



## Hepatitis A, B & C in Minnesota, 2021

Minnesota Department of Health  
Hepatitis Surveillance System

## Communicable Disease Reporting – Hepatitis

- 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 2021
- Definitions:
  - Acute case:
    - Infected within the last twelve month – negative test in twelve months before diagnosis
    - ALT  $\geq$ 200, T. bili  $\geq$ 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

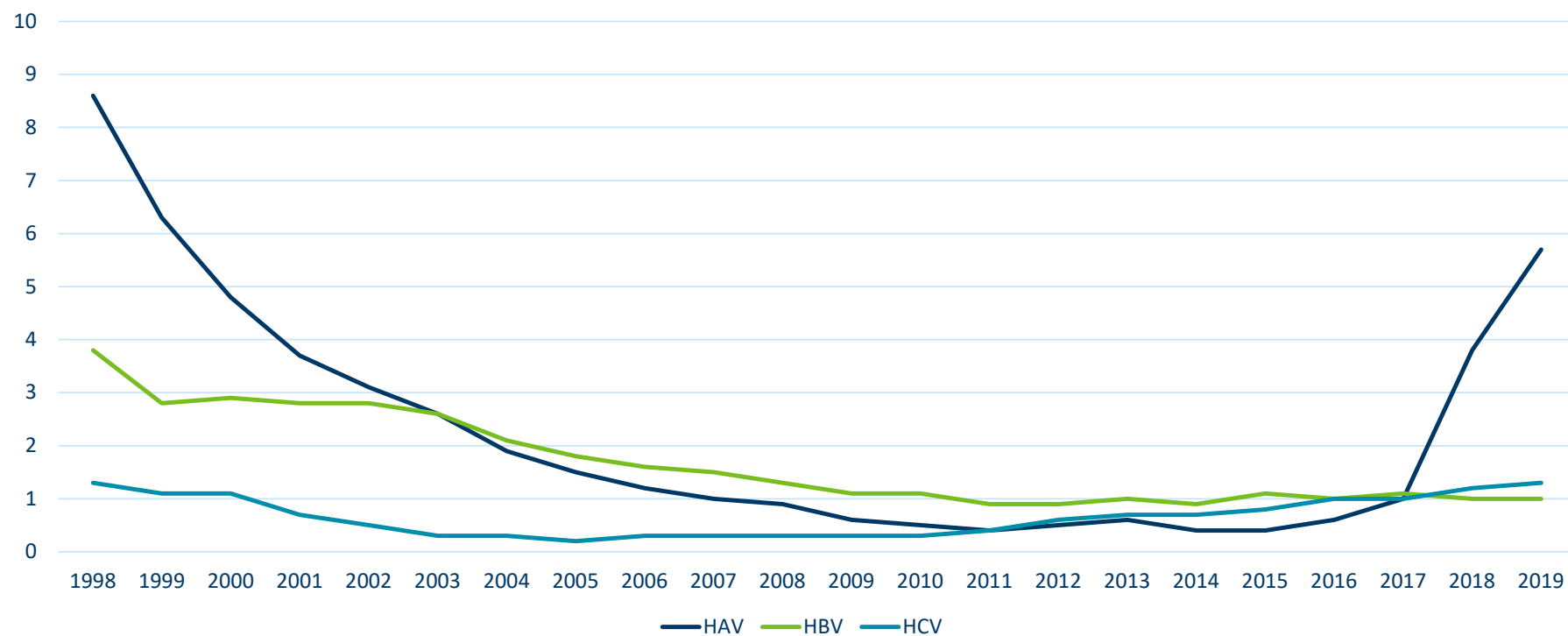
# Data limitations

- The slides rely on data from HCV and HBV cases diagnosed through 2021 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.

# Acute Viral Hepatitis

- Acute case:
  - Infected within the last twelve months - negative test 12 months before diagnosis
  - ALT  $\geq$ 200, T. bili  $\geq$ 3.0, OR jaundice

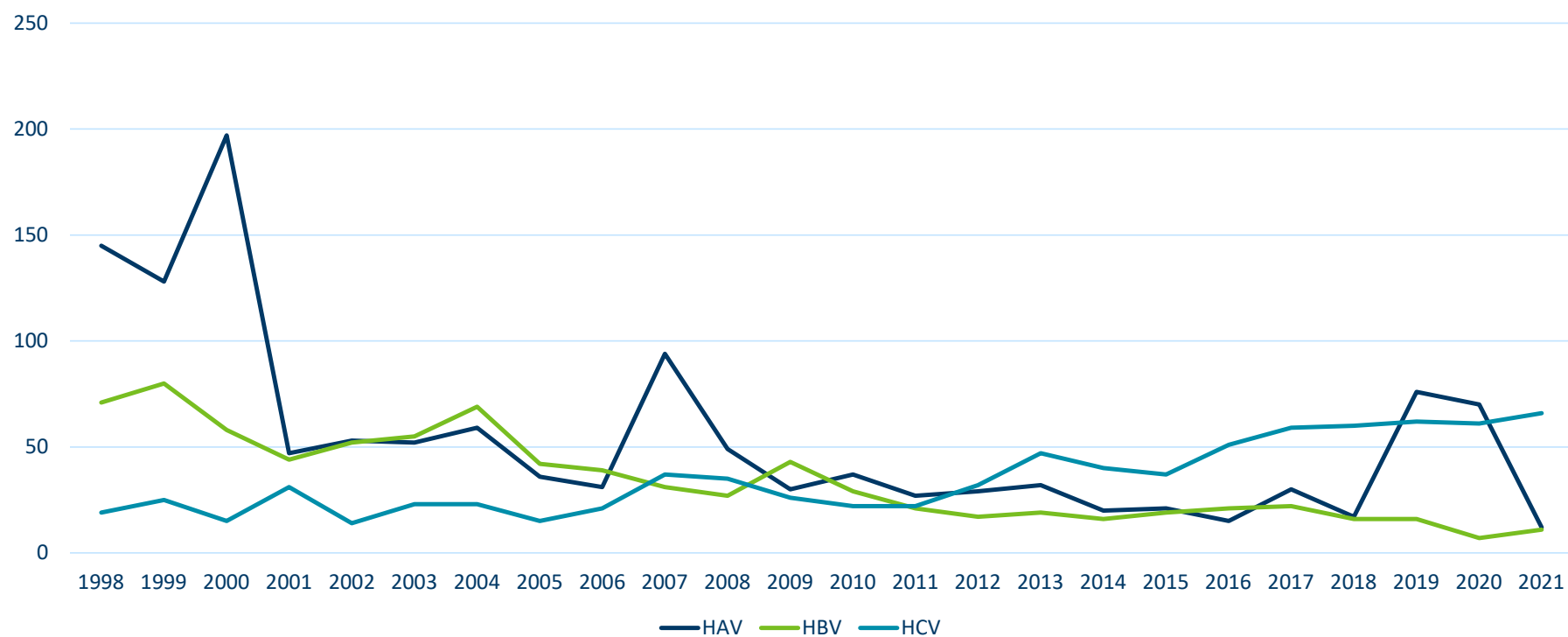
# Reported rate per 100,000 population of acute viral hepatitis United States, 1998-2019



Data Source: Viral Hepatitis Statistics & Surveillance at [www.cdc.gov/hepatitis/Statistics/](http://www.cdc.gov/hepatitis/Statistics/)



# Number of Acute\* Cases per year Minnesota, 1998-2021



Data Source: MN Viral Hepatitis Surveillance System

\*Acute cases include seroconverters for all years for HBV and HCV

# Chronic Viral Hepatitis

## Overview of HCV in Minnesota

A hepatitis C case is defined as current infection with hepatitis C and includes:

- Chronic cases:
  - Probable – anti-HCV + alone
  - Confirmed – HCV RNA +

## Reported Number of Persons Living with HCV in MN

- As of December 31, 2021, 32,935\* persons are assumed alive and living in MN with HCV.

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

\*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System

## Changes in Case Counting, 2016

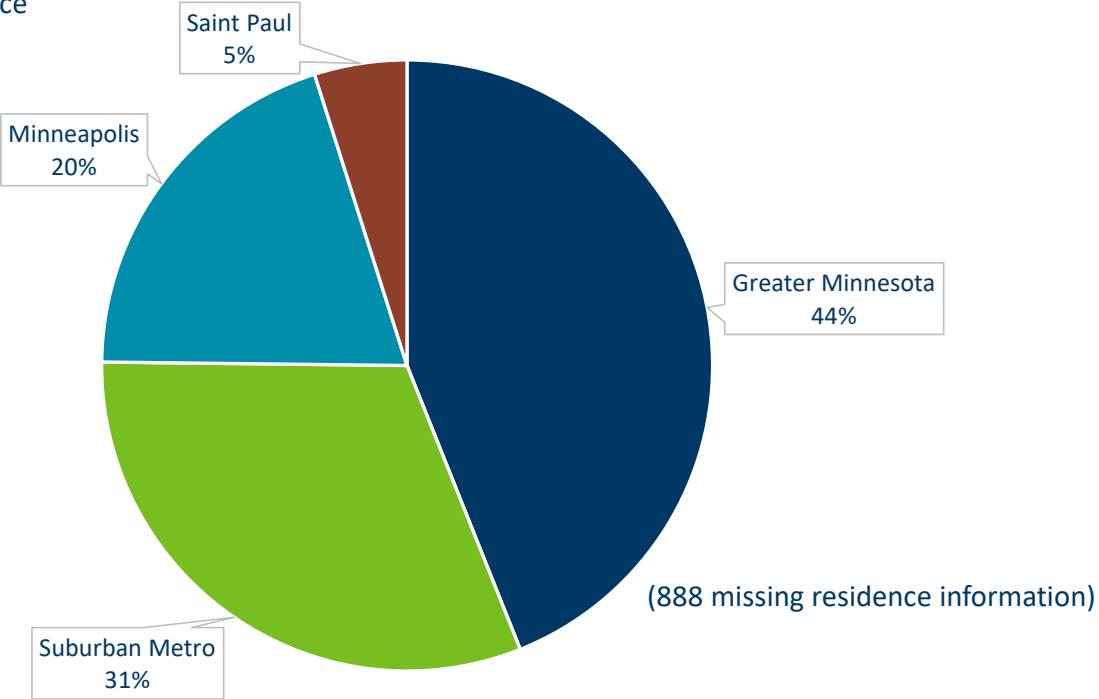
- Removed resolved infections from case counts
- Completed match with death registry for 1997 through 2016

## Changes in Case definitions

- The national case definition for Chronic HCV changed for 2016
  - Confirmed cases must have detectable RNA
  - Probable cases have ONLY a positive antibody test
- The national case definition for Acute HCV changed for 2020
  - Confirmed cases do not need to have documentation of symptoms
  - Total bilirubin of  $\geq 3.0$  added as an indication of presence of jaundice

# Persons Living with HCV in MN by Current Residence, 2021

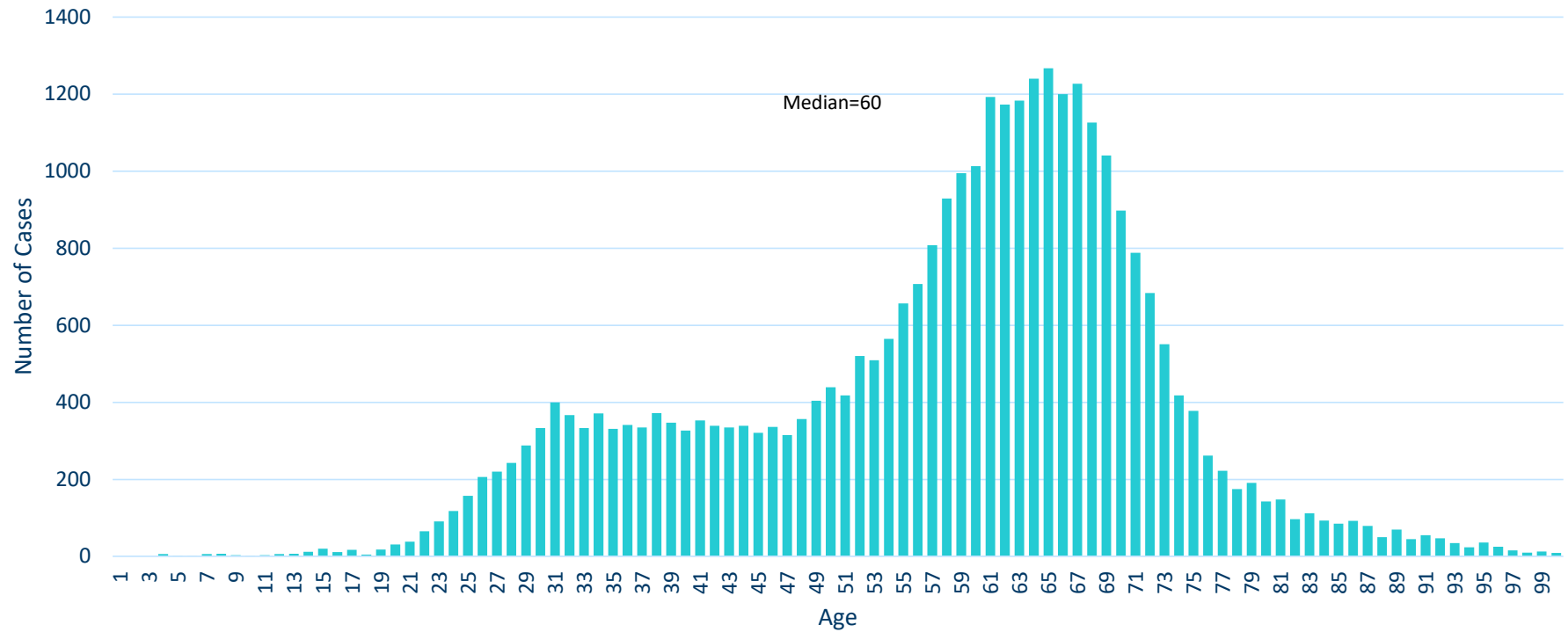
Total number with residence information = 32,047



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

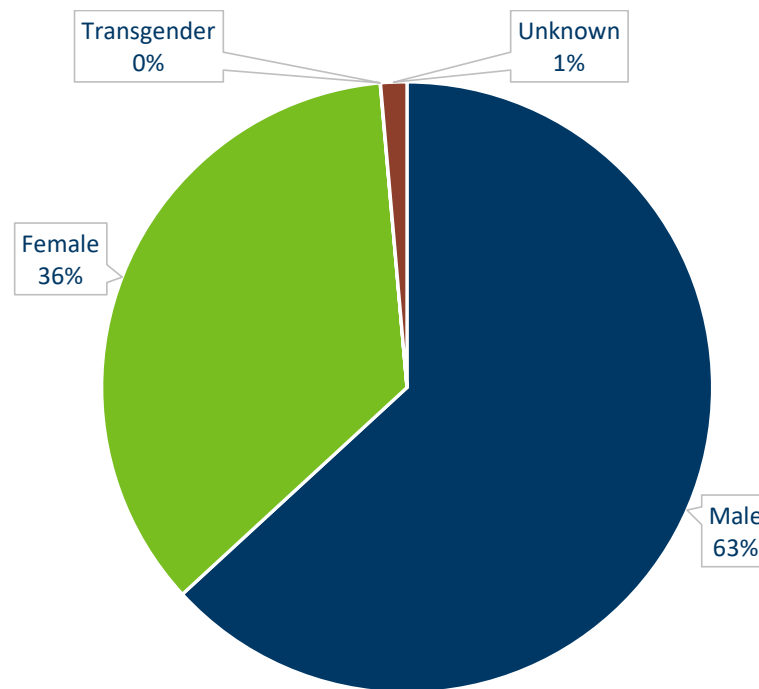
# Persons Living with HCV in MN by Age, 2021



Data Source: MN Viral Hepatitis Surveillance System

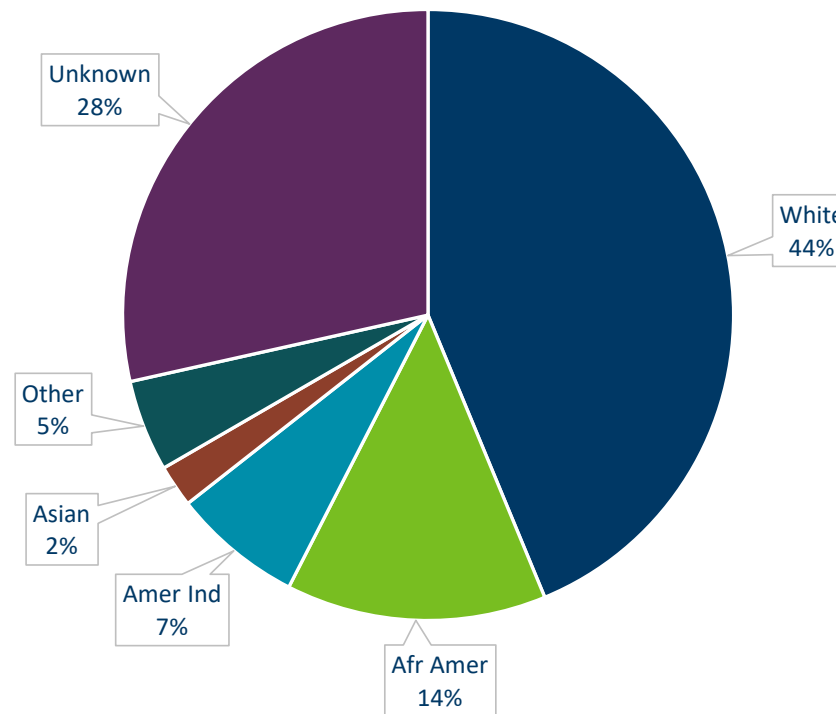


# Persons Living with HCV in MN by Gender\*, 2021



Data Source: MN Viral Hepatitis Surveillance System

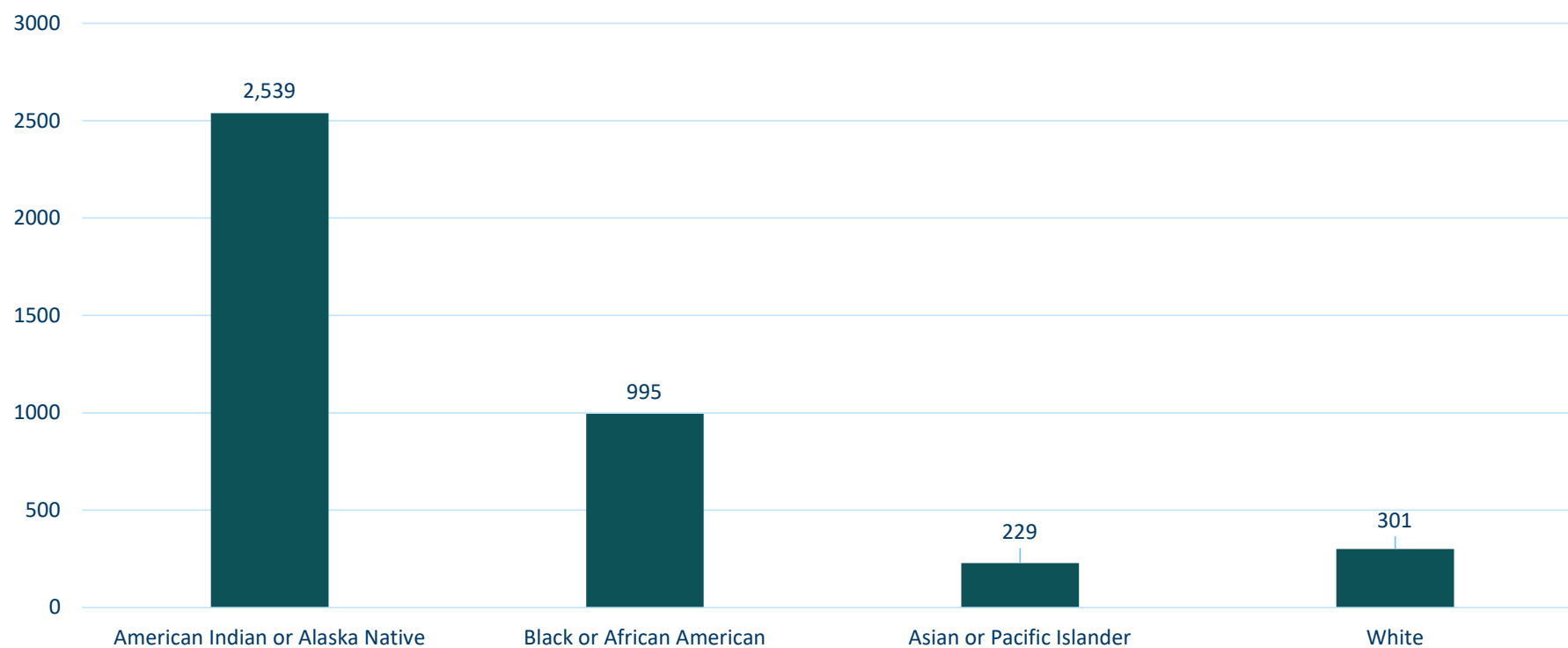
# Persons Living with Chronic HCV in Minnesota by Race, 2021



Afr Amer = African American /Black    Asian=Asian or Pacific Islander  
Amer Ind = American Indian  
Other = Multi-racial persons or persons with other race

Data Source: MN Viral Hepatitis Surveillance System

## Persons Living with HCV in Minnesota by Race rates (per 100,000 persons\*), 2021



Data Source: MN Viral Hepatitis Surveillance System

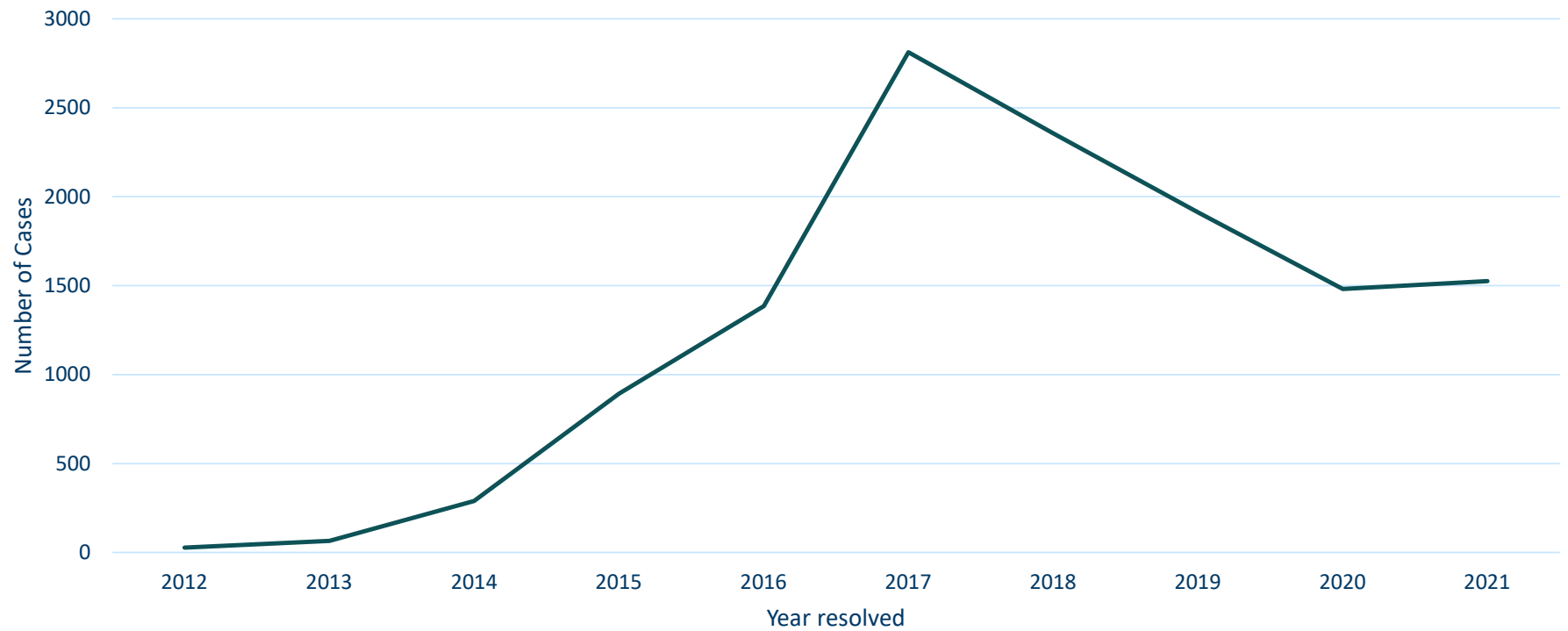
\*Rates calculated using 2020 U.S. Census ACS data

Excludes persons with multiple races or unknown race, n=10,986

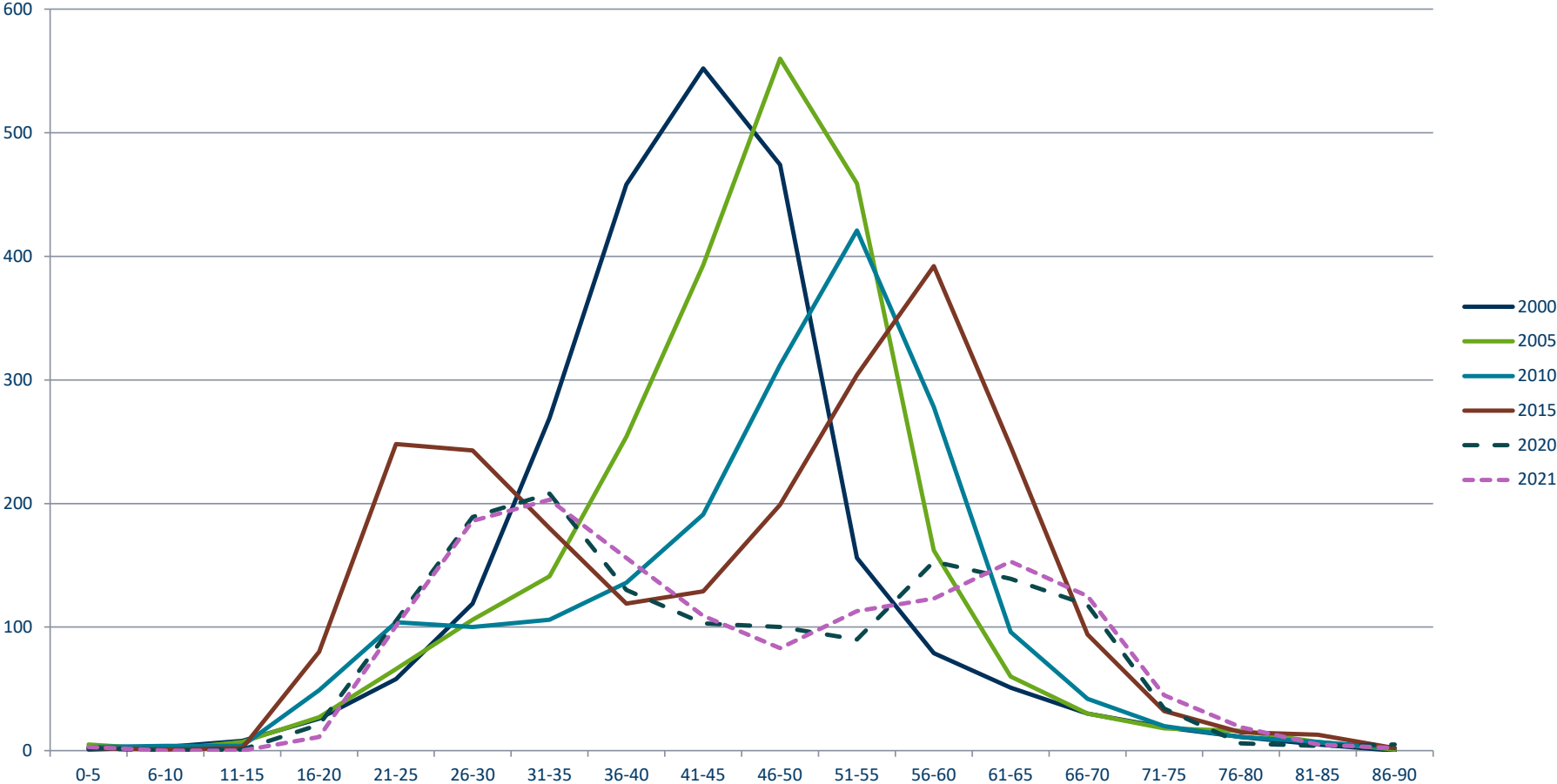
## Resolved HCV Infection

- 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

# Resolved Hepatitis C, 2021



# New Reports of HCV in Minnesota by Age Group, 2021



# Hepatitis C in Populations of Interest

# Hepatitis C in Persons Under Age 30



## Reported Number of Persons <30 Living with HCV in MN

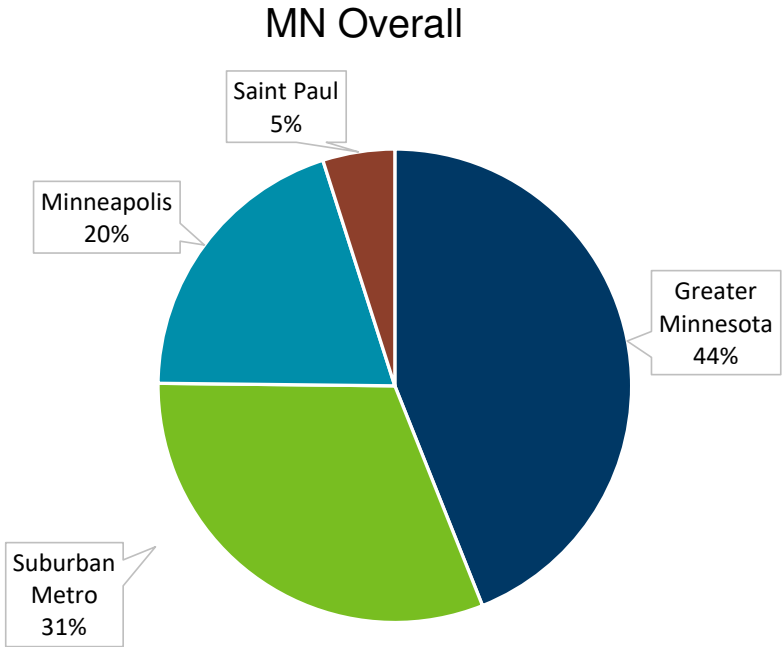
As of December 31, 2021, 2,065\* persons under the age of 30 are assumed alive and living in MN with HCV.

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

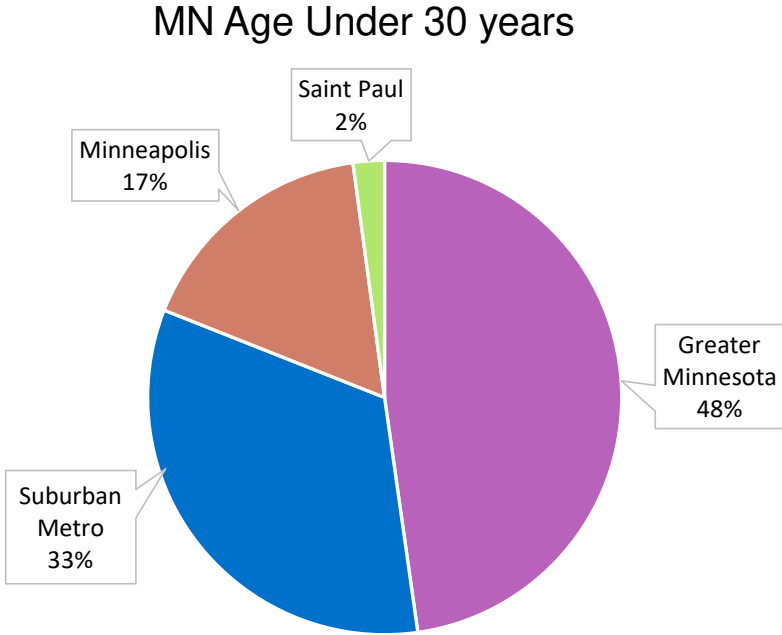
\*Includes persons with unknown city of residence

Data Source: MN Viral Hepatitis Surveillance System

# Persons <30 Living with HCV in MN by Current Residence, 2021



Total number with residence information= 32,047

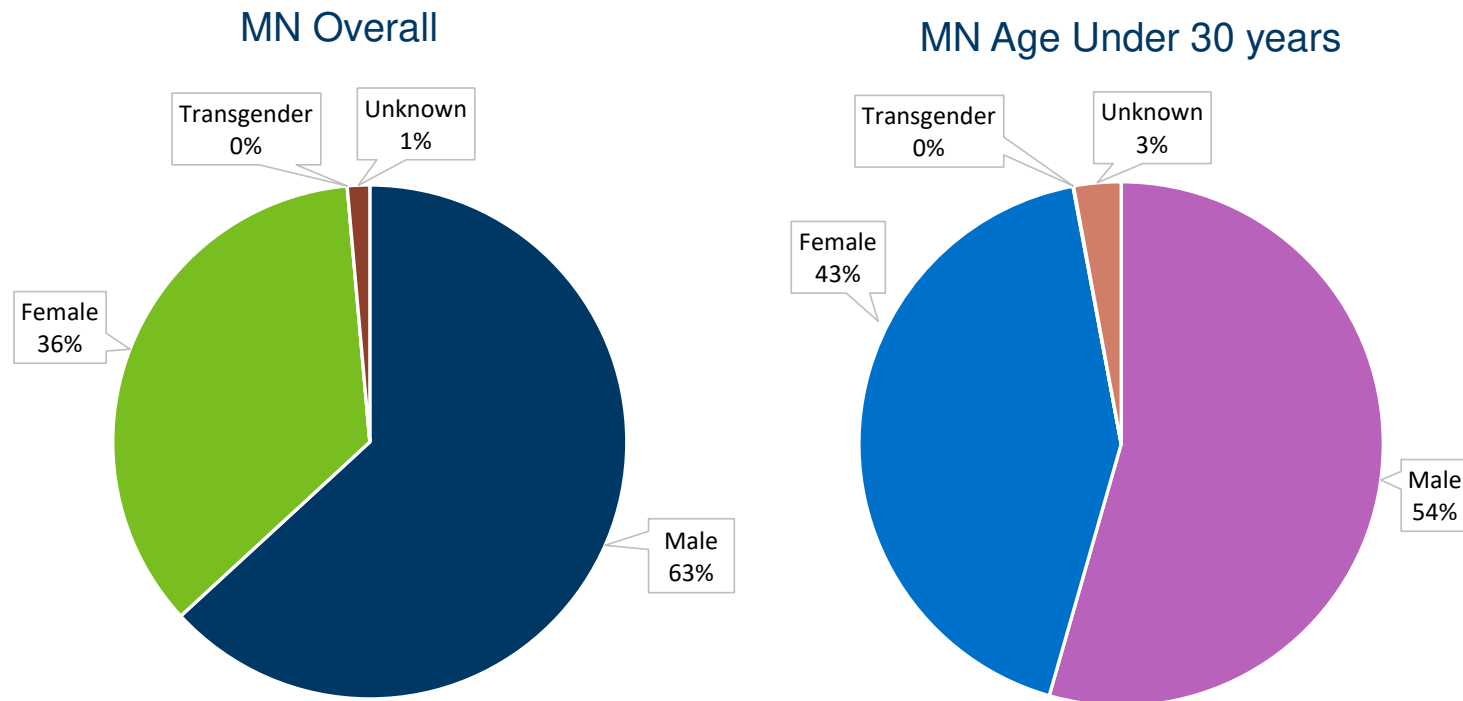


Total number with residence information= 1,968

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.

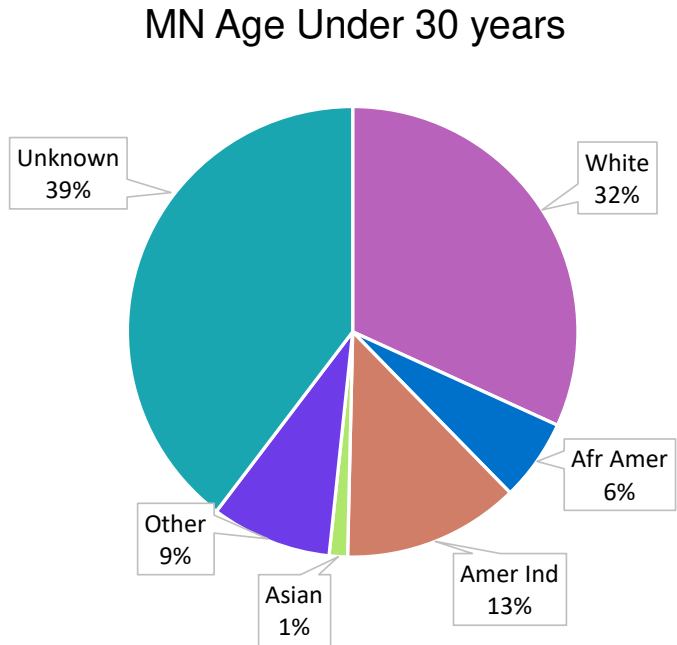
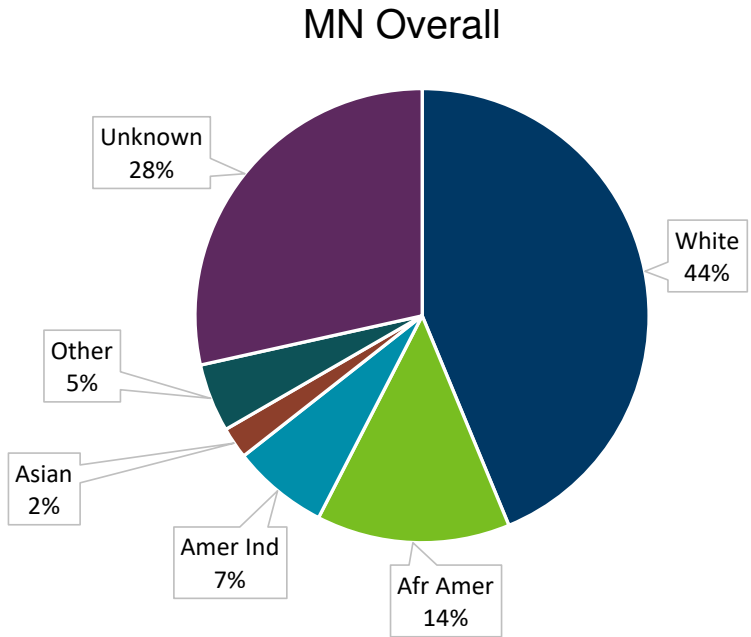
Data Source: MN Viral Hepatitis Surveillance System

# Persons <30 Living with HCV in MN by Gender\*, 2021



\*Includes anonymous methadone patients

# Persons <30 Living with HCV in MN by Race, 2021



Afr Amer = African American /Black    Asian=Asian or Pacific Islander  
Amer Ind = American Indian  
Other = Multi-racial persons or persons with other race

Data Source: MN Viral Hepatitis Surveillance System

# Hepatitis C in Native Americans

# Reported Number of Native Americans Living with HCV in MN

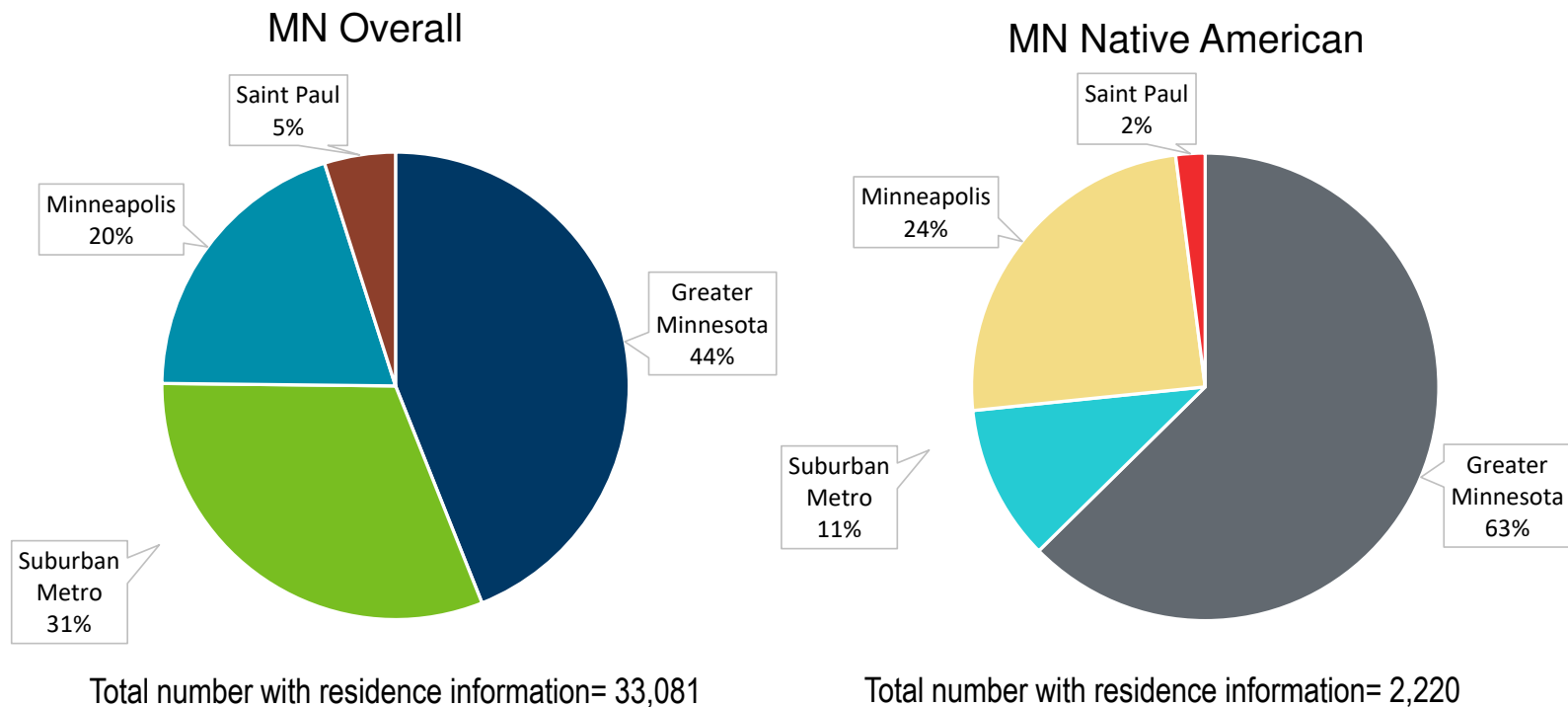
As of December 31, 2021, 2,263\* persons who identify as Native American are assumed alive and living in MN with HCV

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

\*Includes persons with unknown city of residence

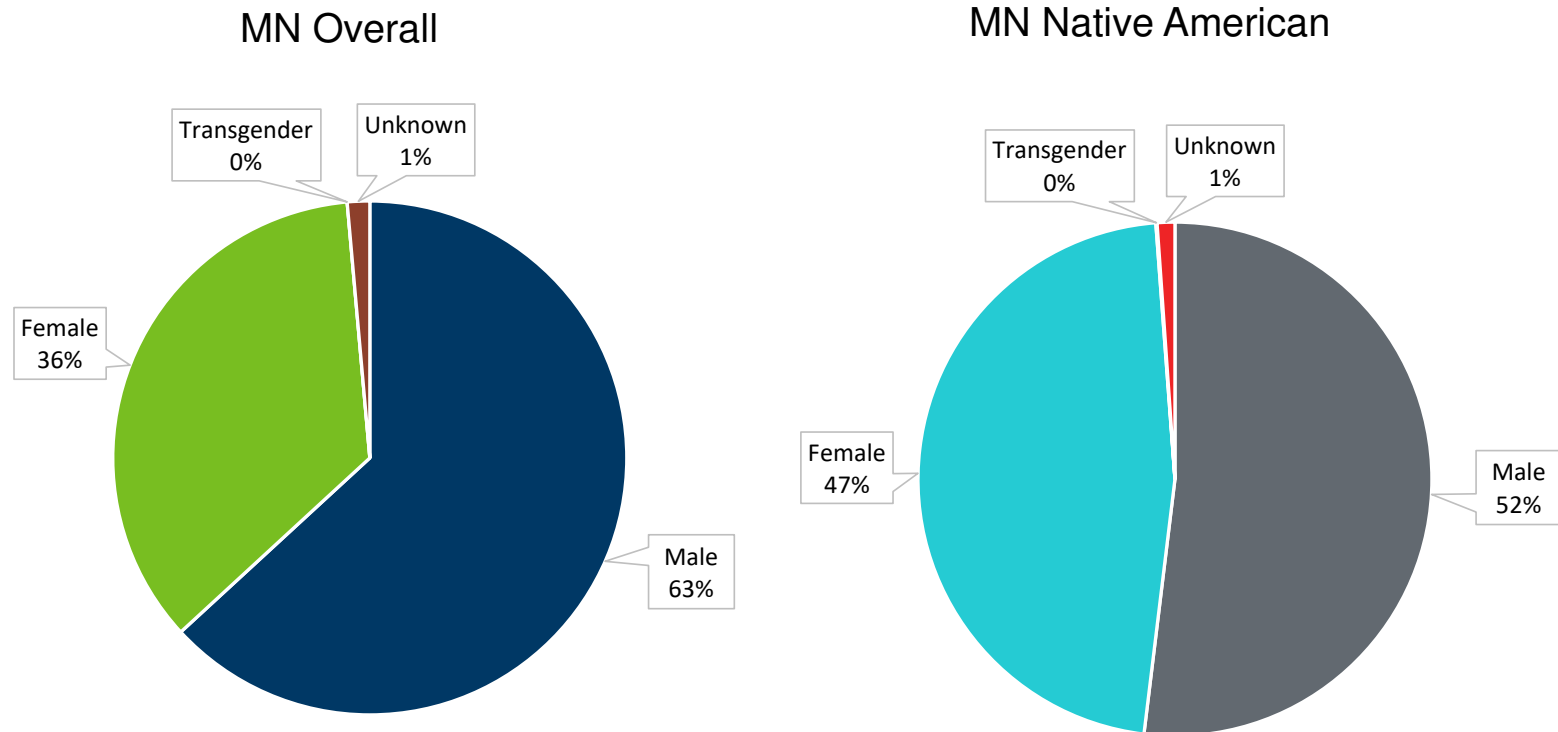
Data Source: MN Viral Hepatitis Surveillance System

# Native American Persons Living with HCV in MN by Current Residence, 2021



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.

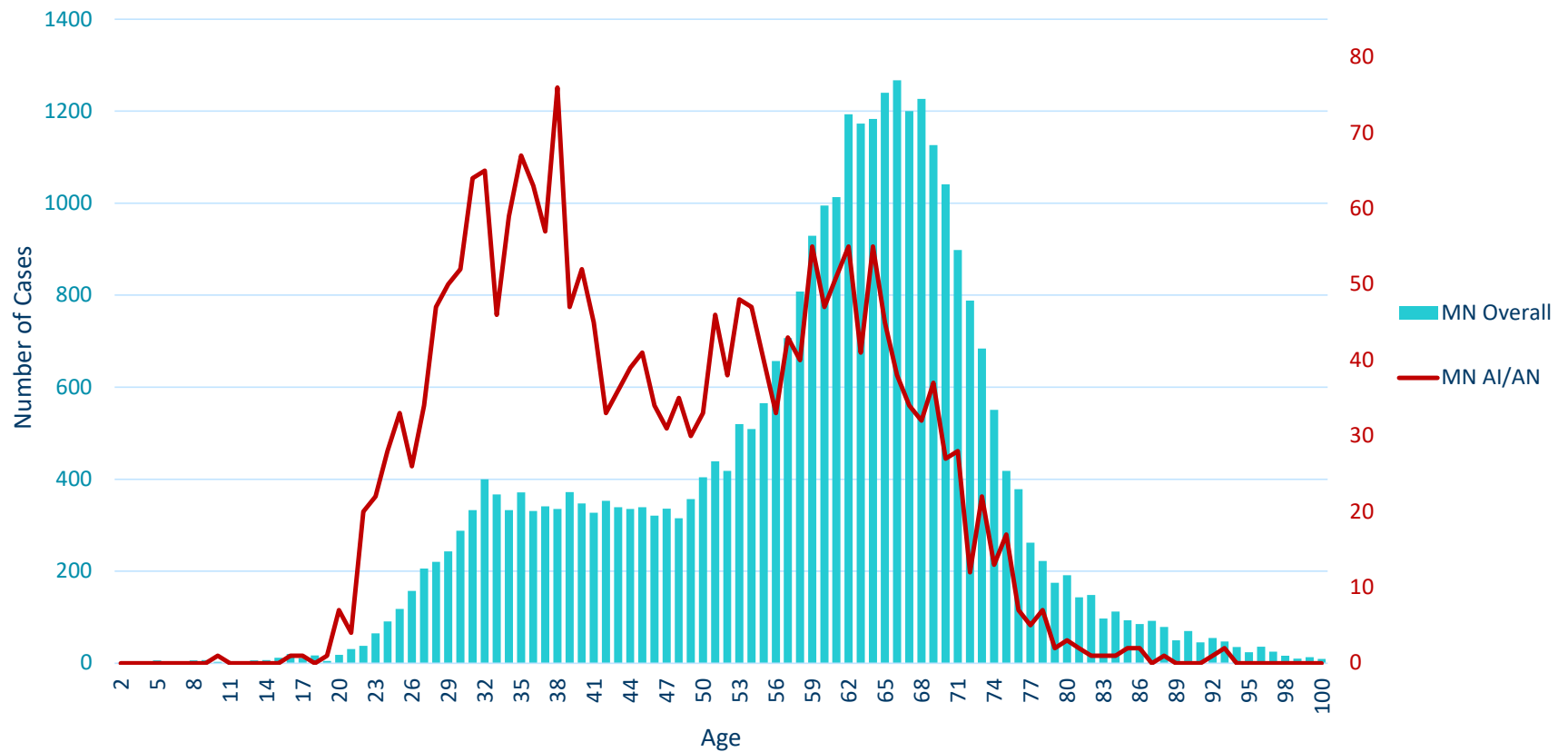
# Native American Persons Living with HCV in MN by Gender\*, 2021



\*Includes anonymous methadone patients



# Native American Persons Living with HCV in MN by Age, 2021



Data Source: MN Viral Hepatitis Surveillance System