

HCV reinfection is common in people entering prisons in Catalonia, Spain

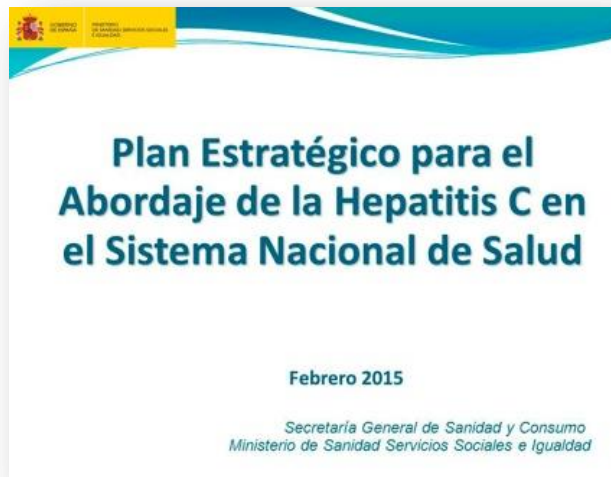
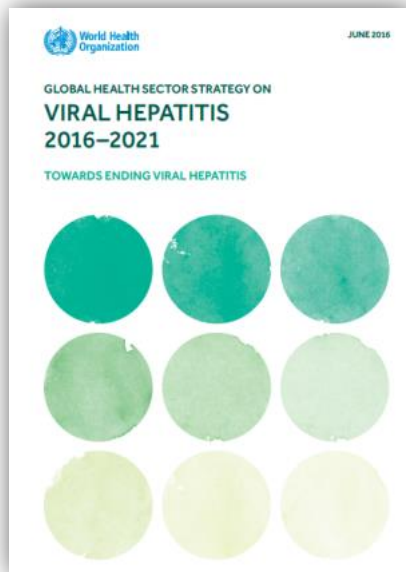
#ReHCV

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Disclosures

Travel sponsorship to attend meetings from Gilead and Cepheid.

People in prisons are key to reach HCV elimination



People who inject drugs attending harm reduction services in Catalonia

HepCdetect II study (2016-2017, N=410)

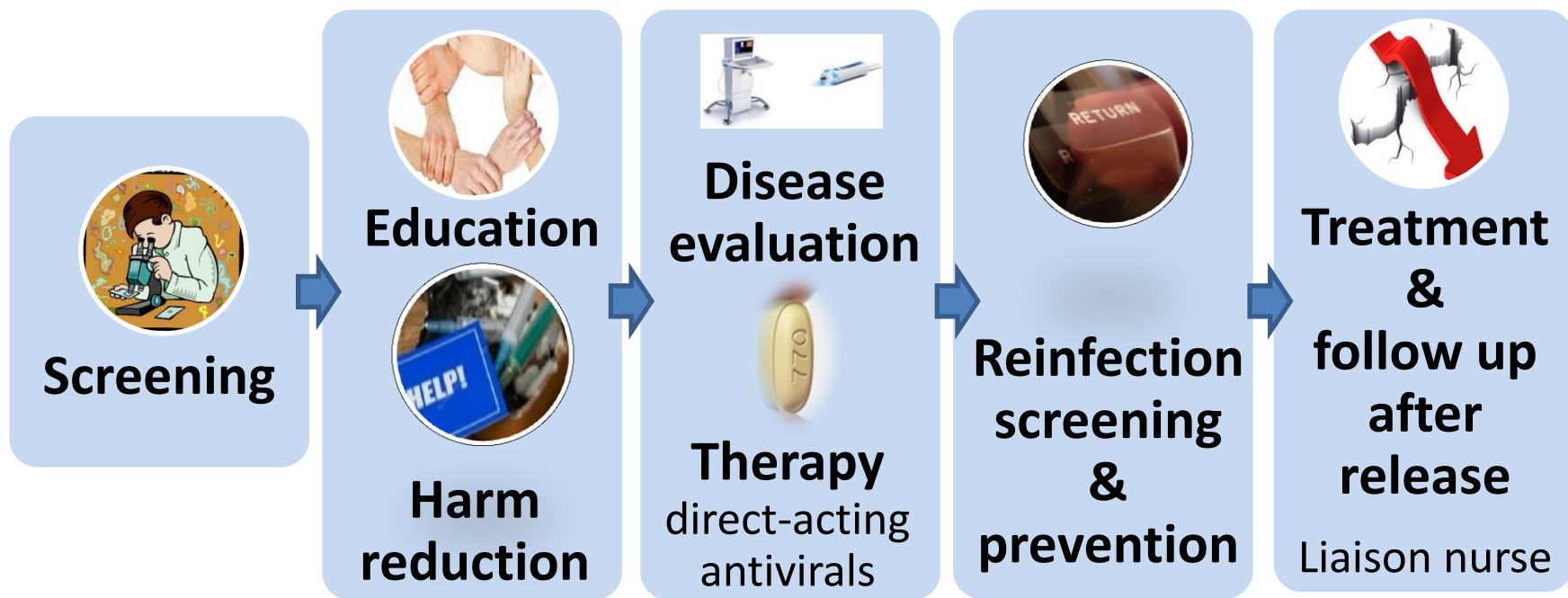


Viremic HCV infection: 58.5%

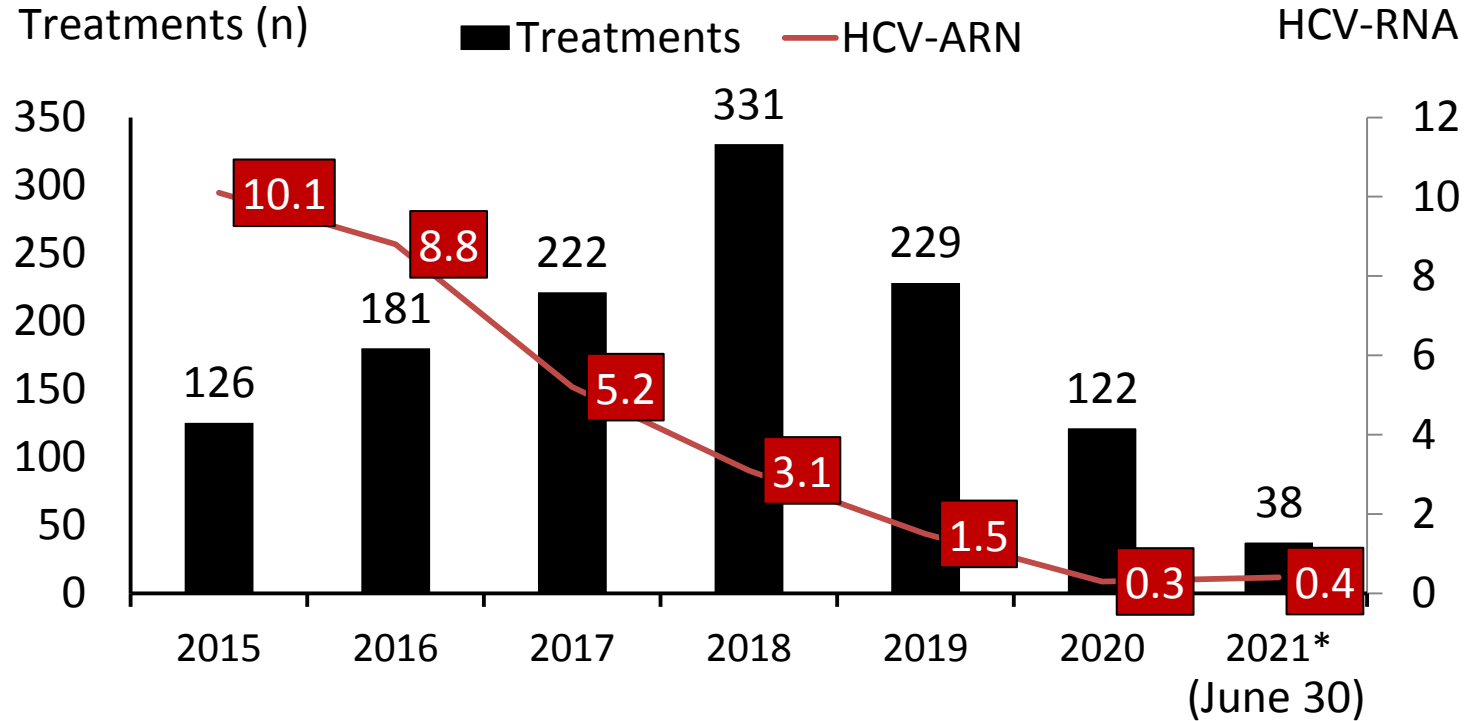
Previous incarceration: 64%

Drug injection in prison: 27%

HCV elimination services offered in Catalan prisons

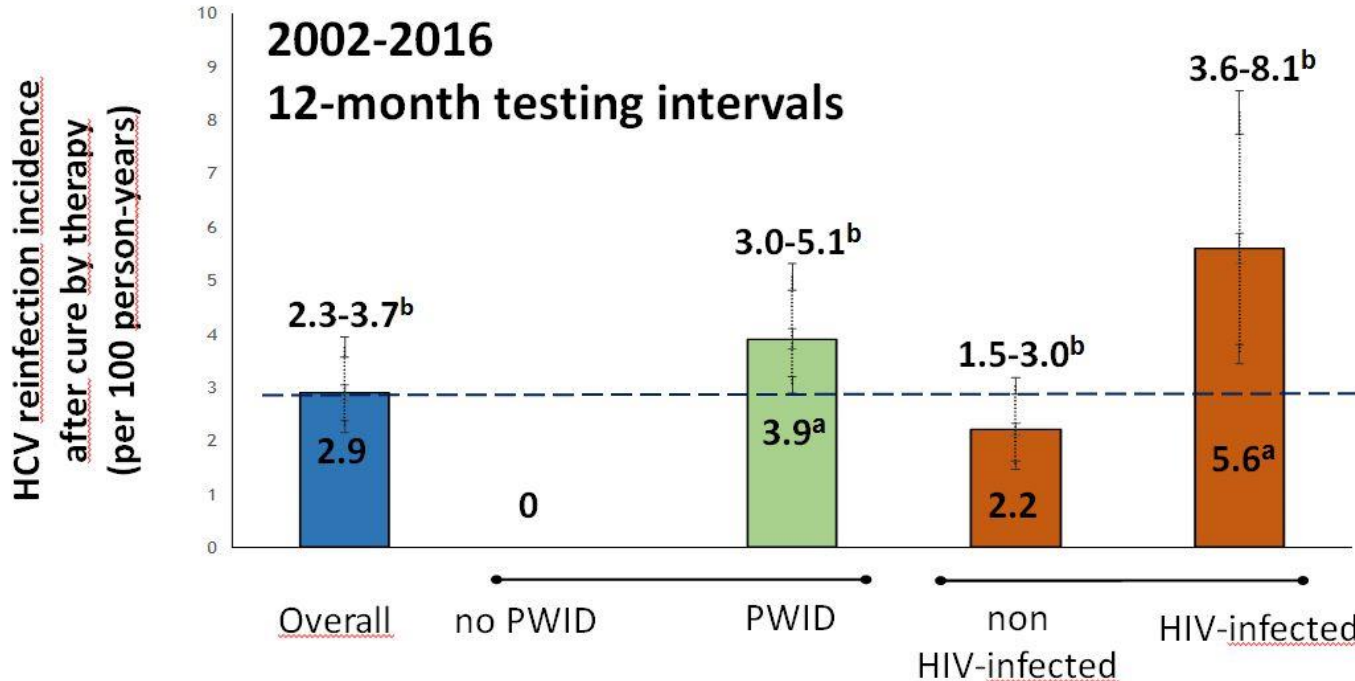


HCV-RNA prevalence in Catalan prisons



Slide provided by Dr. Andres Marco

Reinfection may be an obstacle to reach HCV elimination in Catalan prisons



$p < 0.001$ (log rank)^a
95% Confidence Interval^b

Aims

- i) To determine the current reinfection rate after cure by therapy in people treated in Catalan prisons,
- ii) To assess the proportion of reinfection in people entering prisons, and its determinants,
- iii) To characterize the molecular epidemiology of the HCV epidemic in prison in relation to the community.

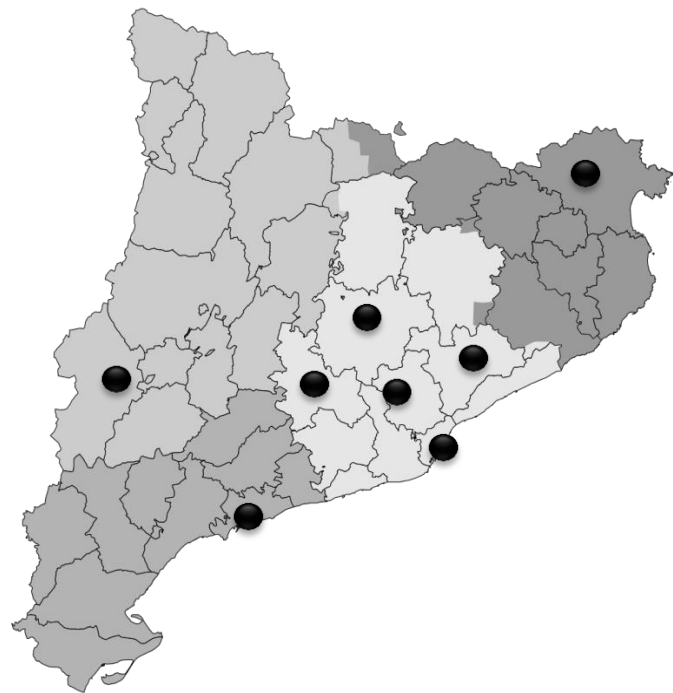
Methods

- Study design:

Prospective study of HCV reinfection in the eight Catalan prisons (Jan 19-Dec 20).

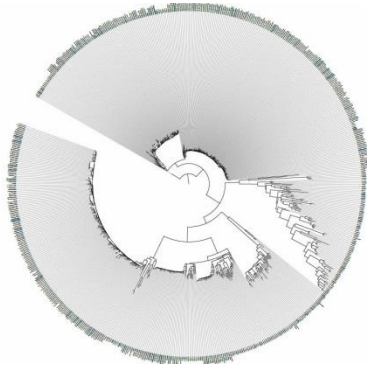
- Study cohorts:

- 1) People cured by therapy in prison and followed-up for reinfection (6, 12, 18, 24 months post-SVR).
- 2) People with viremic HCV infection detected at incarceration.



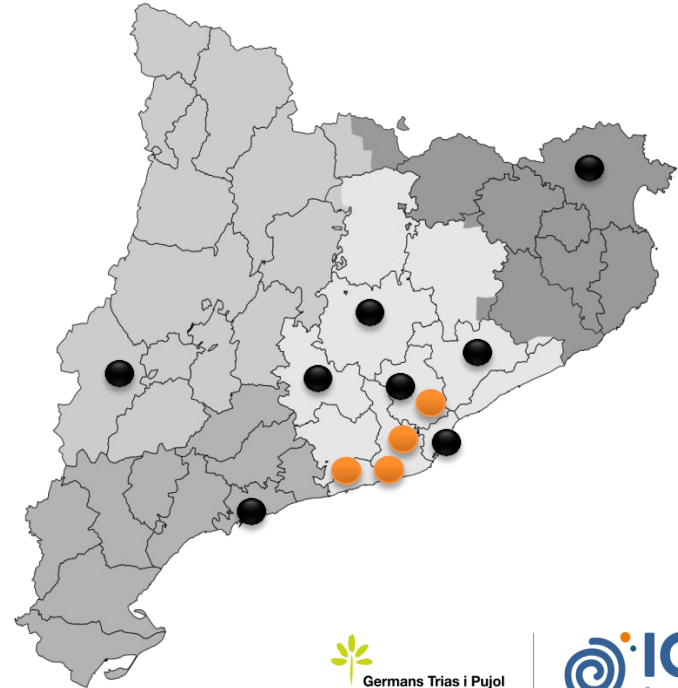
Methods

- Molecular epidemiology study:
Sequencing and phylogeny of HCV isolates (NS5B region)



Prisons (Re-HCV study) ●

Harm reduction services (HepCdetectII study) ●



Results

- **Cohort 1. People cured by therapy in prison with follow-up of reinfection:**

	N=97
Age, mean (range)	44 (30-59)
Male gender, %	89.6
Foreign origin, %	29.2
HIV positive, %	29.5*
Intravenous drug use (after cure)	19.0

**All under antiretroviral therapy*



COVID-19

17% of people in Catalan prisons
were released in 2020
(Marco A, *et al.* Medicina de Familia, 2021)

Results

- Cohort 1. People cured by therapy in prison with follow-up of reinfection:**

Follow-up after cure by therapy	N=97
6 months, %	94.8
12 months, %	57.7
18 months, %	23.7
24 months, %	8.2



103 person-years follow-up

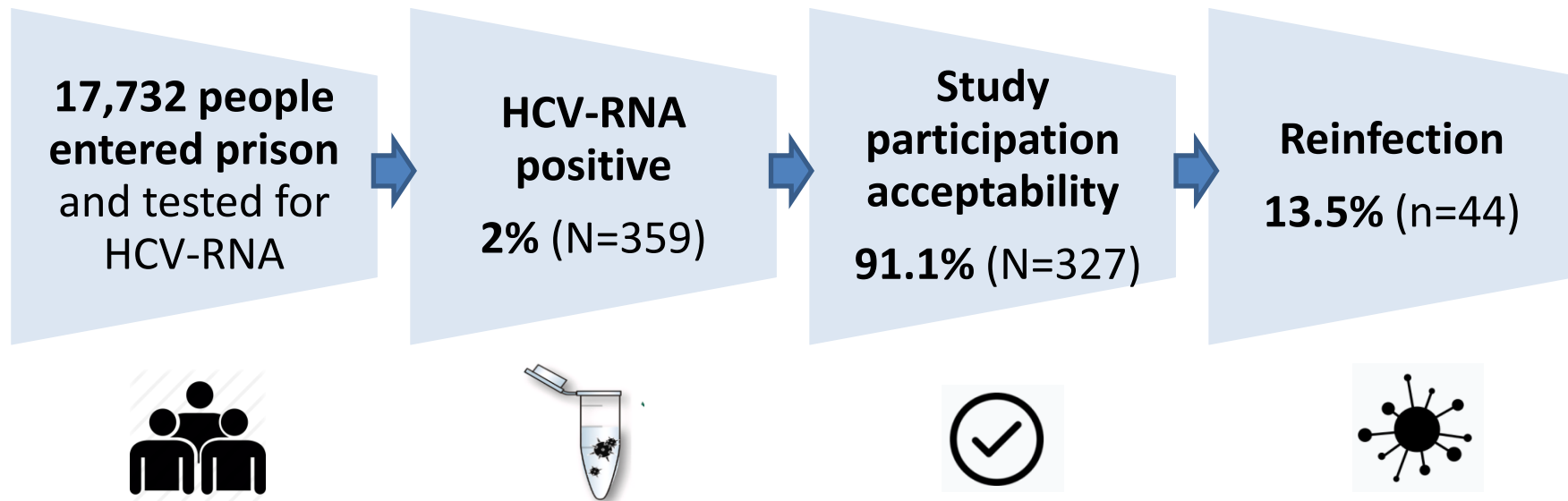
2 reinfections (2.1%)
detected at 12 months.



Incidence of reinfection after cure by therapy:
1.94/100 person-years (95% CI: 0.24-7.01)

Results

- Cohort 2. People with viremic HCV infection at incarceration:**



Results

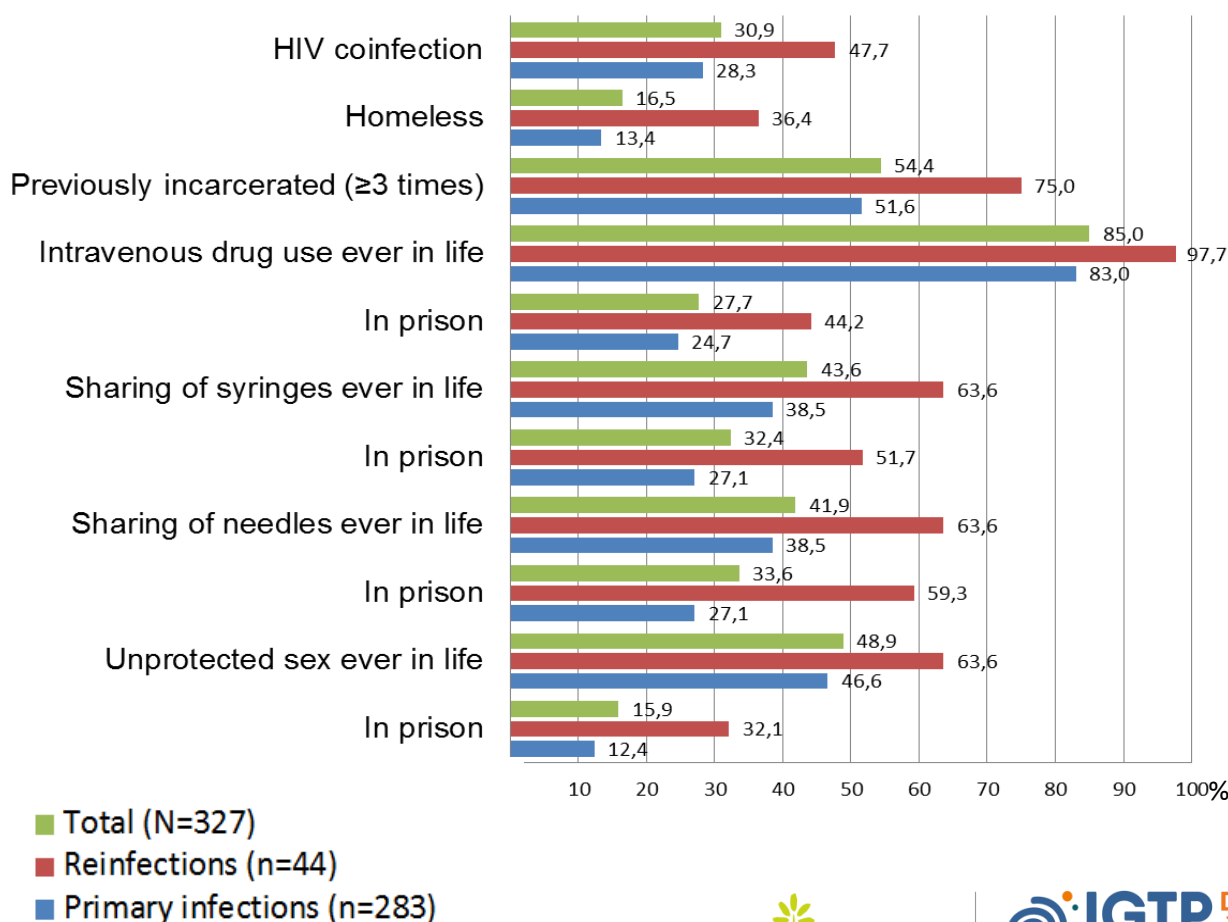
- Cohort 2.**
People with viremic
HCV infection
at incarceration:

93.1% men

mean age, 41 yr

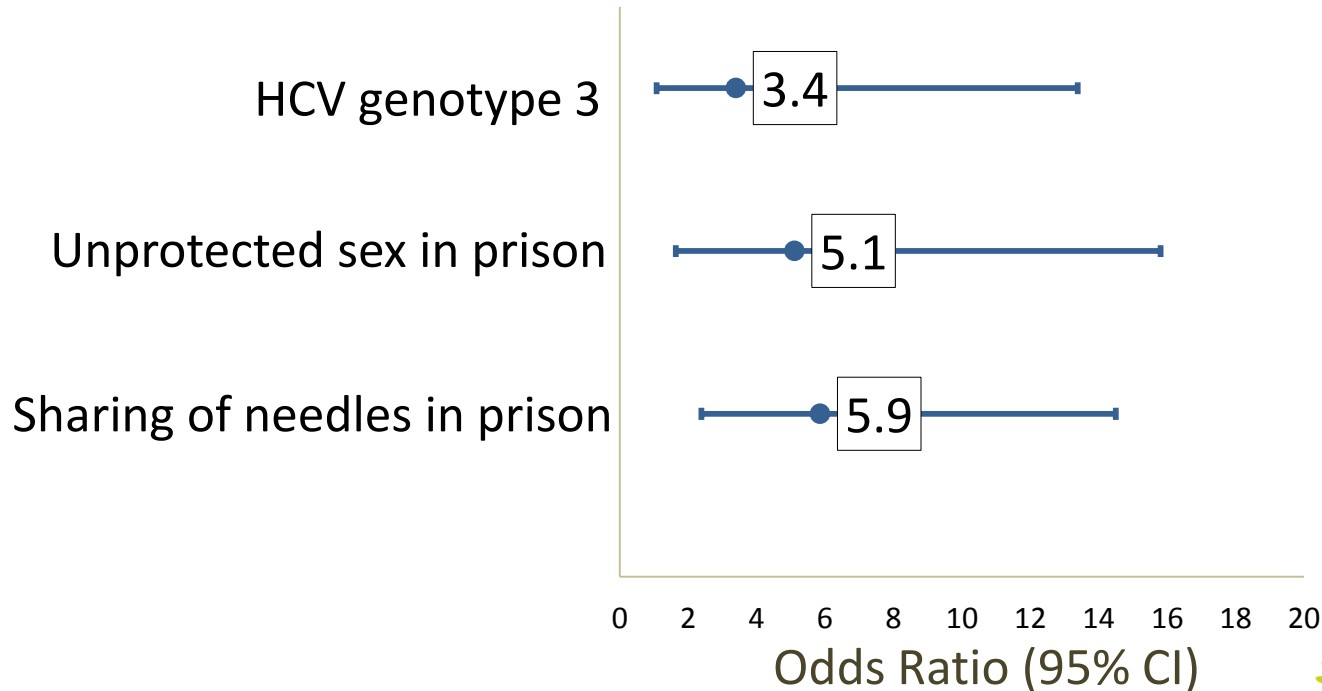
45.8% foreigners

p-value <0.05



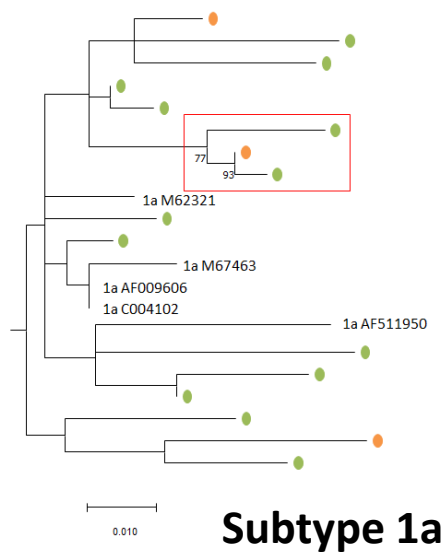
Results

- Determinants of HCV reinfection in viremic people at incarceration:

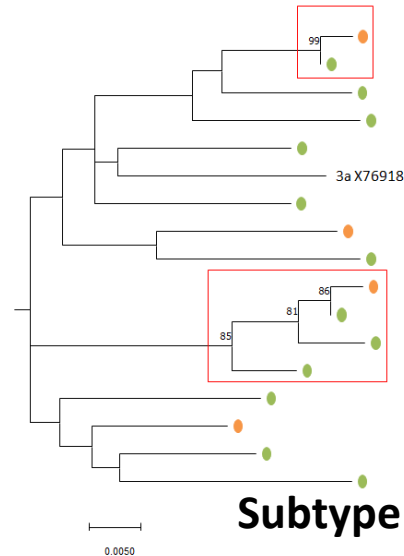


Results

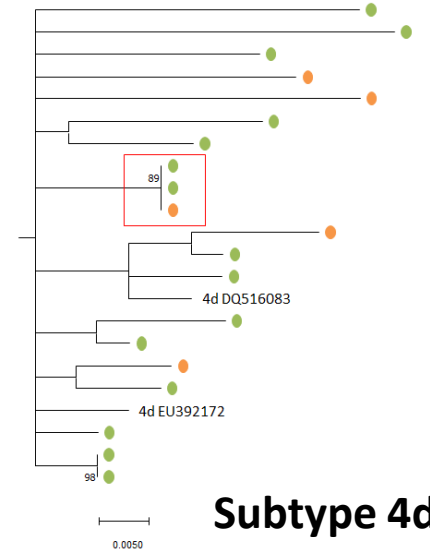
- Epidemiological relationship among HCV isolates circulating in Catalan prisons and in PWID in the community:



Subtype 1a



Subtype 3a



Subtype 4d

● Prisons (ReHCV study) ● Harm reduction services (HepCdetectII)

Conclusions

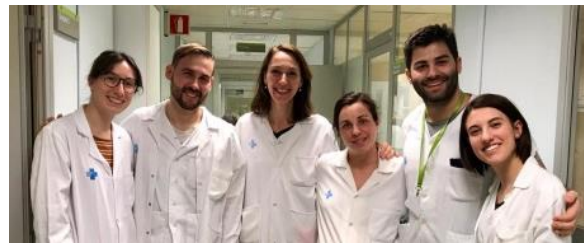
- HCV reinfection rate is low in individuals treated in Catalan prisons, but common in people entering and is associated with sharing needles and unprotected sex during previous imprisonments.
- In order to maintain a low HCV prevalence in prisons and achieve HCV elimination, it is necessary to strengthen harm reduction and test and treat programs among PWID both in prisons and in the community.

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