

# HCV ECHO Launch

Curtis Barry and Laurel Banach  
co-course directors

9/5/25



# Learning Objectives

- Describe the structure of the Project ECHO Model
- Familiarize with course facilitators and participants



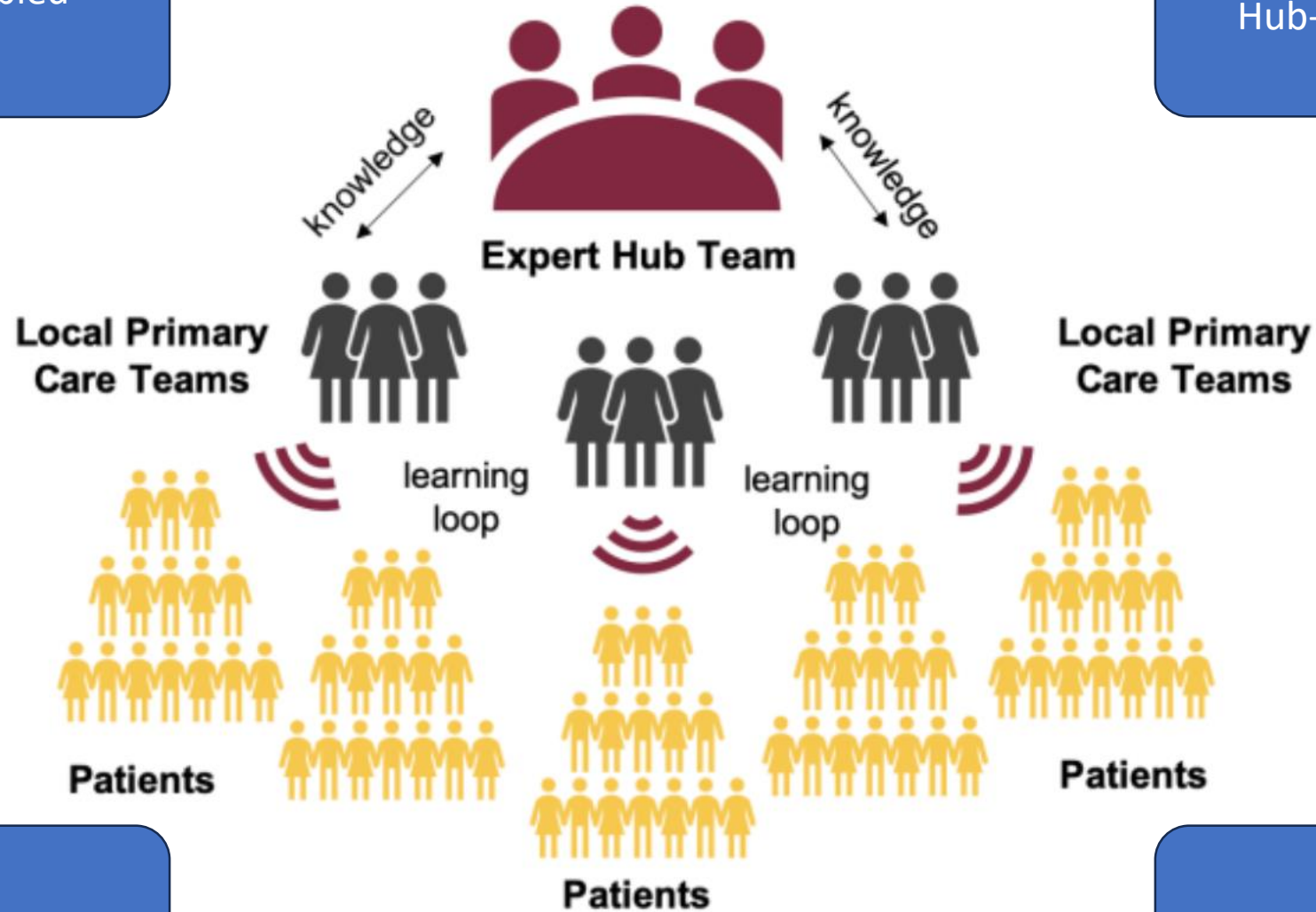
## Project ECHO's Aspirations

At Project ECHO (Extension for Community Healthcare Outcomes), the mission is to democratize medical knowledge and dramatically improve access to best practice care to underserved people all over the world.

The goal is to improve the lives of 1 billion people by 2025.

Technology-enabled  
platform

Hub-spoke framework



Case-based learning

Interactive mentorship

# ECHO vs Webinar: What's the difference?

## ECHO



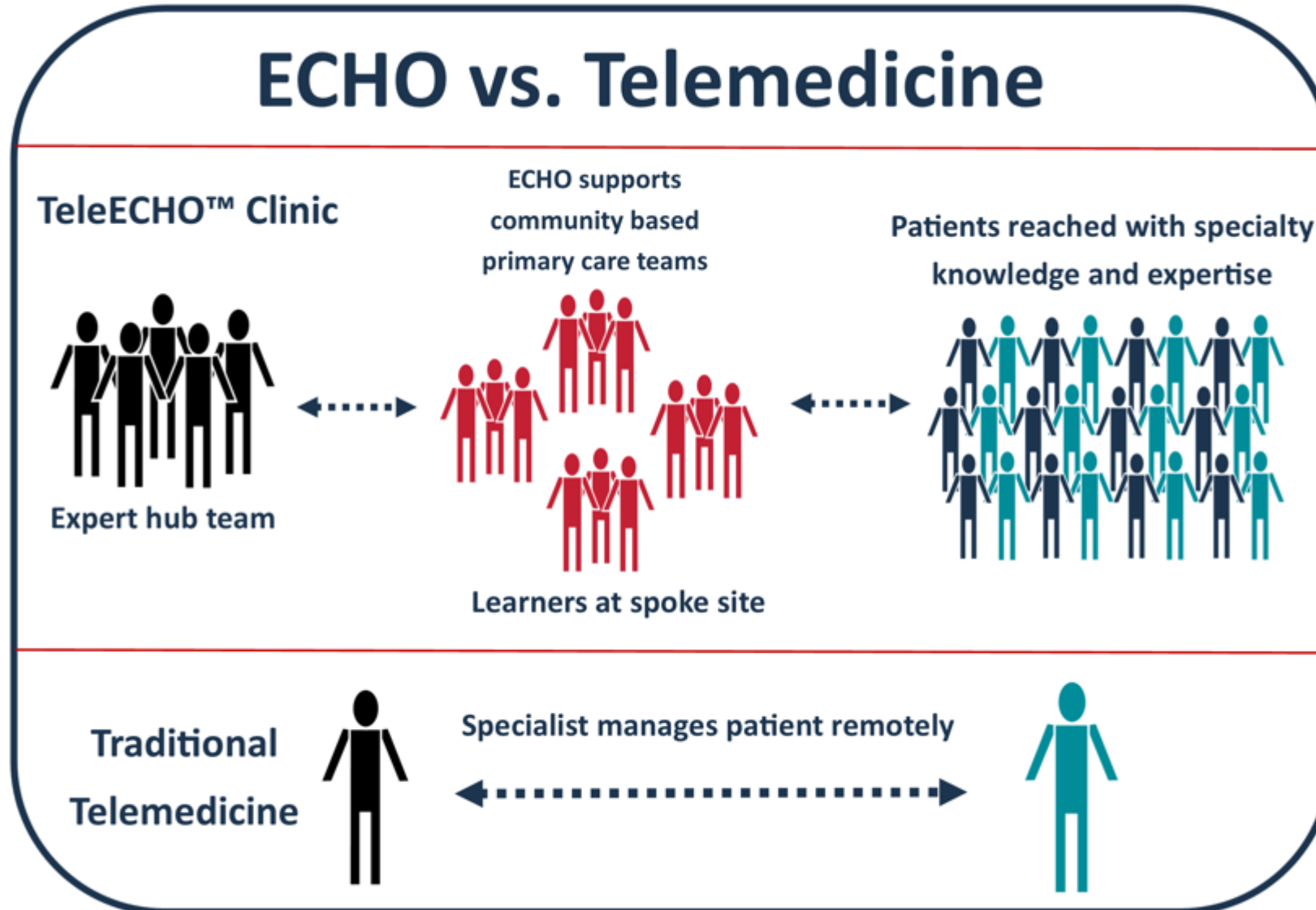
- Uses the ECHO model – participation is free
- Short didactics
- Case-based learning
- Interactive and participatory
- Learners are seen as experts in their context
- Regular, ongoing over a period of time, following a curriculum of interest to learner
- Participants engage visually and become a virtual community of practice
- Building community is a key aim
- Low Dose High Frequency learning
- Aims to present unbiased information
- Earn CE credits

## Webinar



- Structure varies – may cost a fee to participate
- Long presentations/lectures as dominant pedagogical feature
- May be passive with no or minimal discussion
- Case based learning not essential part of webinar
- Information/knowledge is pushed out– one way teach/learn approach
- Often a one-time only learning event
- Participants often are not seen and remain strangers
- May have commercial bias

# ECHO (telementoring) vs. Telemedicine



# Session Format

- 10 minutes: Introductions and housekeeping
- 15-20 minute didactic session by an expert
- 30-35 minute case presentation and discussion

**HCV Project ECHO**  
**Case Presentation Form**  
 This form will capture the data for the upcoming presentation

## General Case Information

\*1. Date for the presentation of this case

Date (mm/dd/yyyy)

## \*2. Presenter Information

Presenter's Name

Presenter's Email

## \*3. Clinical Site

If Clinical Site is not listed above please indicate in space provided below.

# Hepatitis C ECHO – Course Details

- Course consists of 7 ECHO sessions
  - Launch/session 1 for participants (TODAY)
  - Seven sessions about every 2 weeks through end November 2025
- Continuing Medical Education credit is offered to participants (1 credit per session)



In the U.S. and around the world, people are not getting access to the specialty care they need, when they need it, for complex and treatable conditions.

**Moving Knowledge, Not Patients**  
Through technology-enabled collaborative learning, ECHO creates access to high-quality specialty care in local communities.



Hub and spoke knowledge-sharing networks create a learning loop:  
Community providers learn from specialists.  
Community providers learn from each other.  
Specialists learn from community providers as best practices emerge.

You're Invited to join an exciting virtual collaborative learning opportunity!

**Health Equity ECHO Initiative  
Massachusetts Hepatitis C ECHO**  
*For Beginner AND Experienced Practitioners! Come join us!*  
Primary care interdisciplinary team members  
(providers, nurses, social workers, community health workers, patient navigators, etc.)

Participate in 7 one-hour sessions with case discussions  
Fridays at 12:30 pm ET

**TOPICS COVERED:**

- Intro to HCV & ECHO Model - Epidemiology, Screening & Diagnosis
- Staging of Liver Disease & HCV
- Initiating Treatment
- Addressing Barriers to Health Equity
- Monitoring During & After Treatment
- Managing of Co-occurring Conditions (HIV, HBV, SUDs)
- How to Incorporate HCV In your Practice?

**2025 SESSION DATES:**

- Sept 5
- Sept. 19
- October 3
- October 17
- October 31
- November 7
- November 21

 **REGISTER NOW**

 **Project ECHO® (Extension for Community Healthcare Outcomes)**  
University of Massachusetts Memorial Medical Group / 55 Lake Avenue North, Worcester, MA 01655  
Questions or Comments? E-mail: [Susan.Foley@umassmed.edu](mailto:Susan.Foley@umassmed.edu) / Phone: (508) 812-3675





# Curriculum

- All sessions are on Fridays, 12:30pm-1:30pm

Session Number	Topic
Session 1 – 9/5/25	Intro to ECHO Model and HCV: Epidemiology, Screening, and Diagnosis
Session 2 – 9/19/25	Staging of Liver Disease and HCV
Session 3 – 10/3/25	Initiating Treatment
Session 4 – 10/17/25	Addressing Barriers to Care and Health Equity
Session 5 – 10/31/25	Monitoring During and After Treatment
Session 6 – 11/7/25	Management of co-occurring conditions (HIV, HBV, SUDs)
Session 7 – 11/21/25	How to incorporate HCV treatment in your practice

# *Moving Knowledge Instead of Patients & Healthcare Workers*



# Epidemiology, Screening, and Diagnosis

Curtis Barry & Laurel Banach, MD

HCV ECHO

9/5/25



# Disclosure

- No financial disclosures related to this topic

# Objectives

- a. Understand the burden and transmission of HCV in Massachusetts.
- b. Recognize the importance of early detection and treatment.
- c. Identify who should be screened, and how, based on CDC and USPSTF recommendations.
- d. Interpret diagnostic tests for hepatitis C.

# Background

- HCV is a liver infection which can lead to liver damage, cirrhosis, HCC, and liver failure
- HCV most common chronic bloodborne pathogen in US
- Most important risk factor is past or current injection drug use as transmission occurs via blood contact
  - A smaller percentage of cases occur via sexual contact but often with practices increasing risk of bleeding during sex or co-use of substances
- Estimated 3 million with current infection (2.7-3.9 million)
- HCV prevalence has doubled in women ages 15 to 44 from 2006 to 2014
- From 2011 to 2014, 0.73% of pregnant women tested had HCV infection
- Up to 75% of all infected people are unaware
- Chronic HCV typically has no symptoms

# RISK FACTORS

## Risk Activities

- Injection drug use (current or ever, including those who injected only once)
- Intranasal illicit drug use
- Use of glass crack pipes
- Male engagement in sex with men
- Engagement in chem sex (defined as the intentional combining of sex with the use of particular nonprescription drugs in order to facilitate or enhance the sexual encounter [[Bourne, 2015](#)])

## Risk Exposures

- Persons on long-term hemodialysis (ever)
- Persons with percutaneous/parenteral exposures in an unregulated setting
- Healthcare, emergency medical, and public safety workers after needlestick, sharps, or mucosal exposure to HCV-infected blood
- Children born to HCV-infected women
- Recipients of a prior transfusion or organ transplant, including persons who:
  - Were notified that they received blood from a donor who later tested positive for HCV
  - Received a transfusion of blood or blood components, or underwent an organ transplant before July 1992
  - Received clotting factor concentrates produced before 1987
- Persons who were ever incarcerated

## Other Conditions and Circumstances

- HIV or HBV infection
- Sexually active persons about to start pre-exposure prophylaxis (PrEP) for HIV
- Chronic liver disease and/or chronic hepatitis, including unexplained elevated alanine aminotransferase (ALT) levels
- Solid organ donors (living and deceased) and solid organ transplant recipients

# Baby Boomers

- 1945-1965
- 50-75% of all HCV infections
- 1 in 30 baby boomers infected with HCV
- Risk-based strategy alone failed to identify more than 50% of HCV infections





Massachusetts Department of Public Health

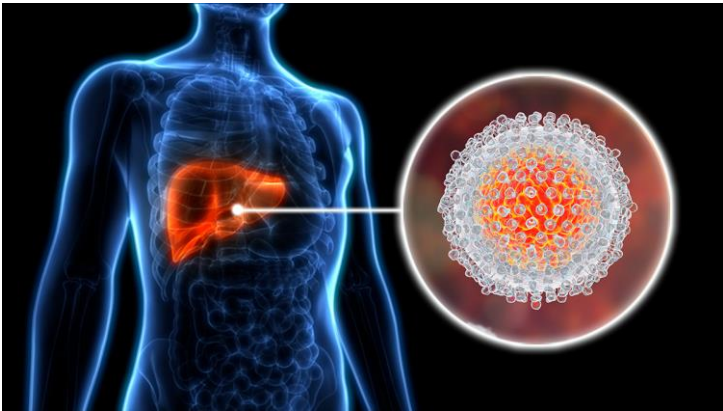
# Epidemiology of Hepatitis C in Massachusetts

Massachusetts Hepatitis C ECHO

September 5, 2025

**Anthony Osinski, MPH**

# Key characteristics of hepatitis C



- Currently, there is no vaccine against hepatitis C infection
- Infection can be cured – highly effective courses of treatment, 8-12 weeks long
- Most people exposed go on to develop chronic infection
- Can lead to cirrhosis, liver cancer, and death
  - Deaths due to hepatitis C are increasing
- Two epidemics in the US
  - Baby boomers (born between 1945-1965)
  - Younger people who inject drugs

# Hepatitis C transmission

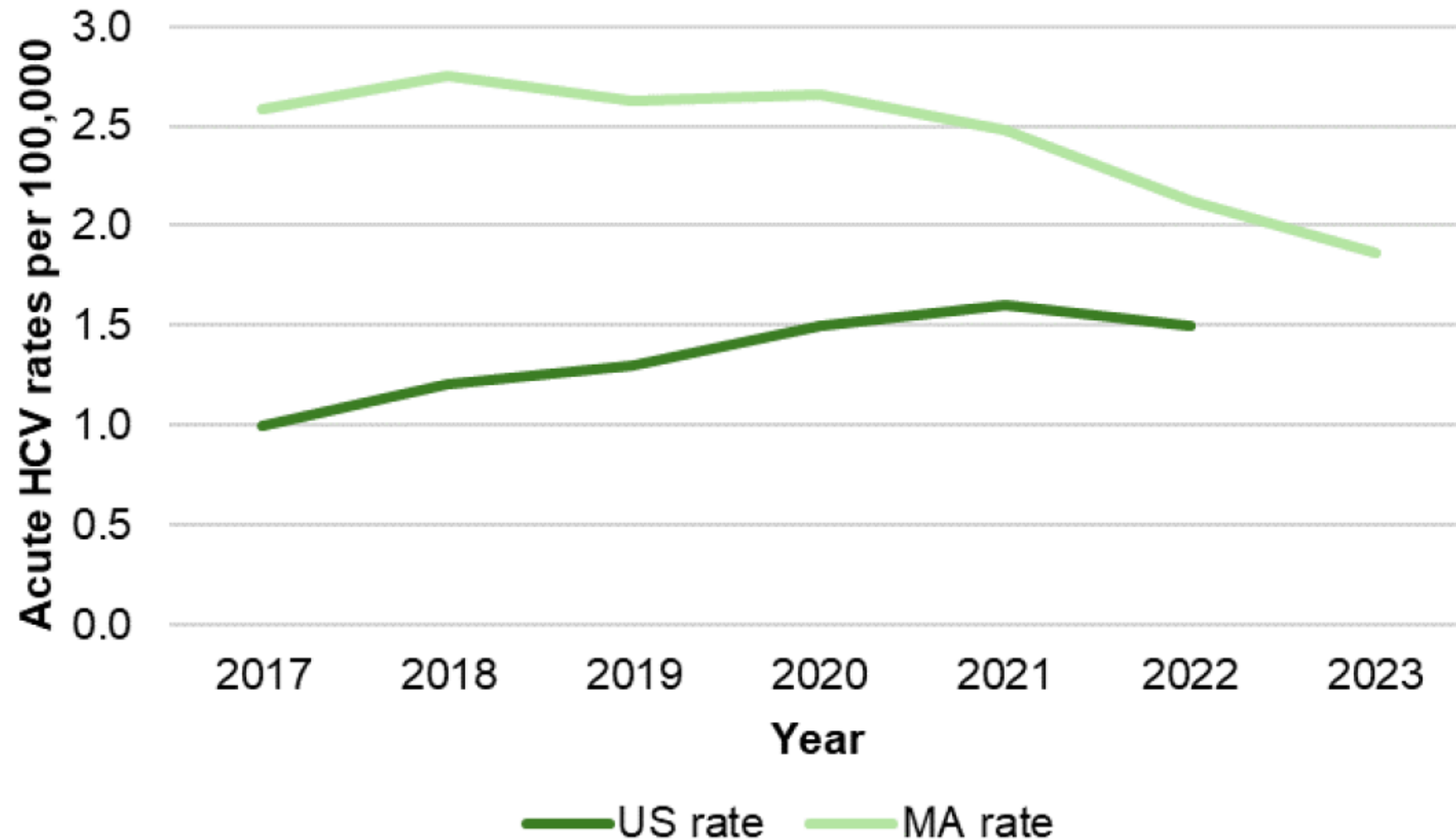
- Currently, the most common mode of exposure is sharing drug injection equipment
  - Not just the needle, but also syringes, cookers, cottons, rinse water, etc.
- Prior to 1992, many people were exposed through blood transfusions, clotting factors, and organ transplants
- Other modes of exposure:
  - Sexual transmission – inefficient, but does occur
  - Vertical transmission – occurs in 4-7% of births to infected gestational parents
    - More common if HIV co-infected
  - Sharing personal/household items contaminated with blood
  - Intranasal drug use
  - Tattoos and body piercings – nonsterile practices

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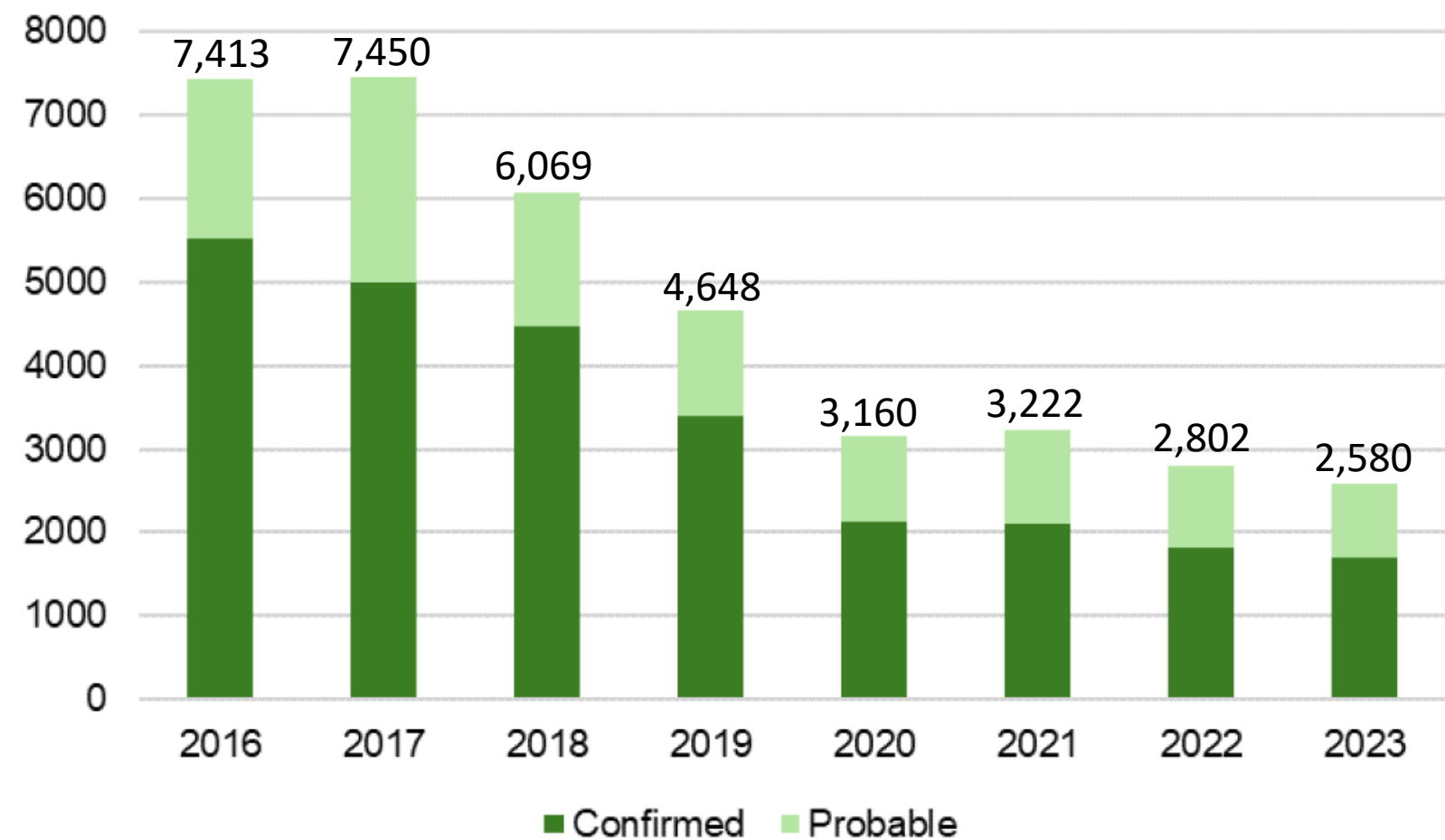
# **Hepatitis C in Massachusetts**

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# Rate of acute hepatitis C cases in Massachusetts compared to the United States, 2017-2023



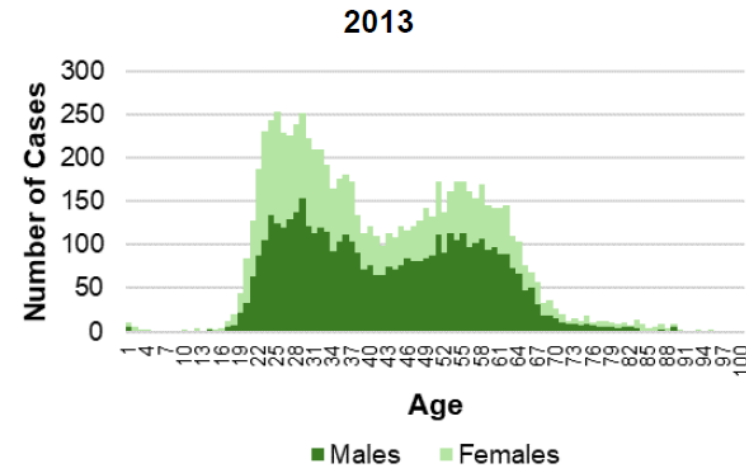
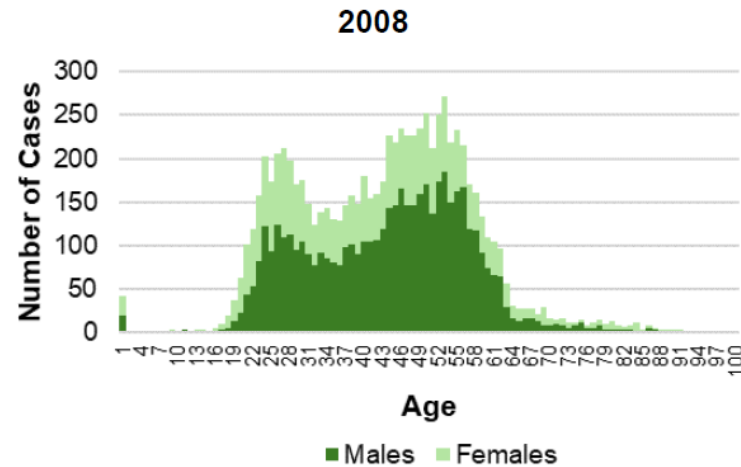
# Confirmed and probable hepatitis C cases by year, MA, 2016-2023



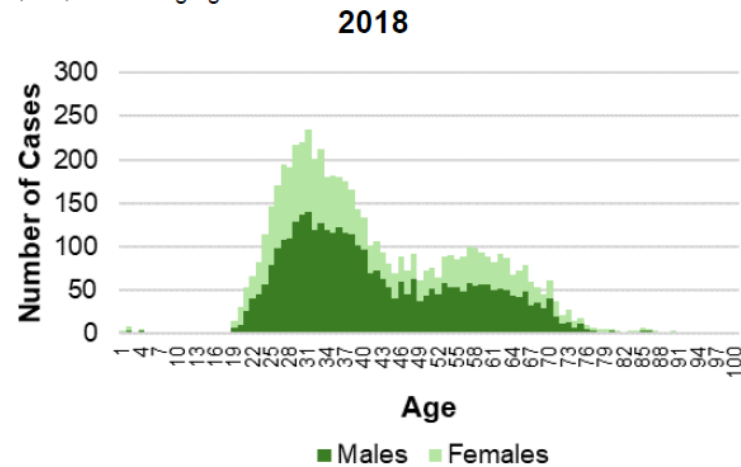
Newly reported cases down **65%** from 2017 to 2023

N=37,344

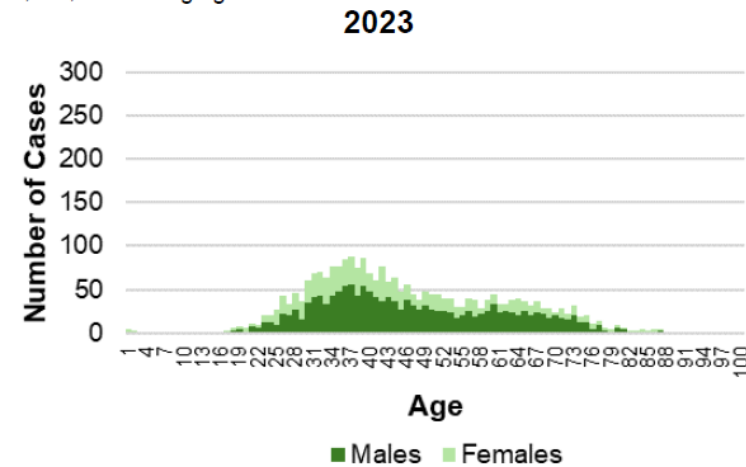
# Confirmed & probable hepatitis C cases by age and recorded sex or gender



N=8,084, 75 missing age or sex



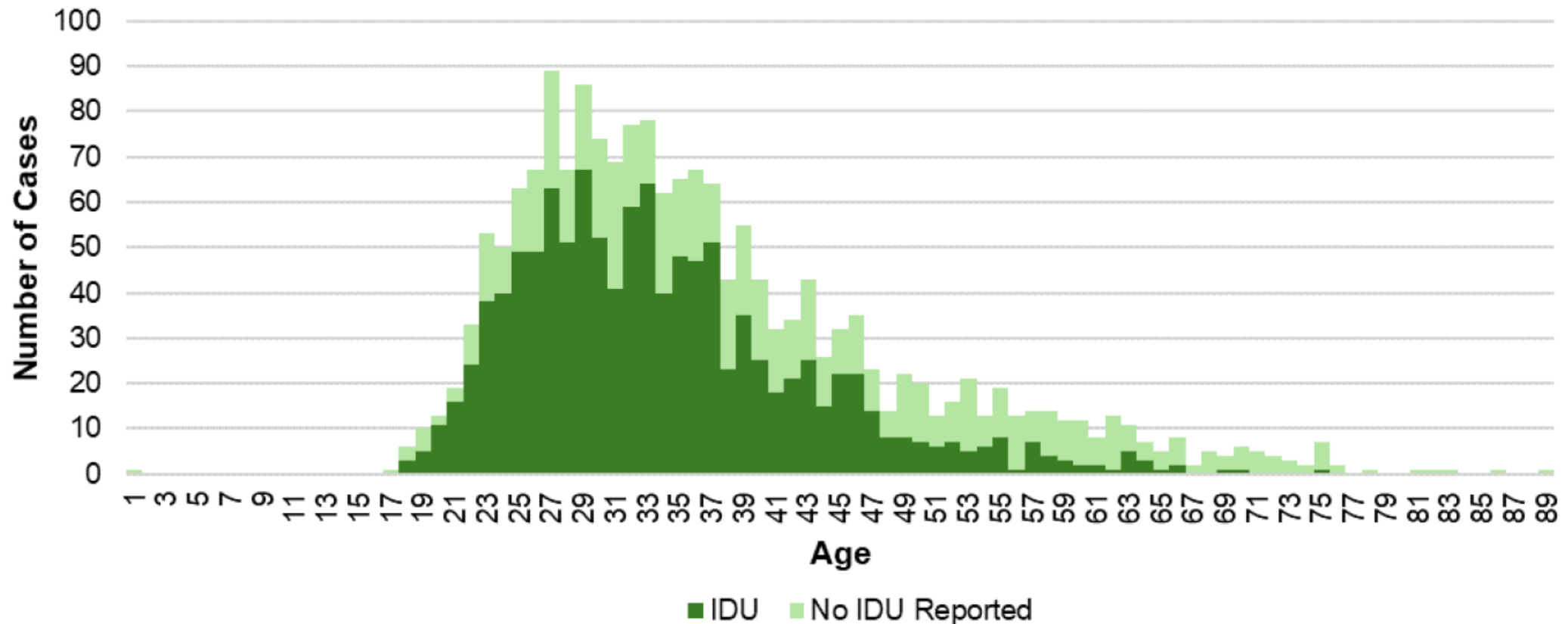
N=7,880, 42 missing age or sex



N=5,951, 118 missing age or sex

N=2,539, 41 missing age or sex

# Number of acute hepatitis C cases reported by age and injection drug use risk, MA, 2016-2023

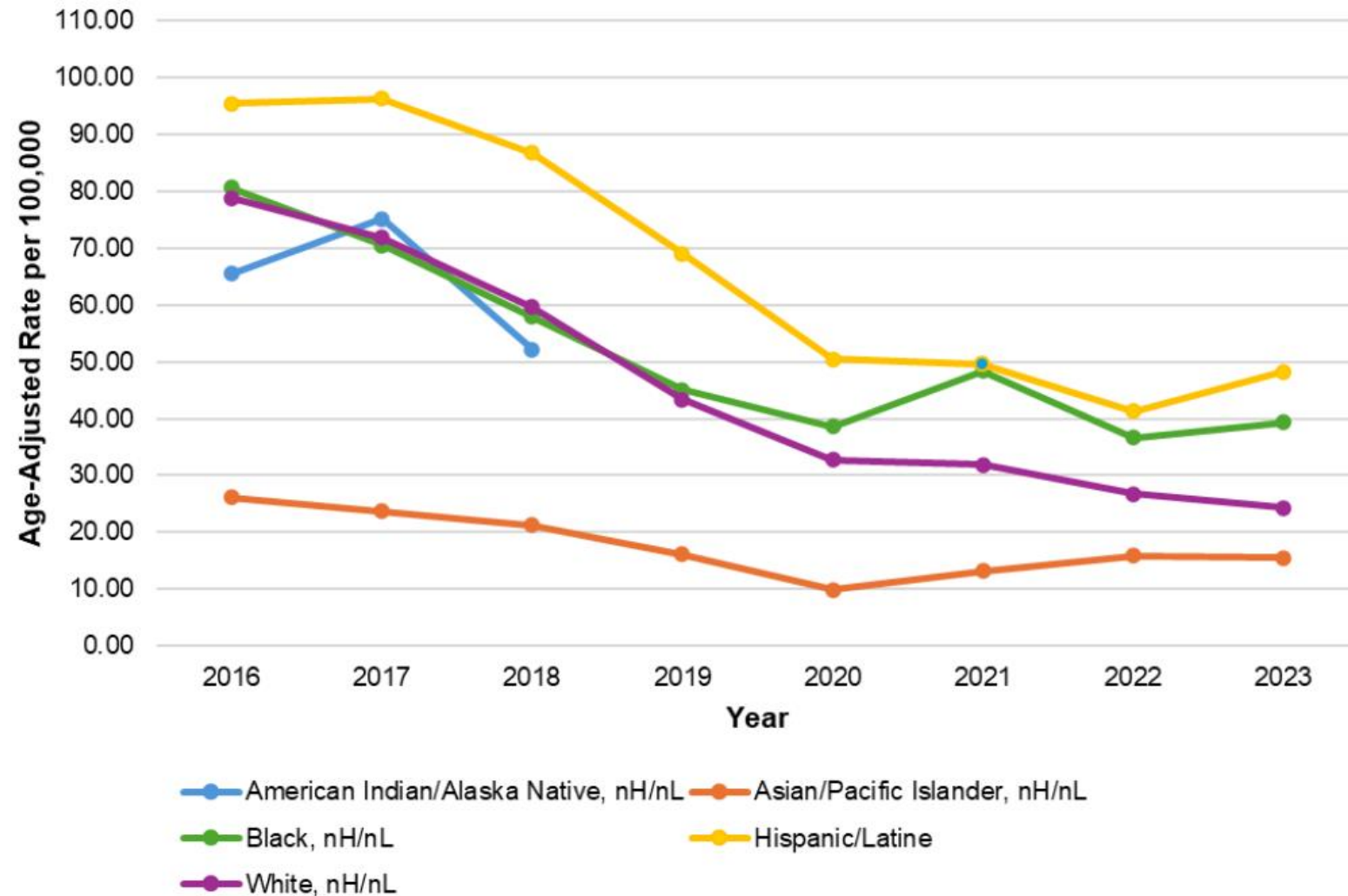


N=1,781

3 cases not included due to missing age, the "No IDU Reported" category includes cases with unknown IDU status.

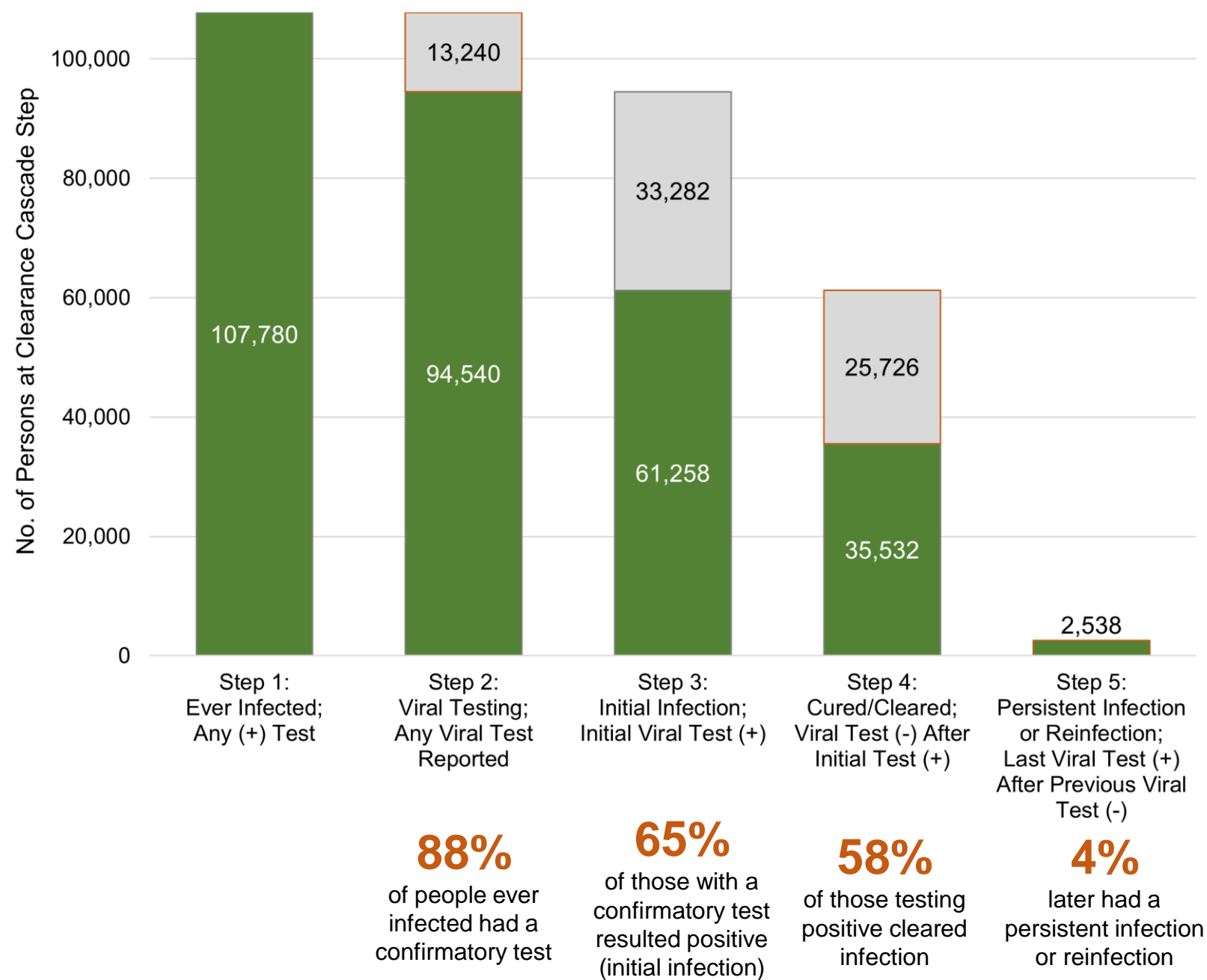


# Age-adjusted rate of confirmed and probable hepatitis C cases by race/ethnicity and year, MA, 2016-2023

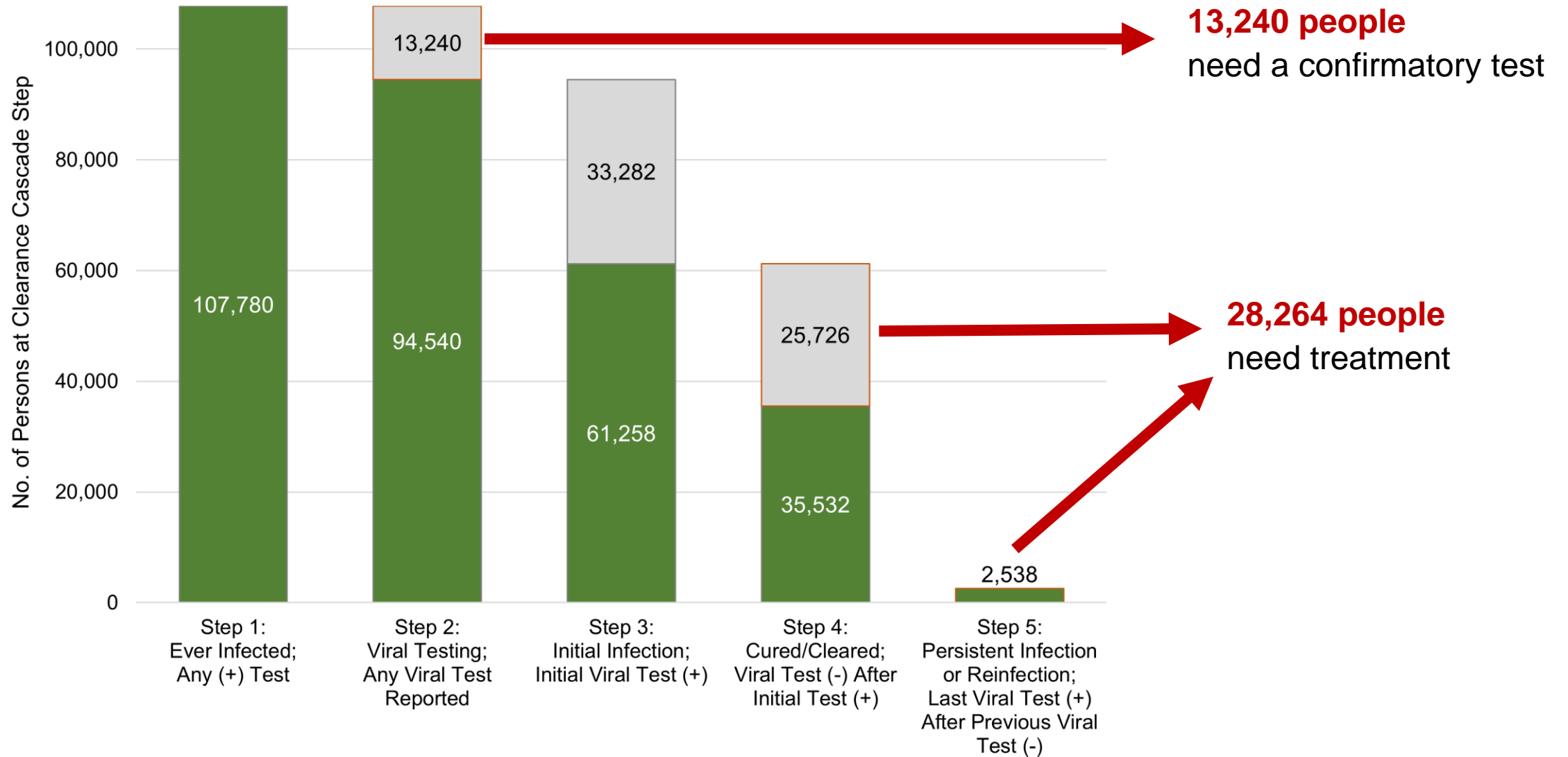


\*Rates for the American Indian/Alaska Native population are not displayed for years 2019, 2020, 2022, and 2023 due to N <5

# Laboratory-based hepatitis C virus clearance cascade, Massachusetts, 2014-2023



# Opportunities to advance HCV care





# Massachusetts Department of Public Health

[anthony.osinski@mass.gov](mailto:anthony.osinski@mass.gov)

[www.mass.gov/hepc](http://www.mass.gov/hepc)

617-983-6800

# JSI Mass HCV Assessment

- Jon Snow Institute interviewed health care providers and patients regarding HCV
  - Interviewed medical leadership in multiple large hospital systems
  - Also surveyed patients at syringe service programs regarding beliefs and attitudes towards HCV screening and treatment

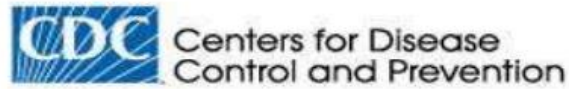
- ***Key themes and takeaways***

- Most systems lack formal policy and quality metrics for HCV screening and treatment; most rely on national guidelines or EMR-based care gaps
- Despite the availability of reflex antibody-to-viral load testing, it remains underutilized.
- Lack of institutional-wide patient education for HCV screening and treatment.
- Interdisciplinary care teams (navigators, CHWs, MAs, PAs, Pharm) are essential in HCV care.
- Patients with HCV *want treatment* but are faced with challenges navigating the healthcare system and treatment *gatekeeping*.

# 2020 Screening Recommendations



JAMA 2020 March; 323:970-975.



MMWR Recomm Rep 2020 April; 69:1-17



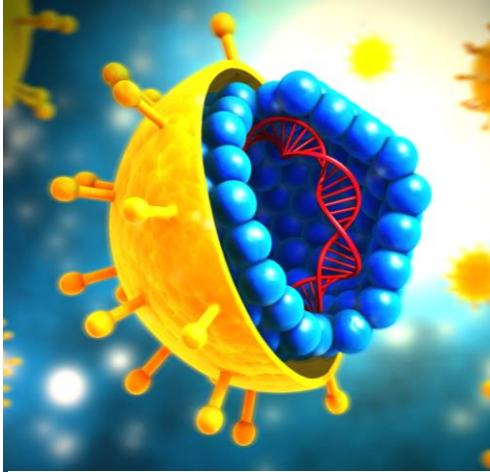
**All adults (ages 18 to 79 years)**  
including pregnant women

**All adults (ages 18 years & older)**  
including all pregnant women during  
each pregnancy, except prevalence  
<0.1%

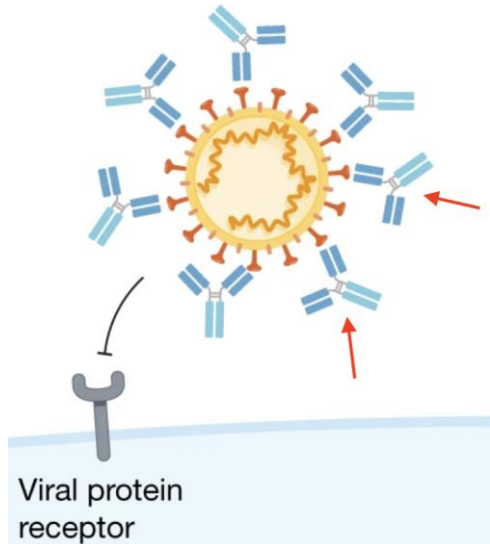
**All adults (ages 18 years & older)**  
including pregnant women, and age  
<18 with risk factors

# DETECTION & DIAGNOSIS

## Definitions:



Hepatitis C **Virus**: enveloped **RNA** virus with proteins on the outside and genetic material on the inside

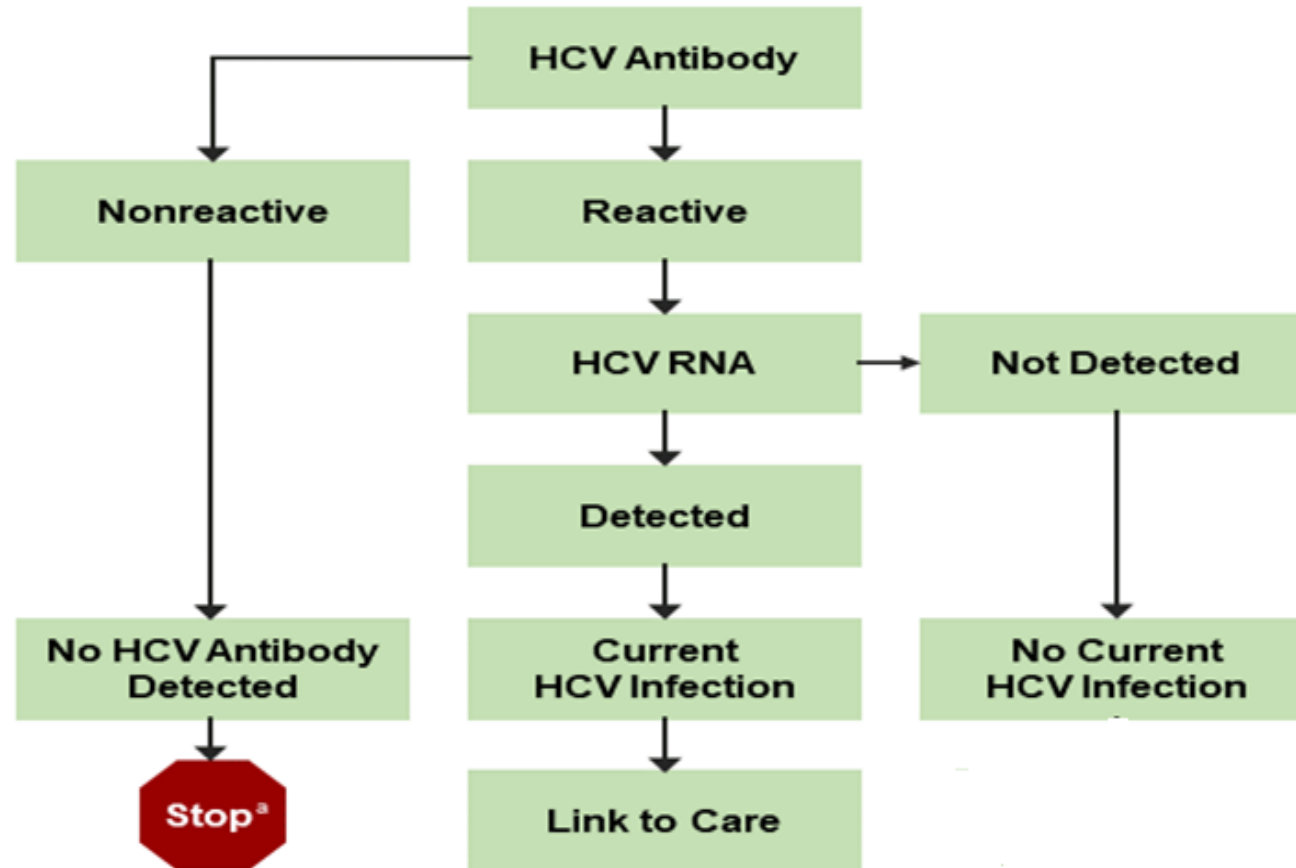


Hepatitis C **Antibody**: a protein made by the immune system in response to exposure to the hepatitis C virus



# DETECTION & DIAGNOSIS

Figure 1. CDC-Recommended Testing Sequence for Identifying Current HCV Infection

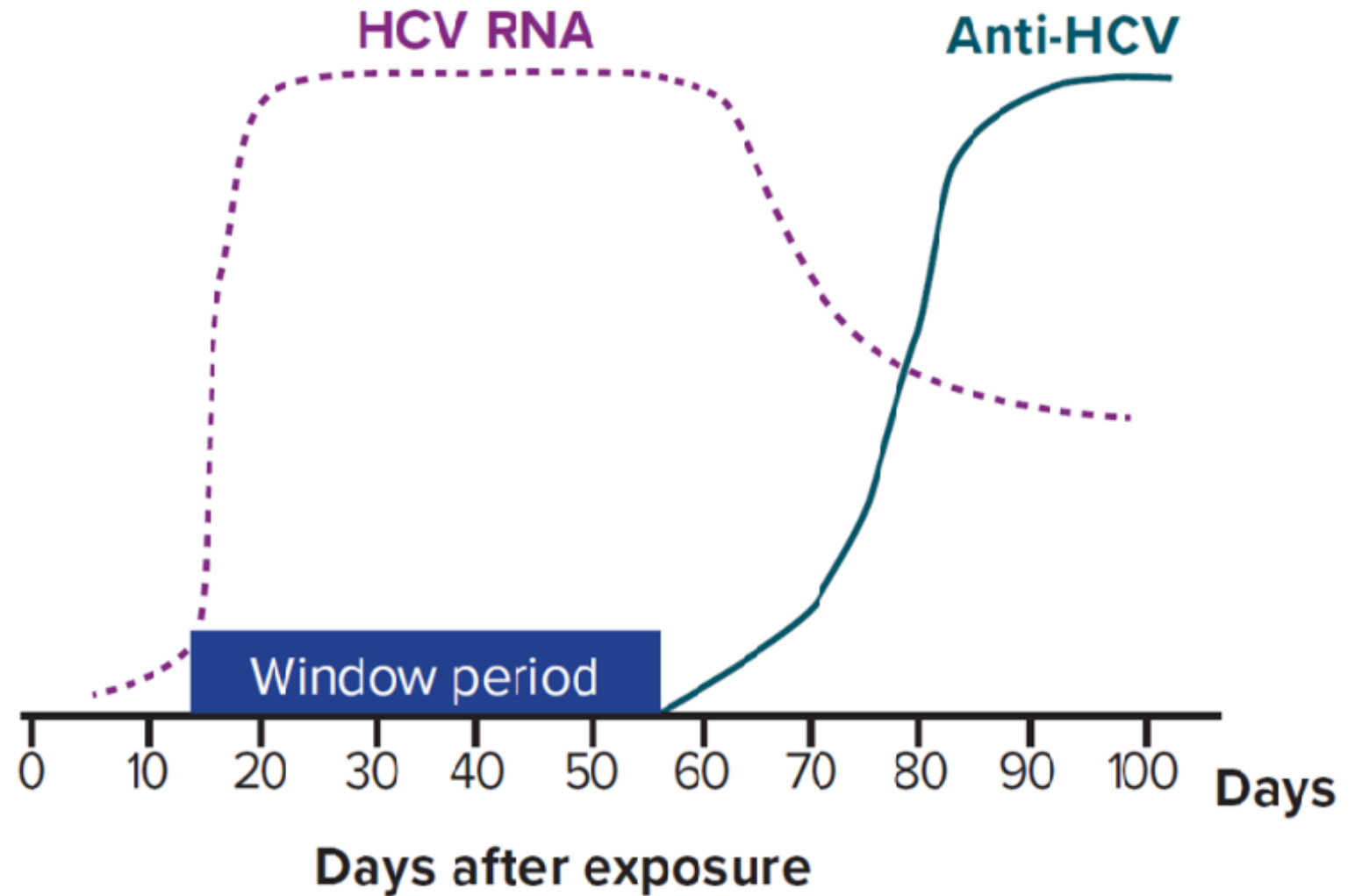


**Reflex testing  
is  
underutilized.**

<sup>a</sup> For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody should be performed. For persons who are immunocompromised, testing for HCV RNA should be performed.



# Serologic course of HCV infection



# Rescreening for people with Ongoing Risk Factors

- Between 2016 and 2020 only 13.7% of MA residents had been tested at least once
- Routine periodic HCV screening is recommended for people with ongoing risk factors including injection drug use.
- For people with a history of HCV, the antibody will remain positive for life
  - Re-screen with HCV RNA test

# TAKE AWAYS

1. Everyone needs a ONE TIME HCV TEST regardless of risk factors
2. CONTINUED SCREEING is recommended if there are ongoing risk factors
3. Preferred screening test is a reflex test:
  1. Hepatitis C Antibody with Reflex to HCV, RNA, Quantitative, Real-Time PCR or
  2. Hepatitis C Antibody with Reflex to HCV RNA with Reflex to HCV Genotype (if available)
4. Active Hepatitis C infection is the + presence of HCV RNA

# Case Presentation

Session 1



Submit cases  
throughout  
the series !

Submit Cases using this Qualtrics link:

[https://umassmed.co1.qualtrics.com/jfe/form/SV\\_0f8rrTTCXBKW7nn](https://umassmed.co1.qualtrics.com/jfe/form/SV_0f8rrTTCXBKW7nn)



HCV Project ECHO Case Presentation Form	
This form will capture the data for the upcoming presentation	
<b>General Case Information</b>	
*1. Date for the presentation of this case	
Date (mm/dd/yyyy)	
<input type="text"/>	
*2. Presenter Information	
Presenter's Name	<input type="text"/>
Presenter's Email	<input type="text"/>
<b>*13. History of substance abuse</b>	
	Unknown      Yes      No, patient denies
Does patient currently drink alcohol?	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Has the patient ever had a drinking problem?	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Does patient currently use drugs other than alcohol?	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Does patient smoke cigarettes?	<input type="radio"/> <input type="radio"/> <input type="radio"/>
<b>Other Medical History</b>	
*14. List current prescribed medications INCLUDE formulation, dosage and frequency:	
<input type="text"/>	
<b>Basic Laboratories</b>	
<b>CBC</b>	
*15. Date of CBC lab draw	
Date (mm/dd/yyyy)	

## Case #1

- 28yo woman presents to mobile clinic requesting refills on her psychiatric medications. She just was released from jail in New Hampshire and now is in a sober home for woman with substance use and criminal justice involvement. She notes she has a history of hepatitis B but it resolved on its own. She notes her HIV testing was negative in jail. When asked about HCV she then wonders if that is what was positive.
- She is requesting refills on clonidine, Seroquel and mirtazapine. She is on 95mg methadone.

JSI found that many patients confused viral hepatitis (A,B,C) and HIV.



## Case #1

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- She is requesting refills on clonidine, Seroquel and mirtazapine. She is on 95mg methadone.
- What education should we discuss?





# Case #1

## Massachusetts Health Promotion Clearinghouse

Free health promotion materials for Massachusetts residents and health and social services providers

<https://massclearinghouse.ehs.state.ma.us/category/HEPC.html>

### HEP C IS SPREAD...

By contact with blood from an infected person.

#### This can happen through:

- ▶ Sharing needles, syringes, cookers, cottons, mixing water, and other drug equipment, when injecting drugs.
- ▶ Transmission from pregnant people with hep C to their children before or during birth.
- ▶ Having sex with a person who is infected with hep C.
- ▶ Getting a tattoo or piercing in unlicensed places or with non-sterile equipment.
- ▶ Sharing items like toothbrushes, nail clippers, or razors that may have blood on them.

### HEP C IS NOT SPREAD...

- ▶ Through sneezing, hugging, holding hands, coughing, sharing utensils or drinking glasses, or through food or water.

# THE ABCs OF HEP C

The facts you need to stay healthy and hep C free.



- ▶ **Anyone can get hepatitis C (hep C)**, and many people don't have symptoms. But without treatment, most people will develop an infection that can cause liver damage, cancer, and even death.
- ▶ **Be sure about your status**—the only way to know if you have hep C is to get tested. Hep C is spread by contact with blood, even very small amounts.
- ▶ **Curing hep C is possible.** Just 8–12 weeks of medication can cure over 90% of people with few side effects.

Ready to learn more? Take the next step.

▶▶▶ **mass.gov/HepC** ◀◀◀



Massachusetts Department of Public Health

HP1949 English Jun 2023



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- She is requesting refills on clonidine, Seroquel and mirtazapine. She is on 95mg methadone.
- What education should we discuss?
- What labs should we order?



## Case #1



HCV Guidance: Recommendations for  
Testing, Managing, and Treating  
Hepatitis C



When in doubt: [HCVGuidelines.org](http://HCVGuidelines.org)

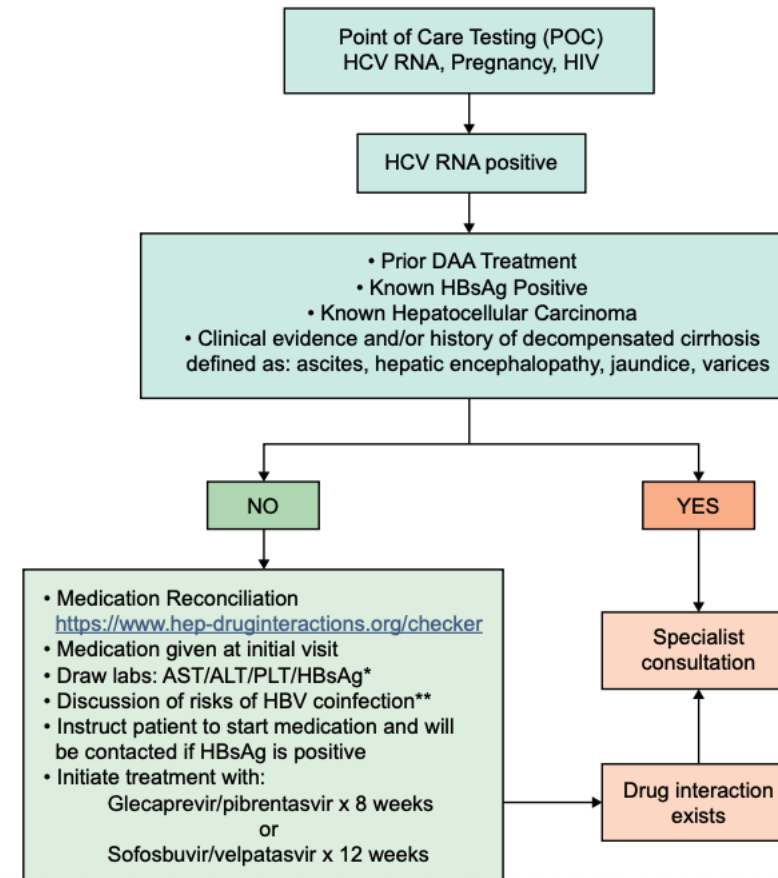
Given challenges with access to care (including phlebotomy) and discomfort associated with blood work, try to minimize number of blood draws:

- HCV RNA Viral Load (consider HCV genotype)
- HIV antigen/antibody test
- Hepatitis B surface antigen
- Complete blood count
- Hepatic function panel & Calculated glomerular filtration rate (kidney function)
- Pregnancy test

# Case #1

- For those with Point of Care HCV RNA testing:

## Hepatitis C Test and Treat Initial Visit



## Case #1

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- She is requesting refills on clonidine, Seroquel and mirtazapine. She is on 95mg methadone.
- What education should we discuss?
- What labs should we order?
- Would now be a good time for HCV treatment?



## Case #1

- There is no sobriety requirement for treatment.
  - There is no sobriety requirement for treatment.
  - There is no sobriety requirement for treatment.
- 
- We can discuss social drivers (determinants) of health with our patients and try to address them to the best of our ability, but we should not withhold treatment from people.

# Thank you !

Session Number	Topic
Session 1 – 9/5/25	Intro to ECHO Model and HCV: Epidemiology, Screening, and Diagnosis
Session 2 – 9/19/25	Staging of Liver Disease and HCV
Session 3 – 10/3/25	Initiating Treatment
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