Eradicate Hep C:
High re-infection rates among PWIDs treated successfully for hepatitis C in a community needle and syringe programme

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Conflict of interest

BS acknowledges honoraria for lectures from Abbvie, MSD and Gilead
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What was the study rationale?

- Testing ‘Treatment as prevention’
- Inclusion criteria- injected in past week.

Study aims

1. Can 100 HCV+ highly active PWIDs be successfully recruited and treated for HCV through a NSP?

2. What are rates of reinfection?

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Study pathway

724 Number of DBS tests carried out at Cairn Centre from Dec 2012-Jul 2016

124 HCV antibody positive individuals newly diagnosed on DBS testing

92 PCR confirmed positive individuals assessed for eligibility

69 newly diagnosed individuals recruited

36 already diagnosed HCV positive individuals recruited

105 individuals enrolled and consented

94 individuals commenced treatment

Genotype 1
> 37 individuals received PEGIFN-α + ribavirin + Telaprevir/Simeprevir

Genotype 2/3
> 37 individuals received PEGIFN-α + ribavirin

11 did not commence treatment
4 lost to follow up
2 no longer actively injecting (commenced on standard treatment pathway)
1 died
1 in prison outside catchment area
3 spontaneously resolved

Calculating reinfection

1. Remain HCV-
   SVR-12

Time at risk

Last negative HCV PCR test

2. HCV reinfection
   SVR-12 or last HCV- PCR test

Time at risk

Estimated time of reinfection

• Exclusions: ‘Did not achieve SVR-12’ or died prior to 6-month follow-up
Key Results

Demographics
- Mean age 34 years, 71% male.
- 94% unemployed
- 1/5 homeless/unstable housing, 12.8% in prison during study
- 18% significant fibrosis (F2-F4)

Injecting practices
- Inject median 6.5 times/week
- 54.3% inject ≥ day

Harm reduction
- 82% had 100% NSP coverage
- 63% on OST prior to enrolment

Key study outcomes

1. SVR-12: **82%** (77/94)
2. ≥80% Treatment adherence: **71.3%** (67/94)
Reinfection rate

**6-month** reinfection rate: **23.53/100 p-yrs** (95% CI 9.80-56.54) (5/77 participants). Total follow-up time 21.25 p-yrs.

**18-month** reinfection rate: **21.5/100 p-yrs** (95% CI 13.00-35.65)(15/77 participants). Total follow up time 69.79 p-yrs.

**18-month mortality rate:** **5.55/100 p-yrs** (95% CI 2.77-11.09) (8/94). Total follow up time 144.24 p-yrs.

Why are reinfection rates so high?

- **Current estimates among PWIDs:**
  - 2 Meta-analyses: pooled re-infection rate: **1.77/100pyrs** to **2.4/100pyrs** (Simmons 2016, Aspinall 2013).
  - **4.9/100 pyrs**- relapsed PWID (Midgard 2016)
  - **5.7/100 pyrs**- individuals hospitalised for drug-related cause (Weir 2016).

- **But...different study population**
  Previous studies define ‘active’= injected last 6-12 months
  • (or 3-months- Hilsden 2013).
Implications?

- This is a **high risk** population
- No **behaviour change** following treatment?
- **NSP** and **OST** not enough?
- Treating the reinfections

Conclusions

- Successful **pathway of care** for ‘hard to reach’ population
- High **reinfection rate**
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References

Questions?