Background

- Enrolment in methadone maintenance therapy (MMT) is associated with improved HIV treatment outcomes among people who use drugs (PWUD).
- The extent to which these benefits are sustained in the context of ongoing cocaine use is unclear.
- We assessed differential impacts of MMT on HIV viral load (VL) suppression among HIV-positive opioid users in relation to discrete patterns of cocaine use.

Methods

- **Design and setting.** Data was drawn from the AIDS Care Cohort to Evaluate exposure to Survival Services (ACCESS) study, an ongoing prospective cohort of >800 HIV-positive PWUD in Vancouver, Canada, that started recruitment in 2005.
- **Study procedures.** Semi-annual interview, serological testing (e.g., HCV) and linkages with the provincial HIV Drug Treatment program (e.g., CD4, VL, ART dispensation).
- **Study population.** HIV-positive ART-exposed opioid users who completed ≥1 study interview between 2005 and 2014.
- **Measures and analyses.** Using a procedure recommended by Knol and VanderWeele,1 we used generalized linear mixed-effects (GLMM) to model the independent effect of MMT on VL suppression (< 50 copies/mL plasma) across strata of frequency (daily versus <daily) of cocaine injection (Model 1) and crack cocaine smoking (Model 2), after adjustment for potential confounders.
- Confounders considered included: age, ethnicity, unstable housing, incarceration, sex work, & daily heroin injection, & daily crack smoke.

Results

- 397 HIV-positive opioid-users were included.
- 1679.1 person-years of follow up
- At baseline:
  - Age, median (IQR): 41 years (36-47)
  - Male: 234 (59%)
  - Enrolled in a MMT program in the last 6 months: 304 (77%)
  - <daily cocaine injection in the last 6 months: 158 (40%)
  - Crack smoke (for Model 1)

Table 1. Adjusted analyses for Model 1

<table>
<thead>
<tr>
<th>MMT (yes)</th>
<th>Observations with/without viral suppression</th>
<th>AOR [95% CI]</th>
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</tr>
</thead>
<tbody>
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<td>1. Early cocaine injection</td>
<td>19/32</td>
<td>1.0</td>
<td>136/79</td>
<td>1.37 (0.53-3.48); P = 0.519</td>
</tr>
<tr>
<td>2. Daily cocaine injection</td>
<td>287/230</td>
<td>0.61 (0.31-1.27); P = 0.246</td>
<td>157/204</td>
<td>1.90 (0.93-3.89); P = 0.092</td>
</tr>
</tbody>
</table>

Table 2. Adjusted analyses for Model 2

<table>
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<tr>
<th>MMT (yes)</th>
<th>Observations with/without viral suppression</th>
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Conclusions

- The effect of MMT on VL suppression differed in relation to distinct patterns of cocaine use:
  - While enrollment in a MMT program was associated with increased odds of VL suppression among <daily cocaine injectors, this beneficial effect of MMT was lost among more frequent cocaine injectors.
  - MMT was associated with increased odds of viral suppression among opioid users regardless of crack-cocaine use.
  - Findings from this study support global calls to expand access to low-threshold Opioid Agonist Therapy to improve addiction and HIV outcomes among HIV-positive opioid users.
  - Our findings also underscore the urgent need to identify novel and effective pharmacotherapies for the treatment of cocaine use disorders, as well as structural interventions to support engagement in HIV care for this population.

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References: