriate and maintain liaison with other jurisdictional EOCs, department operations centers (DOCs), Incident Command Posts (ICPs), or agencies as necessary.
5. Notify the Board of Supervisors (BOS) when a local jurisdiction declares a state of emergency.
6. Make recommendations to the BOS or their representative.
7. Support the acquisition and the movement of resources as needed.
8. Coordinate resource requests and information with the Arizona State Emergency Operations Center (SEOC), if activated, or with AZ DEMA.
9. Support public information needs and activate the Joint Information Center (JIC) as appropriate.
10. Activate and coordinate deployment of any needed ancillary operations and/or facilities (e.g., alternate healthcare/behavioral health sites).
11. Activate mutual aid agreements for additional resources.

County and Local Law Enforcement:

1. Coordinate law enforcement activities with other law enforcement agencies and the ACDEM.
2. Provide a representative to the ACEOC as needed.
3. Provide situational status information to the ACEOC, if activated, or the ACDEM as needed.
4. Coordinate and support security needs during NPI activities.
5. Manage public information through the Apache County Sheriff's Office (ACSO) PIO in coordination with the ACPHSD PIO.

Apache County Government:

1. Maintain communications with ACPHSD Director or designee.
2. Maintain communications with ACDEM Director or designee.
3. Provide legal review and consultation on NPI recommendations.
4. Implement NPI recommendations within County government.
5. Support County law enforcement NPI efforts.
6. Provide public works support as needed.

Municipal Governments:

1. Maintain communications with ACPHSD Director or designee.
2. Maintain communications with ACDEM Director or designee.
3. Provide legal review and consultation on NPI recommendations.
4. Implement NPI recommendations within Municipal government.
5. Support municipal law enforcement NPI efforts.

Fire Departments/Emergency Medical Services (EMS) Teams:

1. Provide emergency medical services.
2. Provide transport to hospital facilities, except when specialized transport is recommended by ACPHSD and ADHS.

Tribal Partners:

1. Coordinate NPI activities and information exchange with ACPHSD.
2. Coordinate emergency management activities and information exchange with ACDEM.

State Resources:

Arizona Department of Emergency and Military Affairs (AZ DEMA)

1. Activate emergency and recovery support functions within the SERRP as appropriate.
2. Maintain activation of the SEOC and state Joint Information Center (JIC) as needed.
3. Coordinate NPI/ESF8 activities with ADHS.
4. Coordinate requests for resources as processed by the counties, including any federal assets.
5. SEOC will advise the Governor about situational status and make recommendations as appropriate.
6. Manage and coordinate communications with response partners.
7. Coordinate Public Health and Health Care resource requests and information with ADHS.
    - Communicate plans, requirements, and strategies to core capability service providers.
8. Acquire and manage resources, supplies, and services from core capability service providers via contracts, mission assignments, interagency agreements, and donations.

Arizona Department of Health Services (ADHS)

Health Emergency Operations Center (HEOC)

1. Coordinate a public health and healthcare NPI activities with federal, state, and local agencies.
2. Support resource and personnel allocation requests with the SEOC, ACEOC, and ACPHSD as appropriate.
3. Provide epidemiologic data and other health-related information, including NPI recommendations, to stakeholders for decision making and public information dissemination.
4. Coordinate NPI information with CDC.
5. Develop NPI recommendations with County and Tribal Public Health agencies.
6. Ensure communication protocols and procedures are followed to guarantee clear and concise health-related messaging.
7. Coordinate and assist the SEOC in obtaining National Disaster Medical System (NDMS) assets, if needed.
8. Assist the counties, as requested, in supporting NDMS assets as appropriate.
9. Coordinate public health information with County Public Health agencies and PIOs.

Division of Behavioral Health Services (DBHS)

The Division of Behavioral Health Services is transitioning to the Arizona Health Care Cost Containment System. As of July 1, 2016, the website for behavioral health information will be http://www.azahcccs.gov.

Bureau of Public Health Emergency Preparedness (PHEP)

1. Utilize the Health Alert Network (HAN) to disseminate public health information to county health officials, hospitals and healthcare facilities, physicians, laboratory directors, and other agencies as required.
2. Monitor public health and healthcare situational status.
3. Support and make NPI recommendations to local public health departments.

4. Make recommendations for implementing corrective actions to mitigate damages from future incidents.

Bureau of Epidemiology and Disease Control (EDC)

1. Monitor infectious diseases in the affected areas and make disease control recommendations, including NPIs, as necessary.
2. Consult with the CDC, as necessary, on disease control and NPI activities and recommendations.
3. Advise local public health and healthcare facilities on clinical specimen collection requirements and laboratory testing.

Bureau of Emergency Medical Services and Trauma System

1. Monitor the status of emergency medical services provision in the affected areas.
2. Provide assistance to support EMS service coordination, as needed and possible.
3. Assist local public health in the coordination of patient transportation needs.

Arizona State Public Health Laboratory (ASPHL)

1. Monitor the status of available laboratory services in the affected area.
2. Provide collection media and analysis support as necessary to laboratories in the affected areas.

Public Health Licensing

1. Monitor the licensing status and available services of licensed healthcare facilities and long-term care agencies.
2. Provide licensing rule clarification and recommendations to ACPHSD, healthcare facilities, and long-term care agencies.
3. Support licensing requirements and reoccupation of affected facilities, if any, as needed.

Schools:

1. Maintain communications with ACPHSD.
2. Coordinate public information with ACPHSD.
3. Implement NPI recommendations as appropriate in coordination with ACPHSD.
4. Provide situational status to ACPHSD as requested.
5. Participate in planning efforts to mitigate the effects of future disaster/emergency incidents.

Correctional Facilities:

1. Maintain communications with ACPHSD.
2. Coordinate public information with ACPHSD.
3. Implement NPI recommendations as appropriate in coordination with ACPHSD.
4. Provide situational status to ACPHSD as requested.
5. Participate in planning efforts to mitigate the effects of future disaster/emergency incidents.

Arizona Health Care Cost Containment System (AHCCCS)

Arizona Health Care Cost Containment System (AHCCCS) is Arizona's Medicaid agency that offers health care programs to serve Arizona residents. The Division of Behavioral Health Services is transitioning to the Arizona Health Care Cost Containment System. As of July 1, 2016, the website for behavioral health information will be http://www.azahcccs.gov.

Federal Resources:

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United States Department of Homeland Security

The United States (U.S.) Department of Homeland Security (DHS), through U.S. Customs and Border Protection (CBP), is engaged on a daily basis with its interagency partners to prepare for and respond to Ebola and other potential threats to public health. CBP has developed enhanced passenger screening for travelers entering the U.S. from or through an Ebola-affected country. These measures are in place at five U.S. airports where over 94% of travelers from the affected region enter the U.S.

United States Department of Health and Human Services (HHS)

Upon request, ADHS may request HHS support for public health emergencies involving healthcare organizations. This support may include training, funding and grant opportunities, guidance, research, and reports.

Indian Health Service (IHS)

The Indian Health Service (IHS) is an operating division (OPDIV) within the U.S. Department of Health and Human Services (HHS). IHS is responsible for providing medical and public health services to members of federally recognized Tribes and Alaska Natives. IHS coordinates epidemiology related information with ACPHSD.

Centers for Disease Control and Prevention (CDC)

Upon request, ADHS may request CDC support for public health emergencies. Support may include but is not limited to surveillance, disease control and NPI recommendations, behavioral health recommendations, support for medical countermeasures and equipment to protect public health, and subject matter expertise.

National Center for Emerging and Zoonotic Diseases, Division of Global Migration and Quarantine (DGMQ)

The Division of Global Migration and Quarantine (DGMQ) is one of 7 divisions within the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID). It focuses on immigrant, refugee and migrant health, overseas field programs, quarantine and border health services, travelers' health, policy and regulatory affairs, community interventions for infection control (non-pharmaceutical interventions), and United States – Mexico Health.

Non-Governmental Resources:

Regional Behavioral Health Authority (RBHA)

Arizona Health Care Cost Containment System (AHCCCS) contracts with community-based organizations, known as Regional Behavioral Health Authorities (RBHAs), to administer behavioral health services. Each RBHA contracts with a network of service providers, similar to health plans, to deliver a range of behavioral health care services, treatment programs for adults with substance abuse disorders, adults with serious mental illness and children with serious emotional disturbance. RBHAs are also able to provide Critical Incident Stress Management (CISM) services to emergency responders and their families. Health Choice Integrated Care (HCIC) serves Apache, Coconino, Mohave, Navajo, and Yavapai Counties.

Northern Healthcare Coalition

The Northern Healthcare Coalition facilitates collaboration among public health, healthcare, pre-hospital entities, and various community partners to prepare for, respond to, and recover from an emergency or disaster. The Northern Healthcare Coalition consists of four counties (Apache, Coconino, and Navajo, and Yavapai).

Hospitals, Healthcare Facilities, Long-Term Care Agencies, Community Health Centers

1. Coordinate healthcare NPI recommendations with ACPHSD.
2. Provide healthcare facility and system situational assessments and information to ACPHSD and ADHS as requested.
3. Coordinate healthcare service provision information and public information with ACPHSD.
4. Request needed resources that are beyond the capacity of the healthcare organization through ACPHSD.
5. Participate in planning efforts to mitigate the effects of future disaster/emergency incidents.
6. Coordinate licensing issues with ADHS.

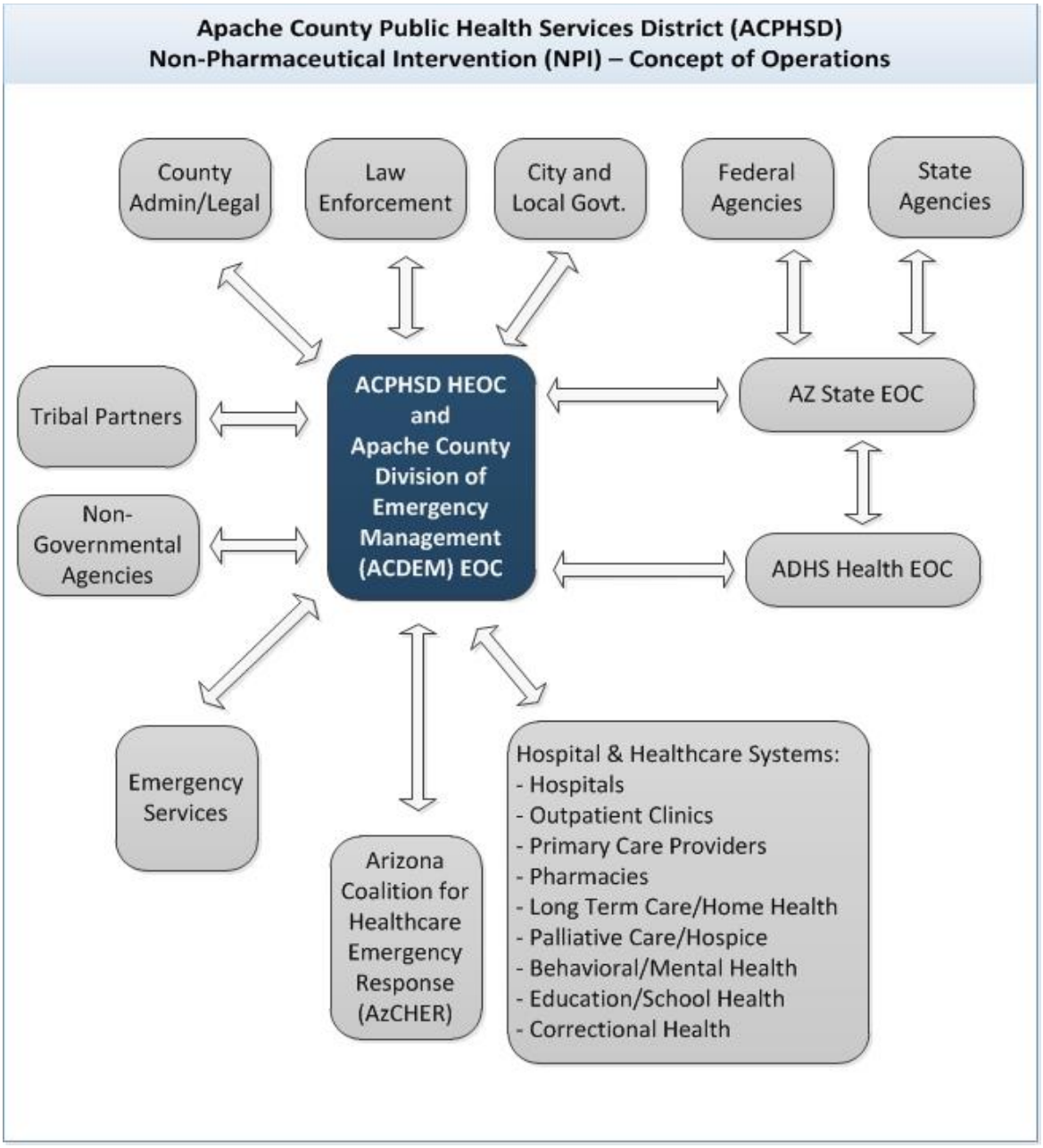
Command and Control

Effective coordination among local, state, and federal agencies is especially important when multiple emergency response plans may be activated simultaneously. The ACPHSD NPI Plan will be co-activated with other ACPHSD emergency response plans depending on the public health emergency. Apache County utilizes the Incident Command System (ICS), in compliance with the National Incident Management System (NIMS), for operational management and coordination during disasters and emergency situations.

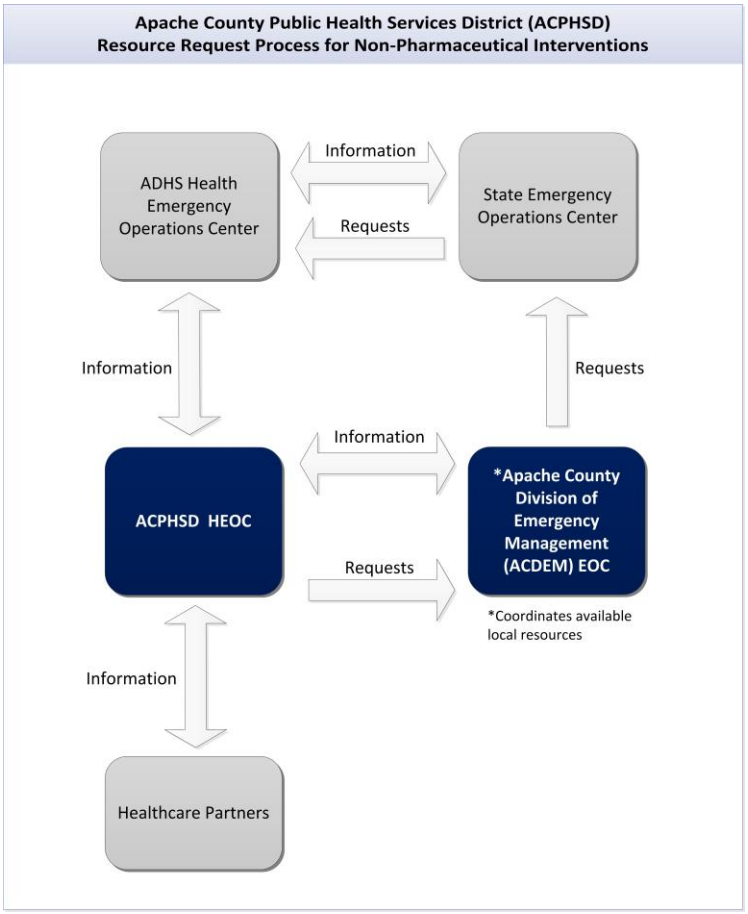
ACPHSD is the local coordinating public health agency for ESF 8 Public Health and Medical Services and coordinates response activities closely with ACDEM and the ACEOC, including co-locating with the ACEOC as appropriate. ACPHSD relies on ACDEM for law enforcement coordination and support and other non-healthcare partner support response activities. ACPHSD coordinates closely with ADHS in the development and implementation of NPI recommendations.

The ACPHSD Director or designee is the authority for ACPHSD NPI Plan activation and operations. ACPHSD or the ACEOC Planning Section (if available) will document NPI actions. The ACPHSD PHEP Division Manager or designee will designate staff roles and responsibilities as appropriate. Additional Apache County staff will be utilized as the situation warrants.

ACPHSD will coordinate NPI recommendations requests with hospitals, medical clinics, behavioral health, schools, correctional health, and other healthcare partners. The following diagram illustrates information sharing and coordination during NPI operations:



ACPHSD will coordinate local resource requests with hospitals, medical clinics, behavioral health, and other healthcare partners. The following diagram illustrates information sharing and the resource request pathway during NPI operations:



Plan Activation

The decision to implement various means of NPIs and community containment measures begins at the local level with the activation of the ACPHSD NPI Plan. Several elements factor in a decision to activate or deactivate the ACPHSD NPI Plan. These include:

- Guidance from ADHS and CDC.
- The characteristics of the disease agent.
- Local and statewide disease surveillance of disease cases.
- Unique circumstances including resource availability.

In order to be effective, NPIs must be implemented in a timely manner. If they are implemented well after the disease has spread, NPIs may not be as effective in reducing morbidity or mortality. In general, an ideal time to start NPIs is when a cluster of cases or an outbreak of disease or exposure has been identified in a community.

The ACPHSD Director or designee authorizes the activation of the ACPHSD NPI Plan and will determine the level of activation based on ongoing situational information. Upon NPI Plan activation approval, ACPHSD will notify Healthcare Partners of the activation status and begin NPI operations as appropriate. The following ACPHSD NPI Plan Activation Table Guideline shows plan activation levels based on sample indicators and actions that may be taken for various activation levels.

Plan Activation Level Indicators and Potential Actions Table Guidelines

Plan Activation Level	Indicators	Actions
Level 4	No indication of clusters or outbreaks of disease.	Plan not activated.
Level 3	Local cluster or outbreak of disease.	Plan activated. Other ACPHSD plan(s) activated. ADHS notified and consulted. Healthcare partners notified. Other regional partners and ACDEM notified. COOP activation team on alert ACPHSD HEOC team on standby. Possible public information dissemination. Personal NPIs recommended. Hygiene information dissemination. Possible environmental NPI recommendations or actions based on ADHS consult.
Level 2	Continued increase in numbers of disease cases. Continued increase in numbers of disease exposures.	Plan activated. Possible ACPHSD HEOC activation. Possible virtual or physical activation of ACEOC. Possible assignment of ACPHSD representative to ACEOC (if activated). COOP activated. ADHS notified and consulted. Healthcare partners notified. Other regional partners and ACDEM notified. Regular information exchange with ADHS and healthcare partners. Resources requested from regional partners. Public information coordination with ADHS PIO. Personal NPIs recommended. Hygiene information dissemination. Possible Community and/or Environmental NPI recommendations or actions following ADHS consult.
Level 1	National, state-wide, regional, or large-scale local outbreak. ADHS notification of widespread disease outbreak and recommendations. Delays or unavailability of medical countermeasures.	Plan activated. ACPHSD HEOC activation. Possible ACEOC activation. ACPHSD representative assigned to ACEOC if activated. Possible SEOC and AZ JIC activation. ADHS notified. Healthcare partners notified. Personal NPIs recommended. Hygiene information dissemination. Possible Community and/or Environmental NPI recommendations or actions based on ADHS consult. Regular information exchange with ADHS and healthcare partners. Public information coordination through Joint Information System (JIS).

Plan Deactivation

ACPHSD will deactivate the NPI Plan or parts of the plan when the ACPHSD Director or designee determines that no further resource support is needed. Deactivation will be coordinated with deactivation of the ACEOC and/or the ACPHSD HEOC. Deactivation will comply with NIMS procedures.

Mutual Aid

The ACEOC is responsible for activation of local Mutual Aid Agreements and requesting activation of statewide and national Mutual Aid Agreements through the SEOC. The ACEOC will coordinate mutual aid resources within Apache County.

A listing of statewide and national Mutual Aid agreements follows:

1. Arizona is a member of the Emergency Management Assistance Compact (EMAC) along with all other U.S. states and the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. EMAC provides for mutual aid between states in managing governor declared emergencies or disasters. Arizona Revised Statutes (ARS) Title 26, Chapter 3, Articles I – XIII provide specific guidance on General Provisions, General Implementation, Party State Responsibilities, Limitations, Licenses and Permits, Liability, Supplementary Agreements, Compensation, Reimbursement, Evacuation, Implementation, Validity, and Additional Provisions.

2. The Arizona Mutual Aid Compact (AZMAC) is a formal agreement among Arizona jurisdictional emergency responders to lend assistance across jurisdictional boundaries. Signatories include all fifteen (15) Arizona counties and many tribes, cities, and other jurisdictions.

3. Arizona is a signatory to the Southwest Caucus Supplement to Interstate Civil Defense (ICD) and Disaster Compact (DC) of 1992. This provides for mutual aid between Arizona, California, Colorado, Nevada, New Mexico, and Utah. Nevada and Utah are not yet signatories.

4. Arizona was entered into the Interstate Civil Defense and Disaster Compact of 1953 by the Governor's Executive Order 76-2. This order made the Compact recognized by the state and clearly usable in a disaster or other interstate emergency of whatever cause or nature.

Continuity of Operations

ACPHSD maintains a Continuity of Operations Plan (COOP) which is activated during emergencies that are expected to disrupt essential public health functions. Any disruption in ACPHSD's staffing, worksites, and/or technology and communication systems may warrant activation of the COOP plan. COOP addresses the immediate prioritization of resources to support a disaster response while maintaining essential agency functions and business processes. The ACPHSD COOP may be activated or co-activated with any other emergency plan as needed upon the approval of the ACPHSD Director or designee. The COOP enables ACPHSD to:

- Identify steps for activation and deactivation of COOP.

- Identify essential functions and business processes.
- Operate with a significantly reduced workforce and with diminished resource availability.
- Specify succession to critical offices and delegations of authority.
- Deploy to and operate from identified alternate work sites should the primary facility become uninhabitable.
- Provide for the safekeeping of vital records and databases.
- Provide for interoperable communications.
- Provide for devolution of essential functions to a pre-identified organization in the event that an emergency or disaster renders ACPHSD leadership and staff unavailable or incapable of performing COOP functions at the primary or alternate work site.

ACPHSD maintains a designated COOP Advisory Team (CAT) that is activated by the ACPHSD Director or designee. The CAT analyzes situational impact on essential functions and develops staffing and resource recommendations consistent with incident response efforts, maintenance of essential public health functions, and reconstitution processes.

Plan Maintenance

The plan will be reviewed annually and updated at least every five years by revision or change. The most recent signature date will determine the date of the plan. ACPHSD will be the agency in charge of coordinating annual reviews, revisions, and changes with involved agencies.

A plan change involves making specific changes to a limited number of pages to update the document. A plan revision is a complete rewriting of the existing plan, resulting in a new document. Revisions are recommended when numerous pages of the plan are changed, major portions of the plan are deleted, or substantial text needs to be added. This plan will be tested during exercises or real responses to identify problem areas and evaluate changes that will be made as the plan is revised.

Changes or revisions will be made to the plan when it is no longer current. Changes in the plan may be needed when:

1. Hazard consequences or risk areas change.
2. The concept of operations changes.
3. Departments, agencies, or groups which perform emergency or recovery functions are reorganized or can no longer perform recovery tasks laid out in this plan.
4. Warning and communications systems are upgraded.
5. Additional emergency or recovery resources are obtained through acquisition or agreement, the disposition of existing resources changes, or anticipated emergency or recovery resources are no longer available.
6. A training exercise or an actual emergency reveals significant deficiencies in the existing plan.
7. When state planning standards are revised.

Non-Pharmaceutical Interventions Operations

Non-pharmaceutical Interventions (NPIs) are actions, excluding administration of vaccinations or medications, that people and communities can take to help slow the spread of infectious diseases. NPI strategies are different for different diseases, but they can be grouped in three broad categories: individual, community, and environmental. Individual NPIs may include actions such as staying home when sick, washing hands, or using an insect repellant to avoid mosquito exposures. Community NPIs include actions such as keeping people apart in congregate settings such as schools and workplaces (Social Distancing) and temporarily closing places where people gather such as schools, concerts, or workplaces (Closures). Environmental NPIs include actions such as surface cleaning, using recommended waste disposal methods, and mosquito abatement activities.

During public health emergencies, including disease outbreaks, both pharmaceutical and non-pharmaceutical interventions may be employed to limit the spread of disease. However, medications or vaccines may not be available or in sufficient quantities to reduce illnesses and deaths. In this case, non-pharmaceutical interventions become critical to limiting the spread of diseases that are transmitted from person to person. There are many non-pharmaceutical interventions that can be used by both individuals and communities to prepare for, respond to, and recover from a communicable disease outbreak (e.g., measles or pandemic influenza). Some of these interventions can be used regardless of the public health emergency, while other more extreme measures would be used only during severe pandemics or emerging exotic disease (e.g. Ebola disease) outbreaks.

NPIs may also be used in conjunction with medications and vaccines because NPIs can prevent community members from being exposed to a disease, thereby reducing the actual number of individuals who become sick and may die. These interventions help reduce the impact of a public health emergency whether it is due to a disease outbreak or other emergency with public health impacts (e.g. chemical exposures) by:

- Reducing the number of people who are exposed and then either infected or affected by the disease or illness causing agent.
- Reducing medical surge that is likely to occur as a result of an incident or emergency.
- Delaying the effects of a full-blown disease outbreak or other incident affecting the public's health.

Secondary benefits of NPIs include increased community resiliency (the sustained ability of communities to withstand and recover from adversity) due to reduced impact on critical infrastructure and public utilities (i.e., water, electricity, waste management, and transportation) which may otherwise be compromised when large numbers of individuals become ill. Enhanced resilience in a community will assist in mitigating the effects of a disease outbreak, reduce infrastructure impacts, and allow the community to rebound through rapid restoration of community functions.

Indicators of an Outbreak

There is no standard number of cases that need to occur before the ACPHSD will respond to an outbreak. This will depend on the disease, the geographical area, and time parameters in which a disease outbreak occurs. ACPHSD coordinates closely with ADHS to identify outbreak indicators and to develop NPI recommendations that will be effective in mitigating the effects of an outbreak. Information on infectious disease surveillance, investigations and disease control procedures may be found in the ACPHSD Epidemiology Response Plan dated February 9, 2016.

ADHS Office of Infectious Disease Services (OIDS) provides support for local health departments in outbreak investigations by coordinating clinical and environmental specimen testing at the Arizona State Public Health Laboratory and managing statewide outbreak related data. ADHS also works closely with CDC, Arizona Department of Agriculture, Food and Drug Administration (FDA) and US Department of Agriculture (USDA) for support and collaboration on multistate investigations. Most infectious disease outbreaks can be classified into categories based on some common characteristics. ADHS categorizes outbreaks into five basic categories:

- Foodborne and Waterborne
- Vectorborne or Zoonotic
- Respiratory or Influenza-Like Illness
- Vaccine Preventable Diseases
- Healthcare-Associated Infection Outbreaks

Public Education

Public Education campaigns are one method used to disseminate NPI information and recommendations. ACPHSD may disseminate information about recommended individual, community, and environmental-based NPIs through media releases, handouts, public meetings, brochures, and other communication channels to educate individuals, communities, and healthcare organizations about measures that help prevent disease transmission.

ACPHSD will adapt and implement existing public education materials in response to specific public health emergencies. ADHS and CDC have a wide variety of public education materials that can be accessed by ACPHSD as needed through their respective websites to develop educational materials and conduct outbreak public education initiatives. During an outbreak, ACPHSD will work with ADHS to develop public information messaging.

Through state and local public health risk communication and education initiatives, knowledge of basic infection control measures in the workplace, schools, homes, and in public should increase and become more commonplace. Partners in the community such as the school system, private businesses, religious leaders, local officials, clinics, hospitals, and other government agencies and first responders can support public educational initiatives by participating in the educational process.

Individual-Based NPIs

Many individual-based interventions are similar to routine interventions implemented during seasonal influenza. Individual NPIs are simple everyday preventive actions that people can take to help lower their risk of coming in contact with influenza virus and other disease agents. These preventive actions also serve as an extra layer of protection even after people are vaccinated or receive medical countermeasures. ACPHSD will work with ADHS to develop individual-based NPIs based on specific disease threats.

NPIs may include practicing hand hygiene, appropriately covering coughs and sneezes, and staying home while ill. During the initial stages of any suspected communicable disease outbreak with person to person transmission (e.g., measles and seasonal flu), the following measures are routinely recommended:

- Staying home when sick.
- Staying home after having been exposed to a family or household member who is sick.

- Covering coughs and sneezes with a tissue.
- Washing hands or using hand sanitizer.

If a pandemic influenza is ongoing, recommendations may also include:

- Covering the nose and mouth with a mask or cloth when an individual is sick and around people or at a mass gathering in a community.

For most public health disease outbreak emergencies, individual-based interventions such as good hygiene practices will be applicable and can be quickly implemented. ACPHSD will collaborate with ADHS and healthcare partners to disseminate information on protection guidelines and best communication practices for impacted communities.

Emerging, exotic diseases such as Ebola will have specific individual-based NPI recommendations developed as the diseases are identified as possible threats within the United States. Other diseases, such as arboviral or zoonotic diseases are not transmitted by person to person contact and require different individual-based NPI recommendations. For example, some common individual-based recommendations for arboviral or zoonotic diseases may include:

- Utilizing a recommended insect repellant when outdoors.
- Avoiding outdoor activities when specific insect vectors may be most active.
- Ensuring standing water sources (such as flower pot trays, old tires, and bird baths) are emptied regularly to prevent breeding environments.
- Wearing clothing and hats that protect against insect bites.
- Removing rodent harborage.
- Not handling bats or other sick wildlife.

Home Isolation of Patients

Isolation is defined as the separation or restriction of movement of people with a communicable disease in order to prevent disease transmission to others. The goal of this NPI is to reduce transmission by reducing contact between persons who are ill and those who are not. Ill individuals not requiring hospitalization may be requested to remain at home voluntarily for the infectious period (number of days after symptom onset as outlined by ADHS guidelines).

Home isolation of patients may occur as hospital resources become scarce or it is in the best interest of the patient to be cared for at home. Arizona Revised Statutes (A.R.S.) § 36-788(C) describes the role of the state and local health department for home isolation and/or quarantine. The county health department shall assist, to the extent possible, with providing support and essential services for the homebound. They shall partner with the local social services agencies to provide adequate food, medicine, medical support systems, communication, and other necessary care depending upon individual needs. The purpose of this is to ensure that the person, family, or community shall be isolated or quarantined in a safe and hygienic manner so as to minimize the likelihood of further transmission of disease and thus confine the contagion. Every effort shall be made to ensure that a homebound person subject to isolation or quarantine has adequate care.

ACPHSD, during a declared state of emergency or state of war emergency, will coordinate with the Emergency Manager, ADHS, AZ DEMA, volunteer agencies, and non-profit community organizations to provide services and resources to people isolated or quarantined at home or another specified location.

Voluntary and Involuntary Quarantine

Voluntary or involuntary quarantine may be used to reduce the risk of transmission from close contacts of people infected with a communicable disease (e.g. tuberculosis or pandemic influenza). People who are quarantined are not ill, but are at increased risk of becoming sick due to their exposure to an infected person. Close contacts include household members or others who have been exposed to a disease agent. ACPHSD will adhere to ADHS and CDC guidelines in implementing quarantine measures and will involve county administration and legal authorities, municipal leadership, and law enforcement in quarantine processes.

For example, as determined on the basis of known characteristics of influenza, a significant proportion of exposed people may shed virus and present a risk of infecting others despite having asymptomatic or only minimally symptomatic illness that is not recognized as pandemic influenza disease. ACPHSD will follow recommended guidelines to encourage household members or other close contacts to voluntarily stay home for a designated amount of time as recommended by ADHS.

There are several factors which will influence the success of this intervention including compliance with quarantine of household members and close contacts. Some associated concerns include:

- Commitment of employers to support employees living in quarantine
- Provision of care for households under voluntary or involuntary quarantine.

People who have been requested to comply with home quarantine may still feel well enough to carry on regular activities, making it difficult to enforce voluntary home quarantine. However, persons quarantined at home may quickly transition from the role of a caretaker to a disease case that develops in the same quarantined household. A.R.S. §36-788 B(2) notes that during a Governor declared state of emergency or state of war emergency, that the Department or local health authority may "Require isolation or quarantine of any person by the least restrictive means necessary to protect the public health." In addition, "The department or local health authority shall use all reasonable means to prevent the transmission of disease among the isolated or quarantined persons." Local county authorities will be advised by the ACPHSD Director when quarantine measures are indicated. The least restrictive alternative will be utilized. ACPHSD will consult with ADHS in considering whether isolation or quarantine measures are indicated.

Community-based NPIs

Some disease outbreaks may require community-based NPI recommendations in addition to individual-based recommendations. As a disease (e.g. measles or influenza) spreads or intensifies, community-based interventions accompanied with individual-based NPIs will be critical. Social distancing and travel advisories are examples of community-based NPIs.

Social distancing

Social distancing refers to actions that communities can take to reduce the likelihood of person-to-person transmission of a communicable disease such as influenza. Some individuals may have significant anxiety and will avoid unnecessary interactions with others for fear of contracting a disease. However, many people who are ill still report to their workplaces, attend social events, and attend locations where people congregate such as stores and movie theaters. Often, children who are in the early symptomatic stages of a disease attend schools or childcare facilities. There are two basic types of social distancing that may be implemented, child and adult social distancing.

Several issues need to be considered when making the decision to implement community-based social distancing interventions. These NPIs can have a tremendous economic impact on both families and the community at large. Social distancing recommendations may impact the livelihood of individuals if people cannot report to their workplaces or have to stay home to care for children when schools and childcare centers are closed, resulting in economic hardship for families. Similarly, closing of businesses such as shopping malls and restaurants may result in loss of income for business owners and their families, resulting in economic hardships or even loss of businesses. The impacts of social distancing interventions must be weighed carefully against the potential economic losses and the expected efficacy of the interventions. Implementing social distancing interventions too early or using them when the severity of the situation does not warrant their use will increase economic and social hardship and reduce the public's confidence in the public health system.

Therefore, ACPHSD will:

- Monitor the unfolding situation closely.
- Utilize ADHS and CDC recommendations to implement local NPIs.
- Collaborate with local government, school boards, businesses and local authorities in order to determine when it is appropriate to implement social distancing policies.
- Be prepared to adapt NPI recommendations as necessary.
- Issue travel advisories if recommended.

Child Social Distancing

Child social distancing is a critical intervention that may be used for any illness that can easily be transmitted by and among children. It may include school and child care facility closures to prevent disease transmission among children. For example, children attending school during pandemic influenza may be more likely to be exposed to influenza. Following exposure, children may become ill and then transmit the disease to their family members and close contacts. Closing school facilities protects children by minimizing the contact they have with each other, decreasing the spread of disease among themselves and reducing the likelihood of them bringing the disease home. The decision to close schools and childcare centers to limit transmission of a disease will be coordinated with ACPHSD, governing officials, and the school district governing board.

For example, during a pandemic influenza outbreak, ACPHSD will consult with ADHS and present templates to schools and childcare facilities for use in developing their own plans. Each individual school system will need to identify their priorities and plan accordingly. The Superintendent of the local school district and the ACPHSD Director (Health Officer) will collaborate to determine if school closure is necessary at the ADHS recommended threshold level.

A.R.S. § 15-341 (A) (34) requires each school site to have an emergency response plan that meets minimum state requirements. Arizona Department of Education (ADE) and AZ DEMA are responsible for developing the minimum standards for school emergency response plans in Arizona. Schools must collaborate with their local law enforcement, fire, emergency management, and public health agencies to develop their individual agency plans.

Under the current circumstances, schools in Arizona receive their funding based upon the average daily membership. Although A.R.S. §15-942 "*Adjustment for rapid decline in student count*" exists to enable schools to receive up to 80% of their funds under certain circumstances, additional language may be needed to continue the flow of funds to schools during a pandemic.

ACPHSD regularly exchanges information and resources with local public and private school systems through emergency preparedness education and training. This sharing would be escalated during an influenza pandemic with the goal of maintaining a unified message. ACPHSD will receive technical assistance from ADHS and CDC regarding school and childcare facility closures.

Adult Social Distancing

Adult Social Distancing measures can include workplace closures as well as event closures or rescheduling to prevent adults from being exposed to sick individuals during an outbreak. The most common adult social distancing measure is workplace closure or recommendations for working from home.

Workplace Closures

ACPHSD will act in an advisory role to local agencies and businesses and make recommendations as needed in response to a public health threat. This NPI requires commitment and cooperation from both employers and employees. ACPHSD will collaborate with local businesses and stakeholders to plan for workplace closures or other alternate workplace strategies such as working remotely from home. Initiation and development of Business Continuity of Operations Plans (COOPs) will help various businesses to identify essential services and establish plans to continue business operations in the event of an emergency such as an influenza pandemic.

ACPHSD is aware that recommendations and public health information coordinated among the state and local health departments may affect or introduce the possibility of closure of businesses or potential limiting of services. Although some businesses may be able to conduct activities with a reduced workforce, many businesses cannot afford to place their operations on hold for any extended period of time. ACPHSD will collaborate with them to identify appropriate NPIs. ACPHSD will encourage businesses to address the following issues in their preparedness plans:

- Define human resource policies such as telecommuting, absenteeism and family sick leave in the event of an influenza pandemic. For example, during a pandemic influenza outbreak, businesses can:
    - Allow and encourage sick employees to stay at home
    - Have employees work from home as much as possible
    - Hold conference calls instead of face-to-face meetings
    - Implement ongoing hygiene etiquette and education about disease transmission (i.e., influenza)

Social Distancing in the Community

During extreme circumstances, it may be necessary to limit the gathering of large groups of people to reduce community transmission of a disease. Limiting public gatherings will reduce the transmission of disease and reduce morbidity and mortality. In implementing community wide social distancing measures, there may be a need to cancel events such as concerts and conferences. For example, during an outbreak, recommendations from ACPHSD might include the cancellation of recreational or optional mass gatherings to limit disease transmission.

In addition, recommendations may include limiting some services, such as local public transport. These recommendations will be implemented following collaboration with ADHS and will be based on disease surveillance reports from the CDC, ADHS and ACPHSD. Since these policies will have tremendous societal consequences, support and buy-in from the public and local leaders is needed. ACPHSD will work with all stakeholders to establish the need for NPI recommendations, develop plans, and implement community social distancing as situations require. Cancellation of mass gatherings would be directed by city and county officials. Any income generating gatherings such as fairs, concerts and special events will be severely affected.

Environmental NPIs

Environmental NPIs include an array of strategies which may be implemented by healthcare facilities or public health environmental professionals to prevent exposures to disease causing agents within healthcare facilities or in other indoor and outdoor environments. Environmental NPIs may include routine surface cleaning, proper waste disposal, and well and restaurant closures that help eliminate disease agents from surfaces or prevent exposures through food and water consumption.

Routine surface cleaning helps to eliminate disease organisms from frequently touched surfaces and objects, such as toys, refrigerator handles, desks, and door knobs in homes, childcare facilities, schools, workplaces, and other settings where people regularly gather. Proper medical waste disposal helps prevent exposures to biological hazards such as used syringes or disposable materiel that has been utilized for patients with emerging, exotic diseases such as Ebola Virus Disease (EVD). Restaurant inspections or closures may prevent exposures to contaminated food. Well and other potable water inspections or closures may help prevent exposures to disease agents that may be transmitted by consuming contaminated water.

Other environmental NPI strategies may include removal of rodent or insect harborage to prevent exposures to vectors infected with arboviral or zoonotic disease agents. Mosquito abatement strategies to prevent human exposures to mosquito bites may include administration of larvacides to standing water, such as is found in neglected or abandoned swimming pools, or adulticidal mosquito fogging in areas where mosquito surveillance activities have found increased numbers of mosquitoes.

Consequences of Non-pharmaceutical interventions

As described earlier, there are numerous benefits of implementing NPIs. They can reduce burden of disease and limit outbreaks as well as reduce the overall burden on healthcare infrastructure. However, there are many consequences to these NPIs especially, the community-level interventions. ACPHSD will consider the following consequences before implementing NPIs:

- **Limited public health benefits.** If interventions are not started early enough, are ended too soon, or are not properly enforced, they may not have the desired public health benefits.

- **Economic hardship.** People who have been quarantined, for example, may not be able to work from home and may therefore lose income. Parents may need to stay home from work or pay for childcare when schools are closed.

- **Social hardship.** People may not have access to their normal social support systems (such as church services and social events) and may experience the effects of social isolation.

- **Inadequate public compliance.** It may be difficult for people to comply with prolonged interventions. Enforcing community interventions may require the support of municipal and county leadership or law enforcement officials.

Which interventions should be used?

NPIs can be used together with vaccines, anti-viral drugs, and other medical countermeasures if these are available. It is most effective to use individual, community, and environmental interventions together. Individual-based interventions can be implemented fairly easily and can be utilized for any type of disease outbreak. For an emerging disease, such as Ebola Virus Disease (EVD) or Zika virus infection, additional individual and community-based NPIs may also be recommended.

Public health is accustomed to recommending may common NPIs for outbreaks of respiratory or gastrointestinal (GI) illness. These Individual-based interventions may include:

- Staying home from work, school, or childcare when sick.
- Staying home after having been exposed to a family or household member who is sick.
- Covering coughs and sneezes with a tissue.
- Washing hands or using hand sanitizer.

Community-based NPIs need to be used with caution and only when necessary as they can result in inconvenience, economic hardship, and fear among the general population. In addition, environmental interventions may be needed as well to reduce the potential for disease exposures. Below are example scenarios of how a combination of measures can be utilized for different disease outbreaks or emerging diseases such as EVD.

Scenario 1- Ebola virus outbreak

Ebola is a rare and deadly disease caused by infection with a strain of Ebola virus. The risk of an Ebola outbreak affecting multiple people in the U.S. is very low. However, to prevent EVD transmission in the U.S., confirmed or suspected cases of EVD present special requirements for disease surveillance, medical resources, and control measures. For example, if EVD has been identified as a threat, the following individual-based NPIs would be recommended:

- Practice careful hygiene.
- Wash hands with soap and water or an alcohol-based hand sanitizer.

- Avoid contact with blood, body fluids (such as urine, feces, saliva, sweat, urine, vomit, breast milk, semen, and vaginal fluids).
- Do not handle items that may have come in contact with an infected person's blood or body fluids (such as clothes, bedding, needles, and medical equipment).
- Avoid funeral or burial rituals that require handling the body of someone who has died from Ebola.

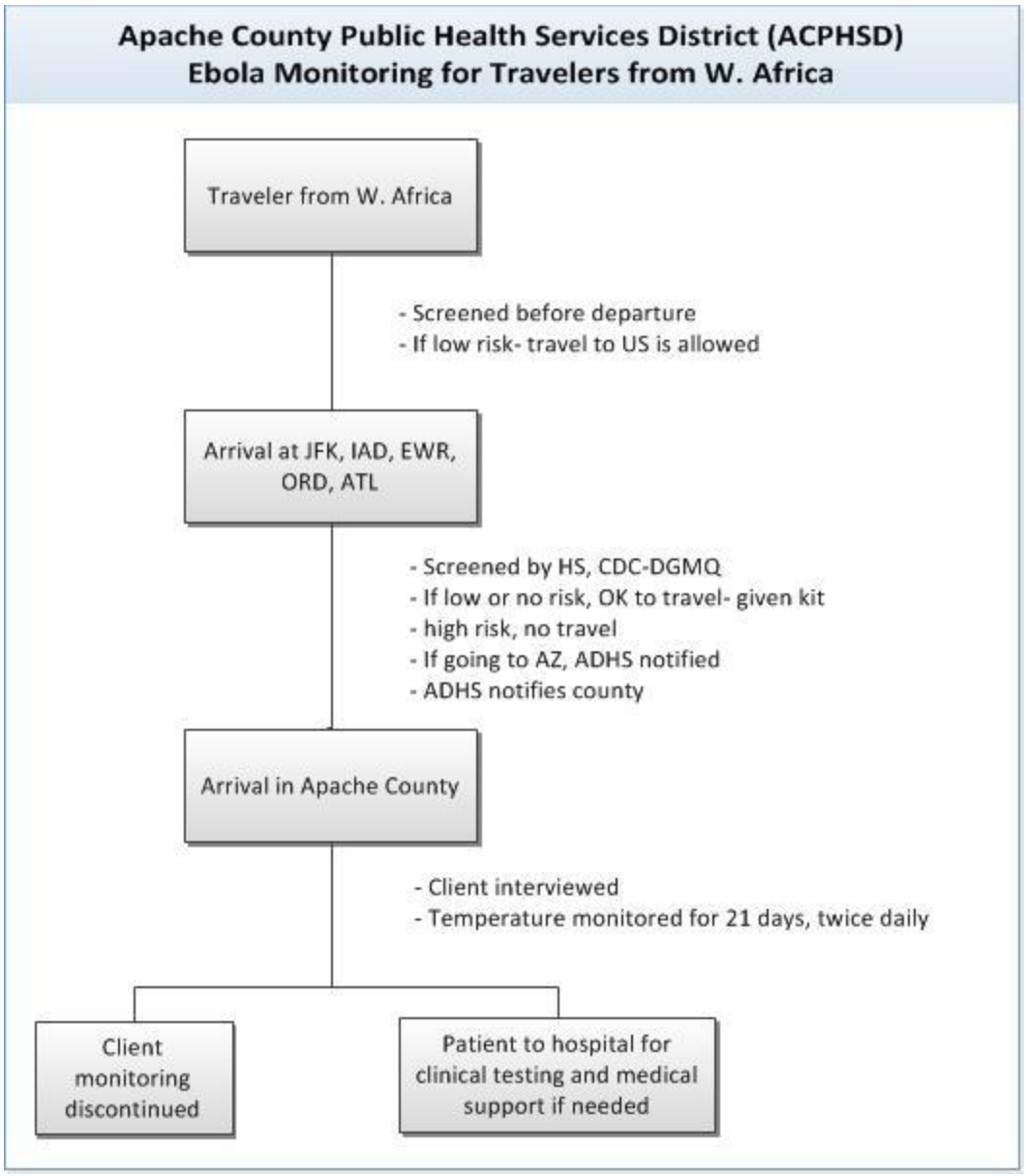
Additional travel guidelines for people traveling to other countries affected by Ebola virus disease may include:

- Avoid contact with bats and nonhuman primates or blood, fluids, and raw meat prepared from these animals.
- Avoid facilities where Ebola patients are being treated. Consult the U.S. embassy or consulate for advice on facilities.
- When returning to the United States, monitor your health for 21 days and seek medical care immediately if you develop symptoms.

EVD Surveillance Measures

CDC guidelines outline a process to screen individuals entering the U.S. from countries under travel restrictions due to EVD outbreaks. Normally, travelers from countries experiencing EVD outbreaks enter the U.S. through five airports, John F. Kennedy International (JFK) in New York, Washington Dulles International (IAD) in Virginia, Newark Liberty International (EWR) in New Jersey, O'Hare International (ORD) in Chicago, and Hartsfield-Jackson Atlanta International (ATL) in Atlanta. Travelers are screened when leaving a country under travel restrictions and again upon entry into the U.S. If a traveler is at low or no risk of EVD exposure, travelers are allowed to continue on to their destination state, such as Arizona. The CDC then notifies ADHS which then notifies the local public health department in the county of destination, in this case ACPHSD. ACPHSD monitors the traveler's health for 21 days. If the monitored traveler remains asymptomatic for 21 days, monitoring is discontinued.

If the traveler becomes symptomatic within the monitoring period, the traveler will be transported to a CDC designated Ebola Treatment Center such as Maricopa Integrated Health System in Phoenix. The University of Arizona Health Network in Tucson is also a CDC designated Ebola Treatment Center. At any time during the 21 day monitoring period, depending on circumstances, ACPHSD, in consultation with ADHS, may place travel restrictions on the person being monitored. These restrictions may include all forms of commercial transportation (such as airplanes, ships, buses, trains, or taxis) and participation in places where the public congregates (such as restaurants, stores, theaters, schools, places of worship, and gymnasiums). The diagram below illustrates the screening process from entry into the U.S., arrival in Arizona, ending in monitoring in Apache County.



Personal Protective Equipment

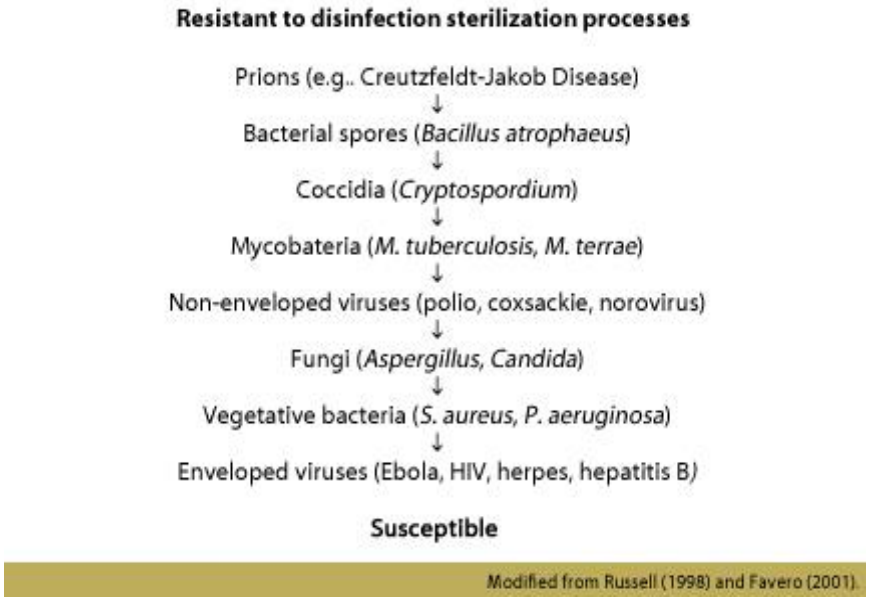
CDC provides extensive guidance for Personal Protective Equipment (PPE) to prevent exposures to Patients Under Investigation (PUIs) and confirmed EVD patients. Guidance includes specific equipment types and use recommendations along with instructions for donning and doffing the PPE and monitoring proper PPE donning and doffing techniques. This guidance may be accessed at http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/index.html.

Healthcare Environmental Cleaning and Waste Management

The following information is from the CDC Ebola website page titled *Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus* and can be accessed at http://www.cdc.gov/vhf/ebola/healthcare-

us/cleaning/hospitals.html. Ebola virus is more susceptible to disinfection and sterilization processes than many common organisms. The figure below (from the CDC website) shows the decreasing order of resistance of microorganisms to disinfection and sterilization.

Figure 1: Decreasing order of resistance of microorganisms to disinfection and sterilization.



Modified from Russell (1998) and Favero (2001).

Ebola viruses are transmitted through direct contact with infected blood or body fluids/substances (urine, feces, vomit) or through exposure to objects (such as needles) that have been contaminated with infected blood or body fluids. The role of the environment in transmission has not been established. Limited laboratory studies under favorable conditions indicate that Ebola virus can remain viable on solid surfaces, with concentrations falling slowly over several days.[1,2] In the only study to assess contamination of the patient care environment during an outbreak, Ebola virus was not detected in any of 33 samples collected from sites that were not visibly bloody. However, virus was detected on a blood-stained glove and bloody intravenous insertion site.[3] There is no epidemiologic evidence of Ebola virus transmission via either the environment or fomites that could become contaminated during patient care (bed rails, door knobs, laundry). However, given the apparent low infectious dose, potential of high virus titers in the blood of ill patients, and disease severity, higher levels of precaution are warranted to reduce the potential risk posed by contaminated surfaces in the patient care environment.
As part of the care of PUIs or patients with confirmed EVD (http://www.cdc.gov/vhf/ebola/healthcare-us/evaluating-patients/case-definition.html), hospitals are recommended to:

- **Be sure environmental services staff wear recommended personal protective equipment (PPE) (see http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html) to protect against direct skin and mucous membrane exposure of cleaning chemicals, contamination, and splashes or spatters during environmental cleaning and disinfection activities.** If reusable heavy-duty gloves are used for cleaning and disinfecting, they should be disinfected and kept in the room or anteroom. Be sure staff is instructed in the proper use of

personal protective equipment including safe removal to prevent contaminating themselves or others in the process, and that contaminated equipment is disposed of appropriately (see question 8 which follows).

- **Use a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus (norovirus, rotavirus, adenovirus, and poliovirus) to disinfect environmental surfaces in rooms of PUIs or patients with confirmed EVD.** Although there are no products with specific label claims against the Ebola virus, enveloped viruses such as Ebola are susceptible to a broad range of hospital disinfectants used to disinfect hard, non-porous surfaces. In contrast, non-enveloped viruses are more resistant to disinfectants. As a precaution, selection of a disinfectant product with a higher potency than what is normally required for an enveloped virus is being recommended at this time. EPA-registered hospital disinfectants with label claims against non-enveloped viruses (norovirus, rotavirus, adenovirus, poliovirus) are broadly antiviral and capable of inactivating both enveloped and non-enveloped viruses.

- **Avoid contamination of reusable porous surfaces that cannot be made single use**. Use only a mattress and pillow with plastic or other covering that fluids cannot get through. Do not place PUIs or patients with confirmed EVD in carpeted rooms. Remove all upholstered furniture and decorative curtains from patient rooms before use.

- **Routine cleaning and disinfection of the PPE doffing area.** Routine cleaning of the PPE doffing area should be performed at least once per day and after the doffing of grossly contaminated PPE. Cleaning should be performed by a healthcare worker wearing clean PPE. An Environmental Protection Agency (EPA) registered hospital disinfectant with label claims against non-enveloped viruses (norovirus, rotavirus, adenovirus, poliovirus) should be used for disinfection. When cleaning and disinfection are complete, the healthcare worker should carefully doff PPE and perform hand hygiene.

- **To reduce exposure among staff to potentially contaminated textiles (cloth products) while laundering, discard all linens, non-fluid-impermeable pillows or mattresses, and textile privacy curtains into the waste stream and disposed of appropriately.**

- **Ebola virus is a classified as a Category A infectious substance regulated by the U.S. Department of Transportation's (DOT) Hazardous Materials Regulations (HMR, 49 C.F.R., Parts 171-180). Any item transported offsite for disposal that is contaminated or suspected of being contaminated with a Category A infectious substance must be packaged and transported in accordance with the HMR.** This includes medical equipment, sharps, linens, used healthcare products such as soiled absorbent pads or dressings, kidney-shaped emesis pans, portable toilets; and used PPE (gowns, masks, gloves, goggles, face shields, respirators, booties, etc.) or byproducts of cleaning contaminated or suspected of being contaminated with a Category A infectious substance.[6, 7] . See question 8 below.

Frequently Asked Questions

1. How can I determine whether a particular EPA-registered hospital disinfectant is appropriate for use in the room of a PUI or patient with confirmed EVD?

Check EPA's Disinfectants for Use Against the Ebola Virus for a list of EPA-registered disinfectants. Users should be aware that an "enveloped' or 'nonenveloped virus" designation may not be included on the container label.

Instead check the disinfectant's label for at least one of the common non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus).

2. Are there special instructions for cleaning and disinfecting the room of a PUI or patient with confirmed EVD?

Daily cleaning and disinfection of hard, nonporous surfaces (high-touch surfaces such as bed rails and over bed tables, housekeeping surfaces such as floors and counters) should be done.[4] Before disinfecting a surface, cleaning should be performed. In contrast to disinfection where products with specific claims are used, any cleaning product can be used for cleaning tasks. Use cleaning and disinfecting products according to label instructions. Check the disinfectant's label for specific instructions for inactivation of any of the nonenveloped viruses (norovirus, rotavirus, adenovirus, poliovirus) follow label instructions for use of the product that are specific for inactivation of that virus. Use disposable cleaning cloths, mop cloths, and wipes, and dispose of these in leak-proof bags. Use a rigid waste receptacle designed to support the bag to help minimize contamination of the bag's exterior.

3. How should spills of blood or other body substances be managed?

The basic principles for blood or body substance spill management are outlined in the United States Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standards (29 CFR 1910.1030).[5] CDC guidelines recommend removal of bulk spill matter, cleaning the site, and then disinfecting the site.[4] For large spills, a chemical disinfectant with sufficient potency is needed to overcome the tendency of proteins in blood and other body substances to neutralize the disinfectant's active ingredient. An EPA-registered hospital disinfectant with label claims for non-enveloped viruses (norovirus, rotavirus, adenovirus, poliovirus) and instructions for cleaning and decontaminating surfaces or objects soiled with blood or body fluids should be used according to those instructions.

4. How should disposable materials (any single-use PPE, cleaning cloths, wipes, single-use microfiber cloths, linens, food service) and linens, privacy curtains, and other textiles be managed after their use in the patient room?

These materials should be placed in leak proof containment and discarded appropriately. To minimize contamination of the exterior of the waste bag, place the bag in a rigid waste receptacle designed for this use. Incineration or autoclaving as a waste treatment process is effective in eliminating viral infectivity and provides waste minimization. If disposal requires transport offsite then this should be done in accordance with the U.S. Department of Transportation's (DOT) Hazardous Materials Regulations (HMR, 49 CFR, Parts 171-180).[6, 7] Guidance from DOT has been released for Ebola.[7]

5. Is it safe for patients with EVD to use the bathroom?

Yes. Sanitary sewers may be used for the safe disposal of patient waste.[8] Additionally, sewage handling processes in the United States are designed to inactivate infectious agents.

6. How long does the Ebola virus persist in indoor environments?

Only one laboratory study has been reported, which was done under environmental conditions that favor virus persistence. This study found that under these ideal conditions, Ebola virus could remain active for up to six days.[1] In a follow-up study, Ebola virus was found, relative to other enveloped viruses, to be quite sensitive to inactivation by ultraviolet light and drying; yet subpopulations did persist in organic debris.[2]

In the only study to assess contamination of the patient care environment during an outbreak, conducted in an African hospital under "real-world conditions," Ebola virus was not detected by either nucleic acid amplification or culture in any of 33 samples collected from sites that were not visibly bloody. Virus was detected on a blood-stained glove and bloody intravenous insertion site by nucleic acid amplification, which may detect nonviable virus, but not by culture for live, infectious virus.[3] Based upon these data and what is known regarding the environmental infection control of other enveloped Ribonucleic Acid (RNA) viruses, the expectation is that with consistent daily cleaning and disinfection practices in U.S. hospitals, the persistence of Ebola virus in the patient care environment would be short, with 24 hours[3] considered a cautious upper limit.

7. Are wastes generated during delivery of care to patients with EVD subject to select agent regulations?

As long as facilities treating patients with EVD follow CDC's *Infection Prevention and Control Recommendations for Hospitalized Patients Under Investigation (PUIs) for Ebola Virus Disease (EVD) in U.S. Hospitals* (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/infection-control.html), waste generated during delivery of care to patients with Ebola would not be subject to federal select agent regulations (See the exclusion provision 42 CFR § 73.3(d)(1)). However, this would not apply to any facility that intentionally collected or otherwise extracted Ebola virus from waste generated during the delivery of patient care.

8. Are wastes generated during delivery of care to patients with EVD subject to any special transportation requirements?

Yes, wastes contaminated or suspected to be contaminated with Ebola virus must be packaged and transported in accordance with U.S. DOT Hazardous Materials Regulations (HMR, 49 CFR, Parts 171-180).[6, 7]

Once a PUI is no longer suspected to have EVD or has been ruled out for EVD, their waste materials no longer need to be managed as if contaminated with Ebola virus.

References

1. Sagripanti JL, Rom AM, Holland LE. Persistence in darkness of virulent alphaviruses, Ebola virus, and Lassa virus deposited on solid surfaces. *Arch Virol* 2010; 155:2035-2039.
2. Sagripanti JL, Lytle DC. Sensitivity to ultraviolet radiation of Lassa, vaccinia, and Ebola viruses dried on surfaces. *Arch Virol* 2011; 156:489–494.
3. Bausch DG et al. Assessment of the Risk of Ebola Virus Transmission from Bodily Fluids and Fomites. *J Infect Dis* 2007; 196:S142–7.
4. *CDC Guidelines for Environmental Infection Control in Healthcare Facilities[PDF - 249 pages]* (see: Environmental Surfaces Section).
5. *OSHA Bloodborne Pathogen Standard* 29 CFR 1910.1030.
6. *DOT. Guidance for Transporting Ebola Contaminated Items, a Category A Infectious Substance*.
7. *DOT. Hazardous Materials Regulations* [49 CFR Parts 100-1999; 49 CFR 172.700; 49 CFR 173.134(a)(5)).
8. *WHO. Interim Infection Prevention and Control Guidance of Patients with Suspected or Confirmed Filovirus Hemorrhagic Fever in Health-care Settings, with Focus on Ebola.* World Health Organization, Geneva, Switzerland, 2014.

Recommendations and procedures for EVD may change over time based on situational information. Check with ADHS and CDC guidelines and travel restrictions for the most updated information. ADHS Ebola information may be accessed at http://www.azdhs.gov/preparedness/epidemiology-disease-control/ebola/index.php. CDC Ebola information and guidelines may be accessed at http://www.cdc.gov/vhf/ebola.

Scenario 2 - Measles Outbreak

Measles is a highly communicable disease that is transmitted by respiratory droplets and airborne spread. Although measles was eliminated in the U.S. in 2000, there has been a recent surge in the number of measles cases due largely in part to reduced vaccination rates. For example, the U.S. experienced a record number of measles cases: 585 cases in 20 states from January 1, 2014 to July 25, 2014. The following measures illustrate a combination of NPIs and pharmaceutical interventions:

- Identify susceptible contacts.
- Review the immunization records and clinical status of all contacts.
- Immunize suspected contacts through a community wide vaccination campaign.
- Implement an educational campaign to encourage community members to vaccinate their children.
- If measles is suspected in a healthcare setting, the patient should be isolated in a negative air pressure isolation room if available; if not, mask the patient and place in a private room with the door closed.

The following control measures may be implemented for school and daycare settings:

- Exclude a measles case from school or childcare establishment for the time period specified by ADHS.
- Review the immunization records of all contacts.
- Vaccinate and exclude from school all persons who cannot readily provide documentation of measles immunity. Persons vaccinated with measles vaccine may be immediately readmitted to the school.
- Persons who continue to be exempted from or refuse measles vaccination should be excluded from the school, childcare or other institution until 21 days after the onset of rash in the last case of measles.

Scenario 3 - Arbovirus outbreak

Arboviruses (arthropod-borne viruses) are transmitted to people primarily through the bites of infected mosquitoes, ticks, sand flies, or midges. Examples of arboviruses causing human disease are Chikungunya Virus, Zika Virus, Eastern Equine Encephalitis Virus, Tick-born Encephalitis Virus, St. Louis Encephalitis Virus, West Nile Virus, and Western Equine Encephalitis Virus. Following are some disease management interventions that may be recommended for arboviral diseases.

Individual-based NPI examples:

- Avoiding outdoor activities at times when implicated mosquito species are most active.
- Wearing insect repellants.
- Ensuring dwelling screens are intact without any holes.
- Eliminating standing water sources around housing.
- Avoid traveling to areas affected by a specific emerging virus, such as Zika Virus.

Environmental NPIs:

- Public Health surveillance for implicated mosquito species (vector surveillance), such as *Aedes Aegypti* and *Aedes albopictus*.
- Mosquito fogging (adulticidal) in at-risk community areas, if possible.
- Mosquito larvaciding in standing water, as appropriate.
- Identification of abandoned swimming pools for larvicidal treatment.

Scenario 4- Pandemic Influenza Outbreak

Pandemic Influenza has been recognized as a public health threat for many years. Pandemic influenza has occurred historically and is likely to occur sometime in the future, possibly resulting in significant morbidity, mortality, and infrastructure disruption. It is likely that an influenza vaccine will be unavailable or delayed. Antiviral medications may also be in short supply. Below are examples of NPIs that have been identified to help mitigate the impact of Pandemic Influenza.

Individual-based NPIs:

- Staying home when sick.
- Staying home if exposed to a family or household member who is sick.
- Covering coughs and sneezes with a tissue.
- Washing hands or using hand sanitizer.
- Covering nose and mouth with a mask or cloth if sick and around people or at a mass gathering in a community where the pandemic is already occurring.
- Isolation and quarantine measures.

Community-based NPIs:

- Social distancing measures such as working from home and other measures to increase distances between people in setting where people come in close contact with each other.
- Temporarily closing childcare centers, schools, workplaces, places of worship, sporting events, concerts, festivals, and other gatherings.

Environmental NPIs:

- Routine surface cleaning that helps to eliminate the flu virus from frequently touched surfaces and objects, such as toys, refrigerator handles, desks, telephones, and door knobs in homes, childcare facilities, schools, workplaces, and any other places where people regularly gather.

Scenario 5- Foodborne/Waterborne disease outbreak

The public depends on health departments and environmental health specialists for protection from foodborne and waterborne illnesses. Such protection relies on rapid detection of outbreaks, determination of the cause of the outbreak, and incorporation of control measures to protect the public. ACPHSD Environmental Health Services performs field investigations, environmental health assessments, and potable water inspections to ensure the public's health. ACPHSD Environmental Health Services works closely with Clinical Services and PHEP to provide

field investigations, environmental sample collections, mitigation and abatement activities, and environmental health recommendations. The following control measures, often utilized in concert with pharmaceutical control measures, are examples of environmental NPIs that may be implemented as part of a foodborne or waterborne outbreak.

Individual-based NPIs:

- Handwashing
- Exclusion of sick food workers from food establishments or other commercial kitchens.

Community-based NPIs:

- Boil water orders.
- Closure of public swimming pools.
- Closure of recreational water areas.

Environmental NPIs:

- Water treatment or well inspections and/or closures.
- Food establishment inspection, process and procedural correction, and closure if warranted.
- Embargo or recall of contaminated food items.
- Environmental health recommendations.

Public Health Risk Communication

Effective public health risk communication is necessary to inform the public not only of the specific interventions being implemented (e.g. which schools/businesses/events are closed) but the rationale behind these measures. The ACPHSD Risk Communication Plan addresses the processes to coordinate and disseminate messages and informational materials to the public, health care professionals, policy makers, media, and others about specific infectious disease agents, vaccinations (if applicable), medications, and non-pharmaceutical interventions.

Additional ACPHSD public communication tools include Ready Apache County and the 311 system. Ready Apache County is an alerting system that can be utilized by agencies and individuals that self-register to receive alerts. The 311 system (available in Apache and Navajo Counties can be called by phone or accessed through the website to find out updated situation information for current events and/or emergencies.

The Joint Information System (JIS) provides a structure and mechanism for information integration among agencies and their Public Information Officers (PIOs) to provide consistent, accurate, and timely information during an emergency response. As an emergency incident increases in scale, the JIS may grow from a local to a larger regional or state structure.

A Joint Information Center (JIC) is a physical site where information coordinated through the JIS is facilitated and disseminated. The JIC site is located near the ACEOC. If this site is unavailable, ACDEM will identify another site to support timely and effective public communication efforts. Depending on the size of the emergency incident, a

state Public Health JIC may be activated by ADHS or a State JIC may be activated by AZ DEMA. Local JIC staff will coordinate public information messaging with state JICs through the JIS.

Appendix A: Acronyms

A.A.C.	Arizona Administrative Code
ACDEM	Apache County Division of Emergency Management
ACEMP	Apache County Emergency Management Plan
ACEOC	Apache County Emergency Operations Center
ACPHSD	Apache County Public Health Services District
ACS	Alternate Care Site
ADE	Arizona Department of Education
ADEM	Arizona Department of Emergency Management
ADHS	Arizona Department of Health Services
ADWR	Arizona Department of Water Resources
AHCCCS	Arizona Healthcare Cost Containment System
A.R.S.	Arizona Revised Statutes
ATL	Hartsfield-Jackson Atlanta International Airport in Atlanta, Georgia
AZ DEMA	Arizona Department of Emergency and Military Affairs
AZMAC	Arizona Mutual Aid Compact
BHS	Behavioral Health Services
BOS	Board of Supervisors
BP4	Budget Period Four
CDC	Centers for Disease Control and Prevention
CISM	Critical Incident Stress Management
COOP	Continuity of Operations Plan
DC	Disaster Compact
DGMQ	Division of Global Migration and Quarantine
DHS	Department of Homeland Security
DOC	Department Operations Center
DOT	Department of Transportation
EDC	Epidemiology and Disease Control
EH	Environmental Health
EM	Emergency Management
EMAC	Emergency Management Assistance Compact
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESF 8	Emergency Support Function 8
EVD	Ebola Virus Disease
EWR	Newark Liberty International Airport in New Jersey
GI	Gastrointestinal
HAN	Health Alert Network
HEOC	Health Emergency Operations Center
HHS	Health and Human Services
HMR	Hazardous Materials Regulations

IAD	Washington Dulles International Airport in Virginia
ICD	Interstate Civil Defense
ICP	Incident Command Post
ICS	Incident Command System
I&Q	Isolation and Quarantine
JFK	John F. Kennedy International Airport in New York
JIC	Joint Information Center
JIS	Joint Information System
LTCF	Long Term Care Facility
MAA	Mutual Aid Agreement
MEDSIS	Medical Electronic Disease Surveillance Intelligence System
MIHS	Maricopa Integrated Health System
MMMD	Medical Materiel Management and Distribution
MMRS	Metropolitan Medical Response System
MSA	Metropolitan Statistical Area
NCEZID	National Center for Emerging and Zoonotic Infectious Diseases
NDMS	National Disaster Medical System
NGO	Non-Governmental Organization
NIMS	National Incident Management System
MOU	Memorandum of Understanding
NPI	Non- pharmaceutical Interventions
NOAA	National Oceanic and Atmospheric Administration
ORD	O'Hare International Airport in Chicago, Illinois
OPHPR	Office of Public Health Preparedness and Response
OSHA	Occupational Safety and Health Administration
PHEP	Public Health Emergency Preparedness
PHS	Public Health Services
PIO	Public Information Officer
PPE	Personal Protective Equipment
PUI	Patient Under Investigation
RBHA	Regional Behavioral Health Authority
RNA	Ribonucleic Acid
SARS	Severe Acute Respiratory Syndrome
SEOC	State Emergency Operations Center
SERRP	State Emergency Response and Recovery Plan
WHO	World Health Organization

Appendix B: Containment Measures: Terms and Definitions

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

Quarantine is the separation and restriction of movement or activities of persons who are not ill but who are believed to have been exposed to infection, for the purpose of preventing transmission of disease. Individuals may be quarantined at home or in designated facilities; health care providers and other response workers may be subject to quarantine when they are off duty. **Quarantine of close contacts** refers to the quarantine of individuals exposed to patients with communicable diseases (e.g., family members, work or school mates, health care workers).

Quarantine of groups of exposed persons refers to quarantine of people who have been exposed to the same source of illness (e.g., a case of influenza at a public gathering, on an airline, train, or cruise ship, at a school or workplace or apartment complex, or at a recently visited store or office).

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

Self-isolation or Self-shielding refers to self-imposed exclusion from infected persons or those perceived to be infected (e.g., by staying home from work or school during an epidemic).

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

Influenza clinics are special facilities that may be established during a pandemic to provide rapid medical assessment of potentially infected persons. Ill persons would be encouraged to call influenza hotlines that provide advice on whether to stay home or seek help at an influenza clinic. Persons who come to an influenza clinic will be advised on whether they may be best served by hospital care or home care.

Individual-level containment measures include isolation of patients and management of their close contacts.

Focused measures to increase social distance (or decrease social contact) includes measures applied to groups rather than individuals or whole communities (e.g., quarantine of groups of exposed persons and measures that apply to the use of specific sites or buildings).

Containment measures that apply to use of specific sites or buildings include cancellation of public events (e.g., concerts, sports events, movies and plays), closure of office buildings, apartment complexes, or schools; and closure of subways or bus lines. These measures may also involve restricting entrance to buildings or other sites (e.g., requiring fever screening or use of face masks before entry to schools, worksites, or airplanes).

Community-based measures to increase social distance include measures applied to whole neighborhoods, towns, or cities (e.g., “Stay Home Days”, establishment of fever clinics, and community-wide quarantine.)

Adapted from the HHS Pandemic Influenza Plan, p. S8-14

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