State of HCV in Minnesota

Minnesota Department of Health
Hepatitis Surveillance System
Hepatitis A, B, C, D and E are all reportable by name to the Minnesota Department of Health (MDH).

All reported cases may be contacted by the MDH Surveillance staff for epidemiological follow-up.
Minnesota Hepatitis Surveillance System

• Hepatitis B cases since 1987

• Hepatitis C cases since 1998

• Passive data collection
Viral Hepatitis Overview
Introduction

- Data in this presentation are current through 2022
- Definitions:
  - Acute case:
    - Infected within the last twelve month – negative test in twelve months before diagnosis
    - ALT ≥200, T. bili ≥3.0, OR jaundice
  - Chronic case:
    - Infected for over twelve months
    - Asymptomatic or symptomatic
  - Resolved cases:
    - No evidence of current infection
    - Evidence of past infection

Data Source: Minnesota Viral Hepatitis Surveillance System
Data limitations

• The slides rely on data from HCV and HBV cases diagnosed through 2022 and reported to the Minnesota Department of Health (MDH) Hepatitis Surveillance System.

• Some limitations of surveillance data:
  • Data do not include hepatitis-infected persons who have not been tested
  • Data do not include persons whose positive test results have not been reported to the MDH

• Persons are assumed to be alive unless the MDH has knowledge of their death. Most recent match with Minnesota death records was in 2016.

• Persons whose most recently reported state of residence was Minnesota are assumed to be currently residing in Minnesota unless the MDH has knowledge of their relocation.

Data Source: Minnesota Viral Hepatitis Surveillance System
Acute Viral Hepatitis

• Acute case:
  • Infected within the last twelve months - negative test 12 months before diagnosis
  • ALT ≥200, T. bili ≥3.0, OR jaundice
Reported rate per 100,000 population of acute viral hepatitis
United States, 1998-2020

Data Source: Viral Hepatitis Statistics & Surveillance at www.cdc.gov/hepatitis/Statistics/
Number of Acute* Cases per year Minnesota, 1998-2022

Data Source: MN Viral Hepatitis Surveillance System

*Acute cases include seroconverters for all years for HBV and HCV
Number of Acute* Cases per year Minnesota, 2013-2022

Data Source: MN Viral Hepatitis Surveillance System

*Acute cases include seroconverters for all years for HBV and HCV
Chronic Viral Hepatitis
Reported Number of Persons Living with HCV in MN

• As of December 31, 2022, 32,543* persons are assumed alive and living in MN with HCV.

Note: Includes all acute, chronic, and probable cases.

*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System
Changes in Case Counting, 2016

- Removed resolved infections from case counts
- Completed match with death registry for 1997 through 2016
Persons Living with HCV in MN by Current Residence, 2022

Total number with residence information = 31,849

Greater Minnesota 44%
Minneapolis 20%
Suburban Metro 26%
Saint Paul 10%

Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties including those in Hennepin County or Ramsey County with unknown city. Greater MN = All other Minnesota counties, outside the seven-county metro area.

Data Source: MN Viral Hepatitis Surveillance System

(885 missing residence information)
Persons Living with HCV in MN by Age, 2022

Data Source: MN Viral Hepatitis Surveillance System
Persons Living with HCV in MN by Gender*, 2022

- Male: 64%
- Female: 35%
- Transgender: 0%
- Unknown: 1%

Data Source: MN Viral Hepatitis Surveillance System
Persons Living with HCV in Minnesota by Race, 2022

Data Source: MN Viral Hepatitis Surveillance System

- **White**: 44%
- **Afr Amer**: 14%
- **Amer Ind**: 7%
- **Asian**: 2%
- **Other**: 5%
- **Unknown**: 28%

Afr Amer = African American /Black  Asian=Asian or Pacific Islander
Amer Ind = American Indian
Other = Multi-racial persons or persons with other race
Persons Living with HCV in Minnesota by Race rates (per 100,000 persons*), 2022

- American Indian or Alaska Native: 2,527
- Black or African American: 988
- Asian or Pacific Islander: 227
- White: 300

Data Source: MN Viral Hepatitis Surveillance System

* Rates calculated using 2020 U.S. Census ACS data
Excludes persons with multiple races or unknown race, n=10,961
Resolved HCV Infection

• Included in overall HCV case counts in past years
• Defined as:
  • A positive HCV RNA test followed by a negative HCV RNA test
• Does NOT include:
  • Anti-HCV positive with a negative HCV RNA with NO past positive HCV RNA
Reported number of resolved infections in MN

As of December 31, 2022, there were 13,386* persons in the MN hepatitis database with HCV infection that resolved between 2016-2022.

*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System
Resolved HCV cases in MN by Current Residence, 2022

**MN Overall**
- Suburban Metro, 26%
- Minneapolis, 20%
- Greater Minnesota, 44%
- Saint Paul, 10%

**Resolved cases 2016-2022**
- Suburban Metro, 29%
- Minneapolis, 16%
- Greater Minnesota, 46%
- Saint Paul, 9%

Total number with residence information = 31,849

Total number with residence information = 12,792

Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties including those in Hennepin County or Ramsey County with unknown city. Greater MN = All other Minnesota counties, outside the seven-county metro area.

Data Source: MN Viral Hepatitis Surveillance System
Resolved HCV cases in MN by Gender*, 2022

Data Source: MN Viral Hepatitis Surveillance System

*Includes anonymous methadone patients
Resolved HCV cases in MN by Race, 2022

Data Source: MN Viral Hepatitis Surveillance System

- White: 44%
- Afr Amer: 14%
- Amer Ind: 7%
- Asian: 2%
- Other: 5%
- Unknown: 28%

Resolved cases 2016-2022

- White: 59%
- Afr Amer: 14%
- Amer Ind: 7%
- Asian: 3%
- Other: 7%
- Unknown: 10%

Afr Amer = African American / Black
Asian = Asian or Pacific Islander
Amer Ind = American Indian
Other = Multi-racial persons or persons with other race
Resolved HCV cases in MN by Race, 2022

Data Source: MN Viral Hepatitis Surveillance System

Total number with known race = 23,336

Total number with known race = 11,558

Afr Amer = African American / Black
Amer Ind = American Indian
Asian = Asian or Pacific Islander
Other = Multi-racial persons or persons with other race
Hepatitis C in Populations of Interest
Hepatitis C in Persons Under Age 30
As of December 31, 2022, 1,802* persons under the age of 30 are assumed alive and living in MN with HCV.

Note: Includes all acute, chronic, and probable chronic cases.

*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System
Persons <30 Living with HCV in MN by Current Residence, 2022

Data Source: MN Viral Hepatitis Surveillance System

Total number with residence information = **31,849**

Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties including those in Hennepin County or Ramsey County with unknown city.

Greater MN = All other Minnesota counties, outside the seven-county metro area.

Total number with residence information = **1,727**

Data Source: MN Viral Hepatitis Surveillance System
Persons <30 Living with HCV in MN by Gender*, 2022

**Data Source:** MN Viral Hepatitis Surveillance System

**MN Overall**
- Male: 64%
- Female: 35%
- Transgender: 0%
- Unknown: 1%

**MN Age Under 30 years**
- Male: 56%
- Female: 42%
- Transgender: 0%
- Unknown: 2%

*Includes anonymous methadone patients

Data Source: MN Viral Hepatitis Surveillance System
Persons <30 Living with HCV in MN by Race, 2022

Data Source: MN Viral Hepatitis Surveillance System

MN Overall

- White 44%
- Afr Amer 14%
- Amer Ind 7%
- Asian 2%
- Other 5%
- Unknown 28%

MN Age Under 30 years

- White 30%
- Afr Amer 6%
- Amer Ind 12%
- Asian 1%
- Other 10%
- Unknown 41%

Afr Amer = African American / Black
Asian = Asian or Pacific Islander
Amer Ind = American Indian
Other = Multi-racial persons or persons with other race
Hepatitis C in Native Americans
As of December 31, 2022, 2,190* persons who identify as Native American are assumed alive and living in MN with HCV

Note: Includes all acute, chronic, and probable chronic cases.

*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System
Native American Persons Living with HCV in MN by Current Residence, 2022

MN Overall

Total number with residence information = 31,849

- Suburban Metro: 26%
- Minneapolis: 20%
- Greater Minnesota: 44%
- Saint Paul: 10%

MN Native American

Total number with residence information = 2,176

- Greater Minnesota: 62%
- Suburban Metro: 9%
- Minneapolis: 25%
- Saint Paul: 4%

Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties including those in Hennepin County or Ramsey County with unknown city. Greater MN = All other Minnesota counties, outside the seven-county metro area.

Data Source: MN Viral Hepatitis Surveillance System
Native American Persons Living with HCV in MN by Gender*, 2022

*Includes anonymous methadone patients

Data Source: MN Viral Hepatitis Surveillance System
Native American Persons Living with HCV in MN by Age, 2022

Data Source: MN Viral Hepatitis Surveillance System
Native American Persons Living with HCV in MN by Age, 2014 & 2022

Data Source: MN Viral Hepatitis Surveillance System
Thank you!

Special thanks to the Hepatitis Unit at MDH!

Genny Grilli, MPH
Hepatitis Epidemiologist Supervisor
Genny.Grilli@state.mn.us
651-201-5557

Sam Burt          Brooklyn Petrich
Julia Jallo       Kristin Sweet
Aniz Anderson     Kylie Littel