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Tennessee epi-news

GOVERNOR BILL HASLAM

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Cryptosporidiosis Outbreak among Little League Tournament Participants

In late July, 2015 the Shelby County Health Department received reports of gastrointestinal illness among families from several southeastern states who had stayed at the same hotel in Memphis. Laboratory testing had already been performed for some of the ill persons and was positive for *Cryptosporidium*. The families were part of a larger group which had traveled to Memphis for a Little League baseball

tournament. Since people from multiple states were affected, TDH was asked to help investigate.

First, to determine the scope of the outbreak, 19 coaches or managers of teams participating in the tournament were interviewed. Only the nine teams that had stayed at that particular hotel reported illness. Next, a case-control study was conducted, utilizing



an online questionnaire, to compare the exposures of ill versus well guests
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CSMD Update: A National View of Doctor Shopping

An important distinction exists between legal and public health definitions of doctor shopping. According to the legal definition, a doctor shopper is someone who goes to multiple providers to obtain prescription drugs for abuse or misuse, which thus includes obtaining just one prescription for illicit use. However, public health definitions do not exist to convict offenders, but rather to identify the extent of the issue for monitoring and evaluation purposes. Currently, there is a need for a validated public health definition of doctor shopping to be used by all states.

Tennessee defines a doctor or pharmacy shopper as an individual visiting at least five prescribers and five dispensers in a three month period (5-5-3 criteria), but a variety of definitions

are used among states. Most define a threshold number of prescribers and dispensers visited within a specified time period and may also incorporate factors such as number of early refills.

As can be seen in the figure, at least 14 different doctor shopping definitions are currently being used in the United States.

This lack of consistency is a barrier as Tennessee works with other states to monitor and reduce doctor shopping. Tennessee is working to validate the 5-5-3 criteria, which ultimately may help establish a consensus definition to be used nationally.



5-5-3	6-6-3	
5-5-12	6-6-6	
15-15-12	7-7-3	6+ /12
3-3-2	10-10-6	mo.
4-4-6	10-10-12	10+ /12
4-4-12	15-15-6	mo.

Cryptosporidiosis Outbreak

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of the hotel during that time period.

Survey responses from 253 individuals were collected. Among these, 55 probable and 8 confirmed cases of cryptosporidiosis were identified. The only exposure found to be associated with illness was swimming in the hotel pool, with ill guests having seven times greater odds of having swam in the pool than did non-ill guests.

A TDH Environmental Health Spe-

cialist performed an environmental assessment at the hotel. The swimming pool water was found to have chlorine levels below the recommended level and was also positive for *E. coli*. Based on these test results, the pool was closed and required to undergo remediation procedures before reopening.

Over the last several decades in the United States, there has been an increase in the number of recreational water ill-

ness outbreaks identified. Over half of these outbreaks were caused by *Cryptosporidium*. It is important that individuals take precautions around recreational water sources and that pool owners and businesses be vigilant with routine maintenance of public aquatic facilities. Guidance on improving the health and safety of facilities can be found in the CDC's [Model Aquatic Health Code](#).

Mary-Margaret Fill, MD

Knox County's Pharmaceutical Waste Collection Program

Common disposal methods for pharmaceuticals are often insufficient to protect health and the environment. Flushing drugs down a drain sends them to wastewater treatment plants not capable of fully removing them before the water is returned to the environment. Landfilling them may result in contaminated leachate which also ends up in waterways. Downstream

the parts per billion level), they are known to cause behavioral changes and reproductive abnormalities in aquatic life. The long-term health effects of chronic low-level exposures in humans, pets and livestock are unknown.

To address the problem, many communities have begun pharmaceutical waste collection programs. These programs also serve to divert drugs

have been collected at quarterly events across Knox County and at the drop box at the Knoxville Police Headquarters, available 24/7. Bottles and other packaging are separated for recycling. The program is operated by a coalition including the Knox County Health Department, the Knox County and the City of Knoxville Solid Waste Departments, the Knoxville Police, University of Tennessee pharmacy students and local wastewater utilities. The program was presented the 2010 Governor's Award for Excellence in Solid Waste Reduction.



While such programs help to reduce the flow of such waste into the environment, a sustainable long-term solution will require development

of more biodegradable drugs, improved utility treatment processes and changes in federal laws. The reforms included in the Secure and Responsible Drug Disposal Act of 2010 are a first step towards this goal. Until that time, programs such as the one in Knox County offer a means of ongoing public education about the problem and potential solutions.

For more information, visit the [City of Knoxville Unwanted Medicines Collection](#) webpage and the [East Tennessee Medication Collection Coalition](#) webpage.

Although concentrations of pharmaceuticals in water are very low (in

away from misuse or abuse by curious youngsters, reduce chances of accidental poisonings and may potentially reduce crime. Local law enforcement often participates in such programs, which is helpful since controlled substances such as opioid pain relievers can only be legally received by law enforcement officers or a pharmacist.

Since 2008, over 17,000 pounds of medications, excluding packaging,

Al Iannacone, MS

One Health: Backyard Poultry

Backyard poultry flocks are increasingly popular as more and more families enjoy raising chicks and having fresh eggs. Keeping poultry can be fun and educational, but studies have shown most people are not aware that their birds can carry dangerous bacteria and viruses. Poultry commonly carry



Campylobacter, *Salmonella* and *E. coli*—all of which can cause serious enteric infections in humans, especially for young children, pregnant women, and elderly or immunocompromised individuals. The birds may show no signs of illness but shed the bacteria in their droppings. The droppings contaminate the birds' environment and may be present on

their bodies, even if they appear clean. While educational campaigns have greatly increased public awareness of the risk of diseases like salmonellosis from raw chicken and eggs, people are less likely to be aware of the risk of infection from live birds. Each year, large multi-state outbreaks of salmonellosis occur

that are linked to backyard poultry. In 2015 the CDC reported four such outbreaks, with 252 cases and 63 hospitalizations. It has been estimated that, for every laboratory-confirmed case of salmonellosis that is reported to public health, approximately 30 more cases exist. It is therefore likely that thousands of illnesses due to backyard poultry contact occurred in the United States in 2015 alone.

Fortunately, the following simple preventive measures can reduce the risk:

- Do...**
- ▶ wear gloves when cleaning cages

- and poultry houses;
- ▶ wash hands with soap and water after contact with birds or their environment, including food and water dishes;
- ▶ supervise young children when around poultry and make sure they wash their hands afterward;
- ▶ research and learn to properly care for poultry and work with a veterinarian to keep birds healthy; and
- ▶ keep new birds separate from the flock for at least 30 days.

Do not...

- ▶ give baby chicks or ducklings to young children as gifts;
- ▶ eat or drink in areas where birds live and roam;
- ▶ allow live birds into the home; or
- ▶ kiss or cuddle birds.

These guidelines are useful not only for preventing enteric infections like salmonellosis but also other diseases such as avian influenza. With these simple protective measures, people can enjoy raising poultry while minimizing their risk of infection and illness.

Heather Henderson, DVM, MPH

Healthcare-Associated Infections

Healthcare-associated infections (HAIs) are infections that patients get while receiving medical or surgical treatment. They are among the leading causes of preventable deaths in the United States and result in substantial increases in health care costs each year. HAIs are the most common complication of hospital care, with about one in every 20 hospitalized patients developing an infection related to their care. However, studies suggest that implementing proven prevention practices can avert up to 70 percent of certain HAIs. The TDH HAI Program works closely with healthcare facilities across the state to reduce the incidence of these preventable infections.

In October, TDH released its tenth report on HAIs and, for the first time,

an annual report on HAIs for healthcare consumers. The new report targeted to healthcare consumers compares the performance of each Tennessee hospital to the national experience on five types of HAIs as well as healthcare worker seasonal flu vaccination. The report also provides consumers with helpful background information about HAIs, including what patients can do to prevent HAIs and things to consider when choosing a healthcare facility.

The technical version of the report includes statewide HAI data for Tennessee acute care hospitals, long-term acute care facilities and inpatient rehabilitation facilities, as well as facility-specific data for acute care hospitals. The report presents information on five types of HAIs (central line-associated blood-

stream infections, catheter-associated urinary tract infections, surgical site infections, methicillin-resistant *Staphylo-*



coccus aureus [MRSA] bacteremia and *Clostridium difficile* infections) and healthcare worker flu vaccination rates.

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Get Smart About Antibiotics Week

Get Smart About Antibiotics Week is an annual one-week observance to raise awareness of the threat of antibiotic resistance and the importance of appropriate antibiotic prescribing and use. Becky Meyer is the project coordinator for outpatient antimicrobial stewardship on the TDH Healthcare Associated Infections team. She recently led efforts for a [gubernatorial proclamation](#) in recognition of the Get Smart About Antibiotics Week, which was observed nationally November 16-22, 2015.

Becky and her colleagues have been working closely with communications professionals to publicize the importance of the initiative through a press release and social media; Additionally, the team has developed [new educational materials](#) for the TDH website and



will be working to engage partners of Tennessee's Appropriate Antibiotic Use Campaign to expand the message statewide.

Shannon Harney, MPH

Healthcare-Associated Infections

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The report also highlights the impressive progress Tennessee hospitals have made preventing HAIs in recent years. In 2014, Tennessee hospitals were more than 50 percent below the national baseline for central line-associated bloodstream infections in adult, pediatric and neonatal intensive care units. This demonstrates significant progress since Tennessee hospitals began reporting these measures in 2008.

Even with these successes, there are opportunities for improvement in other types of HAIs, including catheter-associated urinary tract infections. Tennessee hospitals were 22 percent higher than the national baseline for these infections in adult and pediatric ICUs in 2014.

Full versions of these reports are available on the TDH [HAI webpage](#).

Ashley Fell, MPH

Selected Reportable Conditions

CONDITION	2011	2012	2013	2014	2015
Campylobacteriosis	413	445	418	375	734
Chlamydia	30249	31834	29635	30449	30734
Enterobacteriaceae, Carbapenem-reducing (CRE)	392	280	249	224	427
Gonorrhea	7453	8922	7202	7125	8202
Hemolytic Uremic Syndrome (HUS)	16	19	21	12	14
Hepatitis A, acute	25	22	21	13	14
Hepatitis B, acute	216	264	283	272	264
Hepatitis C, acute	93	150	138	181	197
Lyme Disease	34	30	25	17	25
Meningococcal Disease	9	7	8	7	3
Pertussis	106	314	239	306	155
Salmonellosis	1060	1106	863	955	867
Shiga toxin-producing <i>E. coli</i> (STEC)	111	130	71	142	158
Shigellosis	213	205	705	789	202
Spotted Fever Rickettsiosis	262	696	548	546	602
Syphilis	878	948	875	904	1082
Tuberculosis	172	169	143	147	132

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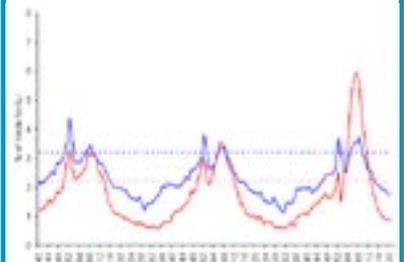


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