

Ebola Virus Community Preparedness Forum

November 14, 2014

After-Action Report/Improvement Plan

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The After-Action Report/Improvement Plan (AAR/IP) aligns with the objectives and capabilities established by the Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness (PHEP) program and the U.S. Department of Health and Human Services, Hospital Preparedness Program (HPP).

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FORUM OVERVIEW

Event Name	Ebola Virus Community Preparedness Forum
Exercise Dates	November 14, 2014
Scope	Facilitated discussion using a tabletop exercise scenario and discussion questions.
Mission Area(s)	Prevention, Protection, Mitigation, and Response
Public Health Preparedness Capabilities	Responder Safety and Health, Emergency Operations Coordination, Emergency Public Information and Warning, Information Sharing, Medical Surge, Public Health Surveillance and Epidemiological Investigation
Threat or Hazard	Ebola Virus Disease
Scenario	Two Ebola patients from West Africa are admitted to a hospital in Arizona.
Sponsor	Arizona Department of Health Services
Participating Organizations	State, local and tribal public health departments, emergency management agencies, hospitals, long term care facilities, healthcare associations, first responders, law enforcement, schools, universities, corrections, border patrol, legal representatives, academic partners, federal agencies
Point of Contact	Andrew Lawless, Emergency Response & Communications Public Health Emergency Preparedness Arizona Department of Health Services andrew.lawless@azdhs.gov Teresa Ehnert, Bureau Chief Public Health Emergency Preparedness Arizona Department of Health Services teresa.ehnert@azdhs.gov

ANALYSIS OF CAPABILITIES

The alignment of forum (exercise) objectives with capabilities provides a consistent system for evaluating and assessing public health and healthcare system preparedness. Table 1 includes the objectives and the aligned public health preparedness capabilities.

Objective	Public Health Preparedness Capabilities
1) Identify challenges and barriers healthcare facilities and public health departments will face when protecting staff and patients during an Ebola virus response.	Responder Safety and Health
2) Discuss how healthcare facilities, public health departments, and emergency management agencies will coordinate emergency response activities.	Emergency Operations Coordination
3) Identify top priorities for public information and communication staff at healthcare facilities, public health departments, emergency management agencies, and other responding organizations.	Emergency Public Information & Warning
4) Evaluate plans and procedures to share information across the response community, and identify top situational awareness priorities for responding organizations.	Information Sharing
5) Assess facility-level and public health medical surge plans in the context of an EVD response.	Medical Surge
6) Evaluate plans to conduct a coordinated public health response (e.g., contact tracing, surveillance) between healthcare, local, state, and federal agencies.	Public Health Surveillance & Epidemiological Investigation

Methodology

Information presented in the following analysis was collected from participants' verbal and written feedback provided at the November 14, 2014 forum. Additional feedback was collected from forum attendees and other stakeholders through a web-based survey. Respondents were asked to identify preparedness gaps and barriers related to the six capabilities listed above. The Ebola virus outbreak scenario and facilitated discussion questions used during the November 14 forum are provided in Appendix A.

The Ebola forum was originally conceived as a tabletop exercise for state, local, and healthcare system partners. Interest in the tabletop grew and the number of attendees (nearly 400) made the facilitation of a traditional tabletop format impossible. In response to the demand, an expert

panel was convened to lead the group through an exercise scenario and discussion questions. Audience members were able to engage the expert panel with follow up questions and were provided time for public comment. The following representatives from state and local public health, emergency management, and healthcare were selected for the panel discussion:

Name	Title and Organization
Cara Christ, MD	Deputy Director Arizona Department of Health Services
Teresa Ehnert,	Bureau Chief, Public Health Emergency Preparedness Arizona Department of Health Services
Jennifer Hamilton	Emergency Management Coordinator Banner Health AZ
Will Humble	Director Arizona Department of Health Services
Luke Johnson	Director, Department of Emergency Response Fort Mojave Tribe
Andrew Lawless	Emergency Response and Communication Coordinator Arizona Department of Health Services
Michelle Smith	Public Health Emergency Preparedness Coordinator Yuma County Department of Health Services
Wendy Smith-Reeve	Director Arizona Division of Emergency Management
Byron Steward	Emergency Manager Mohave County, Arizona
Rebecca Sunenshine, MD	Medical Director and Division Administrator, Disease Control Division Maricopa County Department of Public Health
Saskia van Rijn	Infection Preventionist and Hospital Epidemiologist Phoenix Children’s Hospital

Capability 1: Responder Safety & Health

Objective: Identify challenges and barriers healthcare facilities and public health departments will face when protecting staff and patients during an Ebola virus response.

Discussion Overview

During the facilitated discussion, it was noted that at least one hospital had been designated as an Infectious Disease Treatment Center of Excellence in the Phoenix metropolitan area. Since the forum, an additional infectious disease center has been identified in the Tucson area. It was stated that infectious disease referral centers may be prepared to handle multiple Ebola cases, but that smaller healthcare facilities, especially in rural areas, may not be fully prepared to accommodate Ebola cases for more than two or three days.

Attendees from hospitals mentioned staffing and supply issues as top concerns for treating Ebola patients. It was stated that guidance for personal protective equipment (PPE) seemed to be changing frequently and some attendees were unsure about where to obtain information related to PPE.

During the discussion, it was noted that local communities might benefit from additional coordination between EMS providers and hospitals, e.g., identifying space to decontaminate ambulances as well as doffing and decontamination spaces EMS staff involved in transporting suspected or confirmed Ebola patients.

Strength 1: Panelists and other attendees were able to describe the personal protective equipment needed to protect first responders and healthcare workers from Ebola.

Strength 2: ADHS staff established a statewide webpage to disseminate Ebola related guidance for PPE and provided attendees with the link to the webpage (www.azhealth.gov/ebola).

Strength 3: It was noted that both local and state health departments have well established Strategic National Stockpile (SNS) programs in case the need to distribute PPE or other supplies for first responders and/or healthcare workers arises.

Area for Improvement 1: Some law enforcement representatives in attendance felt that additional clarification for non-compliant cases would improve Ebola readiness.

Area for Improvement 2: Additional guidance on decontaminating rooms and resuming normal operations after transfer of confirmed Ebola patients would improve healthcare facility & local preparedness.

Capability 2: Emergency Operations Coordination

Objective: Identify challenges and barriers healthcare facilities and public health departments will face when protecting staff and patients during an Ebola virus response.

Discussion Overview

In general, emergency management, public health, healthcare and law enforcement representatives stated that they were ready to handle the emergency operations associated with Ebola cases. First responders from local jurisdictions affirmed that they were actively engaged with their local public health departments.

Some attendees stated that non-health related organizations (e.g., schools, corrections, and hospice) would benefit from additional clarification on how public health responses are coordinated across the state. It was also noted that not all attendees had a clear understanding of the process for submitting and testing lab specimens across the state.

Strength 1: Panelists and attendees from public health departments were confident that their organizations would be able to participate in a unified command structure with local public health agencies and ADHS supporting the response.

Strength 2: Panelists were able to answer all questions from attendees regarding emergency operation and demonstrated a coordinated approach between healthcare facilities, local public health, and state public health (ADHS).

Strength 3: Panelists from local and state emergency management clearly described their agency's role in an Ebola response and were able to describe the assets and support services emergency management could offer during a public health emergency.

Area for Improvement 1: Emergency operations coordination with non-health and non-emergency management partners could be improved through on-going outreach and education regarding public health emergencies.

Area for Improvement 2: Continued education and outreach from laboratory staff on collection, shipping, and testing times will strengthen Ebola readiness across the state.

Area for Improvement 3: Additional guidance and coordination regarding animals (pets and otherwise) and Ebola risks and will improve interagency preparedness.

Capability 3: Emergency Public Information and Warning

Objective: Identify top priorities for public information and communication staff at healthcare facilities, public health departments, emergency management agencies, and other responding organizations.

Discussion Overview

During the discussion, both panelists and attendees felt that rumor control would be important and that a unified communication strategy between the affected healthcare facility and local and state public health would be critical. Many attendees from healthcare facilities felt their respective facilities were prepared to handle such a response. It was noted that standard messaging across the healthcare system may not be available and that developing ready-to-go materials, such as talking points and message maps, would ease the real-time burden on hospital communication and public relations staff.

It was also mentioned that environmental health issues related to Ebola waste, drinking water, and sewer system may arise, and that a unified communication approach between healthcare facilities, public health (i.e. environmental health staffs), vendors, and the public will be necessary. Subject matter experts from a variety of agencies and companies will be needed to coordinate communication for these environmental health concerns.

Strength 1: Many of the attendees from public health departments and healthcare facilities confirmed the availability of communications/public relations staff to address concerns from the public and inquiries from the media.

Strength 2: ADHS staff informed attendees of the statewide Ebola website (www.azhealth.gov/ebola) and provided an overview of the types of information available on the website.

Area for Improvement 1: Developing Ebola-specific public information tools, e.g., talking points, message maps, would help ensure the delivery of clear, consistent, and timely information during an Ebola response across the healthcare and public health system.

Area for Improvement 3: Establishing a list of statewide or regional subject matter experts from a variety of disciplines, e.g., infectious disease, personal protective equipment, environmental health, would enable public information staff to efficiently answer technical questions from the media and general public.

Capability 4: Information Sharing

Objective: Evaluate plans and procedures to share information across the response community and identify situational awareness priorities for responding organizations.

Discussion Overview

Attendees from both healthcare facilities and public health departments felt that information sharing processes are well established and regularly tested for this type of response. It was also stated that public health “has done a good job of keeping the response community (e.g., EMS, fire departments, law enforcement) aware.”

Some healthcare facilities believe that information systems (i.e., EMResource) are underutilized by hospital emergency department staff. At the state and county level, it was noted that information sharing systems (i.e. WebEOC) seem to contain lots of repeated information causing users to sift through lots of entries to find new information.

The discussion also included a question and comments on mortuary services. It was noted that attempts would be made to honor burial practices in a culturally sensitive manner. Some attendees felt that additional planning for Ebola fatalities was needed between public and private sector partners.

Strength 1: Information sharing practices between public health and healthcare facilities in place and are regularly exercised and practiced on a routine basis.

Strength 2: Many members of the first responder community feel that their local health departments are doing a good job of providing situational awareness and have established open lines of communication for an Ebola response.

Strength 3: Attendees from schools felt that the Ebola forum was valuable for school administrators; it provided resources and contact information for technical information and situation updates.

Area for Improvement 1: Continued training, outreach, and exercising of communication systems (e.g., EMResource, EMSsystem) would improve information sharing between hospitals and public health departments.

Area for Improvement 2: Reducing the amount of redundant information on web-based incident management systems (e.g., WebEOC) would improve situational awareness and make it easier for end-users to find updates and new information.

Area for Improvement 3: Additional information sharing between public health agencies, medical examiners, funeral directors and crematoriums would improve statewide preparedness for Ebola fatalities.

Capability 5: Medical Surge

Objective: Assess facility-level and public health medical surge plans in the context of an EVD response.

Discussion Overview

Panelists and attendees spoke about the well-established healthcare coalitions across the state and how these groups might be used to coordinate care across a jurisdiction with Ebola cases. It was noted that Ebola cases at a particular healthcare facility may cause patients to seek care elsewhere, and that healthcare coalitions can be used to coordinate this shift in patient care.

Representatives from healthcare facilities noted that it would be challenging to maintain staffing and supply levels for Ebola cases much beyond the 24 – 48 hour time period, and that neighboring healthcare facilities or other in system facilities would be called upon for support via the healthcare coalitions. It was also stated that training and exercises for highly infectious diseases such as Ebola would improve overall preparedness across the healthcare community.

Strength 1: Arizona has four well-established healthcare coalitions covering the entire state as well as a pediatric coalition (total of five coalitions) that can be used to address medical surge regionally.

Strength 2: Attendees felt that the State's plan to utilize the infectious disease referral centers for Ebola patients will be effective and will allow resources and efforts to be focused where they are needed most.

Area for Improvement 1: Healthcare coalitions would benefit from continued planning to address a surge of worried well, actual Ebola cases, and extra patients that may be afraid to go to a hospital with confirmed Ebola cases.

Area for Improvement 2: The statewide healthcare system will benefit from continued coordination between hospitals, public health, and other healthcare facilities within the state's healthcare coalitions regarding resource sharing , e.g., space, staff, and supplies.

Area for Improvement 3: Some hospitals expressed concern about medical waste disposal and linen vendors refusing to handle Ebola contaminated items. Hospitals also brought up the issue of vendors being unwilling to service laboratory/testing equipment or medical devices used on patients testing positive for Ebola.

Capability 6: Public Health Surveillance & Epidemiological Investigation

Objective: Evaluate plans to conduct a coordinated public health response (e.g., contact tracing, surveillance) between healthcare, local, state, and federal agencies.

Discussion Overview

During the forum, epidemiologists from the panel and the audience expressed the fact that contact tracing and surveillance are routine activities for public health departments. Although it would require a substantial increase in personnel time, local and state public health departments can bring in extra staff to address the issue. A local jurisdiction could receive assistance from a variety of sources including neighboring counties, ADHS, and/or the CDC.

It was also mentioned that healthcare facilities with positive Ebola cases can receive support from local and state public health departments, with additional help in the form of a CDC Ebola team. Some smaller jurisdictions expressed the fact that they may not have enough public health nurses and epidemiologists to perform follow up, contact tracing, monitoring, and surveillance for sustained period of time. However, other local, state, and federal assets would be available to support epidemiological operations if a local jurisdiction became overwhelmed.

Despite the fact that nearly 100 percent of possible Ebola exposures will be pre-identified by U.S. Department of Homeland Security and tracked by local and state public health, some attendees felt that exceptions (i.e. outlier cases) are still a possibility. The exceptions could result from exposed people lying about their travel history or illegally entering into the country by land, sea, or air. Some attendees felt that these exceptions (Ebola cases with no prior warning of exposure) warrant additional planning and precautions and could overwhelm facilities and jurisdictions.

During the discussion it was also noted that health departments may encounter challenges when working with populations that do not speak either English or Spanish. Interpreters and translators would be needed to conduct contact tracing, monitoring, and surveillance with these groups.

Strength 1: Local and state epidemiology staff routinely demonstrate their ability to perform case follow up, contact tracing, and surveillance.

Strength 2: The process for requesting additional epidemiology staff and public health nurses from neighboring jurisdictions, ADHS, and/or the CDC is established.

Strength 3: Nearly 100 percent of persons requiring monitoring for Ebola are pre-identified by the U.S. Department of Homeland Security, making it relatively easy for local public health departments to monitor returnees from Africa.

Area for Improvement 1: Increased sharing of infectious disease plans between public health, emergency management, and healthcare would improve Ebola preparedness and help establish common response guidelines across the state.

Area for Improvement 2: Contact tracing and active monitoring of persons who do not speak either English or Spanish may pose challenges for some local health departments.

Area for Improvement 3: Smaller healthcare facilities may not have adequate infection control and epidemiology staff to handle one or more Ebola cases.

APPENDIX A: IMPROVEMENT PLAN

This Improvement Plan (IP) was developed to address questions and issues raised during the Ebola forum discussions. The IP includes corrective actions put in place since the forum as well as updated resources processes, messaging, and training. Many of these corrective actions have been addressed in the *Governor's Council on Infectious Disease Preparedness and Response (GCIDPR) – Preliminary Report*. This report “highlights the work of the Council to examine, develop, and implement a coordinated and comprehensive plan to ensure Arizona's public health infrastructure is prepared for the potential outbreak of infectious diseases and can respond rapidly to protect the health of Arizonans.”

The report includes the EVD Ebola Response Plan, executive orders, draft/sample letters, and other Ebola response resources for state and local officials. The report includes the following Annexes:

- Executive Order 2014-08, establishes the Arizona Infectious Disease Preparedness and Response Council
- ADHS Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure
- Laboratory Training and Education
- Example Letter to Licensed Hospitals
- E DRAFT Infectious Disease Certification Criteria
- EVD Ebola Response Plan
- DRAFT Emergency Declaration
- Process for Isolation and Quarantine
- DRAFT Isolation and Quarantine Directives and Orders
- Ebola Virus Messaging, Resources and Trainings
- Letters to Schools
- Ebola Virus Community Preparedness Forum
- Draft Process Map

The following tables document areas for improvement, corrective actions, primary responsible organizations, start dates, and completion dates for many of the issues identified during the forum. The IP also includes both corrective actions that have already been implemented as well as corrective actions yet to be addressed.

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
RESPONDER SAFETY & HEALTH	Some law enforcement representatives in attendance felt that additional clarification for non-compliant cases would improve Ebola readiness.	This issue is partially addressed in the GCIDPR Report under the EVD Ebola Response Plan	Planning	State public health	Oct. 2014	Dec. 2014
		Continue to provide guidance to law enforcement in coordination with local public health	Planning	State/local public health	N/A	ongoing
	Additional guidance on decontaminating rooms and resuming normal operations after transfer of confirmed Ebola patients would improve healthcare facility and local preparedness.	Ongoing coordination between EMS, emergency department staff, and local/state public health will keep all stakeholders informed as guidance is updated	Planning	EMS providers, hospitals, state/local public health	N/A	ongoing
		Continue updating and distributing information on the ADHS Ebola Preparedness Webpage to include latest guidance and recommendations from federal partners	Training	State public health	Oct. 2014	Ongoing

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
EMERGENCY OPERATIONS COORDINATION	Coordination with non-health and non-emergency management partners could be improved through on-going outreach and education regarding public health emergencies.	This issue is addressed in the GCIDPR Report under the Ebola Response Plan	Planning	State public health	Oct. 2014	Dec. 2014
		Conduct infectious disease preparedness tabletops with healthcare, public health, emergency management and other response partners	Exercise	State/local public health, healthcare system partners, etc.	Oct. 2014	Ongoing
	Continued education and outreach from laboratory staff on collection, shipping, and testing times will strengthen Ebola readiness across the state.	This issue is addressed in the GCIDPR Report under the Laboratory Training and Education Annex	Planning	EMS providers, hospitals, state/local public health	Oct. 2014	Dec. 2014
	Additional guidance and coordination regarding animals (pets and otherwise) and Ebola risks and will improve interagency preparedness.	Coordinate with the Arizona Department of Agriculture, the Arizona Veterinary Medical Association, and veterinary partners to share plans and information	Planning	Arizona Department of Agriculture, Arizona Veterinary Medical Association, and state/local public health	Oct. 2014	Dec. 2014

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
EMERGENCY PUBLIC INFORMATION & WARNING	Developing Ebola-specific public information tools, e.g., talking points, message maps, would help ensure the delivery of clear, consistent, and timely information during an Ebola response across the healthcare and public health system.	This issue is partially addressed in the GCIDPR Report under the Ebola Virus Messaging Annex and the ADHS Ebola Preparedness webpage	Planning	State public health	Oct. 2014	Dec. 2014
		Develop message maps for Ebola and include update messaging materials in the ADHS CERC plan.	Planning	State public health	Feb. 2015	March 2015
	Establishing a list of statewide or regional subject matter experts from a variety of disciplines, e.g., infectious disease, personal protective equipment, environmental health, would enable public information staff to efficiently answer technical questions from the media and general public.	Create a list of Ebola subject matter experts from a variety of fields (infectious disease, environmental health, and PPE)	Planning	State/local public health information staff	Jan. 2015	March 2015

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
INFORMATION SHARING	Continued training, outreach, and exercising of communication systems (e.g., EMResource, EMSsystem) would improve information sharing between hospitals and public health departments.	Discuss communication systems usage and training during healthcare coalition meetings	Exercise, Training	Healthcare coalition partners	N/A	Ongoing
	Reducing the amount of redundant information on web-based incident management systems (e.g., WebEOC) would improve situational awareness and make it easier for end-users to find updates and new information.	Consider limited data entry privileges in WebEOC to one person per agency.	Organization, Planning	State/local public health and state/local emergency management	Jan. 2015	May 2015
	Information sharing between public health agencies, medical examiners, funeral directors and crematoriums would improve statewide preparedness for Ebola fatalities.	This issue has been addressed on the ADHS Ebola Preparedness webpage under the Decedent Care Services section.	Planning, Training	State/local public health	Oct. 2014	Nov. 2014

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
MEDICAL SURGE	Healthcare coalitions would benefit from continued planning to address a surge of worried well, actual Ebola cases, and extra patients that may be afraid to go to a hospital with confirmed Ebola cases.	Continued coordination between healthcare facilities and the infectious disease referral centers will improve Ebola preparedness	Organization	State healthcare coalitions	N/A	Ongoing
	The statewide healthcare system will benefit from continued coordination between hospitals, public health, and other healthcare facilities within the state's healthcare coalitions regarding resource sharing , e.g., space, staff, and supplies.	Test the State's healthcare coalitions through infectious disease preparedness exercises (e.g., tabletop and functional exercises)	Exercise	State/local public health, healthcare coalition partners	Jan. 2015	June 2015
	Some hospitals expressed concern about medical waste disposal and linen vendors refusing to handle Ebola contaminated items. Hospitals also brought up the issue of vendors being unwilling to service laboratory/testing equipment or medical devices used on patients testing positive for Ebola.	Ensure that MOUs/MOAs are in place with vendors to provide services and supplies required for Ebola care.	Organization, Planning	Healthcare facilities	Jan. 2015	March 2015
		Develop list of items/medical equipment that may need to be discarded from patient rooms after treating Ebola patients	Equipment, Planning	Hospital infection control staff	Jan. 2015	June 2015

Public Health Capability	Issue/Area for Improvement	Corrective Action	Capability Element	Responsible Entities	Start Date	Completion Date
PUBLIC HEALTH SURVEILLANCE & EPIDEMIOLOGICAL INVESTIGATION	Increased sharing of infectious disease plans between public health, emergency management, and healthcare would improve Ebola preparedness and help establish common response guidelines across the state.	Continue to share and circulate infectious disease and other response plans between public health, healthcare system, and other response partners	Planning	State/local public health, state/local emergency management, healthcare system partners	N/A	Ongoing
	Contact tracing and active monitoring of persons who do not speak either English or Spanish may pose challenges for some local health departments.	Circulate contact information and resources for interpretation and translating services to healthcare and public health staffs	Organization	State/local public health communications staff	Jan. 2015	March 2015
	Smaller healthcare facilities may not have adequate infection control and epidemiology staff to handle one or more Ebola cases.	Continue to advise healthcare system partners on guidelines for resource requests for EVD cases	Training	State/local public health	N/A	Ongoing

APPENDIX B: ACRONYM LIST

AAR	After Action Report
ADHS	Arizona Department of Health Services
CDC	Centers for Disease Control and Prevention
EMS	Emergency Medical Services
EVD	Ebola Virus Disease
GCIDPR	Governor's Council on Infectious Disease Preparedness and Response
IP	Improvement Plan
PPE	Personal Protective Equipment
SNS	Strategic National Stockpile