

# Injection Drug Use Patterns and Changes Associated with HCV Treatment



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## Background

- Direct acting antiviral (DAA) therapy has proven safe and effective at curing HCV infection in people who are actively injecting drugs, with low rates of reinfection
- We examine the injection drug behavior changes that took place in a cohort of individuals treated for HCV while still reporting active injection drug use.

### Eligibility criteria:

- (1) HCV RNA positive and
- (2) Had injected drugs in the past 90 days.

## Methods

- Data was analyzed from the Accessible Care Trial for curing HCV in PWID, a randomized clinical trial comparing:
  - Accessible Care - on-site, low-threshold HCV treatment with care coordination at a New York City syringe service program
  - Usual Care – on-site referral to HCV patient navigator with facilitated referral to local provider
- Changes in medication for opioid use disorder (MOUD) treatment, injection frequency, and injection equipment sharing were compared at baseline and 3-months comparing:
  - Those initiating DAA therapy in the Accessible Care treatment (**ACTx**) arm
  - Those who did not initiate therapy (**NoTx**)

## Results

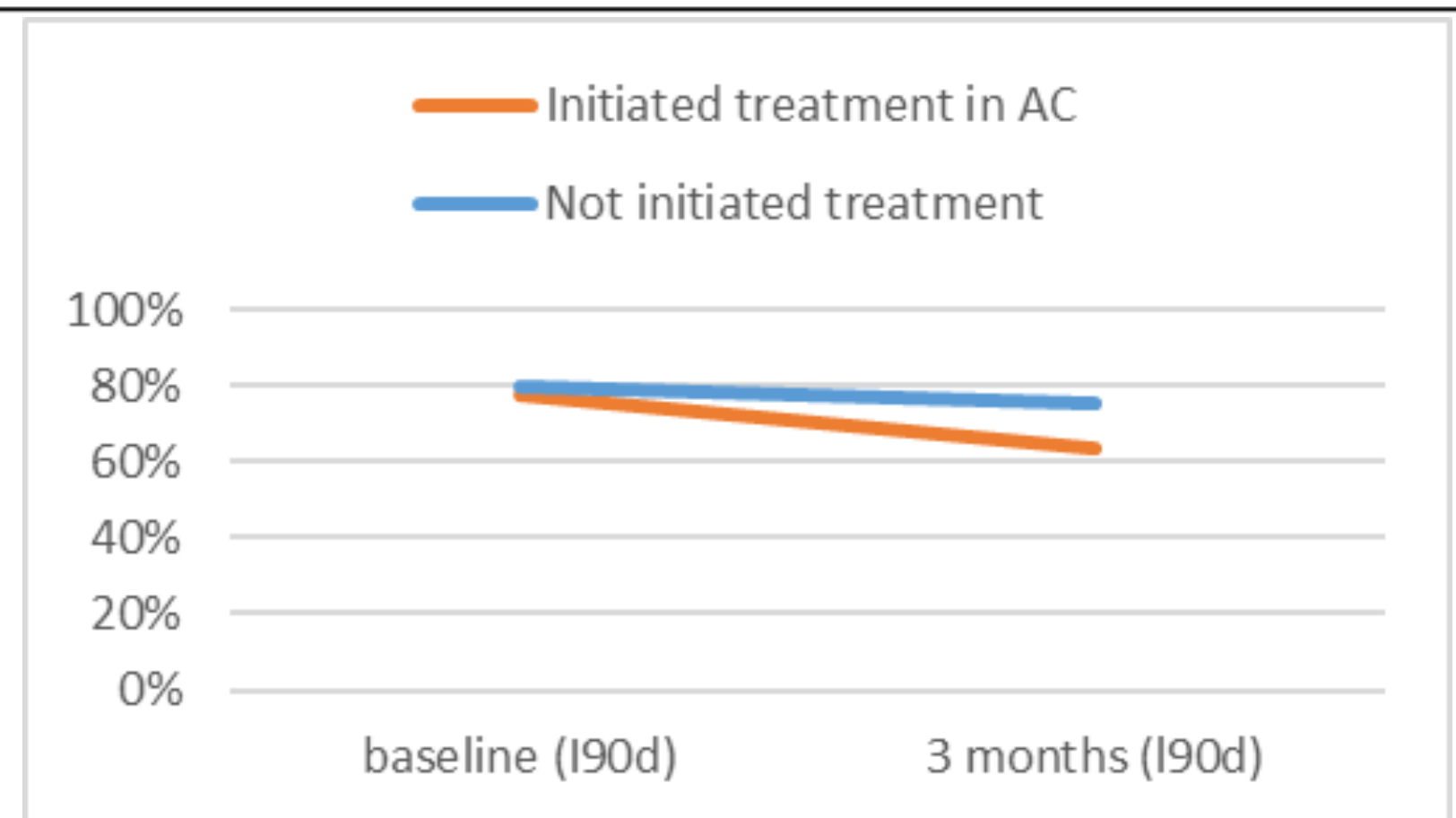
### Participant Characteristics

|                    | Overall (n=147) | Initiated treatment in AC (ACTx) (n=44) | Not initiated treatment (NoTx) (n=103) | p-value |
|--------------------|-----------------|---|--|---------|
| Age (mean, sd)     | 41.4 (10.6)     | 44.5 (10.8)                             | 40.1 (10.3)                            | 0.021   |
| Race/Ethnicity     |                 |   |  | 0.012   |
| Hispanic           | 85 (57.8%)      | 27 (61.4%)                              | 58 (56.3%)                             |         |
| Non Hispanic White | 48 (32.7%)      | 9 (20.5%)                               | 39 (37.9%)                             |         |
| Non Hispanic Black | 8 (5.4%)        | 6 (13.6%)                               | 2 (1.9%)                               |         |
| Other              | 6 (4.1%)        | 2 (4.5%)                                | 4 (3.9%)                               |         |
| Gender             |                 |   |  | 0.881   |
| Male               | 113 (76.9%)     | 35 (79.5%)                              | 78 (75.7%)                             |         |
| Female             | 33 (22.4%)      | 9 (20.5%)                               | 24 (23.3%)                             |         |
| Transgender        | 1 (0.7%)        | 0 (0.0%)                                | 1 (1.0%)                               |         |
| Homelessness       |                 |   |  | 0.174   |
| Lifetime           | 136 (92.5%)     | 43 (97.7%)                              | 93 (90.3%)                             |         |
| Past 3 months *    | 85 (58.2%)      | 25 (56.8%)                              | 60 (58.8%)                             | 0.856   |

\* one non-initiated participant refused to answer past 3 months homelessness status

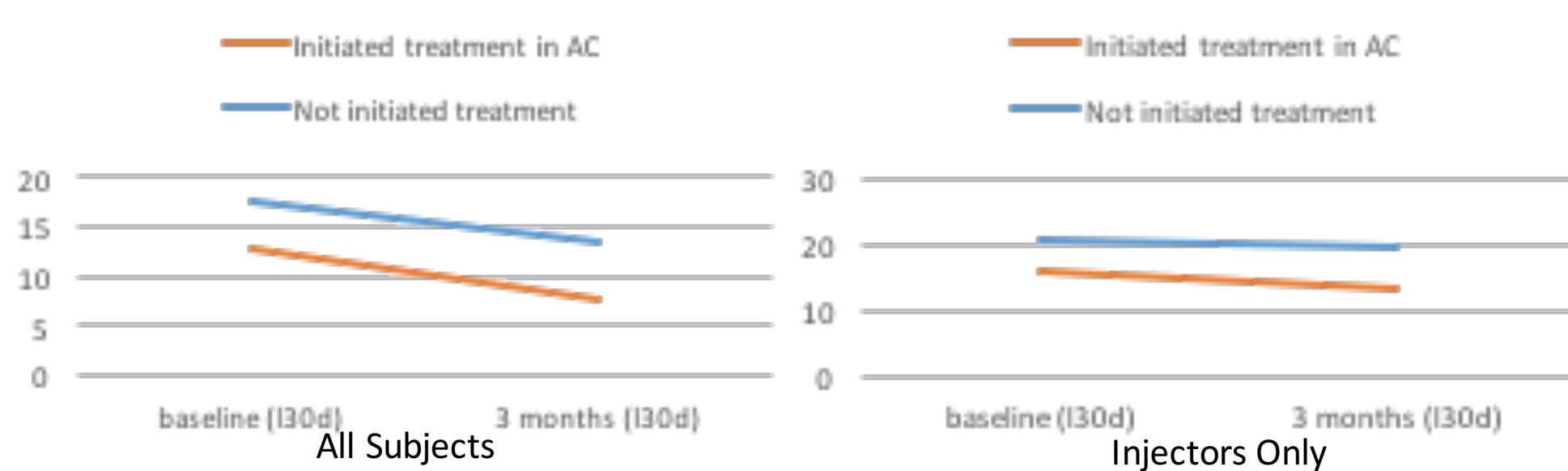
### Medication for Opioid Use Disorder

| Drug Treatment            | baseline (last 90 day) |    | 3 months (last 90 days) |    |
|---------------------------|------------------------|----|-------------------------|----|
|                           | Y                      | N  | Y                       | N  |
| Initiated treatment in AC | 34                     | 10 | 28                      | 16 |
| Not initiated treatment   | 82                     | 21 | 33                      | 11 |
| Overall                   | 116                    | 31 | 61                      | 27 |

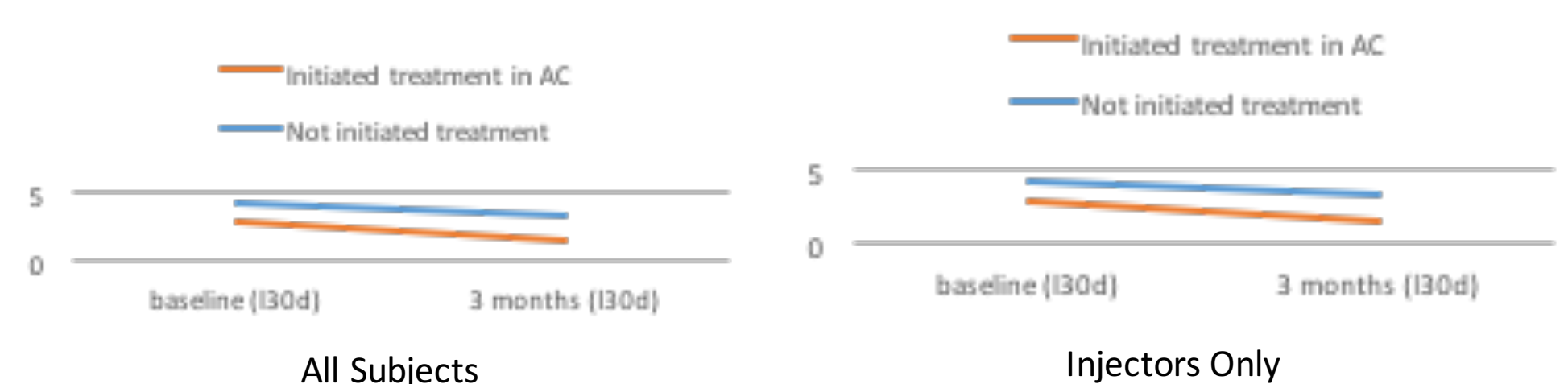


### Injection Frequency (days injected in last 30 days & injections per injection day in last 30 days)

| Injection days over last 30 days | baseline (I30d) |       |     | 3 months (I30d) |       |    |
|----------------------------------|-----------------|-------|-----|-----------------|-------|----|
|                                  | mean            | SD    | n   | mean            | SD    | n  |
| All subjects                     |                 |       |     |                 |       |    |
| Initiated treatment in AC        | 12.86           | 12.31 | 44  | 7.68            | 11.75 | 44 |
| Not initiated treatment          | 17.44           | 13.47 | 103 | 13.50           | 13.06 | 44 |
| Overall                          | 16.07           | 13.26 | 147 | 10.59           | 12.69 | 88 |
| Injectors only                   |                 |       |     |                 |       |    |
| Initiated treatment in AC        | 16.17           | 11.68 | 35  | 13.52           | 12.85 | 25 |
| Not initiated treatment          | 20.41           | 12.31 | 88  | 19.80           | 11.12 | 30 |
| Overall                          | 19.20           | 12.24 | 123 | 16.95           | 12.24 | 55 |

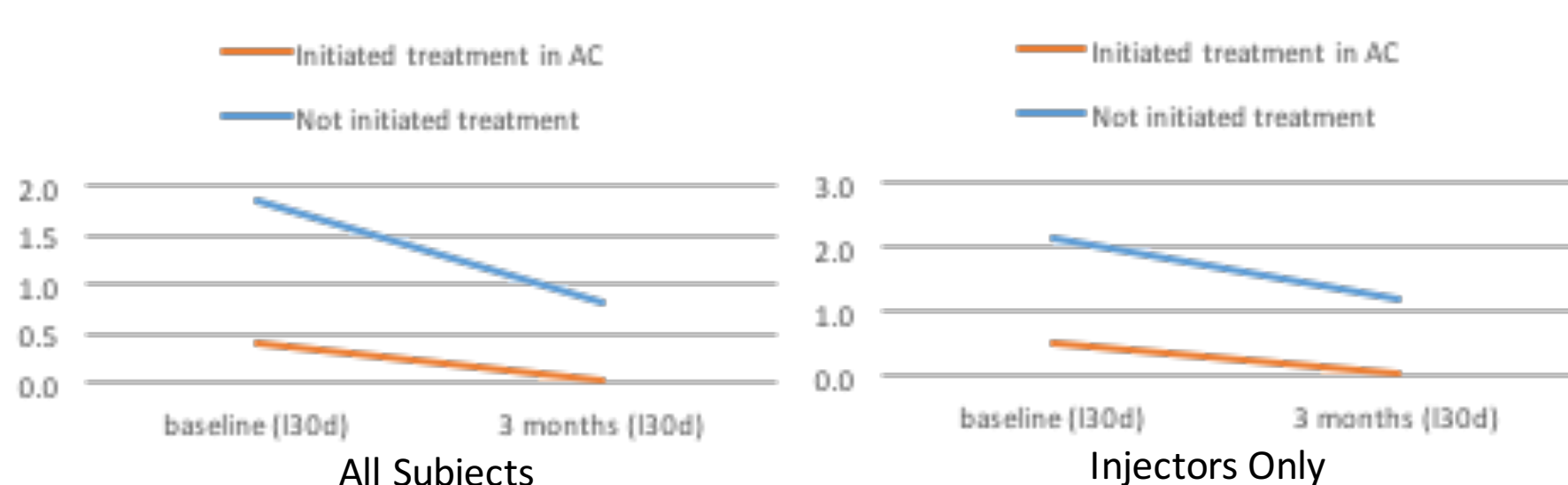


| Injection Events in last 30 days | baseline (I30d) |      |     | 3 months (I30d) |      |    |
|----------------------------------|-----------------|------|-----|-----------------|------|----|
|                                  | mean            | SD   | n   | mean            | SD   | n  |
| All subjects                     |                 |      |     |                 |      |    |
| Initiated treatment in AC        | 2.95            | 2.96 | 44  | 1.52            | 2.18 | 44 |
| Not initiated treatment          | 4.30            | 7.97 | 103 | 3.43            | 3.83 | 44 |
| Overall                          | 3.90            | 6.88 | 147 | 2.48            | 3.24 | 88 |
| Injectors only                   |                 |      |     |                 |      |    |
| Initiated treatment in AC        | 3.71            | 2.86 | 35  | 2.68            | 2.30 | 25 |
| Not initiated treatment          | 5.03            | 8.42 | 88  | 5.03            | 3.66 | 30 |
| Overall                          | 4.66            | 7.29 | 123 | 3.96            | 3.31 | 55 |

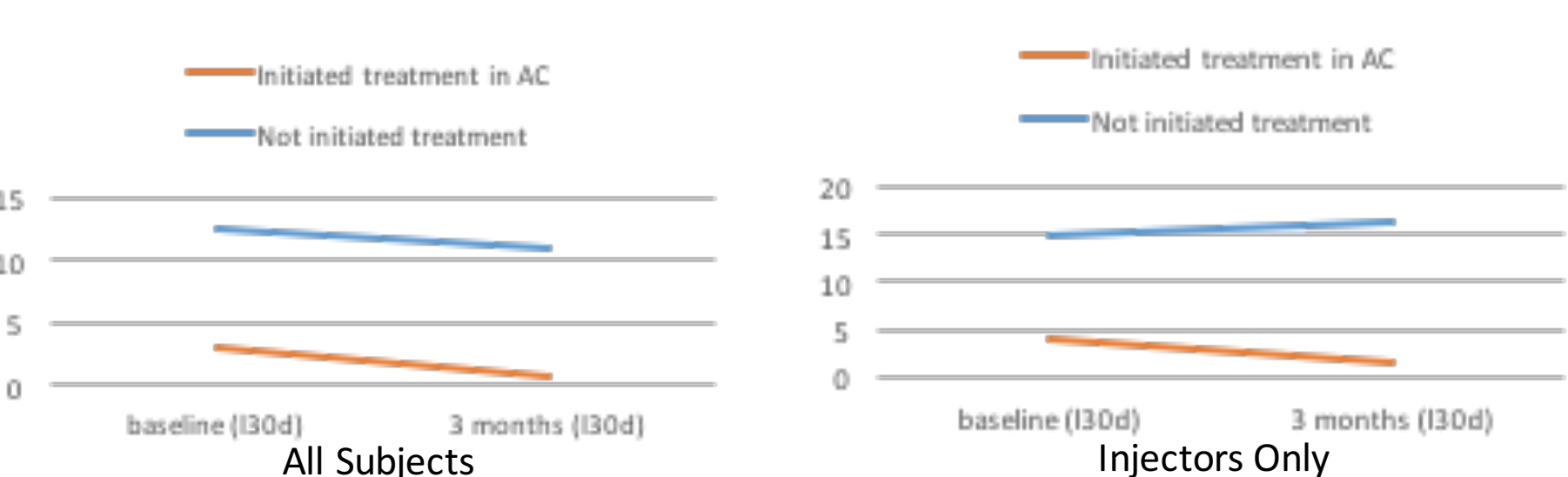


### Sharing of Injection Equipment (used syringes or used cookers in last 30 days)

| How many times used syringe used by someone else in last 30 days | baseline (I30d) |      |     | 3 months (I30d) |      |    |
|--|-----------------|------|-----|-----------------|------|----|
|  | mean            | SD   | n   | mean            | SD   | n  |
| All subjects   |                 |      |     |                 |      |    |
| Initiated treatment in AC  | 0.41            | 1.42 | 44  | 0.02            | 0.15 | 44 |
| Not initiated treatment  | 1.84            | 8.95 | 102 | 0.82            | 3.38 | 44 |
| Overall  | 1.41            | 7.54 | 146 | 0.42            | 2.41 | 88 |
| Injectors only   |                 |      |     |                 |      |    |
| Initiated treatment in AC  | 0.51            | 1.58 | 35  | 0.04            | 0.20 | 25 |
| Not initiated treatment  | 2.16            | 9.66 | 87  | 1.20            | 4.05 | 30 |
| Overall  | 1.69            | 8.22 | 122 | 0.67            | 3.03 | 55 |



| How many times shared cooker in last 30 days | baseline (I30d) |       |     | 3 months (I30d) |       |    |
|--|-----------------|-------|-----|-----------------|-------|----|
|  | mean            | SD    | n   | mean            | SD    | n  |
| All subjects                                 |                 |       |     |                 |       |    |
| Initiated treatment in AC                    | 3.16            | 10.82 | 44  | 0.89            | 4.65  | 44 |
| Not initiated treatment                      | 12.63           | 36.14 | 102 | 11.11           | 34.24 | 44 |
| Overall                                      | 9.77            | 31.04 | 146 | 6.00            | 24.83 | 88 |
| Injectors only                               |                 |       |     |                 |       |    |
| Initiated treatment in AC                    | 3.97            | 12.03 | 35  | 1.56            | 6.14  | 25 |
| Not initiated treatment                      | 14.80           | 38.75 | 87  | 16.30           | 40.63 | 30 |
| Overall                                      | 11.70           | 33.64 | 122 | 9.60            | 30.95 | 55 |



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## Discussion

- Treating people who inject drugs may also have indirect pro-health benefits including reduction in high risk injection drug behavior
- The low rates of HCV reinfection seen in many HCV treatment studies in PWID may be partially related to decreased injection risk behavior