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ISSUE 2 | VOLUME 5 | 2012

Tennessee epi-news

TENNESSEE DEPARTMENT OF HEALTH

COMMISSIONER JOHN J. DREYZEHNER, MD, MPH

When You Find Hepatitis A, Call Us

The contagious liver disease hepatitis A remains common worldwide, with an estimated 1.4 million cases annually, mostly in regions without routine access to improved sanitation and clean water. Hepatitis A infection is much less common in TN and the US, and routine childhood immunization plays a role. In Tennessee in the first half of 2012, 18 cases of hepatitis A were reported, three of which were associated with an outbreak in a high school. Thirteen of the 18 cases could not be linked to an outbreak, a known source case, or to foreign travel. This is an important reminder of the unpredictability of this uncommon but contagious and preventable virus.

Hepatitis A is an acute infection ranging from mild illness lasting a couple of weeks to severe illness lasting several months. Symptoms may include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored stool, joint pain and jaundice. The long incubation period, 15 to 50 days after exposure to the virus, can make public health investigation and identification of source very challenging. Additionally, some people, especially very young children, with hepatitis A do not have symptoms but can still spread the virus to others.

There are a variety of infectious and noninfectious causes of hepatitis, and elevated liver enzyme test results alone are not an indication for specific hepatitis A testing.

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Tennessee Participates in CDC's FoodCORE Program

The Centers for Disease Control and Prevention estimates that foodborne diseases sicken one in six Americans resulting in 128,000 hospitalizations and 3,000 deaths annually. In 2010, CDC monitored 17–42 potential food poisoning clusters per week and investigated more than 200 multistate clusters leading to 14 recalls.

Tennessee is part of a novel CDC project to fund innovative improvements to state and local foodborne disease outbreak response. Tennessee is one of seven sites that participate in what is called FoodCORE — Foodborne Diseases Centers for Outbreak Response Enhancement, covering about 13 percent of the U.S. population.

The backbone of Tennessee's FoodCORE program is the student interview team, composed of three to six university students majoring in health sciences or public health. They conduct centralized follow-up interviews for nearly all *Salmonella* and Shiga toxin-producing *E. coli* cases in the state, and they pitch in during outbreak investigations. Regional health staff are kept in the loop about potential outbreaks and situations such as a sick food handler or childcare attendee.

FoodCORE will likely continue to rely on student interviewers. John Dunn, Deputy State Epidemiologist, reflected on the approach, "This model has been successful in Tennessee and other states in rapidly responding to foodborne illness outbreaks. It's great to work with energetic, resourceful students and to give them hands-on experience that ultimately strengthens our public health workforce."

For more information, please visit the FoodCORE website (http://www.cdc.gov/foodcore). — *by Susan Miller, MS, CHES, and Katie Garman, MPH, CHES* ❖

When You Find Hepatitis A, Call Us (continued)

(Continued from page 1)

In the absence of symptoms listed above, serologic testing for hepatitis A is not recommended and may generate false positive IgM results, especially in older adults. Lab testing for acute hepatitis A should be limited to persons clinically suspected of having acute hepatitis or infected because of exposure to a high-risk contact.

Hepatitis A is spread through the ingestion of an infected person's fecal matter from contaminated objects, food or drinks. The virus is hardy, even surviving exposure to freezing temperatures, and can persist on environmental surfaces for months. Persons with hepatitis A infection often have a history of close personal contact with an infected person, international travel, consumption of contaminated food,or use of illegal injection drugs. Caring for young children recently adopted from overseas or in daycare is also considered a risk factor because of asymptomatic infections in children. In about half of cases, a source is undetermined but is likely linked to a person with asymptomatic infection. Routine immunization of one-year-olds in the US is reducing this risk and serves as another success story for childhood immunizations.

For further information or to report a case, contact your local health department. Urgent public health action may be necessary to protect close contacts and prevent further spread. Visit the CDC home page for hepatitis at http://www.cdc.gov/hepatitis. — *by Robb L. Garman, MPH* ❖

Deployment of Emergency Mobile Operation Centers

The Tennessee Department of Health Emergency Preparedness program recently deployed three specialty trailers to serve as Mobile Operations Centers in the event of public health or medical emergencies. The MOCs are fully outfitted with self-contained work stations and an array of technically advanced command and communication services. Each trailer is designed to be deployed independently and can be used in remote areas or where infrastructure has been damaged by natural or man-made disaster. With these strategically prepositioned capabilities, the department can help direct the state's response in a wide variety of situations. According to EP Senior Planner Greg Galfano, "These are great assets for the department which will allow us to respond rapidly and decisively. They'll be invaluable when they are needed."

Other features of the MOCs include:

- Communications center with radio transceivers tuned to the department's primary and operations channels and frequencies used by other response agencies
- Boom-mounted camera with remote pan, tilt and zoom and video recording capability
- Independent satellite-based broadband phone and internet system
- Satellite television with access to cable news networks and local broadcast stations.
- Generator and shore input power
- Emergency public address and warning system — *by Darryl Edmisson, MS* ❖

Lyme Disease Update

Tick season has been busy in Tennessee so far in 2012, and many people will have been exposed to ticks and tick bites through the summer and into the fall. Patients with *erythema migrans*, commonly known as a "bull's eye" rash, should be considered for Lyme disease testing. A two-tiered approach is recommended when testing for Lyme disease. First, with a screening test for the presence of antibodies to *Borrellia burgdorferi*, the causative agent of Lyme disease, using either an enzyme immunoassay, EIA, or immunofluorescent antibody assay, IFA, followed by a Western blot test. It's important that a Western blot is performed only after results from the EIA or IFA are positive or equivocal. Many commercial labs offer both tests as a package and per request will automatically test the specimen using a Western blot if the results of the EIA or IFA are positive. If late stage Lyme disease (illness lasting >1 month) is suspected, only tests for IgG antibodies to Lyme should be requested; IgM antibody test results for late-stage Lyme are more

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Lyme Disease Update (continued)

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likely to represent false positives, since multiple organisms can cross react with Lyme antibodies.

A recent study featured in the journal *Emerging Infectious Diseases* noted that a large proportion of people examined by a rheumatologist in a Lyme endemic area had antibodies to *Bartonella spp.* or had *Bartonella spp.* bacteremia, as determined by culture or PCR. Nearly half of these patients had been previously diagnosed with Lyme disease, and the authors questioned whether bartonellosis may have been a more accurate diagnosis for these patients. Though the authors were unable to make a causal link between the symptoms (myalgia, joint pain, progressive arthropathy or neurologic symptoms) and the presence of the organism in these patients, additional studies could focus on the burden of disease related to *Bartonella spp.* in patients referred to rheumatologists. The most well-known *Bartonella* species is *B. henselae*, the causative agent of "cat-scratch" fever. Other species of *Bartonella* have been shown to infect humans, but the population-wide burden of disease is still being studied. The entire EID article can be read online at http://wwwnc.cdc.gov/eid/article/18/5/11-1366_article.htm.

Other information about Lyme disease and communicable disease reporting can be found at: http://health.state.tn.us/ReportableDiseases/ReportableDisease.aspx/DiseasePageList?dname=Lyme%20disease. — *by Caleb Wiedeman, MPH* ❖

SPOTLIGHT: Bonnie Bashor

Many environmental laws had their origins in the 1970s and were accompanied by numerous rules, policies and procedures. Bonnie Bashor began her career in 1977 in what was then known as the Tennessee Department of Health and Environment, working on these initial environmental regulations.

As the director of the Environmental Epidemiology Program, Bonnie's work and leadership has undoubtedly prevented thousands of potential exposures to harmful chemicals. Bonnie helped to create our network of regional environmental epidemiologists and successfully networked the Department of Health with a variety of other agencies such as the Department of Environment and Conservation, the US Agency for Toxic Substances and Disease Registry, and the US Environmental Protection Agency.

Several key issues over the years highlighted Bonnie's expertise and enthusiasm, including the dose reconstruction project for the Oak Ridge National Laboratory and the Public Health Assessment for the TVA coal ash release. Her persistence in the Alton Park neighborhood of Chattanooga assisted three generations of people in seeking environmental justice for their community. In College Grove, her quick thinking led to action that aided concerned parents in dealing with a newly discovered lead exposure problem. Bonnie's leadership of the Cypress Creek exposure investigation led to cleanup of persistent pesticides.

Bonnie has recently retired; we will miss her leadership and sense of humor. — *by David M. Borowski, MS* ❖

Tuberculosis News

Finding tuberculosis patients in Tennessee just got a little easier. Intensive training in TB contact investigation was a big part of a four-day course recently conducted in Nashville. This training course, developed by the Centers for Disease Control and Prevention and the four Regional Training and Medical Consultation Centers, focused

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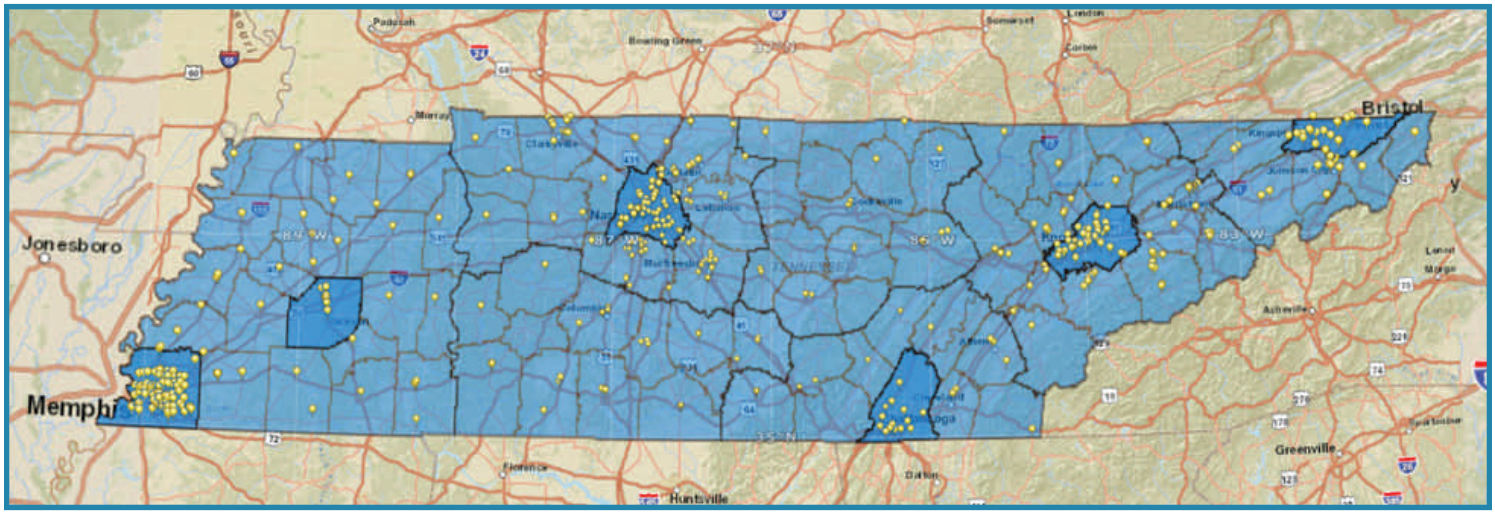
Tuberculosis News (continued)

(Continued from page 3)
on communicating and interviewing, identification of contacts, providing patient education, cultural competency and use of an interpreter. The course was hosted by the Tennessee Tuberculosis Elimination Program and involved CDC staff and trainers from the Southeast National Tuberculosis Center in Gainesville, Florida. In addition to lectures, health department TB staff from across the state participated in role plays, group exercises, and peer and expert feedback. — *by Wilfred Rabi* ❖

Emergency Preparedness Section Partners with 528 Tennessee Pharmacies to Distribute Medical Countermeasures

Unprecedented in the state of Tennessee, the Emergency Preparedness program has secured new four-year contracts with local independent and national chain pharmacies in a pre-emptive action to help distribute medical countermeasures from the Strategic National Stockpile. During a declared health emergency such as bioterrorism, pandemic influenza, severe weather, radiation event or natural disaster, these no-cost contracts allow pharmacies to dispense medications and supplies to the community at no cost.

This network of pharmacies is now part of the Tennessee Countermeasure Response Network. It is comprised of six local and national pharmacy chains plus 31 independent pharmacies, totaling 528 pharmacy locations statewide. Their willing participation in this agreement will be vital to completing the mission of the Tennessee Department of Health and the Emergency Preparedness program. Establishing these critical partnerships before a crisis will help build resilient communities and help secure the health and wellness of Tennesseans. — *by Laina Stanford and Paul Petersen, PharmD, BCPS* ❖



Norovirus Gastroenteritis Associated with a Youth Hockey Tournament

Noroviruses are a group of highly virulent, single-stranded RNA viruses that cause acute gastroenteritis. Symptoms usually develop 12–48 hours after a person is exposed and last for 24–72 hours. Most people recover without complication, but illness can have serious, long-term consequences, especially among young children, older persons and those who are immunocompromised.

In February 2012 the Tennessee Department of Health responded to reports of nausea, vomiting, and diarrhea among attendees at the 2011 President's Youth Hockey Tournament in Franklin, TN, and worked with the TDH Mid-Cumberland

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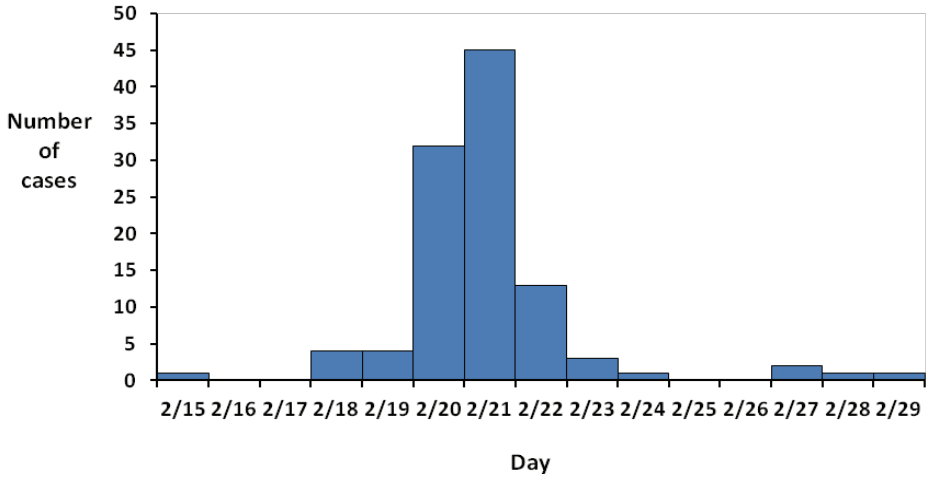
FIGURE. Onset of gastroenteritis among ill attendees, by date — February 2012.



Norovirus Gastroenteritis Associated with a Youth Hockey Tournament (continued)

(Continued from page 4)

Regional Health Department to conduct an epidemiologic investigation.

An Internet-based survey sent to 35 team captains (one captain per team) in 10 states revealed at least 204 persons associated with 33 teams had been sickened. These ill persons had stayed at five different hotels, though 176 (86%) had stayed at a single hotel, which will be called Hotel A.

A second online survey was sent via team managers to players and families who had stayed at Hotel A to assess exposures associated with illness. Sixty-nine players and 145 family members, both ill and well, who stayed at Hotel A responded. Many had acute GI illness—see text box for details. Four specimens tested positive for norovirus GI, and further analysis of one sample revealed Norovirus GI.3B. We received reports of a player having vomited in the pool table room on February 18. Four hotel workers reportedly became ill the next day, one of whom had cleaned up the vomitus.

We concluded that this outbreak was caused by person-to-person transmission of norovirus. Exposure to contaminated areas and close contact between team members and families had created the potential for widespread transmission. We educated hotel staff on best practices for cleaning up bodily fluids and provided education on transmission reduction to survey respondents. Persons who indicated working with children, in the food industry or in patient care, were individually contacted and provided information regarding norovirus prevention. We recommend thorough cleaning of areas contaminated with vomitus or diarrhea, and consistent adherence to hand hygiene practices, especially during mass gatherings. — *by Jane A.G. Baumblatt, MD* ❖

- 214 people stayed Hotel A
- 118 (55%) sickened
  - 78% nausea
  - 68% diarrhea
  - 54% vomiting
- Onset 2/18–2/29
- 42 (36%) exposed to pool table room
  - OR, 2.7; CI, 1.4-5.4
- 13 (11%) exposed to swimming pool
  - OR, 5.0; CI, 1.1-22.8
- 40 (34%) exposed to lobby
  - OR, 2.7, CI, 1.4-5.6

Laboratory Results Reporting and Case Reporting: Critical Components to Successful Public Health Investigations

Investigations of communicable diseases, outbreaks and other events of public health interest often begin when local or state health departments receive a *case report* from a healthcare provider or a *lab report* from a laboratory, including hospital, regional or PH laboratories.

Laboratory results play a critical role in both surveillance and investigation efforts and are often the trigger event which starts the investigative process. As PH and healthcare continue to move toward greater health information system interoperability, electronic laboratory results reporting continues to grow in importance.

Patient demographic information, such as address and phone number as well as ordering provider information, are critical to PH efforts. This information is used to assign an investigative jurisdiction and to conduct the PH investigation when needed. Patient information is typically passed on to labs by ordering providers, enabling labs that possess this information to include it when reporting lab observations to PH.

Lab reports and case reports continue to play a critical role in outbreak detection and PH surveillance and investigation. When these reports contain patient contact information and ordering provider information, PH actions can be accomplished more completely and quicker, requiring fewer public resources and allowing for more timely PH interventions. — *by Daniel Golson, MPH* ❖

YOU are invited!

Call Wendi Welch at (615) 343-3622 or e-mail wendi.welch@vanderbilt.edu

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* Meet your colleagues * Foster state-wide teamwork *

Got Water?

Health Impacts from Drought

Tennessee and much of the country are experiencing a drought of historical proportions. This drought, the worst in decades, covers nearly two-thirds of the continental US. and is having dramatic effects on agriculture, air quality and water quality, as well as water quantity for river navigation and cooling for electricity generating plants. The interaction of all these factors is as fascinating as it is sobering. To learn more, check out the CDC's publication at http://www.cdc.gov/nceh/ehs/publications/Drought.htm.

What Can We Do?

- Conserve water, even when drought is not imminent
- Limit time outdoors when air quality is poor
- Follow healthy swimming practices
- Do not swim in water with visible algal blooms or excessive algae
- Check on people who are vulnerable to climate extremes in your community
- Practice good hygiene—wash hands frequently
- Conserve energy to reduce the burden on electrical generating

Additional Resources:

- Air Quality Map
  - http://www.airnow.gov/index.cfm?action=airnow.local_state&stateid=44&tab=1
- EPA Drought Preparedness
  - http://www.epa.gov/naturalevents/drought.html
- USGS , Water Use in the US
  - http://ga.water.usgs.gov/edu/wateruse.html
- Tennessee Healthy Well manual
  - http://www.tn.gov/environment/dws/pdf/TnHealthyWell.pdf

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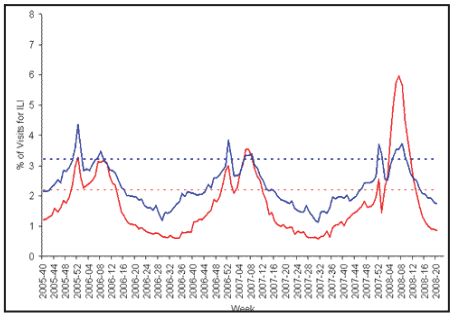
Tennessee Department of Health
Authorization No. 343227, 02/12
Website Only

Reported Cases, by Year of Diagnosis, Tennessee, 2008-2012

Condition	2008	2009	2010	2011	YTD 2012
Chlamydia	27939	29761	27809	30249	23070
Cryptosporidiosis	48	82	52	92	47
Gonorrhea	8754	7933	6974	7453	6393
Meningococcal Disease	21	15	13	9	4
Methicillin-resistant *Staphylococcus aureus (MRSA), invasive*	1988	1954	1610	1671	1244
Pertussis	120	203	226	94	154
Spotted Fever Rickettsiosis	231	187	307	259	555
Salmonella, non-Typhi	923	779	969	996	708
Shiga-toxin producing *E. coli* (STEC)	113	86	116	104	88
Syphilis	1271	1316	1130	878	663
Tuberculosis (TB)	282	210	193	156	124
Pediatric TB 0-4 yrs	13	5	11	2	5
Pediatric TB 5-15 yrs	2	6	2	6	4

Flu happens!

(And we need you to tell us about it.)



Join the Tennessee Sentinel Providers Network

Conducting year-round influenza surveillance including free laboratory testing for selected specimens.

Contact Robb Garman for more info:
(615) 532-8507
robb.garman@tn.gov