Cherokee Nation Health Services HCV Elimination Program

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Whitney Essex, ARNP
Dwayne David, Pharm D

HCV in the CNHS: Historical Trauma and Cultural Disconnection

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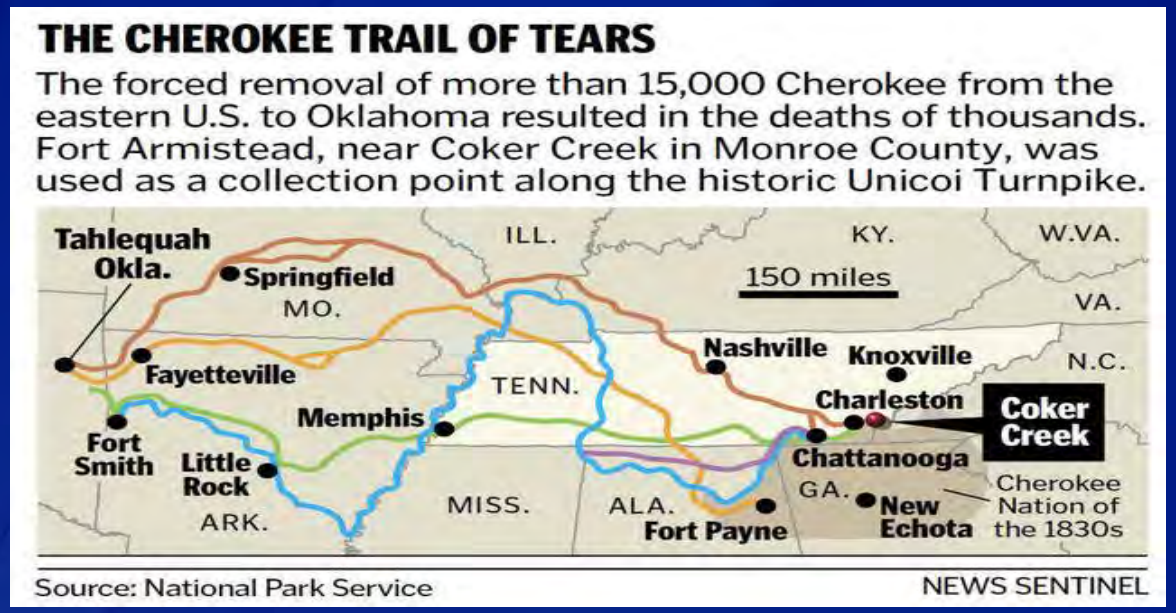

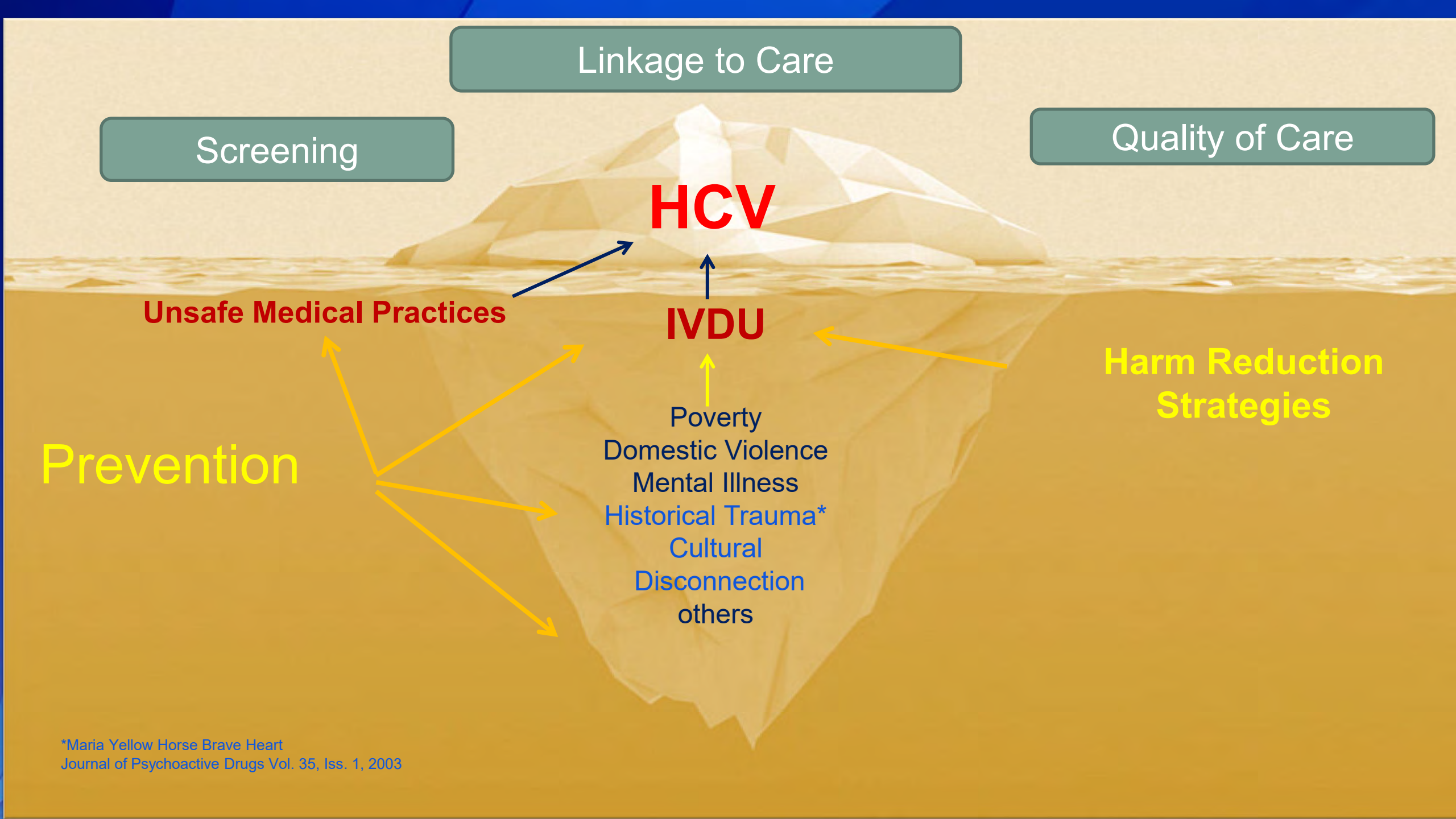

*Maria Yellow Horse Brave Heart
Journal of Psychoactive Drugs Vol. 35, Iss. 1, 2003

CDC :“Do you think the CNHS can pursue an HCV elimination goal?”

HEPATOLOGY

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Viral Hepatitis

Hepatitis C virus treatment for prevention among people who inject drugs: Modeling treatment scale-up in the age of direct-acting antivirals

Natasha K. Martin, Peter Vickerman, Jason Grebely, Margaret Hellard, Sharon J. Hutchinson, Viviane D. Lima, Graham R. Foster, John F. Dillon, David J. Goldberg, Gregory J. Dore, Matthew Hickman

View issue TOC
Volume 58, Issue 5
November 2013
Pages 1598–1609

Antiviral Research 110 (2014) 79–93

Contents lists available at ScienceDirect

Antiviral Research

journal homepage: www.elsevier.com/locate/antiviral

Commentary

Can hepatitis C be eradicated in the United States?

Brian R. Edlin [a,b,*], Emily R. Winkelstein [b]

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[b] National Development and Research Institutes, 71 West 23rd St., 4th floor, New York, NY 10010, United States

Elimination of Hepatitis C Virus Infection Among People Who Inject Drugs Through Treatment as Prevention: Feasibility and Future Requirements FREE

Jason Grebely, Gail V. Matthews, Andrew R. Lloyd, Gregory J. Dore

Clinical Infectious Diseases, Volume 57, Issue 7, 1 October 2013, Pages 1014–1020,

Key Concepts to Guide HCV Elimination

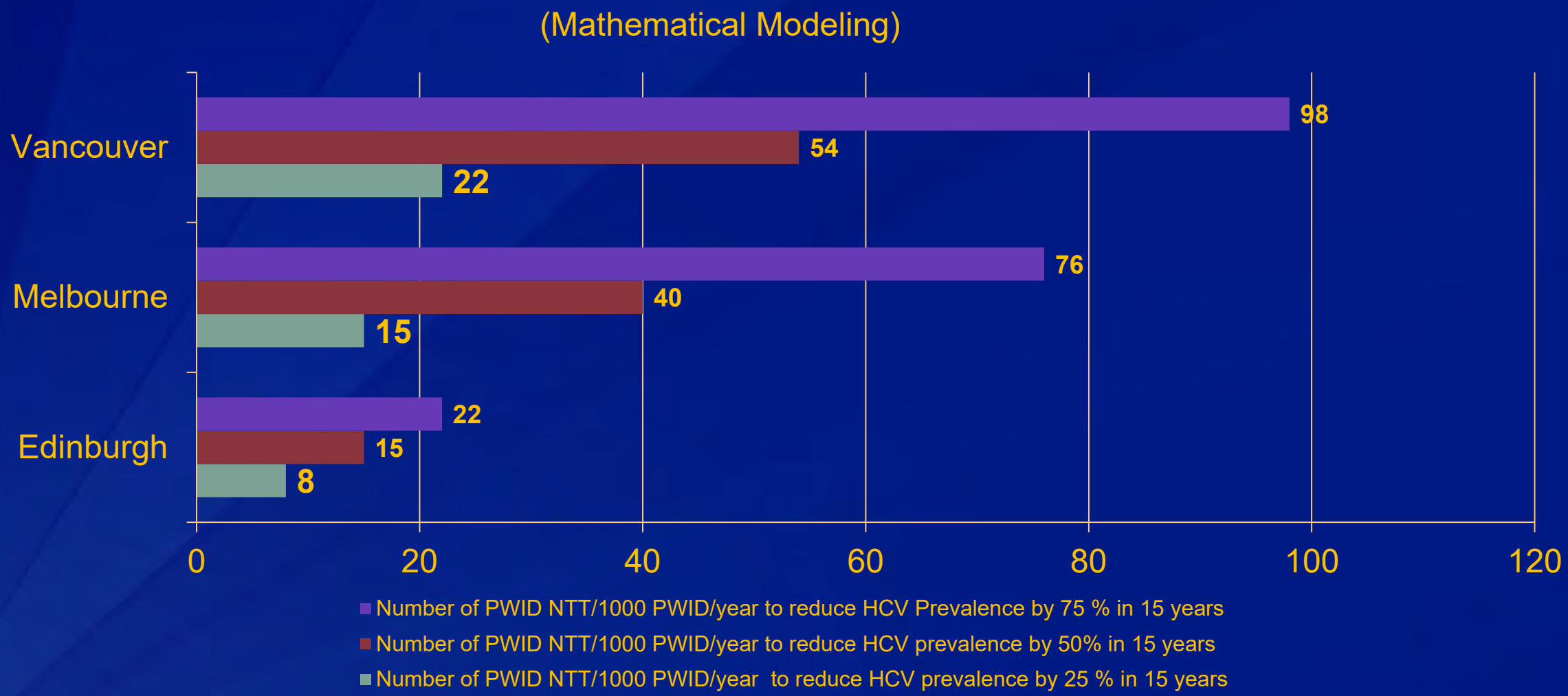
- **Treat the HCV infected population to decrease the burden of liver disease (Decrease Prevalence)**
  - Mainly target birth cohort (patients born between 1945-1965)

- **Prevent Transmission (Decrease Incidence and prevalence)**
  - **Mainly target the younger population who are PWID**
    - *Treatment as prevention* (HCV + PWID, HIV/HCV coinfection)
    - Establish or expand MAT
    - Establish or expand needle and syringe services

MAT: Medication Assisted Treatment

PWID: People Who Inject Drugs

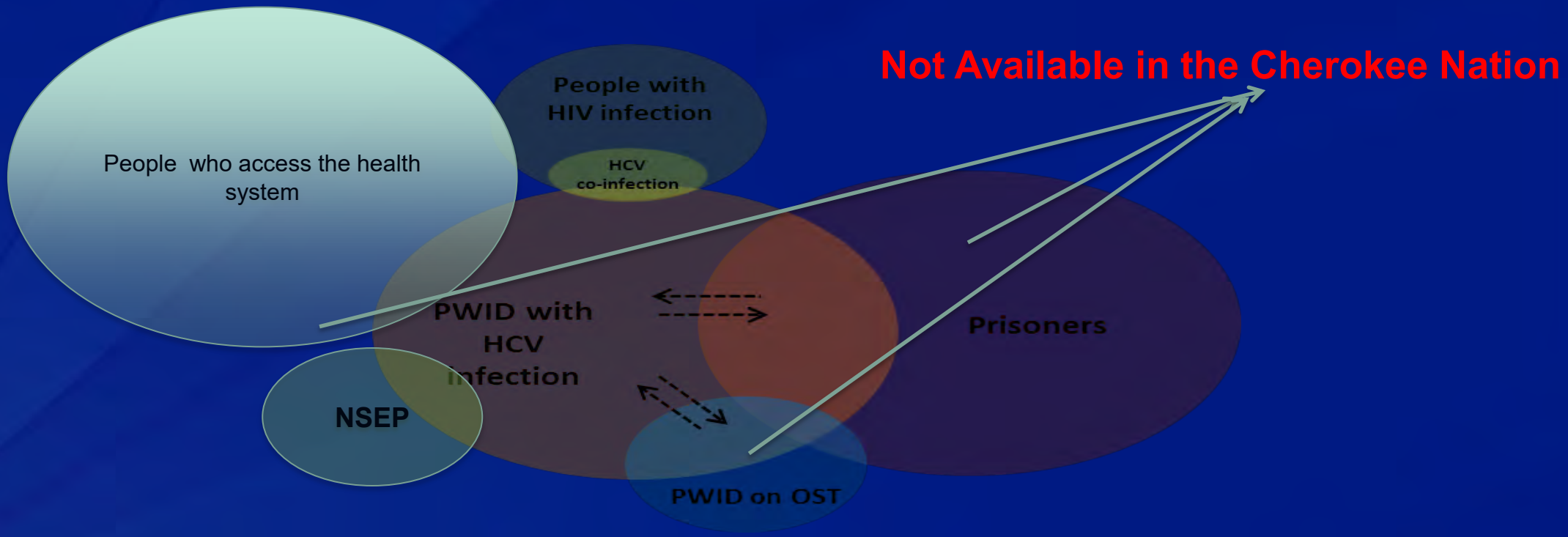
Impact of Treatment as Prevention on HCV Prevalence



Adapted from NK Martin, et al. Hepatology 2013:58(5):1598-1609

NTT: Number Needed To Treat.
PWID: People Who Inject Drugs

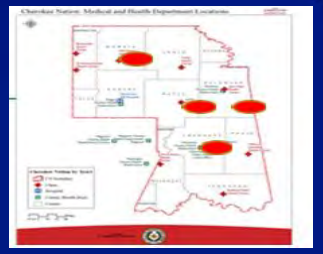
Where Can We Find and Treat HCV (+) PWID?



ED: Emergency Department, UC: Urgent Care

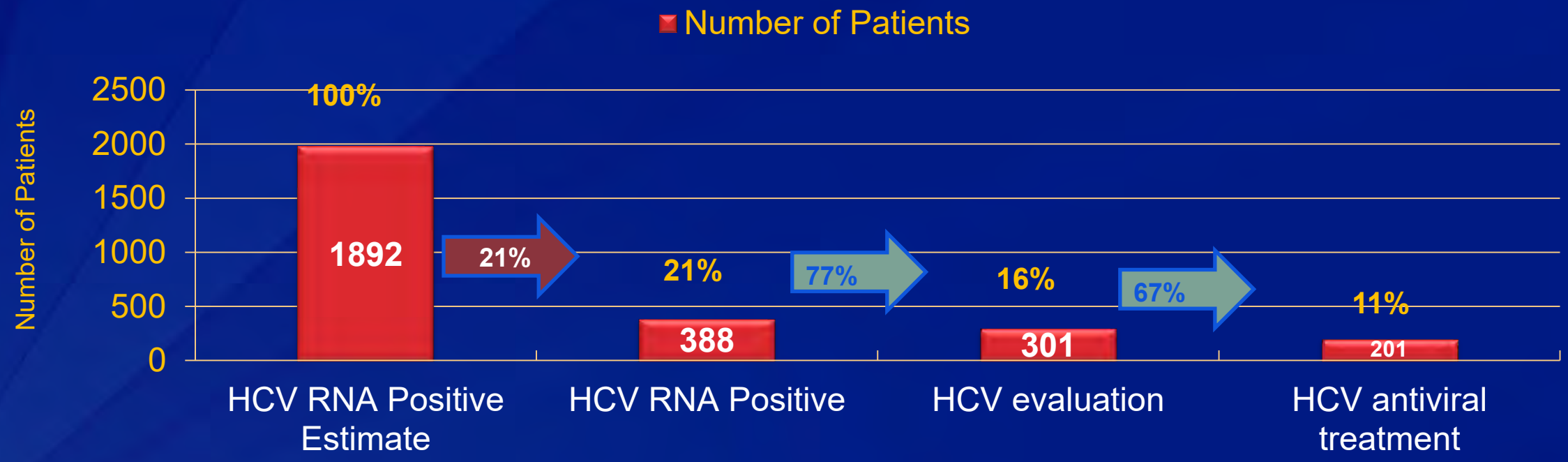
Adapted from Hajarizadeh B et al. The Lancet Gastroenterol Hepatol 2016;1:317-27

How did we get from this point……



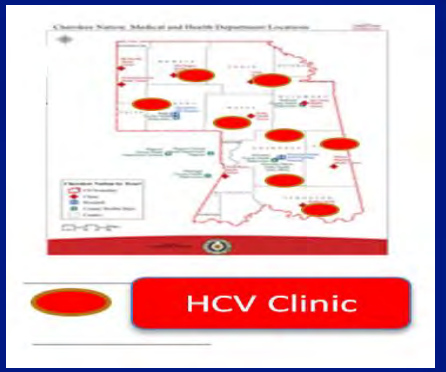
HCV Clinics

CNHS HCV Cascade of Care: July 2015

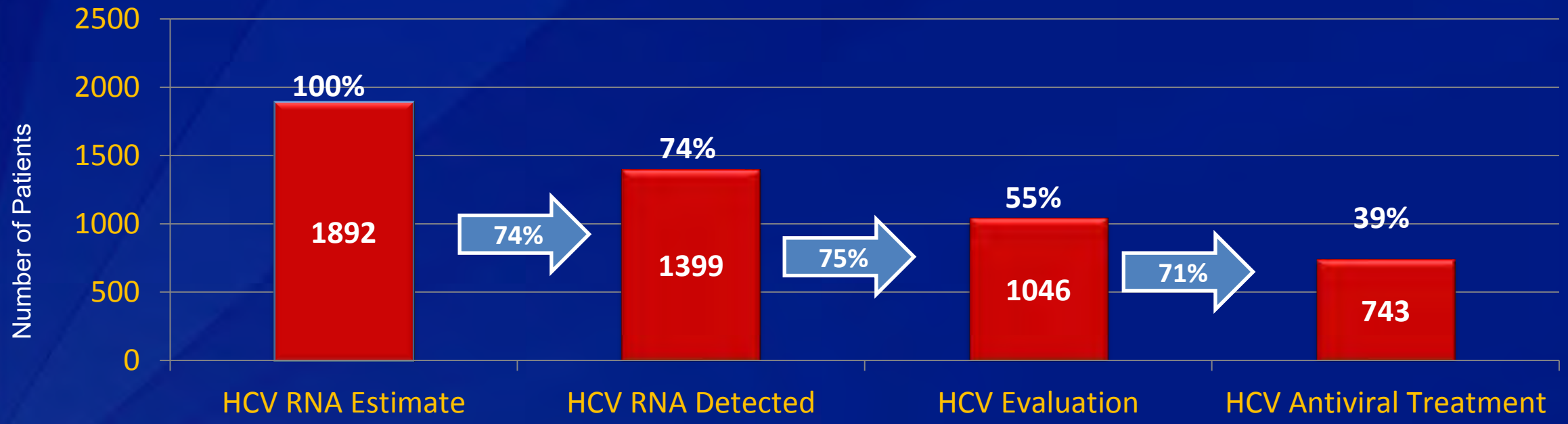


Adapted from: Mera J, Vellozzi C, Hariri S, et al. Identification and Clinical Management of Persons with Chronic Hepatitis C Virus Infection — Cherokee Nation, 2012–2015. MMWR Morb Mortal Wkly Rep 2016;65:461–466.

……to this point?



CNHS HCV Cascade of Care: December 2017



CNHS HCV Elimination Program 8/2015 – 10/2018

1. Secure political commitment for HCV elimination
2. Expand the HCV screening program
3. Establish robust programs to link to care, treat, and cure patients
4. Reduce the incidence of new HCV infections

Goal #1: Secure Political Commitment

HCV Awareness Day
October 31,2015

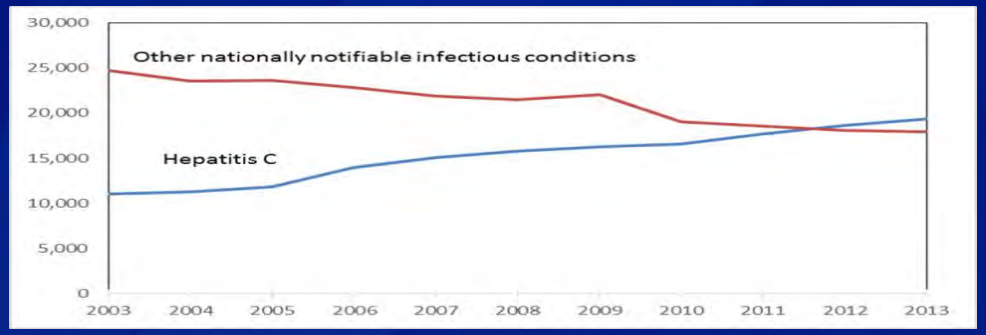
HCV Elimination Awareness Day
October 31, 2017

"As Native people and as Cherokee Nation citizens, we must keep striving to eliminate hepatitis C from our population."
Chief Bill John Baker

1. https://www.cdc.gov/hepatitis/statistics/2015surveillance/index.htm Accessed February 12, 2018
2. Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)
3. Ly KN, et al. Clin Infect Dis 2016 May 15;62(10):1287-1288

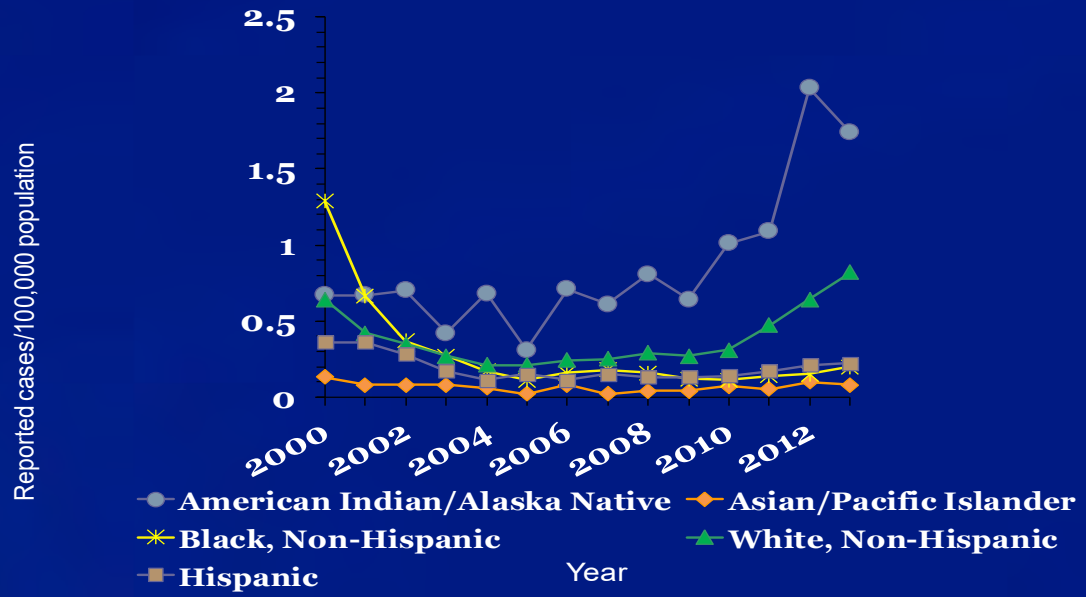
What were the "talking points" for HCV Elimination?

- AI/AN have the highest
  - Mortality[1]
  - Incidence[2]



HCV Deaths and Deaths from Other Nationally Notifiable Infectious Diseases, USA 2003- 2013[3]

Incidence of Acute Hepatitis C Stratified by Ethnicity: USA 2010-2013



1. https://www.cdc.gov/hepatitis/statistics/2015surveillance/index.htm Accessed February 12, 2018
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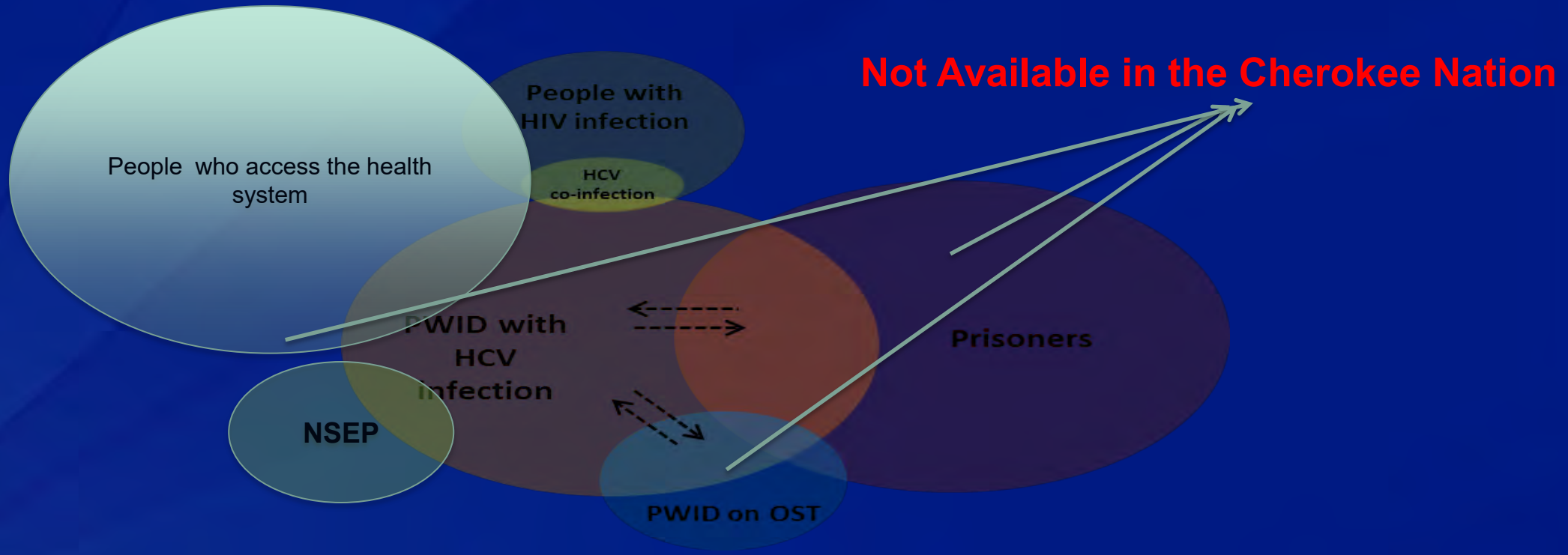
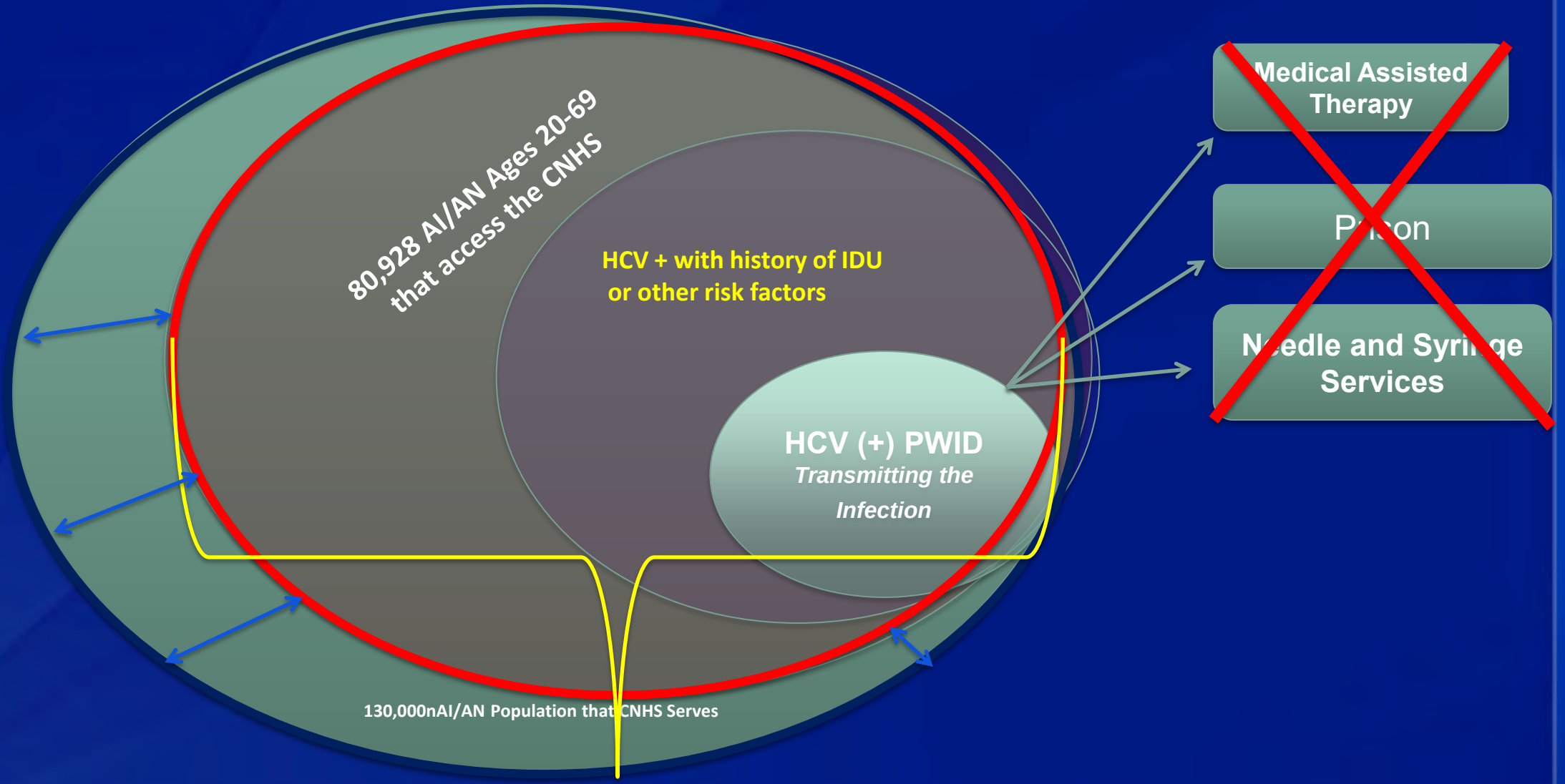
Expand the Screening Program



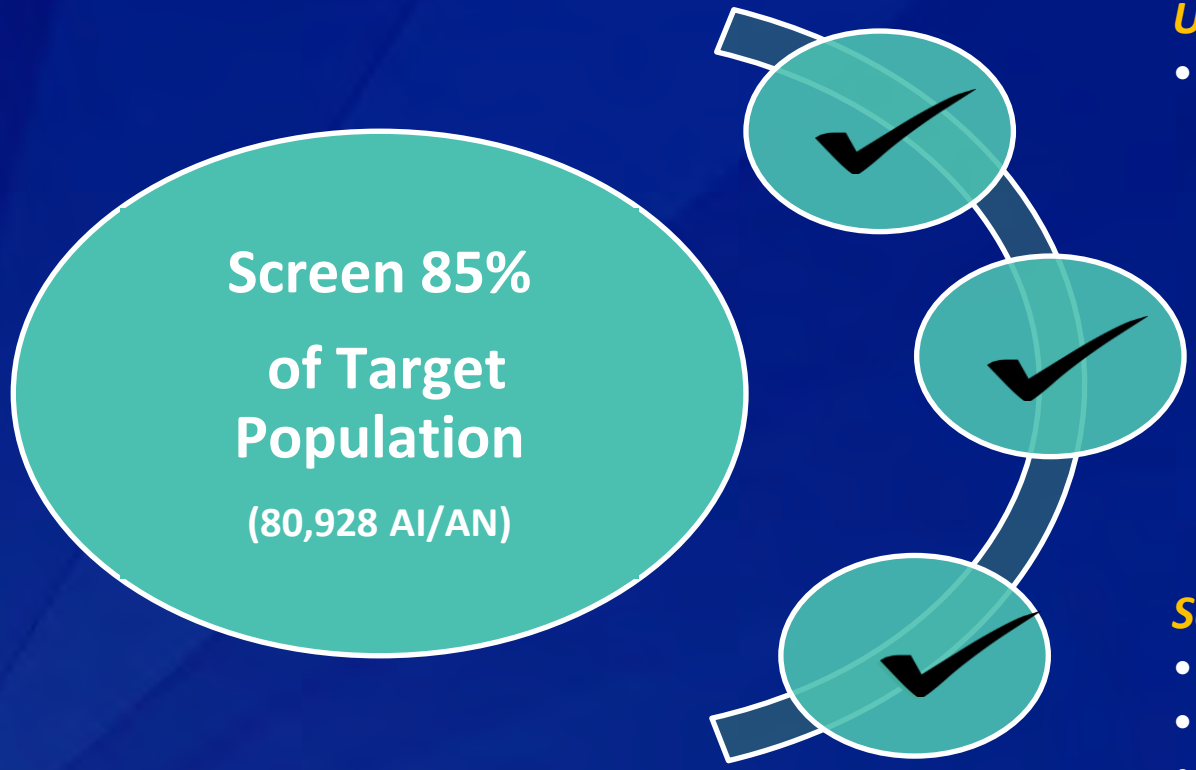
ED: Emergency Department, UC: Urgent Care

Adapted from Hajarizadeh B et al. The Lancet Gastroenterol Hepatol 2016;1:317-27

Goal #2: Expanding the Screening Program



Goal #2: Expand Screening Program



Universal Screening

- Ages 20-69

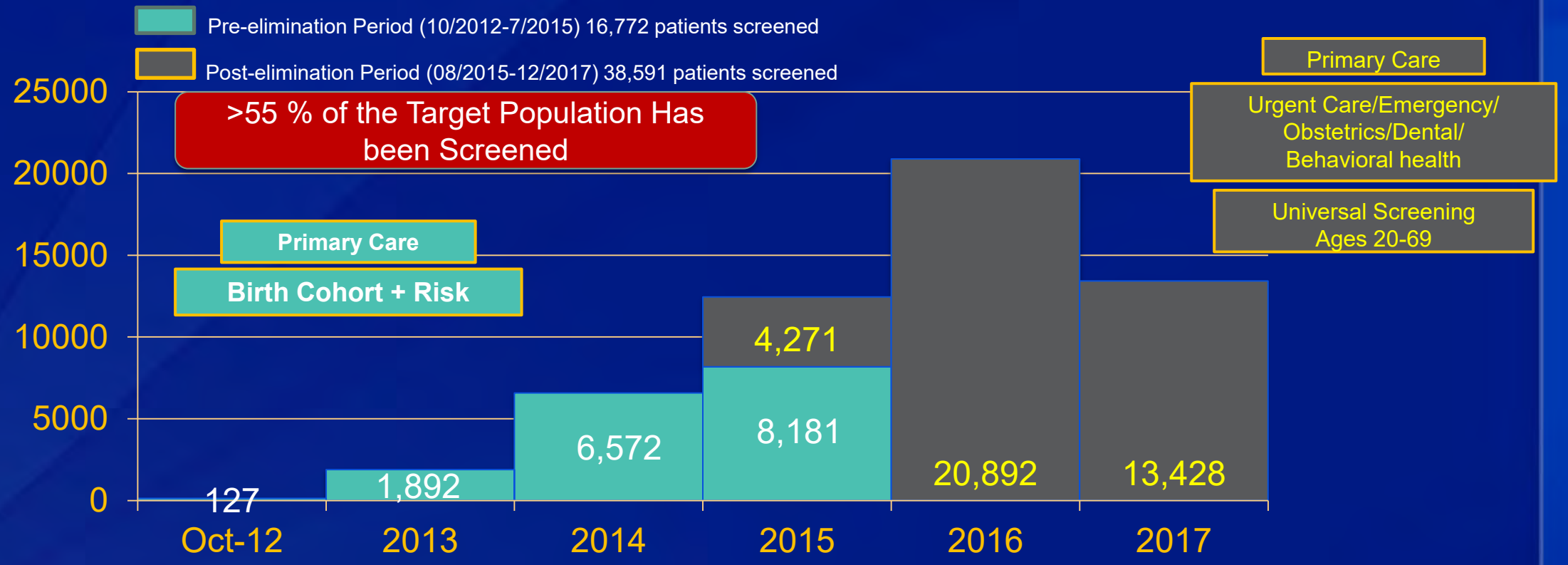
Non-Traditional Screening Sites

- Emergency Department
- Urgent Care
- Dental Clinics
- Behavioral Health
- OBGYN

Screening Modalities

- EHR Reminders
- Point of care antibody test
- Lab Triggered screening

HCV Screening in the CNHS: 10/2012 – 12/2017



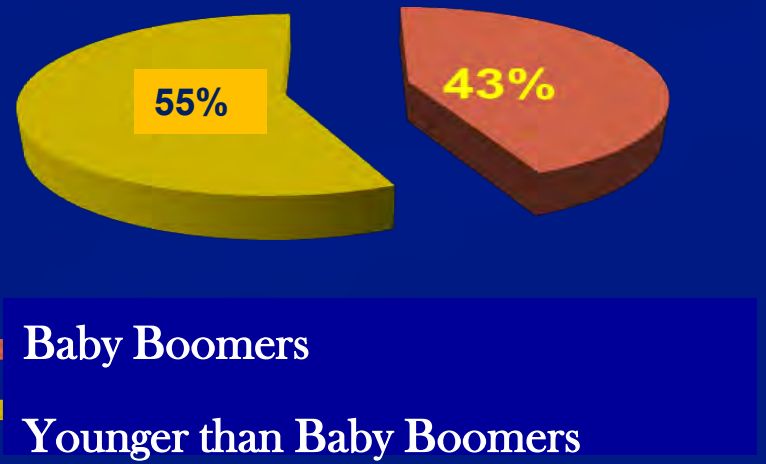
*preliminary data

HCV Prevalence, Gender and Age Distribution*: 8/2015 – 12/2017

Prevalence

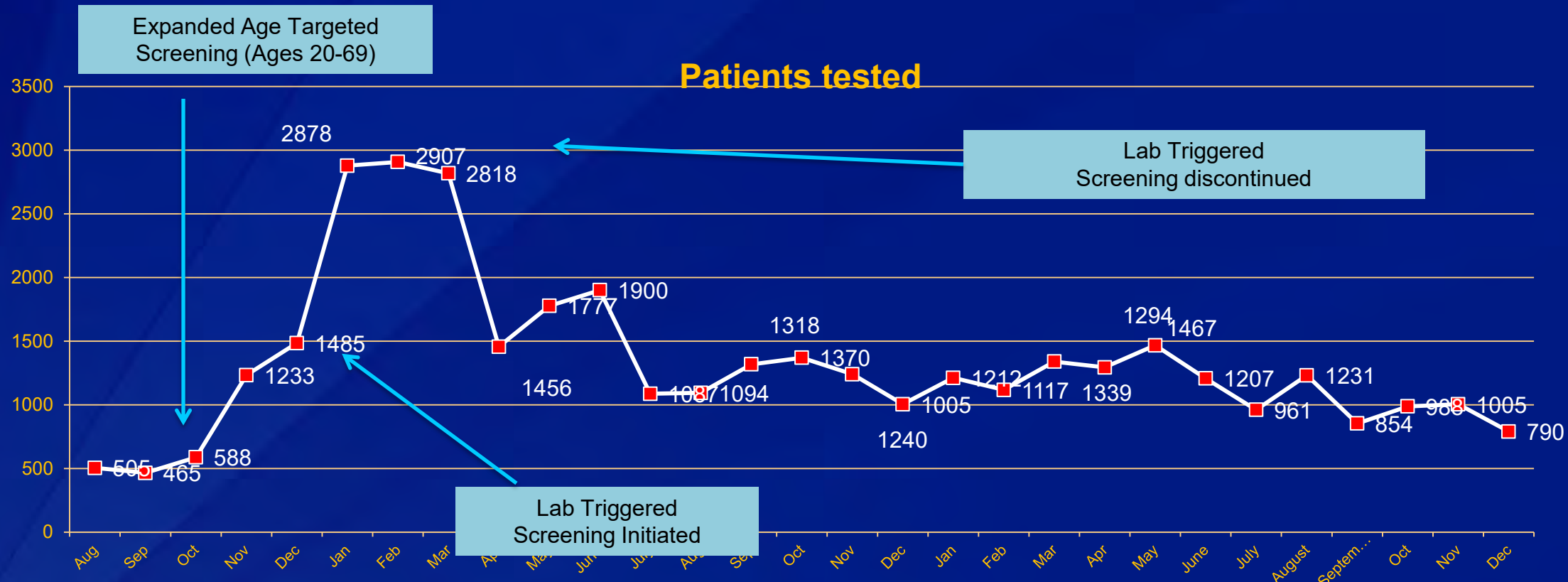
- 38,591 patients screened
- 1,328 HCV antibody positive
  - Overall Prevalence ~ 3.4%
    - Male 4.5%
    - Female 2.7%
  - Baby boomers
    - 3.9% (12,540)
  - Younger than Baby Boomers
    - 3.2% (18,319)

Age Distribution of HCV Ab (+)



*preliminary data

CNHS: HCV Screening* 8/2015 – 12/2017

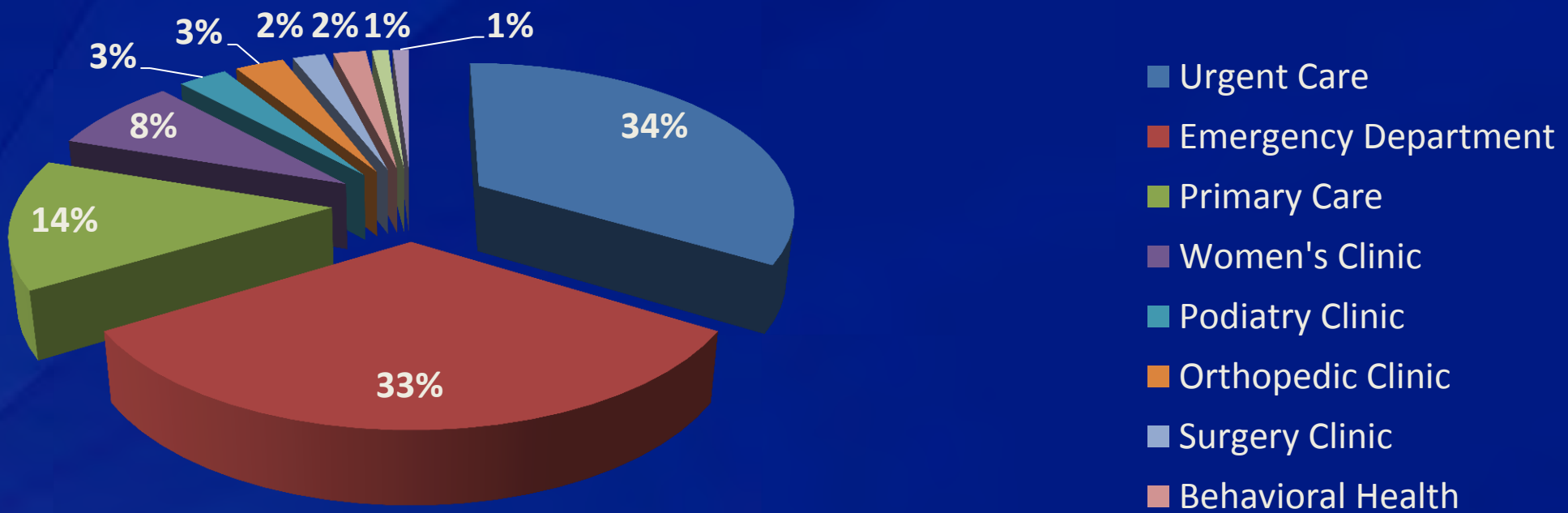


Cherokee Nation Health Services 2018

*preliminary data

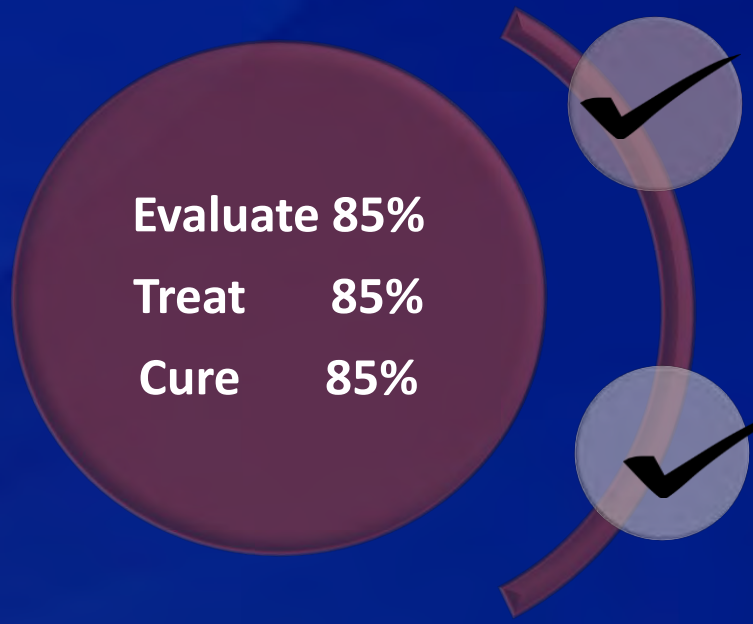
Lab Triggered Screening: Screening location

97 patients with new positive HCV antibody screen at WW Hastings Hospital



67% were detected in the Urgent Care/Emergency Department

Goal # 3: Link to Care, Treat, and Cure



Expand Case Management Capacity

- Patient navigator
- Case manager for antiviral procurement
- Clinical Case Manager
- Pharmacy managed follow up

Expand Clinical Capacity

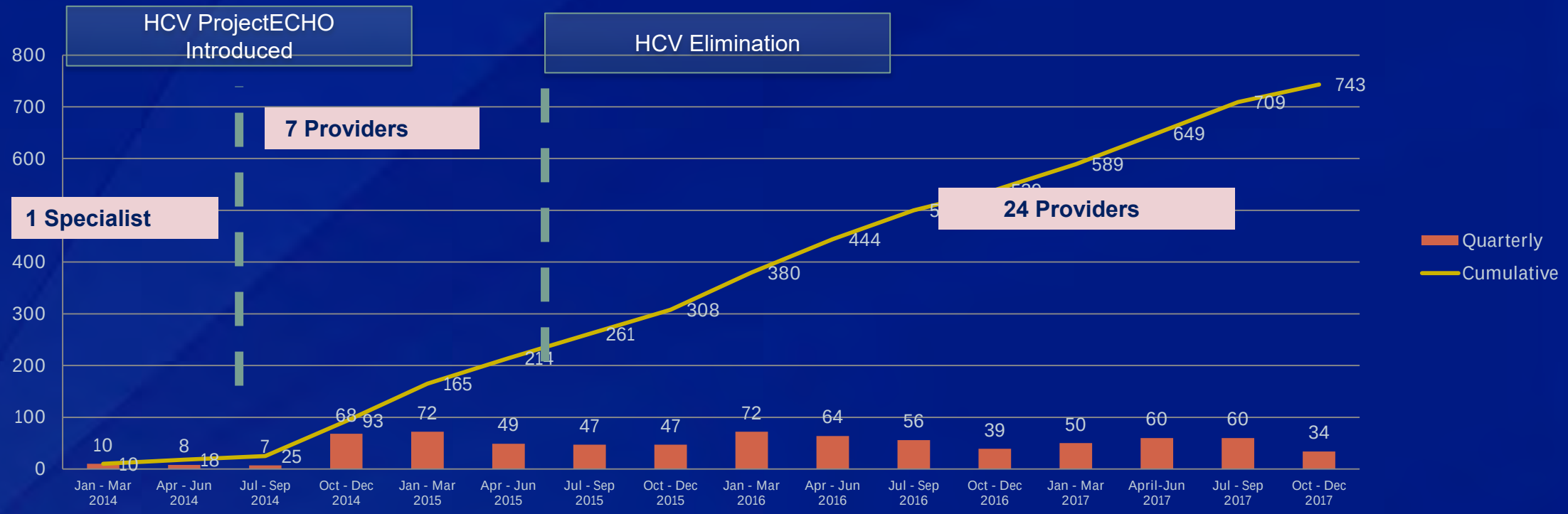
ProjectECHO

Patient and Medical Provider Support

- **Before HCV Evaluation**
  - ***Patient Navigator*** contacts patient to make sure and appointment is secured
  - If the patient cant be reached a ***Public Health Nurse*** is sent to the patients home
- **During Evaluation**
  - Most patients are evaluated by a ***drug and alcohol counselor***,
  - If substance use disorder is detected, referral to a ***behavioral health specialist***
- **After Treatment Initiated**
  - ***Clinical case manager, pharmacist*** and a ***community health worker*** will assist with adherence follow-up and treatment (including DOT)

DOT: Direct Observed Therapy

CNHS HCV Program: Clinical Capacity Expansion: 1/2014 – 12/2017



Providers included 1 Specialist, 8 Physicians, 8 Pharmacists and 7 Nurse Practitioners

Goal #4: Reduce the incidence of new HCV infections

Decrease Incidence

Public and Provider Awareness	Contact Tracing	Harm Reduction
• Public Campaign • Provider Training	• Acute HCV • PWID	• Treatment as Prevention • OST • NSEP

CNHS HCV Elimination Program Strategies and Goals, 8/2015-10/2018

CNHS: Cherokee Nation Health Services. PWID: People Who Inject Drugs, OST: Opioid Substitution Therapy, NSEP: Needle and Syringe Exchange Program

Moving Forward

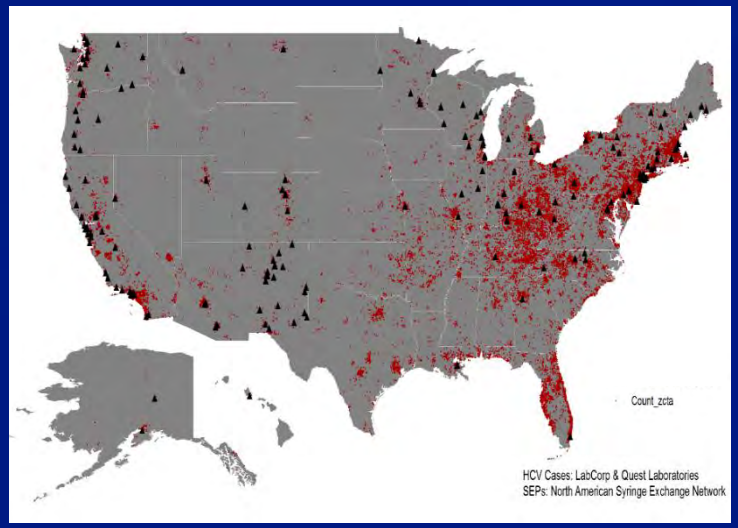
- **Increase public awareness and intensify HCV screening** in "hot spots" and out in the community
- **Improve engagement in care of PWID**
  - Expand Medication Assisted Treatment
  - Advocate for needle and syringe service
  - Identify networks of transmission trough the Global Health Outbreak Surveillance Technology (GHOST) program
- **Treat, treat and treat patients with HCV!!!!!!!**
- **Define measures to monitor program outcomes**
  - 90 % reduction in incidence by the year 2030
  - 65 % reduction in mortality by the year 2030

What is a Syringe Service Program (SSP)?

PWID and SSPs

- Number of life time PWID – 6.6 million
- Number of persons injecting in past year - 775,000
  - 334,000 (43%) living with HCV infection
- 270 syringe service programs (SSP) in operation (early 2017)
- Approximately 2,200 additional programs needed for proximal access to syringe services
- 39 states/counties approved to redirect USG funds to support SSPs (as of April 3)

Only 20% of persons 15-29 yrs. with HCV, live within 10 miles of a syringe service program.



HCV Cases: LabCorp and Quest commercial laboratories

SSPs: SSPs: North American Syringe Exchange Network

Canary L, CID, 2017; CDC unpublished data

Myths and misconceptions of SSPs

- SSPs increase high-risk practices
- SSPs promote syringes in the community
- SSPs enable drug use
- SSPs increase crime

Do SSPs increase high risk practices?

For every 2-fold increase in SSP coverage, participants . . .

Outcome variable	aPR	95% CI	p-value
Receptively shared syringes	0.96	0.93-0.99	0.021
Receptively shared syringes with ≥2 people	0.94	0.89-0.99	0.012
Shared other injection equipment (e.g., cookers, filter, water)	1.00	0.98-1.03	0.954
Models control for age, gender, race/ethnicity, homelessness, and peer network size			

Slide courtesy of Dr. Dita Broz, NHBS Team

Do SSPs promote syringes in the community?

For each 2-fold increase in SSP coverage, participants . . .

Outcome variable	aPR	95% CI	p-value
Safely disposed of used syringes	1.20	1.07-1.34	0.001
Models control for age, gender, race/ethnicity, homelessness, and peer network size			

Slide courtesy of Dr. Dita Broz, NHBS Team

Do SSPs increase risky behavior?

For each 2-fold increase in SSP coverage, participants were . . .

Outcome variable	aPR	95% CI	p-value
Have sex without a condom with a casual partner	0.97	0.94-0.99	0.037
Models control for age, gender, race/ethnicity, homelessness, and peer network size			

Slide courtesy of Dr. Dita Broz, NHBS Team

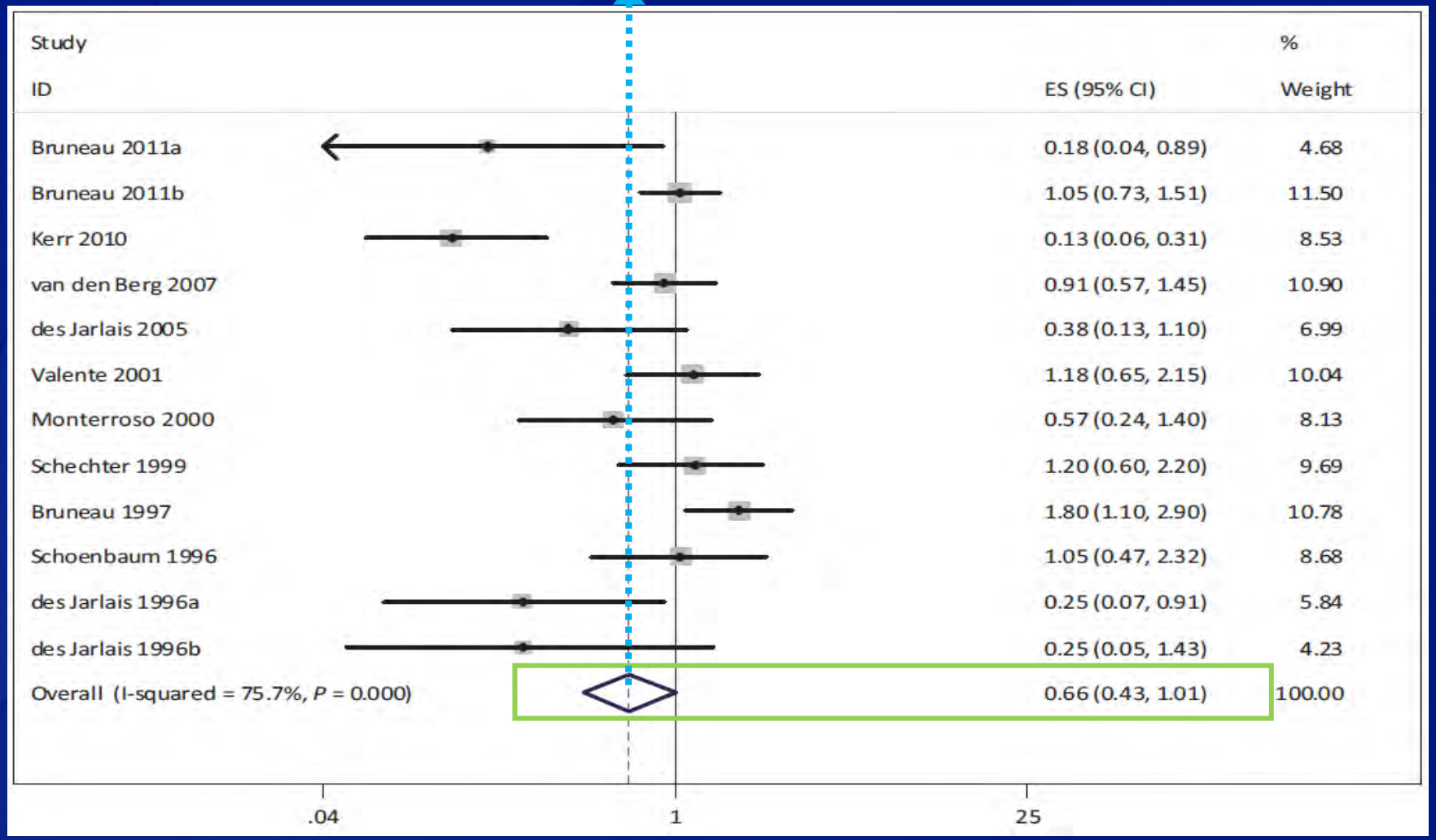
Do SSPs increase crime?

- No evidence of increased illegal drug use or crime.
- As many as 1 in every 3 officers may be stuck by a used needle during his or her career.
- Needle stick injuries are among the most concerning and stressful events experienced by law officers and have been ranked as equivalent to a knife or gunshot wound.
- **SSPs help to protect the public and first responders by providing safe syringe disposal and reducing community presence of syringes**

Lorentz et al, *Am J. Preventative Medicine*, 2000; Davis et al, *DAD*; 2014 Cepada et al, *J. Urban Health*, 2017

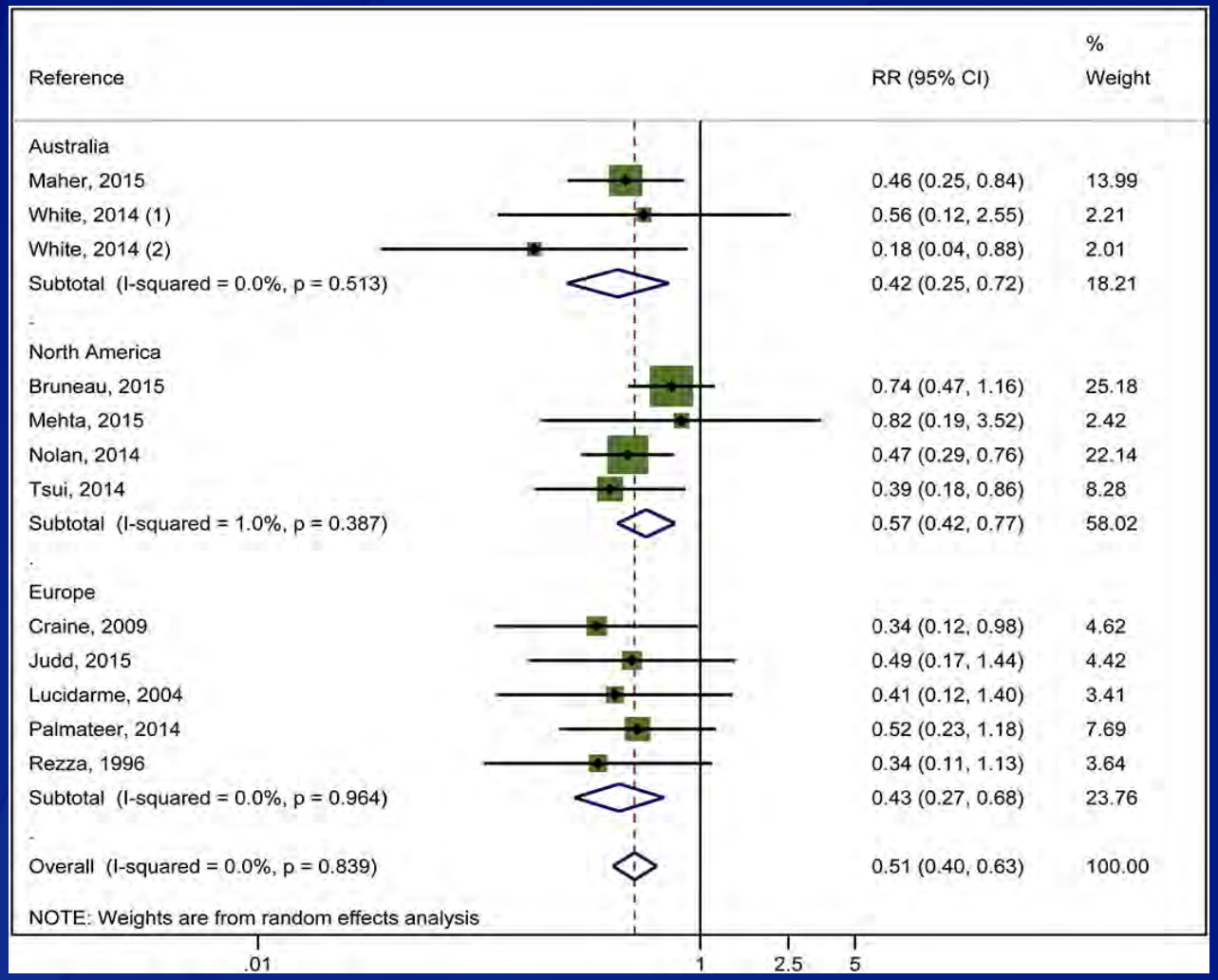
SSPs Reduce HIV Transmission

56% reduction in risk of HIV infection



Aspinall E J et al., Int J Epidemiol 2014, Courtesy of Richard Needle

SSPs play an essential role in reducing HCV transmission

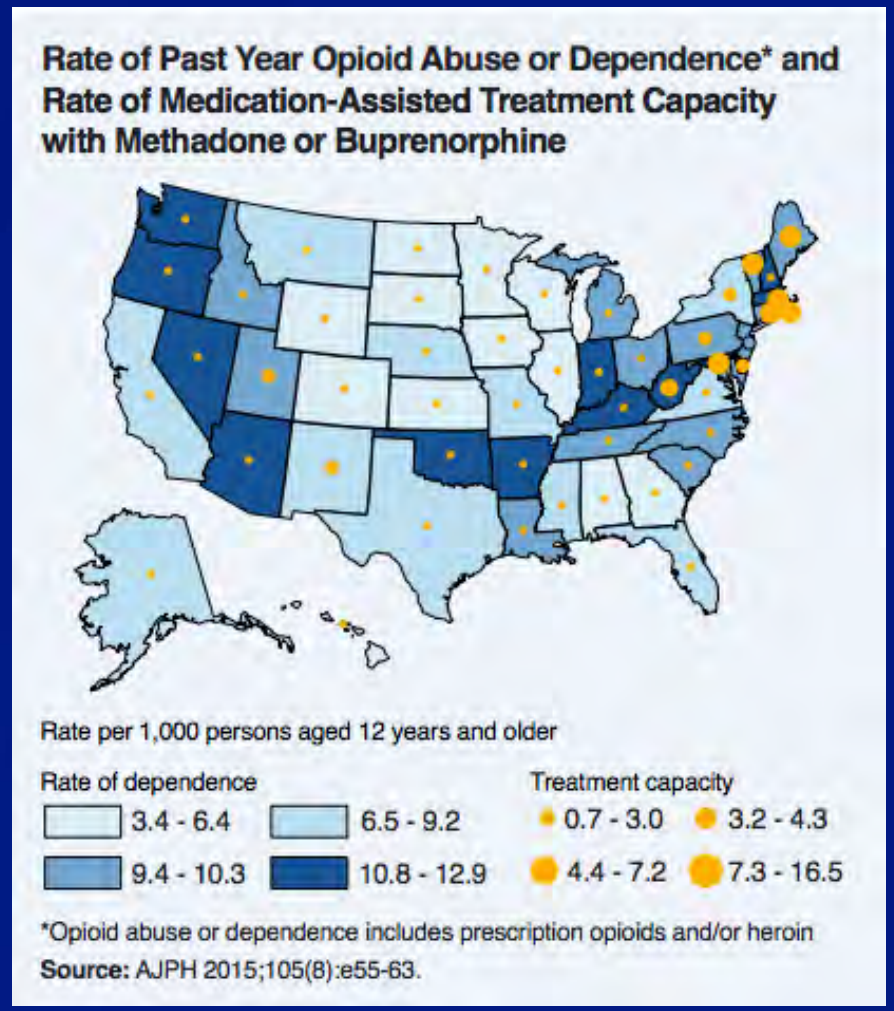


- Combined use of OST and high coverage of NSP associated with a 74% risk reduction in HCV acquisition
  - RR = 0.26
  - I^2=80%
  - P= 0.007

Platt, et al, *Addiction*, 2017

Unmet Opioid Treatment Need

- In 2014, opioid injection accounted for 360,707 admissions for drug treatment
  - 22.3% of all admissions
- In 2015, nearly 2.4 million Americans had an opioid use disorder
- Close to 80% of these individuals did not receive treatment.



SAMHSA, *TEDS-A,* 2014; SAMHSA, *NSDUH,* 2015; SAMHSA, *MAT Pocket Guide*, 2016

SSPs facilitate entrance to substance use treatment

- PWID who used SSPs were 2.8 times more likely to reduce the amount they injected compared to those who didn't use the programs
- New users of SSPs were 5 times more likely to enter drug treatment than those who didn't use the programs.
- PWID who used SSPs were 3.5 times more likely to stop injecting compared to those who didn't use the programs.

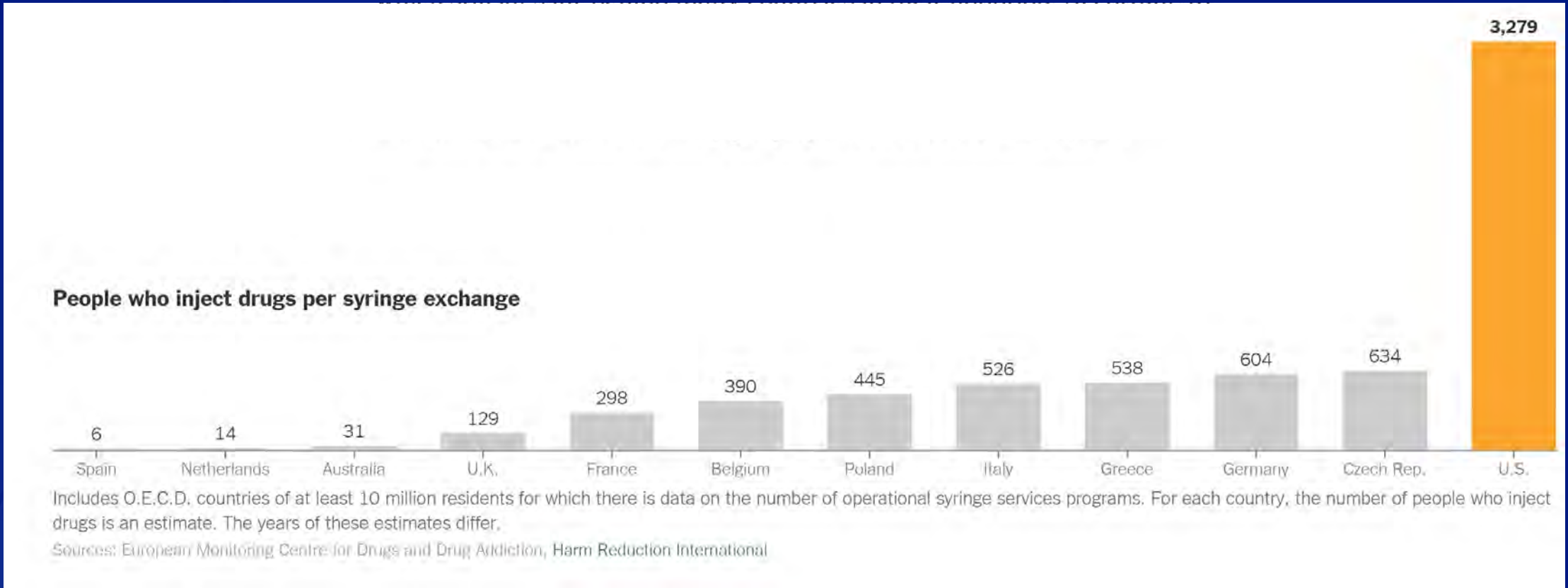
Hagan H et al *J. of Substance Abuse Treatment*, 2000; Latkin et al, *Substance Use and Misuse*, 2006

Role of Syringe Services Program

- Access to sterile injecting equipment and disposal
- Risk reduction education
- Opportunity to engage in care
  - Access to primary care
    - More likely to connect with primary care when meet a health care provider on the street
  - Testing/screening services
  - Patient navigation and case management
  - Naloxone distribution
  - HAV/HBV vaccine
  - Access to mental health, social services
  - Reproductive health

Islam, et al, *J. Primary Care Comm Health*, 2010, Des Jarlais, et al, *MMWR*, 2015; Islam, et al, *J. of Substance Use Tx*, 2012

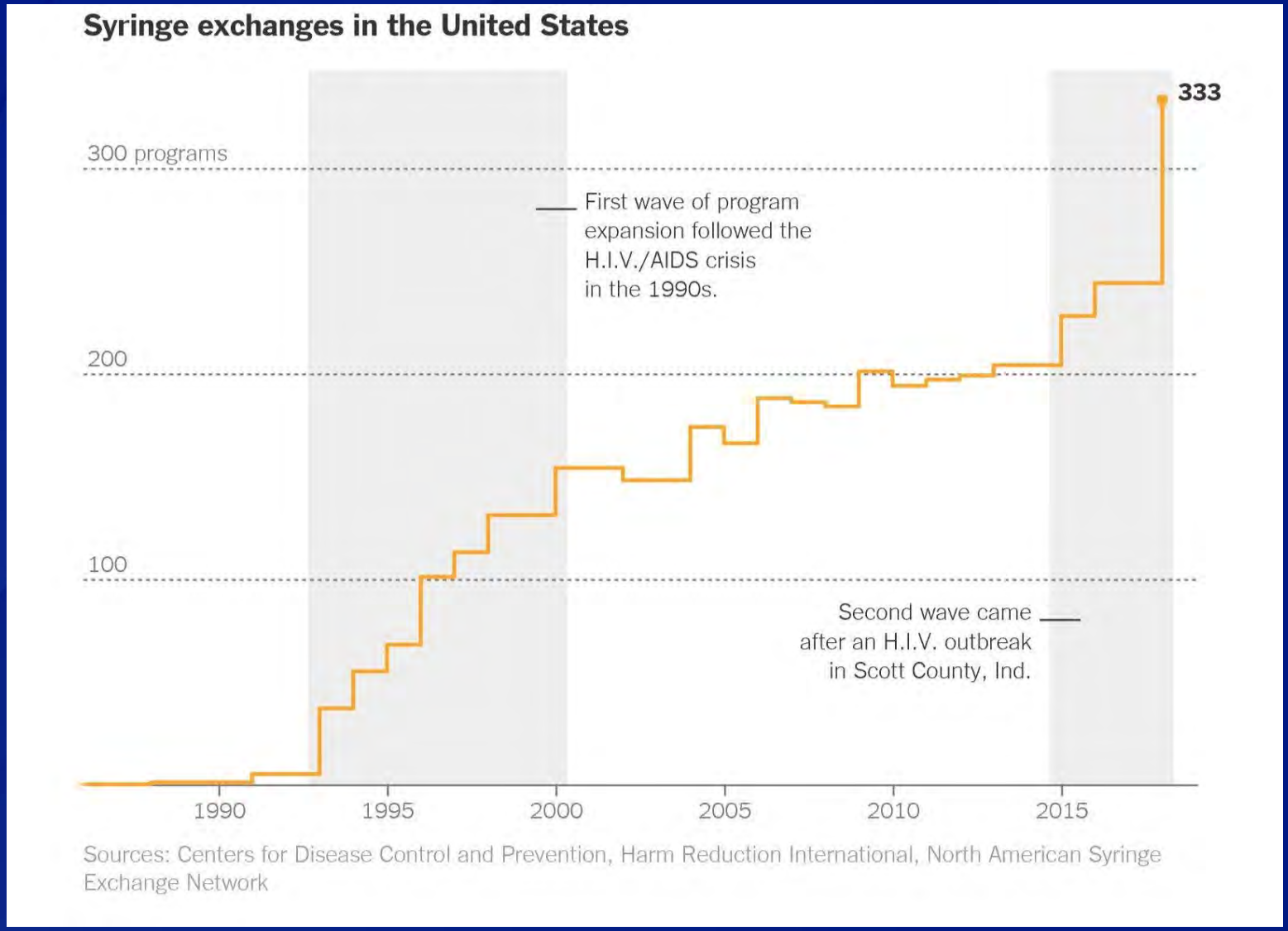
Meeting PWID demand



Includes O.E.C.D. countries of at least 10 million residents for which there is data on the number of operational syringe services programs. For each country, the number of people who inject drugs is an estimate. The years of these estimates differ.

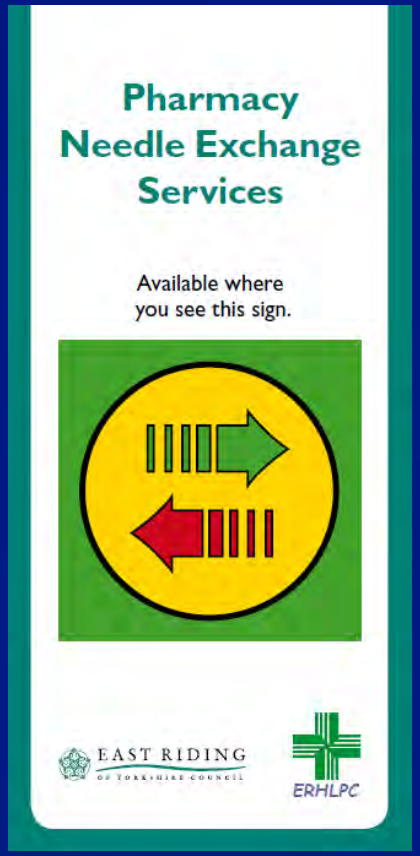
Sources: European Monitoring Centre for Drugs and Drug Addiction, Harm Reduction International

The growth of SSPs



Innovations and Creativity in SSP delivery

- Pharmacy sales
- Mobile services
- Vending machines
- Web-based mail order supply
- Peer to Peer delivery



Special Thanks to Alice Asher, Dita Broz and John Brooks for slides, panel preparation support and review

Thank you

Questions:

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