



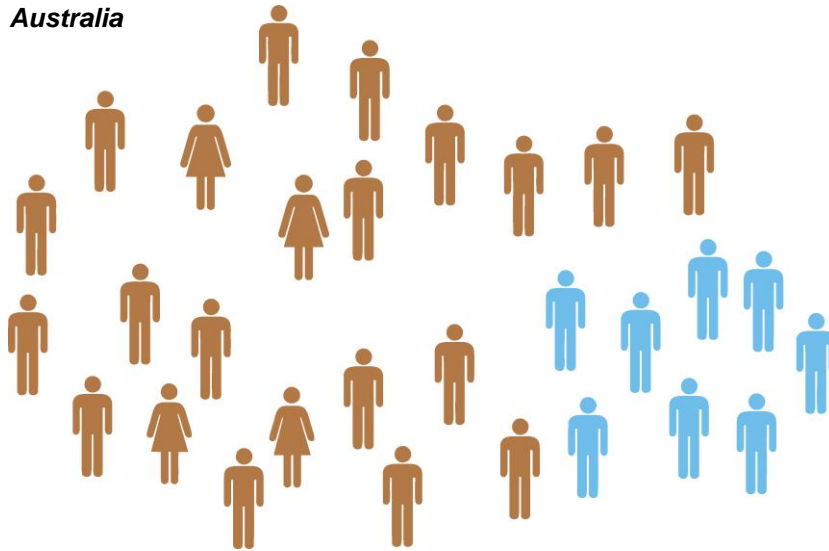
Phylogenetic clustering among people with recent hepatitis C virus infection in Australia between 2004-2015

Sofia R Bartlett, Tanya Applegate, Brendan Jacka, Francois Lamoury, Rowena Bull, Mark Danta, Daniel Bradshaw, Andrew R Lloyd, Margaret Hellard, Gregory J Dore, Gail V Matthews and Jason Grebely

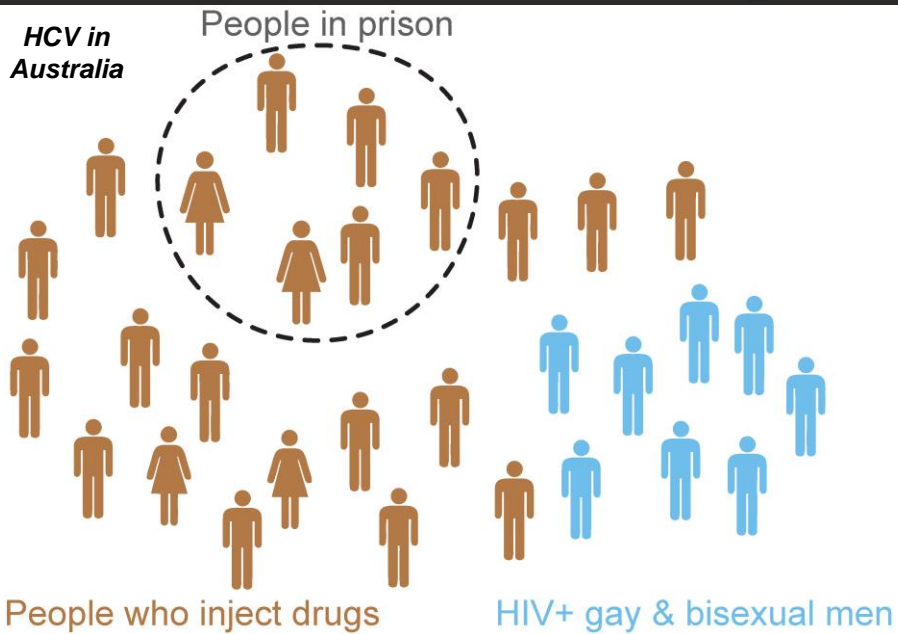
Disclosures:

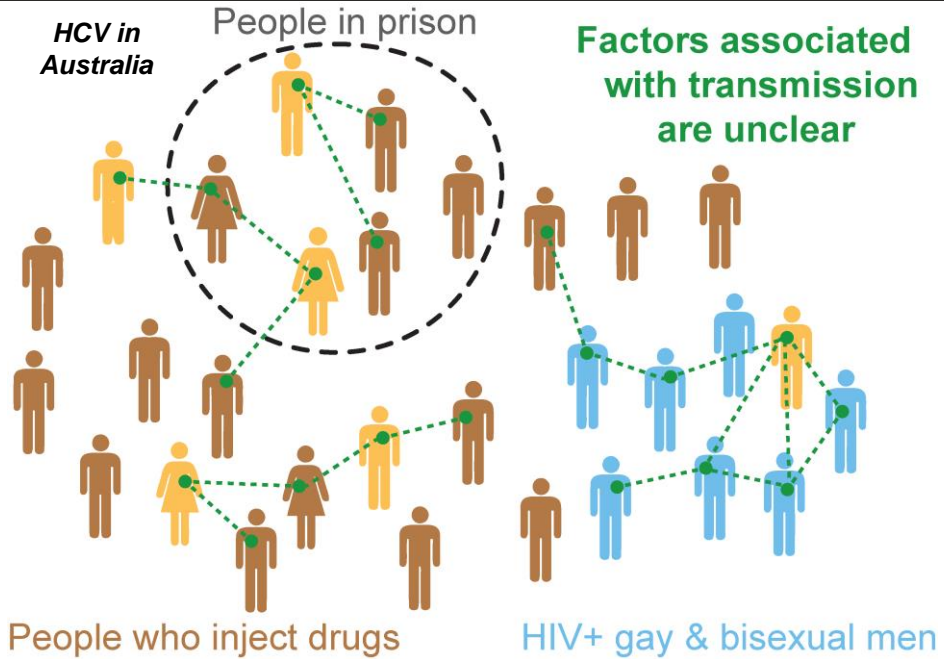
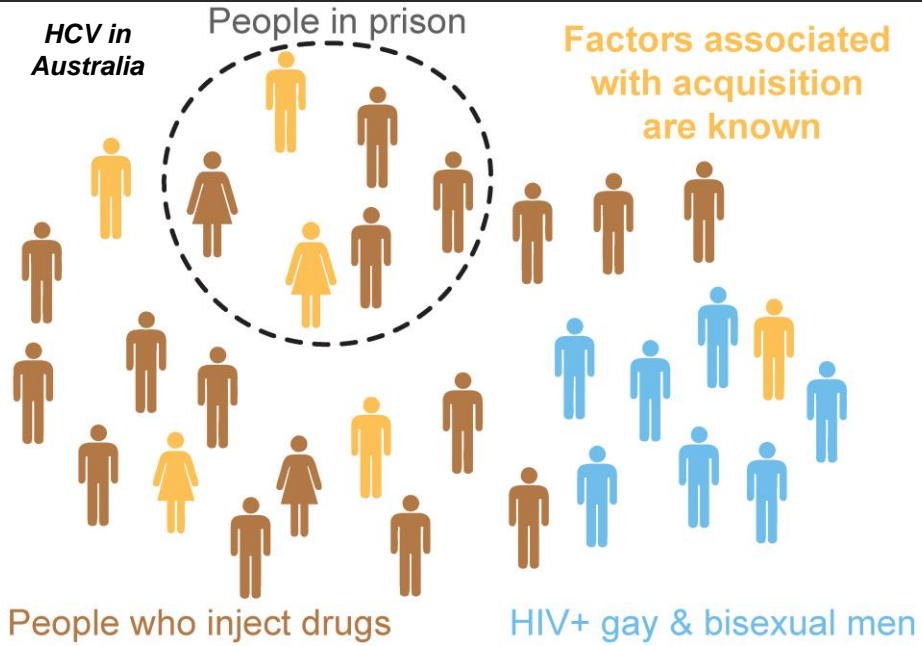
- The speaker has no financial or other conflicts of interest to report

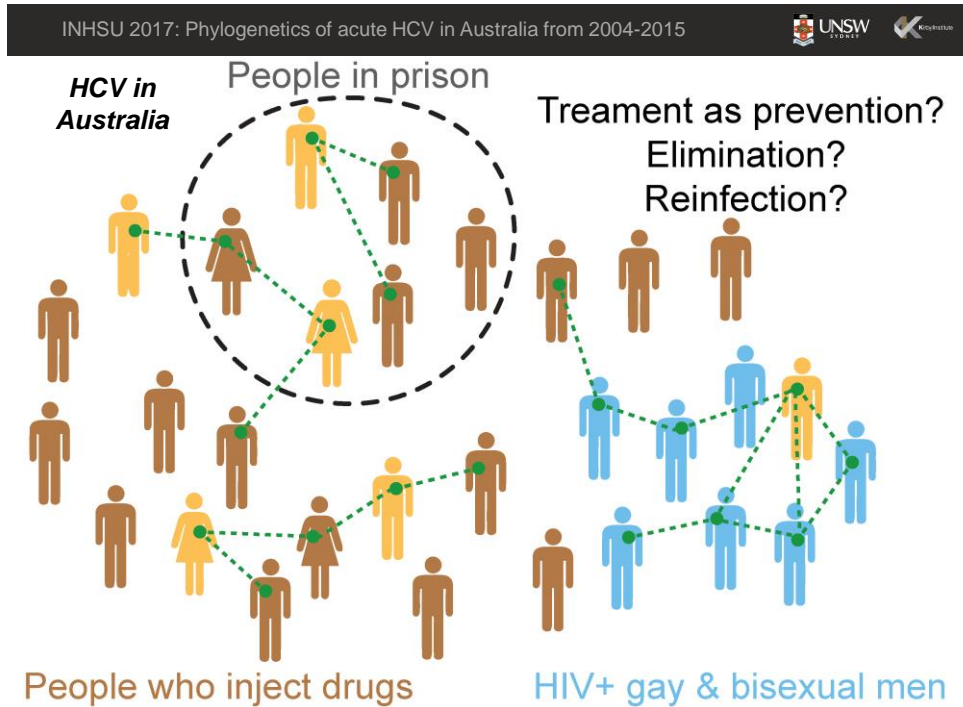
HCV in Australia



HCV in Australia







INHSU 2017: Phylogenetics of acute HCV in Australia from 2004-2015

UNSW SYDNEY

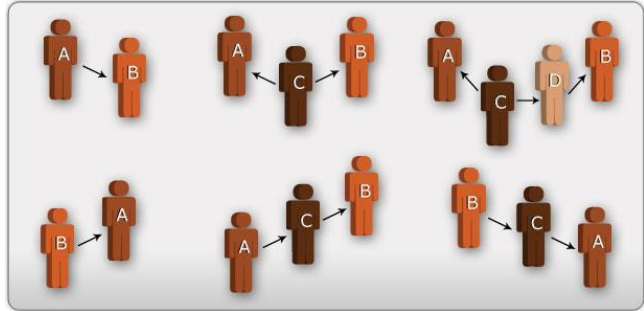
Aims

Among people with acute or recent HCV infection in Australia;

1. To identify and characterize composition of phylogenetically reconstructed pairs and clusters
2. Investigate multi-risk profiles and factors associated with pair/cluster membership

Methods

Some things to note about phylogenetic studies:



- Highly similar viruses can be a *cluster*, but direct individual transmission cannot be claimed
- We don't know who is missing from transmission network (i.e. not sampled)

Characteristics of participants

Characteristic	Overall	ATAHC I	RAMPT-C	ATAHC II	DARE-C I	DARE-C II
Total n (%)	(n=237)	(n=119)	(n=25)	(n=60)	(n=15)	(n=18)

Transmission pairs/clusters identified

Legend

- HIV positive □ HIV negative
- male ○ female
- over 45 ■ under 45

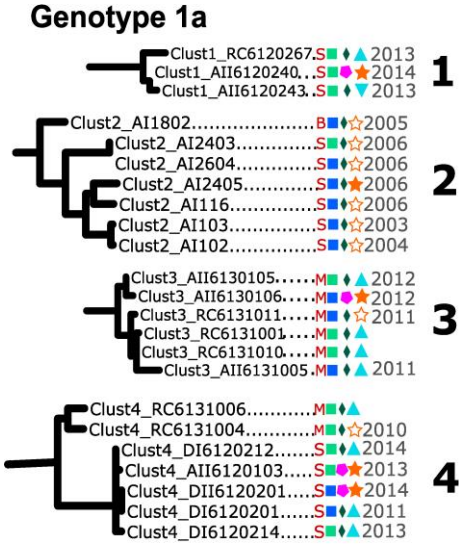
Example

- Male, HIV pos, over 45
- Female, HIV neg, under 45

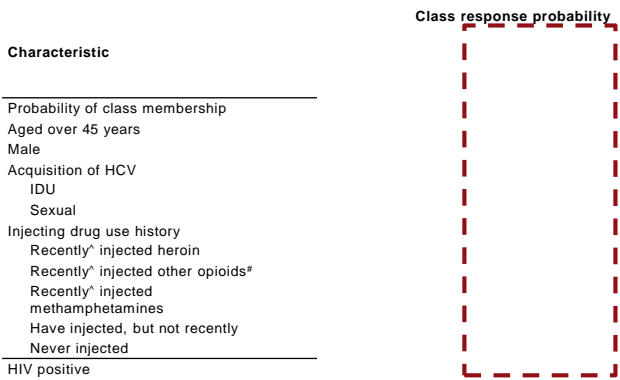
B Brisbane M Melbourne
 S Sydney P Perth

2013 estimated year of infection

- ◆ sexual HCV acquisition
- ◆ IDU HCV acquisition
- ▲ never IDU
- ★ recent IDU
- ☆ IDU ever (not recent)

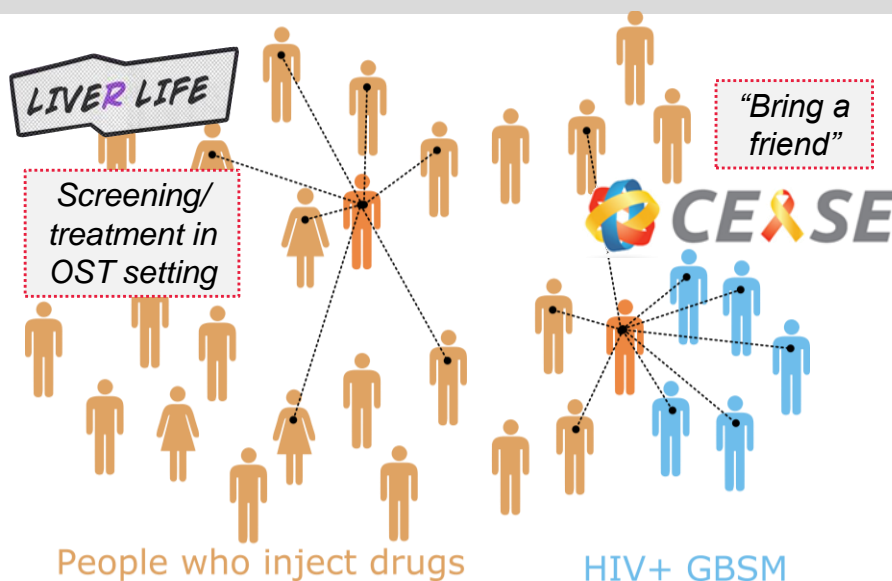


Multi-risk profiles



Class 2 (vs. Class 1; AOR 3.40; 95%CI 1.52, 7.60) independently associated with phylogenetic clustering

Implications for Treatment as Prevention and Elimination of HCV



Acknowledgements

- **ATAHC, ATAHC II, RAMPT-C, DARE-C I & DARE-C II study participants and coordinators (Barb Yeung & Laurence Maire)**
- Kirby Institute, UNSW
 - As Prof Jason Grebely
 - Dr Tanya Applegate
 - As Prof Gail Matthews
 - Prof Greg Dore
 - Dr Danica Martinez
 - Mr Francois Lamoury
 - Dr Behzad Hajarizadeh
 - Dr Brendan Jacka
 - Dr Marianne Martinello
- Kirby Institute/School of Medical Sciences, UNSW
 - Prof Andrew Lloyd
 - Dr Rowena Bull
- The Burnett Institute, Melbourne
 - Prof Margaret Hellard
- St Vincent's Hospital Sydney
- Chelsea and Westminster Hospital
- Dr Mark Danta
- Dr Daniel Bradshaw