



The Two Hepatitis C Epidemics in Massachusetts: Myths and Realities

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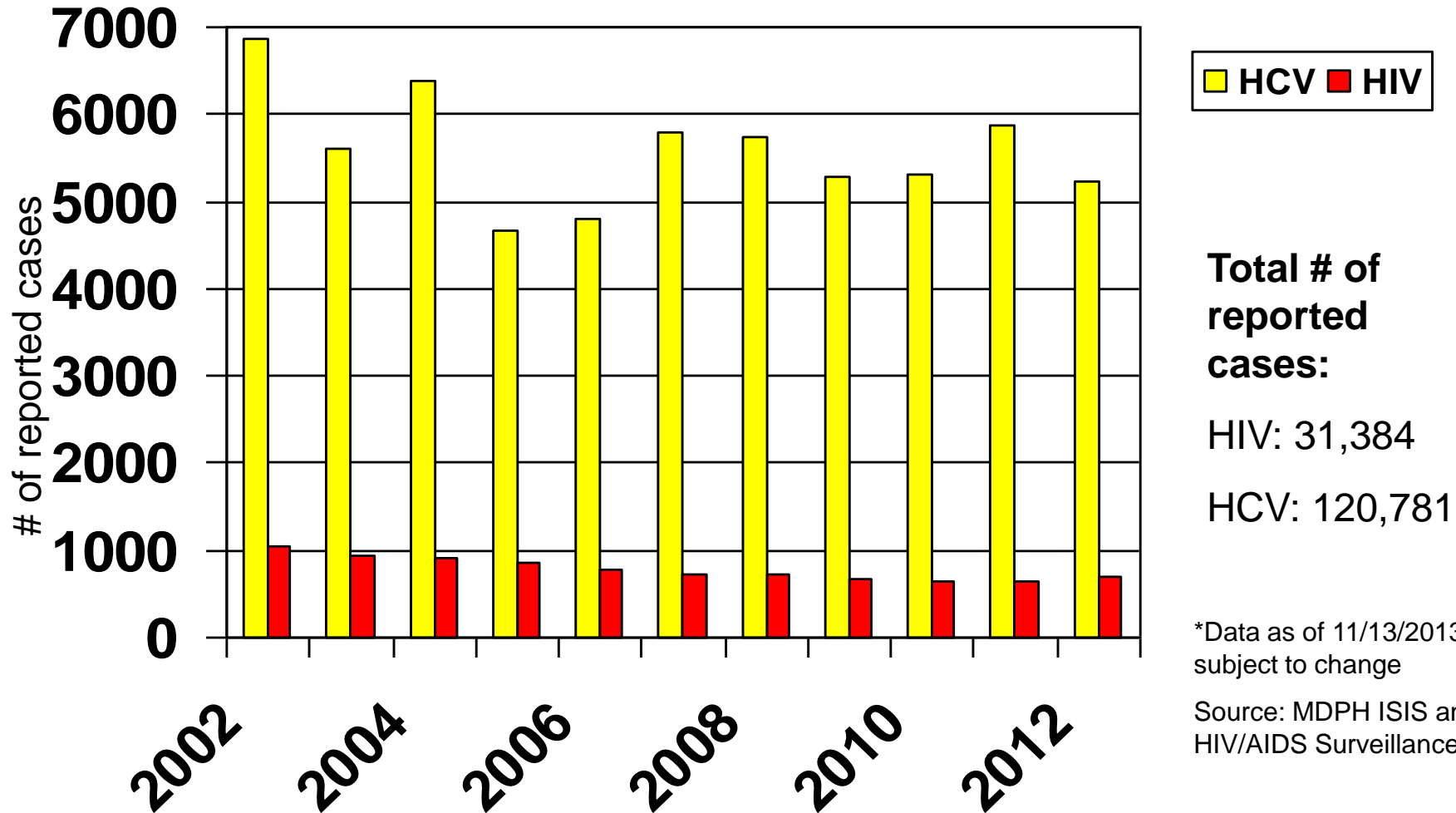
Goals of presentation

- Discuss the two epidemics of hepatitis C virus (HCV) infection
- Consider some key myths about both HCV epidemics
- Recognize the increase of HCV infection in young people who use drugs and what needs to be done

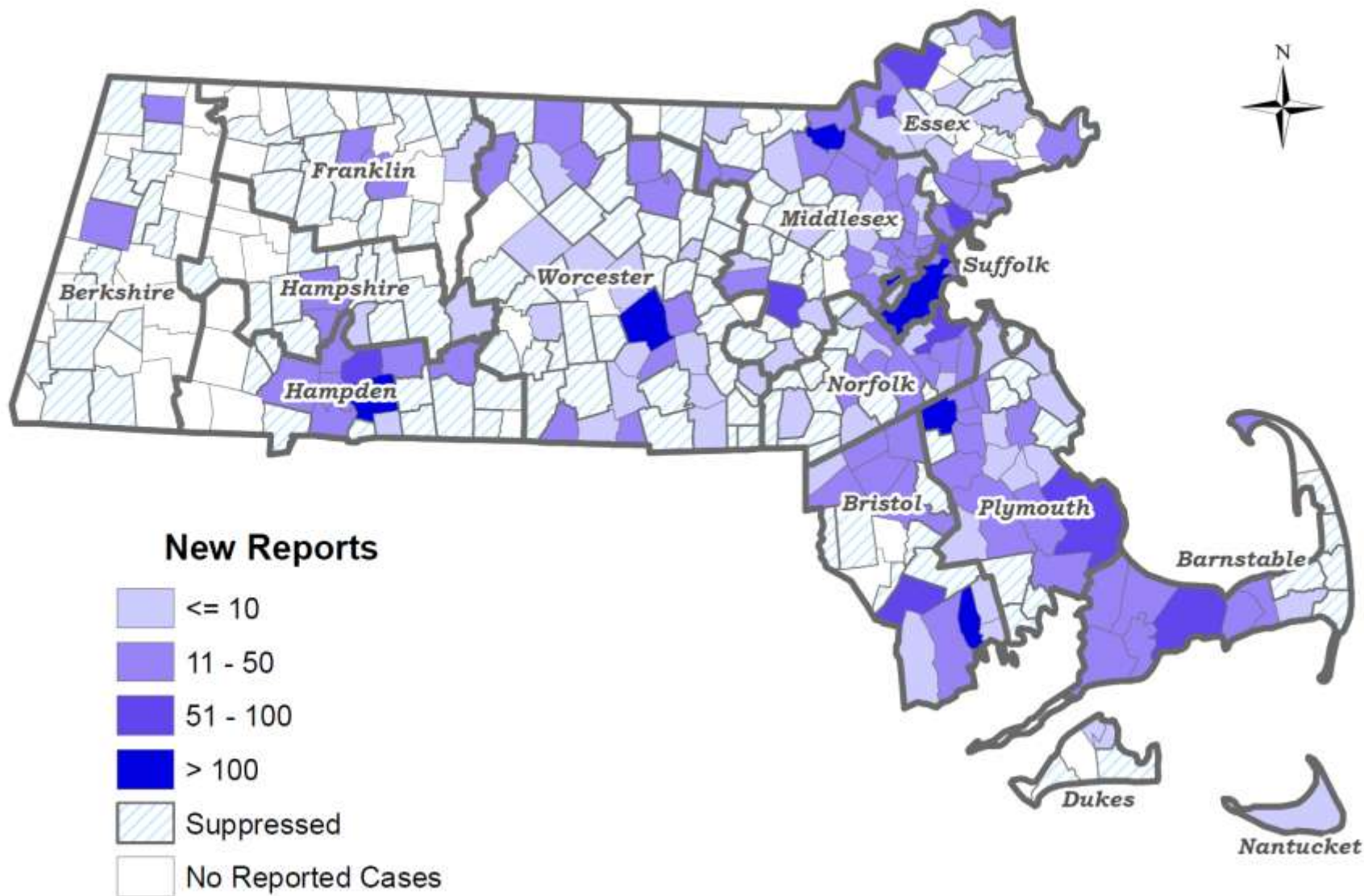
HCV – a quick overview

- Bloodborne virus
- No HCV vaccine
- Causes chronic infection in 75%-85% of infected individuals
- Most people infected via injection drug use (sharing drug injection equipment)
- Can lead to cirrhosis, liver cancer, death
- HCV can be cured
- Prevalence in incarcerated people estimated at 12-35%

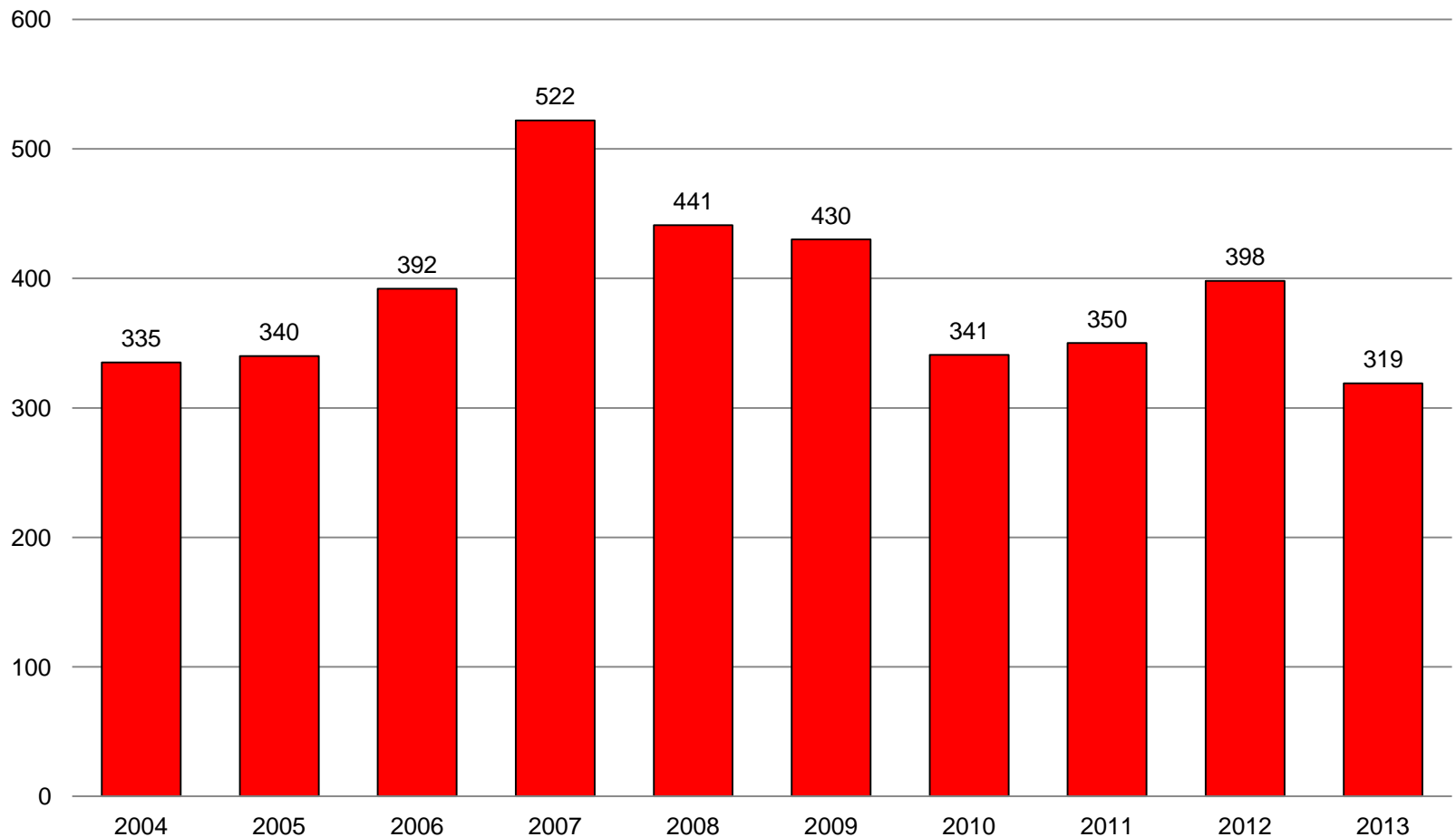
Reported confirmed cases of HCV and HIV infection in MA: 2002-2012



New Reports of Confirmed Chronic Hepatitis C Cases by Massachusetts City/Town: 2013



Reported incarcerated cases of HCV in MA, 2004-2013



*Data as of June 12, 2014 and subject to change

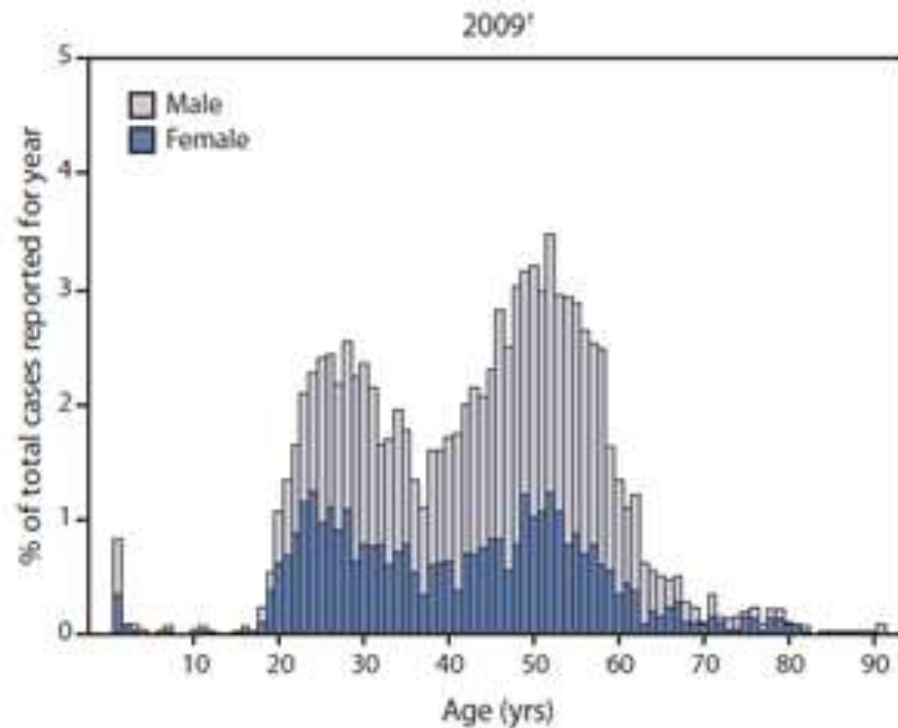
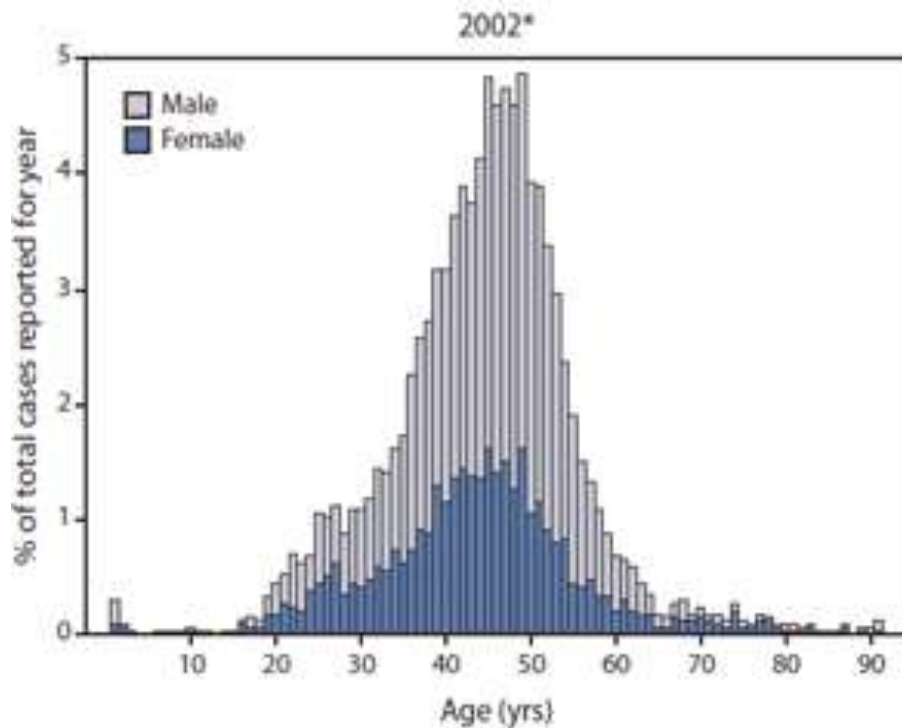
Six common myths about HCV infection

- “HCV cases are only in older people”
- “There is no reason to test people”
- “HCV treatments are too difficult to take”
- “Because HCV can be cured, we are done!”
- “The numbers of people with HCV are going down”
- “There is nothing you can do to prevent HCV in people who use drugs”

Myth #1

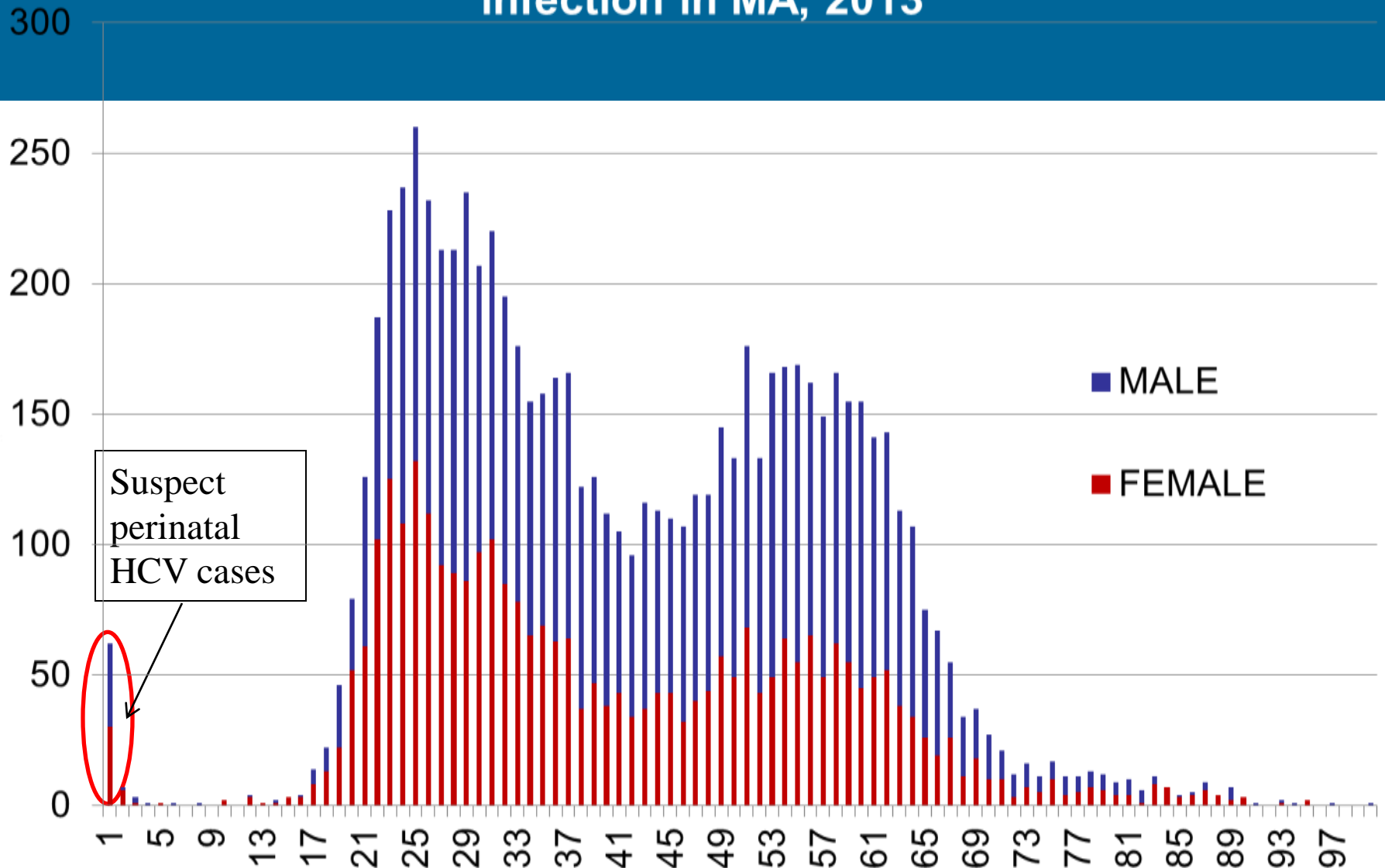
“HCV cases are only in older people”

MMWR: Age distribution of newly reported confirmed cases of hepatitis C virus infection --- Massachusetts, 2002 and 2009



* N = 6,281; excludes 35 cases with missing age or sex information.
† N = 3,904; excludes 346 cases with missing age or sex information.

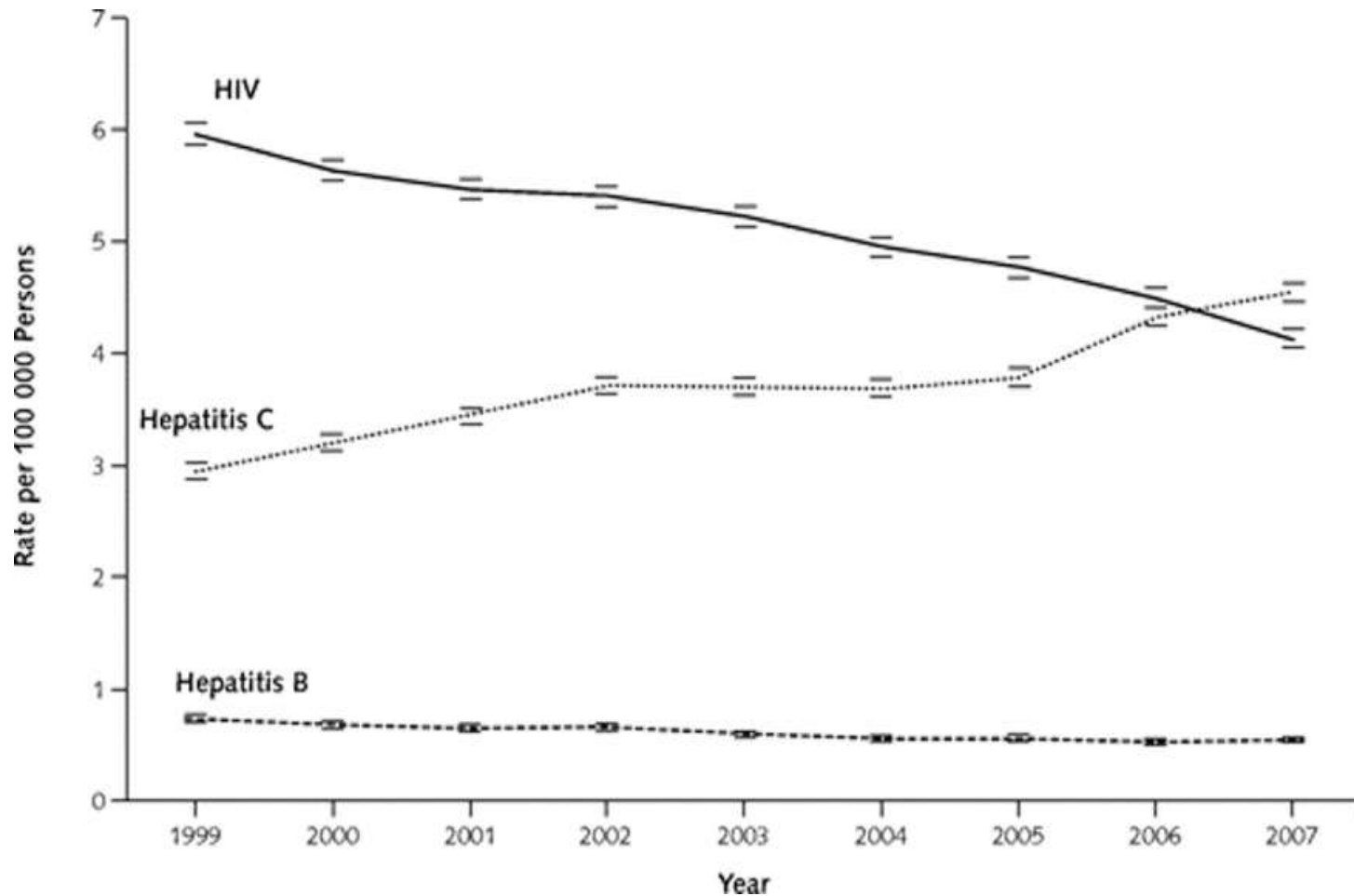
Reported confirmed and probable cases of HCV infection in MA, 2013



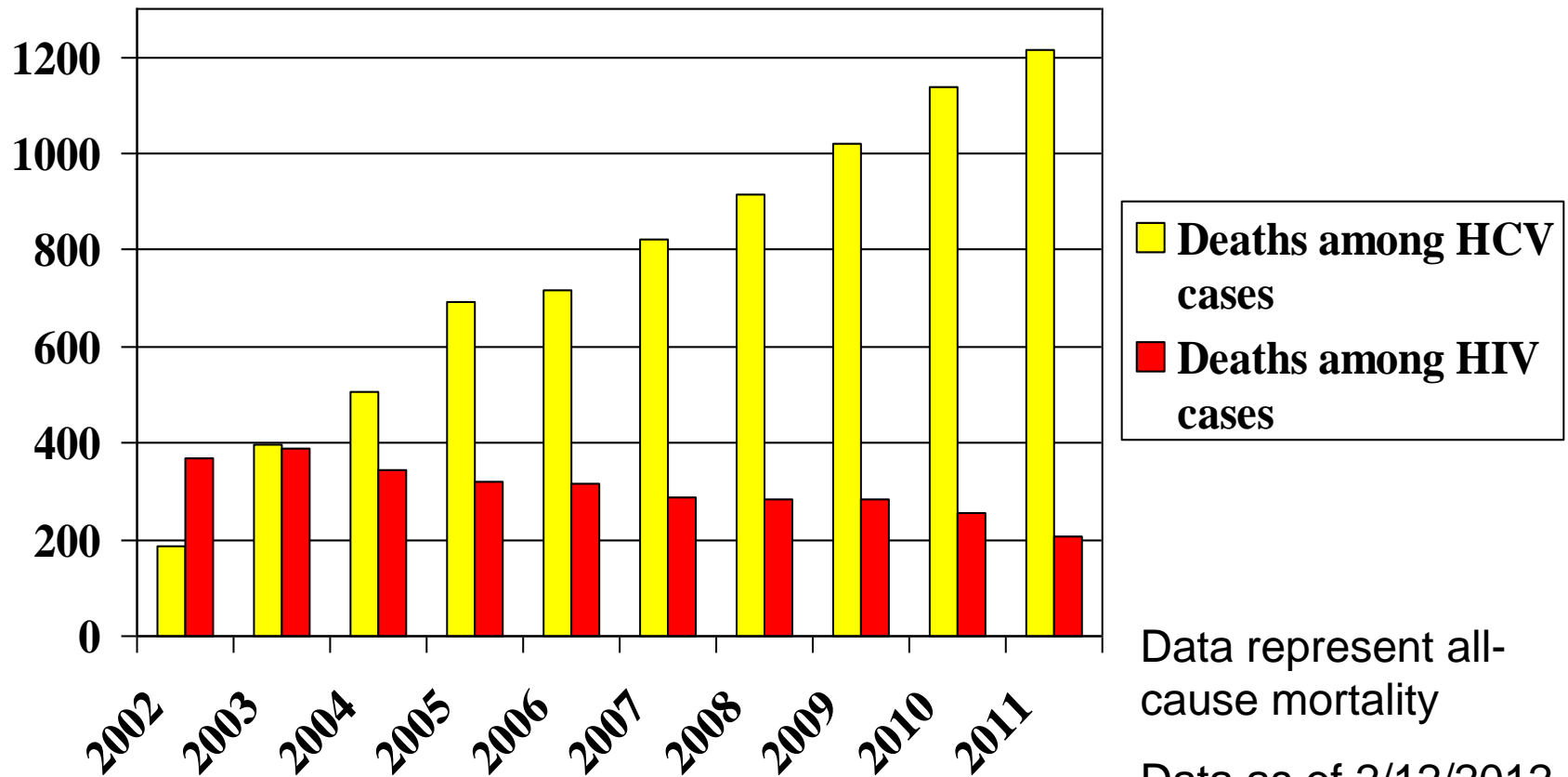
Myth #2

“There is no reason to test people for HCV”

Annual age-adjusted mortality rates from hepatitis B and hepatitis C virus and HIV infections listed as causes of death in the United States between 1999 and 2007



Mortality among reported HIV and HCV cases in Massachusetts, 2002-2011



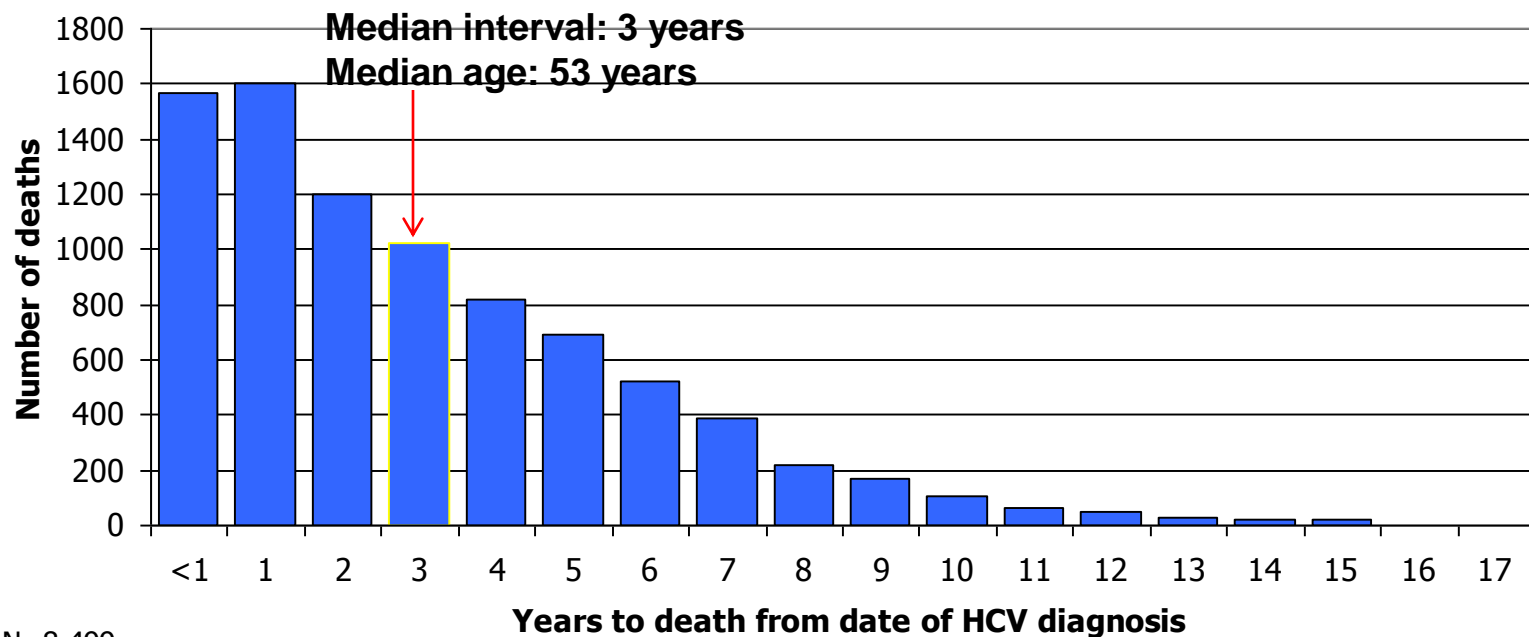
Data represent all-cause mortality

Data as of 2/12/2012 and subject to change

Mortality among HCV cases in Massachusetts

Lijewski, et al, 2012

Timing of mortality among known HCV cases in Massachusetts, 1992-2009



76,122 HCV diagnoses were reported to the MDPH between 1992 and 2009, 8,499 of these reported HCV cases died and are represented in the figure. Data as of 1/11/2011.

CDC HCV screening recommendations (2012)

- Move to focus on age-based screening
 - 2/3 of HCV cases among “baby-boomer” population
- Recommendation: One-time HCV screening for all people born between 1945-1965
- Risk-based screening still important

Myth #3

“HCV treatments are too difficult to take”

HCV treatment evolution

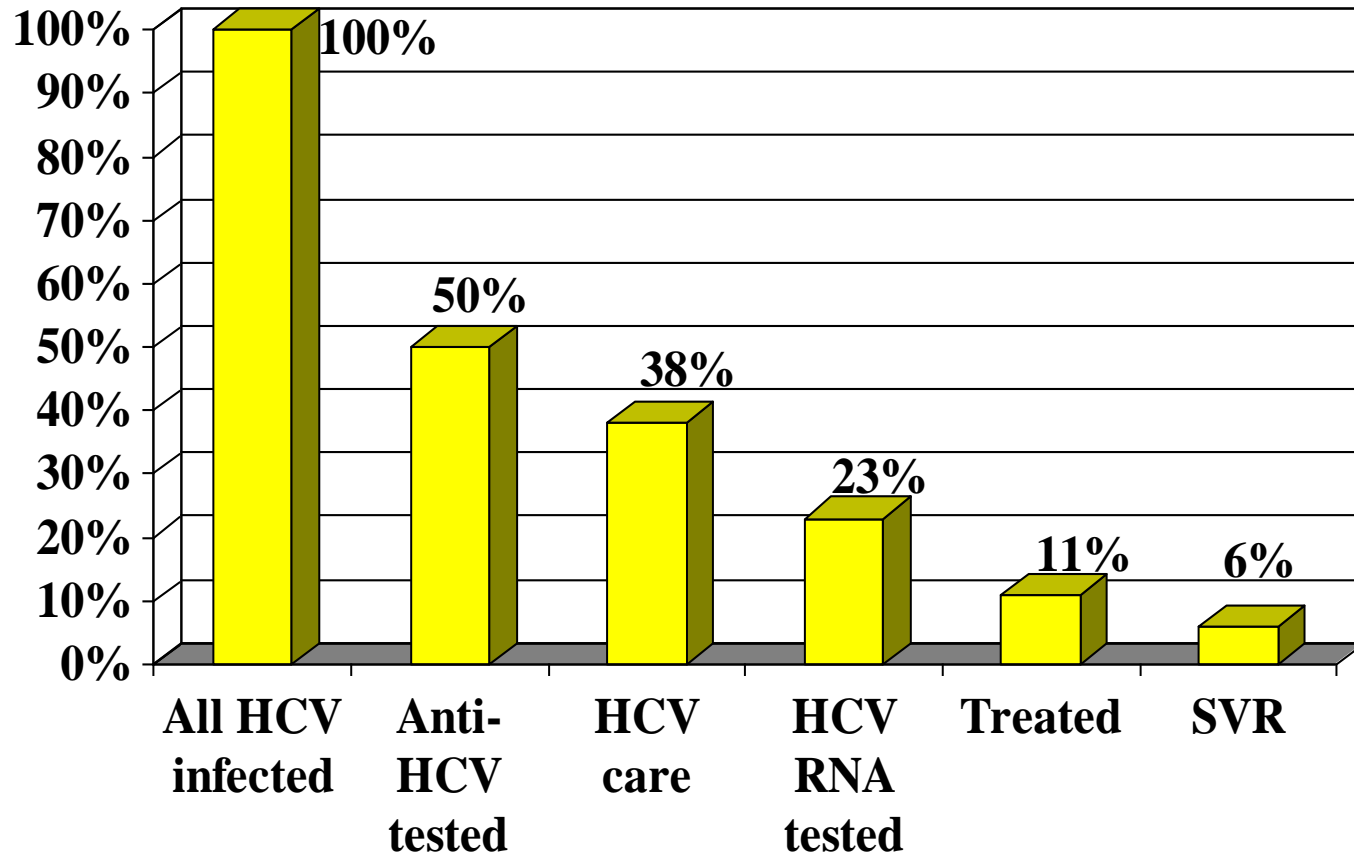
- Goal of treatment is to CURE
- HCV treatment is improving rapidly
- Interferon-free regimens now available
- More effective, easier to tolerate, all-oral
- However...new medications are **very** expensive



Myth #4

“Because HCV infection can be cured, we are done!”

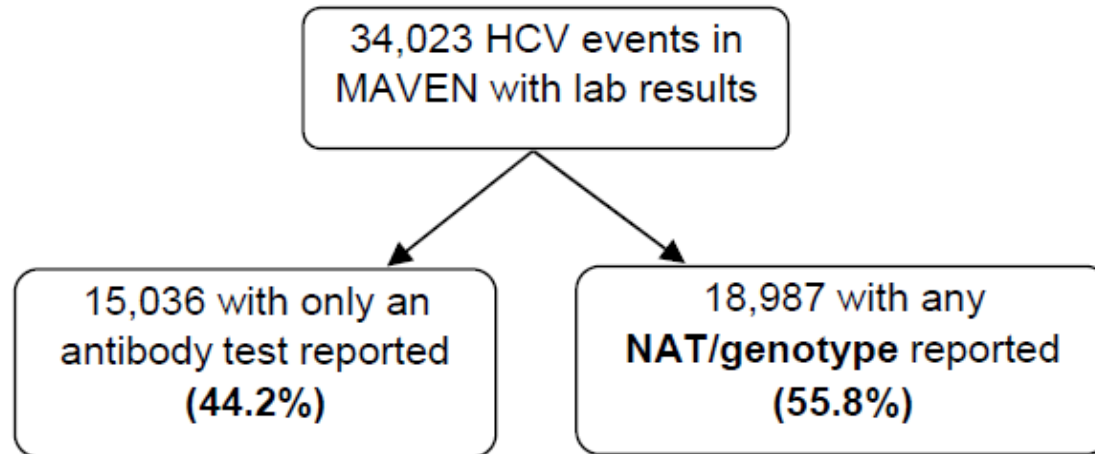
HCV Test, Care and Cure Continuum



Mooreman A, et al, NEJM, 2013

HCV diagnosis and access to care

Laboratory results for reported cases of hepatitis C virus infection in MA, 2007-2010



Data as of December 2012 and are subject to change

Barton, et al, 2013

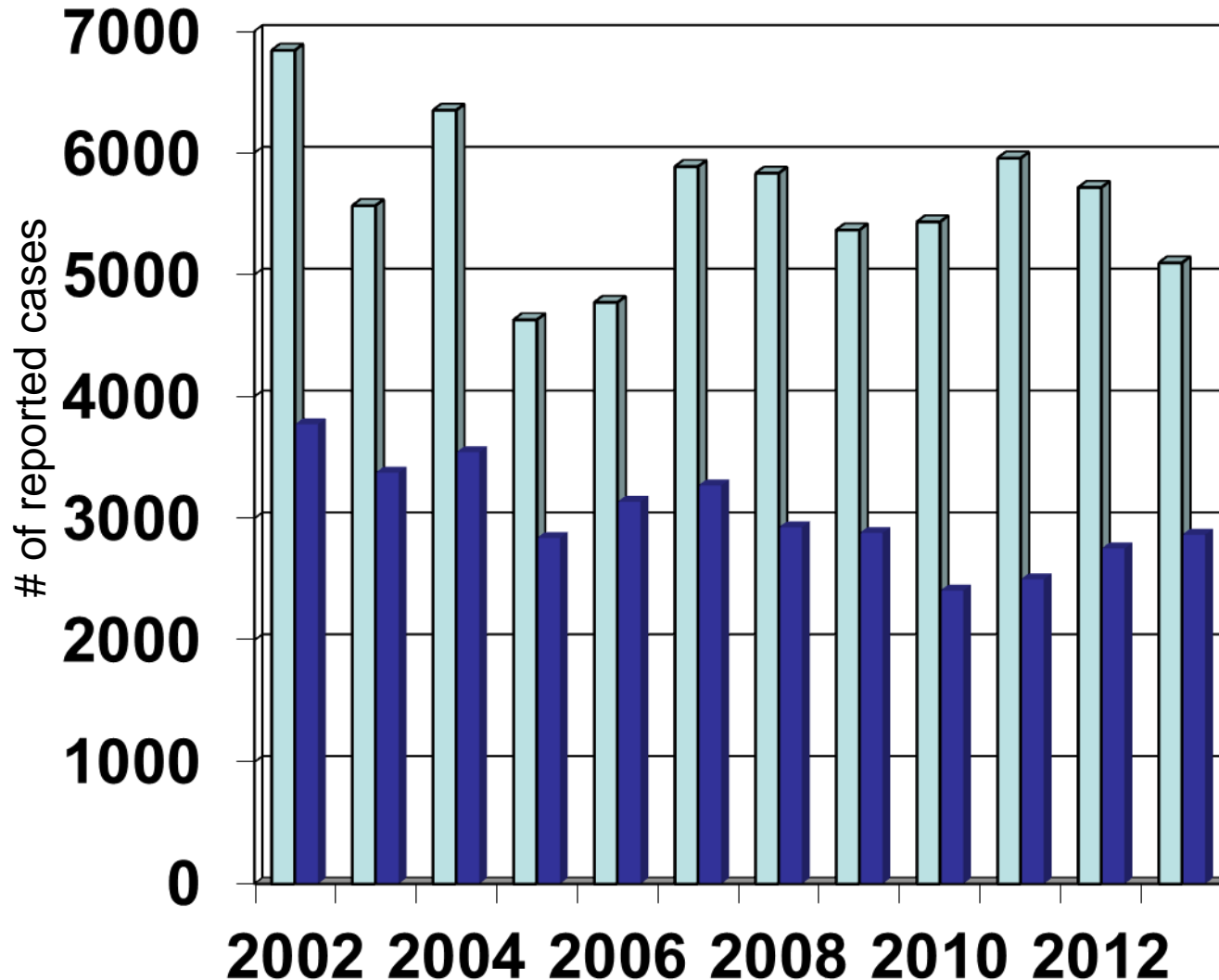
Myth #5

“The numbers of people with HCV infection are going down”

What is the prevalence of HCV in Massachusetts?

- If the recent NHANES data (2014) are applied to the Massachusetts population:
 - ~65,000 people living with HCV infection
- How accurate is this?

Reported cases of HCV infection in Massachusetts: 2002-2013



Confirmed
Probable

Total # of reported cases since 1992:

120,781

*Data as of June, 2014 and subject to change

Source: MDPH Office of Integrated Surveillance and Informatics Services

The Massachusetts example

- How many cases does a jurisdiction have evidence for? **120,781**
 - What proportion of cases are estimated to have been diagnosed? **45%** (HHS Action Plan)
 - How many cases have spontaneously cleared the virus? **15-25%**
 - How many cases have been treated successfully (cured)? **5%**
 - How many cases have died? **9%**

Translation of the MA numbers to prevalence estimates

- Most conservative measure = 174,000 (~3x the NHANES measure)
 - 25% clearance, 45% diagnosed
- The middle of the road measure (but still pretty conservative) = 197,000
 - 15% clearance, 45% diagnosed
- A less conservative measure = 374,000
 - 15% clearance, 25% diagnosed

How reliable are current estimates of HCV incidence?

- CDC estimates 17,000 new HCV infections annually
 - This equates to 354 annual incident cases in Massachusetts
 - Over 2,500 cases of HCV infection in people under the age of 30 years were reported to MDPH in 2013 alone

What would be a better measurement of incidence in MA?

- In Massachusetts between 2010 and 2012, the average annual # of reported HCV cases in people under the age of 30 was 2,146
 - Assumptions:
 - Cases were recently infected
 - Most cases exposed via injection drug use
 - PWID are less likely to access health care (and therefore use the lower proportion of known diagnosis – 25%)
 - Do not need to account for viral clearance, mortality, treatment
 - Revised (and likely conservative) estimate of **8,584** annual incident cases among people under 30 years in Massachusetts (24x the CDC estimate)

Myth #6

“There is nothing you can do to prevent HCV infection in people who use drugs”

Prevention of HCV among IDU

- Even with no vaccine available, HCV is preventable among IDU
 - Multi-component prevention works
 - Provision of sterile equipment and substance use treatment critical (Hagan, et al, 2011)
 - Opioid substitution therapy helps prevent HCV transmission (Alavian, et al, 2013; White, et al, 2014)
 - Peer education reduces risk behavior (Mackesy-Amiti, et al, 2013)
 - Harm reduction practices effective, e.g. encouraging intranasal drug use as an alternative among IDU (Des Jarlais, et al, 2011)

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Police: When prescription pill abuse becomes too expensive, users switch to cheaper heroin



After months of undercover investigations, Prince William county police officers execute Operation Blue Dragon targeting suspected prescription pill and heroin dealers. The Ford's Gate Silverman takes you behind the scenes as officers arrest dozens of addicts.

By Tom Jackman, Published: November 13, 2014 | Email the writer

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Heroin replacing pain pills as drug of choice in some parts of Kentucky

BY BETH WIDOMAN
bwidoman@kentuckyherald.com January 26, 2014



Heroin has rapidly replaced prescription pain pills as the drug of choice in much of Northern Kentucky and Louisville, raising fears that a heroin scourge will soon ravage the state.

In Northern Kentucky, police are finding people passed out in cars at gas stations with needles sticking from their arms. In Louisville, police statistics suggest more than 50 people died of heroin overdoses in 2013.

"We've even found parsons in the front seat with kids in the back seat in cars with needles, wondering what was going on," said Covington police Chief Spike Jones.

Police in Louisville and the Northern Kentucky suburbs of Cincinnati said they began seeing more heroin as early as four years ago, but it was in the last 12 months that heroin surpassed pain pills as the preferred drug of addicts.



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Aggressive pill enforcement pushes young suburbanites to heroin

By Phil Treder
Beacon Journal staff writer
Published: January 9, 2014 - 10:55 PM



Acron firefighter Captain Joseph Nello with the drug Narcan, used to revive heroin overdose victims. In Akron, paramedics have used Narcan 45 times for 230 overdose cases. The drug reverses the effects of heroin and "brings people back from the dead." (Phil Mauturzi/Akron Beacon Journal)

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- Where to find help
 - Akron-area heroin deaths soar, suburbs and rural areas fall victim
 - En-users help heroin addicts out of death spiral

In the '60s, the focus was on LSD, marijuana, tuning on and tuning out.
In the '70s, it was cocaine at the discotheque. The '80s meant crack cocaine abuse, that urban nemesis that led Nancy Reagan to plead: "Say no to drugs."
The '90s saw a rise in methamphetamine and homemade poisons. Americans learned the drug could be made with similar household products.
As the century turned, opiate use, such as prescription painkillers and heroin, came into vogue. Abuse rose, and the government and media are reacting.

To many, the opiate-heroin plague is simply a shift in America's attention on drug abuse.
Efforts to stamp out pill abuse simply led to the increased popularity of heroin, a dark drug that has been lurking in the background during all those

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Updated: 7:53 a.m. Monday, May 5, 2011 | Posted: 6:53 p.m. Sunday, May 5, 2011

Pain pill addicts use heroin when money gets tight, drug study says

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By Kate Wedell
Staff Writer
The over prescription of opioid medications — like OxyContin, Vicodin, Percocet and methadone — is not only leading to increased overdose rates on those drugs, but may be leading to an increase in heroin use, according to a annual statewide study of drug trends.

The Ohio Substance Abuse Monitoring Network's annual report, which compiles information from eight regions in the state, shows that heroin use has increased in the past six months in Dayton and statewide. The report attributes the spike in part to the wide availability of opioid prescriptions, which often lead to addiction and then heroin use when pills become too expensive.

The report, distributed by the Ohio Department of Drug and Alcohol Addiction Services, covers June 2010 through January 2011. The findings are based on interviews with treatment providers, active and recovering drug users, and law enforcement officials as well as crime lab data and

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Heroin and pill abuse stir a battle cry in Vermont

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AP Photo/Toby Talbot, file

Posted: Wednesday, January 15, 2014 4:21 pm
Associated Press

MONTPELIER, Vt. (AP)— Behind the facade of pristine ski slopes, craft beer, quaint village greens and one of the lowest unemployment rates in the country, Vermont is grappling with painkiller and heroin abuse, a challenge leaders say is fueling crime and wrecking lives and families disproportionately in this tiny state.

Nearly every day, police across Vermont respond to burglaries or armed robberies investigators believe are prompted by the unrelenting hunger for money to fund heroin or pill habits. In many cases, law enforcement officials say, what began as the abuse of prescription drugs has turned into heroin use because it's less expensive and, more recently, easier to get.

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Corrections and HCV infection

- Correctional facilities offer a great opportunity to address all of these issues
 - Testing both the birth cohort and young people who use drugs
 - Treatment (including linkage to care upon release)
 - Prevention

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