

Jurisdiction is EXPERIENCING a significant increase in viral hepatitis or HIV infections due to injection drug use

REQUEST FOR DETERMINATION OF NEED

Requesting Jurisdiction: Michigan

Geographic area for which the determination is requested: State of Michigan

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We are submitting evidence for consultation with CDC to demonstrate our jurisdiction is **EXPERIENCING significant increases in viral hepatitis or HIV infections due to injection drug use**

| Outcome(s) | Data source | Geographic area | Baseline period | Assessment period | Percent change between baseline and assessment |
|-------------------|--|------------------------|---|---|---|
| Acute HCV | Michigan Disease Surveillance System (NNDSS) | State of Michigan | Month: Jan-Dec Year: 2009 Value: 0.28 Units: acute HCV cases per 100,000 persons | Month: Jan-Dec Year: 2015 Value: 0.85 Units: acute HCV cases per 100,000 persons | >200% increase in the number of acute HCV diagnoses per year between 2009 and 2015 In 2015, where data was available, 60% of cases report a history of IDU within the last 2 weeks to 6 months |

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| <p>Chronic HCV Diagnoses (18-29 year old age group)</p> | <p>Michigan Disease Surveillance System (NNDSS)</p> | <p>State of Michigan</p> | <p>Month: Jan-Dec Year: 2000</p> <p>Value: 59 Units: new HCV diagnoses</p> | <p>Month: Jan-Dec Year: 2015</p> <p>Value: 1,444 Units: new HCV diagnoses</p> | <p>>2300% increase in the number of chronic HCV diagnoses per year in individuals aged 18-29 between 2000 and 2015</p> <p>In 2015, where data was available, approximately 90% of chronic HCV cases between the ages of 18 and 29 reported a lifetime history of IDU</p> |
| <p>Prescription Opioid Deaths</p> | <p>MDHHS Vital Records</p> | <p>State of Michigan</p> | <p>Month: Jan-Dec Year: 2000</p> <p>Value: 74 Units: Deaths</p> | <p>Month: Jan-Dec Year: 2014</p> <p>Value: 481 Units: Deaths</p> | <p>550% increase in overdose deaths as a result of prescription opioids (without other drugs) between 2000 and 2014</p> |
| <p>Heroin Overdose Deaths</p> | <p>MDHHS Vital Records</p> | <p>State of Michigan</p> | <p>Month: Jan-Dec Year: 2000</p> <p>Value: 89 Units: Deaths</p> | <p>Month: Jan-Dec Year: 2014</p> <p>Value: 520 Units: Deaths</p> | <p>484% increase in overdose deaths as a result of heroin (with or without other drugs) between 2000 and 2014</p> |
| <p>Heroin Substance Abuse Treatment Admissions</p> | <p>SAMHSA Treatment Episode Data Set (TEDS)</p> | <p>State of Michigan</p> | <p>Month: Jan-Dec Year: 2000</p> | <p>Month: Jan-Dec Year: 2015</p> | <p>>100% increase in the number of substance abuse treatment</p> |

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| | | | Value: 9,023 Units: substance abuse treatment admissions with mention of heroin | Value: 19,728 Units: substance abuse treatment admissions with mention of heroin | admissions with mention of heroin |
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Part A2: Summary of Evidence

Data submitted to the CDC for the State of Michigan indicated a 200% increase in the rate of acute HCV infections between 2009 and 2015. Where risk information was ascertained on these cases, 60% reported injection drug use 2 weeks to 6 months prior to onset of symptoms.

Data submitted to the CDC for the State of Michigan indicated a 2300% increase in the number of chronic HCV diagnoses per year between 2000 and 2015 in individuals aged 18-29. Where risk information was ascertained on these cases, approximately 90% reported a history of ever injecting drugs.

Other data sources also suggest that the majority of these infections are related to the concurrent epidemics of prescription opioid abuse and heroin:

- Prescription opioid deaths have increased 550% in Michigan between 2000 and 2014
- Heroin overdose deaths have increased 480% in Michigan between 2000 and 2014
- Substance abuse treatment admissions have increased over 100% in Michigan between 2000 and 2015
- Suryaprasad AG et al. Emerging Epidemic of Hepatitis C Virus Infections Among Young Nonurban Persons Who Inject Drugs in the United States, 2006–2012. *Clin Infect Dis.* (2014) 59 (10): 1411-1419.
 - Michigan was an active participant in this study which found an increase in HCV cases associated with injection drugs among youth, particularly in non-urban settings.
 - For the entire study, 77% of interviewees reported a history of injecting drugs (among Michigan interviewees the proportion was 94%)
 - For the entire study, 61% of interviewees reported a history of using heroin (among Michigan interviewees the proportion was 92%)
 - Among Michigan interviewees 37% reported sharing needles, 47% reported sharing cookers, 53% reported sharing cotton, and 65% reported sharing a water source for drug use and preparation

- The CDC's high vulnerability study recently identified 11 Michigan counties in the top 5% of counties in the United States at greatest risk for rapid dissemination of HCV and/or HIV infection among persons who inject drugs
 - Michigan has the fifth most "vulnerable counties" among the 50 states (only behind Kentucky, Tennessee, West Virginia, and Missouri)

Geographic Area

All data mentioned in the table above (counts and rates) are available geographically by county, local health jurisdiction, and public health preparedness region. Indicators of heroin use are prevalent in Detroit and surrounding suburban areas while signs of prescription opioid abuse tend to be more pervasive in areas further removed from Detroit, where heroin is not as readily available.

The highest rates of acute HCV cases and chronic HCV cases among persons aged 18-29 are generally in the rural Northern Lower Peninsula (perhaps not coincidentally, the counties that CDC identified as highly vulnerable) and the Upper Peninsula. On the other hand, the greatest number of these cases are found in suburban southeast Michigan. As such, we are requesting this determination of need for the entire State of Michigan to allow geographical flexibility in our ability to redirect funds for syringe service programs as we perceive many areas of the state to be experiencing and at risk for rapid dissemination of HCV and/or HIV.