

Public Health & Medical Preparedness Program Five Years in Review, 2012-2017



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Kentucky Public Health

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Public Health and Medical Preparedness Program

Since 2002, the Kentucky Department for Public Health (KDPH) has served as the lead agency for Emergency Support Function (ESF)-8: Public Health and Medical Services for the Commonwealth of Kentucky. Throughout this period, KDPH has maintained a public health and medical preparedness program that continues to improve planning and response capabilities throughout the state based upon responses to exercises, planned events and real world incidents. The Kentucky Board of Emergency Medical Services (KBEMS) and Kentucky Community Crisis Response Board (KCCRB) also serve as primary ESF-8 agencies and help lead Kentucky's preparedness efforts. As the lead agency, KDPH works closely with 105 ESF-8 local, state and federal support agencies and organizations listed in the state's ESF-8 Annex of Kentucky's Emergency Operations Plan to prepare for, respond to, and recover from any all-hazards event. This responsibility is supported by KDPH's mission statement, "To improve the health and safety of people in Kentucky through Prevention, Promotion and Protection" and vision statement, "Healthier People...Healthier Communities". Since the severe winter storm of 2009, KDPH has greatly enhanced the capabilities of the Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness Program (PHEP) at the local and state level through use of federal funds and by coordinating with ESF-8 support agencies to implement an active assessment, planning, organizing, equipping, training, exercise, and evaluation program.

Due to its geology and geographical setting, Kentucky is vulnerable to a wide array of hazards including floods, severe storms, health emergencies, natural hazards, man-made hazards, earthquakes and cyber-terrorism; all of which threaten life and property. The most catastrophic natural disasters that could affect Kentucky would be an earthquake along the New Madrid Seismic Zone (NMSZ) or a flood resulting from the failure of a major dam such as the Wolfe Creek Dam. Both of these incidents would impact large populations causing multiple injuries, fatalities, and numerous public health and medical resources and needs. Through research of historic impacts, past federal disaster declarations, probability rates, dollar losses to date, and discussions with key agencies, each of these hazards have a high probability of affecting Kentucky on a day-to-day basis. On average, a federally declared disaster typically strikes Kentucky twice each year. From 2000 to 2016, Kentucky received 30 Major Disaster Declarations, seven Fire Management Assistant Declarations, and two Emergency Declarations. Most of the disaster declarations involved severe storms involving tornadoes, flooding, and mudslides and in several cases, severe winter weather. In addition, Kentucky has a high population of persons with Functional and Access Needs (FAN) that require additional health and medical support during any all-hazards event.

Since July 1, 2012, KDPH has activated the State Health Operations Center (SHOC) greater than 62 times. During these activations, KDPH provided ESF-8 support for various events involving suspicious packages (white powder), severe weather, flooding, power outages, wildland fires, contaminated medications, train derailments, disease outbreaks, influenza activity, chemical spills, water shortages, and emerging infectious diseases such as Ebola Virus Disease and Zika Virus Disease. In addition, KDPH activated the SHOC and deployed incident management personnel to provide ESF-8 support to local jurisdictions for annual planned events including the Kentucky Oaks and Derby, Thunder Over Louisville, and Kentucky Speedway. Such experience in dealing with natural disasters and mass gathering events provides a paradoxically perverse need for continued planning, equipping, training, and exercising to enhance Kentucky's ability to respond to real-life emergencies and disasters that could impact the health and safety of Kentucky's population.

Public Health and Medical Preparedness Program

Throughout the last five years, the Kentucky Department for Public Health (KDPH) has worked diligently in collaboration with many of its healthcare coalitions and partners to enhance the capacity of local health departments (LHDs) to protect and increase the resiliency of their communities. While this grant cycle of five years may have come to a close, many of KDPH's preparedness-related projects can still serve as a valuable resource to local preparedness staff in the next grant cycle (2017-2022). This document is a compilation of the past five years from fiscal years (FY)12 through FY17. The review serves as a report out to the public regarding the current status of the Public Health and Medical Preparedness Program. KDPH plays an important role in safeguarding Kentucky while reducing risk, promoting benefits, and enhancing community preparedness. This document highlights the accomplishments that have come to fruition through these efforts including real-world responses to Ebola and Zika Virus Disease, severe weather, mobile pharmacy operations, and ongoing training and exercises. FY12 through FY17 were banner years, continuing the upwards trend in the sustainability of our emergency preparedness infrastructure. With this in mind, the KDPH Preparedness Team compiled this document to highlight the many important accomplishments that were achieved in the selection of the five years featured programs, real-world events, trainings, exercises, and partnerships.



(Pictured from Left to Right: Jim House, (KDPH) Deborah Arnold (KCCRB), Michael Poynter (KBEMS), Dr. Kraig Humbaugh (KDPH) and Rebecca Gillis (KDPH).

On October 16, 2013 the ESF 8 Annex was signed by the Primary ESF 8 Agencies during the Health and Medical Preparedness Advisory Committee meeting. The Emergency Support Function (ESF) 8 – Public Health and Medical Services Annex defines how Kentucky's ESF 8 Agencies will coordinate public health and medical related preparedness, response, and recovery activities for any event that occurs within the Commonwealth of Kentucky.

KDPH has the overall responsibility for the maintenance of the ESF 8 Annex in collaboration with the Kentucky Board of Emergency Medical Services (KBEMS) and the Kentucky Community Crisis Response Board (KCCRB). KDPH, KBEMS, and KCCRB serve as Kentucky's ESF 8 Primary Agencies .

Public Health Preparedness Capabilities

Kentucky's Public Health and Medical Preparedness Program is built upon the Capabilities defined by the Center for Disease Control and Prevention (CDC) and the Assistant Secretary for Preparedness and Response (ASPR). There are 15 Public Health Preparedness Capabilities and eight Healthcare Preparedness Capabilities.

Capability 1: Community preparedness is the ability of communities to prepare for, withstand and recover, in both short and long term, from public health incidents. Major Programs Associated: Functional and Access Needs (FAN) and Severe Weather Safe Haven Sites

Capability 2: Community recovery is the ability to collaborate with community partners, (e.g., healthcare organizations, business, education, and emergency management) to plan and advocate for the rebuilding of public health, medical, and mental/ behavioral health systems to at least a level of functioning comparable to pre-incident levels, and improved levels where possible. Major Programs Associated: COOP Planning, Recovery workgroups and Kentucky Community Crisis Response Board (KCCRB) Strike Teams

Capability 3: Emergency operations coordination is the ability to direct and support an event or incident with public health or medical implications by establishing a standardized, scalable system of oversight, organization, and supervision consistent with jurisdictional standards and practices and with the National Incident Management System. Major Programs Associated: Emergency Support Function (ESF– 8)

Capability 4: Emergency public information and warning is the ability to develop, coordinate, and disseminate information, alerts, warnings, and notifications to the public and incident management responders. Major Programs Associated: Kentucky Outreach Information Network (KOIN) and Public

Information Officer (PIO)

Capability 5: Fatality management is the ability to coordinate with other organizations (e.g., law enforcement, healthcare, emergency management, and medical examiner/coroner) to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains and personal effects; certify cause of death; and facilitate access to mental/ behavioral health services to the family members, responders, and survivors of an incident. Major Programs Associated: Mortality Data Management System (MDMS), Family Assistance Center (FAC) and Victim Identification System

Capability 6: Information sharing is the ability to conduct multijurisdictional, multidisciplinary exchange of health-related information and situational awareness data among federal, state, local, territorial, and tribal levels of government, and the private sector. This capability includes the routine sharing of information as well as issuing of public health alerts to federal, state, local, territorial, and tribal levels of government and the private sector in preparation for, and in response to, events or incidents of public health significance. Major Programs Associated: An internet based emergency management information sharing system called WebEOC, Health Alert Network (HAN), and the National Electronic Disease Surveillance System (NEDSS)

Capability 7: Mass care is the ability to coordinate with partner agencies to address the public health, medical, and mental/behavioral health needs of those impacted by an incident at a congregate location. This capability includes the coordination of ongoing surveillance and assessment to ensure that health needs continue to be met as the incident evolves. Major Programs Associated: Functional Assessment Service Teams (FAST), Epidemiology Surveillance and Environmental Surveillance and Inspection

Public Health Emergency Preparedness Capabilities

Capability 8: Medical countermeasure dispensing is the ability to provide medical countermeasures (including vaccines, antiviral drugs, antibiotics, anti-toxin, etc.) in support of treatment or prophylaxis (oral or vaccination) to the identified population in accordance with public health guidelines and/or recommendations. Major Programs Associated: Cities Readiness Initiative (CRI) and Points of Dispensing (POD)

Capability 9: Medical materiel management and distribution is the ability to acquire, maintain (e.g., cold chain storage or other storage protocol), transport, distribute, and track medical materiel (e.g., pharmaceuticals, gloves, masks, and ventilators) during an incident and to recover and account for unused medical materiel, as necessary, after an incident. Major Programs Associated: Strategic National Stockpile (SNS) and Receiving, Staging, Storage (RSS)

Capability 10: Medical surge is the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. It encompasses the ability of the healthcare system to survive a hazard impact and maintain or rapidly recover operations that were compromised. Major Programs Associated: Hospital Preparedness Coalition (HPC) and Regional HPC Coordinators

Capability 11: 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. Such strategies may include isolation, quarantine and hygiene. Major Programs Associated: Disease Outbreak and Pandemic Flu

Capability 12: Public health laboratory testing is the ability to conduct rapid and conventional detection, characterization, confirmatory testing, data reporting, investigative support, and laboratory

networking to address actual or potential exposure to all-hazards. Hazards include chemical, radiological, and biological agents in multiple matrices that may include clinical samples, food, and environmental samples (e.g., water, air, and soil). This capability supports routine surveillance, including pre-event or pre-incident and post-exposure activities. Major Programs Associated: Laboratory Response Network (LRN)

Capability 13: Public health surveillance and epidemiological investigation is the ability to create, maintain, support, and strengthen routine surveillance and detection systems and epidemiological investigation processes, as well as to expand these systems and processes in response to incidents of public health significance. Major Programs Associated: Epidemiology Rapid Response Team, Building Epidemiological Capacity in Kentucky (BECKY) and Regional Epidemiologists

Capability 14: The responder safety and health capability describes the ability to protect public health agency staff responding to an incident and the ability to support the health and safety needs of hospital and medical facility personnel, if requested. Major Programs Associated: Occupational Safety and Health Administration (OSHA), The National Institute for Occupational Safety and Health (NIOSH)

Capability 15: Volunteer management is the ability to coordinate the identification, recruitment, registration, credential verification, training, and engagement of volunteers to support the jurisdictional public health agency's response to incidents of public health significance. Major Programs Associated: Kentucky Health Emergency Listing of Professionals for Surge (K HELPS), Medical Reserve Corps (MRC) and Voluntary Organizations Active in Disaster (VOAD)

Healthcare Preparedness Capabilities

Capability 1: Healthcare system preparedness is the ability of a community's healthcare system to prepare, respond, and recover from incidents that have a public health and medical impact in the short and long term. The healthcare system role in community preparedness involves coordination with emergency management, public health, mental/behavioral health providers, community and faith-based partners, state, local, and territorial governments to do the following: Provide and sustain a tiered, scalable, and flexible approach to attain needed disaster response and recovery capabilities while not jeopardizing services to individuals in the community; (1) Provide timely monitoring and management of resources, (2) Coordinate the allocation of emergency medical care resources, (3) Provide timely and relevant information on the status of the incident and healthcare system to key stakeholders. Healthcare system preparedness is achieved through a continuous cycle of planning, organizing and equipping, training, exercises, evaluations and corrective actions.

Capability 2: Healthcare system recovery involves the collaboration with Emergency Management and other community partners, (e.g., public health, business, and education) to develop efficient processes and advocate for the rebuilding of public health, medical, and mental/behavioral health systems to at least a level of functioning comparable to pre-incident levels and improved levels where possible. The focus is an effective and efficient return to normalcy or a new standard of normalcy for the provision of healthcare delivery to the community.

Capability 3: Emergency operations coordination regarding healthcare is the ability for healthcare organizations to engage with incident management at the Emergency Operations Center or with on-scene incident management during an incident to coordinate information and resource allocation for affected healthcare organizations. This is done through multi-agency coordination representing healthcare organizations or by integrating this coordination into plans and protocols that guide incident management to make the appropriate decisions. Coordination ensures that the healthcare organizations, incident management, and the public have relevant and timely information about the status and needs of the healthcare delivery system in the community. This enables healthcare organizations to coordinate their response with that of the community response and according to the framework of the National Incident Management System (NIMS).

Capability 5: Fatality management is the ability to coordinate with organizations (e.g., law enforcement, healthcare, emergency management, and medical examiner/coroner) to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains and personal effects; certify cause of death; and facilitate access to mental/behavioral health services for family members, responders, and survivors of an incident. Coordination also includes the proper and culturally sensitive storage of human remains during periods of increased deaths at healthcare organizations during an incident.

Capability 6: Information sharing is the ability to conduct multijurisdictional, multidisciplinary exchange of public health and medical related information and situational awareness between the healthcare system and local, state, Federal, tribal, and territorial levels of government and the private sector. This includes the sharing of healthcare information through routine coordination with the Joint Information System for dissemination to the local, state, and Federal levels of government and the community in preparation for and response to events or incidents of public health and medical significance.

Capability 10: The Medical surge capability is the ability to provide adequate medical evaluation and care during incidents that exceed the limits of the normal medical infrastructure within the community. This encompasses the ability of healthcare organizations to survive an all-hazards incident, and maintain or rapidly recover operations that were compromised.

Capability 14: The responder safety and health capability describes the ability of healthcare organizations to protect the safety and health of healthcare workers from a variety of hazards during emergencies and disasters. This includes processes to equip, train, and provide other resources needed to ensure healthcare workers at the highest risk for adverse exposure, illness, and injury are adequately protected from all hazards during response and recovery operations.

Capability 15: Volunteer management is the ability to coordinate the identification, recruitment, registration, credential verification, training, engagement, and retention of volunteers to support healthcare organizations with the medical preparedness and response to incidents and events.

National Preparedness Cycle

The National Incident Management System (NIMS) defines preparedness as "a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response." This 'preparedness cycle' is one element of a broader National Preparedness System to prevent, respond to, recover from, and mitigate against natural disasters, acts of terrorism, and other man-made disasters. The following includes some examples of KDPH's preparedness cycle activities for 2012-2017:



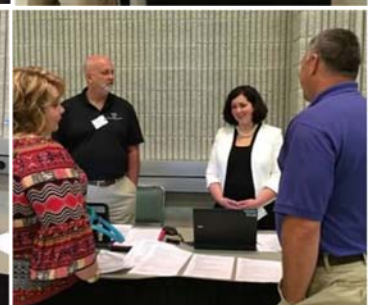
- Plan
 - The State Health Operations Center Support Plan
 - Kentucky Mass Casualty Incident Support Plan
 - Disease Outbreak Support Plan
 - Kentucky's Ebola Response Plan
 - Emergency Communication Plan
 - Multi-year Training and Exercise Plan
- Organize and Equip
 - Information Sharing (WebEOC, Satellite Radios, HAN, K HELPS)
 - Major Equipment: Pharmacy Trailer, Mobile Hospital, Mobile Operation Units, Mass Fatality Units, Medical Surge Trailers, Federal Medical Station, Preparedness Program vehicles, generators
- Train
 - Incident Command System (ICS) classes
 - Epidemiology Rapid Response Team (ERRT)/National Electronic Disease Surveillance System (NEDSS)
 - Public Information Officer (PIO)
 - Functional and Access Needs (FAN) Awareness
 - Lab Specimen Collection
 - Medical Reserve Corps (MRC) Volunteers
 - Nuts and Bolts of Preparedness
 - Federal Medical Station
 - Local Health Department Ebola Personal Protective Equipment (PPE) Video
- Exercise
 - HAvBED, Satellite Radio and Notification Drills
 - Strategic National Stockpile (SNS) and Cities Readiness Initiative (CRI) Full Scale Exercises
 - Continuity of Operations (COOP) and Ebola Exercises
 - Interagency Training and Exercise Planning Workshop
- Evaluate and Improve
 - Readiness Review
 - After Action Report (AAR)/ Improvement Plan (IP)

Annual Conferences

The ESF-8 Conference was held June 9– 11, 2014 at the Crowne Plaza Hotel in Louisville. Over 368 Public Health Preparedness staff and ESF-8 partners were in attendance. The conference attracted top-notch speakers with expertise that included lessons learned from recent statewide events. It also provided cutting-edge information for 43 sessions including: Nuts and Bolts, Pet Preparedness, Pet CPR, Pharmacy’s Role in Emergency Preparedness (with a tour of the mobile pharmacy), Disaster Epidemiology and Surveillance, Human Trafficking, Crisis Standards of Care and several interactive sessions addressing Preparedness in Long Term Care facilities. This year’s conference was a successful way to engage public health professionals and enhance their knowledge on disasters as well as other public health emergencies.



On May 11th and 12th, approximately 130 Public Health Preparedness Staff from across the Commonwealth traveled to the Center for Rural Development in Somerset Kentucky for the 2016 Kentucky Preparedness Summit. Participants attended a variety of sessions all driven by local input and suggestion derived from the 2015 Summit Evaluations and the November 2015 Joint Meeting Summit Topic Idea discussion activity. Two exercises took place during the Summit. Day one included a Mock State Health Operations Center (SHOC) in which local health department staff was given the opportunity to gain insight into how the SHOC functions during local responses. Other activities included WebEOC training, Resource Request training, as well as an overview of the Federal Medical Station (FMS) KY has available for deployment including cots, baby cribs and Hoya lifts. Day two included an exercise to demonstrate how to set up a Zumro tent, an asset available within each HPC region.



Tornado Response of 2012

Tornados are among the most prevalent natural disasters we face in Kentucky and require much of our focused preparedness efforts. We are still providing support and assisting in recovery as we look back to the tornados of 2012. Tornados swept across the Midwest and the South on Friday, March 2, 2012 hitting hardest in Indiana, Kentucky and Ohio. Kentucky had a total of 24 fatalities.

Laurel County



Kenton County



West Liberty—Morgan County



Trimble County— Milton Fire and Rescue Station 2



Magoffin County

Winter Storm Responses 2014-2016

The winter of 2014-2015 will be remembered as the series of winter storms and extreme cold weather that occurred during the last two weeks of February and first week of March. The first major event began on Monday, February 16th and lasted until Sunday, February 21st; KDPH activated the State Health Operations Center (SHOC) to Level 2 in anticipation of ESF 8 – Public Health and Medical resource requests from local health departments. During this timeframe, much of the state experienced double digit snow totals with parts of eastern Kentucky seeing up to 18" of precipitation. For the second time in two weeks, Kentucky experienced a complex two-day weather event which began with heavy rainfall on March 3rd and transitioned over to heavy, record setting snowfall on the night of March 4th and 5th, followed by record breaking cold and flooding. The Northern portion of the state had snow accumulation estimated at 8-12 inches in many counties. Central and Western Kentucky experienced heavy precipitation along the state parkways with totals of 12-24 inches. The snowfall throughout Central and Western Kentucky was nothing short of amazing. Like the previous weather event in late February, this storm was preceded by heavy rain and record breaking cold temperatures. The rain from days prior combined with extremely wet melting snow packs resulted in extensive water runoffs and widespread flooding in rivers, creeks and streams. The majority of creeks and rivers in Central and Eastern Kentucky either approached or surpassed flood stage. However, years of work by state agencies resulted in mitigating a number of areas from being heavily flooded like in the record breaking flood of 2009.



Next we had Winter Storm Jonas which began on January 22, 2016. Winter Storm Jonas followed the forecast and much of Central and Eastern Kentucky experienced double digit snow totals with parts of eastern Kentucky seeing the most, where many places picked up to 12-16" of precipitation. The snow that fell during this time marked the second widespread double digit snowstorm in as many years. It was 1998 since the state last had a wide spread double digit snowstorm. As if the snow wasn't enough, the existing snowpack on the ground resulted in record breaking low temperatures, with the wind chill several degrees below zero from January 22nd to January 23rd.



2014 LHD Emergency Responses

Lincoln County Board of Education Fire with Boyle County MRC

On August 6, 2014, the Lincoln County Emergency Management and Stanford EMS requested firefighter rehab assistance from Boyle and Mercer Medical Reserve Corps (MRC) Units. A total of six Boyle MRC volunteers and one Mercer MRC volunteer and RPC for Region 15 South responded with eight volunteers on stand-by. A total of 25 hours were donated. MRC volunteers distributed water, Gatorade, food and wet, cool washcloths to the responders.



Pictured above: Brent Blevins (Boyle HD Director and MRC Coordinator) and Patty Simpson (Boyle MRC volunteer) working the rehab tent for firefighters on the Lincoln Board of Education fire.

Owen County Water Response

On January 7, 2014 a Kentucky American water main break in Owenton left much of Owen County without water. Water was not fully restored to the county for nearly a week. A boil water advisory was put in place and water distribution locations established across the county.

Three Rivers District Health Department (TRDHD) responded rapidly to the water emergency. TRDHD collaborated with Emergency Management and a local Kroger store to secure an early shipment of gallon water jugs which were distributed to risk based populations as well as the local physicians, dentists and medical facilities. TRDHD home health nurses brought bottled water to their patients; environmentalists worked with local businesses to ensure compliance with environmental regulations while attempting to keep them operational; Health Department personnel worked with Owen County Emergency Management to ensure water distribution at New Horizons Hospital, Owenton Manor, and the Jonesville long term care facility and checked on these locations regularly; TRDHD provided public information and guidance to Owen county residents, Owen county Judge Carolyn Keith, and Owen county EM; and the Department opened its Operations Center to prepare situation reports and log events on WebEOC.



Montgomery County Arsenic Response

On August 26, 2016, the Montgomery County Health Department was notified of an environmental incident on Long Lane located in Montgomery County. The Department of Environmental Protection was deployed to Long Lane where they spot-tested soil samples with unusual high readings of Arsenic and other heavy metals that were in the ground. Current residents were residing on top of a former wood treatment plant, Southern Wood Treatment Company, that closed in 1984. The plant site used ammoniacal copper arsenite (ACA) to treat wood. The operations of the facility resulted in significant releases of ACA to the environment. The company did not restore or remediate releases at the site and at some point after 1998, without the Energy and Environment Cabinet's knowledge, the site was subdivided with numerous residences (in the form of mobile homes and modular homes).

The arsenic contamination levels present at the site exceeded the cancer risk screening levels in excess of 3,700 to 45,000 times the acceptable level for residential land; and the soil at 10 of these residences are impacted at the surface, therefore creating an open exposure pathway to residents to the contamination. The Energy and Environment Cabinet declared an environmental emergency to conduct remediation designed to prevent citizens from being exposed to arsenic at the site through soil removal and soil capping.

The Montgomery County Health Department (MCHD) consulted with an arsenic exposure expert from the University of Louisville and collaborated with the Regional Epidemiologist, Environmental Protection, Kentucky Department for Public Health and University of Kentucky to meet with the residents in the area to create the best plan of action. On September 7, 2016, 22 team members, including the University of Kentucky K-PHAST, traveled to the site to complete surveys with 100% of the residents. They collected toenail samples for testing at the University of Kentucky.

Governor Matthew Bevin, Governor of the Commonwealth of Kentucky, declared a State of Emergency on December 22, 2016 and requested assistance from the Department of Military Affairs to implement a response plan.



Eastern KY Floods of 2015

On the night of July 13, 2015 a storm left a large footprint on several counties in Kentucky, but wreaked havoc in Johnson County. The State Health Operations Center (SHOC) activated on July 14-15 to respond to any ESF-8 unmet needs and monitor multiple shelters that were open during the flood. Johnson and Rowan counties saw the worst of the flooding. Four inches of rain fell in about an hour that Monday night and Kentucky Emergency Management stated that more rain was expected Tuesday afternoon, raising fears of additional flooding across Eastern KY. Kentucky Power reported 19,000 people were without power in Eastern Kentucky. In addition there were 4 confirmed weather related deaths and authorities spent the next few weeks trying to locate several other people who were reported missing. Homes were destroyed, families were displaced and former Governor Steve Beshear declared a state of emergency the following day to provide assistance to local officials in Johnson and the surrounding area. Johnson County Emergency Management Officials says more than 150 homes were destroyed, but 500 homes housing 1,200 people were affected to some extent. Debris, weather and high waters have all created challenges for rescue efforts. KCCRB deployed a team of three to provide services to the victims in Johnson County and the Johnson County Health Department gave Tetanus vaccines to first responders and area residents.



Community-based Methicillin-Resistant Staphylococcus (MRSA)

December 16, 2013, USA Today published an article on the investigation of a MRSA outbreak in Kentucky lead by Drs. Matthew Groenewold and Marion Pennington of the Kentucky Department of Public Health.

Over the course of a few days in March 2013, Saint Joseph-London Hospital in London, KY, admitted three patients who tested positive for MRSA, a deadly bacteria. Two of the patients quickly died, while the third turned out to be the only survivor after spending three weeks in a coma. The hospital ordered that any new patient with respiratory symptoms be isolated and tested for MRSA. They notified the Kentucky Department for Public Health, which alerted other hospitals and healthcare providers in the region to watch for symptoms and report cases; a few cases of now-deceased patients were identified with the same strain of MRSA, but all the cases were isolated.

Ultimately, the investigators focused on six cases. Community-associated MRSA was confirmed in four. In two, the strain was suspected but not confirmed because the patients hadn't been tested. The epidemiologists developed a hypothesis. All six victims were infected after catching a late-season flu. Perhaps the MRSA was there all along, the investigators reasoned, and the flu simply weakened the patients' immune systems enough for it to take over.

Groenewold says the theory rests partly on indications that the region has high MRSA "carriage rates" – a high percentage of people who carry the bacteria on their skin. The MRSA goes unnoticed until a bad flu sweeps in and then serious infections crop up sporadically. "We concluded that this wasn't something that was common, but probably wasn't rare either," Groenewold says. Because there's no systematic tracking of cases, he says, "we just don't know how often this is happening."

Currently Dr. Groenewold is an epidemiologist and a Lieutenant Commander in the Commissioned Corps of the United States Public Health Service assigned to the Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH), where he conducts occupational health research and surveillance in Cincinnati, Ohio and Dr. Pennington is now working for the United States Department of Agriculture.



Dr. Matthew Groenewold, CDC Epidemiologist



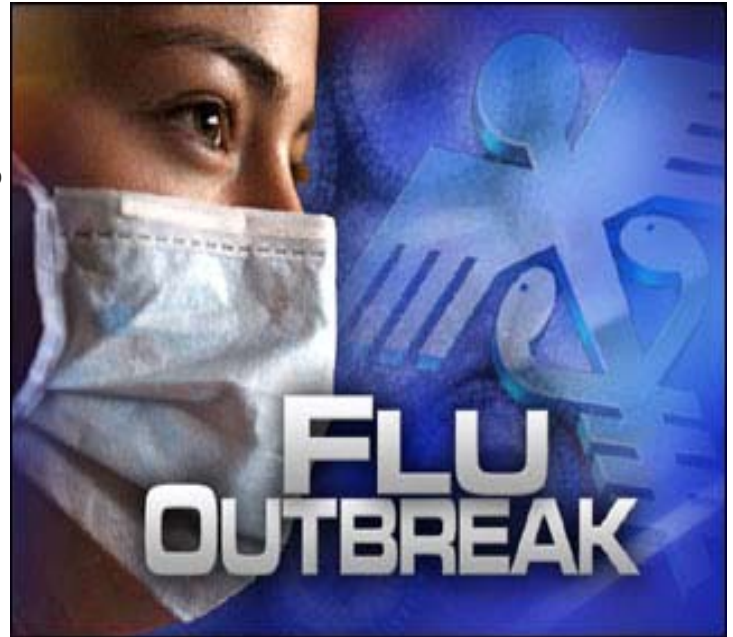
Dr. Marion Pennington, the Regional Epidemiologist who helped lead the investigation

FIVCO Flu and Multi-State Fungal Meningitis Outbreaks

In October 2015, King's Daughters Medical Center (KDMC) in Boyd County acquired single-pathogen PCR machines to test for influenza in their facilities. This switch in testing led to a dramatic increase in influenza cases reported to and investigated by the local health departments (LHDs) in the FIVCO Area. In total, 1,522 cases were reported and 58% were interviewed by a LHD staff member. The LHD's spent approximately 1,500 hours on the investigation at a cost of \$45,000.00.

Prior to 2015, influenza surveillance in the FIVCO area was limited to a few pediatricians/primary care providers and hospitals that reported rapid test numbers to the regional epidemiologist. Each year a few samples were submitted to DLS for subtype testing. In 2014, KDMC obtained a multi-pathogen respiratory PCR machine for in-patient testing and in 2015 they obtained single-pathogen machines for testing of all patients with ILI at all of their facilities in the tri-state area.

KDMC began reporting positive influenza PCR results into NEDSS in January 2016, after a reminder from the regional epidemiologist was sent out. In February 2015, it was determined that a potential outbreak may be developing in the FIVCO region and a regional outbreak number was issued on February 19, 2016. Each LHD activated their ERRT team to assist with investigation activities.



From October 24, 2012 through October 30, 2012, the Kentucky Department for Public Health (KDPH) activated its State Health Operations Center (SHOC) to a Level 2 (partially activated) to support an epidemiological investigation into a multi-state fungal meningitis outbreak. During this response, KDPH addressed 5 of the 37 capabilities from the Department of Homeland Security's Target Capabilities List (TCL); Planning, Intelligence and Information Sharing and Dissemination, Epidemiological Surveillance and Investigation, Laboratory Testing, and Emergency Operations Center Management. In addition, KDPH addressed 4 of the 15 capabilities from Centers for Disease Control and Prevention's (CDC) Public Health Emergency Program (PHEP); Emergency Operations Coordination, Information Sharing, Public Health Laboratory Testing, and Public Health Surveillance and Epidemiological Investigation. KDPH coordinated with multiple agencies at the local, state, and federal level including; the Tennessee Department of Health, Ohio Department of Health, Indiana Department of Health, Local Health Departments, Local Law Enforcement agencies, St. Thomas Hospital, Kentucky Division of Emergency Management, and the Centers for Disease Control and Prevention.

The outbreak was first recognized by the Tennessee Department of Health in September 2012. During the investigation, the Centers for Disease Control and Prevention (CDC), in collaboration with state and local health departments and the Food and Drug Administration (FDA), linked the New England Compounding Center (NECC) as the source of the outbreak. The fungal meningitis exposure in patients was due to one of three contaminated lots of a steroid injection containing preservative-free methylprednisolone acetate (MPA) compounded by the NECC. A total of 207 Kentucky residents received either an epidural or joint steroid injection from one or more of the three identified lots in one of three states - Tennessee, Ohio, and Indiana - all of which informed KDPH of these exposures.

Tainted Steroid Injections
Causes Multi-State
Meningitis Outbreak



MRC Events Across the Bluegrass

Rugged Red Half Marathon

On September 6, 2014 Powell County Medical Reserve Corps, Kentucky River Medical Reserve Corps, Boyle County Medical Reserve Corps and Madison County Reserve Corps worked in collaboration to host a recovery tent for the Rugged Red Half Marathon. Kentucky Department for Public Health Regional Preparedness Coordinators from Region 8/9, Region 12 and Region 15N participated in planning meetings and worked the recovery tent. Kentucky River Medical Reserve Corps mobilized their 7x16 box trailer and recovery tent for this event. Madison County MRC provided

a first aid kit, cooling blankets and vests. Region 8/9 HPP provided mobile radios that were utilized for the Rugged Red event. The medical volunteers were from Madison County MRC and Kentucky River MRC. Boyle County MRC and Powell County MRC made up non-medical volunteers. The Recovery Tent was a success at the event; 30 of the race participants were seen at the tent with multiple sprains/strains, dehydration, heat exhaustion, cramping and allergic reactions being just some of the symptoms that were treated by the recovery tent team.



Green River District MRC Volunteers

Volunteers participated in events such as; ROMP bluegrass music festival, county fairs, various exercises, airshows, better bites, and blood drives.



MRC Exercises

Region 1 MRC Volunteers

The Mass Casualty Exercise planned by the Ballard County Office of Emergency Management on July 14, 2014 was a great success. The event started with a 911 call reporting a school bus and two car collision. As first responders arrived they found twenty-five students and one adult trapped in the bus. Region One MRC members were on standby to act as parents and grandparents arriving on scene.



Eastern KY MRC Units and Volunteers



KY River District MRC with Knott County ATC HOSA



The Montgomery County MRC held a "Grill and Drill" in Mt. Sterling



Lawrence County Pet Shelter



Functional and Access Needs (FAN)

Strategic planning and coordination at the state and local levels are critical for effective emergency response which meets the needs of populations with functional and access needs (FAN). To address this, the Kentucky Department for Public Health (KDPH) conducted a Jurisdictional FAN Population Risk assessment evaluating health vulnerabilities and assets throughout Kentucky. The assessment was carried out in accordance with Centers for Disease Control and Prevention's (CDC) Community Preparedness and Healthcare Preparedness capabilities. Data from the assessment were used to develop the Health Risks & Resources tools.

Health Risks & Resources Across Kentucky is a set of data and mapping tools developed to support public health preparedness and response efforts in Kentucky. The tools serve as a resource to local health departments and Emergency Support Function (ESF) 8 partners by providing access to county-level health and disability data as well as location points critical to public health planning and response. Greater understanding of local health vulnerabilities promotes community-focused planning efforts. KDPH expands Kentucky's ESF-8 response capacity by including location information for ESF-8 related sites. Additionally, KDPH promotes proactive personal readiness of Kentuckians by providing the information on a public website. <http://safekentucky.org/index.php/preparedness>



Functional Assessment Service Teams (FAST)

Functional Assessment Service Teams (FAST) is a resource that is available to communities during times of disasters and emergencies.

The purpose of FAST is to provide trained staff who are able to respond to local disaster area shelters in order to assess and identify residents who may have functional and access needs. The assessment will evaluate the needs and determine whether or not these individuals can be supported within the general population shelter. FAST will also assist in facilitating the process of obtaining essential resources for the shelter residents with functional and access needs.

FAST is a critical component of Mass Care, Capability 7 and Community Preparedness, Capability 1.



Pictured above: Kenyetta Pinkston, former FAN Coordinator, presented at the Green River District MRC meeting.

Bluegrass Airport Full-Scale Disaster Exercise

Every three years, the Blue Grass Airport holds a full-scale emergency training exercise where they mock a plane crash. Members of the Region 15 Healthcare Coalition recently participated in the Full Scale Exercise, which occurred on April 11, 2017. This was the first year in which the airport exercise planners have involved more off site hospital participation. Organizers brought in nearly 300 participants to make the exercise as realistic as possible. Overall, the hospitals were able to process more than 160 patients without much difficulty. A total of 7 MRC volunteers from MRC and 33 HOSA students from Elkhorn Crossing in Georgetown participated in the exercise.



Tri-State SNS Exercise Event

Tri-State Strategic National Stockpile (SNS) Exercise Event

The release of aerosolized anthrax in the Cincinnati metro area would require considerable coordination from both state and local public health officials, emergency management, and other response partners from Ohio, Kentucky and Indiana. This was the main focus of the full-scale SNS Exercise, Operation Mutual Aid, held on April 16 and 17, 2014. Bracken County, Three Rivers, Northern Kentucky Health Departments and Kentucky Department for Public Health spearheaded the event in Kentucky.

The exercise tested players' ability to coordinate emergency operations, receive and distribute SNS assets, inform the public about the situation, and dispense the medications to the public.

More than 150 people participated in the activities at the Burlington Readiness Center. Representatives from the KDPH Preparedness Branch, Emergency Management Agencies, other public health agencies, and MRC volunteers supported the exercise.

Operation Mutual Aid was a highly successful exercise for Northern Kentucky CRI jurisdiction. Each of the capabilities tested and each of the Centers for Disease Control (CDC) performance objectives assessed were performed without challenges.



Region 4 CHEMPACK Full Scale Exercise

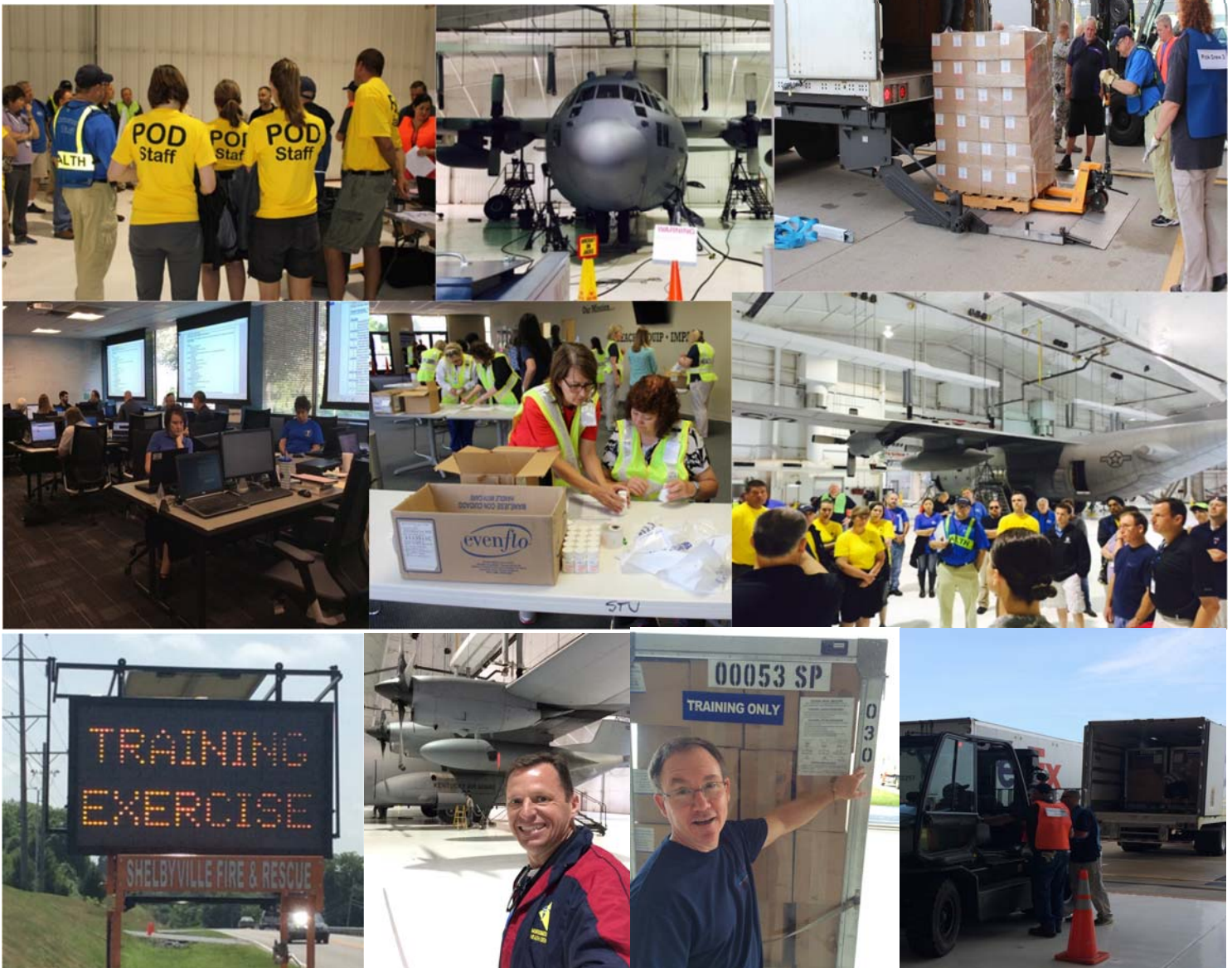
On April 27, 2017 a CHEMPACK exercise was conducted to test broad responses to an accidental chemical nerve agent release in Region 4. The exercise served as the Region's Hospital Preparedness Programs (HPP) 5-year Qualifying exercise. This exercise demonstrated the region's capability to request and quickly deploy CHEMPACK assets for a large-scale exposure to a chemical nerve agent event. This was the first time in Kentucky the assets were flown into a location by helicopter in order to be deployed. This exercise also demonstrated the ability of healthcare facilities to respond and recover from a medical surge event. Participants included: Kentucky's Region 4 Healthcare Coalition "HEART" (Healthcare Emergency Area 4 Response Team); Region 4 healthcare facilities (8 hospitals, 13 LTC and 2 rehabilitation centers); Kentucky State Police; Air Methods; Monroe County: Fire Departments, 911 center, Sheriff's Dept., EMS, Tompkinsville Police Dept.; Kentucky Department for Public Health, Kentucky Fire Commission Area 4, Red Cross, University of Louisville (OVAR Geriatric Education Center) and Region 4 Health Departments.



State SNS & Louisville CRI Jurisdiction Full Scale Exercise of 2015

The Kentucky Department of Public Health (KDPH) developed and conducted the 2015 Strategic National Stockpile (SNS) and Louisville Cities Readiness Initiative (CRI) Full Scale Exercise (FSE) which took place on the 16th, 17th, and 18th of June 2015. This full scale exercise was designed to test and evaluate the state's ability to request, receive and distribute critical medical materiel and resources as operationalized according to the KDPH SNS Plan.

This exercise was developed to address capabilities related to Public Health Preparedness, Healthcare Preparedness and CRI. In addition it tested a wide range of plans and policies related to an initial healthcare response to a release of weaponized anthrax spores at a major sporting event in the downtown Louisville. Capabilities were tested from an activated State Health Operations Center (SHOC) and through coordination with healthcare and emergency management agencies within the Cities Readiness Initiative. The exercise included many locations and several local health departments conducted exercises in conjunction with this exercise. Louisville Metro Public Health and Wellness conducted a drive-thru POD at the Louisville Fairgrounds and North Central District Health Department conducted a walk-thru POD supported with staff from several local health departments.



Fatality Management



Region 1 Shake and Bake Full-Scale

On October 27, 2016, the Region One Healthcare Coalition (HCC) conducted a 3-hour Functional Exercise (FE) titled, "Shake and Bake FE" which was developed using an earthquake scenario. This FE was developed and conducted following a multiyear building block approach through the conduct of a series of exercises including the 2015 "Shaken Not Stirred" FE and regularly scheduled quarterly communication and HAVBED drills. There were well over 80 personnel from the counties of McCracken, Graves, Marshall, Calloway, Ballard, Carlisle, Hickman, and Fulton and from state agencies who participated in the exercise as players, evaluators, or volunteers. This included assigned personnel and volunteers from all five hospitals in the region, local and state public health agencies, one university, emergency management agencies (local, regional, and state), EMS agencies, and long term care facilities.



Two Exercises at Lexington-Bluegrass Airport

Lexington-Bluegrass Airport hosted two exercises on April 9, 2014. The first exercise involved a National Disaster Medical System (NDMS) alert as a result of an earthquake and tornado in Oklahoma. Lexington VA established a command post near the airport hangar and a C-130 brought patients to be triaged and transported to community hospitals. The second was a full scale exercise mandated by the Federal Aviation Administration. This year's exercise involved nearly 170 volunteer victims, as well as fire and EMS departments from Bluegrass Airport, Lexington, Nicholasville and Versailles and other surrounding jurisdictions. In an effort to validate HPP Region 15's mass fatality planning, coroners from multiple counties were on hand to participate as well.



Rumble in the Region

On April 28, 2014 Lawrence County Health Department held a Mass Fatality Family Assistance Center Table Top Exercise. There were 18 different state, county and media agencies and 30 people participating in the exercise. The scenario had a helicopter crashing into the ER of Three Rivers Medical Center with 32 fatalities and numerous injured from the event. The room was set up by disciplines and everyone interacted throughout the exercise.



Region 5 HPC Exercise

On June 19, 2014 Region 5 hosted a Mass Fatality Exercise. Nearly 100 people from several different agencies attended including local coroners, hospitals, long term care facilities, law enforcement, Emergency Management, EMS, 911 Services, Local Fire Departments, Amateur Radio Emergency Service, Red Cross, federal counterparts at Ft. Knox along and public health from eight counties.

Healthcare Coalition Exercise Events

Region 12 HPC Exercise – Twisted Mountains

The Region 12 Healthcare Planning Coalition held a Full Scale Exercise on May 22, 2014. The purpose of the exercise was to increase the level of all-hazards preparedness of capabilities of hospitals, other healthcare facilities, trauma care and emergency medical service systems in cooperation with community response agencies. Thirteen agencies participated in exercise. The exercise was a success with great participation throughout the region including four local hospitals participated through satellite phone, setting up their EOCs and running their decontamination sites onsite at their facilities, while other agencies participated at Eastern Kentucky Veteran's Center.



Region 3 HPC Functional Exercise– Twisted Winter

The Green River District Healthcare Preparedness Coalition (Region 3) recently fulfilled a grant requirement and participated in a Functional Exercise on January 25, 2017. The exercise was built upon a tornado scenario that affected all seven counties in the Region Three Healthcare Coalition. All four acute care hospitals and other healthcare/ESF-8 partners collaborated (including all seven county Emergency Managers) to provide emergency operations coordination, information sharing, medical surge operations, and continuity of care during the event.

Region 2 HCC Functional Exercise

Region 2 Health Care Coalition recently completed a Functional Exercise based upon the Total Eclipse that is a real-life event taking place in August of this year. The Coalition is made up of nine counties in Western Kentucky and seven hospitals and other healthcare/ESF-8 partners. There were over 120 participants during the exercise from the Regional Coalition, Regional Emergency Management, U of L, and KDPH, that worked through information that was sent out concerning events that could possible take place during the Total Eclipse.



Region 14 HPC First Receivers Training and Train-the-Trainer

Region 14 HPC conducted First Receivers Training and First Receivers Train-the-Trainer in 2014. During this training, HPC members learned how to develop a first receivers hospital based program while conducting hazardous materials research and learning to properly don/doff appropriate PPE.

Public Health Laboratory Testing

The Kentucky Division of Laboratory Services (DLS) works closely with public health epidemiology (EPI), environmental health, law enforcement, agriculture, veterinary officials, hospitals and other agencies to produce timely and accurate data to support ongoing public health investigations. They also play an important role in the implementation of appropriate preventive or curative countermeasures.

As a principal component of Capability 12, the Public Health Laboratory currently has 50 staff members who perform approximately 3,000,000 tests on more than 150,000 specimens each year. The lab provides results that assure the health of newborns and mothers and confirms cases and outbreaks of food and water-borne diseases, sexually transmitted diseases, influenza, tuberculosis, pertussis, norovirus, rabies, anthrax, and other diseases of public health concern.



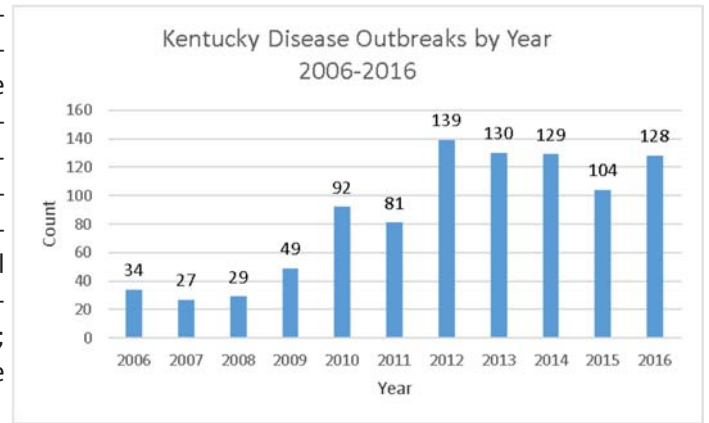
In November, 2014, Division of Laboratory Services completed the Ebola risk assessment template provided by Association of Public Health Laboratories. In December 2014, DLS sent two laboratory scientists to the Tennessee Department of Health to receive training. Also in December, U.S. Army Medical Research Institute of Infectious Diseases and CDC provided a five-sample panel and four analysts performed the validation, which included positive and negative controls. Hepatitis C Virus, BK Virus (polyomavirus), Cytomegalovirus, and Human Immunodeficiency Virus (HIV) were also tested in the validation for specificity purposes. DLS received a letter from CDC stating that the lab passed the validation panels and is approved to test for Ebola using the Department of Defense Emergency Use Authorization assay.

Public Health Surveillance and Epidemiological Investigation

Public health surveillance and epidemiological investigation, Capability 13, encompasses the detection and investigation of diseases, conditions, and other threats of public health significance and the implementation of control measures to mitigate spread. KDPH coordinates with local health departments and seventeen PHEP-funded regional epidemiologists to perform these functions across the Commonwealth. Regional epidemiologists are responsible for leading outbreak investigations; leading and coordinating Epi Rapid Response Teams; ensuring that reportable disease staff have access to and receive training in the NEDSS electronic disease reporting system; conducting morbidity surveillance; conducting mortality surveillance for urgent public health issues; assisting with public health emergency preparedness planning; and building and maintaining relationships with the healthcare community in their regions along with many other responsibilities.

Outbreak Investigations

Regional epidemiologists led the investigation of 630 outbreaks from 2012-2016 (not including seasonal influenza outbreaks occurring in long term care facilities). Many of these investigations required communication and collaboration with several local-level and state-level partners and in some instances, federal-level partners. For each outbreak, regional epidemiologists are required to create a line list and epi curve; complete the Initial Reporting Form (GI Outbreaks in Facilities), Final Reporting Form (GI Outbreaks in Facilities), or Flu Outbreak Reporting Forms (Outbreaks in Facilities); conduct influenza mortality surveillance and report each influenza-related death; prepare an outbreak narrative at the end of any outbreak; ensure all outbreak-related cases are entered into NEDSS; enter all outbreak data into NORS (National Outbreak Reporting System); and coordinate with the appropriate partners to investigate the outbreak and mitigate the spread of disease.



Building Epidemiological Capacity in Kentucky (BECKY)

BECKY is an initiative that began in 2006 and it is designed to bring together public health and epidemiology professionals from across the state to brainstorm and implement ideas to increase epidemiologic capacity and public health preparedness for Kentucky. BECKY develops strategies to attract and retain qualified epidemiologists in Kentucky's workforce, builds and enhances existing collaborations between public health agencies and Kentucky universities, furthers training and education of our current epidemiologic workforce, works to standardize roles of various public health workers, promotes creation of more jobs in Kentucky for epidemiologists, increases the resources and tools available to epidemiologists across the state, and increases collaboration between all epidemiologic professionals in Kentucky.

Epi Rapid Response Team

The Epi Rapid Response Team (ERRT) initiative is a program to train local health department nurses, environmentalists, and epidemiologists in field outbreak investigation techniques. Each Spring a two day in-person training and one day refresher/tabletop exercise is held. Attendance from 2012-2016 ranged from 30-60 new members being trained and over 100 attendees (new and existing) participating in the refresher/tabletop exercise. In recent years, the types of disciplines being trained have increased to include not only nurses, environmentalists, and epidemiologists, but also health educators and preparedness staff. An additional part of the program, the annual conference, is held in early summer. Participants consisting of CDC Career Epidemiology Field Officers; CDC EIS Officers; local and state epidemiologists, nurses, environmental health specialists, physicians, veterinarians, preparedness personnel, health educators; and University of Kentucky Preventative Medicine Residents have presented on epidemiologic topics to expand the capacity and expertise of the group.



Ebola Response In Kentucky

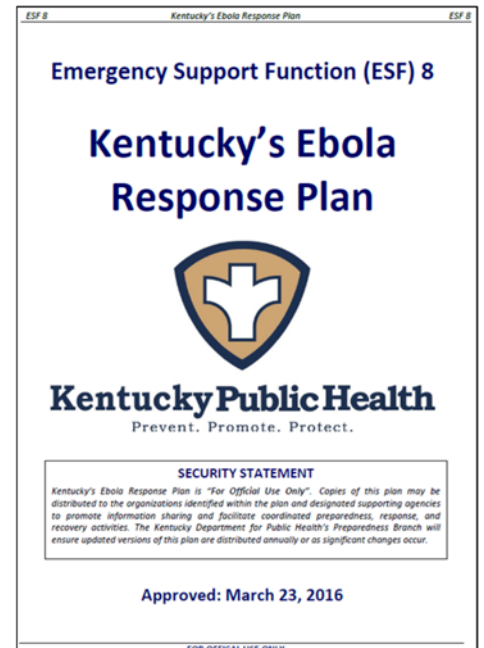
The Kentucky Department for Public Health's State Health Operations Center (SHOC) was activated to level 2 on October 2, 2015. Level 2 activation means limited staff are assigned to work in the SHOC and completing situation reports (SitRep) and incident actions plans (IAP). An Ebola Planning and Response team made up of state public health subject matters experts have been working together to develop and provide guidance to local health department staff and our Emergency Support Function (ESF) partners. The Preparedness Branch has hosted special Ebola ITVs to share information with local health department staff. KDPH also hosted conference calls with partners including hospitals, healthcare providers, Emergency Management, local colleges and universities and local officials.

A call center was established to answer calls and emails from local health departments, hospitals and providers.



State Trainings and Exercise Activities

- Regional Ebola Support Plan Workshop – July 15, 2015
-Followed by 12 Workshops in each Healthcare Coalition (HCC)
- Region IV Ebola Virus Disease Coordination and Transportation Plan Virtual Tabletop Exercise – June 16, 2016
- Statewide Ebola PPE Drill for Healthcare Coalitions – July 20, 2016
- Kentucky Ebola Decedent Drill No. 1 – October 12, 2016
- PMC Ebola Transport Exercise – December 1st and 2nd, 2016



Ebola Full Scale Exercise in Pikeville



On December 1st and 2nd, 2016, the Pikeville Medical Center (PMC) and Region 10/11 Healthcare Coalition (HCC) partnered with local, state, and federal agencies to conduct a 2-day Full-Scale Exercise (FSE) titled, “PMC Ebola Transport Exercise”. The objectives of this exercise were to establish an incident management structure to coordinate emergency response activities to manage the medical care, laboratory testing, and transport of a patient diagnosed with Ebola Virus Disease, use redundant communication systems to maintain situational awareness and disseminate Essential Elements of Information (EEI) to local, state, and federal agencies during an incident involving a patient diagnosed with Ebola Virus Disease, provide medical care and laboratory testing for a patient diagnosed with Ebola Virus Disease, transport a patient diagnosed with Ebola Virus Disease from an Ebola Assessment Hospital to an Ebola Treatment Center, use personal protective equipment (PPE) and adhere to infection prevention and control practices to maintain employee safety and health while managing a patient diagnosed with Ebola Virus Disease, and conduct laboratory testing and reporting of an Ebola Virus specimen to show competency with local, state, and federal policies and regulations. Capabilities exercised included Healthcare Preparedness Capabilities (HPC) Emergency Operations Coordination #3, Information Sharing #6, Medical Surge #10, and Responder Safety and Health #14 and Public Health Preparedness Capability Public Health Laboratory Testing #12.

Agencies that participated in this full scale exercise included Pikeville Medical Center, Pike County Health Department, Region 10/11 HCC, Trans-Star Ambulance Service, Pike County Airport (PBX), Pike County Emergency Management, Pikeville City Police, Kentucky Department for Public Health, (Public Health Preparedness Branch, Division of Laboratory Services, Healthcare Associated Infection (HAI) Prevention Program), Kentucky Division of Emergency Management – Duty Officer, Georgia Department of Public Health, Grady Memorial Hospital, Emory University Hospital, DeKalb County Emergency Management, Department of Health and Human Services Assistant Secretary for Preparedness and Response, Centers for Disease Control and Prevention, Department of State Department of Homeland Security, and Phoenix Air Group.



Ebola Exercises

“Keep Calm and Don’t Get Ebola in Hopkins County”

On November 13, 2014 Baptist Health Madisonville, Medical Center Ambulance, City of Madisonville, Region 2 HPC, Hopkins County Emergency Management and Hopkins County Health Department participated in an Ebola Full Scale Exercise to exercise Ebola response policies and procedures as well as the Incident Command structure. The following Healthcare Preparedness Capabilities were exercised during the event: Capability 3 Emergency Operations Coordination, Capability 6 Information Sharing, Capability 10 Medical Surge and Capability 14 Responder Safety and Health.



Some notable strengths of the full scale exercise are listed below:

- Incident command structure at Baptist Health Madisonville
- Emergency Operations Coordination between the hospital and local health department in Ebola response in accordance with EOP
- The Hospital and LHD utilized the numerous CDC/KDPH guidance documents throughout its planning phase and during the event to ensure all protocol for notification, tracking, patient contact identification, were adhered to
- Liaisons and PIO shared critical information within their organizations and at the Joint Information Center
- Policies and procedures were followed for a suspected Ebola patient by all agencies
- Availability of appropriate PPE
- Training and education
- Policies and procedures developed prior to the exercise

Ebola Tabletop Exercises

Throughout November and December 2014, Coalition Coordinators from Regions 3, 10, 12 and 14 held Ebola Tabletop Exercises with their regional hospitals, local health department staff, emergency management, long term care staff, county coroners, Department for Public Health staff, Emergency Medical Services (EMS), and Fire/Rescue agencies. The Kentucky Department for Public Health (KDPH) Kentucky Ebola TTX 2.0 exercise materials were used for the tabletop portion of the meetings.



Zika Preparedness Activities



The Kentucky Department for Public Health's (KDPH) State Health Operations Center (SHOC) was activated to a Level 3 to coordinate ESF 8 activities for the planning and preparedness activities related to Zika Virus Disease on February 11, 2015. The main objectives were to ensure KDPH was prepared to support resource requests, provide assistance, and effectively coordinate ESF 8 activities, to include providing guidance to healthcare facilities and providers. The implementation of KDPH's Kentucky's Zika Response Plan was signed for approval on October 10, 2016. Local Health Departments were encouraged to participate in the Fight the Bite campaign and promote education to their community leaders and their local communities.



KDPH Representatives at Zika Health and Welfare Testimony



KDPH Preparedness Staff



Lexington-Fayette County Health Department



Department of Agriculture



Zika Summit

On May 11, 2017 Cabinet for Health and Family Services Secretary Vickie Yates Brown Glisson, Kentucky Commissioner of Agriculture Ryan Quarles, representatives from the Kentucky Department for Public Health, renowned experts and response partners gathered in Lexington for the Kentucky Zika Summit.

This conference, held at the Lexington Center, represented 179 agencies consisting of healthcare professionals, environmental specialists, state and local community leaders, emergency managers, school officials and many service organizations from across the state. The group discussed the current state of Zika virus disease threat and decided what strategies and policies would best mitigate the threat.

Several stations focused on various topics related to Zika prevention for summit attendees in the display area where subject matter experts provided information on preventing travel-related transmission, Kentucky's mosquito population, public mosquito control efforts, addressing standing water issues and removing mosquito breeding grounds around the home, and personal protective measures like insect repellent and appropriate clothing. The event also introduced "Marty Mosquito," public health's mascot for Zika prevention and awareness. To date, 37 cases of Zika virus have been reported in Kentuckians with a travel exposure and/or sexual exposure to someone who traveled to a Zika-affected area.



Points Of Distribution (POD) Events



Lexington-Fayette County Annual free flu shot clinic

Boyle County Drive Thru Clinic



Laurel County Health Department



Little Sandy District Drive Thru Clinic



Get the
FLU  **SHOT**
not the flu!



Lawrence County Drive Thru Clinic



The Lake Cumberland District Health Department (LCDHD) partnered with two local colleges, Somerset Community College (Somerset, KY) and Lindsey Wilson College (Columbia, KY), and offered free Tdap vaccinations to students, staff and faculty through convenient, on-campus POD clinics. Just over 350 Tdap vaccinations were given in an average throughput of three minutes per individual through these on-campus PODs.

Planned Events



Quaker State 400 Race at the Kentucky Speedway: From June 25 to June 29, 2014, Three Rivers District Health Department (TRDHD) led efforts to ensure the safety of the public at the Quaker State 400 event at the Kentucky Motor Speedway in Sparta, Kentucky. TRDHD coordinated with Kentucky Department for Public Health (KDPH), the Northern Kentucky Independent District Health Department (NKDHD), Louisville Metro Public Health and Wellness (LMPHW) and Kentucky Motor Speedway officials to provide for the health and safety of the public by conducting inspections and monitoring public health issues associated with food vendors and camp ground facilities. During the event, TRDHD addressed seven of the 37 Target Capabilities that are listed in the U.S. Department of Homeland Security's (DHS) Target Capabilities List (TCL) including; On-site Incident Management, Emergency Operations Center Management, Critical Resource Logistics and Distribution, Responder Safety and Health, Environmental Health, Epidemiological Surveillance and Investigation, and Emergency Public Information and Warning. In addition to these capabilities they also addressed eight of the 15 Centers for Disease Control and Prevention (CDC) Public Health Preparedness Capabilities including; Community Preparedness, Emergency Operations Coordination, Emergency Public Information and Warning, Information Sharing, Medical Material Management and Distribution, Medical Surge, Public Health Surveillance and Epidemiological Investigation, and Responder Safety and Health. In partnership with area hospitals, there were also five Healthcare Preparedness Capabilities addressed including; Healthcare System Preparedness, Emergency Operations Coordination, Information Sharing, Medical Surge, and Responder Safety and Health.



Planned Events

Kentucky Department for Public Health's, primary involvement with Thunder Over Louisville and the Kentucky Oaks/ Derby is to escort two CHEMPACK containers to the MetroSafe building throughout the venue and return at the end of the event. CHEMPACKs are caches of nerve agent antidotes, each able to treat around 500 patients. KDPH supplies these caches to supplement the CHEMPACKs located in Louisville because of the event size and potential risks.

In addition, KDPH also supports the Joint Emergences Services Unit (JESU) with public health, hazardous material, and radiation expertise (in conjunction with the Radiation Health Branch). During the event, KDPH addressed five of CDC's Public Health Preparedness Capabilities including; Capability 3-Emergency Operations Coordination, Capability 4-Emergency Public Information and Warning, Capability 7-Mass Care, Capability 8-Medical Countermeasure Dispensing, Capability 9-Medical Material Management and Distribution. In addition two Healthcare Preparedness Capabilities (HPC) Capabilities; Capability 1-Healthcare Preparedness and Capability 10-Medical Surge were addressed.



CHEMPACK container



Kentucky Oaks Day: KDPH and JESU staff detailed to this planned event. KDPH staff pictured above: Brad Learn, HPC Coordinator; Lloyd Peniston, CRI Coordinator; and Joey Riddle, Region 6 Regional Preparedness Coordinator

Partnerships/Contracts

The Department of Military Affairs (DMA) and the Kentucky Community Crisis Response Board (KCCRB) served the Commonwealth by training and maintaining a statewide team of regional response-ready volunteers to provide disaster behavioral health services in the form of assessment, behavioral health triage, Psychological First Aid/critical incident stress management and referrals for first responders, disaster relief workers and affected civilians following disasters and critical incidents across the Commonwealth.

The Department for Aging and Independent Living (DAIL) assisted with the development of a disaster sheltering resource called Functional Assessment Service Teams (FAST). During an emergency or disaster these team members conduct assessments to evaluate resources necessary to support persons with functional and access needs within general population shelters.

Norton's Healthcare activates and maintained a statewide emergency public health hotline that was available 24 hours a day, seven days per week only during emergencies as needed, to communicate efficiently with Kentuckians regarding bioterrorism, all hazards and public health threats.

Kentucky Hospital Research and Education Foundation (KHREF) enhanced the ability of hospitals and supporting health care systems to prepare for and respond to bioterrorism and other public health emergencies.

The Kentucky Pharmacists Association engaged a full-time pharmacist and director of communication to assist with a variety of activities in support of the Emergency Preparedness Branch of the Kentucky Department of Health.

University of Kentucky: Emergency Preparedness for Aging and Long Term Care enabled Long Term Care (LTC) facilities across KY to enhance the preparedness level of each facility in order to increase overall surge capacity of the healthcare system.

The Kentucky Board of Emergency Medical Services (KBEMS) Information System (KEMSIS) will track patient movement from the incident site to entry into the healthcare system (EMS or facility level). This information will be incorporated with incident data will be integrated into the local, state and Federal incident common operating picture.

KDPH will partner with the University of Louisville who will enable Long Term Care (LTC) facilities across KY to enhance the preparedness level of each facility in order to increase overall preparedness, response and recovery capacity of the healthcare system. The University of Louisville also worked with KDPH to identify adult populations with functional needs living in HUD-funded properties to identify the population profile, locations and risk factors of HUD-funded 202 and 811 program properties in order to increase overall preparedness and response for emergencies.

Louisville Emergency Management Agency/ MetroSafe Medical Reserve Corps (MRC) created a community public health and medical volunteer resource that will be pre-credentialed, pre-registered and prepared to respond to a public health emergency primarily by staffing Points of Dispensing (PODs), provide medical surge to the community and supplement public health staff by supporting public health initiatives in the Louisville Metro area.

Local Health Departments shared responsibility with KDPH to oversee the implementation of public health programs for the prevention, detection, care, and treatment of physical disabilities, illnesses, and diseases, in accordance with KRS Chapter 211. Many of these responsibilities are conducted through the terms of a Multi-Provider Memorandum of Agreement between the KDPH and all local jurisdictions.

**A special THANK YOU
to all of our
Local Health Departments, State, and Contract Partners!**



Department of Military Affairs (DMA)
Department for Aging and Independent Living (DAIL)
Norton Healthcare
Kentucky Hospital Research and Education Foundation (Khref)
Kentucky Pharmacists Association
University of Louisville
University of Kentucky
Kentucky Board of Emergency Medical Services (KBEMS)
Louisville Emergency Management Agency/MetroSafe Medical Reserve Corps (MRC)
Kentucky's Local Health Departments



Kentucky Public Health
Prevent. Promote. Protect.



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