

# Public Health Emergency Preparedness Stories from the Field



The *PHEP Program* strengthens the ability of our nation's communities to prepare for, withstand, and recover from public health threats - *saving lives 24/7/365.*

## Situation

In the afternoon hours of March 22<sup>nd</sup>, 2019 Chattanooga-Hamilton County Health Department (CHR) received notice of a food handler with a positive Hepatitis A laboratory test result. Due to the potential for transmission from the food worker to customers, and upon consult with the Tennessee Department of Health, it was determined that a special vaccination clinic should be set up on Sunday, March 24<sup>th</sup> for individuals who were patrons of the restaurant while the case was infectious. An estimated 5,000 - 6,000 customers visited the restaurant during the ten day period.



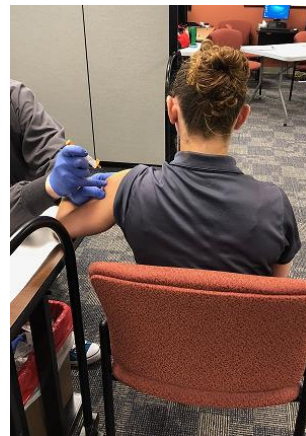
## Intervention

On March 22<sup>nd</sup>, a press release was issued to advise the public of the situation and the special vaccination clinic operating hours and locations. Less than 48 hours later, the 3<sup>rd</sup> Street facility operated a Sunday clinic from 12:00pm - 6:00pm. The 3<sup>rd</sup> Street facility and Ooltewah Health centers operated under extended hours March 25<sup>th</sup> and 26<sup>th</sup> to provide vaccine to those exposed. The special clinics ultimately ran from March 24<sup>th</sup> - March 28<sup>th</sup>. CHR staff, Hamilton County Health Medical Reserve Corps and Southeast Regional Health Office employees teamed together to operate this special clinic.



## Impact

There were a total of 2,448 vaccinations given to community members in the five days that the special clinics were operational. Additionally, 108 doses of immune globulin (IG) were administered to those who met the clinical recommendations. In addition to the provision of post-exposure prophylaxis, these special clinics also provided the opportunity to provide health education to attendees, build relationships with partner agencies, and train Medical Reserve Corps volunteers.





### Situation

January 18<sup>th</sup> through the evening of the 19<sup>th</sup> 2019, were the dates for the very special and publicized Governor's Inauguration events in Nashville TN. Events started at 5:30pm on the 18<sup>th</sup> and concluded at 12:00am on the 19<sup>th</sup>. There were 12 events in total, ranging from estimated 300 guests up to 4,000 guests depending on the event purpose.

It was determined by the Tennessee Emergency Management Agency that a broad spectrum of protection should be established for these events. This included State of Tennessee Department of Health Emergency Preparedness as well as many other agencies including Nashville City Police, Davidson County Sheriff and Emergency Management Agency, Tennessee Emergency Management Agency, Tennessee Bureau of Investigation, Tennessee State Troopers, Military, Tennessee Emergency Medical Services, and other federal services.



### Intervention

Department of Health Emergency Preparedness received a request from Tennessee Emergency Management Agency to deploy the Mobile Operations Center and to be a partner of the coalition of agencies involved.

Tennessee Emergency Management Agency requested that Emergency Medical Services Strike Teams to be established at each event, and all communications would be directed through the Mobile Operations Center.



### Impact

The communications capabilities of the Mobile Operations Center allowed Emergency Medical Services to clearly communicate and inform all teams via Satellite phone, HAM radio, 800mhz P25 radio, Satellite internet, and monitor local news via satellite TV.

Additional benefit is continuing to building relationships with many agencies and working closely with them to further develop PHEP capabilities and making other agencies aware of our benefit to be a part of any exercise/response.



## Situation

Following the acquisition of several county EMS agencies in West Tennessee by West Tennessee Healthcare/Medical Center EMS, it became necessary to upgrade the communications for all the agencies. During the planning stages for this event Jackson MedLink discovered they would be unable to dispatch to its southernmost area of operation. On March 5, 2019, it became necessary to use extraordinary measures.



## Intervention

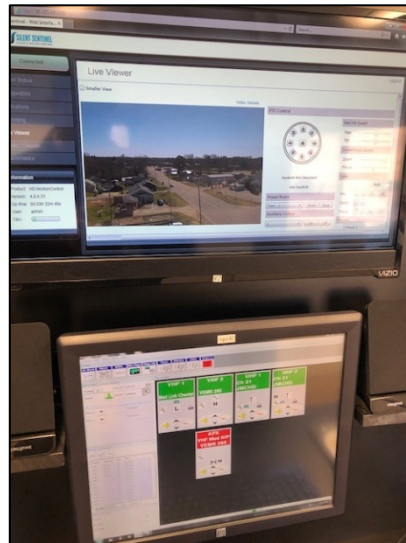
Jackson-Madison County Regional Health Department Emergency Response (JMCHD ER) was contacted in reference to the possibility of providing communications assistance using the Mobile Regional Medical Communications Center (RMCC 9). RMCC 9 is a converted dental bus repurposed by JMCRHD ER using PHEP monies to provide communications assistance to our partners; local, state, and federal. RMCC 9 is a fully functional mobile dispatch center with UHF, VHF, 700/800 mhz, and ham radio capabilities. RMCC 9 also has VoIP and satellite phone service. It is able to provide secure wireless internet to multiple users simultaneously. Dispatch capability is augmented through the use of 3 Motorola MIP 5000 consoles.



## Impact

On March 5, 2019 RMCC 9 was sent to Selmer, Tennessee in McNairy County to provide dispatch services for Medical Center EMS during the initial phases of the radio system upgrade and changeover. For approximately 4 hours, all ambulance dispatching was handled using the capabilities of the RMCC 9.

Following that initial 4 hour period, it became necessary to relocate the equipment and staff to Henderson, Tennessee in nearby Chester County to reestablish the communication network for Emergency Medical Services for this county. RMCC 9 and staff were busy providing this vital service for another 6 hours in Chester County. In total, this valuable asset provided crucial services for our partners for about 10 hours on this day, services that would have been almost impossible to replicate otherwise.





## Stories from the Field: Knox County Health Department

## Situation

In late May through early June of 2018, the Knox County Health Department (KCHD) was notified of 15 cases of Shiga Toxin-Producing *E. Coli* (STEC) among children younger than five years of age. Nine cases were hospitalized for their illness and seven cases developed Hemolytic Uremic Syndrome (HUS), a life-threatening complication of STEC infection.

Two common exposures were quickly identified: 10 cases reported consuming raw milk, and five cases reported attending the same child care facility where goats were housed near the property. While extremely rare, two separate STEC outbreaks were occurring simultaneously. PHEP staff played key roles in the response ranging from providing epidemiological support to backing incident command and logistical operations.

## Intervention

The Knox County Epidemiology, Emergency Preparedness and Environmental Health Departments sent staff to the farm that dispensed raw milk and the child care facility to identify any immediate areas of concern, collect samples and retrieve a list of persons potentially exposed. A health directive was delivered to the farm requesting that all raw milk dispensing cease. The Department of Health and Human Services closed the child care center, also using a directive.

KCHD activated the Extended Public Health Investigation Team (xPHIT) for situational awareness, and to expedite interviews of exposed contacts. A phone bank was opened to receive calls from the public regarding the outbreaks.

The assistance of the Tennessee Department of Health (TDH) was requested to develop a REDCap survey to be sent to all cow share program participants to find additional cases and conduct an epidemiologic study. The survey was sent out via TNHAN text message to ask cow share participants to discard of any raw milk product they may still have and to ask that they complete the survey. The survey was also sent out via e-mail to cow share members who did not have a phone number listed.

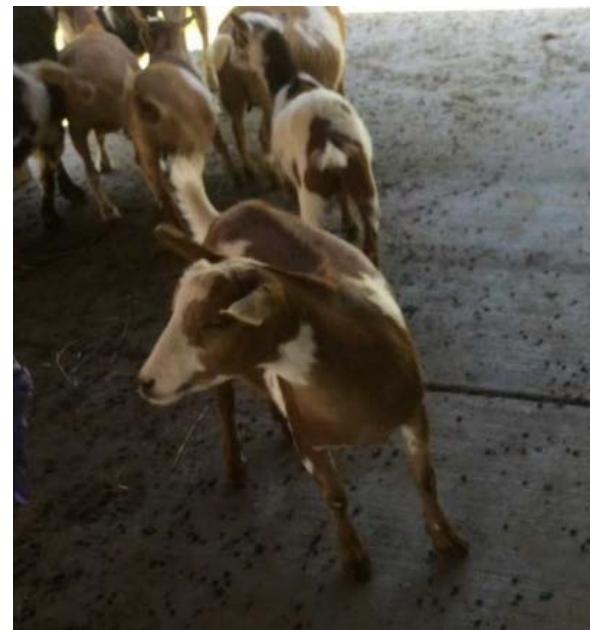
All environmental samples from the farm and child care center (41) were sent to the TDH Laboratory in Nashville. Cow manure samples from the farm where the raw milk was dispensed were shown to be a PFGE match to clinical samples from children who were exposed to raw milk. Goat manure samples were shown to be a PFGE match to clinical samples of cases that attended the child care facility.

## Impact

The role of PHEP in outbreak response and incident command fundamentals for KCHD staff was vital to ensuring a timely and efficient response from the entire outbreak team.

The quick response of KCHD prevented further infections from exposure to STEC through the consumption of raw milk or direct/indirect contact to goat manure.

Collaboration with TDH aided in quick case finding and mitigation of further risk. KCHD worked with the child care facility on infection control practices and created a childcare exclusion guide to assist decision making when requesting that children stay at home when ill. Infection control was evaluated at the child care facility and several recommendations were made to improve practices.



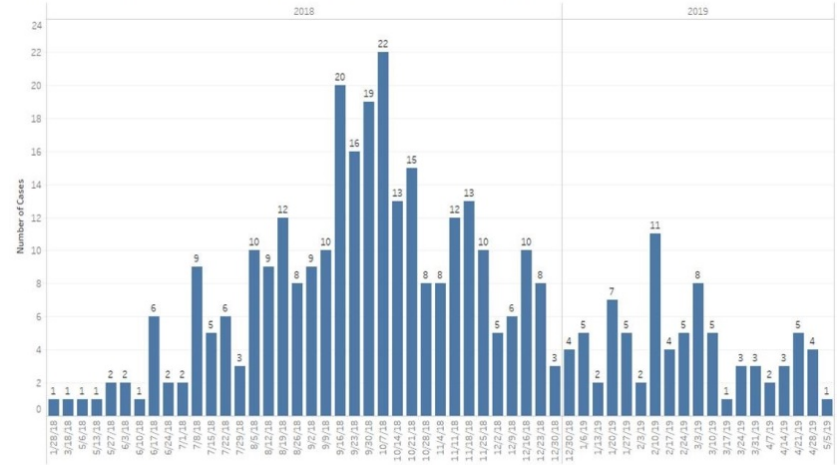
# 2018-2019 Hepatitis A Response

## Situation

Hepatitis A emerged in the Mid-Cumberland Region in January 2018. Since then, there have been 389 cases of the vaccine preventable disease. On June 21, 2018 the region experienced its first case in the jail system.

Multiple visits have been made to date to several county jails to assist in preventing additional jail-associated cases and slowing the outbreak. As of April 4, 2019 the Mid-Cumberland Region has had 83 (9.3%) incarcerated individuals who were diagnosed with Hepatitis A.

Mid-Cumberland Public Health Region Hepatitis A Cases, January 1 2018 - present



## Intervention

The Mid-Cumberland Region began vaccinating in June and continued vaccinating on multiple occasions within the jail when a new case was identified. In November 2018, the Mid-Cumberland Region was awarded funds to secure assistance to form a Hepatitis A Vaccination Strike Team, which was coordinated and supervised by PHEP-funded staff. This team has worked diligently in the community and jails to promote vaccination against Hepatitis A.

## Impact

From June 21, 2018 to present the Mid-Cumberland Region and Hepatitis A team have touched the lives of 8,916 inmates through education and/or vaccination.

Of those individuals, 5,212 (58.4%) have received at least one dose of Hepatitis A vaccine, and an additional 1,448 (16%) are fully vaccinated against the virus.

As of April 23, 2019 the Mid-Cumberland Region has recorded a total of 1,205 (13.5%) refusals. The number of individuals who initially refused is 822 (9%), upon subsequent visit is 186 (2%) and refused three or more times is 197 (2.2%). Data shows a 75-80% conversion rate from those that refused initially but chose to vaccinate during a subsequent visit.

Prevention of additional cases of disease is the backbone of this response strategy, and the experience of quickly forming, training, and mobilizing a strike team is a successful model to be replicated for future infectious disease outbreaks.



## Situation

Tennessee is in the midst of a hepatitis A outbreak tied to a large, multi-state outbreak that began in early 2017. Those most affected by the outbreak include people who use illegal drugs, people experiencing homelessness, incarcerated and recently incarcerated individuals, and men who have sex with men.

Shelby County Health Department (SCHD) began its response to the outbreak in the summer of 2018, by offering hepatitis A vaccinations to inmates in the Shelby County Correctional Center, at area homeless shelters, and by partnering with community health providers to vaccinate at-risk populations.

PHEP established a formal ICS structure to facilitate response activities on November 16, 2018. Shortly thereafter, a schedule of weekly and sometimes daily meetings was established. PHEP staff played key roles in the response ranging from providing epidemiological support, to supporting incident command, reporting, and logistical operations.

SCHD ramped up its response on April 9, 2019, after an adult female tested positive for hepatitis A at a Memphis-area hospital emergency room. The woman reportedly stayed in several hotels along Sycamore View Road, ate at restaurants in the area, and had numerous contacts during her infectious period.



## Intervention

A contact investigation was immediately launched in order to reach the close contacts of the case and provide post-exposure prophylaxis. These efforts were made difficult by the fact that the case had no means to contact the people she potentially exposed except Facebook. She did give SCHD epidemiologists permission to send messages to her Facebook contacts. Epidemiologists sent messages via Facebook to 305 of woman's contacts over several days. The contacts that messaged back were given further information/instructions.



SCHD's Environmental Health Bureau organized an outreach effort on April 12, 2019 to do environmental assessments at 16 hotels, three gas stations, and five restaurants in the Sycamore View/Macon Road area. Two of those hotels—the Red Roof Inn and the Motel 6—where the confirmed case stayed during her infectious period—were inspected and housekeeping and food service staff were offered hepatitis A vaccinations.

As a part of the outreach on April 12, SCHD also set up a table in a vacant parking lot next to the Motel 6 and offered sandwiches, condoms, and Narcan to passersby on Sycamore View Road. Everyone who stopped was also offered the hepatitis A vaccine, which was given by a Public Health nurse in a room at the Motel 6.

## Impact

The role of PHEP in outbreak response and incident command fundamentals was vital to ensuring a timely and efficient response from the entire SCHD team.

The work of the PHEP-funded Regional Epidemiologist and Environmental Epidemiologist limited the spread of hepatitis A among vulnerable homeless and drug-using populations and prevented what could have been a significant outbreak.



### Situation

In May 2018, Nashville MPHD declared an outbreak of hepatitis A after a confirmation of eight cases in five months, a 400% increase in the typical number of reported cases in a year.

Of the initial 12 cases of hepatitis A in Nashville, 50% were reported among men who have sexual contact with other men (MSM).

This highly contagious viral infection can be prevented through vaccination.



### Intervention

To reduce the number of new cases seen in this community, targeted outreach to educate and vaccinate MSM was made a top priority in the outbreak response strategy.

Within the first month of the outbreak, all seven LGBT venues in Nashville were contacted with Hepatitis A information including details about the outbreak, risk factors for infection, resources to access free vaccine, and sexual transmission of the virus. Venue owners were also offered the opportunity to host vaccination points of dispensing (PODs) at their location where vaccine could be offered to all patrons and employees free of charge. Coordinators of major LGBT festivals and cultural events were similarly contacted.



### Impact

Between June and September nine LGBT specific hepatitis A vaccination PODs were deployed at six LGBT venues, a Nashville pride event, a LGBT music festival, and a major drag benefit event. MPHD vaccinated 409 individuals for hepatitis A.

Although the outbreak persists, no cases have been reported among MSM since October 2018.

Offering free vaccine at LGBT venues, festivals, and cultural events is an effective way to raise community awareness of hepatitis A and vaccinate those at a higher risk of infection





### Situation

Each day in Tennessee, an average of three people die by suicide. As of 2017, suicide is the second leading cause of death for young people (ages 10-19) in Tennessee, with one person in this age group lost to suicide every week. We lose one person between the ages of 10-14 every four days, and every day we lose at least one person over the age of 45. In 2017, there were 1,163 recorded suicide deaths in the Tennessee, (a rate of 17.3 per 100,000), the highest number and rate recorded in the last 35 years. (*Tennessee Suicide Prevention Network – Status of Suicide in Tennessee 2019*)

### Impact on First Responders/First Receivers

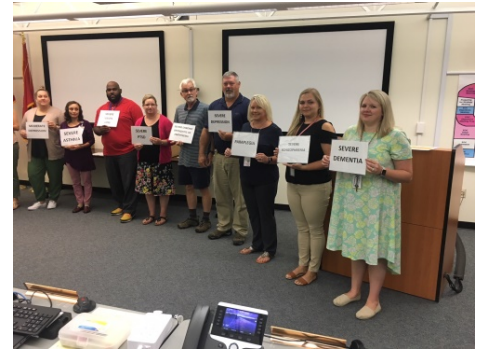
In a January 20, 2019 report by Chattanooga Reporter Kayla Strayer with News Channel 9 Chattanooga Fire Chief Phil Hyman indicates that suicides among first responders are on the rise. “Our firefighter suicides throughout the nation have actually exceeded the line of duty deaths we have,” Chief Hyman. “In 2017 we had 103 firefighter suicides (nationwide) and only 93 line of duty deaths (nationwide).”

### Intervention

In 2017 the Northeast Region’s Disaster Mental Health Taskforce, led by Melissa Taylor PHEP Nurse Consultant, began exploring avenues in which to mitigate and prevent mental health challenges among First Responders, First Receivers, and the general public. Melissa Taylor approached the Northeast Tennessee Healthcare Preparedness Coalition (NTHPC) with a proposal to train 30 first responders, first receivers and mental health professionals in the National Council for Behavioral Health’s Mental Health First Aid instructor courses for adults and youth. Since this initial meeting the NTHPC has funded in excess of \$100,000 to train 30 responders as Adult Mental Health First Aid Instructors and 30 responders as Youth Mental Health First Aid Instructors. ***Northeast Region PHEP/HPP has joined forces to host over 85 Mental Health First Course (Adult and Youth) while training over 1,154 first responders, first receivers, public health employees, teachers and residents in Northeast, Tennessee.***

### Impact

The nearly 1200 trainees now have the skills to recognize a Mental Health Crisis through the course’s core action plan, ALGEE. At the end of the Mental Health First Aid Course trainees can “ASSESS for risk of suicide or harm”, “LISTEN non-judgmentally”, “GIVE re-assurance and information”, “ENCOURAGE appropriate professional help”, and “ENCOURAGE self-help and other support strategies”. Melissa Taylor RN, and David Long MRC Volunteer/Fire chaplain, provided an Adult Mental Health First Aid course to ETSU staff and had an immediate impact, as demonstrated by the correspondence received from a student.



*Hi Melissa and David – I want to thank you for the MHFA course you taught at ETSU this past Monday and Friday mornings. I had no idea that first thing this Monday morning I would put what I learned into practice. I had a student come and see me who was clearly suffering and reaching out for help. I used every step of ALGEE as I talked to him. He is now getting the help he needs. Because of the opportunity to take this course, I knew what to do and felt confident in my ability to assess the situation. Thank you so much for sharing your expertise, for your kindness and your patience.*

**IT HAS ALREADY MADE A DIFFERENCE!**

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## Situation

- A large exercise based on a hostage situation and bomb threat at a middle school was being conducted. A large contingency of First Responders would be responding to the school. Communicating this to the students, faculty and also the surrounding community was very important.
- An event that has a large amount of big animals and spectator camping in a small area needed a way to communicate safety messages and daily activities to the participants and spectators.
- If a mass casualty event occurred at the Bonnaroo Arts and Music Festival the primary healthcare facility in the city could experience a huge patient surge that would overwhelm their emergency department.
- The Bell Buckle Arts Festival is held in the late summer and overheating can be a big issue during this large walking event.

## Intervention

- The South Central PHEP program offered the Radio Stat Information AM Broadcast system to broadcast exercise information to those in the area and arriving in vehicles.
- The RadioStat system was offered to the Maury County Mule Day organizers and EMA to broadcast emergency messages and daily activities.
- The SCR PHEP Alternate Care Unit was offered to the local healthcare facility to assist in potential patient surge.
- The SCR PHEP Alternate Care Unit was offered to the City of Bell Buckle to be an on-site medical triage site for the event.

## Impact

- A Letter of Agreement was put together stating what the exercise message would entail and was approved by the School, EMA and PHEP. The message was recorded and played on a loop for 5 hours.
- A Letter of Agreement was put together stating the emergency message/event information and was approved by EMA, Event Coordinator and PHEP. The message was recorded and played on a loop 24/7 for 5 days.
- The Alternate Care Unit was deployed and set-up during Bonnaroo Arts and Music Festival.
- The Alternate Care Unit was deployed and set-up during the Bell Buckle Arts Festival. 4 patients were treated for overheating and did not have to be transported off grounds.
- Both the Radio Stat System and the Alternate Care Unit have been requested and deployed multiple times.



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## Situation

Local health departments in the Southeast Region have been included in the Multi-Jurisdictional Radiological Emergency Response Plans for Sequoyah Nuclear Power Plant and Watts Bar Nuclear Power Plant for decades. In the event of a release from the power plants, the health departments are tasked with coordinating community reception centers. This includes monitoring the general population and emergency workers for radiological contamination and directing the decontamination process. The health departments will also provide potassium iodide if ordered. Health departments participate in annual exercises evaluated and graded by the Federal Emergency Management Agency. These exercises, however, require only six individuals to move through the process and do not require individuals to simulate decontamination.



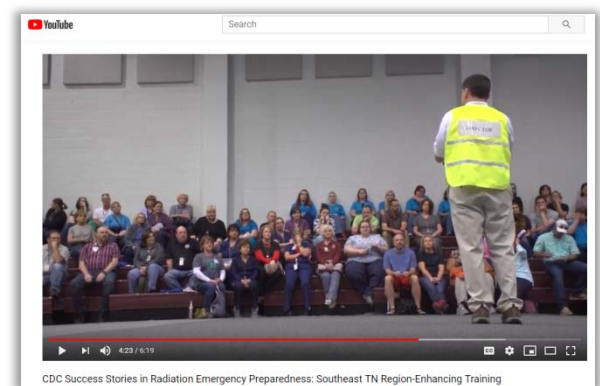
## Intervention

In April 2018, the Southeast Region, in partnership with the Centers for Disease Control and Prevention (CDC) and the National Association of County and City Health Officials, conducted Operation Southern Fortress. The scenario was a human-caused event in which individuals were intentionally exposed to a radiological substance. Over 40 individuals were considered contaminated. These individuals were monitored, simulated decontamination by showering, and were monitored again to ensure all contamination was removed. The purpose of the exercise was to measure the time required for numerous individuals to move through the process and to fully test radiological response plans developed by the Southeast Region. Throughput times were gathered for over 560 observations.



## Impact

- The data gathered during the exercise is being incorporated into modeling software under development by the CDC and Prevention. The software will provide all response agencies with a scientifically-based planning tool to better plan the use of human and non-human resources in response to radiological events.
- Southeast Region PHEP personnel trained over 300 public health personnel across Tennessee that incorporated lessons learned from the exercise.
- The exercise was the basis for the Southeast Region being selected as one of three jurisdictions to be featured in the CDC's "Success Stories in Radiation Emergency Preparedness".
- Some lessons learned from the exercise have been cross-referenced into other aspects of PHEP plans and training.



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## Acute Hepatitis A Case in Sullivan County Jail

### Situation

On November 21, 2018 at 1330, Sullivan County Regional Health Department (SCRHD) was made aware of a lab positive acute Hepatitis A case in a male inmate housed at the Sullivan County jail, which typically houses more than 850 inmates.

At that point in the outbreak, there had been nearly 500 cases of Hepatitis A across the state, with nearly two-thirds (62%) requiring hospitalization. 16% of all cases had been incarcerated during either their exposure or infectious periods. Over half (56%) of all cases reported some type of recreational drug use.

County jails across the state had long been recognized as a key venue for preventive vaccination efforts. The shared bathroom facilities and close living conditions present in correctional housing also necessitate a rapid response by public health to confirmed cases in jails in order to provide post-exposure prophylaxis to susceptible individuals and prevent additional cases.



### Intervention

A response planning meeting was convened within an hour of confirmation of the case. In attendance were SCRHD and Sullivan County Sherriff's Office (SCSO) Staff. A response plan was formulated and vaccination teams made up of SCRHD Nurses, SCSO Nurses, Sullivan County EMS (SCEMS), SCRHD Clerical Support, and SCSO jailers were established. SCRHD Blountville Nurse Supervisor was designated as Branch Director. The SCRHD Regional Health Operations Center (RHOC) was activated to Level 3 Status at 1630 for to support the vaccination efforts and to provide response to any media inquiries. A joint press release was developed and released by SCRHD and SCSO to media outlets, local healthcare systems, and agency social media platforms at 1800. Vaccination Response Teams (consisting of 12 SCRHD staff and 2SCEMS staff) departed SCRHD at 1815. The teams provided 756 vaccinations and returned back to the RHOC by 2030. The RHOC was back to Level 5 status at 2110.



### Impact

The response to the jail for medical countermeasure delivery was very successful due to the staff at SCRHD utilizing and applying incident command principals for command and control. SCRHD PHEP staff were able to efficiently manage the response based on the level of preparedness of the staff to utilize these principles. These immediate efforts helped mitigate a potential outbreak in the confined jail population as well as reducing the risk of exposure to jail staff.



## Stories from the Field: West Tennessee Region

### Situation

The Lauderdale Co. Health Department (LCHD) lost the use of all phone services. The health department numbers were accidentally disconnected when the county changed their phone service to a new provider. Health department staff were advised that service would not be restored for several weeks.

The Lauderdale County Health Department serves an estimated 25,274 citizens. An inoperable phone system significantly reduced the public's access to the Health Department, as well as reducing the health department's ability to provide service.

The Lauderdale County Health Department provides well child exams, immunizations, family planning, sexually transmitted disease testing and treatment, nutrition counseling, the Women, Infants and Children (WIC) program, Children's Special Services, prenatal care, the Help Us Grow Successfully (HUGS) program, Vital Records, Environmental Health Inspection program as well as primary care clinics with medical staff members that diagnose and treat acute and chronic illnesses.

### Intervention

The Tennessee Department of Health's West Tennessee Regional Office (WTRO) maintains a Mobile Operations Center known as the "MOC-C" which has wide ranging communication capabilities. Upon notification of the outage, WTRO deployed their MOC-C to Lauderdale County Health Department and utilized its communications systems capabilities to re-establish phone service.

Upon arrival at the county health department, PHEP staff started the setup by connecting the MOC-C to building power. The satellite system of the MOC-C was connected via a fiber optic cable to the phone system of the Health Department.

Once the MOC-C was up and running (3 telephones, the communications outrigger, and necessary cables), phones were deployed to each of the reception desks.

A Lauderdale County Health Department phone number was forwarded to the MOC phone system. The MOC-C system would then "roll-over" the calls allowing three phones to be in use simultaneously. The system brought the Health Department personnel the ability to function and utilize their regular desk phones as they normally would.

### Impact

The swift response by PHEP staff permitted communication between Lauderdale County Health Department and clients, community partners and county and state offices and provided residents of Lauderdale County access to the Health Department and its services.

