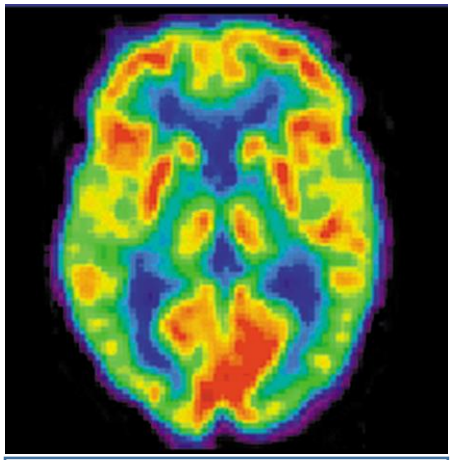
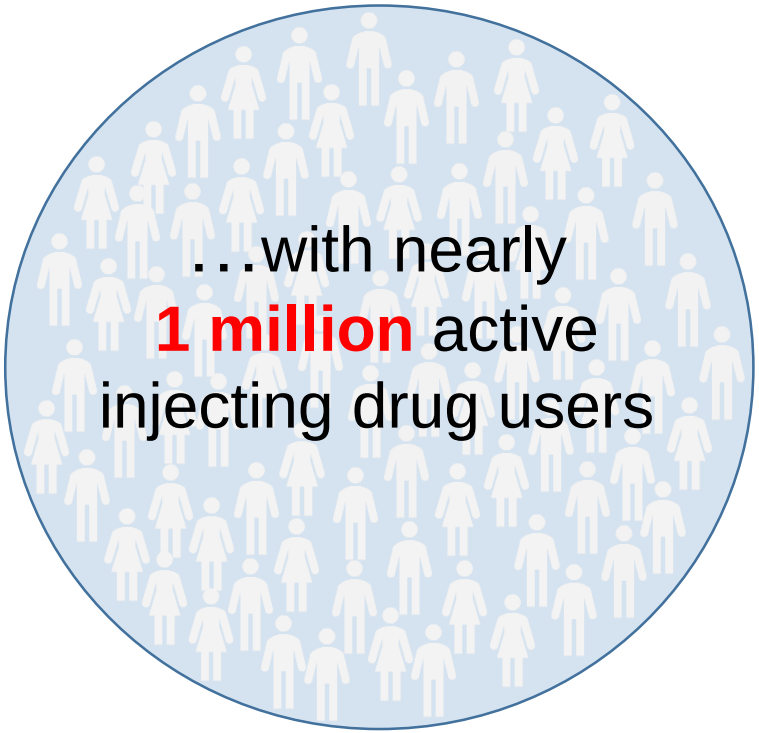


Felice A. Nava, MD PhD

HCV∅?
Dall'Eradicazione del virus alla presa in carico del paziente

Vicenza, 23 Maggio 2018

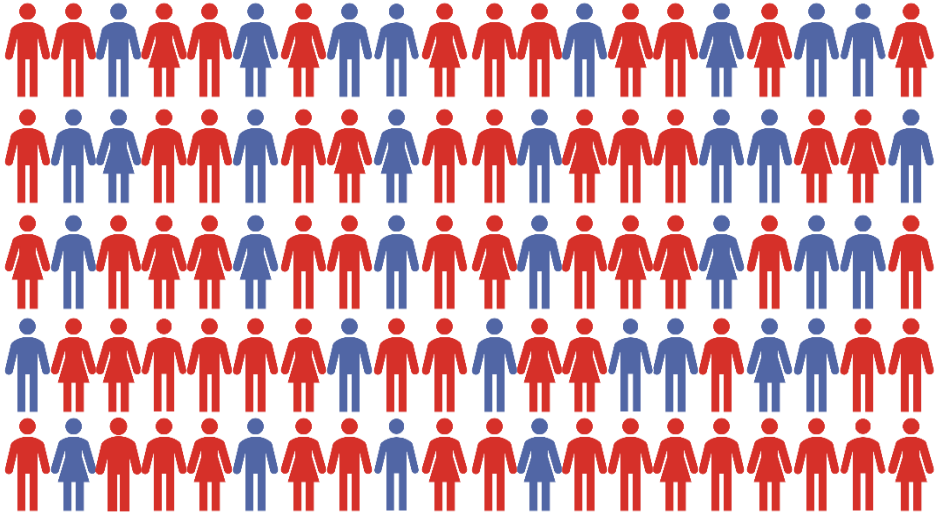
A substantial number of people in Europe use illicit drugs…



Trends in injecting drug use in Europe 2010 EMCDDA: Available at: http://www.emcdda.europa.eu/attachements.cfm/att_108590_EN_EMCDDA_SI10_injecting.pdf

The risk of HCV is high in people who inject drugs (PWID)

Estimated that **67%** of people who inject drugs have been exposed to HCV



Nelson P, et al. Lancet 2011

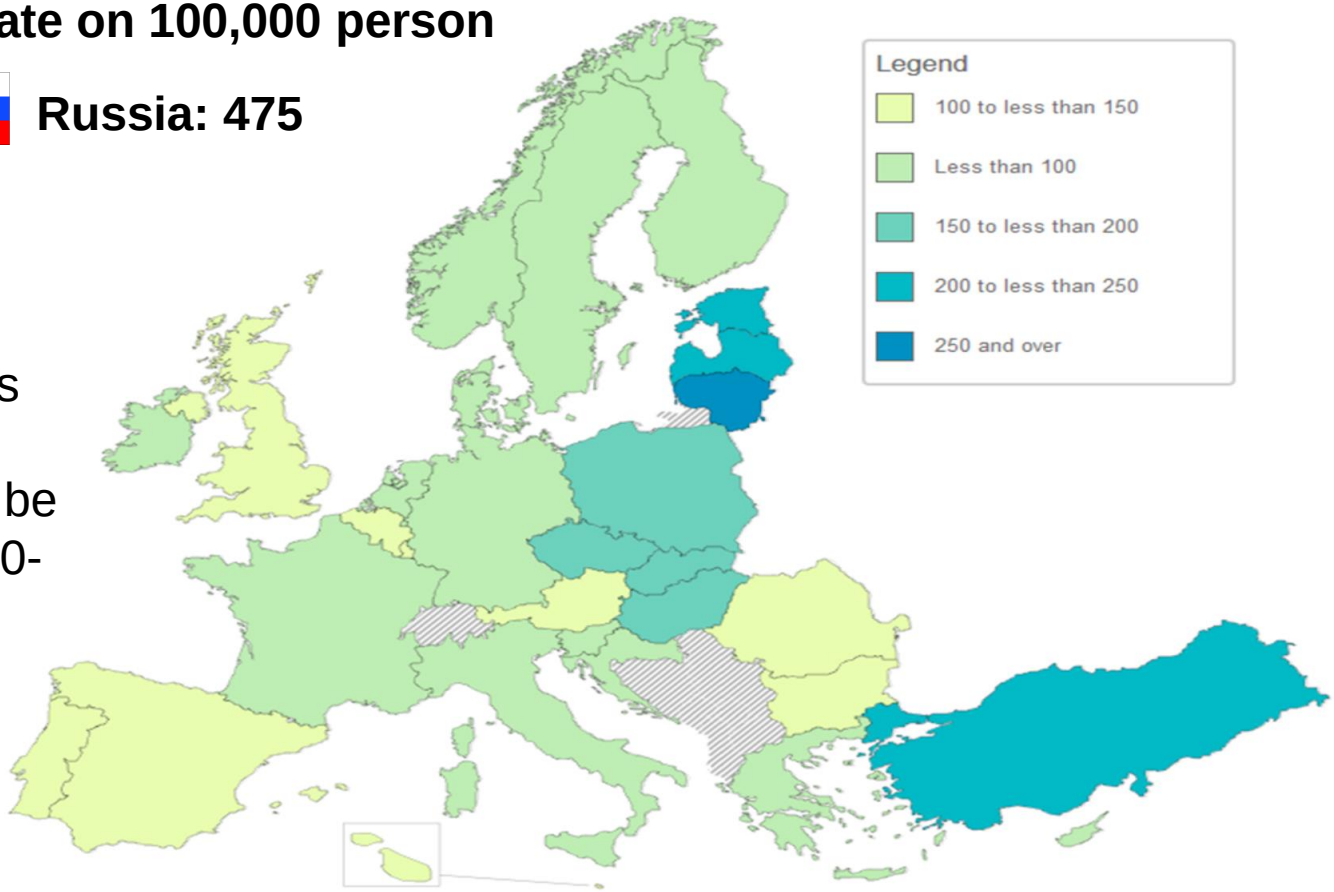
…and in Prison Population

Prison population rate on 100,000 person

EU: 125 **Russia: 475**

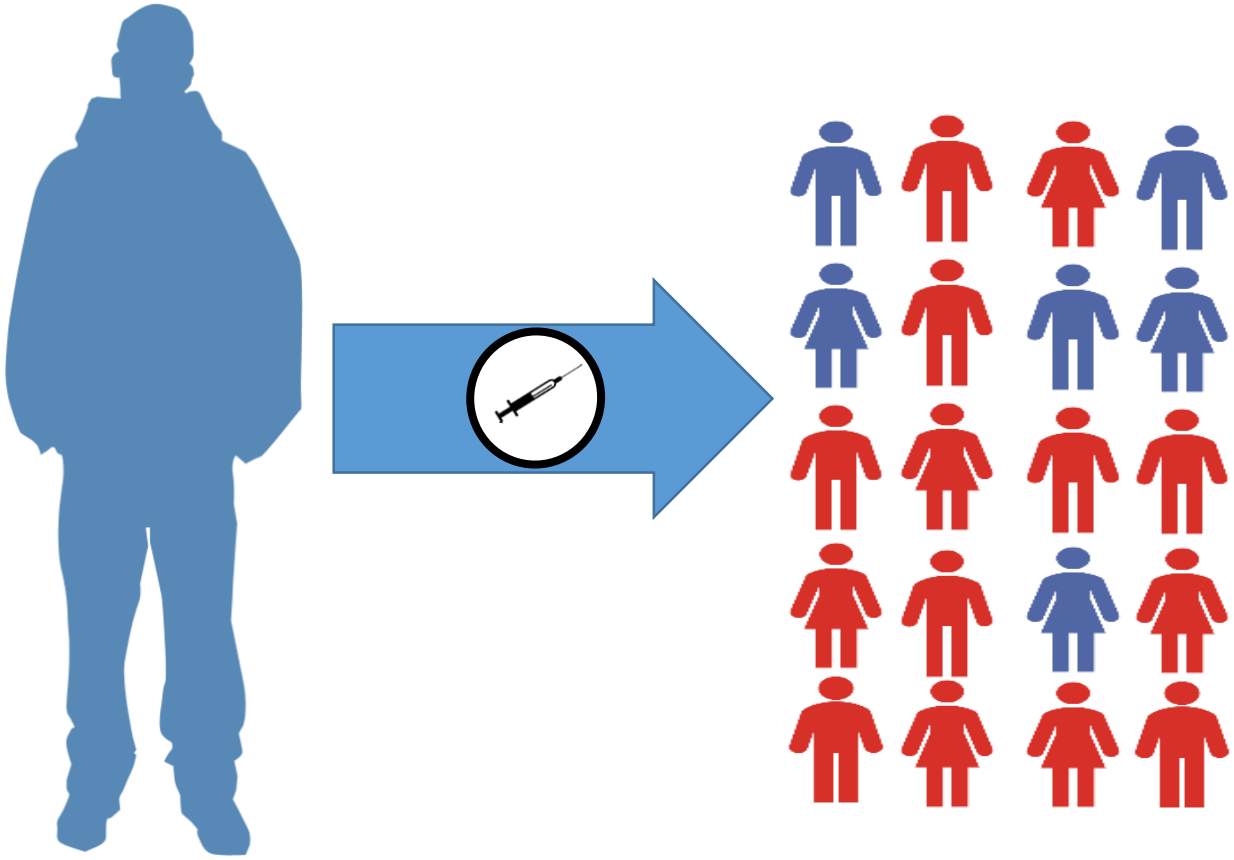
US: 698

On **600,000** detainees in Europe -28*
20-30% of them may be HCV + (about 120,000-180,000)



Source: SPACE 2016 – Council of Europe
* Europe: 28 EU countries, Norway and Turkey

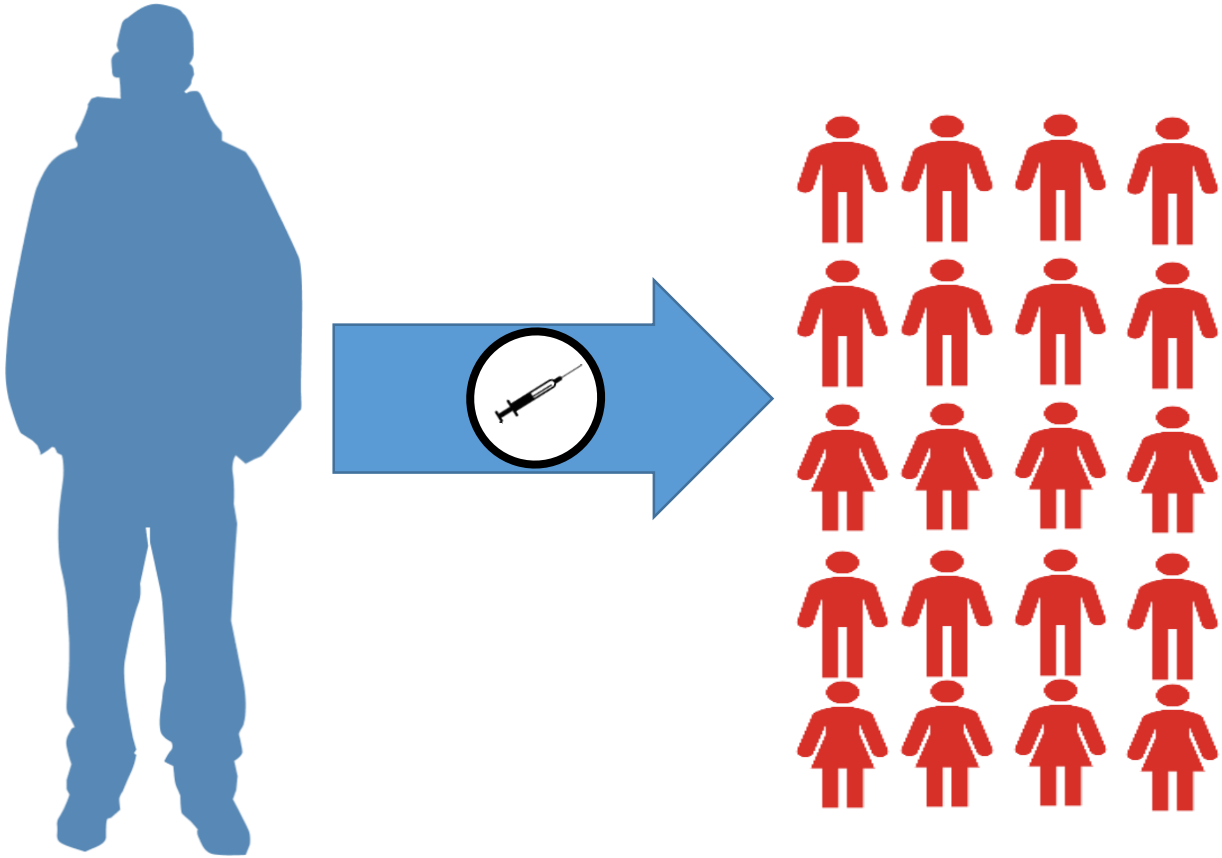
HCV in PWID is a public health concern



Each PWID infected with HCV is likely to infect about 20 others within the first 3 years of initial infection

Viral Hepatitis—A Very Real Consequence of Substance Use.
Available at : https://www.drugabuse.gov/related-topics/viral-hepatitis-very-real-consequence-substance-use
Magiorkinis G et al. Plos Comput Biol, 2013. 9(1): p. e1002879

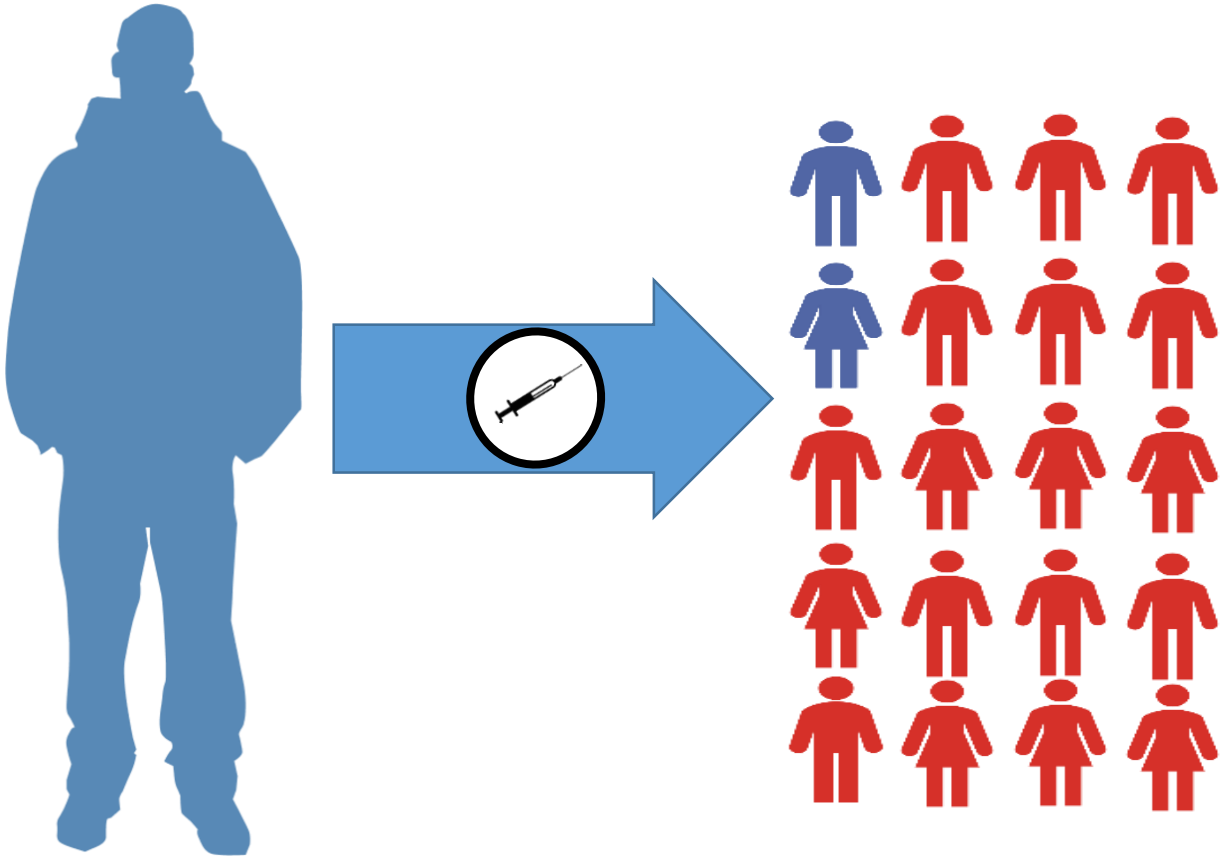
The Majority of New Cases Occur in PWID



80% of new infections occur among current PWID

Hajarizadeth et al., 2013. Nat. Rev. Gastroenterol. Hepatol. 10: 553-562; Grebely, Dore, 2014. Antiviral Res. 104: 62-72

Few PWID have been treated



1-2% are treated each year

Aspinall et al., 2015. Clin. Inf. Dis., 57: S80-S89; Dimova et al., 2013. Clin. Inf. Dis., 56: 806-816; Hellard et al., 2009. Clin. Inf. Dis., 49: 561-573; Dalgard, 2005. Clin. Inf. Dis., 60: S336-S338; Grebely et al., 2010. J. Gastroenterol Hep., 25: 1281-1284

The Treatment of PWID: a Priority

The i.v. use causes the

23%

of new HCV infection

WHO Global Hepatitis Report 2017

HCV elimination in ‘special population’ is now a possible priority of public health

- **DAA therapy is effective and well tolerated** in people receiving opiate substutive therapy (OST) [1, 2] and in people with a history of injecting drug use (including current/former people who inject) [3, 4]

- **DAA HCV therapy has the potential to improve the access of care** for people on OST and to facilitate the taking in charge for people who use drugs [1]

- Strong evidence suggests that **reinfection is not more a concern** if the HCV treatment is associated with OST, needle exchanges programmes [5] and psychosocial interventions [6]

1. Grebely et al. Nat Rev in Gastroenterology & Hepathology, 2017; 2. Norton et al. Int J Drug Policy, 2017; 3. Mazhnaya et al. Int J Drug Policy, 2017; 4. Powis et al. Int J Drug Policy, 2017; 5. MacArthur et al., Int J Drug Policy 2014; 7. Degenhardt et al. Lancet, 2010

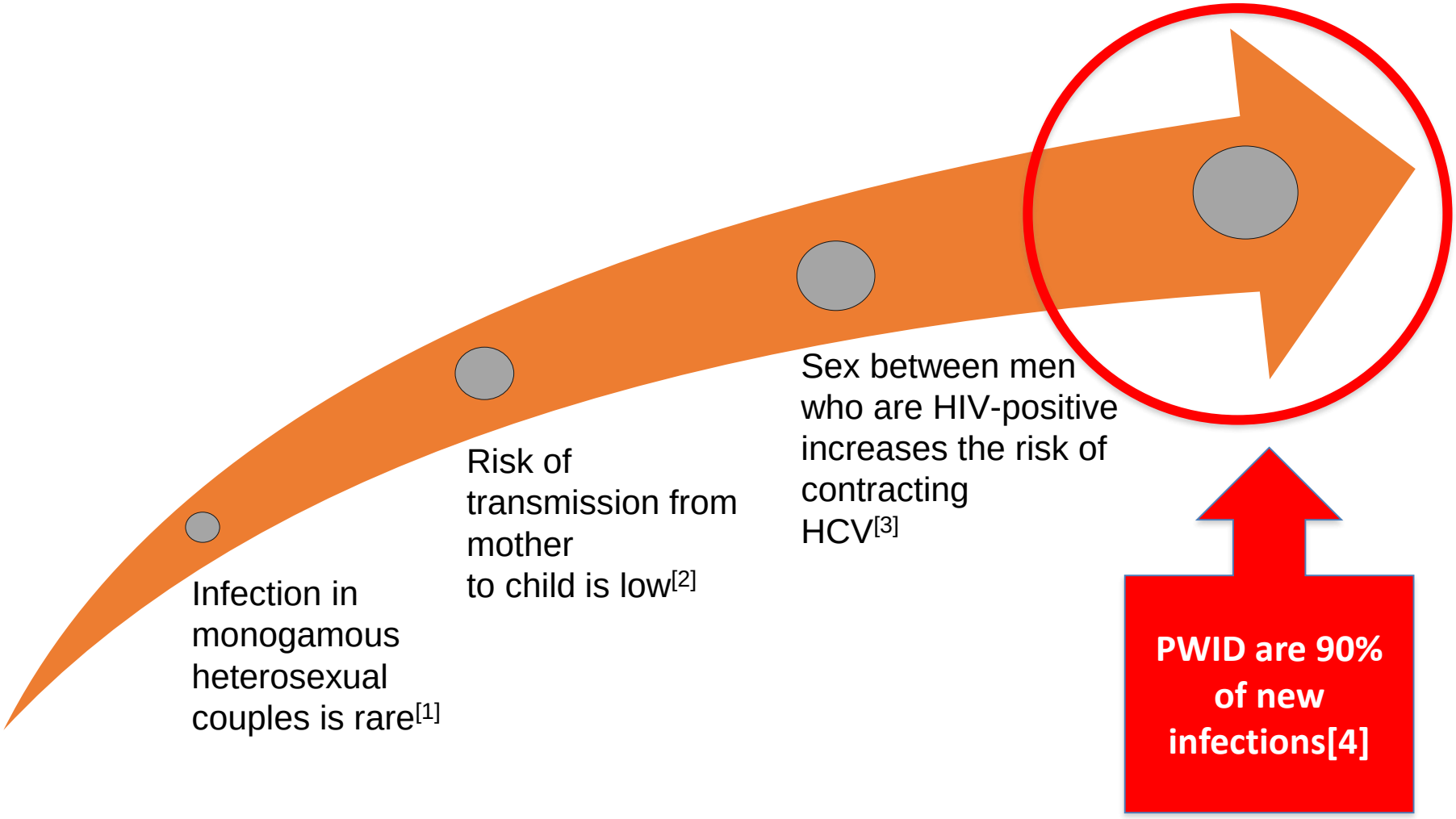
Evolution of Hepatitis C care facilitates treatment of ‘special population’

	Old Model Interferon era	New Model DAA era
Screening	Blood test (invasive)	Mouth Swabs (non invasive)
Medication route administration	Injection	Oral
Diagnosis of disease severity	Liver biopsy (invasive)	Fibroscan (non invasive)
Cost (direct)	+++	+++++
Cost effectiveness	Moderate	High
Efficiency of treatment: Sustained viral response	Moderate	Very high
Place of care	Hospital Specialist Clinic	Drug Abuse Units, Prisons, Outreach,…(where the patients are)

Treatment planning for ‘special population’: the main actions

1. Treatment as prevention
2. Treatment as essential co-factor for prevention
3. Removal of the barriers for treatment

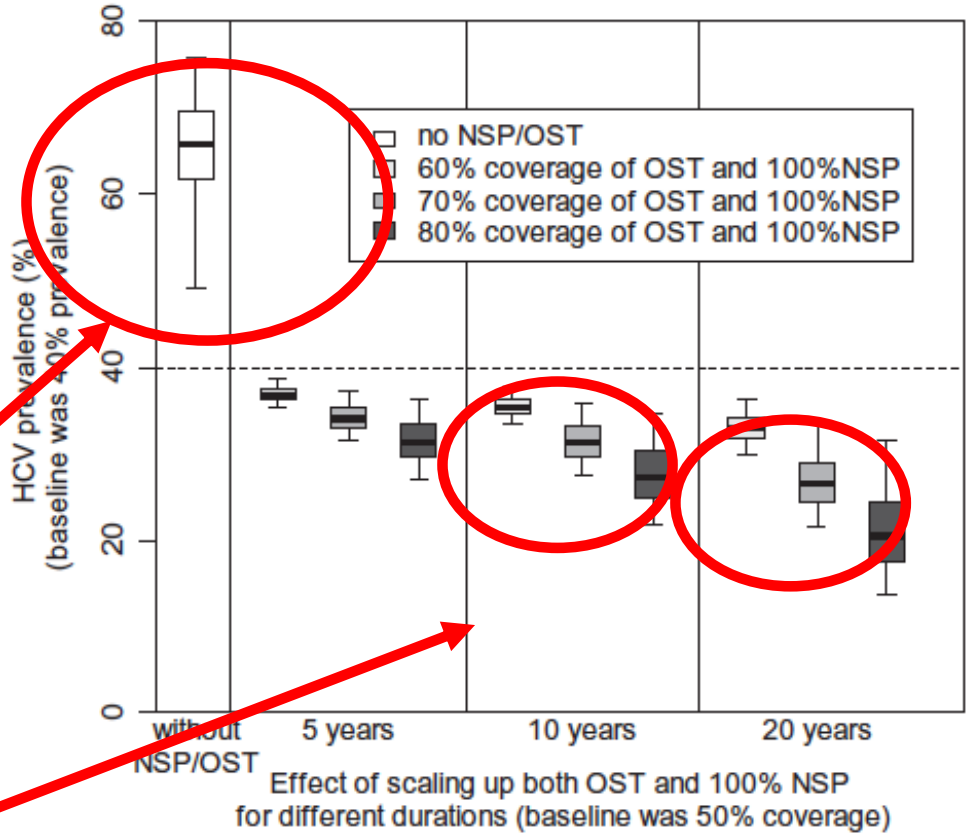
1. Hepatitis C is an infection: treatment acts as prevention



1. Terrault et al. Hepatology 2013; 2. Thomas et al. J Infect Dis 1998; 3. Larsen et al. PLoS One 2011; 4. Shepard et al. Lancet Infect Dis 2005

2. Why HCV treatment is needed for prevention?

Opioid substituion therapy (OST) and needle and syringe programmes (NSP) can reduce HCV prevalence, but cannot eliminate the disease



- Without OST or NSP chronic HCV prevalence could have been 65%
- Scaling up OST and NSP unlikely to decrease HCV prevalence to:
  - < 25% in 10 years
  - < 30% in 20 years

Only HCV treatment + harm reduction measures can elimate the HCV

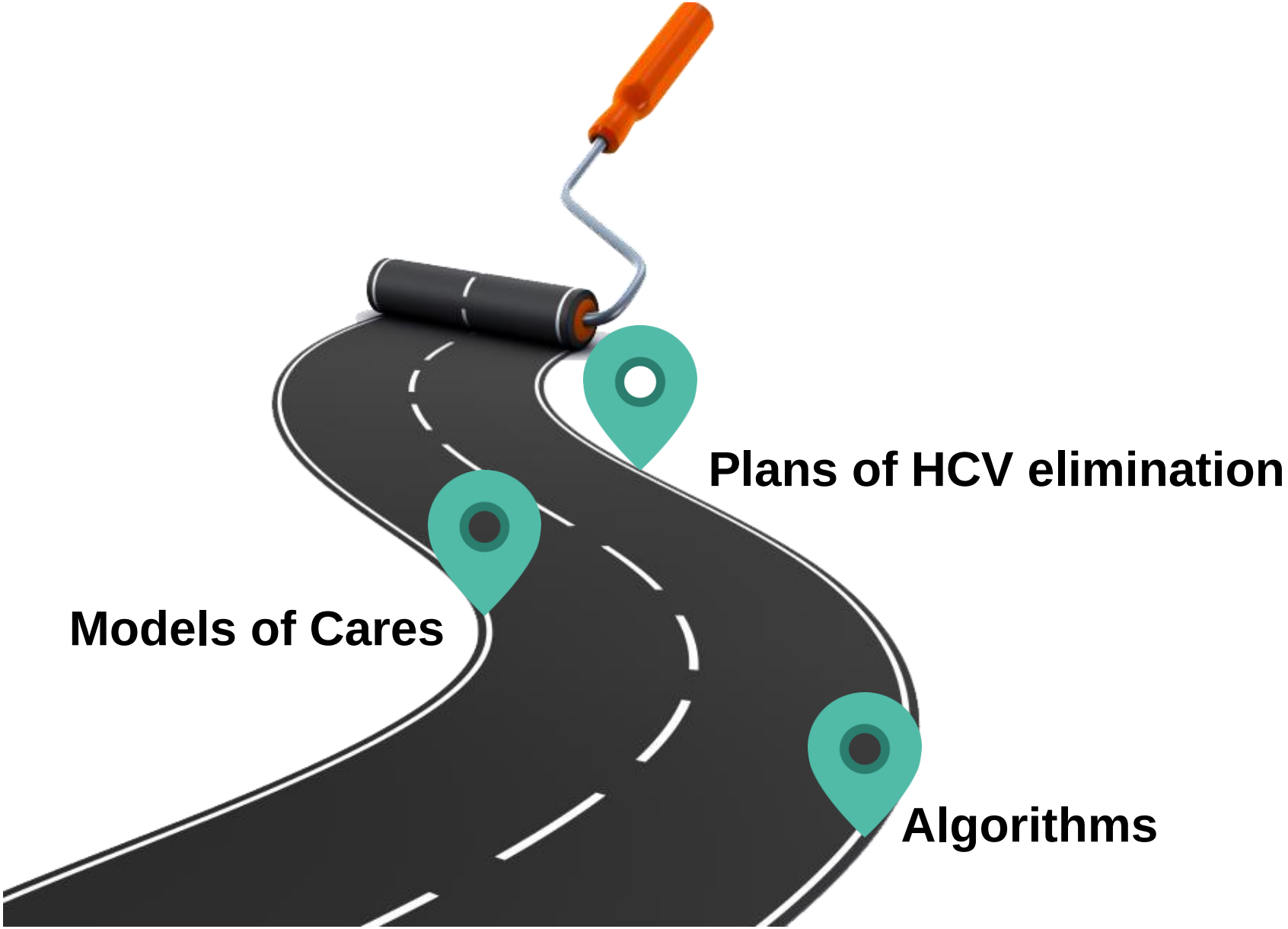
Vickerman et al. Addiction 2012.

3. Remove the barriers to access HCV care: ‘the patients voice’

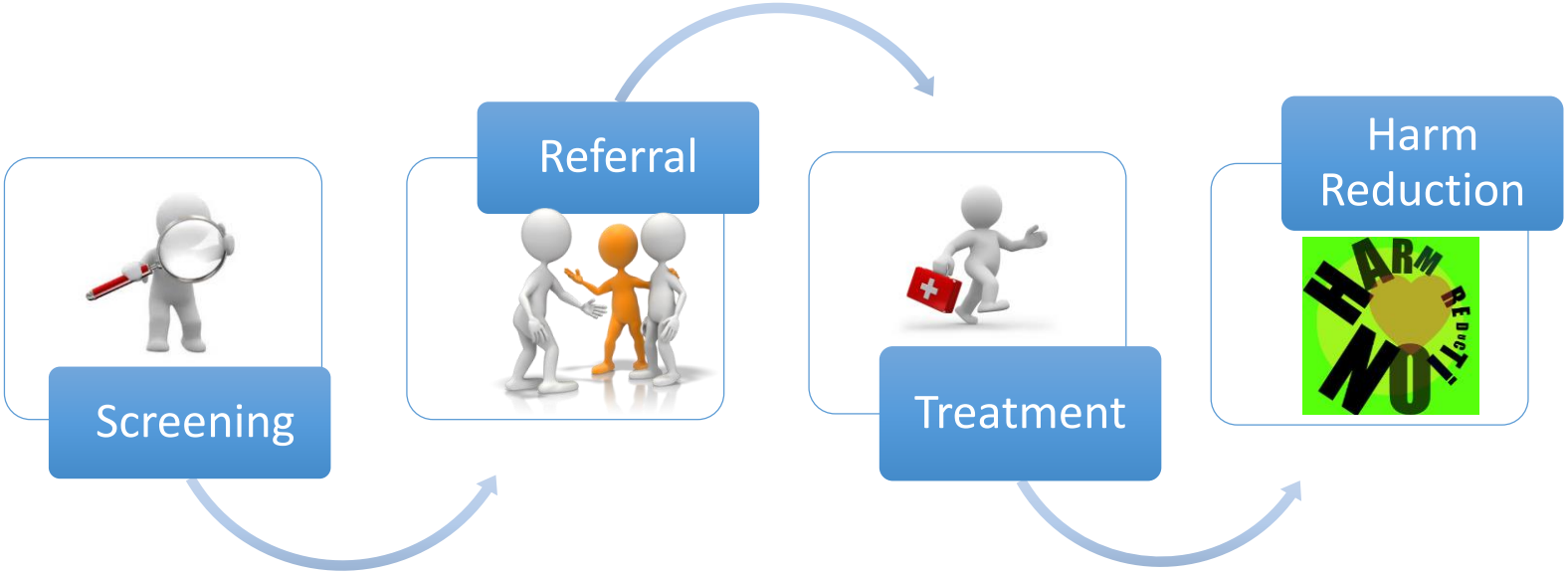
- Lack of adequate and timely referral
  “No doctor ever referred me to treatment”
- Lack of information about HCV infection and its treatment
  “The doctor told me that the virus is dormant”
- Devaluation of disease and treatment by healthcare providers and services
  “The doctor told me that I could live the rest of my life with Hep C”
- Living conditions: poverty, unstable housing, lack of transportation
  “I have no money to get the treatment center”
- Active drug use and the absence of symptoms
  “The doctor says me that until the drug comes first I cannot be treated”
- Poor relationship with HCV doctor, communication issues
  “The information I was given was insufficient”
- Stigma and discrimination
  “The doctor and the people treat me differently”

Strategy for an HCV elimination plan in PWID

1. Taking in charge: follow the essential steps
2. Holistic approach
3. Build an effective model of care
4. Include PWID in a plan of HCV elimination

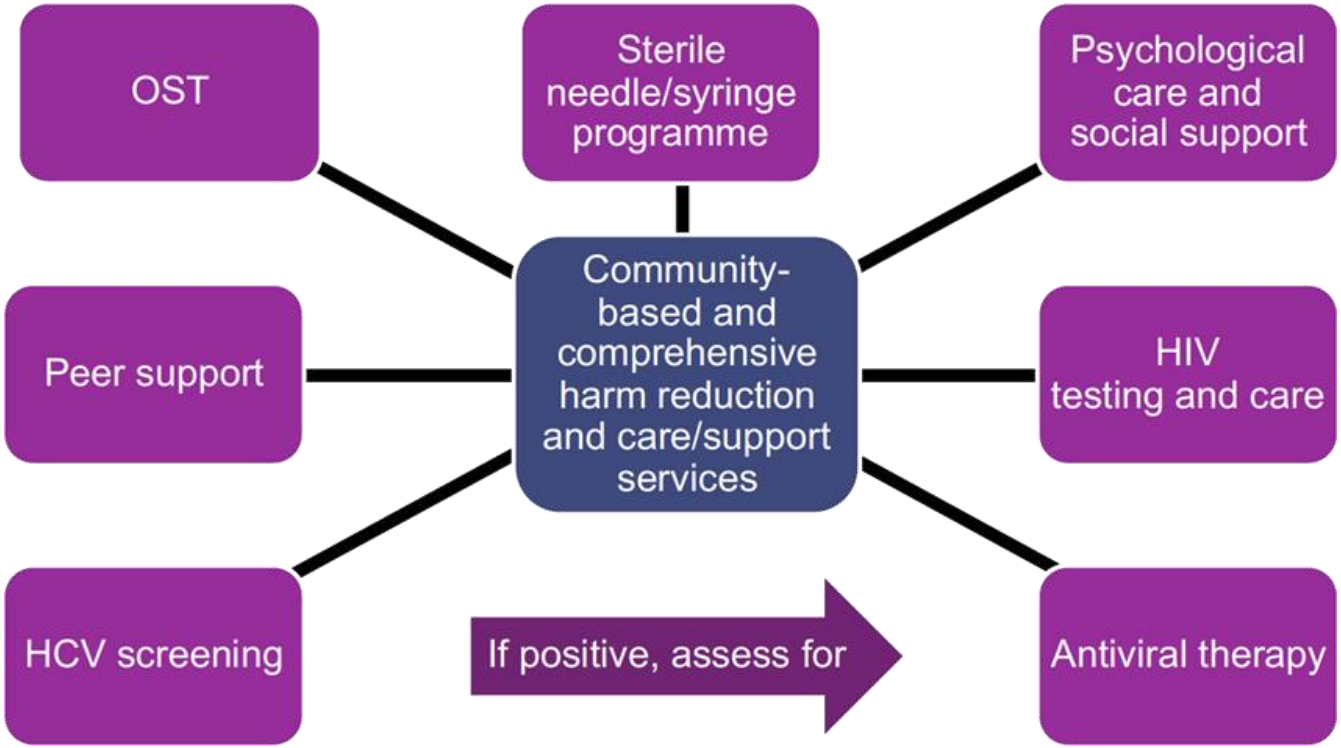

Plans of HCV elimination
Models of Cares
Algorithms

1. The taking in charge for PWID with HCV infection: the essential steps



Nava et al. 2018, Mission – Italian Quarterly Journal of Addiction, 49: 56-61

The holistic approach for PWID with HCV infection: the ingredients



Health organizations should offer all ingredients for an effective HCV treatment

Dillon JF, et al. Hepatol Med Policy 2016

2. The Model of Care for PWID with HCV infection: collaborative vs integrated

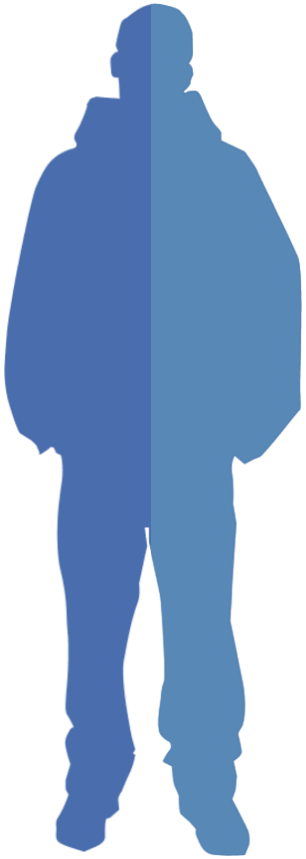
Collaborative Model

- Specialists work together in separated settings
- Suggested in occasional users or in mild and motivated addicts
- Probably more time for referral and treatment (about 1 month)
- Probably more drop-out

Integrated Model

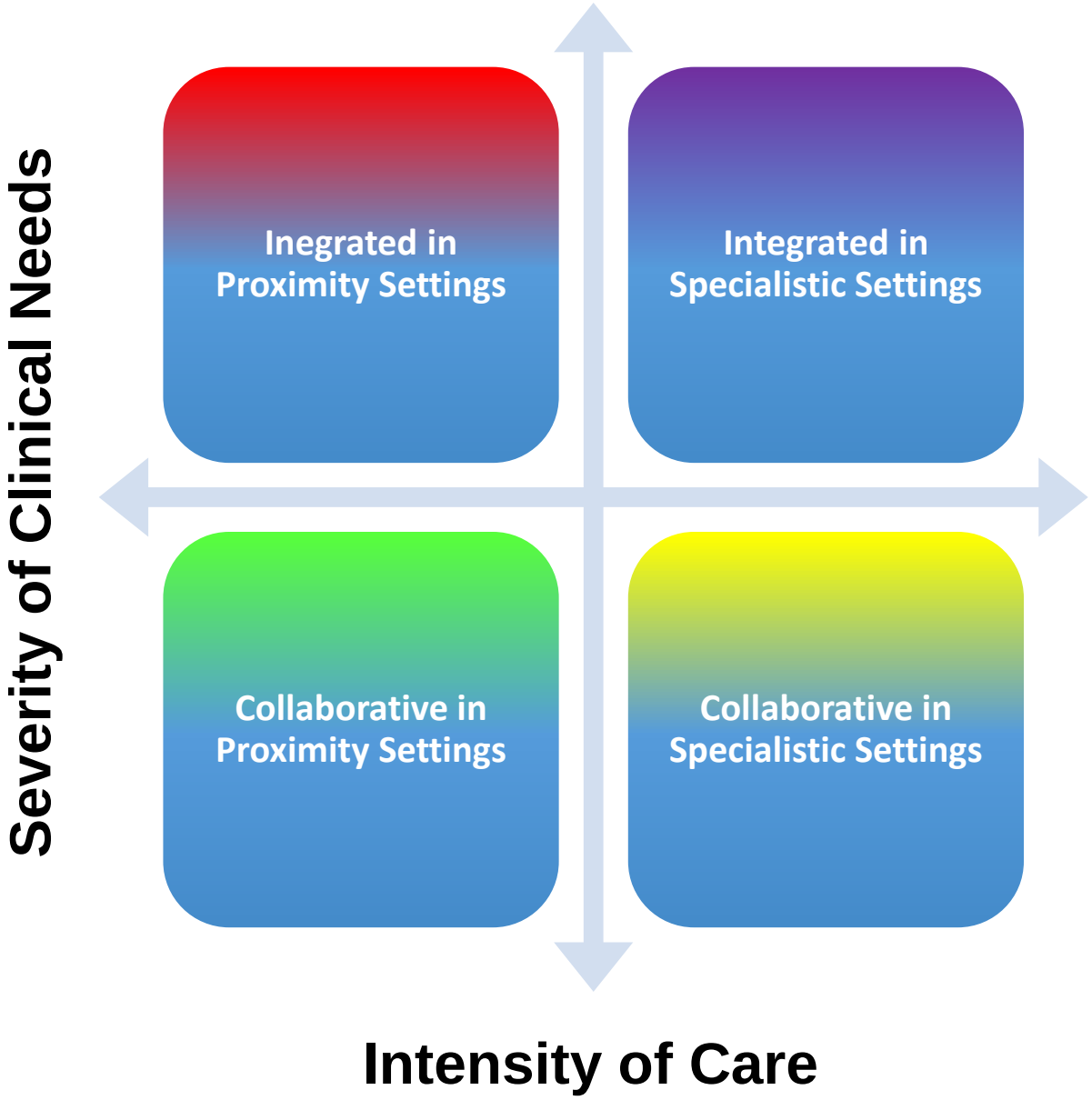
- Specialists work together in the same place
- Suggested in all drug users and in particular in severe and unmotivated addicts (can be made in drug abuse units, prisons, outreach, ect.)
- Need of more cooperation between specialists
- Need of a health group coordination (nurses based)

Management of HCV infection in PWID



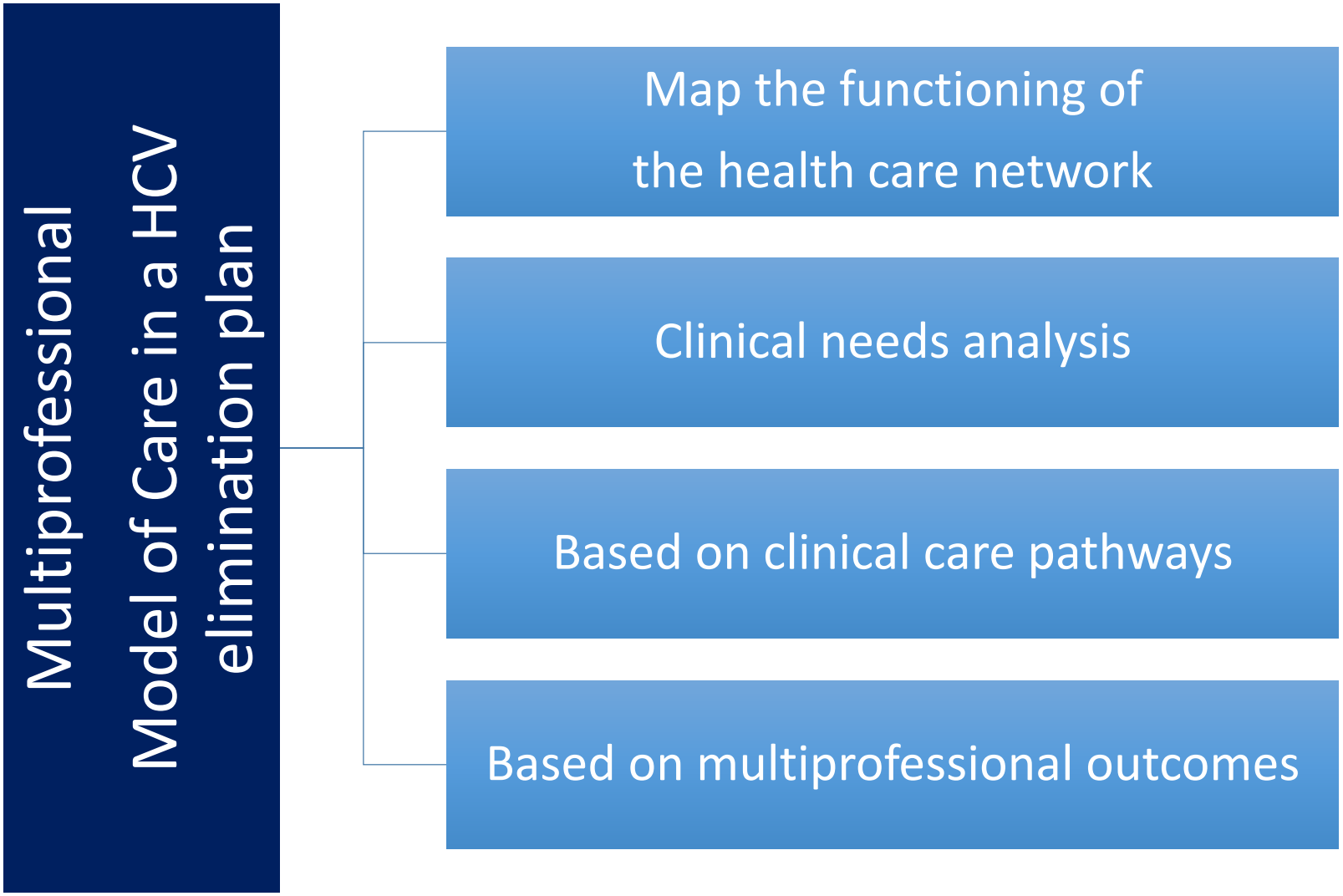
- **Stratification of Clinical Needs**
- **Severity of Clinical Needs (Priorities)**
- **Evaluation of the Intensity of Care**

Choice Modelling

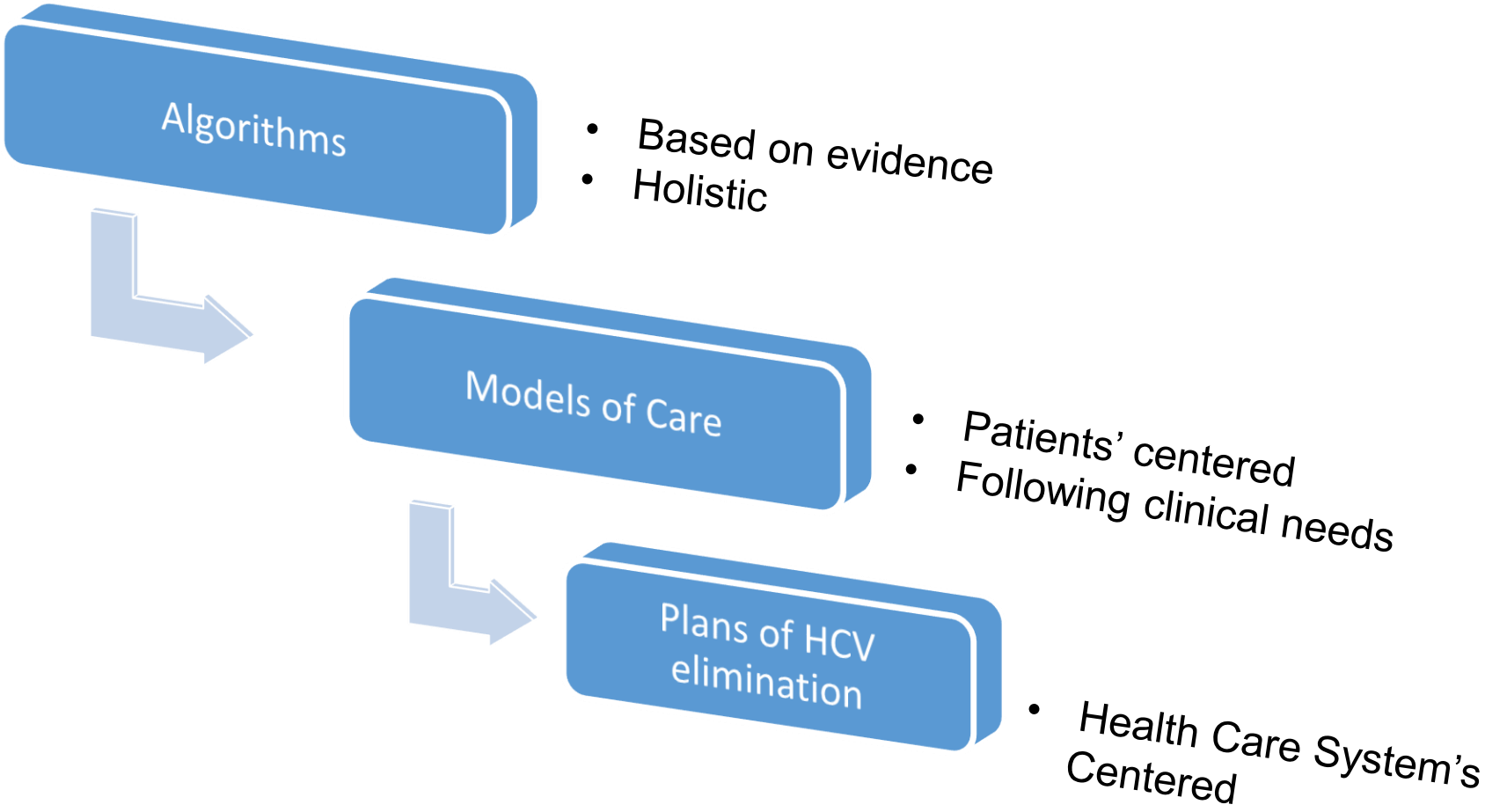


3. The Plan of HCV Elimination

One System, One Patient, One Plan…



The Active Ingredients



Conclusion

Are we also eliminating HCV in special population?

Conclusion

How to make HCV a ’rare’ disease:

- Preparing the at risk population for testing, referral, treatment and harm reduction programs

- Linking services across diseases promoting holistic and integrated models of care

- Building a plan of HCV elimination in our community able to be sustainable, flexible, universalistic, free of stigma

Treat the ’special population’ it’s like to treat and to protect ‘general population’

*Take home message