



Hepatitis C Cluster in Young Injection Drug Users in a Rural Midwestern County: Investigation and Public Health Response

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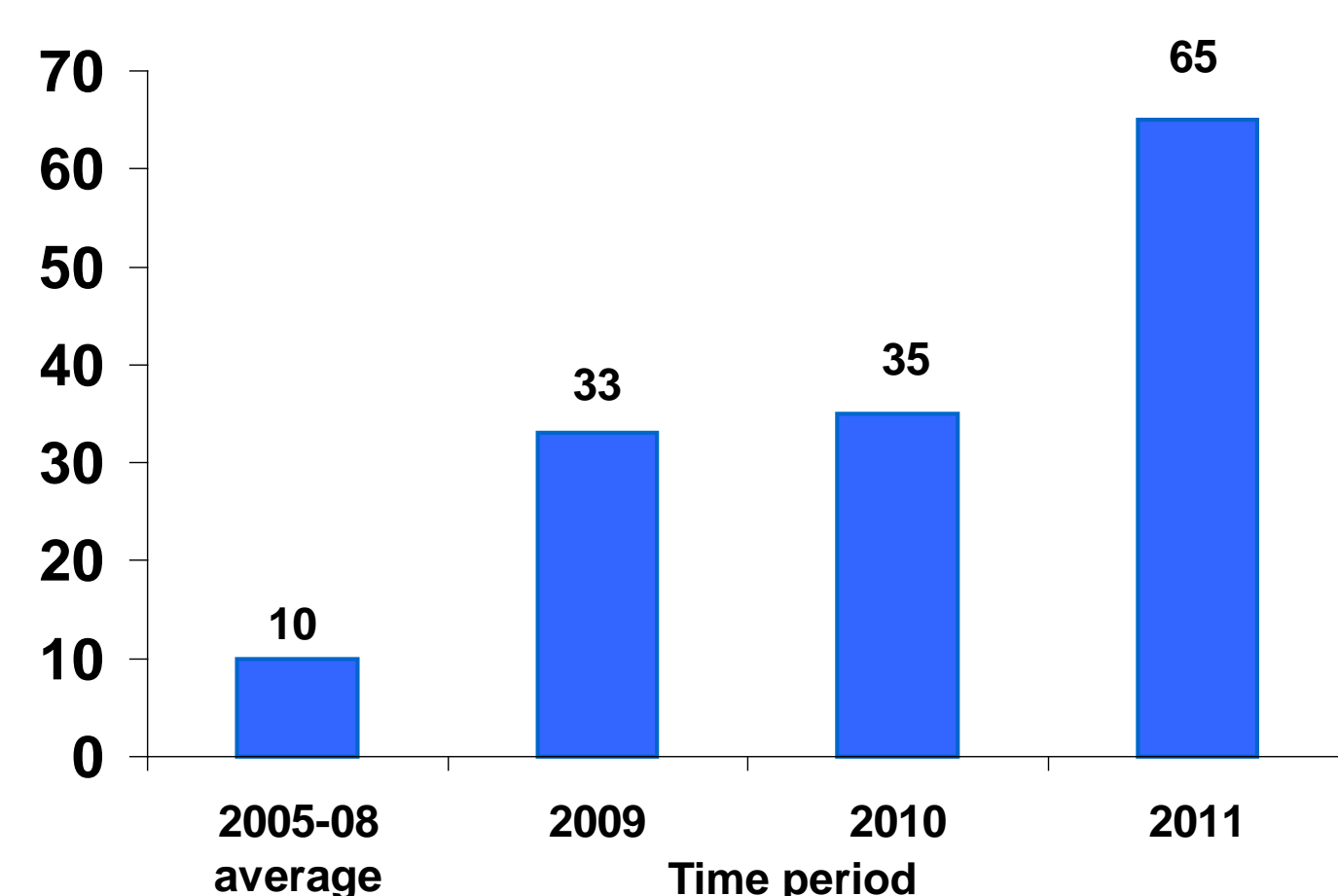


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Background

- Manitowoc County is a rural farm and industry based county along Lake Michigan
- Cluster identified in December 2010 as a result of individuals seeking testing
- Increase in cases in recent years

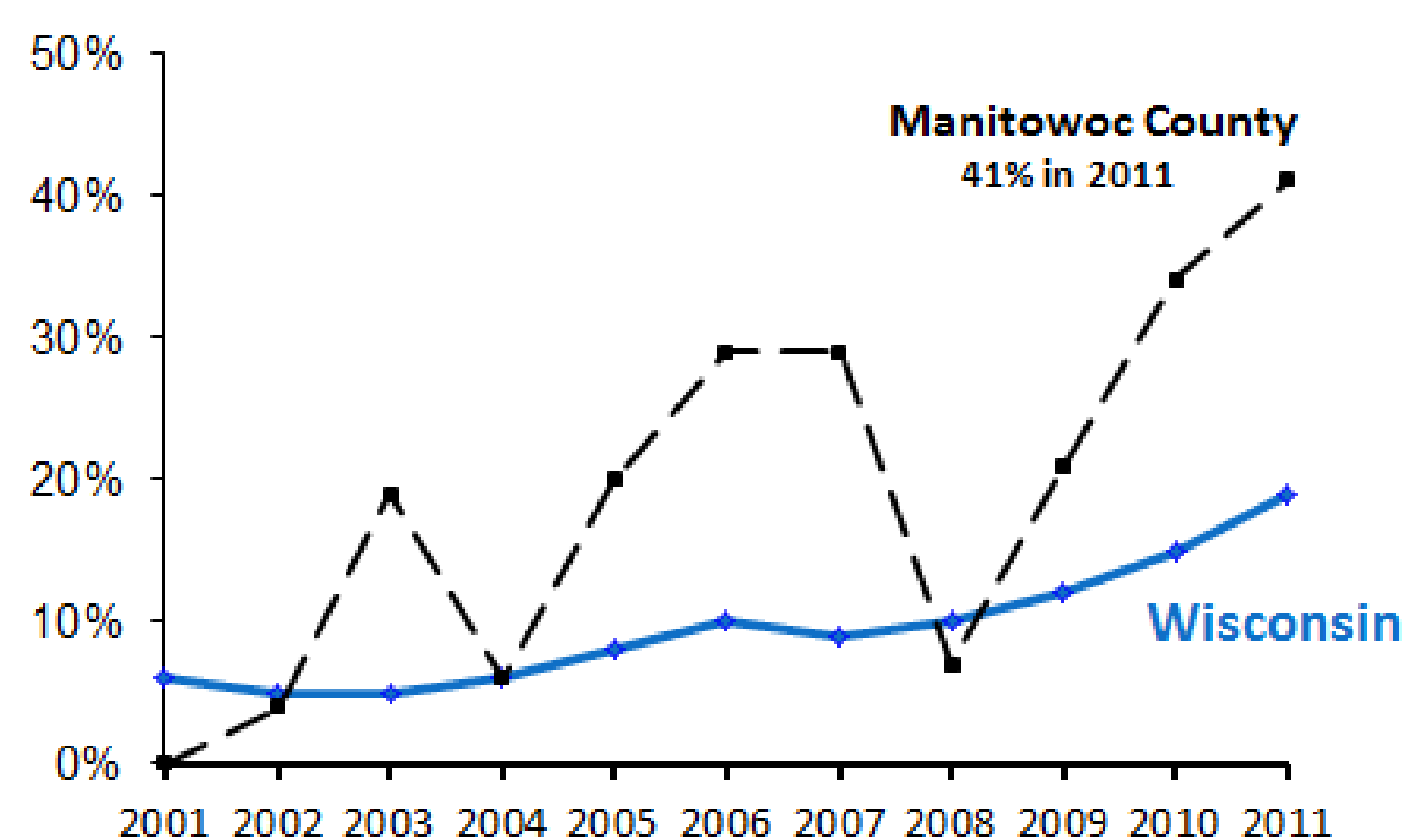
Figure 1: Reported cases of Hepatitis C infection, Manitowoc County



Source: Wisconsin Electronic Disease Surveillance System (WEDSS), Wisconsin Division of Public Health, Adult Viral Hepatitis Program

- Figure 2 shows increase in percentage of cases under the age of 30
- As of May 2012, there are 243 individuals included in the cluster investigation
 - 80 individuals have past or present Hepatitis C virus infections
 - 4 are co-infected with HIV
 - Investigation is ongoing with 128 individuals who need to be located and tested for hepatitis C

Figure 2: Persons under age 30 as a percentage of all reported cases of HCV, Wisconsin and Manitowoc County, 2001-2011



Source: Wisconsin Electronic Disease Surveillance System (WEDSS), Wisconsin Division of Public Health, Adult Viral Hepatitis Program

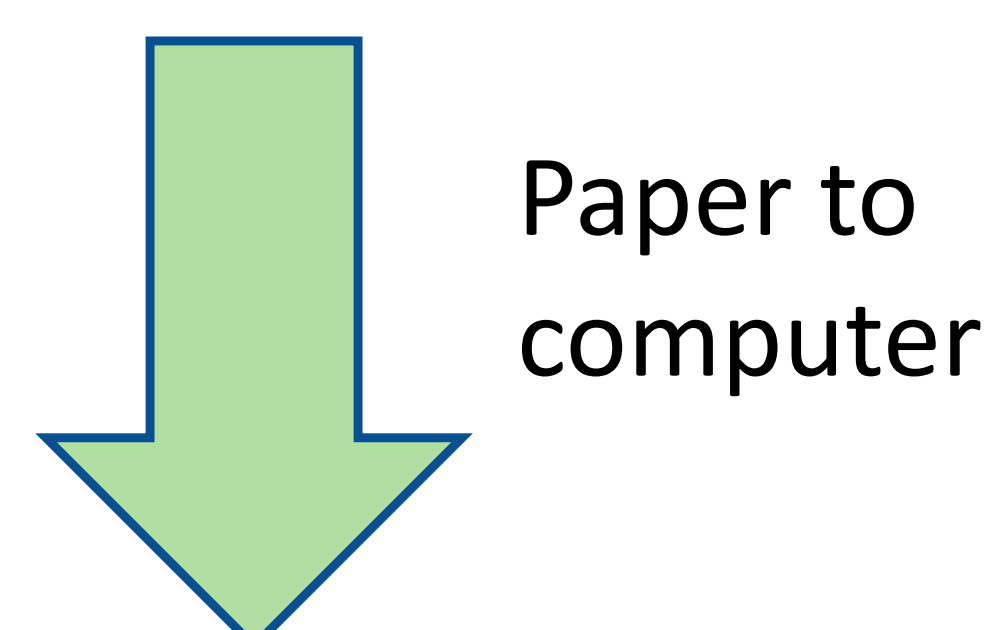
Cluster Highlights

- Network of persons who inject drugs (PWID) and their sex partners
- Includes 18 family groups (parents and children or siblings)
- Many different drugs being used, not just heroin
 - » Opiates and prescription drugs including morphine, codeine, Vicodin, Percocet, dilaudid, oxymorphone, fentanyl, methadone
- Other risk factors: men who have sex with men, “party groups” and sex for drugs or money

Figure 3: The original cluster diagram

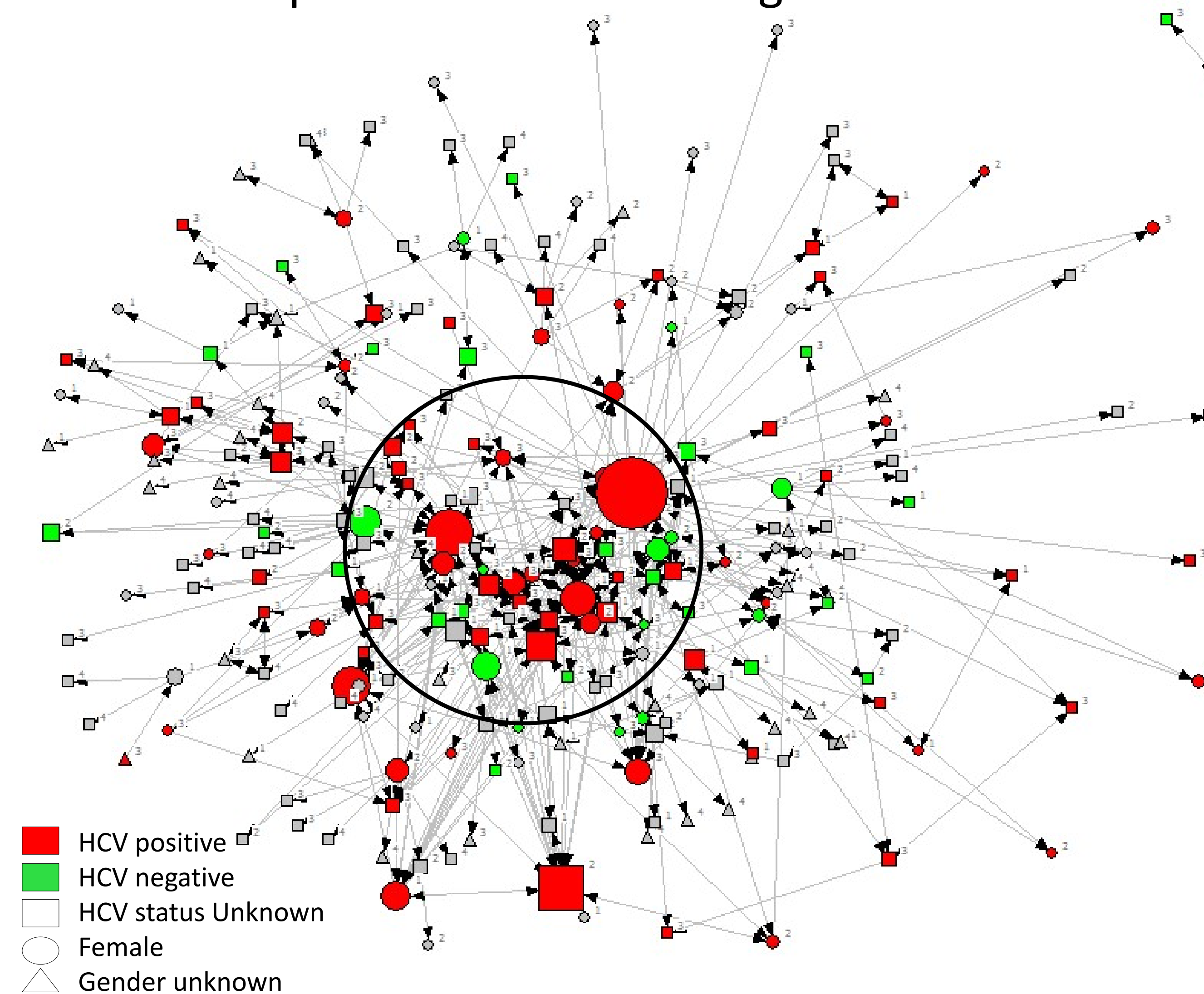


Staff from the local health department developed a hand-drawn social network diagram on a ream of paper 4x7 1/2 feet



Paper to computer

Figure 4: Cluster diagram using UCI Net to aide in prioritization of testing efforts



Source: Wisconsin Division of Public Health AIDS/HIV and Hepatitis C programs in collaboration with Manitowoc County Health Department

- Notice that females (circles) are holding this cluster together
- Size of symbol indicates importance of connection in the network

Key Partnerships Formed

- Manitowoc County Metro Drug Unit
- Manitowoc County Jail
- Wisconsin Department of Corrections
- AIDS Resource Center of Wisconsin (ARCW)
- Area healthcare providers
- Surrounding local health departments
- Wisconsin Department of Health Services

Why use UCI Net/Net Draw software?

- Allowed prioritization and targeted intervention by identifying key people to contact based on risk and connections within the cluster
- Easy to update when new contacts are found and/or clients are tested
- Easy to visualize subsets of the cluster based on risk or demographics

Lessons Learned

- Collaboration with the ARCW Needle Exchange Program and Metro Drug Unit was key
- Reflexive PCR testing is helpful in young PWID populations who may not come back for further testing
- Create client interview form early, to avoid having to re-contact clients for additional information
- Be non-judgmental and focus on the client’s well being, not illegal behaviors
- Talk the talk: know street language for drugs and know the drug culture

Next Steps

- Work with CDC to conduct genotypic analysis
- Continue public health follow-up of clients not yet tested
- Educate the community about the increase in hepatitis C and ways to prevent transmission

Acknowledgements

- Ellen Christel, Barbara Herrmann, and Julie Reimer, *Manitowoc County Health Department*
- Chris Bering, Ryan Anderson, Jim Vergeront, and Jeffrey Davis, *Wisconsin Department of Health Services*
- Sara Schuette, *Manitowoc County Jail*
- *AIDS Resource Center of Wisconsin*
- Adam Slez, *Princeton University*