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Tennessee *epi-news*

GOVERNOR BILL HASLAM

COMMISSIONER JOHN J. DREYZEHNER, MD, MPH

Studying the Burden of Hepatitis C Virus Infection

Tennessee, along with three other Appalachian states, documented a greater than three-fold increase in acute hepatitis C virus (HCV) infection from 2006-2012 among individuals aged 30 years and younger. During the same time period, case rates were twice as high in non-urban areas compared to urban areas and were predominately driven by persons who inject drugs. To better understand the HCV epidemic in Tennessee, the TDH Viral Hepatitis program implemented HCV testing and risk factor assessment among pa-

tients seeking services through health departments in eastern Tennessee.

From June through October of 2016, routine opt-out HCV testing was offered to all patients seeking health department services for sexually transmitted diseases or family planning in Knox and Hamilton counties, while targeted testing was offered in Sullivan County. Testing was conducted through the TDH State Laboratory. All antibody positive (Ab+) specimens were automatically tested for HCV RNA to differentiate between current and prior infection.

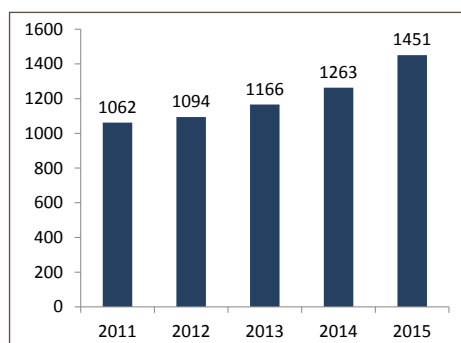


During the health department visit, demographic and risk factor in-
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Drug Overdose Deaths and the Role of the CSMD

From 2014 to 2015, drug overdose deaths in Tennessee increased by 14%, to a rate of 22 per 100,000 residents, despite reductions in the amount of opioids dispensed, fewer doctor shoppers and increased utilization of the CSMD. Only about half of people who died of overdose had controlled substances dispensed within 60 days prior to death, suggesting that other factors, such as illegal fentanyl, heroin or diverted prescription opioids, played a significant role. These are

signs that the epidemic is evolving and changes are needed in how we identify



Drug Overdose Deaths, 2011-2015, Tennessee

and intervene prior to the fatal overdose. The proportion of drug overdose deaths in which an opiate was involved rose only slightly in 2015, from 68% to 71%, suggesting that the role of opiates in drug overdose deaths overall may be leveling off. However, the number of deaths in which fentanyl was involved rose significantly, from 5.5% to 12%. Of special concern is that approximately one-third of drug overdose deaths include a combination of opioids and benzodiazepines—an interaction that

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Hepatitis C Virus Infection

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formation was collected and risk reduction messaging was provided.

By the end of the five-month study period, 4,753 persons had been tested: average age was 28 years, 21% reported a history of injection or intranasal drug use, and 28% reported prior incarceration. Of those tested, 8% (397) were HCV Ab+. Of Ab+ clients, 74% (294) had positive HCV RNA tests, indicating current infection. Significant-

ly more Ab+ persons were male and non-Hispanic white; however, more than 40% of Ab+ individuals were females of reproductive age, and five were pregnant. History of intranasal or injection drug use and history of incarceration were significantly associated with current or past HCV infection.

This analysis is the first to quantify the burden of HCV in eastern Tennessee among health department

clients and highlights the need for HCV testing among at-risk groups. TDH plans to expand HCV testing to all health departments in early 2017. For more information concerning HCV testing in local health departments, contact the HIV/STD/Viral Hepatitis Program at 615-741-7500.

Lindsey Sizemore, MPH, CPH, Michael Rickles, PHD

Lead Poisoning Prevention

The lead poisoning crisis associated with municipal water in Flint Michigan put the spotlight on a widespread and long-standing problem throughout the United States. To bring

prevention during October was the first SoilSHOP (Screening, Health, Outreach & Partnership), held in Chattanooga. SoilSHOP was the result of collaboration between the TDH Environmental Epidemiology Program and Childhood Lead Poisoning Prevention Program, along with the Agency for Toxic Substance & Disease Registry (ATSDR), the U.S. Environmental Protection Agency (EPA), the Tennessee Department of Environment & Conservation (TDEC) and local agencies. The event provided an opportunity for outreach and education. Residents were invited to bring soil from their property to be screened onsite for lead, using x-ray fluorescence machines provided by EPA and TDEC.

EPA officials were in Chattanooga conducting an ongoing soil screening project to identify areas where lead from historical foundry operations may

have been deposited. Early in this project, the Environmental Epidemiology program provided analyses of blood lead data by creating cluster maps to visualize the distribution of test results above a specified level. Although these maps did not identify locations of soil contamination, they did generate further interest in the data and have led to additional review of available blood lead data. The data analysis was used along with other criteria to select where to screen soil in this investigation.

Fortunately, most soil samples screened during SoilSHOP were in the acceptable range for lead content. Educational materials were provided at the event for lead-related issues, including lead poisoning prevention, lead-based paint safety, drinking water safety and gardening safety. Future events in Chattanooga and across Tennessee have been discussed.

Rebecca Gorham



further attention to the issue in Tennessee, Governor Haslam proclaimed October 2016 to be Lead Poisoning Prevention Month. Among the activities focusing on lead poisoning awareness and

TRUST Memphis: National HIV Behavioral Surveillance

National HIV Behavioral Surveillance (NHBS) was created by CDC in 2003 to ascertain HIV behavioral risk factors among three high-risk populations (men who have sex with men, persons who inject drugs and heterosexuals at increased risk for HIV infection). The project involves interviews and anonymous HIV testing in cities throughout the United States. Data are collected from one of the three priority populations in rotating annual cycles. Interview topics include demographics,

social experiences, sexual behavior, substance use and HIV testing experiences, in addition to site-specific questions.

In 2015, the Memphis MSA ranked eighth among new HIV infections among 381 MSAs in the United States, with 311 cases (23.1 per 100,000 persons). Due to the need to improve HIV prevention in Memphis, TRUST (Talk, Respect, Understand, Support, Take action) Memphis NHBS was awarded 2.5 million dollars for five years. In 2016, four new full-time employees in Mem-

phis were hired and trained. The team began by conducting formative assessment, or planning, with an ethnographer conducting focus groups and interviews. Anonymous interviews and HIV testing began in late 2016 in two Memphis communities. In less than six weeks, TRUST Memphis conducted 572 interviews using respondent-driven sampling methodology (snowball sampling), performed 571 HIV tests, and offered STI (gonorrhea, chlamydia and syphilis) testing to interested participants.

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TRUST Memphis

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The program has provided much needed services to some Memphis residents. One participant who had not received medical care in many years was glad to be offered HIV/STI testing. The person recruited family and friends to participate in the interview and receive testing. Another participant, who was

homeless, hungry and out of HIV care, expressed gratitude for the incentives and services being offered. The interviewer was able to further assist the participant by providing referrals to additional care and services with collaborating community-based organizations.

TRUST Memphis is now conducting

the formative assessment for the next cycle. The information collected from the interviews will be used to drive prevention planning, inform policy and guide resource allocation in the Memphis area.

Samantha A. Mathieson, MPH

Putting One Health into Practice

November 3rd was the first international One Health Day. The One Health approach recognizes that the health of people is intimately connected to the health of animals and the environment. The goal of One Health Day is to bring attention around the world to the need for One Health interactions and for the world to see them in action. Hundreds of registered events took place across the globe.

The Tennessee One Health Committee held its quarterly meeting on November 3rd to recognize One Health Day. The Committee is composed of individuals from multiple state and federal agencies and is open to anyone with interest. Connections made through the committee have improved communication and collaboration between the different agencies.

In a recent example of this type of communication, when the Tennessee Department of Agriculture's Kord Animal Health Laboratory received several serum samples from a herd of cattle experiencing pregnancy loss, zoonotic

diseases such as brucellosis and Q fever were immediate considerations—especially since the requesting veterinarian had informed the lab of a sick child in the owner's family. The veterinary pathologist promptly contacted public health veterinarians at TDH with preliminary results due to suspicion of a reportable zoonotic disease. TDH passed along all available information to the regional health office and awaited final test results. A few days later, the pathologist notified TDH of positive lab results for *Coxiella burnettii*, the causative agent of Q fever. The regional health office then followed up

with the family to ascertain that the ill child was tested for *C. burnettii*. The child was later confirmed as a case of Q fever and was appropriately treated.

The crucial first step in this One Health success story was a veterinarian

educating a client of the human health threat of certain pathogens that cause pregnancy loss in cattle, prompting the client to mention her ill child. This information was relayed to the pathologist at the animal diagnostic lab, who then



relayed it to TDH. Awareness of diseases affecting both humans and animals and open lines of communication between agencies resulted in rapidly obtaining a diagnosis in the cattle as well as the child.

Heather Henderson, DVM, MPH

2017 Reportable Diseases and Events

Several changes have recently occurred that will affect reporting requirements, including **how**, **what** and **when** to report known or suspected cases of reportable conditions.

How to Report: The Reportable Disease and Events (PH-1600) form, used to report cases of reportable diseases, conditions or events to public health, is getting a facelift. The new PH-1600 will be available for use beginning January 2017. It has been revised to include detailed directions to healthcare providers

and laboratories for reporting. Health-care providers are encouraged to attach documentation to the PH-1600, including the laboratory report, rather than completing redundant information on the form. Laboratories will be allowed to report via the printed laboratory report, completing the PH-1600 only if the provider or patient demographics are missing from the lab report. In addition to the new PH-1600 paper form, TDH will also allow reporting through a REDCap web entry form.

This online form will allow reporters to securely upload additional documentation, including laboratory reports, face sheets, notifiable diseases reports and relevant electronic health records. It will also generate a confirmation email with a reference number for the reporter's records, which can be used to follow up on cases reported to TDH.

What to Report: The "Reportable Diseases and Events" list has also been updated for 2017. Some conditions have been added, removed or revised to in-

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Drug Overdose Deaths

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has high risk for respiratory suppression, which is the main cause of overdose death.

Data from the CSMD are being combined with other patient data to identify key markers for increased risk. As previously noted, just over half of overdose deaths took place among people who had filled an opioid prescription within the past 60 days, while nearly three quarters of those who died had filled a prescription for a controlled substance within the past year. The natural history of addiction is being mapped from the prescription phase to what appears to be a danger zone, when individuals may move into the illicit market and are at higher risk for overdose and death. Policy and programs can thus be targeted more specifically to intervene early, when recovery is more likely to be successful.

Meanwhile, continuing progress is being observed in other key indicators. Doc-

tor shopping has substantially decreased, and the proportion of individuals receiving prescriptions for high morphine milligram equivalents (MME) continues to decrease. Specifically, prescriptions above 120 MME decreased to 2.9% in 2015 from 4.1% in 2013, while the proportion of prescriptions higher than 200 MME is now 0.61%. The number of pain clinics in the state has been reduced by more than one hundred, and the remaining pain clinics are certified and regulated. The team is working closely with other departments, including the Department of Mental Health and Substance Abuse Services and the Tennessee Bureau of Investigation, to be nimble in their response to the epidemic. The CSMD is a key component in the response to an evolving epidemic by providing critical data when and where it is needed.

Melissa L. McPheeters, PhD, MPH

2017 Reportable Diseases and Events

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clude special reporting criteria. It will now have one page for healthcare providers, organized by condition, and one page for laboratories, organized by pathogen. In addition, the page for healthcare providers does not include conditions reportable only by laboratories, and vice versa. The reporting categories have been replaced with icons indicating the timeframe and method for reporting. The majority of conditions for regular reporting will continue to require the PH-1600 within one week. The former matrix and laboratory

guidance documents have been combined into a single “Detailed Laboratory Guidance” document for easier use by laboratories. In addition, icons have been added to indicate when a specimen is required or requested to be sent to the state public health laboratory for additional testing. The new documents are available at <http://health.tn.gov> under “List of Reportable Diseases.” Any questions can be directed to CEDS.Informatics@tn.gov.

Justine Maxwell, DrPH, MPH, Shannon Harney, MPH

CHANGES TO THE LIST OF REPORTABLE DISEASES IN TENNESSEE FOR 2017

Added	Removed	Revised
<i>Candida auris</i>	Chancroid	Hepatitis B: Acute (laboratory tests/results)
Colistin-resistant (plasmid mediated) gram negatives	Creutzfeldt-Jakob/Prion Disease (including variant)	Hepatitis B: Perinatal (laboratory tests/results, condition name)
Hepatitis C Virus, Chronic (lab reporting only)	Guillan-Barré Syndrome	Hepatitis B: Pregnant Female (laboratory tests/results, condition name)
Nontuberculous <i>Mycobacteria</i> infection (extra-pulmonary only)	Hantavirus	Lyme Disease (laboratory tests/results, epidemiologic criteria for the case definition)
Tuberculosis infection (formerly latent TBI)	Melioidosis	<i>Pseudomonas aeruginosa</i> (catchment changed to residents of Davidson county)
	Powassan Virus	Tuberculosis (laboratory tests/result, submission requirements)
	Severe Acute Respiratory Syndrome (SARS)	Zika Virus (laboratory tests/results)
	Trichinosis	

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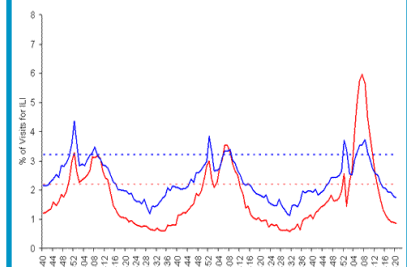


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