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SUBSTANCE ABUSE ISSUES IN INDIANA

*By Jessica Schultz, Injury Prevention
 Epidemiologist Consultant*

A Public Health Crisis Continues

The United States is in the middle of a drug overdose epidemic, with more deaths due to drug overdoses reported in 2014 than any other year on record.¹ Overdose deaths involving prescription opioids have quadrupled nationwide since 1999,¹ as have the sales of these prescription drugs.² Any drug has the potential to be misused or abused, and may be even more dangerous when used in combination with other drugs or alcohol. From 1999 to 2014, more than 165,000 people have died in the U.S. from overdoses related to prescription opioids.¹ Additionally, more than 2 million

Americans abused or were dependent upon prescription drugs in 2014.³ Opioids are substances derived from the opium poppy (or synthetic versions) used for pain relief. Heroin is an opioid and acts on the same receptors in the brain as opioid pain relievers. Nationwide, 61% of drug overdose deaths involved a type of opioid, including heroin. The national age-adjusted rate of drug overdose deaths involving opioids increased by 14% and the heroin overdose death rate increased by 26% in 2014.¹

Indiana's Epidemic Persists

Drug poisoning first surpassed motor vehicle

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HEPATITIS C IN INDIANA: THE GOOD, THE BAD, AND THE PROMISING

By Deborah Nichols, Hepatitis C Epidemiologist

The hepatitis C virus (HCV) is the most common blood-borne infection and ranks number one as the greatest cause of death for any infectious disease killer in the United States. It is estimated that 3.5 million people in the US are living with hepatitis C, and approximately half are unaware of their infection. Annual HCV mortality in 2013 exceeded the total number of deaths from 60 other infectious diseases combined, including HIV, tuberculosis and pneumococcal disease¹. Transmission often occurs from exposure to blood or body fluids

and is highest among intravenous drug users (IDU) who share paraphernalia (including needles, cookers and cottons), health care workers and being born to a mother who has hepatitis C². Historically the greatest burden of HCV has been among baby boomers, those born between 1945 and 1965. CDC recommends baby boomers be screened once in their lifetime. Recently the incidence of HCV has risen in younger populations due to the opioid and heroin epidemic³.

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SUBSTANCE ABUSE, CONTINUED...

traffic-related injuries as the leading cause of injury deaths in 2008 and continues to rise. In 2014, the drug overdose death rate was 17.9 deaths per 100,000 persons, compared to a motor vehicle traffic-related death rate of 10.7 deaths per 100,000 persons. In 2014, drugs and medications – prescription drugs, illicit drugs, and over-the-counter medications – were the underlying cause of death for 89.0% of all poisoning deaths in Indiana. Of the drug overdose deaths, 79.9% were unintentional, 9.7% were suicide or intentional self-harm, and 10.4% had undetermined intent. Males had rates 1.5 times higher than females and people aged 45-54 had the highest rate of all age categories (27.1 per 100,000). In 2014, there were 12,145 non-fatal drug poisoning-related emergency department visits, of which 2,822 visits were due to opioid overdose.

The three most commonly abused prescription drugs include opioids, depressants, and stimulants. Opioid pain relievers, such as oxycodone or hydrocodone, contributed to 250 (21.7 percent) of the 1,152 drug overdose deaths in Indiana in 2014 (Figure 1). These results may understate the burden of opioid deaths, and a death may be included in more than one drug category. Specific to illicit drugs in Indiana, the number of heroin overdoses increased 2.7 times from 2011 to 2014. This increase may be due to increased heroin supply (cheaper and easier accessibility) and widespread prescription opioid exposure and increased rates of opioid addiction. Approximately three out of every four new heroin users report having abused prescription opioids prior to using heroin.⁴

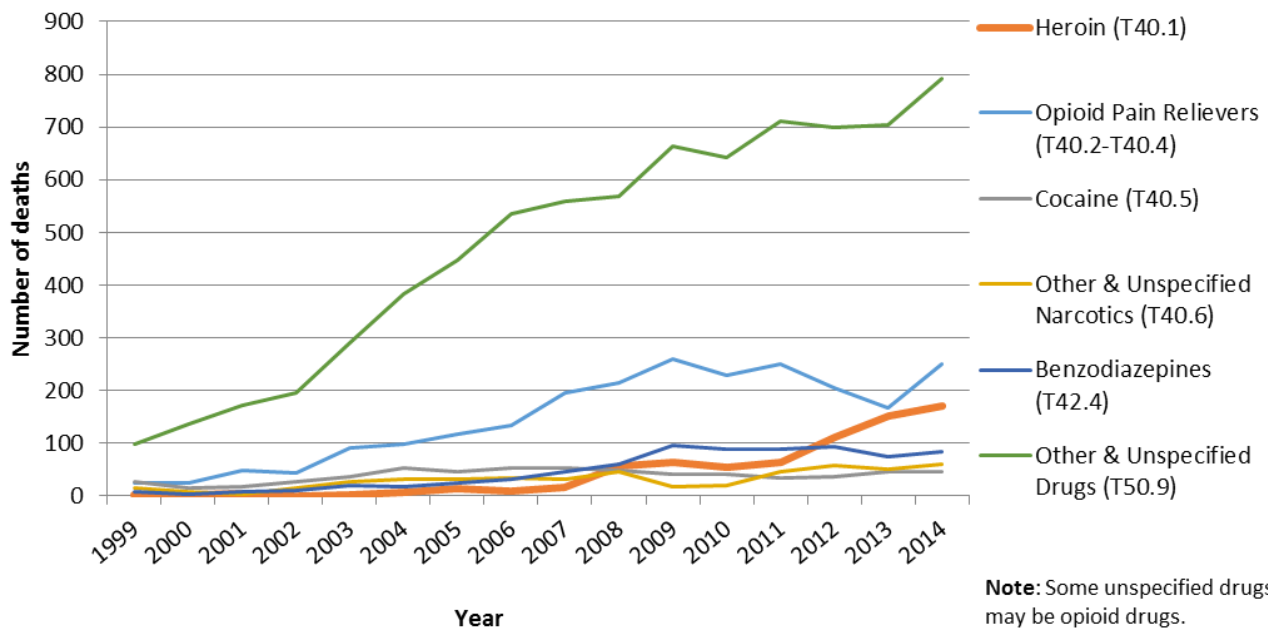
Indiana funding to reduce opioid overdose deaths

The ISDH is funded to help prevent overdose deaths related to prescription opioids as a part of the CDC’s Prescription Drug Overdose: Prevention for States program. Indiana joins 29 states receiving funding for the program through August 2019. The funding will support enhancement of INSPECT, the state’s prescription drug monitoring program at the Indiana Professional Licensing Agency; improve opioid prescribing practices; provide prevention efforts at the state and community levels to address current and emerging problems related to prescription drug overdoses; and a partnership with the IU Fairbanks School of Public Health to evaluate opioid prescribing practices. The ISDH will use funds to expand the Indiana Violent Death Reporting System (INVDRS) to collect data on opioid overdose. This comprehensive surveillance system will help to expand and inform prevention efforts and community interventions.

References:

1. CDC. Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2016. Available at <http://wonder.cdc.gov>.
2. Frenk SM, Porter KS, Paulozzi LJ. Prescription opioid analgesic use among adults: United States, 1999–2012. NCHS data brief, no 189. Hyattsville, MD: National Center for Health Statistics. 2015.
3. Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, 2014.
4. Rudd RA, Aleshire N, Zibbell JE, Gladden RM. Increases in Drug and Opioid Overdose Deaths — United States, 2000–2014. MMWR 2015; 64(50):1378-82.

Figure 1: Number of drug overdose deaths involving opioid pain relievers and other drugs, Indiana residents, 1999-2014



HEPATITIS C, CONTINUED...

Figure 1 shows acute/chronic hepatitis C cases by year of birth comparing those diagnosed in 2010 and 2015 in Indiana. In contrast to the decrease in the baby boomer population, there has been a steady increase in the 18-39 year old population that is associated with IDUs (in red).

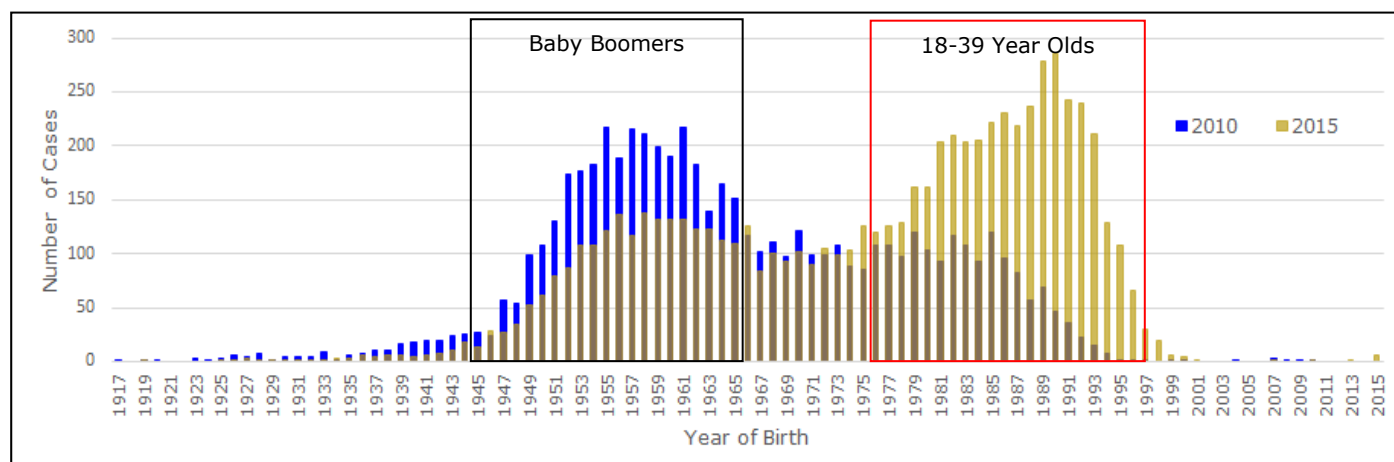
This age-cohort shift highlights the changing discussions surrounding intervention strategies for counties in Indiana. Eight counties in Indiana have been authorized to operate a Syringe Exchange Program (SEP) (Allen, Clark, Fayette, Lawrence, Madison, Monroe, Scott, and Wayne). SEPs were first allowed in 2015 as a result of the Scott County HIV/HCV outbreak and have become part of a locally run comprehensive public health effort to reduce HIV and HCV. In addition to harm re-

duction, these programs have been shown to provide an opportunity for linking the patient to substance abuse treatment and screening. Indiana counties are also addressing the growing epidemic of HCV by participating in a pilot program to offer rapid HCV testing and provide linkage-to-care for treatment. The ultimate goal of this pilot program is to determine the best way for counties to reach high-risk individuals to receive testing and to link participants to care and ultimately to treatment.

References:

1. <http://www.cdc.gov/media/releases/2016/p0504-hepc-mortality.html>
2. <http://www.cdc.gov/hepatitis/hcv/cfaq.htm>
3. <https://www.aids.gov/pdf/hcv-and-young-pwid-consultation-report.pdf>

Figure 1: Acute/Chronic Hepatitis C Cases by Year of Birth, Diagnosed in 2010 and 2015, Indiana



“RANDOM” EMPLOYEE SPOTLIGHT

Name: Kelsey Gurganus

When did you start with ISDH?

I started in May of 2012 in the Maternal and Child Health (MCH) Division as a contract epidemiologist.

Current title and division?

Director of the Epidemiology Unit for the MCH Division.

What are your current responsibilities or major projects/initiatives you are working on?

Serve in a leadership capacity over a team of epidemiologists that provide epidemiology and data support to the MCH Division, as well as many other important internal and external partners.

Some of the major projects and responsibilities I have in this role revolve around the following: Pregnancy Risk Assessment Monitoring System (PRAMS), State Systems Development Initiative (SSDI), Infant Mortality Collaborative Innovation and Improvement Network (CollIN), Indiana Perinatal Improvement Quality Improvement Collaborative.

What do you like best about working in public health?

Working in the field of public health is very rewarding. At the end of the day, I know the work and time I put in can and will make a difference. Having the opportunity to improve and impact the health and well-being of Hoosiers is priceless.

Tell us one random fact about yourself:

I really, REALLY enjoy training for and racing in marathons!

The staff member highlighted in the *Random Employee* section was selected using a random number generator, with the population of staff assigned numbers between 0 and 100. The employee with the highest randomly generated number was selected as this quarter's winner. Congratulations!

ZIKA VIRUS: AN EMERGING INFECTIOUS DISEASE IN THE AMERICAS

By Jen Brown, State Public Health Veterinarian

Zika virus disease (Zika) is caused by an arthropod-borne virus (arbovirus) that is spread primarily through the bite of an infected mosquito. The yellow fever mosquito (*Aedes aegypti*) is the most important vector, but the Asian tiger mosquito (*Aedes albopictus*) can also transmit the virus. The virus can also be spread from infected men and women to their sex partners, from an infected pregnant mother to her baby, or through transfusion of blood products. There is no vaccine or specific treatment currently available for Zika.

Most people infected with Zika virus do not experience symptoms. About 1 in 5 will have a mild, self-limiting illness characterized by fever, rash, arthralgia, and conjunctivitis. A small proportion of people infected with Zika virus may develop Guillain-Barré syndrome, an autoimmune disease associated with muscle weakness and paralysis. Zika virus infection during pregnancy is a cause of microcephaly, a birth defect where a baby's head is smaller than expected when compared to babies of the same sex and age. It has also been linked to other severe fetal brain defects and problems in infants including eye defects, hearing loss, and impaired growth.

In May 2015, the Pan American Health Organization issued an alert regarding the first confirmed Zika virus infection in Brazil. Widespread local transmission by mosquitoes was subsequently reported in many areas of Latin America and the Caribbean, including the US territories of Puerto Rico and the Virgin Islands. On February 1, 2016, the World Health Organization declared the Zika virus epidemic a public health emergency of international concern.

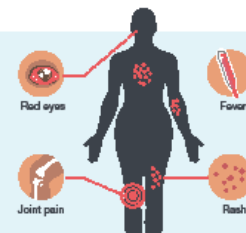
Limited local transmission has been detected in the continental United States in three neighborhoods in Miami, Florida, so far this year. As of October 28, 2016, pregnant women are advised to consider postponing elective travel to Miami-Dade County, and are advised not to travel at all

to two neighborhoods where active transmission is still occurring. A map of these neighborhoods is available at <http://www.cdc.gov/zika/intheus/florida-update.html>.

As of October 26, 2016, 4,091 cases of Zika had been reported to the Centers for Disease Control and Prevention (CDC). Of these, the majority (96.6%) were associated with travel to areas with active Zika virus transmission. As of October 28, 2016, 47 cases of Zika virus disease had been reported in Indiana; all of these were travel-associated. Countries included Haiti (7), Nicaragua (7), Dominican Republic (6), Puerto Rico (5), El Salvador (5), Mexico (4), Honduras (3), Jamaica (3), Trinidad (2), US and British Virgin

CDC's Response to Zika

WHEN TO TEST FOR ZIKA VIRUS



As a healthcare provider, you decide if a patient should be tested for Zika virus infection. The algorithm below will help you determine whether or not to test your patient for Zika virus infection. For information on which test to use, see [CDC's interim guidance](#).

If your patient is

- Experiencing or has recently experienced symptoms of Zika*
- An asymptomatic pregnant woman

Ask the following questions

NO ← Does the patient live in or has the patient recently traveled to an area with Zika? → **YES**

NO ← Has the patient had unprotected sex with a partner who has lived in or traveled to an area with Zika? → **YES**


Do Not Test for Zika

Test for Zika

*Healthcare providers should review their local and state health jurisdiction guidelines regarding testing of patients with clinically compatible illness without known travel or sexual exposures.

CDC does not recommend Zika virus testing for asymptomatic

- Men
- Children
- Women who are not pregnant



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS268732A August 17, 2016

ZIKA VIRUS, CONTINUED...

Islands (1), Guatemala (1), Ecuador (1), Belize (1), and St. Martin/St. Barthelemy (1).

Local transmission of Zika virus by mosquitoes has not been detected in Indiana. Because established populations of *Aedes aegypti* mosquitoes are not present in our State, the risk of widespread local transmission of Zika virus occurring in Indiana is low. However, *Aedes albopictus* mosquitoes are present in the southern two-thirds of our State, and Zika cases will continue to occur in Indiana among residents who travel to areas of active Zika virus transmission or who have sexual contact with infected persons.

The Indiana State Department of Health (ISDH) was recently awarded \$3.6 million in federal funding from various sources for Zika virus preparedness and response activities. A total of \$2 million will be disbursed over the next five years to improve surveillance and reporting of children born with birth defects and to create a referral system for families to access needed services. About \$1 million will be disbursed over the next year to support surveillance and response activities for all arboviruses, including West Nile virus; these funds will support staff in the areas of entomology, laboratory services, epidemiology, and information technology, as well as equipment and supplies needed to collect mosquitoes in the field and test them for viruses in the laboratory. About \$600,000 in newly available and redirected funding will support ISDH emergency preparedness activities, including support for the Indiana Environmental Health Emergency Response Team, funding for a Zika virus public information campaign, and directly available funding to local health departments to support their own vector surveillance and control programs.

The ISDH Laboratories offer testing for Zika virus by RT-PCR and MAC-ELISA for people who meet eligibility criteria (Figure 1). Prior authorization from the ISDH is required. The ISDH coordinates public health investigations for all Zika virus cases detected in our State. Please contact the Epidemiology Resource Center at 317-233-7125 for consultation on Zika virus testing. More information is available at <http://www.in.gov/isdh/zika>.



The EPIC Newsletter is published quarterly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials, and communities.

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