Kirby Institute

Hepatitis C infection among people who inject drugs in Australia: Monitoring exposure, treatment uptake and viraemic prevalence

J Iversen, G Dore, B Catlett, P Cunningham, J Grebely & L Maher

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Acknowledgements

- People with viral hepatitis
- NSP attendees, staff and managers
- Australian NSP Survey National Advisory group
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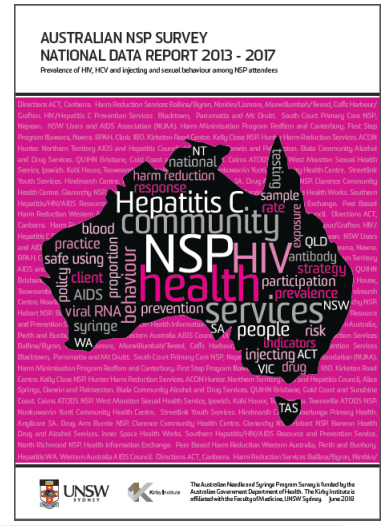
Disclosures

- GD is a consultant/advisor and has received research grants from Merck, Gilead, Bristol-Myers Squibb, and AbbVie.
- JG is a consultant/advisor and has received research grants from AbbVie, Cepheid, Gilead, Janssen, and Merck

Monitoring exposure, treatment uptake and viraemic prevalence

Australian Needle Syringe Program Survey

- Bio-behavioural sentinel surveillance system conducted annually since 1995



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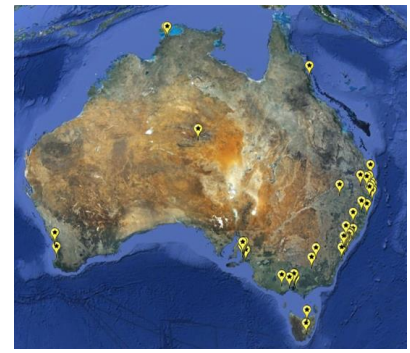
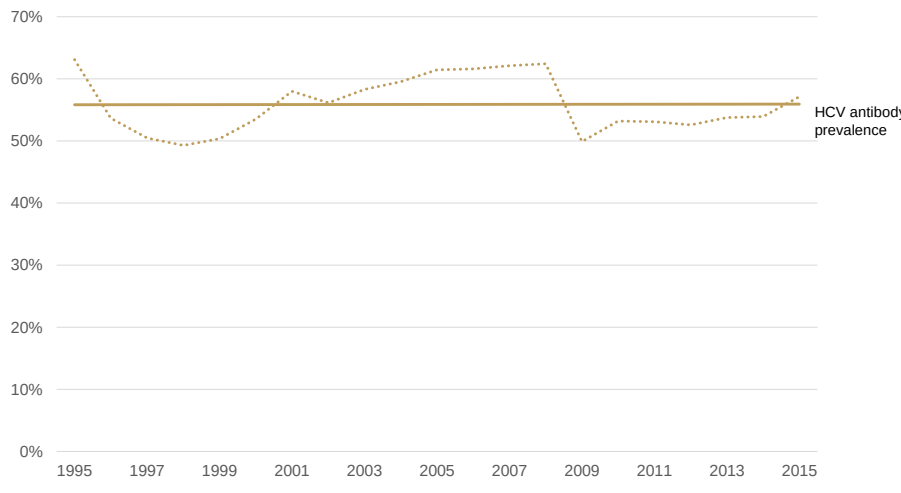
- Bio-behavioural sentinel surveillance system conducted annually since 1995
- Self-administered questionnaire & provision of dried blood spot (DBS)
- DBS testing: HIV/HCV antibody
- Conducted at ~50 NSPs nationally
- 2000-2500 respondents per annum
- 75% metropolitan NSPs, 25% regional/remote
- Representative of NSP attendees at sentinel sites[1]



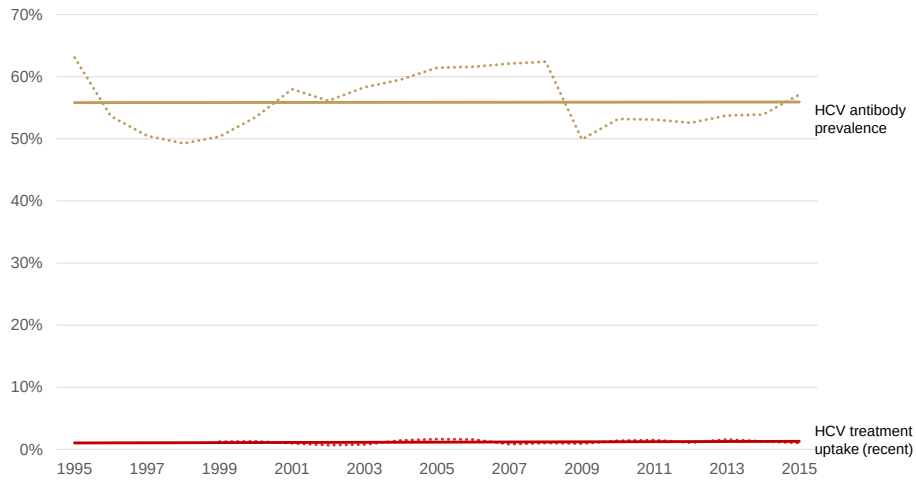
Source: 1. Topp et al, JAIDS, 2011

Monitoring exposure



Source: Iversen & Maher (2015), Australian NSP Survey, The Kirby Institute

Monitoring exposure, treatment uptake



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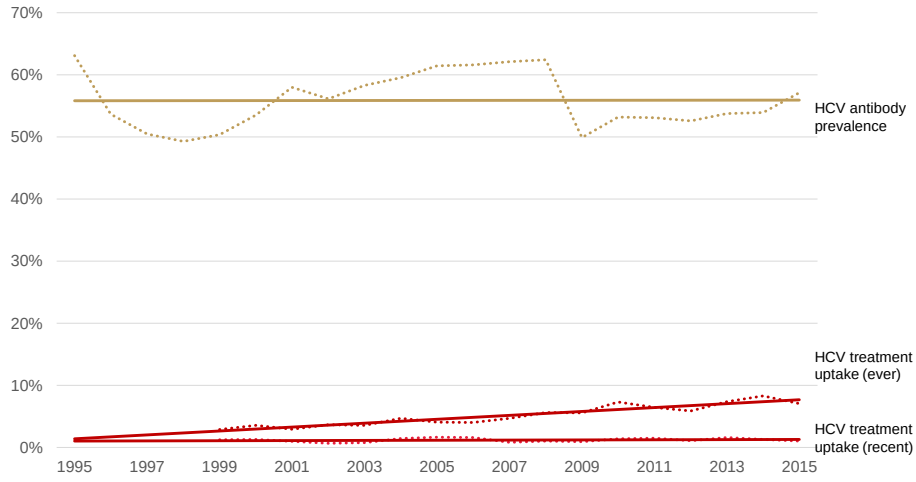

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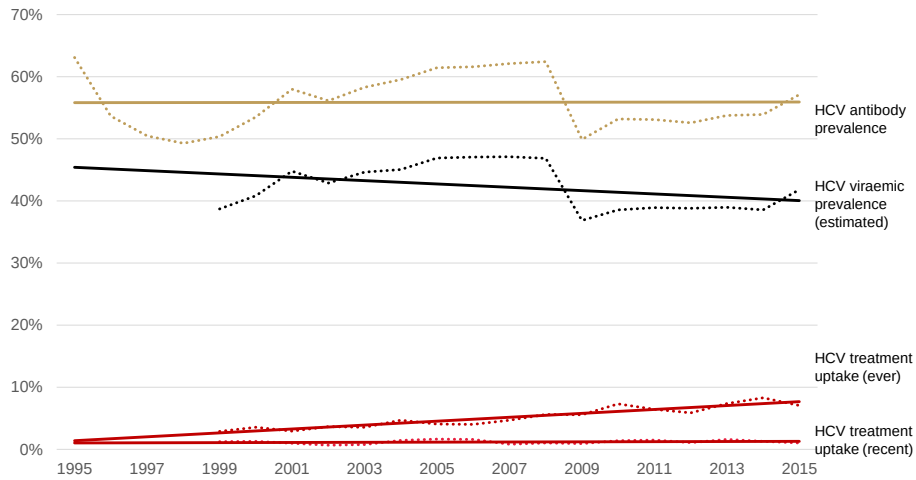

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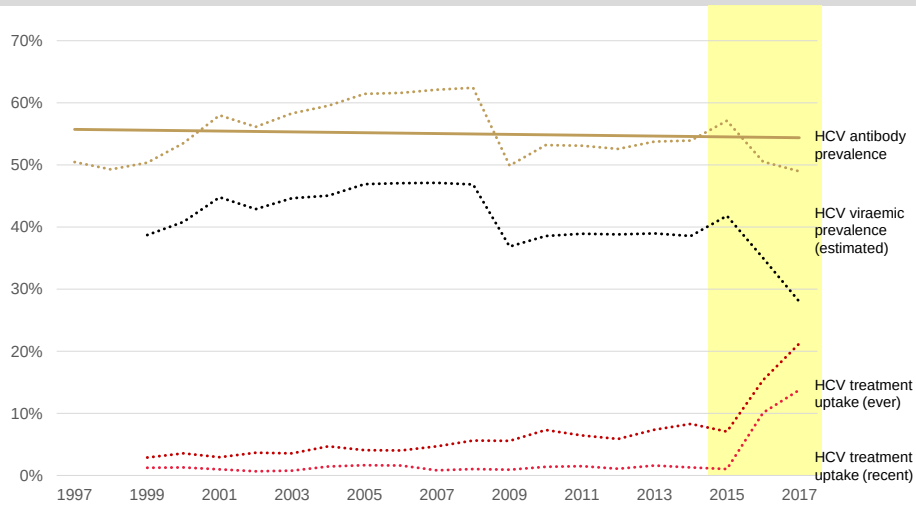
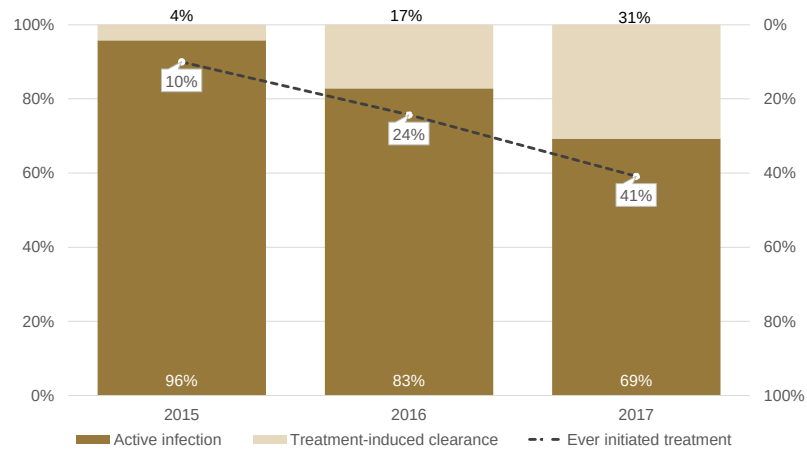


Source: Heard, Iversen, Geddes & Maher (2018), Australian NSP Survey, The Kirby Institute

HCV RNA testing using dried blood spots

- Feasibility study conducted in 2012
- Laboratory feasibility conducted by St Vincent's HIV Reference Lab/AMR
- Financial support from jurisdictions (NSW, NT, QLD, VIC & WA)
- Commenced annual ANSPS HCV RNA testing in 2015 (baseline)
- Combined HCV antibody/RNA test results and self-reported treatment uptake to determine:
  - Non-exposed
  - Spontaneous clearance
  - Treatment induced clearance (cured)
  - Active infection
- Monitor elimination efforts among people who inject drugs: from baseline (2015 pre DAAs) into the future

HCV viraemic status and treatment history among treatment eligible respondents^, 2015-2017



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# Post stratification weightings adjusted for previous and recent HCV treatment and gender among RNA tested sample

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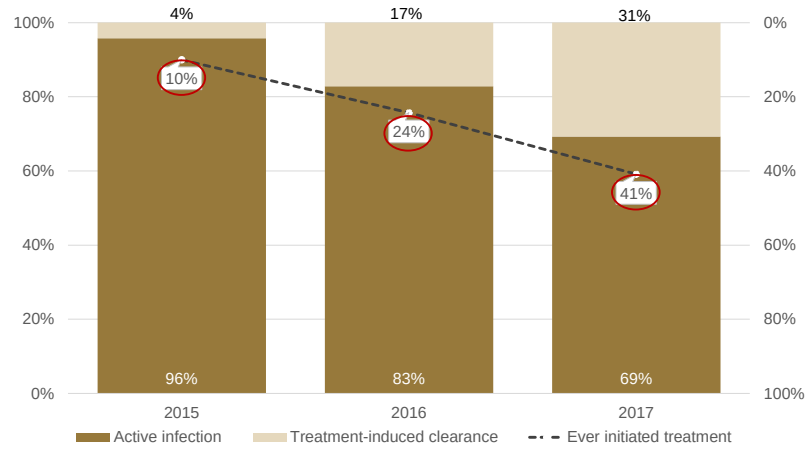

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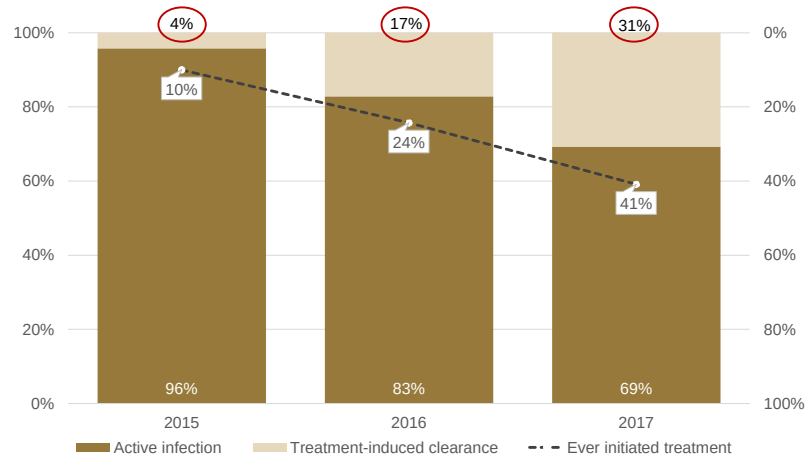

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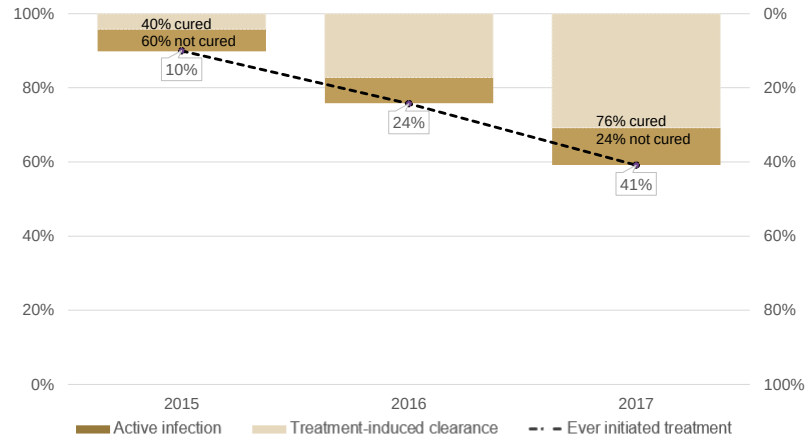

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Post stratification weightings adjusted for previous and recent HCV treatment and gender among RNA tested sample

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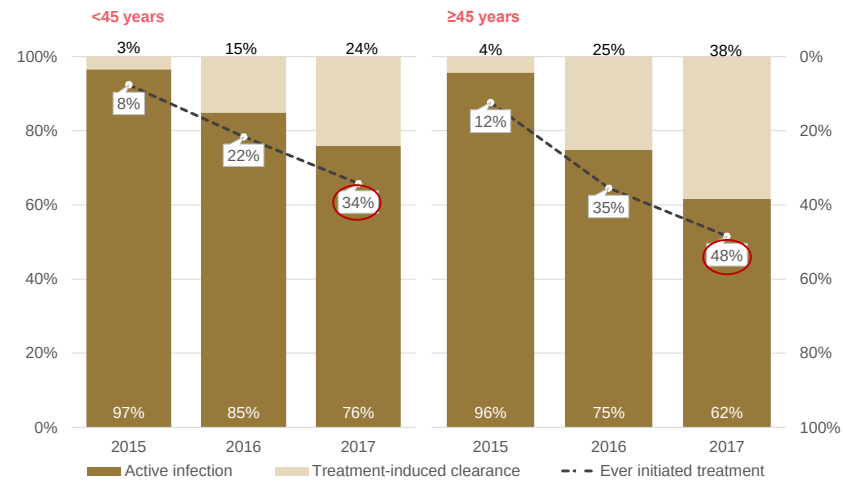
HCV viraemic status and treatment history among treatment eligible respondents^ stratified by age, 2015-2017



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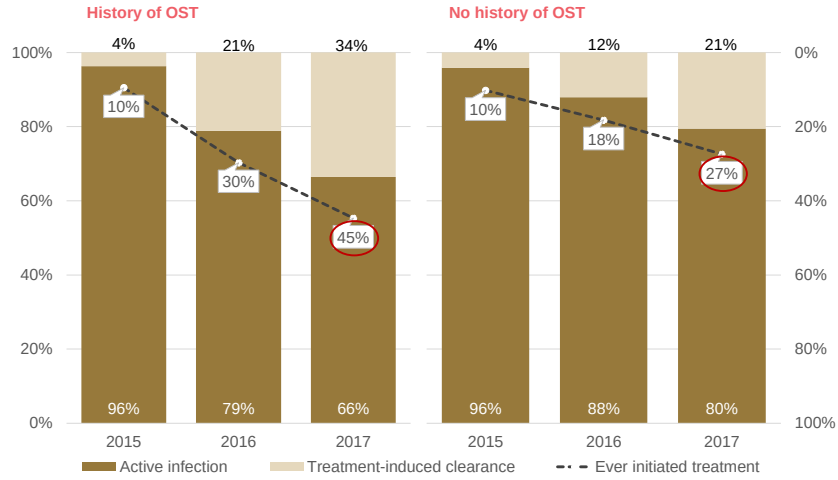
HCV viraemic status and treatment history among treatment eligible respondents^ stratified by history of OST, 2015-2017



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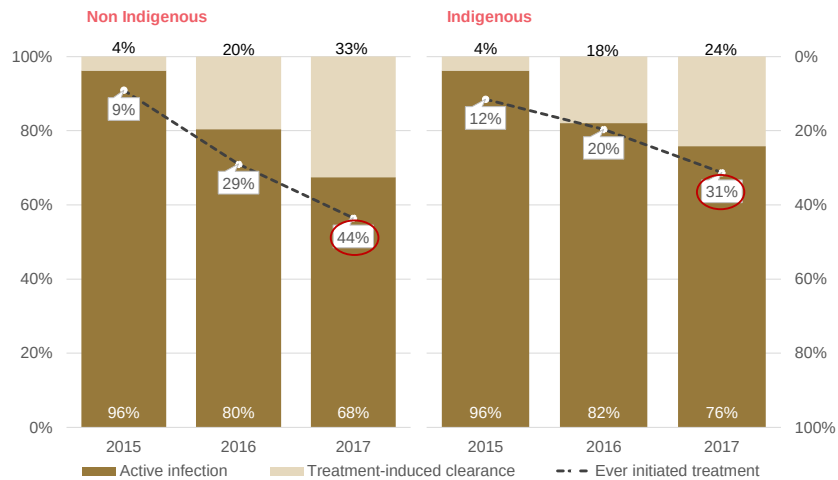
HCV viraemic status and treatment history among treatment eligible respondents^ stratified by Indigenous status, 2015-2017



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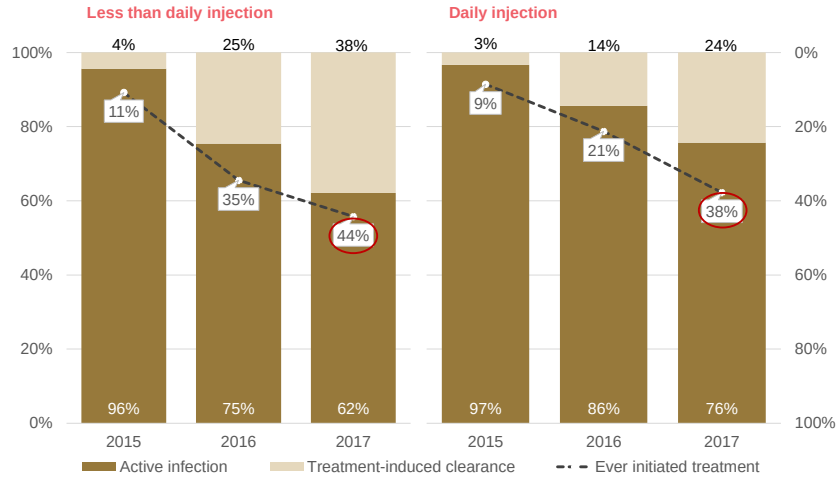
HCV viraemic status and treatment history among treatment eligible respondents^ stratified by injection frequency, 2015-2017



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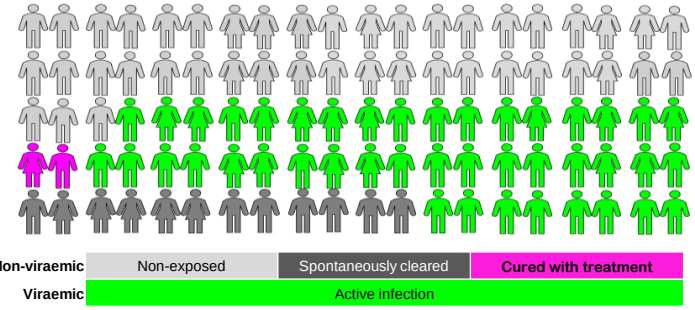
Viraemic status of ANSPS respondents

2015

Pre DAAs

43% non-exposed
12% spont. cleared
2% cured
43% active infection



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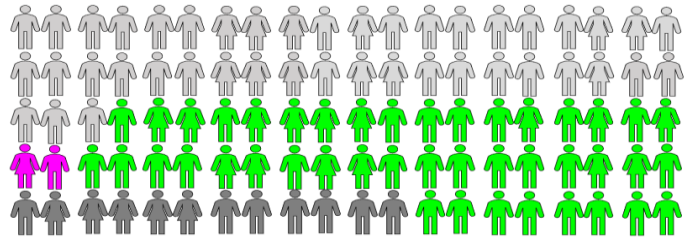
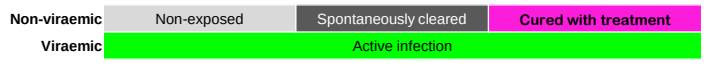
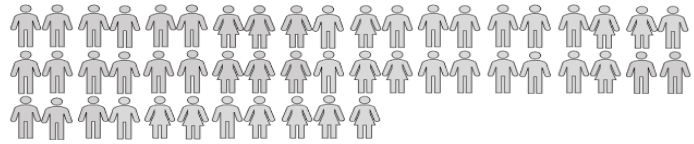




2017

Post DAAs

51% non-exposed



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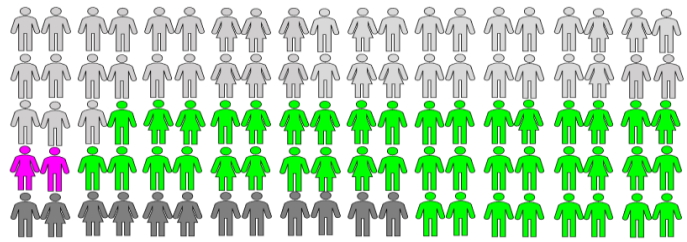

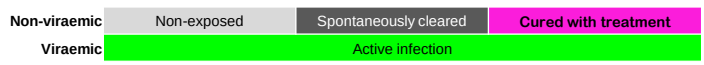

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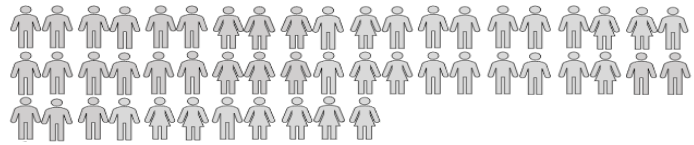

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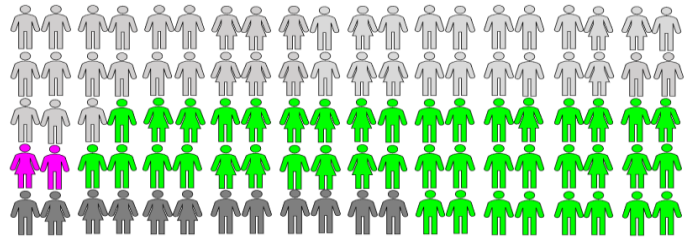

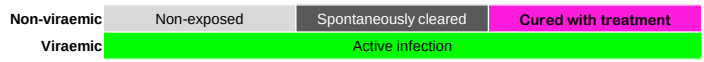

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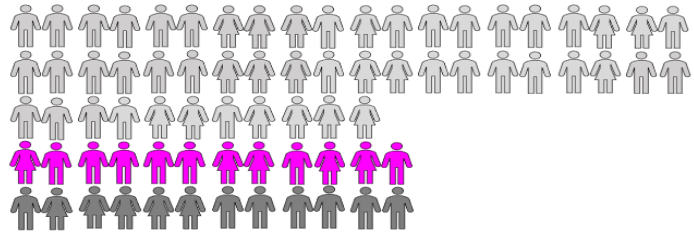

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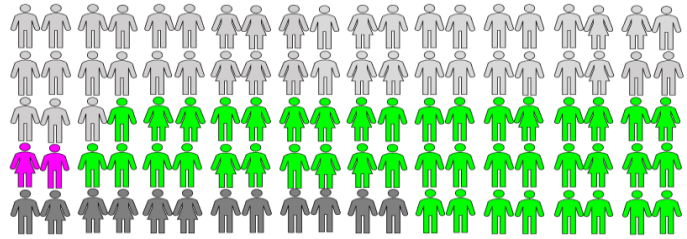

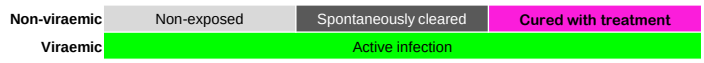

2017

Post DAAs

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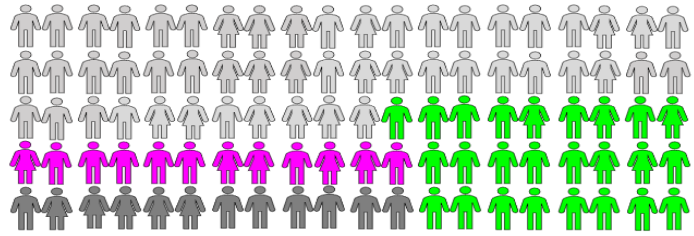
25% active infection



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- Captured people engaged with NSP services → generalisability of results to wider population is uncertain

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- Contribute to monitoring of HCV elimination efforts