

# **Hepatitis C Virus (HCV) & Infectious Disease 101 for Hubs & Spokes April 24, 2018 12:00 pm – 1:00 pm**

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California Department of Public Health

# Disclosures

The speakers do not have relevant financial relationships with commercial interests.

# Overview

- Why hepatitis C?
- Epidemiology of hepatitis C in California
- Hepatitis C transmission, testing
- Role of Hubs & Spokes in reducing the hepatitis C disease burden

# Why Hepatitis C?

- *SAMHSA/CDC/U.S. Preventive Services Task Force HCV Testing Recommendations:*
  - Persons born during 1945-1965 (one-time)
  - People who have ever injected drugs (routine)<sup>1</sup>
- *DHCS Hub & Spokes Grant Requirements:*

“Hubs need to perform HIV and Hepatitis C virus (HCV) testing on all individuals who enter treatment. Funds can be utilized for testing only if the costs are not already covered by other sources.”<sup>2</sup>

1. Source: SAMHSA HCV Screening Advisory, 2015.

2. DHCS Opioid State Targeted Response (STR) [Application](#)

# Hepatitis C Virus: What Is It?

HOW LONG  
DOES HCV  
LIVE OUTSIDE  
THE BODY?



SYRINGES  
UP TO 63 DAYS



SURFACES  
UP TO 42 DAYS

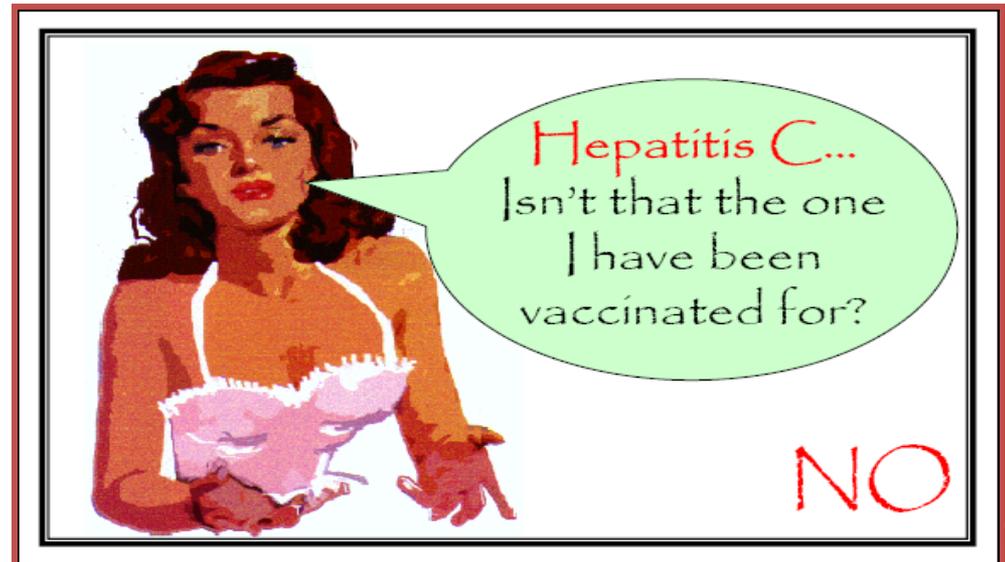


WATER  
UP TO 21 DAYS



COTTON FILTERS  
24 HOURS,  
OR 48 HOURS  
IF WRAPPED IN FOIL

- Bloodborne virus that enters the body, replicates in the liver
- Can be cured in 8-12 wks.!
- Leading cause of liver transplant
- Most unaware of their infection



# Sharing Injection Equipment = #1 HCV Transmission Route



# Other Blood Transmission Routes

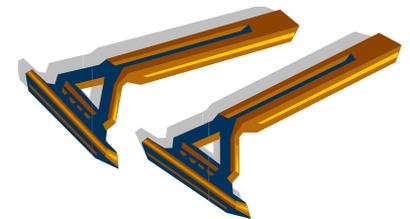
- Tattooing in prisons
- Mother-to-child at birth
  - ~ 5% risk; 20% if HIV coinfecting
- Bloodborne exposures in health care settings (e.g., needlesticks). Risk from needlestick:



HIV  
0.3%

HCV  
2%

HBV  
30%



- Household transmission (e.g., sharing razors)
- Intranasal drug use → theoretical risk

# HCV Transmission: Sexual

- Low risk among heterosexual, long-term, monogamous, HCV +/- partners (0-3%)
- Increased risk for sexual HCV transmission:
  - Having a sexually transmitted disease (STD)
  - Having HIV infection
  - Multiple sexual partners
  - Rough sex
- Risk does not appear higher among HIV-negative men who have sex with men (MSM)

Source: Centers for Disease Control and Prevention. Viral Hepatitis Information for Gay and Bisexual Men. 2014.

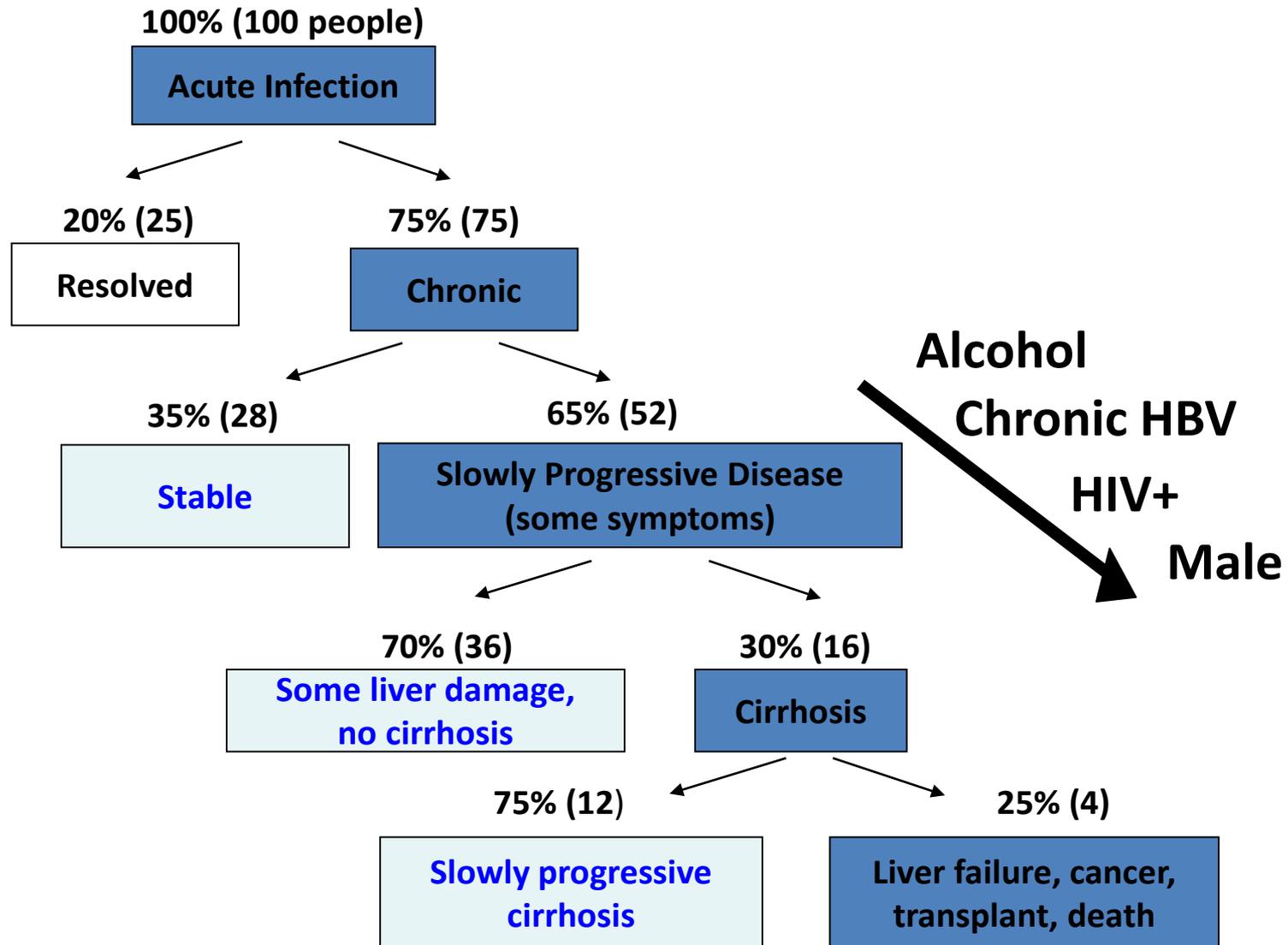
# Hepatitis = “Inflammation of the Liver”



- Possible complications of hepatitis C infection:

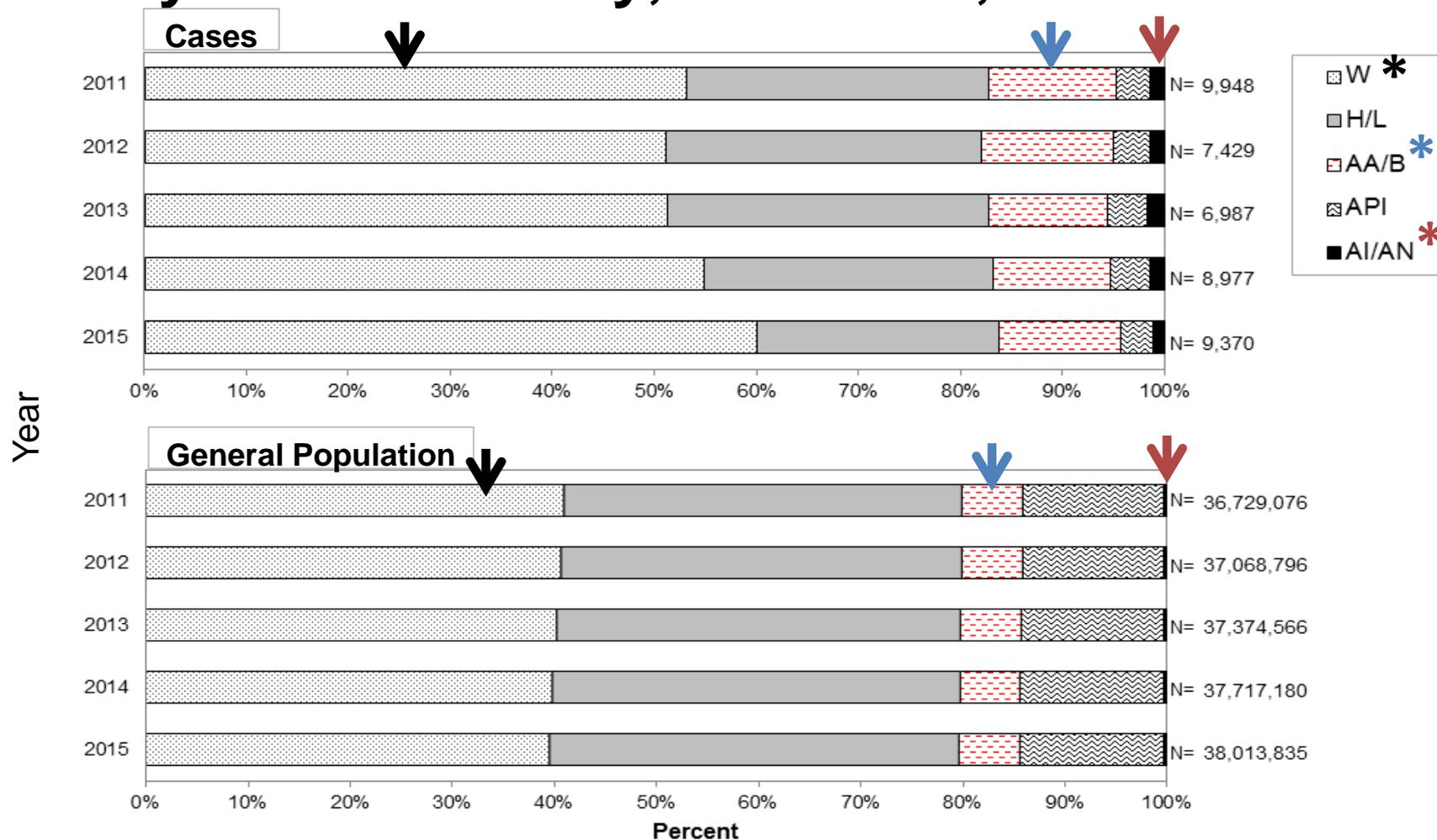
- Severe fatigue
- Ascites (accumulation of fluid in the abdomen)
- Encephalopathy (confusion due to buildup of ammonia in brain)
- End stage liver disease (**decompensated cirrhosis**)
- Hepatocellular carcinoma (**liver cancer**), fatal without a transplant

# Natural History of HCV over 10-25 Years





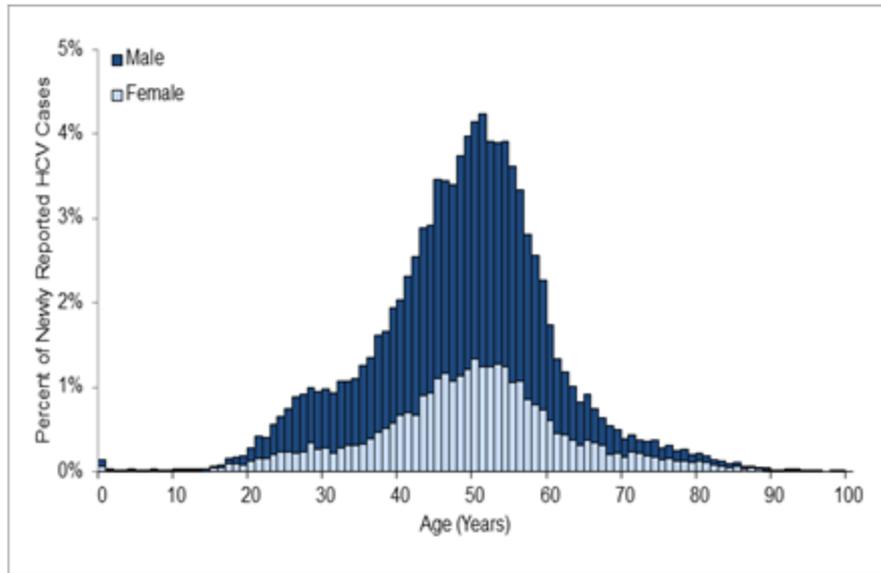
# Cases and Percentages of Chronic HCV Cases by Race/Ethnicity, California, 2011-2015



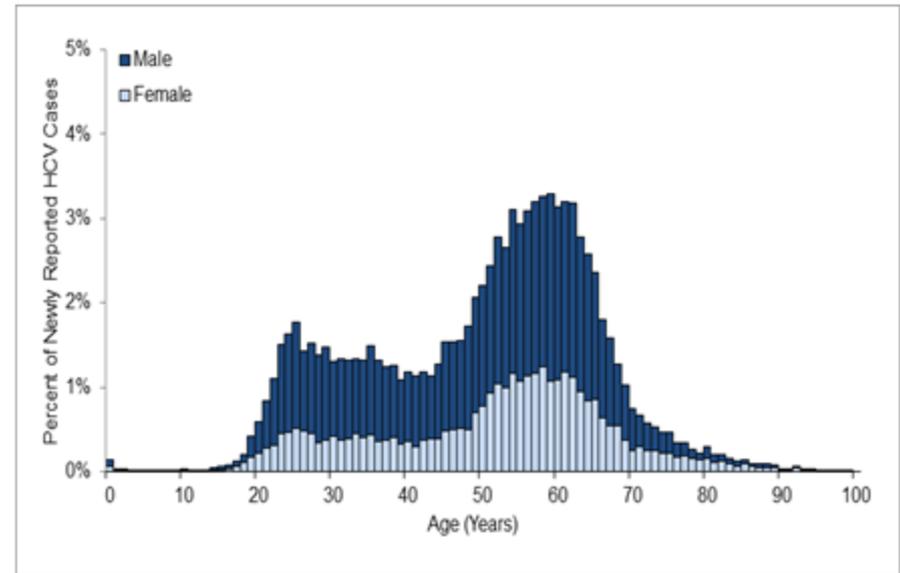
Key: **W=White**, **H/L=Hispanic/Latino**, **AA/B=African American/Black**, **API=Asian/Pacific Islander**, **AI/AN=American Indian/Alaska Native**

# Chronic Hepatitis C – Age Distribution of Newly Reported Cases, California, 2007 and 2015

2007\*



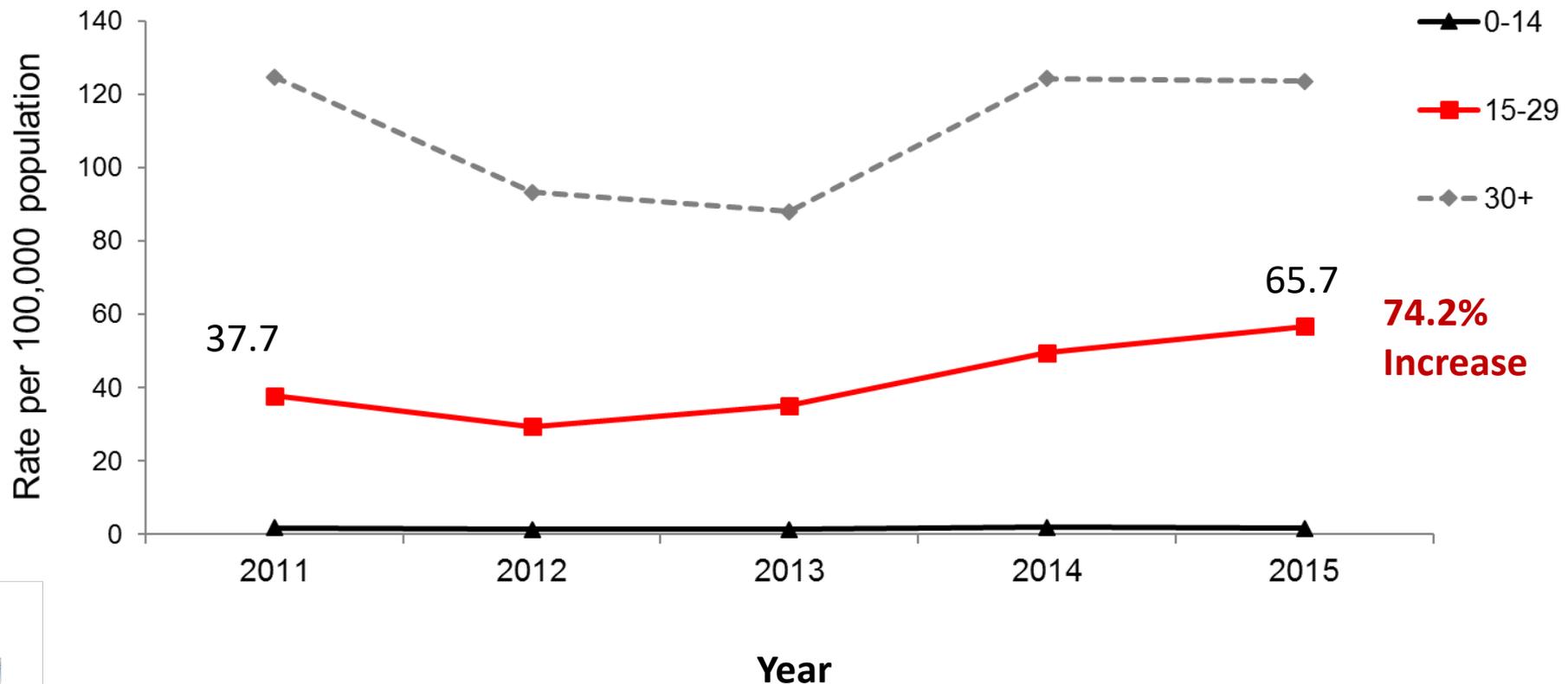
2015†



\*N = 41,037; excludes 547 cases with missing age or sex information.

†N = 33,454; excludes 294 cases with missing age or sex information.

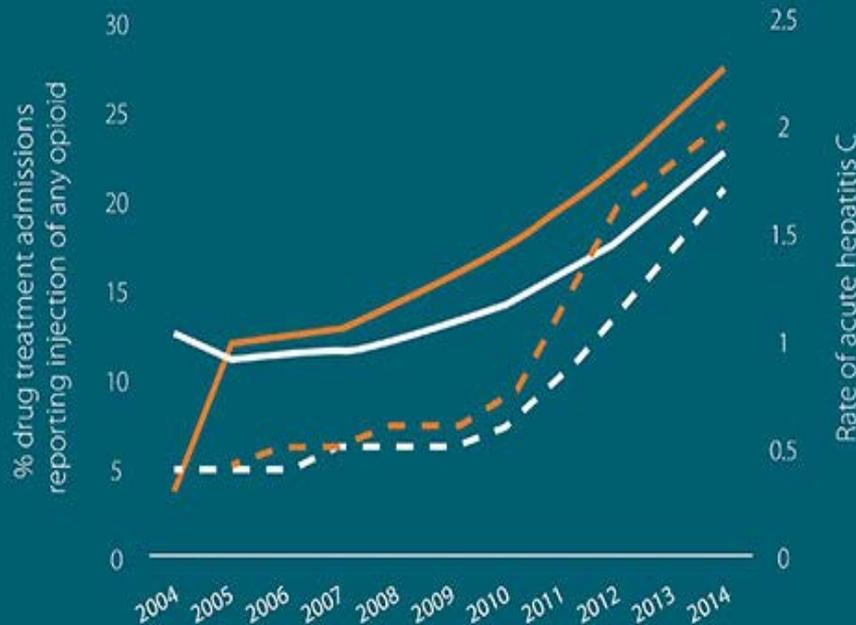
# Increasing Rates of Newly Reported Chronic Hepatitis C Cases in Persons Ages 15-29—California, 2011-2015



**74.2%  
Increase**

# Hepatitis C and Opioid Injection Increasing at Similar Rates

## HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY IN YOUNGER AMERICANS FROM 2004-2014

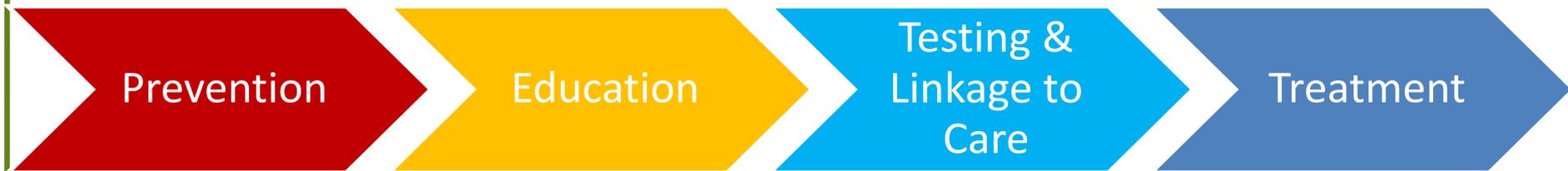


- Among people aged 18-29, HCV increased by 400% and admission for opioid injection by 622%

**MAT maintenance reduces HCV incidence among young people who inject drugs by 50%**

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration

# Role of Hubs & Spokes in reducing the hepatitis C disease burden



# Ensure People Receive Both Steps in the HCV Testing Process

## 1) Screen for HCV antibody (anti-HCV)

- Rapid finger-stick test or blood draw
- “Have you *ever* had hepatitis C?”
- Expect  $\geq 15\text{-}20\%$  HCV positivity in NTPs



## 2) If reactive, test for HCV nucleic acid \*

- Blood draw only
- “Do you have hepatitis C virus in your blood *now*?”
- On-site phlebotomy recommended



\* Also called ribonucleic acid (RNA) test; polymerase chain reaction (PCR) test, viral load test; quantitative or qualitative.

# Medi-Cal Billing (CPT) Codes for Hepatitis C Virus (HCV) Testing

Test	CPT Code	Rate
HCV antibody	86803	\$12.57
HCV RNA	85720	\$21.83
	87521	\$38.21
	87522	\$38.68

Key: CPT=Current Procedural Terminology; RNA = ribonucleic acid, a test needed to detect current infection

# Post-Diagnostic Laboratory Testing

- Viral Load
  - Can be in the billions
  - Not predictive of HCV progression or liver health
  - Used to monitor response to HCV treatment
- Genotype
  - Six genotypes; 74% HCV+ in U.S. have genotype 1
  - Can be used to determining best course of treatment although newer drugs are “pangenotypic,” meaning they work on all HCV genotypes
- Tests for coinfection
  - Hepatitis A, hepatitis B, HIV
- Liver function/health
  - Alanine aminotransferase (ALT) or aspartate aminotransferase (AST), etc.

# Staging of Liver Disease

- Classification of liver scarring (1-4)
  - 1=Minimal; 2=Mild; 3=Moderate; 4=Severe
- Indirect markers of fibrosis
  - Aspartate Aminotransferase-to-Platelet ratio index (APRI), FIB-4, FibroSure, Fibroscan, etc.
  - Used to determine presence of cirrhosis
  - Less useful for determining stage of fibrosis
- Ultrasound transient elastography
- Liver biopsy (gold standard but not needed)

Source: <http://www.hepatitisc.uw.edu/>

# Living with Hep C? New treatments have changed the game

**Direct-Acting  
Antivirals!**

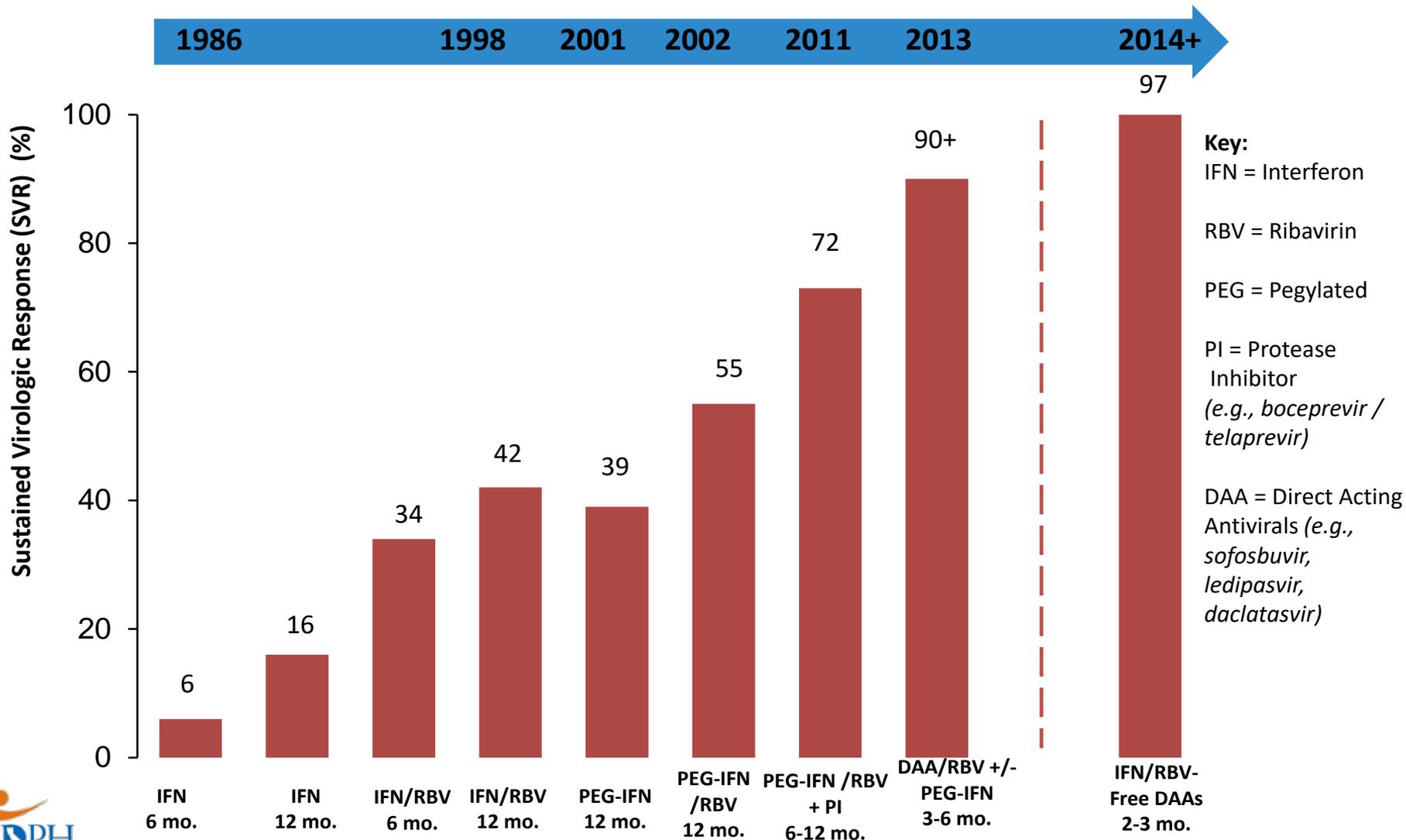


**There is new hope for people with Hep C**  
**Come visit us to talk about the new cure**

Glide Harm Reduction Program - 5th floor  
330 Ellis Street (between Taylor & Jones)  
San Francisco, CA 94102  
(415) 674-5188 / [hepc@glide.org](mailto:hepc@glide.org)  
For more info, visit [www.endhepcsf.org](http://www.endhepcsf.org)



# Hepatitis C Can Be **CURED** in 8-12 Weeks



Strader DB, et al. Hepatology 2004;39:1147-71. Adapted from presentation by Gish R, CA HCV Forum, 2013.

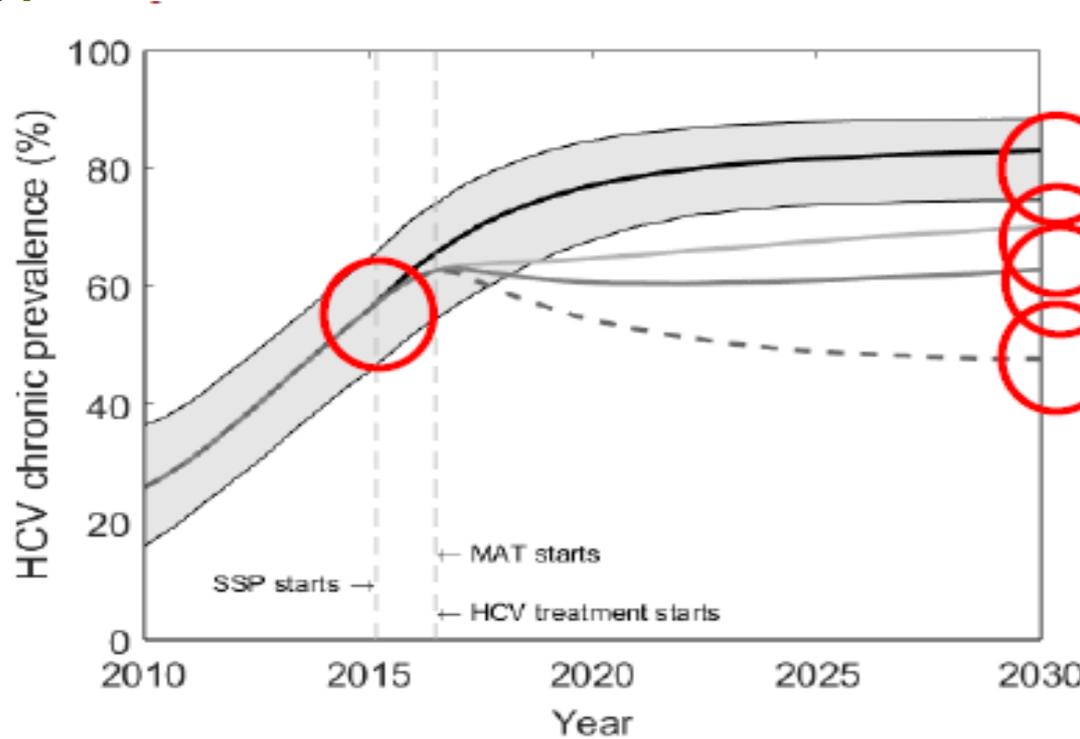
# DHCS HCV Treatment Guidelines, July 2015

HCV treatment is covered for people with...

- Evidence of liver disease:
  - Stage 2 or higher fibrosis, serious extrahepatic manifestations, liver cancer or post liver transplant
- Comorbidities:
  - HIV, HBV, liver disease, diabetes, debilitating fatigue
- Likelihood of transmitting HCV to others:
  - Men who have sex with men and have high risk sexual practices, **active injection drug users**, women of childbearing age who wish to get pregnant, health care workers who perform exposure prone procedures, people on hemodialysis

Source: <http://www.dhcs.ca.gov/Pages/HepatitisC.aspx>

# MAT Plus HCV Treatment and Syringe Access Can End Hep C



— No intervention scale-up      - - Full HR + HCV-treat 20/1000 PWID annually  
 - - 50% SSP & 50% MAT (Full HR)      - - Full HR + HCV-treat 50/1000 PWID annually

Median projections for a sample of 1000 parameter sets.

Source: Vickerman P et al., Impact and cost-effectiveness of scaling up HCV treatment and prevention interventions for PWID in the U.S. University of Bristol; 2017.

Key: MAT = medication assisted treatment; SSP = syringe services program; HR = harm reduction.

# Summary

- Hepatitis C rates are increasing among young adults in California
- MAT can reduce HCV incidence in young people who inject drugs by 50%!
- All people who have ever injected drugs should be tested for hepatitis C
- Testing is a 2-step process: Antibody + RNA
- New treatments have changed the game and people on MAT can be cured of HCV!
- H&S sites have a critical role in ending hep C

# Contact Information

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CME EVALUATION

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<https://www.surveymonkey.com/r/XHGB876>

Further Questions/Concerns please contact  
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