

Hepatitis Headlines

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Viral Hepatitis Surveillance and Prevention Unit, Michigan Department of Health and Human Services

www.michigan.gov/hepatitis

Welcome New Staff!

The MDHHS Viral Hepatitis Unit is pleased to welcome two new staff members, Marjorie Coffey and Adam Hart. Marjorie started as the Viral Hepatitis Data Analyst at the end of March. She graduated with her MPH from Michigan State University and completed her internship for the program at Macomb County Health Department. As a data analyst for the unit, Marjorie will be assisting in the maintenance and quality control of surveillance data as well as conduct data analyses for various projects. Adam joined the Viral Hepatitis Unit as the Viral Hepatitis Surveillance Coordinator in April. Prior to joining us, Adam worked in the MDHHS Division of Immunizations as a MCIR Epidemiologist. He also has experience working with the TB Control Unit at MDHHS and at Oakland County Health Division where he interned while completing his MPH program at Wayne State University. Adam will be working closely with Marjorie in maintaining quality data, as well as preparing and disseminating data products.



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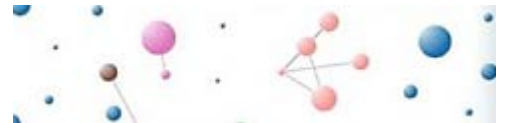
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HCV GHOST for Detection of Transmission Networks



Use of next generation sequencing (NGS) is becoming more common as the cost of the testing goes down and capacity is built at State laboratories. The MDHHS Bureau of Labs (BOL) is performing whole genome sequencing and NGS on a multitude of bacterial and viral agents. The value in this data is that it can supplement epidemiological information to help piece together networks of communicable disease transmission. When networks of transmission are identified, public health action can be initiated to investigate cases and prevent further spread. Through small grants through the Association of Public Health Laboratories (APHL) and the Council of State and Territorial Epidemiologists (CSTE) the MDHHS BOL is the among the first laboratories outside of the CDC to perform [HCV Global Health Outbreak and Surveillance Technology \(GHOST\)](#). Kevin Rodeman gave a [nice presentation at the 2017 Communicable Disease Conference](#) if you're interested in learning about how the technology works. Once the molecular testing has been performed the sequences can be uploaded to the GHOST application where a complex algorithm can determine relatedness of the patient specimens and build a transmission network (figure).

As you may already be aware, the MDHHS BOL performs HCV antibody testing with automatic reflex to HCV RNA. For the last few years this testing has been offered at no charge to our public health partners. HCV RNA positive isolates have been and will continue to be saved for HCV GHOST analysis. MDHHS epidemiologists can access the GHOST application and run analyses to identify potential outbreaks and ongoing transmission clusters. If networks of transmission are identified this information will be shared with local health departments so that public health outreach and education can be prioritized. Over the next few months we will also be developing a guideline for how LHDs may choose to respond to potential clusters. When combined with epidemiological info (such as the data that is collected in MDSS case report forms) this can be a powerful tool to disrupt ongoing spread of HCV in a community.



Lansing Syringe Exchange

In Michigan, injection drug use has been identified as a primary risk factor for HCV transmission among individuals aged 18 to 29 years old. Since 2000, the number of chronic hepatitis C diagnoses among person 18 to 29 years of age has increased nearly year-over-year. During that time frame the number of new annual HCV diagnoses increased from 59 to 2060 in 2016. In 2016, where injection drug use information was available, 84.2% of diagnosed chronic HCV cases in this age group reported a history of injection drug use.

Access to clean needles and other drug use paraphilia, has been shown to help prevent the spread of viral hepatitis C among people who inject drugs. The concurrent opioid and HCV epidemics are affecting all Michigan communities, but only four syringe service programs (SSP) exist in the State (Flint, Detroit, Ypsilanti, and Grand Rapids). So many communities are still in need of SSPs.

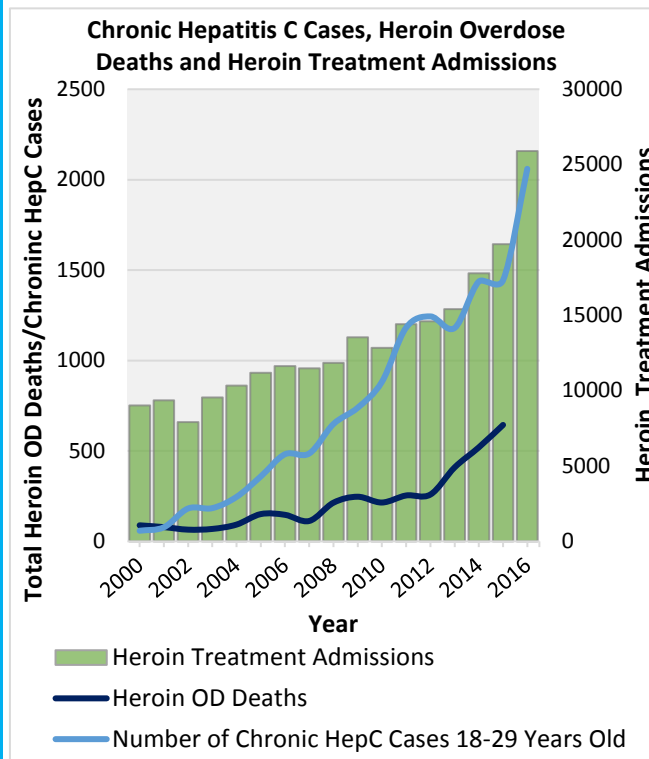
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Hepatitis C Virus and Opioid/Heroin Use in Young Adults

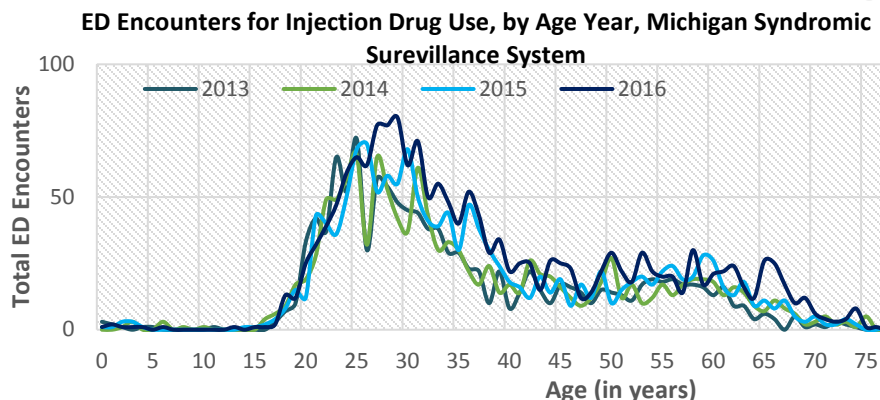
As the burden of chronic hepatitis C continues to grow in the young adult population in Michigan, the concurrent opioid epidemic also continues to surge. Since 2000, young adult cases of chronic hepatitis C have increased by 3,391% while, in the same timeframe, heroin substance abuse treatment admissions increased by 187% and heroin overdose deaths rose by 624%.

Previous studies conducted by MDHHS have shown injection drug use as the primary risk factor for HCV acquisition among those aged 18-29 years old. In many instances these clients reported sharing needles, syringes, and other injection drug works (such as cookers and cotton) which could have acted as vectors for HCV transmission. Increases in heroin overdoses and heroin substance abuse treatment admissions as shown below likely represents an increase in heroin use, which may explain the rise in HCV cases in the young adult population.



This inference draws further support from emergency department (ED) encounter data, which indicates that substance abuse encounters have been on the rise since 2013, with young adults comprising a sizeable portion of those encounters.

A demographic breakdown of the chronic HCV cases aged 18-29 years old who were diagnosed in 2016 shows that the vast majority were white, non-Hispanic, and non-Arab with an approximately even gender distribution. Of those that had injection drug use information available, 84.2% reported a history of intravenous drug use (IVDU).



Hepatitis A in Southeast Michigan

Public health officials in the City of Detroit and Macomb, Oakland, St. Clair and Wayne counties in consultation with the Michigan Department of Health and Human Services (MDHHS) continue to investigate an elevated number of hepatitis A virus cases in SE Michigan. From August 1, 2016 to June 6, 2017, a total of 175 cases of lab-confirmed hepatitis A have been reported to public health authorities in these jurisdictions. This represents a nine fold increase over the same time period a year earlier (n=19). Ages of the cases range from 21 to 86 years, with a median age of 45 years; 65% of the cases are male. The percentage of cases hospitalized is 83%. Approximately 40% of the cases have a history of substance abuse; 18% have been diagnose with hepatitis C virus co-infection. No single source of exposure has been identified but rather transmission appears to be occurring mainly through direct person-to-person spread and through contamination of the environment and/or equipment among individuals who may use drugs.

Risk factors for a hepatitis A infection include living with someone who has hepatitis A, having sexual contact with someone who has hepatitis A, or sharing injection or non-injection illegal drugs with someone who has hepatitis A. The hepatitis A virus can also be transmitted through contaminated food or water. Hepatitis A is a vaccine-preventable disease. While the hepatitis A vaccine is recommended as part of the routine childhood vaccination schedule, most adults have not been vaccinated and may be susceptible to the hepatitis A virus. Public health officials in the impacted jurisdictions have been working to provide education and opportunities for vaccination for close contacts of cases and vulnerable populations. Providers should report any ill patients they suspect of having hepatitis A to their local health department for public health follow-up.

For more information on Hepatitis A and other resources please visit:

www.cdc.gov/hepatitis/hav/havfaq.htm#general

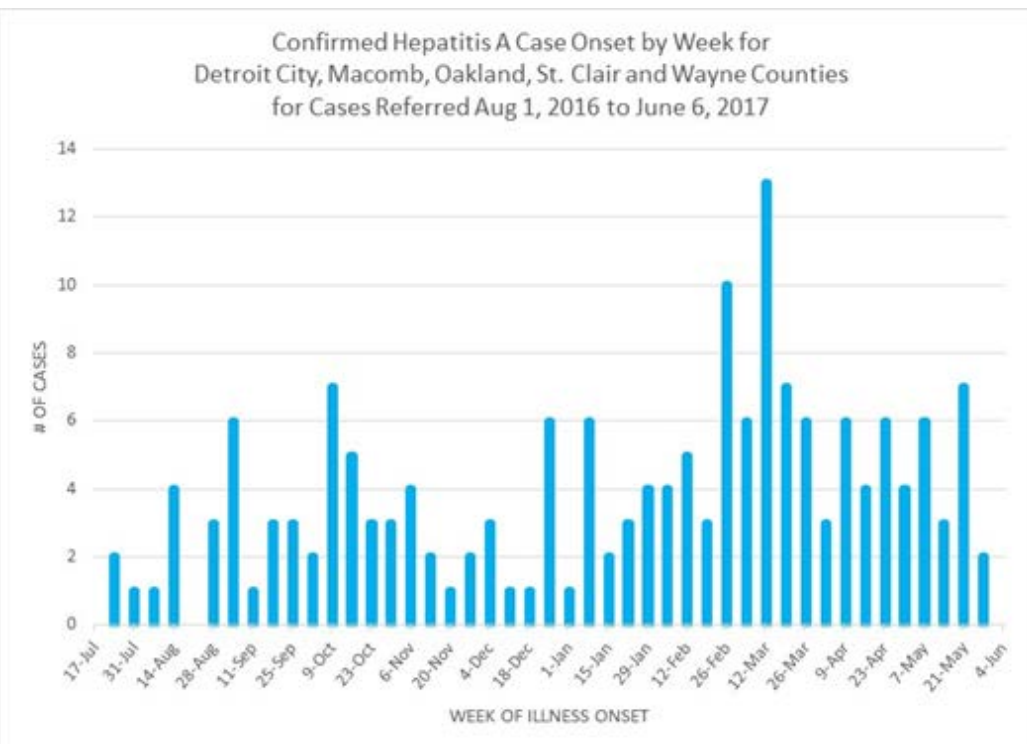


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Recently, the [Lansing City Council](#) voted to enact a [syringe exchange program in Lansing](#). Michigan's State Law allows for distribution of clean syringes if it is for the purpose of preventing disease transmission. But it wasn't until after the city overturned their [local paraphernalia ordinance](#) could they proceed for their plans with the program. Lansing is awaiting approval from the Centers for Disease Control and Prevention to potentially redirect existing federal funds to finance the SSP. If approved, the program would be available at non-profit organizations and recovery facilities.

Lansing will be the fifth SSP in the State and we think they highlight the potential route to establishing a program in any Michigan locality. First, one must consider the local ordinances and whether possession of a needle and exchange needles are permissible. Secondly, local, State, or Federal funding must be procured to support the program. Of course, it also must be determined where to physically house the program, what services would be offered, when it would operate, and how it would be staffed.

We're excited to see Lansing take this great step and hope other municipalities consider looking into SSPs as well.



Perinatal Hepatitis C Case Definition

As we have shown over the last few years, Michigan is the midst of a heroin and opioid **epidemic that is leading to increases in HCV infections**, particularly in young adults. The concurrent epidemics of opioid abuse and HCV infections equally impacts both males and females. As a result, we are seeing more HCV diagnoses in women of child-bearing age and therefore, more infants born to HCV-infected mothers. With this comes a risk of vertical or **perinatal transmission from the mother to child**. Historically, there has been no national standard for measuring perinatal HCV infections using routine surveillance data. The Council of State and Territorial Epidemiologists (CSTE) have passed a new nationally notifiable condition called Perinatal HCV Infection. The perinatal HCV case definition will be applied to HCV labs for patients between 2 and 36 months of age. To meet criteria for a confirmed case of perinatal HCV infection, the patient must be between 2 and 36 months of age and have a positive HCV RNA, genotype, or antigen test. The existing acute and chronic HCV case definitions are unchanged and will only be used for patients greater than 36 months of age.

The authors wanted to measure HCV infection as opposed to HCV exposure. Since the mother's HCV RNA can persist in the child for a few months, RNA results prior to two months of age are not considered. HCV antibody also transfers efficiently from mother to child and can persist for years, therefore HCV antibody tests are not considered in the case definition for perinatal HCV infection. Because other causes of HCV infection in infants are exceedingly rare, it is not a requirement to document the HCV status of the mother for the purposes of satisfying the case definition. The proposal hopes to standardize and streamline perinatal HCV surveillance across the country so that we can better measure and raise awareness of this important and emerging public health issue. With the recent passing of the proposal at the CSTE National Conference, the expectation is that this new condition will start to be utilized in January 2018.



Epidemiological Profile Stakeholder Survey

For the last few years the MDHHS Viral Hepatitis Unit has released an **Annual Viral Hepatitis Surveillance Report** or "Epi profile". In each iteration we have strived to improve the quality and comprehensiveness of the data in the report. In an effort to continually improve the report, we are seeking your feedback! Please consider taking 10-15 minutes to complete this short 10 question survey. We are interested in hearing how you have used this report in the past, what data are most/least important to you, and what data might be missing.

Link to Survey: <https://www.surveymonkey.com/r/VHEpiProfile>



Save the Date

7/21 – [MDHHS Viral Hepatitis Stakeholder Forum](#)

7/23-7/25 – [Michigan Primary Care Association Annual Conference](#)

7/28 – [World Hepatitis Day](#)

Fall – [2017 Immunization Conferences](#)

Helpful Links

www.michigan.gov/hepatitis

www.michigan.gov/injectionsafety

www.michigan.gov/hepatitisb

www.michigan.gov/cdinfo

www.michigan.gov/hai

[CDC Hepatitis](#)

[CSTE HCV Subcommittee](#)

[Know More Hepatitis Campaign](#)

[Know Hepatitis B Campaign](#)

[CDC Hepatitis Risk Assessment](#)

[Hepatitis A](#)

[Hepatitis B](#)

[Hepatitis C](#)

[USPSTF](#)

[AASLD](#)

[Institute of Medicine Report](#)

[One and Only Campaign](#)

[Injection Safety Resources](#)

[Hepatitis Occupational Exposure Guideline](#)

[Blood Glucose Monitoring](#)

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