



# Lessons from HCV

## Clinical trial eligibility & outcomes among people who inject drugs

Scientia Professor Gregory Dore



**Kirby Institute**

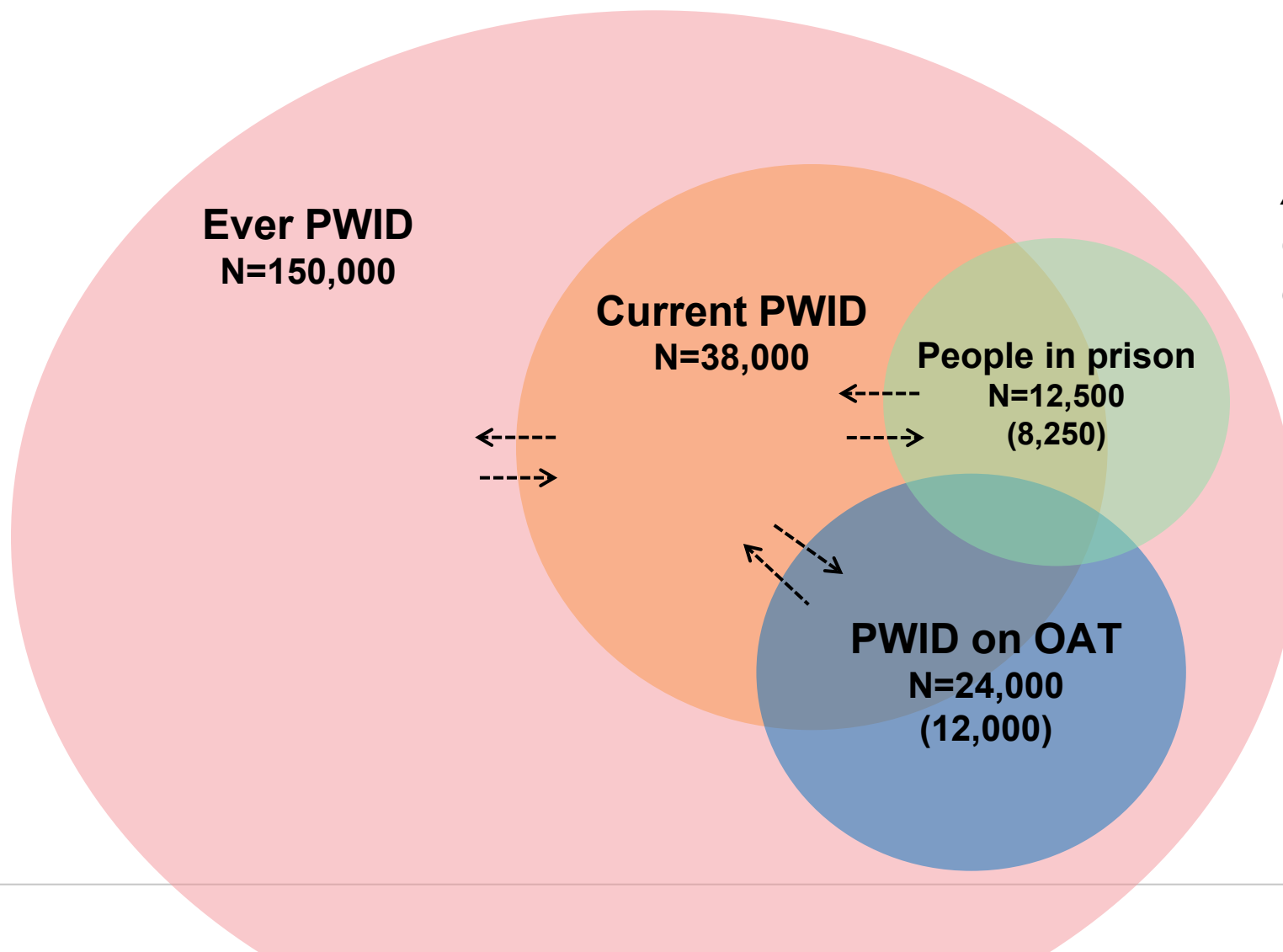
# Disclosures

- Research grants: AbbVie, Gilead, Merck
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# Lessons from HCV

- Variations in PWID clinical trial eligibility for major DAA studies
  - DAA treatment efficacy & adherence
  - Working with community organisations
-

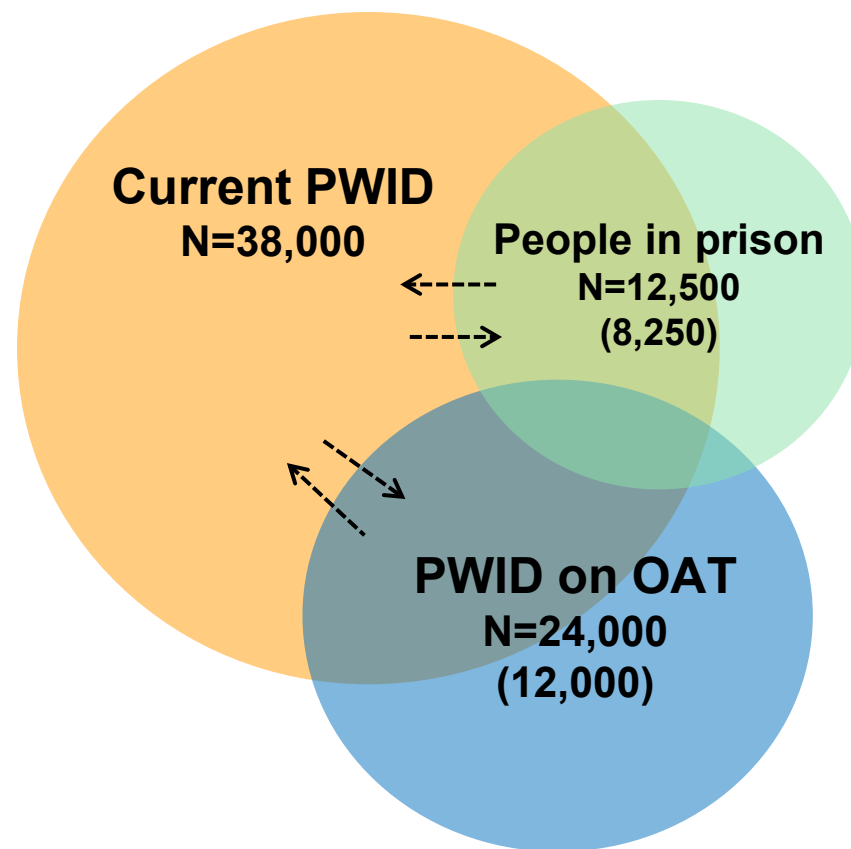
# PWID populations with HCV in Australia: 2016



*An estimated 20-25% of current PWID are incarcerated each year*

*An estimated 30% of current PWID are on OAT*

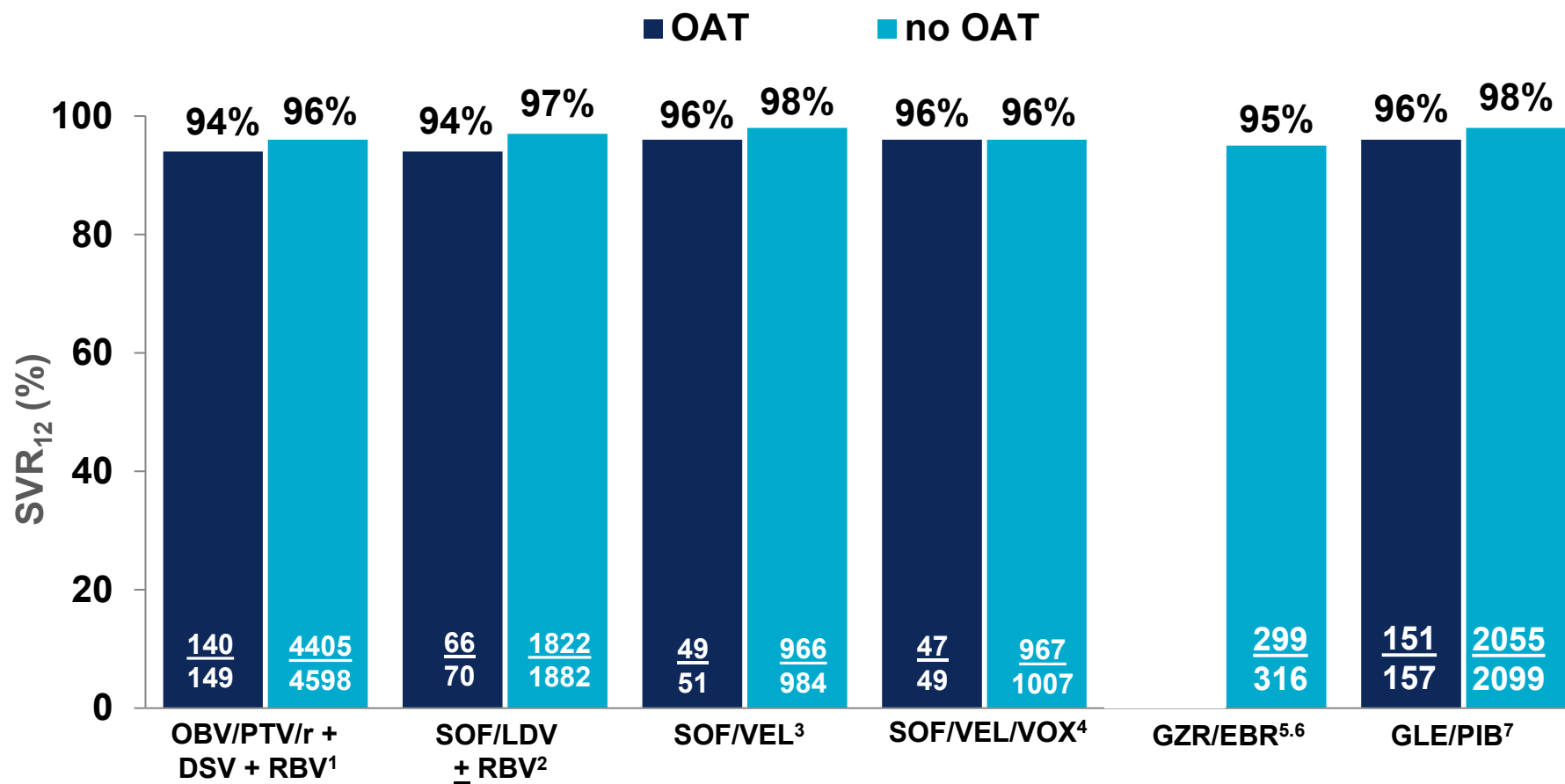
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# DAA treatment outcomes: phase III trials



1) Grebely J, ILC 2017. 2) Grebely J, CID 2016. 3) Grebely J, CID 2016. 4) Grebely J, OFID 2018. 5) Zeuzem S, AIM 2015. 6) Dore GJ, AIM 2016. 7) Grebely J, IJDP 2019

# CO-STAR study

**Annals of Internal Medicine**

ORIGINAL RESEARCH

## Elbasvir–Grazoprevir to Treat Hepatitis C Virus Infection in Persons Receiving Opioid Agonist Therapy

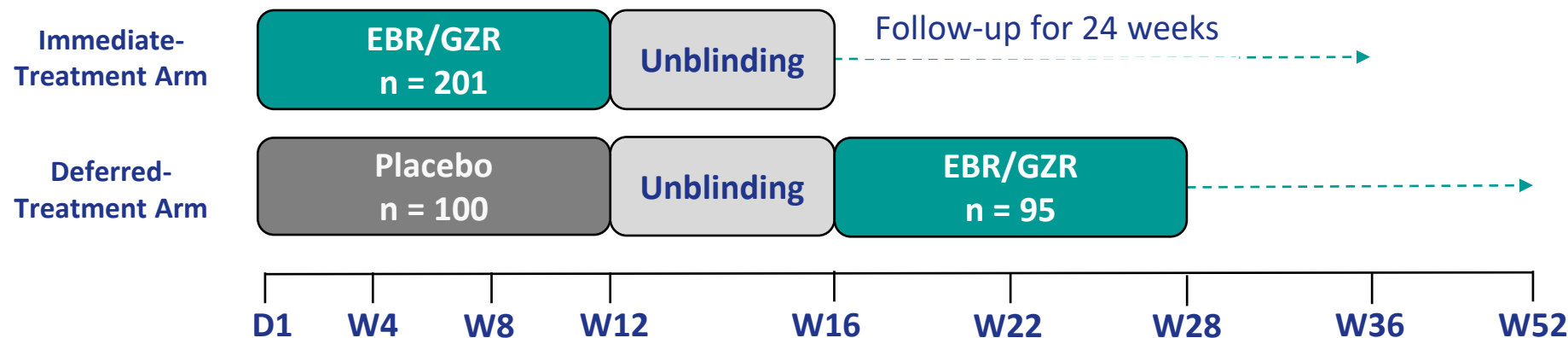
**A Randomized Trial**

Gregory J. Dore, MD; Frederick Altice, MD; Alain H. Litwin, MD; Olav Dalgard, MD; Edward J. Gane, MD; Oren Shibolet, MD; Anne Luetkemeyer, MD; Ronald Nahass, MD; Cheng-Yuan Peng, MD; Brian Conway, MD; Jason Grebely, PhD; Anita Y.M. Howe, PhD; Isaias N. Gendrano, MPH; Erluo Chen, MPH; Hsueh-Cheng Huang, PhD; Frank J. Dutko, PhD; David C. Nickle, PhD; Bach-Yen Nguyen, MD; Janice Wahl, MD; Eliav Barr, MD; Michael N. Robertson, MD; and Heather L. Platt, MD; on behalf of the C-EDGE CO-STAR Study Group\*

- **First major international study of DAA safety & efficacy in PWID population (53 sites, 13 countries)**
- **Funded by Merck**

# CO-STAR study design

- Phase 3, randomized trial of EBR/GZR for 12 weeks
- Participants with GT1, 4, or 6 infection on OAT for  $\geq 3$  months
  - Consistently kept  $\geq 80\%$  of scheduled appointments while on OAT
  - Goal of 20% with cirrhosis
  - May be co-infected with HIV
- Urine drug screen performed at each visit
  - Participants with positive results not excluded





# SIMPLIFY & D3FEAT studies: ACTIVATE network

- International open-label trials of HCV DAA treatment at 25 sites in 8 countries
- Treated with sofosbuvir and velpatasvir (SIMPLIFY; n=103) or PrOD±RBV (D3FEAT; n=87)

The logo for the SIMPLIFY study, featuring the word "simplify" in white lowercase letters inside a dark grey rounded rectangle with a green top edge.The logo for the D3FEAT study, featuring three stylized arrows in blue, green, and yellow pointing to the right, with the text "D3FEAT" below them.

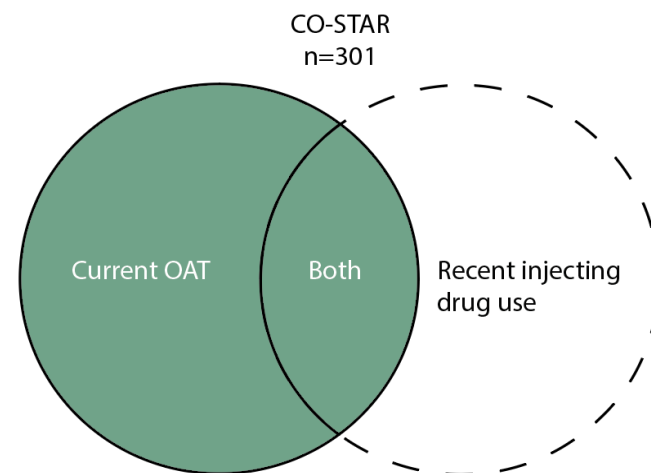
# SIMPLIFY & D3FEAT study design & eligibility

- DAA treatment-naïve patients with GT1-6 chronic HCV infection (F0-4)
- Treated with sofosbuvir and velpatasvir (SIMPLIFY; n=103) or PrOD±RBV (D3FEAT; n=87)
- People with recent injecting drug use (past six months; SIMPLIFY) or people with either recent injecting drug use or currently on OAT (D3FEAT)
- Patients with HIV and decompensated liver disease excluded



# “PWID” study eligibility varies considerably

57% injecting previous 6 m

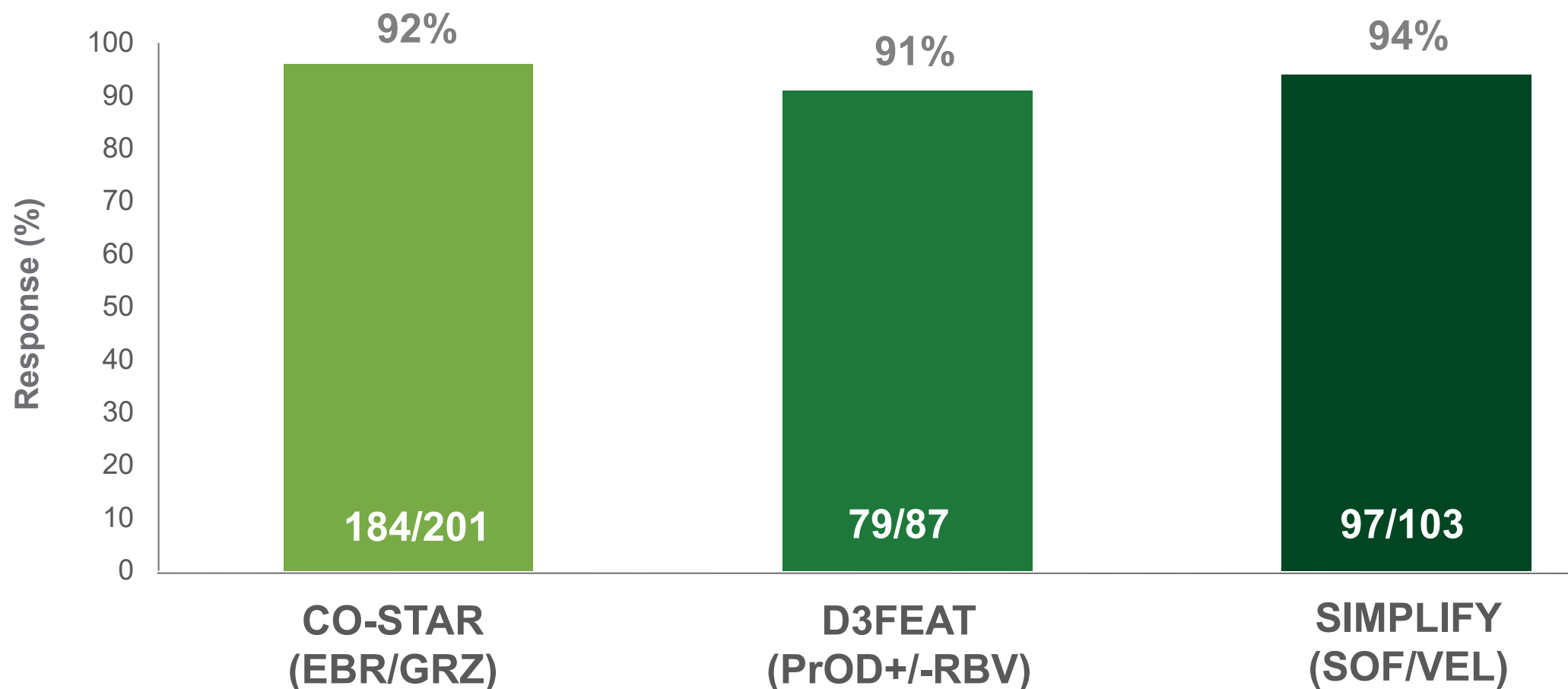


Estimated 25% injecting previous 6 m

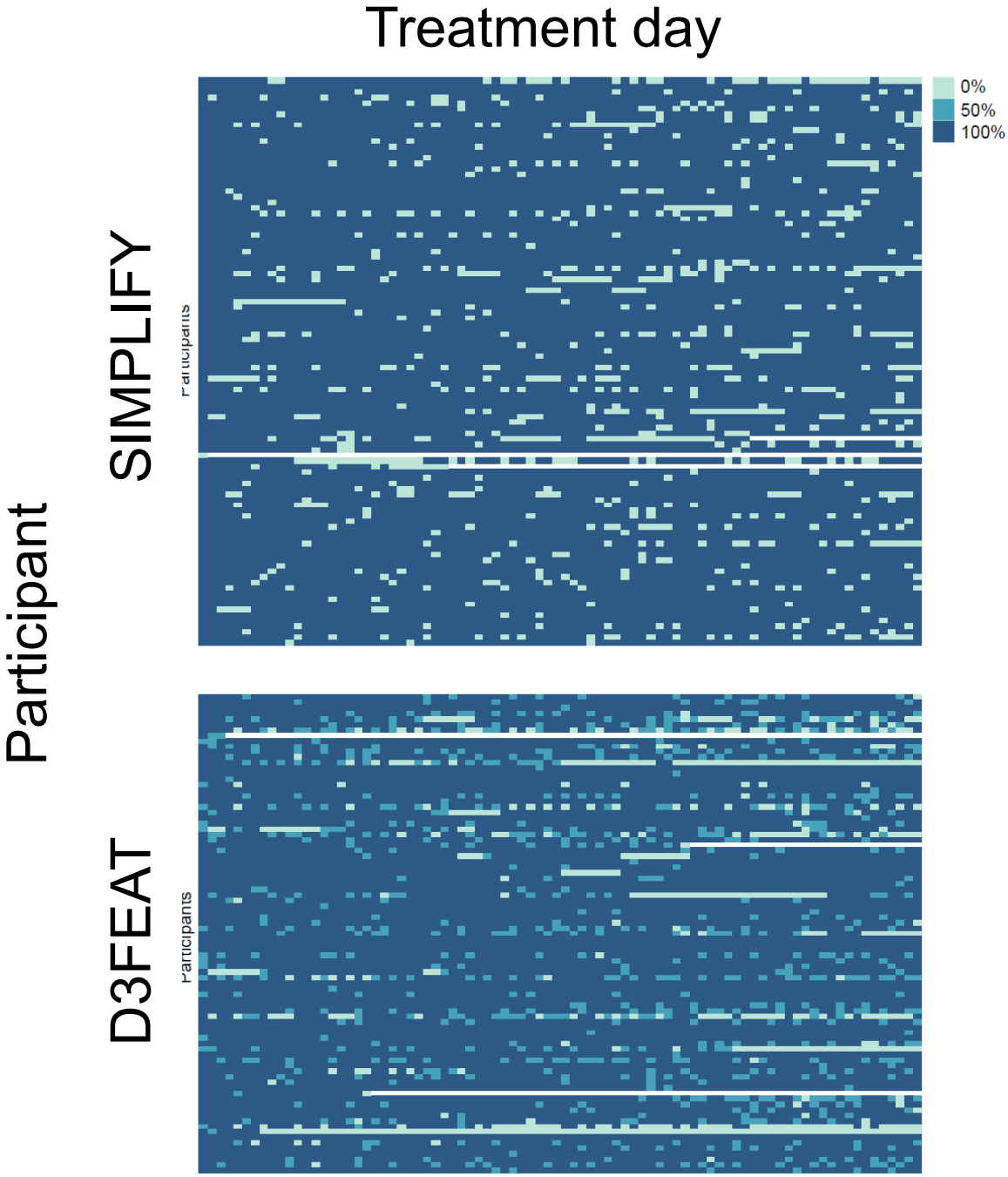
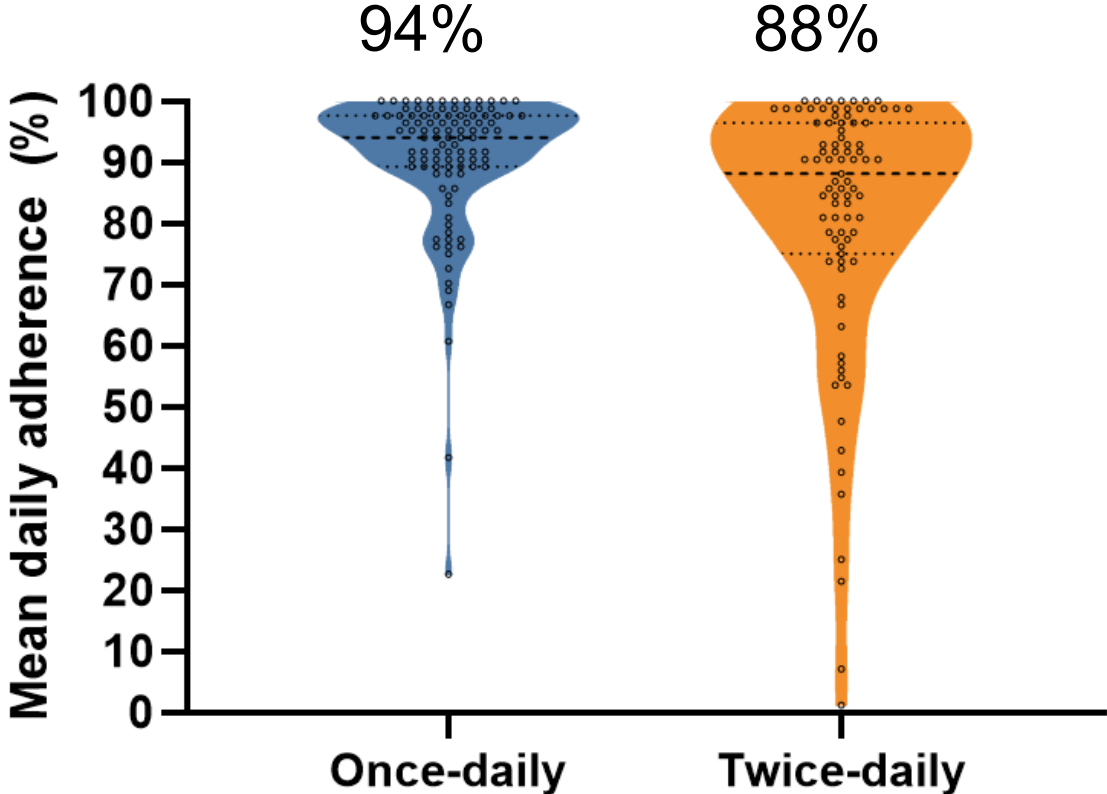
# Participant characteristics: SIMPLIFY + D3FEAT

	Overall (n=190)
<b>Age, median (IQR)</b>	48 (41-53)
<b>Male sex</b>	141 (74)
<b>Unstable housing</b>	37 (20)
<b>Hazardous alcohol consumption</b>	97 (51)
<b>Any injecting drug use in the last month</b>	115 (61)
<b>Heroin</b>	83 (44)
<b>Cocaine</b>	23 (12)
<b>Amphetamines</b>	46 (24)
<b>≥daily injecting drug use</b>	40 (21)
<b>OAT and recent injecting (past month)</b>	
<b>No OAT, no recent injecting</b>	21 (11)
<b>No OAT, recent injecting</b>	47 (25)
<b>OAT, no recent injecting</b>	52 (28)
<b>OAT, recent injecting</b>	68 (36)

# ITT SVR12: CO-STAR, D3FEAT, SIMPLIFY trials



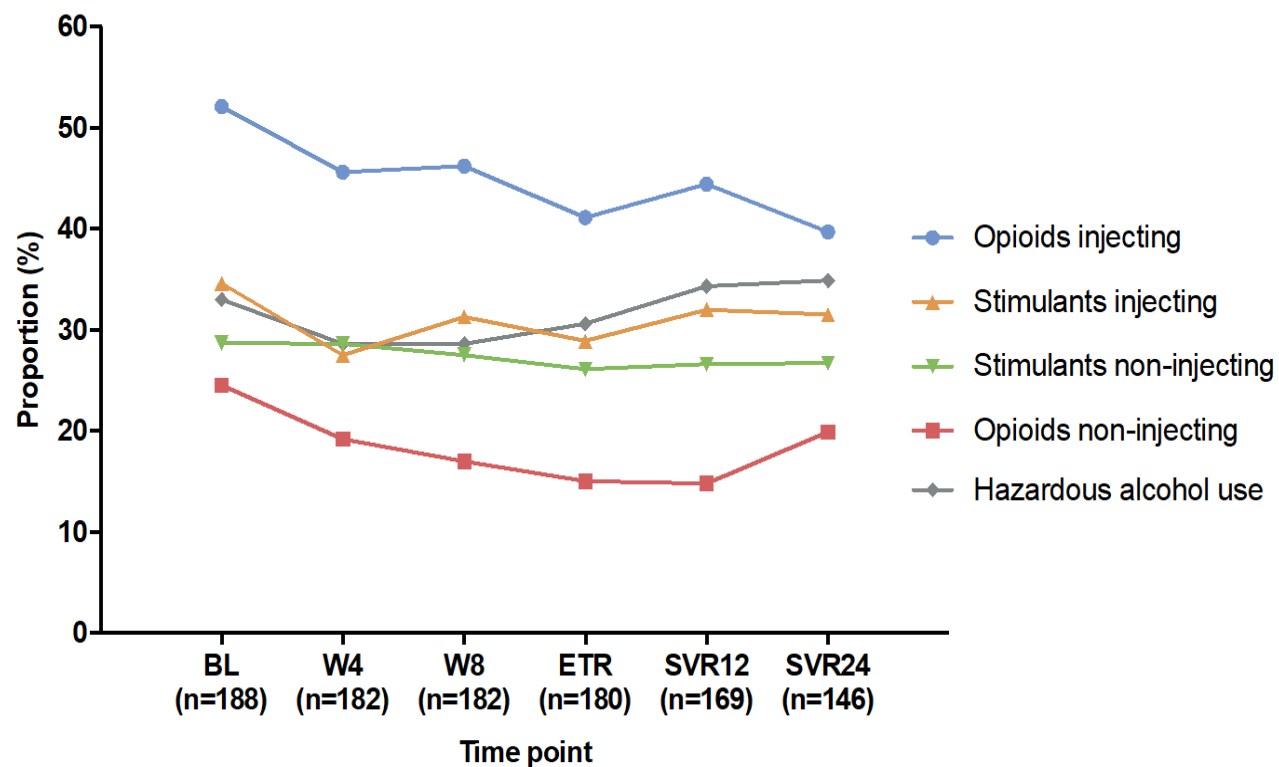
Overall adherence of 92%



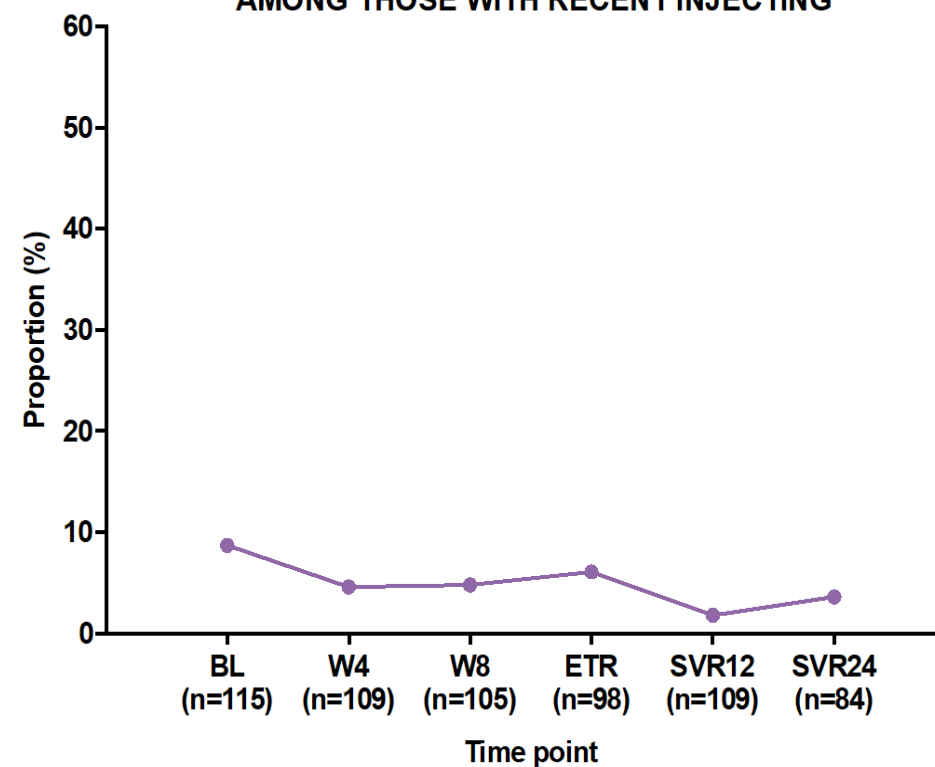
# Drug use risk behaviour



DRUG AND ALCOHOL USE, PAST MONTH



SHARING NEEDLES/SYRINGES, PAST MONTH AMONG THOSE WITH RECENT INJECTING



# Acknowledgements



## UNSW Sydney

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