High uptake of direct-acting antiviral therapy for HCV and reduction in population-level viremic prevalence: Progress toward achieving HCV elimination among people who inject drugs

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This presentation will include the discussion of the investigative use of medical devices (Xpert HCV Viral Load Fingerstick, Cepheid)
**Background/Aims**

*Background:* Australia has had unrestricted government subsidised direct-acting antiviral therapy for HCV since March 2016.

*Aims:* Gauge the progress toward eliminating HCV among people who inject drugs by measuring

- HCV treatment uptake
- Current HCV infection
**Study Design and Participants - ETHOS Engage Cohort**

**Study design:** Observational cohort study

**Study setting:** Drug treatment clinics and needle and syringe programs (25 sites)

**Study recruitment period:** May 2018-September 2019

**Inclusion criteria:**
- 18 years of age or older;
- Written informed consent;
- History of injecting drug use;
- Recent injecting drug use (previous 6 months) OR currently receiving OST.

**Exclusion criteria:**
- Women who are pregnant
1. Study Enrolment
   - Informed consent

2. Point-of-care testing
   - GeneXpert & dried blood spot

3. Fibroscan
   - Median stiffness

4. Participant Survey
   - Demographics
   - Injecting history
   - HCV experience

5. Clinical Assessment
   - Consultation with clinic nurse

Clinic Waiting Area

Peer support worker
Participant Disposition

1,468 Enrolled into ETHOS Engage

25 Excluded:
16: withdrawn / walkout
5: insufficient survey data
4: duplicates

1,443 participants with sufficient data
Participant characteristics

- 1,443 participants
  Mean age: 44 (SD: 10); 65% male; 23% Indigenous ethnicity
- 157 (11%) currently **homeless**
- 974 (68%) ever **imprisoned**, 259 (18%) within last year
- 1070 (74%) currently receiving **opioid substitution therapy**
- 525 (36%) **excessive alcohol consumption**
  as defined using AUDIT-C
Recent injecting drug use

**Total population:**

- Last month, ≥daily: 30%
- >12 months ago: 15%
- within 1-12 months: 21%
- Last month, <daily: 34%

**Current OST (n=1,070):**

- within 1-12 months: 25%
- >12 months ago: 20%
- within last 12 months: 21%

**No current OST (n=373):**

- within 1-12 months: 34%
- >12 months ago: 23%
- within last 12 months: 43%
1,468 Enrolled into ETHOS Engage

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1,443 participants with sufficient data

655 (45%)
No evidence of chronic HCV

788 (55%)
Evidence of chronic HCV (past or current)
Factors associated with treatment uptake:

- **Age ≥45**, aOR: 1.46, 95%CI: 1.06 – 2.01
- **Female**, aOR: 0.67, 95%CI: 0.47 – 0.95
- **Homelessness**, aOR: 0.59, 95%CI: 0.38 – 0.96
- **Current OAT**, aOR: 2.54, 95%CI: 1.48 – 4.39
- **≥Daily IDU**, aOR: 0.50, 95%CI: 0.29 – 0.86

Chronic HCV (ever) determined by combination of results obtained by point of care serology and self-reported HCV status

*Main drug injected in last month, excludes data for participants injecting other drugs (n=28); variable not used in adjusted analysis due to collinearity with recency of injecting
Current HCV infection

- 55% chronic HCV (ever)
- 32% treatment-induced clearance
- 24% current infection

Total Population: N=1388
Current HCV infection and associated factors

- **Y**: aOR: 1.47, 95% CI 1.00 – 2.16
- **>12m**: aOR: 1.79, 95% CI 1.31 – 2.46
- **≥daily**: aOR: 2.26, 95% CI 1.43 – 2.42
- **≤12m**: aOR: 2.04, 95% CI 1.38 – 3.02

Main drug injected:
- Heroin: 25%
- Meth: 25%
- Other opioids: 23%

Excessive alcohol:
- No: 30%
- Yes: 32%

Current HCV infection status obtained Cepheid GeneXpert HCV Viral Load results
N=55 (4%) of participants excluded from current HCV prevalence indicator due to invalid/unknown current HCV infection status

*Main drug injected in last month, excludes data for participants injecting other drugs (n=28).
Conclusions

• Unrestricted DAA access in Australia has produced high treatment uptake (66%) among people who inject drugs, across marginalised populations

• High treatment uptake has led to a reduction in the proportion of people with current HCV infection to 24% (>50% reduction among those with history of chronic HCV)

• To maintain momentum toward HCV elimination and achieve targets, sub-populations with significantly higher viremia and those significantly less likely to initiate HCV therapy may require additional support to encourage engagement with HCV care
ETHOS Engage – Future Directions

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Wave 1:
• Complete!
• Treatment uptake and outcomes assessed

Wave 2:
• Revisiting all sites
• POC RNA test results available same day
• Prescriber onsite
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