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UTAH DEPARTMENT OF HEALTH
Bureau of Emergency Medical Services and Preparedness

THE PREPAREDNESS POST

UTAH DEPARTMENT OF HEALTH

Preparing for Ebola with New Technology

By Mike Stever

On September 30, 2014, the Centers for Disease Control and Prevention (CDC) confirmed the first laboratory-confirmed case of Ebola to be diagnosed in the United States in a man who had traveled to Dallas, Texas from Liberia. Across the nation, states started looking at their infectious disease plans just in case something similar were to occur in their jurisdiction.

In Utah, a great deal of work began soon after at the Utah Department of Health (UDOH) and local health departments (LHDs), as officials tried to plan for all the various scenarios. On the morning of December 16, 2014, 259 stakeholders with an interest and responsibility in Utah's Ebola preparedness came together to participate in the first-ever Utah Preparedness Virtual Tabletop Exercise. The purpose of the exercise was to connect participants from 23 host sites throughout the state of Utah to share ideas and evaluate Ebola preparedness and management plans at the local, state, and federal levels for gaps or inconsistencies.

Hosted by the UDOH and LHDs, participants representing all aspects of Ebola preparedness and response were connected via videoconference originating in the UDOH Department Operations Center (DOC). The format of a virtual tabletop exercise was pioneered at FEMA's Emergency Management Institute and adopted by UDOH. Tabletop exercises are discussion-based sessions where participants meet in an informal setting to talk about their respective roles during a specific emergency.

Crafted by a committee representing state and local interests, specially tailored "what if" scenarios involving challenges unique to rural and urban concerns were shared with all the locations across the state. Once the scenarios were presented, participants at each site were given discussion questions.

Following each 30-minute discussion session, highlights of conversations including strengths, areas for improvement, and problem- solving were shared statewide. Issues were captured for the creation of an After Action Report which will then be refined into an Improvement Action Plan and shared with participants. That information can then be used to update and improve preparedness plans.

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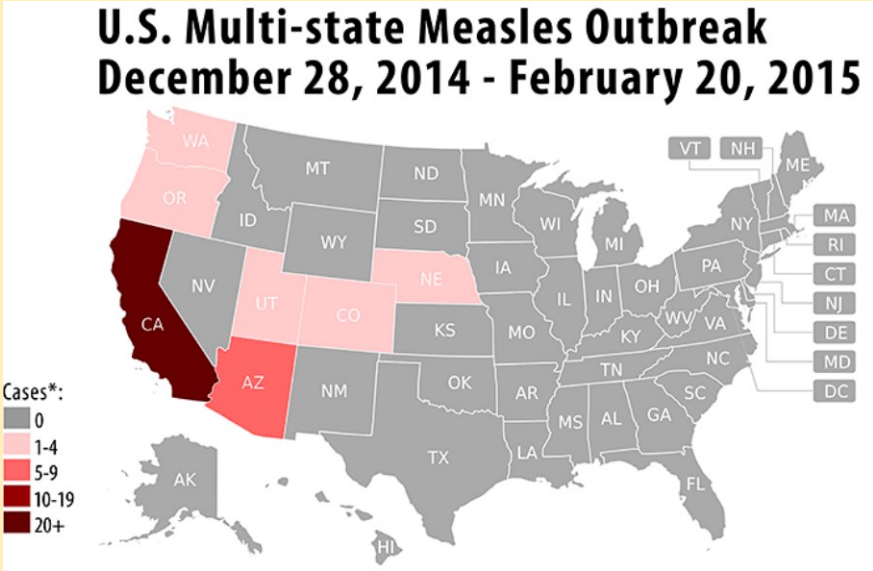
2015 Measles Outbreak in Utah

By Becky Ward

Before 1963, approximately 500,000 measles cases were reported annually in the United States resulting in nearly 500 deaths. Since the measles vaccine was introduced in 1963, the incidence of measles has declined significantly, to the degree that many U.S. health care providers haven't even seen a patient with measles. In 2000, endemic measles was declared eliminated in the United States. However, measles outbreaks continue to occur. The majority of U.S. measles cases are imported from other countries primarily due to *unvaccinated* U.S. residents traveling to other countries where measles continues to be endemic.

Between December 2014 and February 2015, Utah experienced a measles outbreak associated with two unvaccinated Utah residents who traveled to Disneyland in California.



The Utah outbreak resulted in three confirmed measles cases, all of whom were younger than 18 years old, unvaccinated, and part of the same household. However, the two index cases* attended 16 events during their infectious period, potentially exposing others. Public health identified more than 375 contacts in 160 households who were exposed to measles. Although many of these contacts had documentation of measles immunity** and were not at risk, 117 people required quarantine and daily monitoring for symptoms of the disease for 21 days. Many contacts without evidence of immunity were given measles-mumps-rubella (MMR) vaccine or immunoglobulin, a protein the body uses to fight infection.

**The first case or instance of a patient coming to the attention of health authorities*
***Evidence of measles immunity is defined as documented receipt of two doses of live measles virus–containing vaccine, laboratory evidence of measles immunity, documentation of physician-diagnosed measles, or birth before 1957.*

Measles is a highly contagious, acute viral illness that spreads quickly in unvaccinated populations. Vaccination is an important line of defense for two reasons. First, vaccination directly protects the person being vaccinated. Second, having a high percentage of the population vaccinated protects others, including those who cannot be vaccinated because of severe allergies to vaccine ingredients, medical conditions, or who are too young to begin vaccination.

Utah law requires that students entering a public, private, charter or parochial school be fully vaccinated or claim a medical, religious, or personal exemption. Approximately 92-94% of people in a population

2015 Measles Outbreak in Utah (continued)

need to be fully vaccinated (two doses of MMR vaccine) against measles to provide "herd immunity" (protection provided by an immunized population for those who aren't vaccinated). During the Utah 2013-2014 school year, 95.8% of Utah students in kindergarten through grade 12 were fully vaccinated against measles.

While the overall measles vaccination coverage at school entry is high, other factors contribute to disease risk and transmission in a community, including immunization exemptions and waning immunity. Utah is one of 20 states that allow exemptions for nonmedical reasons, e.g., religious or personal beliefs. The percentage of Utah exemptions for school entry has increased from 1.2% in 1997 to 4.5% in 2013. Although it seems small, over several years, the number of unimmunized children accumulates and at some point the overall vaccine coverage required for herd immunity will no longer be present. Additionally, Utah has the youngest median age, larger family sizes, and the highest birthrate in the nation. These factors, combined with an increasing exemption rate, create a critical risk in the community for outbreaks of vaccine-preventable diseases.

Table 1 Estimated public health costs associated with measles outbreak, Utah 2015

Outbreak Response	Number	Costs
Public health***	3,000	$109,240
MMR vaccine doses	300	$5,400
Laboratory tests	29	$308
	Total Estimated Public Health Costs	**$114,948**

***Includes public health staff hours and costs from the Utah Department of Health and local health departments associated with the measles outbreak.

Public health's direct costs for the measles outbreak response were approximately $115,000. Costs include public health staff hours, vaccine, immunoglobulin, laboratory testing and quarantine. The cost estimate does not include other indirect costs such as public education and provider consultation conducted by local health departments or any private health care associated costs. These costs are difficult to determine, but would certainly increase the overall cost of responding to the outbreak.

This outbreak serves as a reminder of the importance of maintaining high vaccination rates, even for diseases that are rarely seen in the United States, as long as those diseases continue to circulate in other parts of the world.

Testing Dixie Regional Medical Center's Emergency Response Plan *by Steve Ikuta*

In keeping with the effort to "always be prepared," Dixie Regional Medical Center in St. George participated in Utah's 85th WMD Civil Support Team's annual Operation Red Rocks exercise in Washington County. The full scale exercise was designed to test Dixie Regional's radiological and nuclear incident emergency response plan. The scenario was based on a van carrying radioactive material. That vehicle's driver suffered a heart attack causing the van to collide with a Washington County School bus filled with high school students and chaperones returning from a field trip.

One of Dixie Regional Medical Center's main objectives included surveying potential patients from the scene to determine whether they had any radioactive material on them. If the results were positive, victims were sent through the decontamination process before receiving any further care. Another objective involved activating the medical center's Radiation Nuclear Incident response team to assess, treat, consult and transfer any patients experiencing acute radiation syndrome. This process involved consulting with facilities that have a blood and marrow transplant program such as Primary Children's Hospital, LDS Hospital, University of Utah Healthcare, University of Utah's Burn Center, and the Huntsman Cancer Institute.

A conference call also included other subject matter experts from Oak Ridge Associated Universities and Radiation Emergency Assistance Center. Dixie Regional Medical Center even got Life Flight's High Risk OB team involved, as they transferred a "pregnant woman" for further evaluation and consultation with hematologist, Dr. Derrick Haslem. For the health care involvement of the exercise, there were 24 different participants representing federal, state and local governments along with health care institutions and local community partners, i.e., St. George Fire Department, Southwest Region Hazmat, Gold Cross Ambulance, Washington County School District, Intermountain's Courier Services, and others. Utah's National Guard Homeland Response Force partnered with Washington County's Emergency Operations Center along with the Joint Information Center during the exercise.

Steve Ikuta serves as Emergency Management Program Manager for the Southwest Region and is a member of the Utah Public Health Preparedness Senior Advisory Committee.

Utah Ranks 2nd in Nation for Health Preparedness

In December, the Association of State and Territorial Health Officials (ASTHO), in partnership with the Centers for Disease Control and Prevention (CDC), and 20 development partners, released the National Health Security Preparedness Index (NHSPI) for 2014. The index measures the nation's readiness to protect people during a health emergency or disaster. The 2014 national result, 7.5 on a scale of 10, demonstrates that a great deal of health security preparedness has been done. However, significant work still remains.

Utah received an 8.3 preparedness result, taking the second spot in the rankings. Virginia's ranking was 8.4. Utah's top scores included 9.4 in Incident Information and Management, 9.0 in Countermeasure Management, 8.5 in Community Planning and Engagement, and 8.0 in Health Security Surveillance. The Beehive state falls in the bottom one-third of states in the domain of Health Care Delivery.

To view the entire report, visit www.nhspi.org.

UDOH Web sites:

health.utah.gov (main)

health.utah.gov/preparedness

health.utah.gov/ems

health.utah.gov/epi

health.utah.gov/lab

Utah Department of Health

Bureau of Emergency Medical Services and Preparedness

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Preparedness Training information:

https://www.utah.train.org

Calendar 2015 Training

Date	Event	Location	Information
April 28– 29	Homeland Security Exercise and Evaluation Program (HSEEP)	Sandy, UT	UTRAIN: #1011178
April 28	Isolation and Quarantine for Rural Communities	Ogden, UT	UTRAIN: #1054034
April 28	Rural Isolation and Quarantine Planning: Private Sector Readiness	Ogden, UT	UTRAIN: #1054018
April 29	Rural Isolation and Quarantine for Public Health and Healthcare Professionals	Ogden, UT	UTRAIN: #1054026
April 29	Isolation and Quarantine for Rural Public Safety Professionals	Ogden, UT	UTRAIN: #1054035
May 5-6	Governor's Public Safety Summit	Layton, UT	To register visit: http://publicsafety.utah.gov/
May 7	Pre-Disaster Mitigation Grant Workshop	Utah Division of Emergency Management State Office Building Salt Lake City, UT	RSVP to Brad Bartholomew @ bbart@utah.gov
May 8. 9, 15 and 16	Community Emergency Response Team (CERT) Train-the-trainer	Orem, UT	UTRAIN: #1033034
May 13-14	Advanced Incident Command System (ICS-400)	Salt Lake City, UT	UTRAIN: #1011057

Calendar 2015 Training

Date	Event	Location	Information
May 13-14	Intermediate ICS for Expanding Incidents (ICS-300)	Ogden, UT	UTRAIN: #1011051
May 14	Procedures for Post-Earthquake Safety Evaluation of Buildings	Magna, UT	UTRAIN: #1037374
May 14	Technical Medical Moulage	Salt Lake City, UT	UTRAIN: #1055917
May 20	Utah COOP Tabletop Exercise	Salt Lake City, UT	UTRAIN #1051964
June 3	Local Damage Assessment	Salt Lake City, UT	UTRAIN: #1054851
June 3-4	Intermediate ICS for Expanding Incidents (ICS-300)	Vernal, UT	UTRAIN #1011051
June 23-24	Benefit Cost Analysis	Salt Lake City, UT	UTRAIN: #1027276
June 30	Rapid Needs Assessment	Salt Lake City, UT	UTRAIN: #1011069
July 8-9	EOC Management and Operations	Salt Lake City, UT	UTRAIN: #1011065
July 15-16	Readiness: Training Identification Preparedness Planning	Salt Lake City, UT	UTRAIN: #1056533
July 29-30	Intermediate ICS for Expanding Incidents (ICS-300)	Salt Lake City, UT	UTRAIN: #1011051
August 5-6	Recovery from Disaster, the Local Government Role	Salt Lake City, UT	UTRAIN: #1011066

Calendar 2015 Training

August 12-13	Mitigation for Emergency Managers	Salt Lake City, UT	UTRAIN: #10134348
August 12-13	Advanced Incident Command System (ICS-400)	Vernal, UT	UTRAIN: #1011057
August 19-20	Local Volunteer and Donations Management	Salt Lake City, UT	UTRAIN: #1026948
August 20	Procedures for Post -Earthquake Safety Evaluation of Buildings	Magna, UT	UTRAIN: #1037374

Visit: www.bereadyutah.gov for more information.

Newsletter produced by Charla Haley