



HCV Transmission and Risk Behaviour in NSW Prisons

Behzad Hajari, MD, MPH, PhD | 14 Aug 2018



Disclosure

None to disclose

Introduction

The presented data are from HITS-p and SToP-C studies

- Hepatitis C Incidence and Transmission study – prisons (HITS-p) is a prospective cohort study of prisoners enrolled between 2005 and 2014 in NSW.
- The Surveillance and Treatment of Prisoners with hepatitis C (SToP-C) is an interventional study to investigate the feasibility and effectiveness of HCV treatment as prevention in the prison setting in NSW.

3

HITS-p study



Inclusion criteria:

- HCV negative
- Having a lifetime history of IDU
- HCV negative
- Having a lifetime history of any HCV risk factor (IDU, tattooing, piercing, blood fights)



Study design: Cohort (observatory)

Number of prison sites: 23

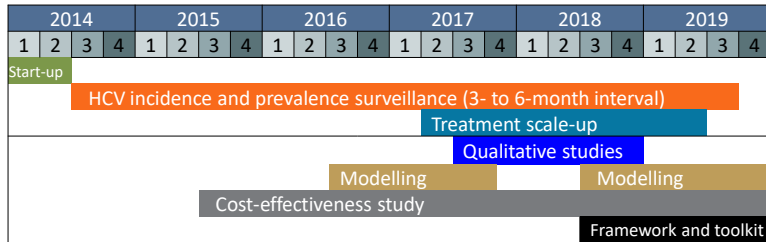
Primary outcome: HCV incidence

4

Dolan K, et al. Eur J Epidemiol 2010



UNSW  

SToP-C study

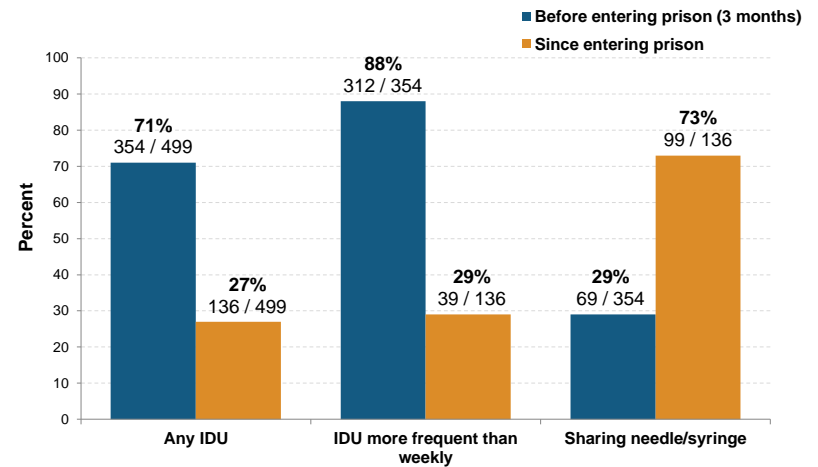


Inclusion criteria: No restriction based on HCV status and risk factor
Study design: Interventional
Number of prison sites: 4
Primary outcome: HCV incidence reduction

5

UNSW  

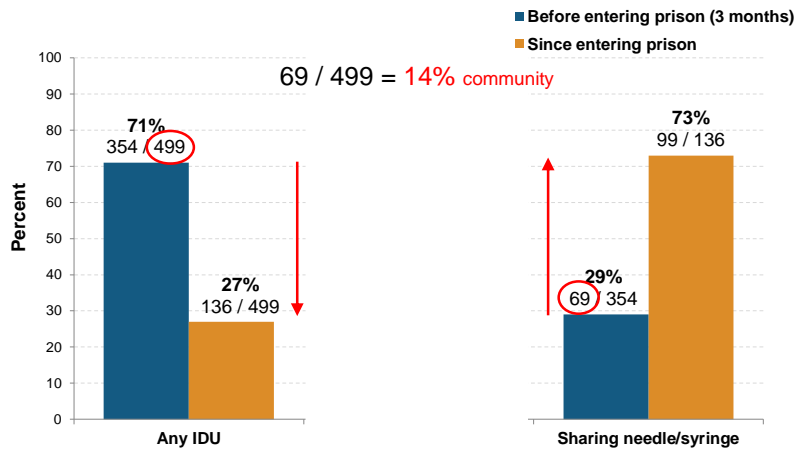
HITS-p: Injecting risk behaviors



6

Cunningham EB, et al. IJDP 2018

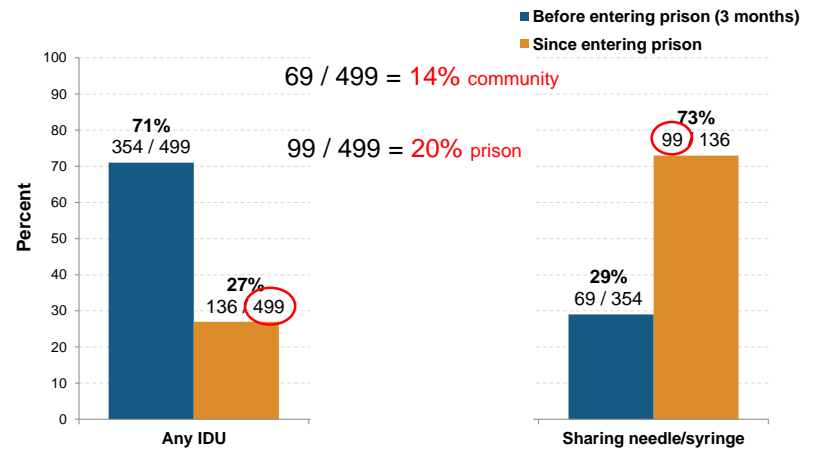
HITS-p: Injecting risk behaviors



7

Cunningham EB, et al. IJDP 2018

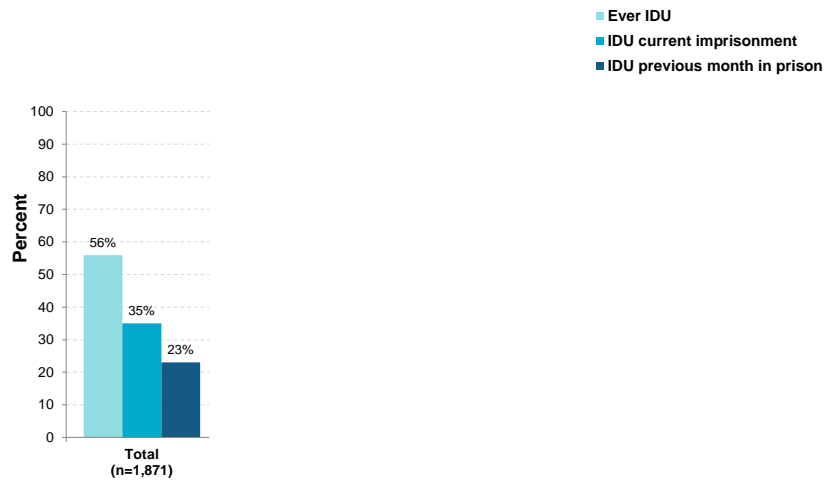
HITS-p: Injecting risk behaviors



8

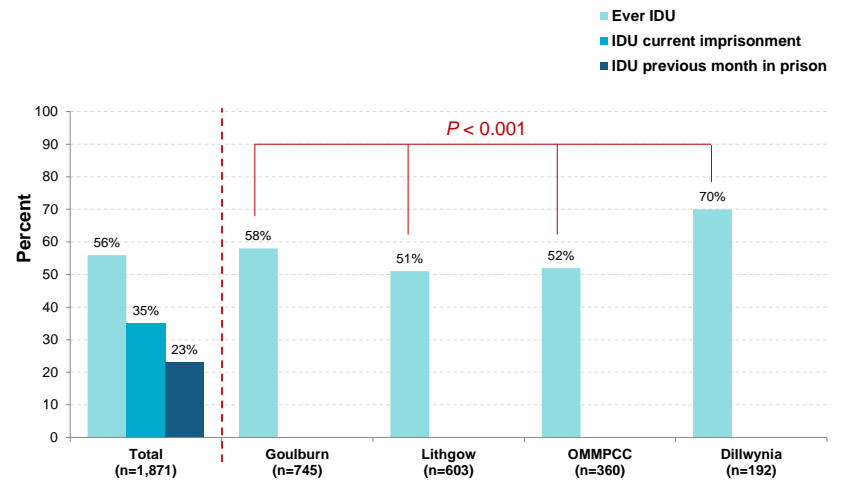
Cunningham EB, et al. IJDP 2018

UNSW Sydney | SToP-C: Injecting risk behaviors by prison



9

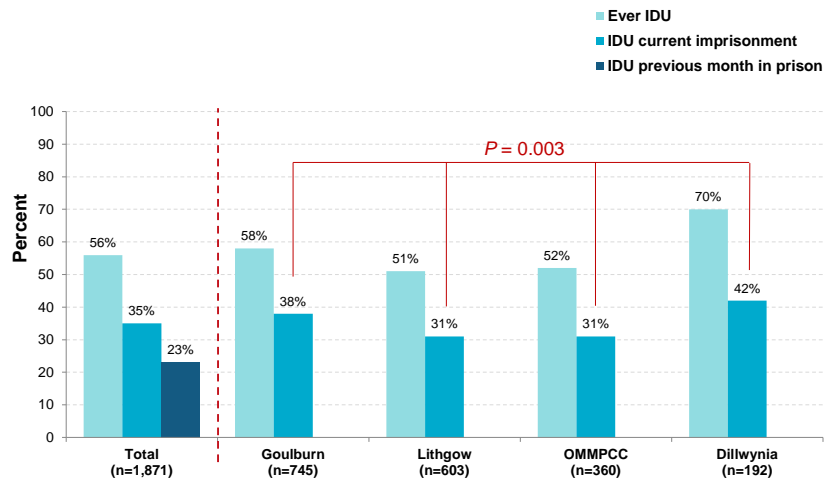
UNSW Sydney | SToP-C: Injecting risk behaviors by prison



10

UNSW *University of New South Wales* *Centre for Evidence-Based Corrections*

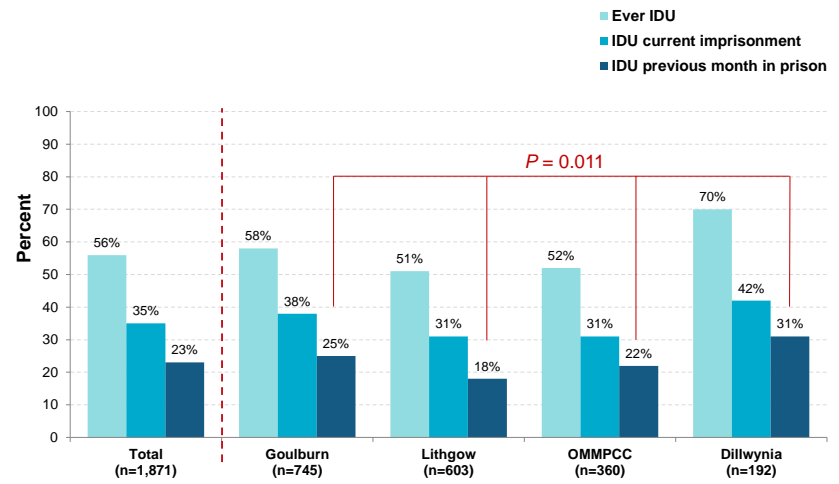
SToP-C: Injecting risk behaviors by prison





11

UNSW *University of New South Wales* *Centre for Evidence-Based Corrections*

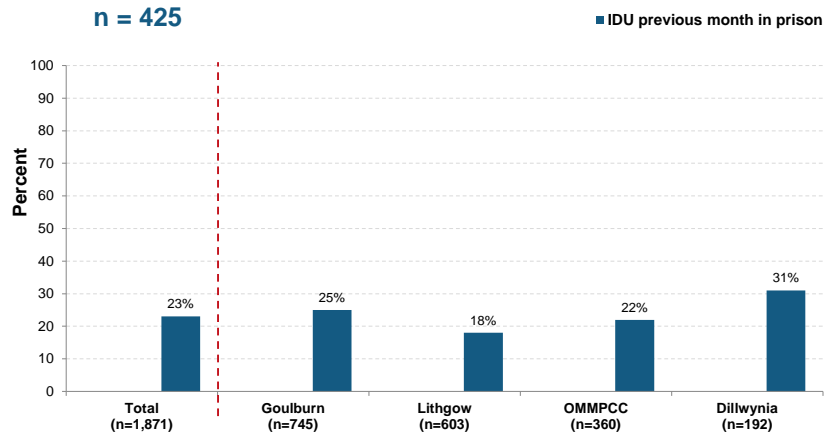
SToP-C: Injecting risk behaviors by prison





12

UNSW |  | 

SToP-C: Injecting risk behaviors by prison

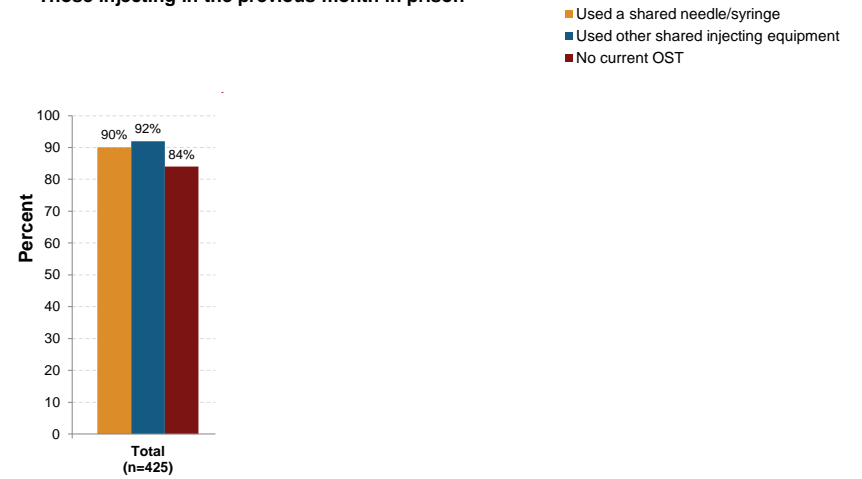


13

UNSW |  | 

SToP-C: Injecting risk behaviors among active PWID

Those injecting in the previous month in prison

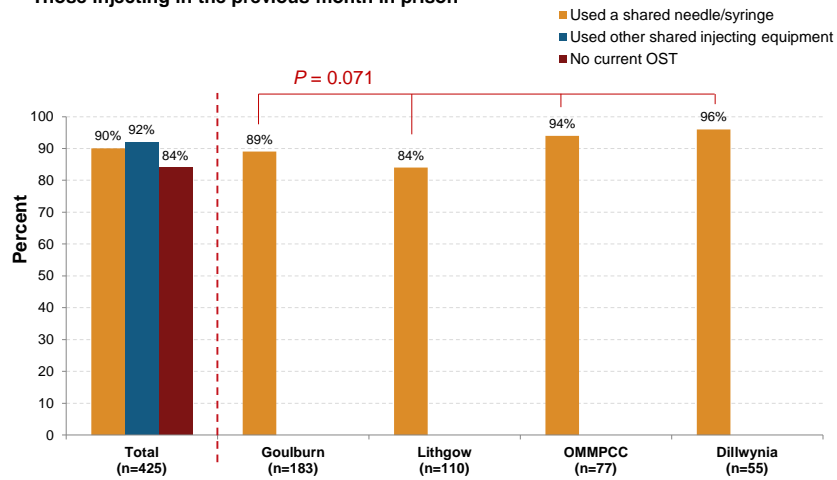


14

UNSW *University of New South Wales* *Equity*

SToP-C: Injecting risk behaviors among active PWID

Those injecting in the previous month in prison

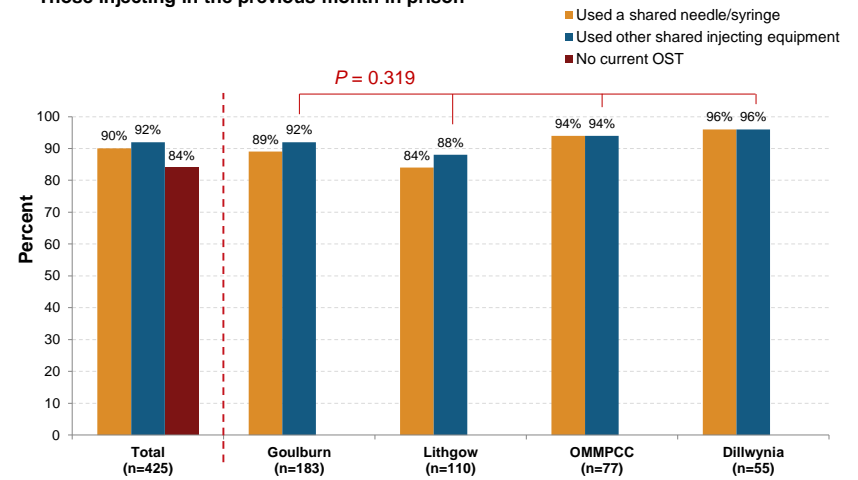


15


UNSW *University of New South Wales* *Equity*

SToP-C: Injecting risk behaviors among active PWID

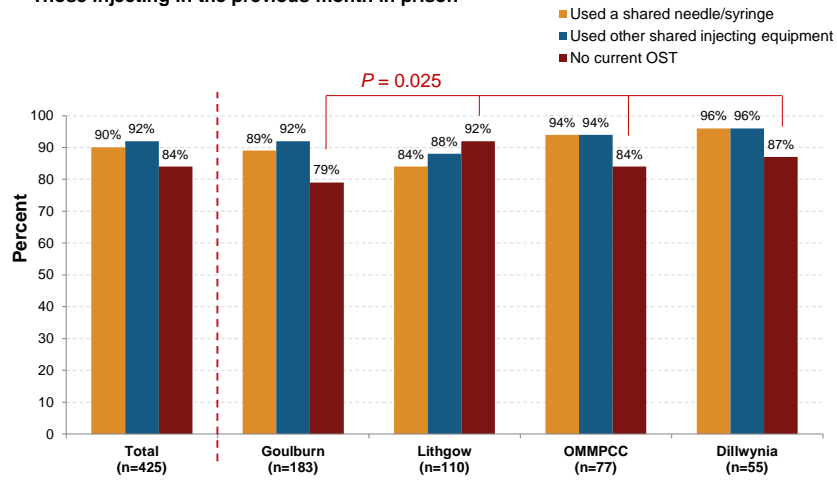
Those injecting in the previous month in prison



16

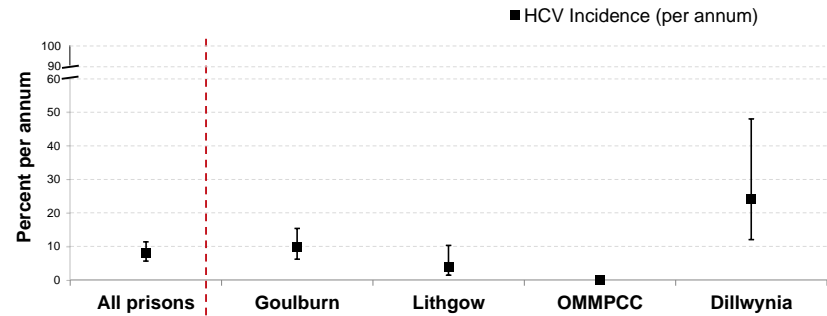
UNSW  **SToP-C: Injecting risk behaviors among active PWID**

Those injecting in the previous month in prison



17

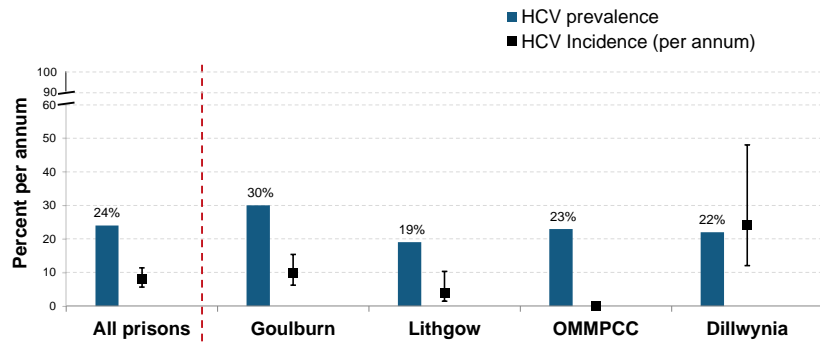
UNSW  **SToP-C: HCV incidence**



Site	Person-years follow-up	Incident case N	HCV incidence, per 100 PY (95% CI)
All prisons	388	31	8.0 (5.6, 11.3)
Goulburn	194	19	9.8 (6.2, 15.3)
Lithgow	104	4	3.9 (1.4, 10.3)
OMPCC	57	0	0 (0.0, 0.06)
Dillwynia	33	8	24.0 (12.0, 48.0)

18

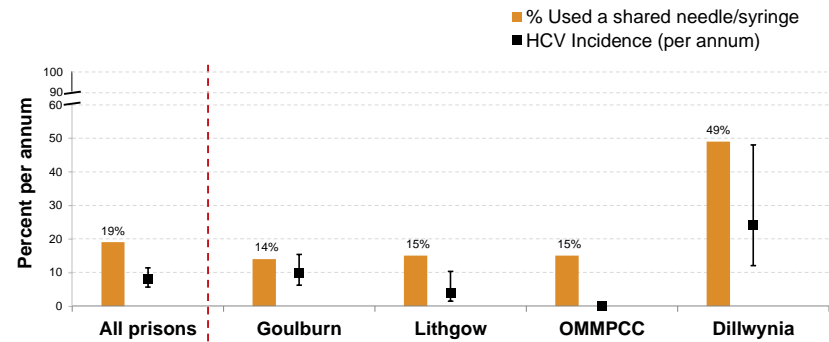
SToP-C: HCV incidence



Site	Person-years follow-up	Incident case N	HCV incidence, per 100 PY (95% CI)
All prisons	388	31	8.0 (5.6, 11.3)
Goulburn	194	19	9.8 (6.2, 15.3)
Lithgow	104	4	3.9 (1.4, 10.3)
OMPCC	57	0	0 (0.0, 0.06)
Dillwynia	33	8	24.0 (12.0, 48.0)

19

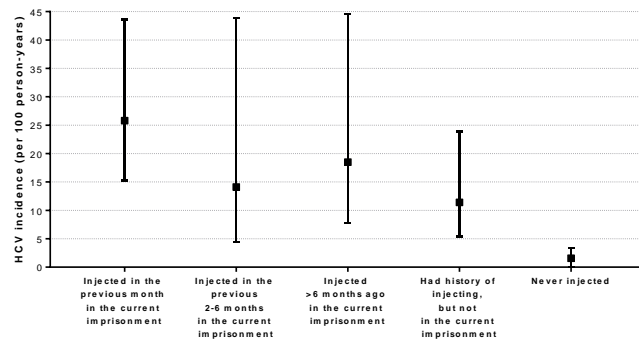
SToP-C: HCV incidence



Site	Person-years follow-up	Incident case N	HCV incidence, per 100 PY (95% CI)
All prisons	388	31	8.0 (5.6, 11.3)
Goulburn	194	19	9.8 (6.2, 15.3)
Lithgow	104	4	3.9 (1.4, 10.3)
OMPCC	57	0	0 (0.0, 0.06)
Dillwynia	33	8	24.0 (12.0, 48.0)

20

SToP-C: HCV incidence by risk behaviour



	Person-years follow-up	Number of incident Infections	HCV incidence, per 100 PY (95% CI)
Injected in the previous month in the current imprisonment	54	14	25.8 (15.3, 43.6)
Injected in the previous 2-6 months in the current imprisonment	21	3	14.1 (4.5, 43.8)
Injected longer than 6 months ago in the current imprisonment	27	5	18.5 (7.7, 44.5)
Had history of injecting, but not in the current imprisonment	61	7	11.4 (5.4, 23.9)
Never injected	225	2	0.9 (0.2, 3.6)

Conclusion

- Upon entry to prison, injecting drug use decreased but high risk injecting (e.g., syringe sharing) increased among those who did inject, resulting in an overall increase in risk of HCV exposure.
- There is high prevalence of high-risk injecting among prisoners who actively injected drugs
- HCV incidence varies across prisons. A part of this variation can be explained by varied risk behaviours. More data is required to improve understanding of HCV transmission in prison.
- These findings highlight the need for improved HCV prevention strategies in prisons.

Acknowledgements

SToP-C study

Greg Dore
Andrew Lloyd
Jason Grebely
Marianne Byrne
Pip Marks
Carla Treloar
 Tony Butler
 Georgina Chambers
 Natasha Martin
 Peter Vickerman

Protocol Steering Committee

Stuart Loveday
 Lee Treveltham
 Colette McGrath
 Julia Bowman
 Roy Donnelly
 Luke Grant
 Terry Murrell
 Brenda Currie
 Alison Churchill
 Kate Pinnock
 Mary Ellen Harrod

HITS-p study

Andrew Lloyd
Evan Cunningham
Jason Grebely
Greg Dore
 Fabio Luciani
 Neil Bretana
 Kate Dolan
 Paul Haber
 William Rawlinson
 Carla Treloar
 Lisa Maher

Study partners:

