



epiConnections

A BIMONTHLY NEWSLETTER OF THE COMMUNICABLE DISEASE AND
EMERGENCY MANAGEMENT DIVISION OF BOULDER COUNTY PUBLIC HEALTH

Preparing for Infectious Disease Emergencies is More Important than Ever

Since 1980, 1-3 new human infectious diseases have been identified each year, caused by population growth and movement; greater contact between people and animals; international travel and trade; poor public health infrastructure; climate change impacts on habitat; as well as other social factors. In addition, other diseases have "re-emerged," causing greater numbers of cases than before and/or affecting different populations and regions than in the past (e.g., chikungunya and Ebola) and, in some cases have developed resistance to available treatments (e.g., multi-drug resistant tuberculosis). As our populations and environments continue to change, it's more important than ever that public health and healthcare partners are prepared to respond to outbreaks of both familiar diseases and those that are newly emerging.

Impact in Boulder County: Infectious disease outbreaks are often unpredictable and can vary greatly in severity and spread. One of the greatest infectious disease threats in recent years was the influenza H1N1 pandemic of 2009-2010, a novel influenza strain that resulted in 75 hospitalizations and 3 pediatric deaths in Boulder County. Extensive vaccination efforts were implemented nationwide, with over 80 million individuals receiving vaccination that year; nearly 82,000 of them in Boulder County. Another example is the most recent influenza season. While the strain was not novel and was not deemed a pandemic, the poor vaccine match resulted in over 130 hospitalizations and 1 pediatric death in Boulder County. Further, in 2012, Boulder County experienced a pertussis epidemic which peaked in 2013, with over 150 cases reported in 2012 and more than 210 cases in 2013. And the summer of 2013 brought our community broad exposure to hepatitis A through contaminated frozen berries causing 5 reported cases; post-exposure vaccination efforts likely averted many more cases. Just this past week, neighboring Weld County detected a Salmonella typhi outbreak stemming from a food handler.

Anne Schuchat, Assistant Surgeon General and director of CDC's National Center for Immunization and Respiratory Diseases, reminds us that although the United States is wealthy and has a strong health system infrastructure, we are intertwined with nations that have more fragile health systems and less resources. Ebola in Guinea, Sierra Leone, and Liberia illustrated that infectious diseases that have never been reported in the US can be one traveler away from impacting our communities and our health care systems. The situation led to one of the largest health system responses in the US in recent history, perhaps since the 2009 H1N1 pandemic. Shortly after the Ebola crisis, an outbreak of measles at an amusement park in California that spread to many states, including Colorado, posed a threat to our community, which tends to have lower than ideal vaccination rates.

Use Your Skills to Help in an Emergency

Recent disasters throughout Colorado have reminded us of the emotional, mental, and physical impact of traumatic events. Whether natural or man-made, devastating events, such as floods and wildfires, can occur anywhere and can have long-lasting impacts on individuals, families, and communities.

These same disasters are also followed by incredible outpourings of concern, generosity, and community cohesiveness. Countless Colorado volunteers donate their time and efforts to improve the social fabric of their communities; many of whom are medical and public health professionals. However, because of the complexities of the health field, including concerns about credentialing, training, and legal protections, many volunteers have not been able to utilize their professional skills and training. The terrorist events of 2001, Hurricane Katrina, and Superstorm Sandy showed that not only do individuals with medical and public health expertise want to volunteer, their expertise is a critical need in supporting the health and wellness of a community.

The Medical Reserve Corps (MRC) program was created as a national system of community-based units to identify, recruit, train, and activate volunteers, especially those with medical and public health backgrounds. Medical Reserve Corps units supplement existing public health and emergency response entities in the community and are a vital part of caring for our community in an emergency.

If you would like to help the community respond to emergencies as a member of the Medical Reserve Corps of Boulder County (MRCBC), find out more at www.BoulderCountyMRC.org or contact Nick Kell at 303-413-7532 or nkell@bouldercounty.org.

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A Look Outside Our Community
and Around the World

Update on Ebola Virus Transmission in Liberia, Sierra Leone, and Guinea

As of November 23, the World Health Organization (WHO) has reported 3 confirmed cases of Ebola in Liberia and no cases in Sierra Leone and Guinea. On September 3, 2015, the WHO declared Liberia free of Ebola virus transmission; however, 3 new cases were identified in late November, and 40 contacts are currently being followed. It is possible that, as of this publication, new cases have emerged. On September 21, 2015, enhanced entry screening was discontinued for travelers coming to the United States from Liberia. Travelers are no longer funneled through one of the United States airports conducting enhanced entry screening.

As of November 7, 2015, the Ebola outbreak in Sierra Leone was declared over, and the Centers for Disease Control and Prevention (CDC) no longer recommends active monitoring for those travelers arriving in the United States; however, travelers will continue to enter through one of the five airports conducting enhanced entry screening.

The last case of Ebola in Guinea was reported on October 29; monitoring of travelers will continue until 90 days have passed since the second negative test of the last confirmed patient.

Over this past year, Boulder County Public Health has been notified of and/or monitored 36 travelers arriving from the 3 Ebola-affected countries. As flare-ups continue, health care facilities and providers should consider obtaining a travel history from patients with suspected infectious diseases as early as possible, such as at the point of intake or during triage. CDC recommends specifically asking patients about travel to Guinea within the past 21 days if they are experiencing fever or other symptoms of Ebola (i.e. severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage).

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Planning for Local Response: To ensure that we're as prepared as possible to respond to emerging infectious disease threats, Boulder County Public Health has convened professionals in the fields of emergency management and infectious disease from a variety of agencies, including Boulder Community Health, Beacon Center for Infectious Diseases, Longmont United Hospital, Salud Clinic, People's Clinic, Avista Adventist Hospital, Good Samaritan Medical Center, Kaiser Permanente, American Medical Response of Boulder, University of Colorado-Boulder, Boulder County Office of Emergency Management, and City of Longmont Office of Emergency Management. Known as the Community Infectious Disease Emergency Response (CIDER) Team, this team is charged with informing a public health infectious disease emergency response plan that will serve as a blueprint for responding to any infectious disease emergency in the community. The plan contains annexes specific to disease groups (e.g. respiratory aerosolized transmission, antibiotic resistance, and meningitis). The CIDER Team worked together to prioritize the annexes using a communicable disease risk assessment that is based on the probability of occurrence, severity (potential of harm), likelihood of spread, and ability to intervene. The following was the outcome of that assessment, in rank order. This ranking will guide future planning efforts:

1. Respiratory Aerosols (e.g. measles, pneumonic plague, active TB in congregate setting, MERS-CoV, pandemic flu).
2. ABX-resistant disease (e.g. MRSA / VRSA, C. Difficile, CRE / VRE, Shigella).
3. Bioterrorism (e.g. inhalation anthrax, botulism, tularemia, smallpox).
4. Emerging zoonoses (e.g. mosquito-borne, Ebola).
5. Invasive meningitis in congregate setting.
6. Blood-borne pathogen (e.g. drug diversion/medical error, IDU hep C/HIV outbreak).
7. Extensive food outbreak.
8. Sexually transmitted infections (e.g. gonorrhea/chlamydia/HPV).
9. Pathogen in water.

By partnering to respond to infectious disease emergencies, our community will be better equipped to respond to infectious disease threats that may emerge in Boulder County. If you or someone in your office is interested in participating as part of the CIDER Team, please contact Linda Rae at lrae@bouldercounty.org.

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References: K.E. Jones, et al., "Global trends in emerging infectious diseases," Nature, 2008: Vol. 451.