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Social and socio-economic benefits of antiretroviral therapy adherence among HIV-infected people who use illicit drugs in Vancouver, Canada

Lindsey Richardson, Thomas Kerr, Robert Hogg, Sylvia Guillemi,
Julio Montaner, Evan Wood and M-J Milloy
British Columbia Centre for Excellence in HIV/AIDS

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I have no conflicts of interest to declare



Clinical benefits of ART adherence

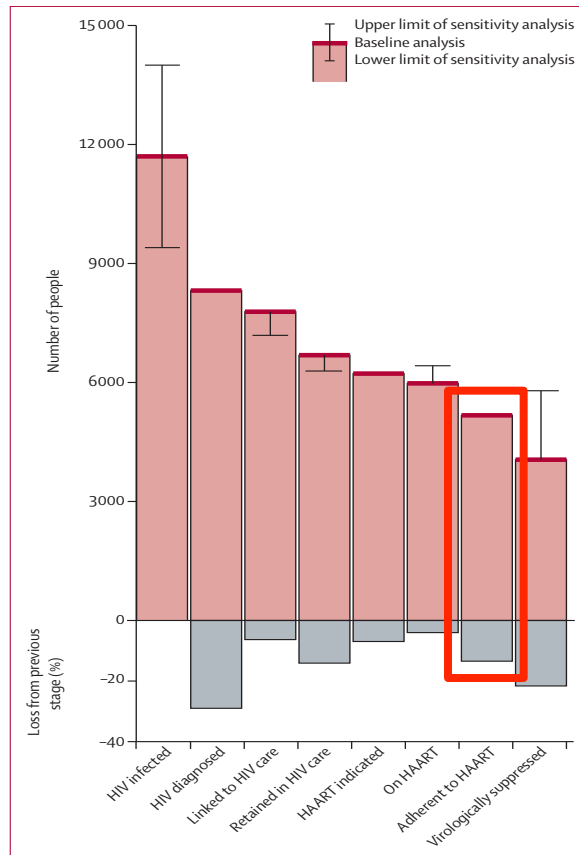


Figure 5: Cascade of HIV care, including estimates of HIV prevalence and ranges from sensitivity analyses

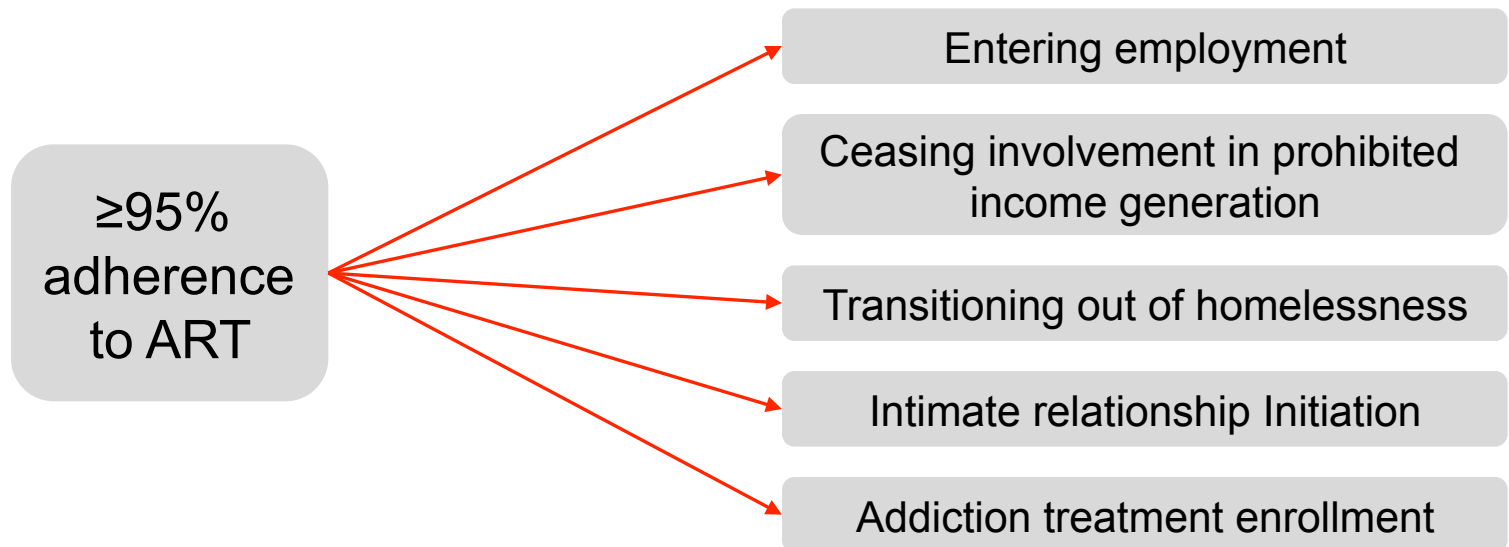
- Non-detectable viral load, stalled disease progression, reduced comorbidities
- Life expectancy approaches non-HIV+ for people optimally maintained on ART
- Sustained and significant population-level decreases in onward HIV transmission from ART scale up
- What about secondary clinical and non-clinical benefits of ART?

Nosyk et al. (2013) *Lancet ID*; Montaner et al., (2014) *Plos One*



Study objectives:

- To examine whether becoming optimally adherent to ART is associated with improvements in a range of social, socio-economic and secondary clinical outcomes among people who use illicit drugs
- Outcomes examined:





AIDS Care Cohort to Evaluate Access to Survival Services (ACCESS)

- **Research design:** Community-recruited cohort of people living with HIV/AIDS who use illicit drugs (ongoing since 1996)
- **Data collection:** Interviewer administered questionnaire and blood sample for serologic analysis at baseline and semi-annually
- **Data linkages:** Complete retrospective and prospective HIV clinical profile including all VL and ART dispensation from provincial treatment provider (BCCfE Drug Treatment Program)
- **Methods:**
 - Generalized linear mixed effects models for each outcome
 - Backwards model selection with adjustment for known/hypothesized confounders



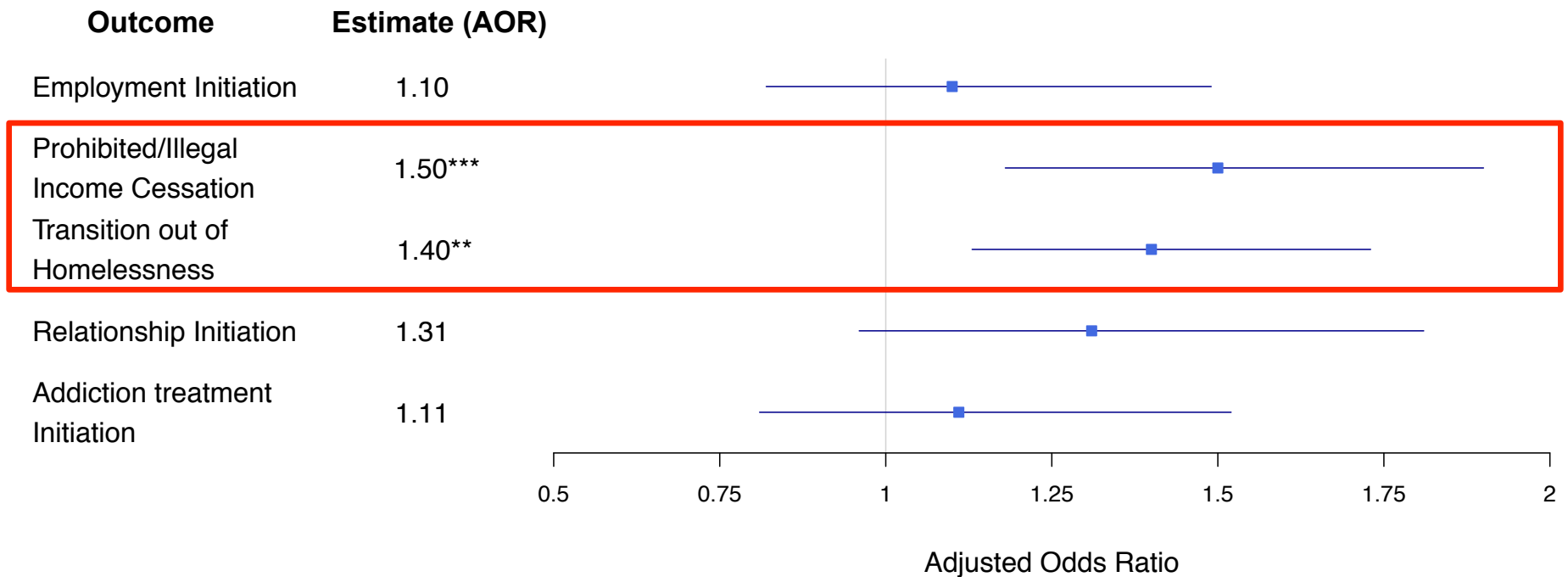
ACCESS Sample and Baseline Characteristics

TABLE 1. Baseline characteristics of 724 HIV-seropositive and ART exposed individuals who use illicit drugs, stratified by ART adherence at any point during the study period, Vancouver, Canada, 2005-2013

Characteristic	No ART adherence N=261 (35.8%)	ART adherence N=463 (63.8%)	Odds Ratio (95% CI)	p-value
Age				
Median (IQR)	44.0 (36.7-50.1)	43.5 (37.7-48.4)	1.00 (0.99 - 1.00)	<0.001
Gender				
Male	174 (66.6)	307 (66.3)		
Female	85 (32.6)	155 (33.5)	1.03 (0.75-1.43)	0.842
Ethnicity				
Non-Caucasian	106 (40.6)	213 (46.0)		
Caucasian	155 (59.3)	249 (53.8)	0.80 (0.59-1.08)	0.145
CD4 T-cell count (per 100 cells)				
Median (IQR)	3.5 (2.2-5.2)	2.9 (1.7-4.1)	0.96 (0.94-0.97)	<0.001
PVL (log 10) ^a				
Median (IQR)	0.7 (1.5-2.5)	2.5 (1.7-4.4)	1.06 (1.03-1.08)	<0.001



Multivariate results



- Notes: 1. Models considered relevant confounders of age, gender, ethnicity, education, recent incarceration, high intensity drug use, high-risk drug use, baseline cd4 count, and, where not the outcome, employment, prohibited/illegal income generation, homelessness, and addiction treatment
2. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$



Prohibited IGA, ART adherence and VL

- *ART adherence increases the likelihood of reducing socio-economic vulnerability:*
 - Ceasing prohibited income generation
 - Transitioning out of homelessness
- *Improved socio-economic well-being can reinforce engagement in HIV care, quality of life and individual health outcomes*
- *Findings emphasize clinical and non-clinical importance of promoting early ART uptake and adherence*

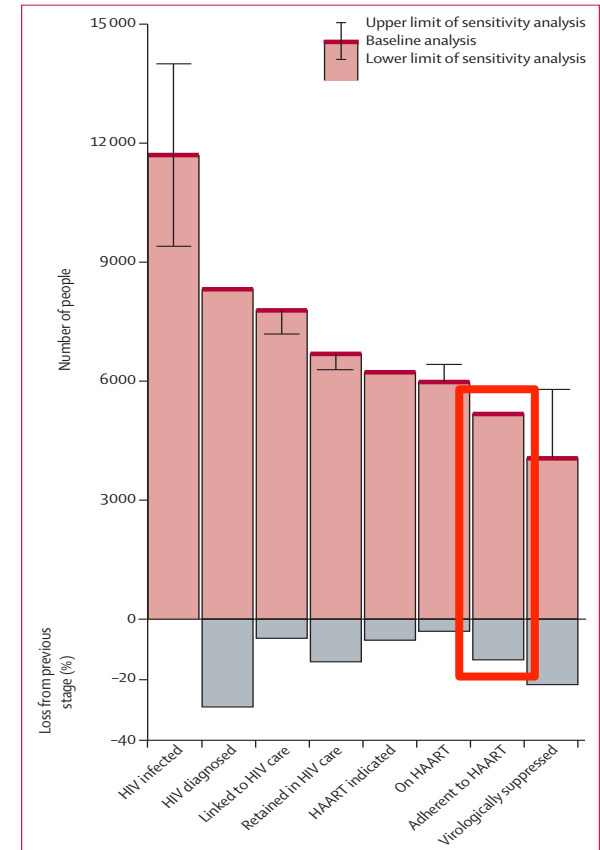


Figure 5: Cascade of HIV care, including estimates of HIV prevalence and ranges from sensitivity analyses

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