



**Kirby Institute**

# Hepatitis C treatment as prevention: *Feasible or Forlorn?*

**Professor Greg Dore**

Viral Hepatitis Clinical Research Program,  
Kirby Institute, University of New South Wales



# HCV treatment as prevention

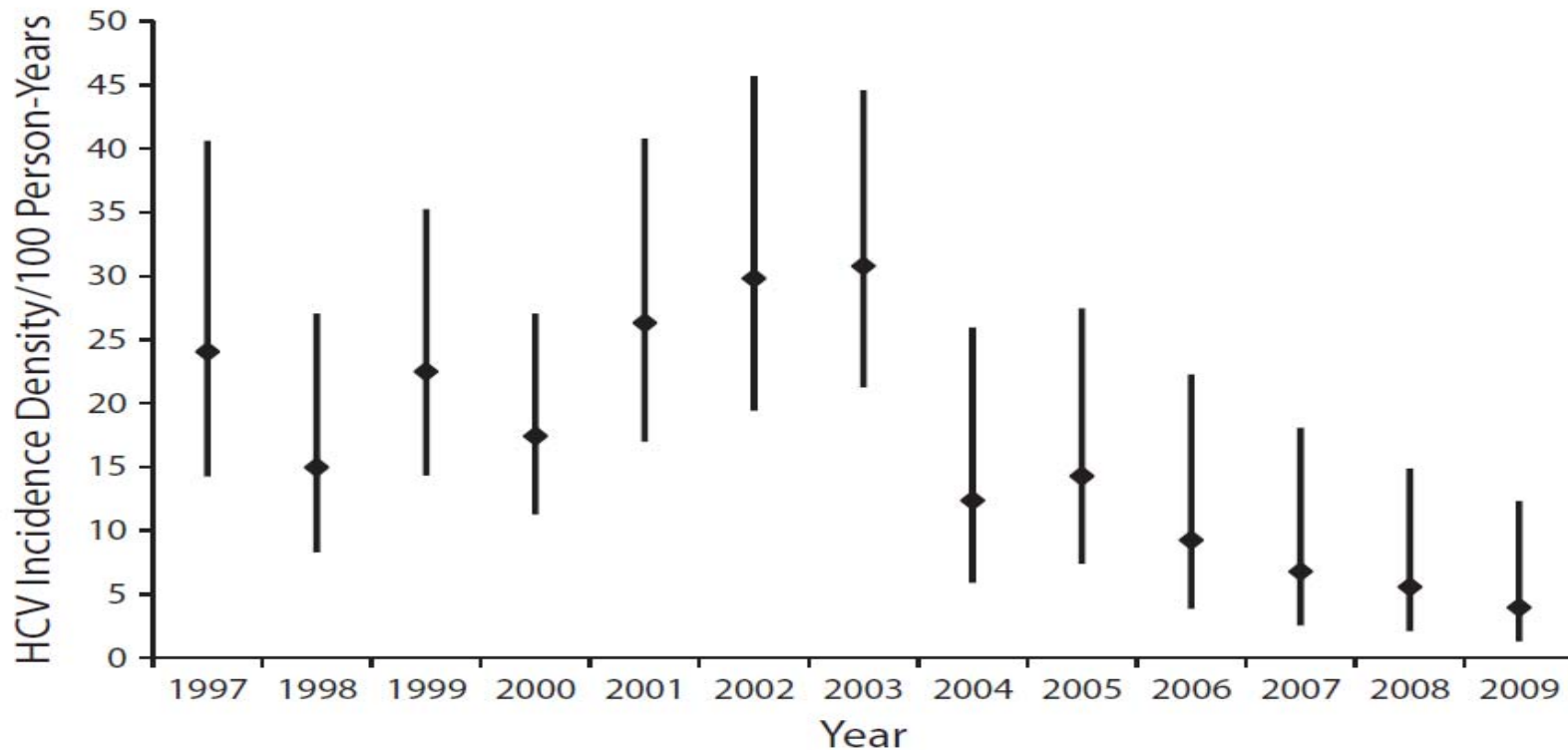
---

## *Reasons to strive for HCV elimination through treatment*

- Rising burden of HCV-related liver disease and mortality
- Evidence for extra-hepatic HCV morbidity and mortality
- Entering new era of highly effective DAA-based therapy
- Modest success in HCV prevention through harm reduction

# HCV prevention through harm reduction

*HCV incidence among PWID in Australian NSP Survey*



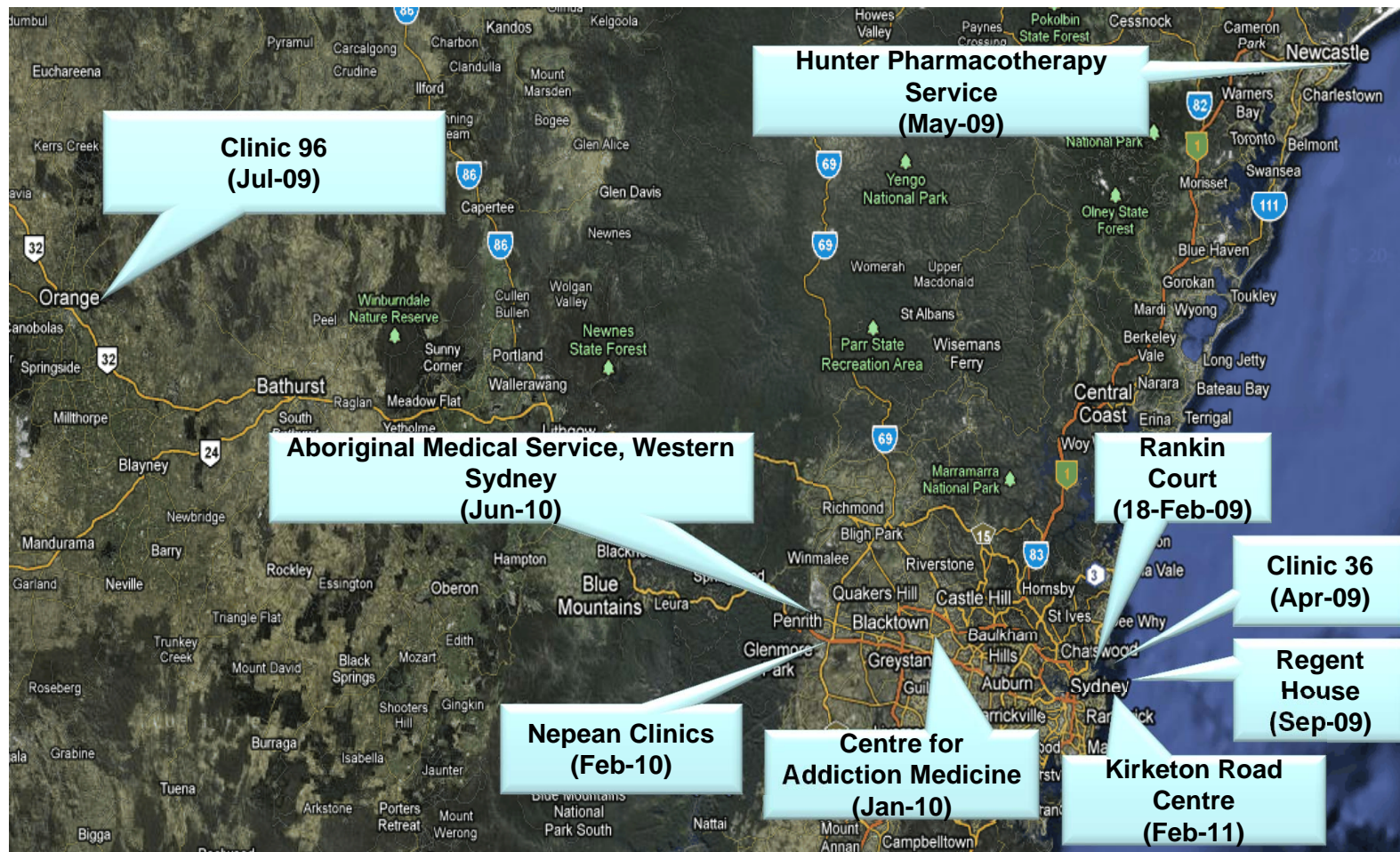
# HCV treatment as prevention

---

## *Strategies towards HCV elimination*

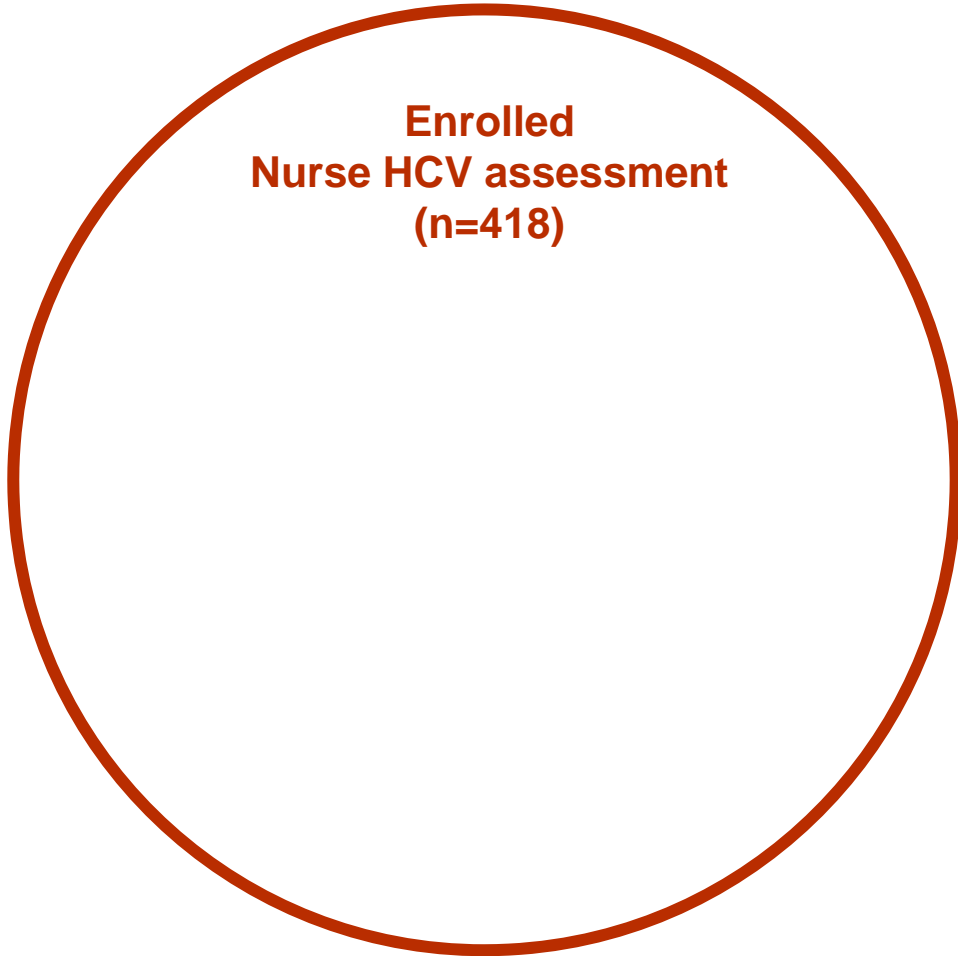
- Broad expansion of HCV treatment access
- Targeted programs for those with risk of transmitting:
  - *PWID*
  - *Prisoners*
  - *HIV+ MSM*
  - *Antenatal women*
- Partnerships and public health advocacy
- Drug price reform

# Expansion of HCV treatment: ETHOS project



# ETHOS cohort study

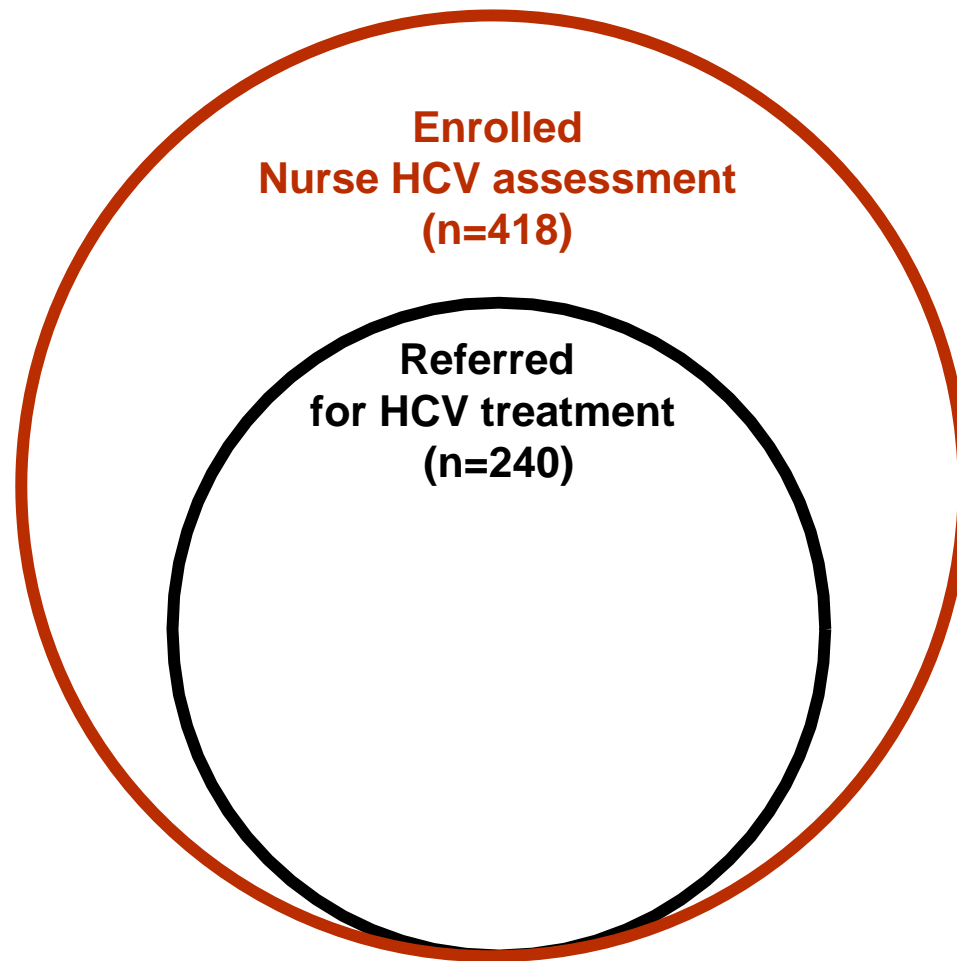
---



**Enrolled  
Nurse HCV assessment  
(n=418)**

# ETHOS cohort study

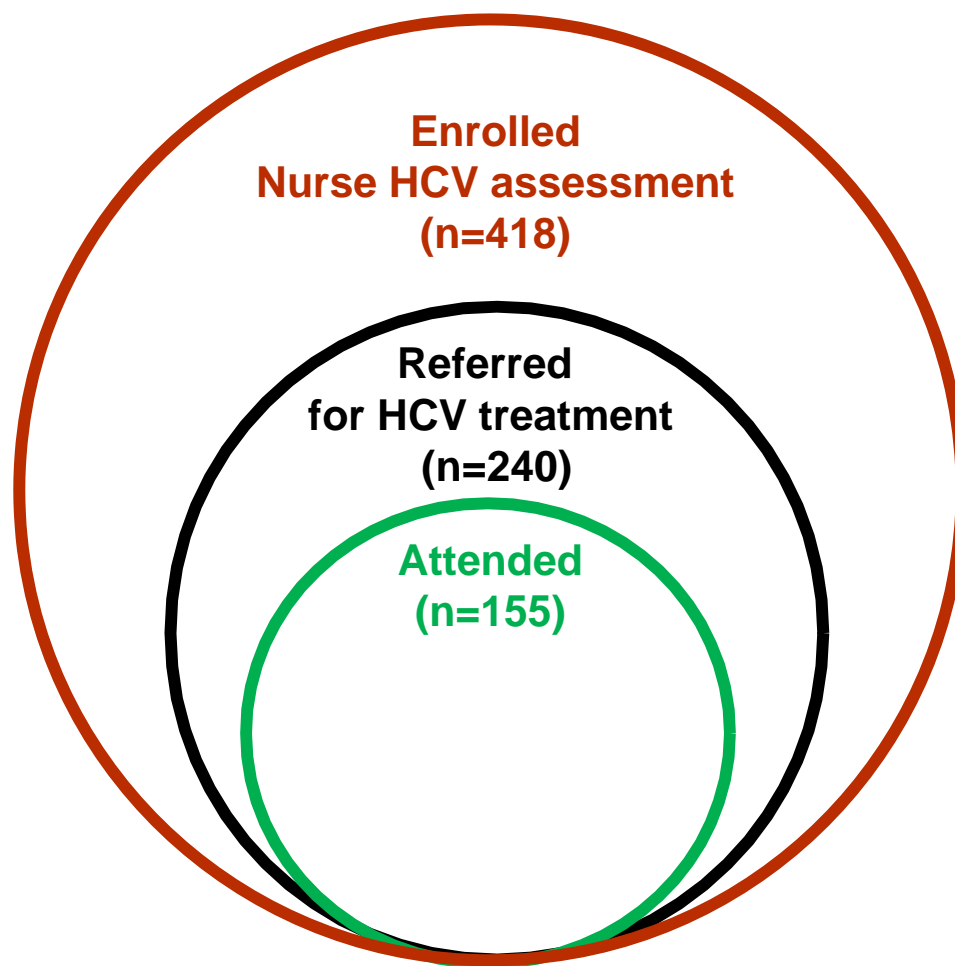
---





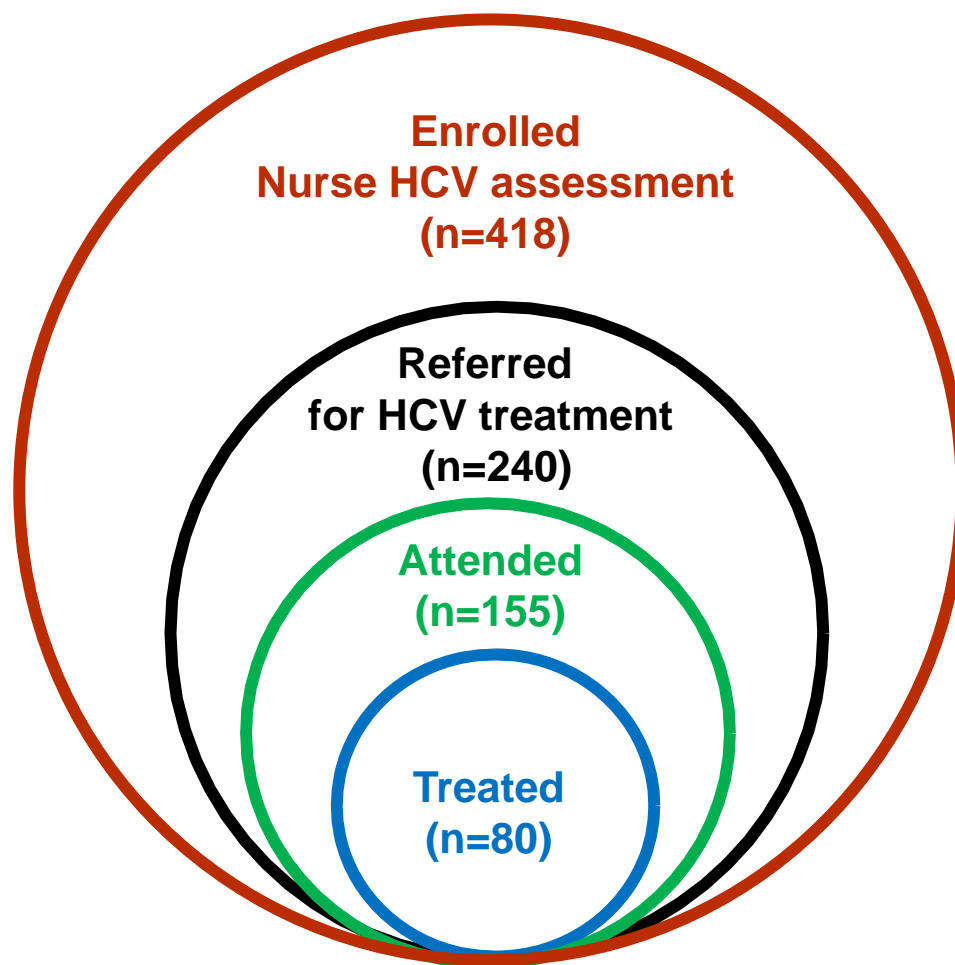
# ETHOS cohort study

---

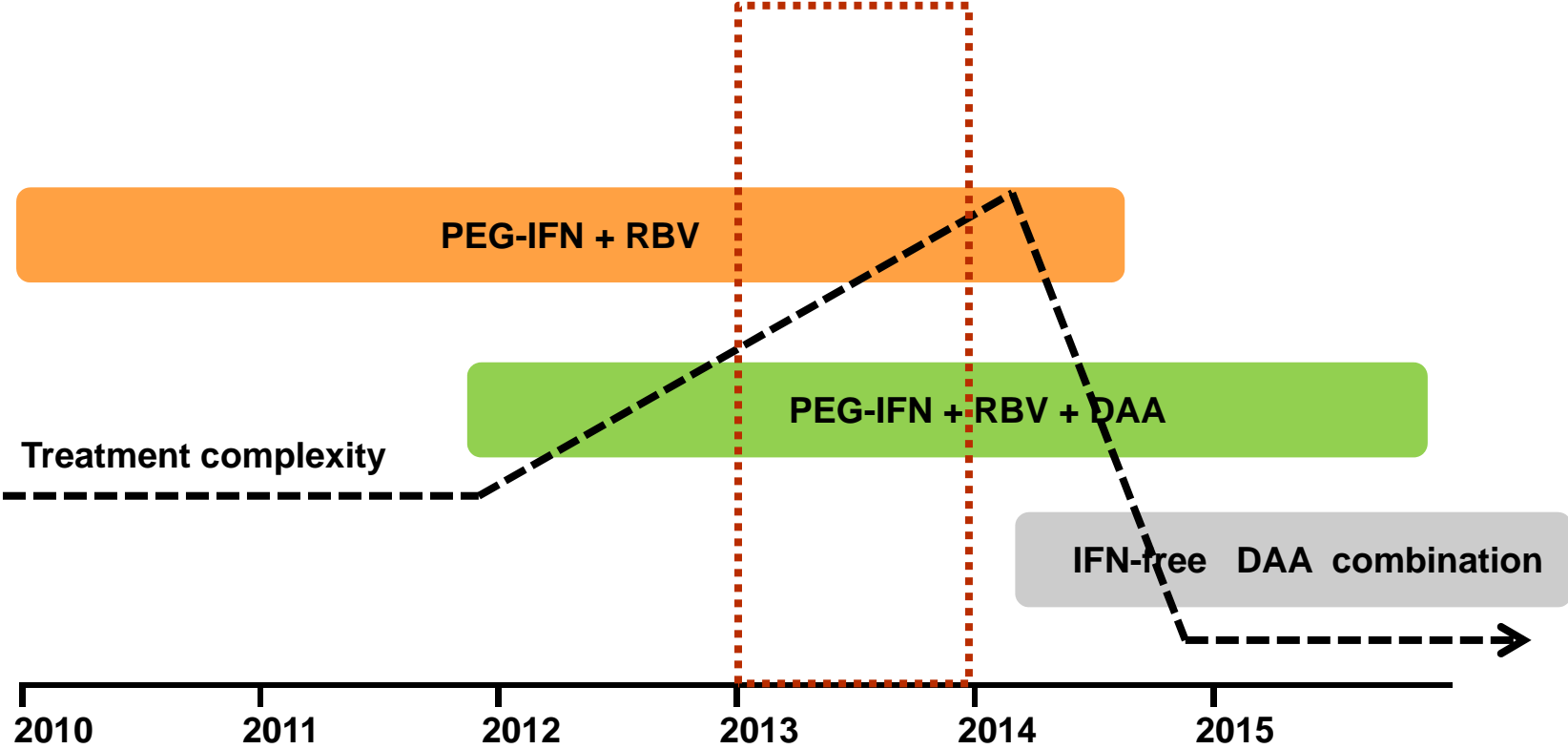


# ETHOS cohort study

---

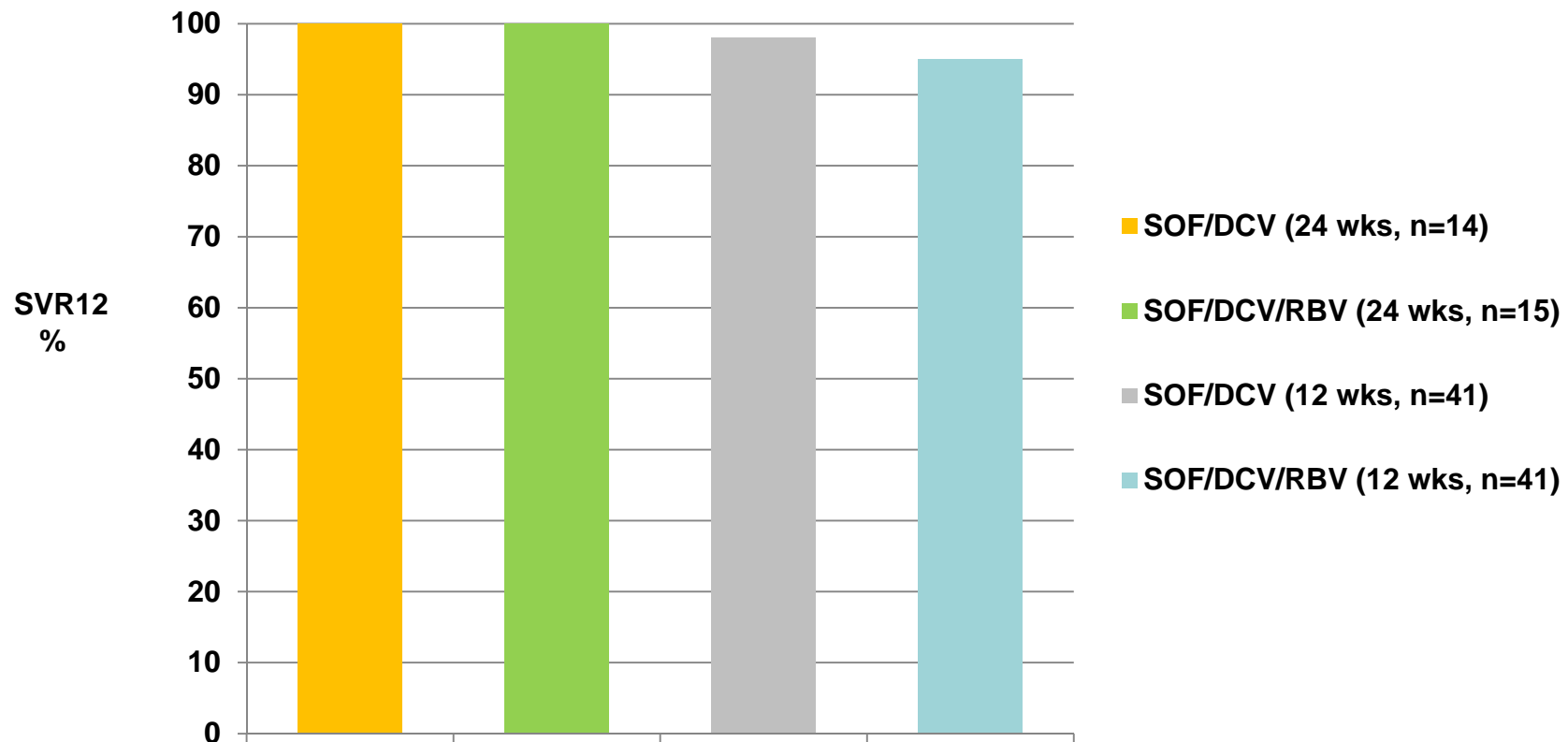


# HCV treatment strategies



# IFN-free DAA therapy (Sofosbuvir/Daclatasvir)

*HCV genotype 1 treatment naive*



Non-cirrhotic, ~70% non-CC, ~GT1a 70%;  
No cases of virological breakthrough or relapse

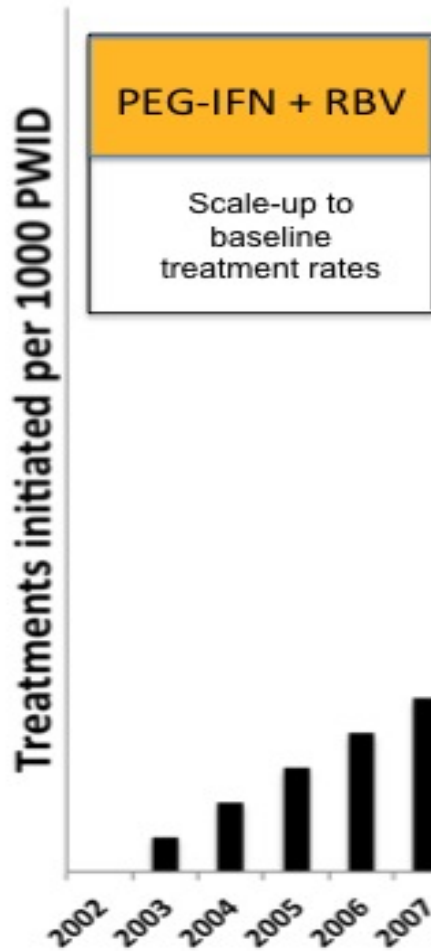
## IFN-free DAA therapy in PWID

---

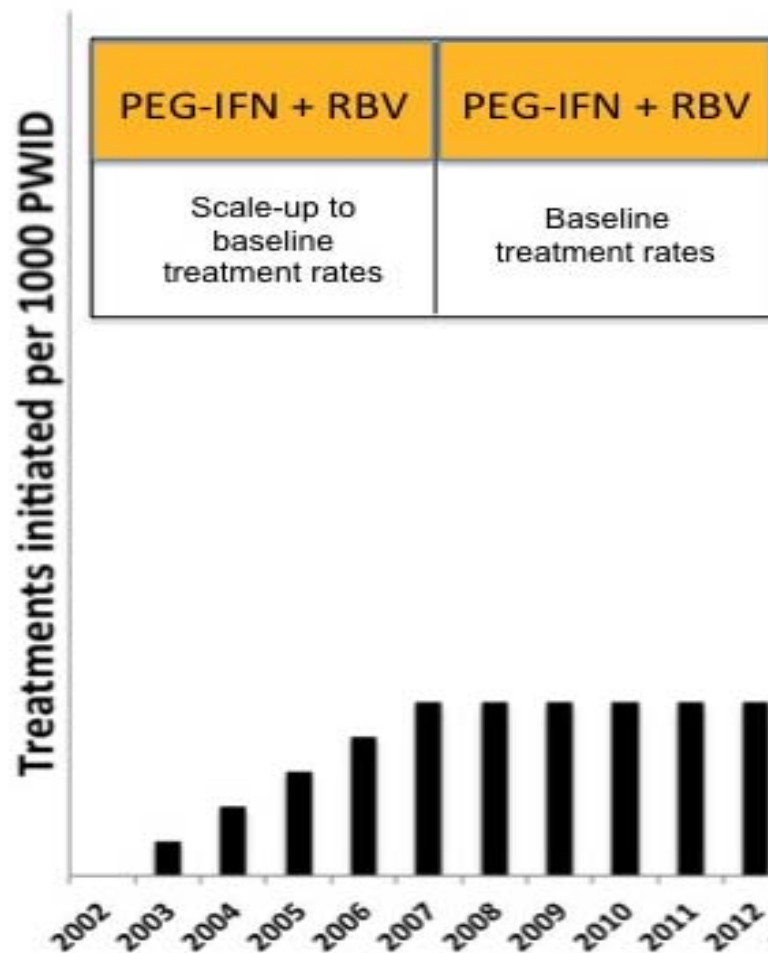
Parameter	Edinburgh value	Melbourne value	Vancouver value
HCV chronic prevalence among PWID	25%	50%	65%
PWID population size	4,240	25,000	13,500
Baseline treatment rate per 1000 PWID	8	1	3

# IFN-free DAA therapy in PWID

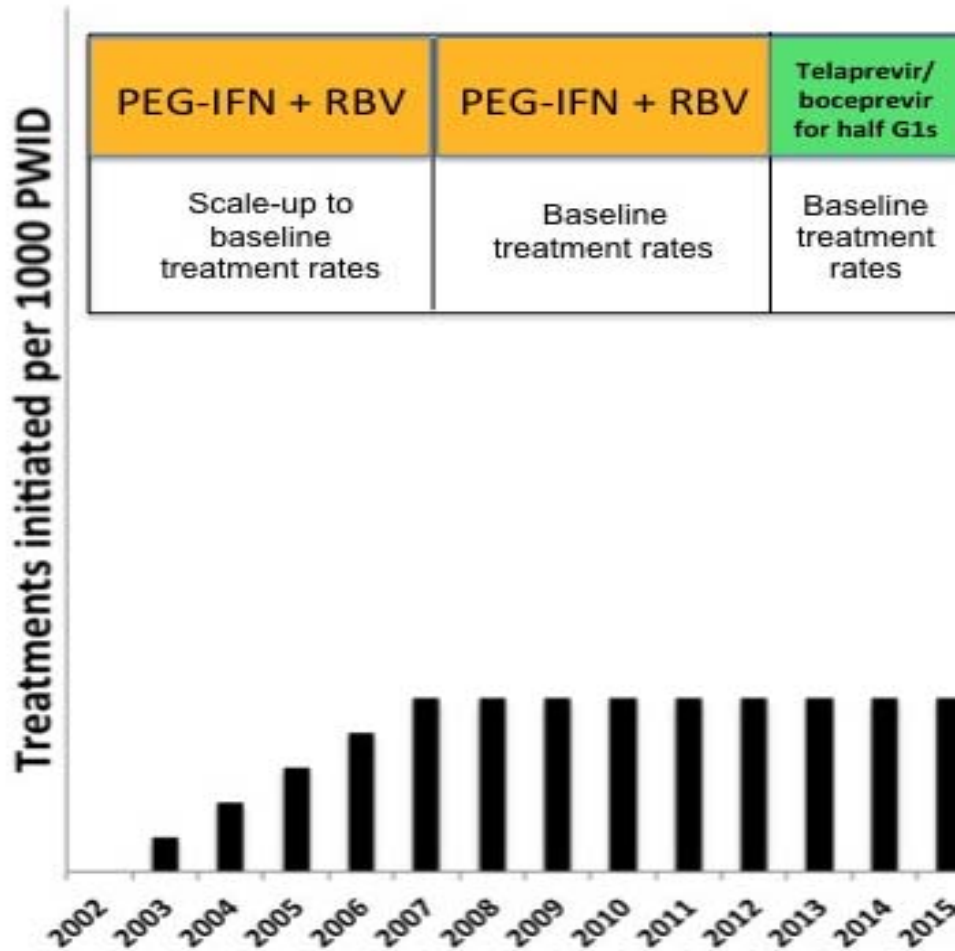
---



# IFN-free DAA therapy in PWID

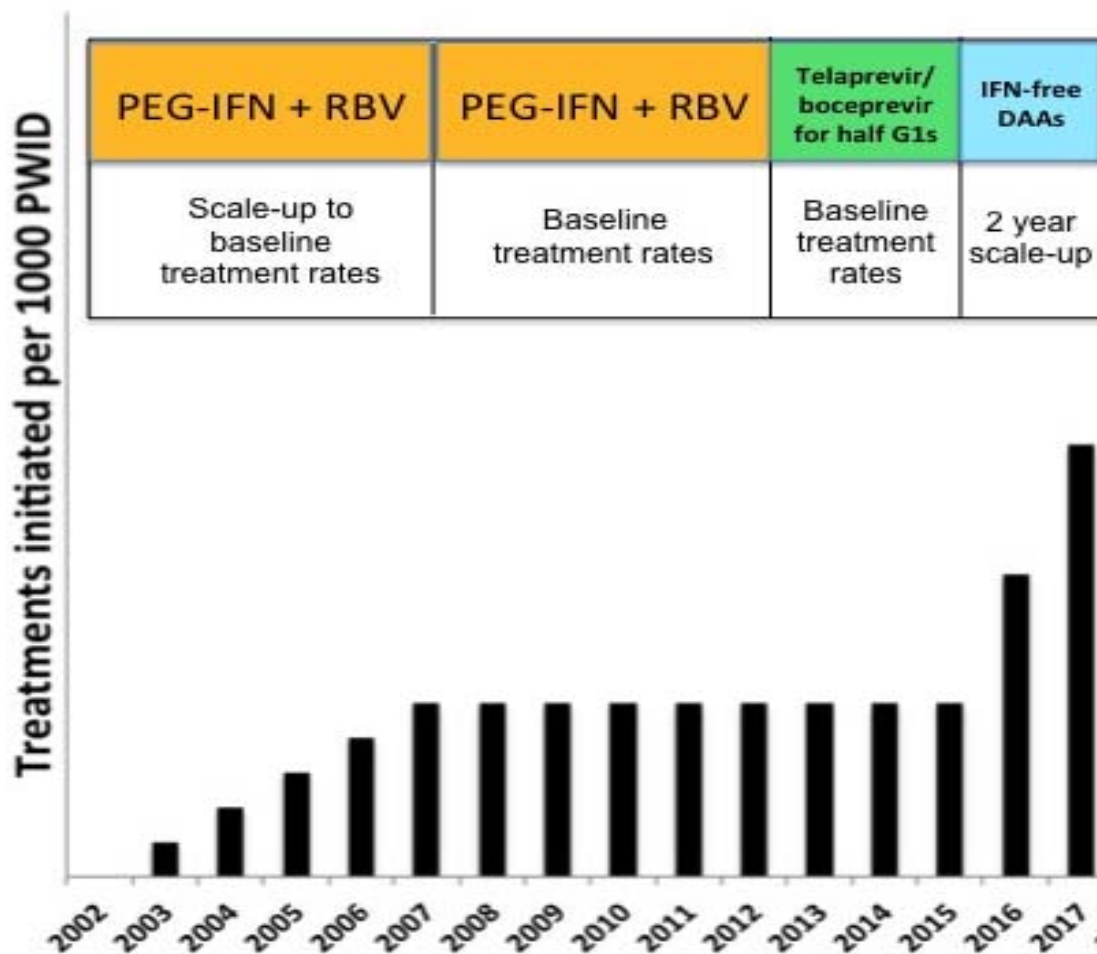


# IFN-free DAA therapy in PWID

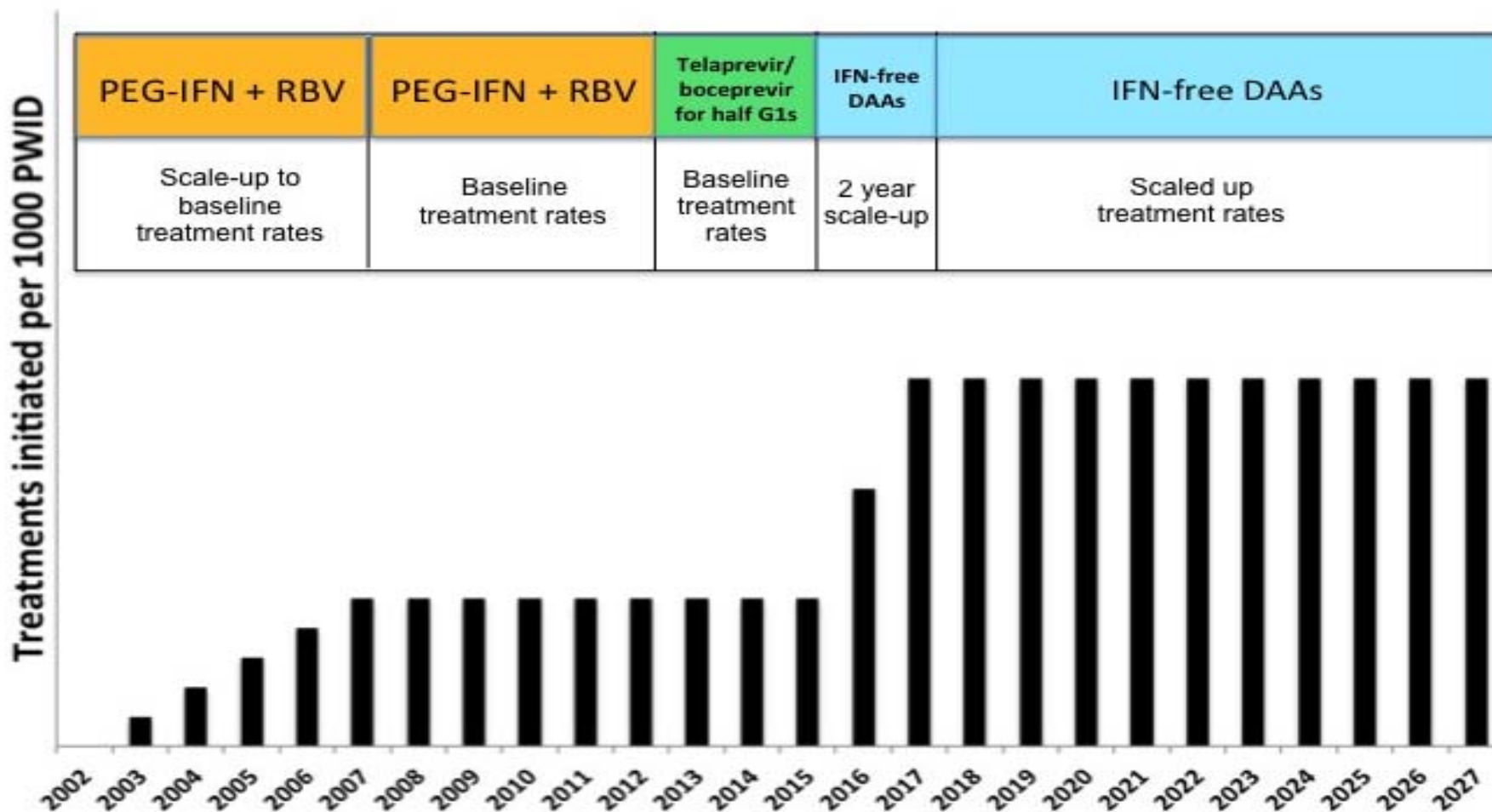




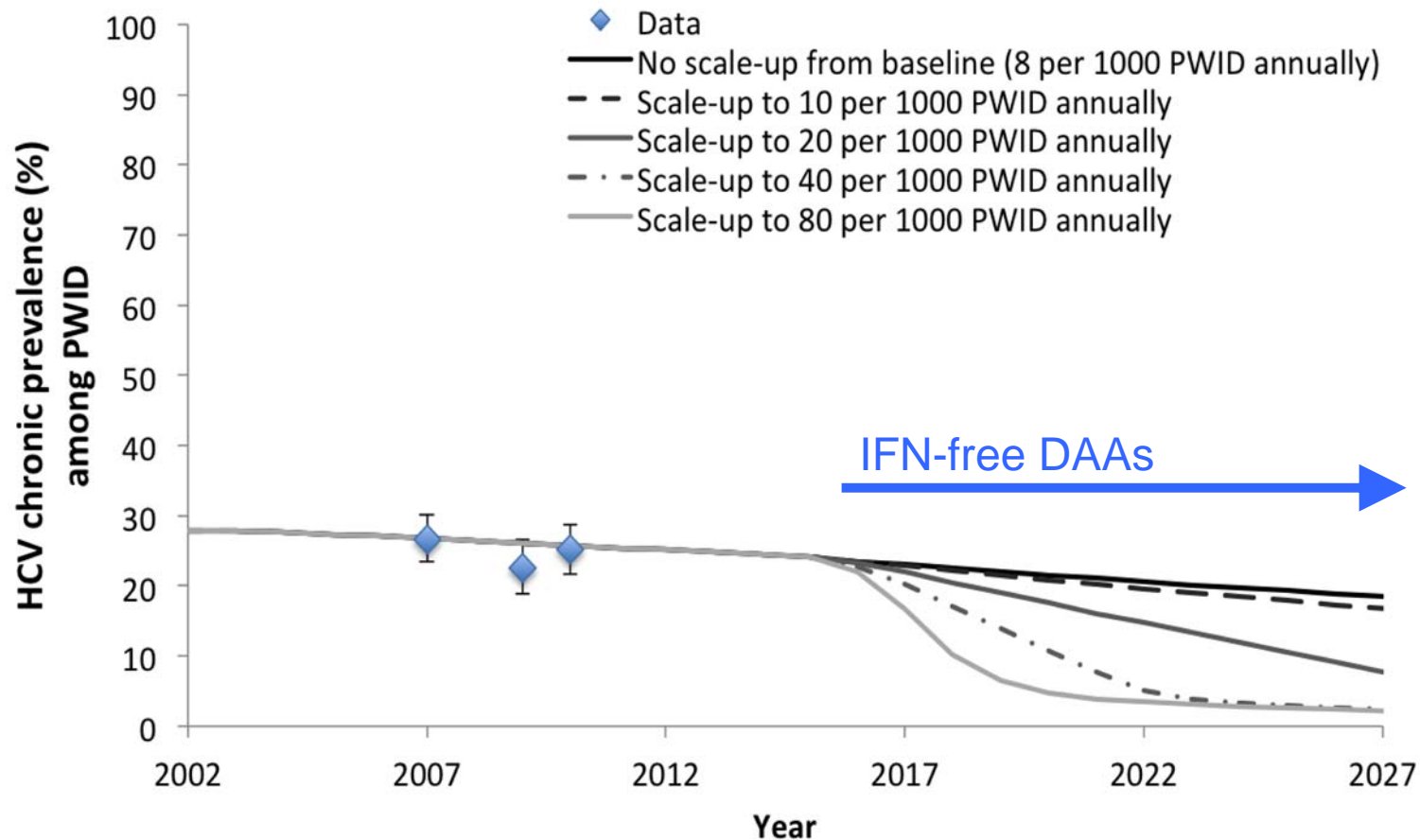
# IFN-free DAA therapy in PWID



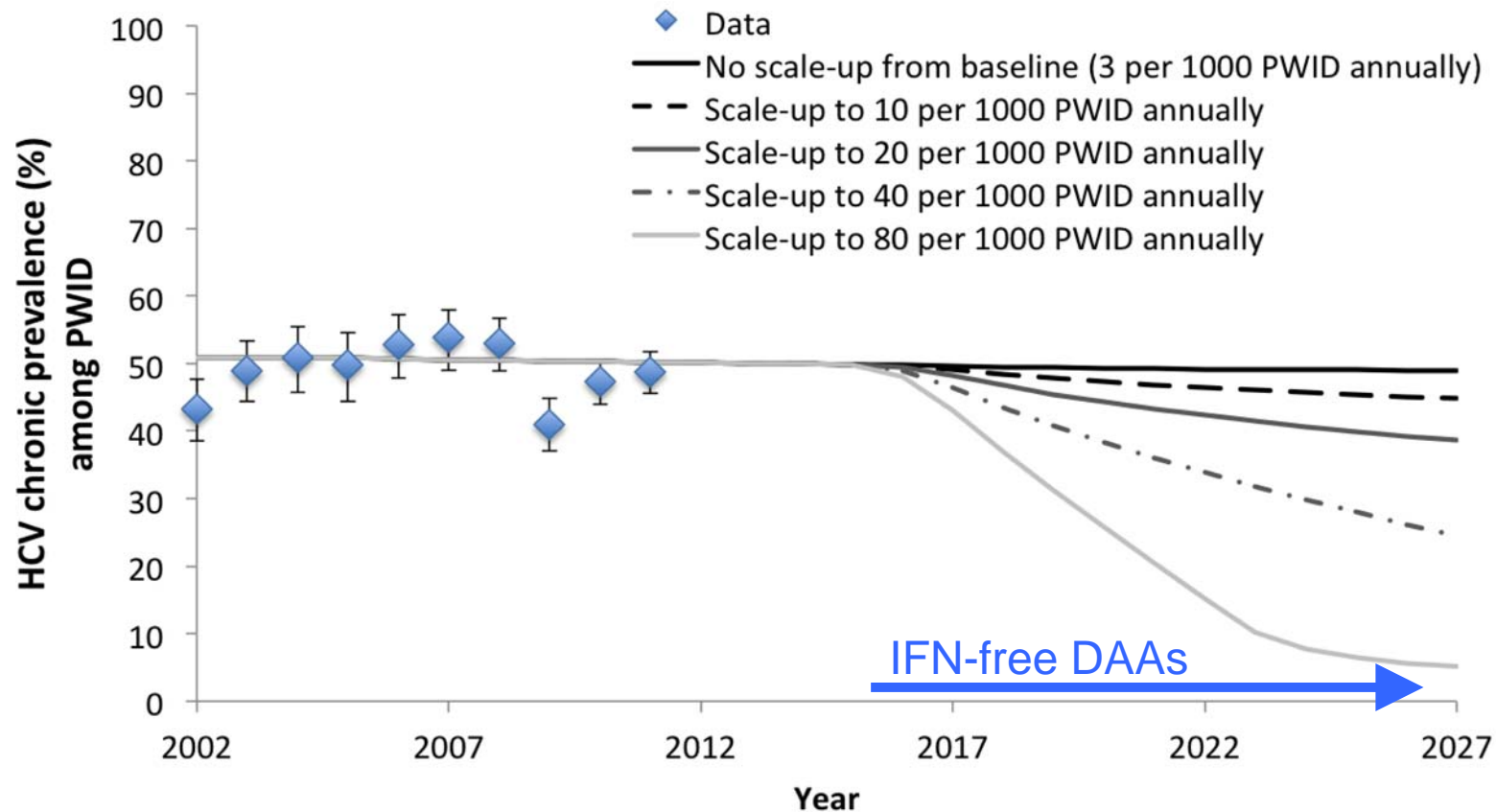
# IFN-free DAA therapy in PWID



# IFN-free DAA therapy in PWID: Edinburgh



# IFN-free DAA therapy in PWID: Melbourne



# IFN-free DAA therapy in PWID: Vancouver

IFN-free DAAs 

# HCV treatment as prevention

---

## *STOP-C project*

- HCV treatment as prevention in prison setting
- Dore – Lloyd – Butler group collaboration
- First phase: Maximum security active and control prisons (Gilead)
- Second phase: Medium security active and control prisons (NHMRC)
- Early access IFN-free DAA regimens
- Initial period of enhanced HCV surveillance prior to DAA scale-up

# HCV treatment as prevention

---

## *Acknowledgements*

- Kirby Institute: Jason Grebely, Gail Matthews, Pip Marks, Maryam Alavi, Michelle Micallef, Tony Butler
- UNSW: Andrew Lloyd
- United Kingdom: Natasha Martin, Peter Vickerman