

The validation of a novel deprivation index for HIV/HCV co-infected individuals with non-attendance of a second visit

Authors: Adam Palayew, Alexandra M. Schmidt, Sahar S. Saeed, Curtis L. Cooper, Valérie Martel-Laferrriere, Marie-Louise Vachon, Mark Hull, Sharon Walmsley, Marina B. Klein

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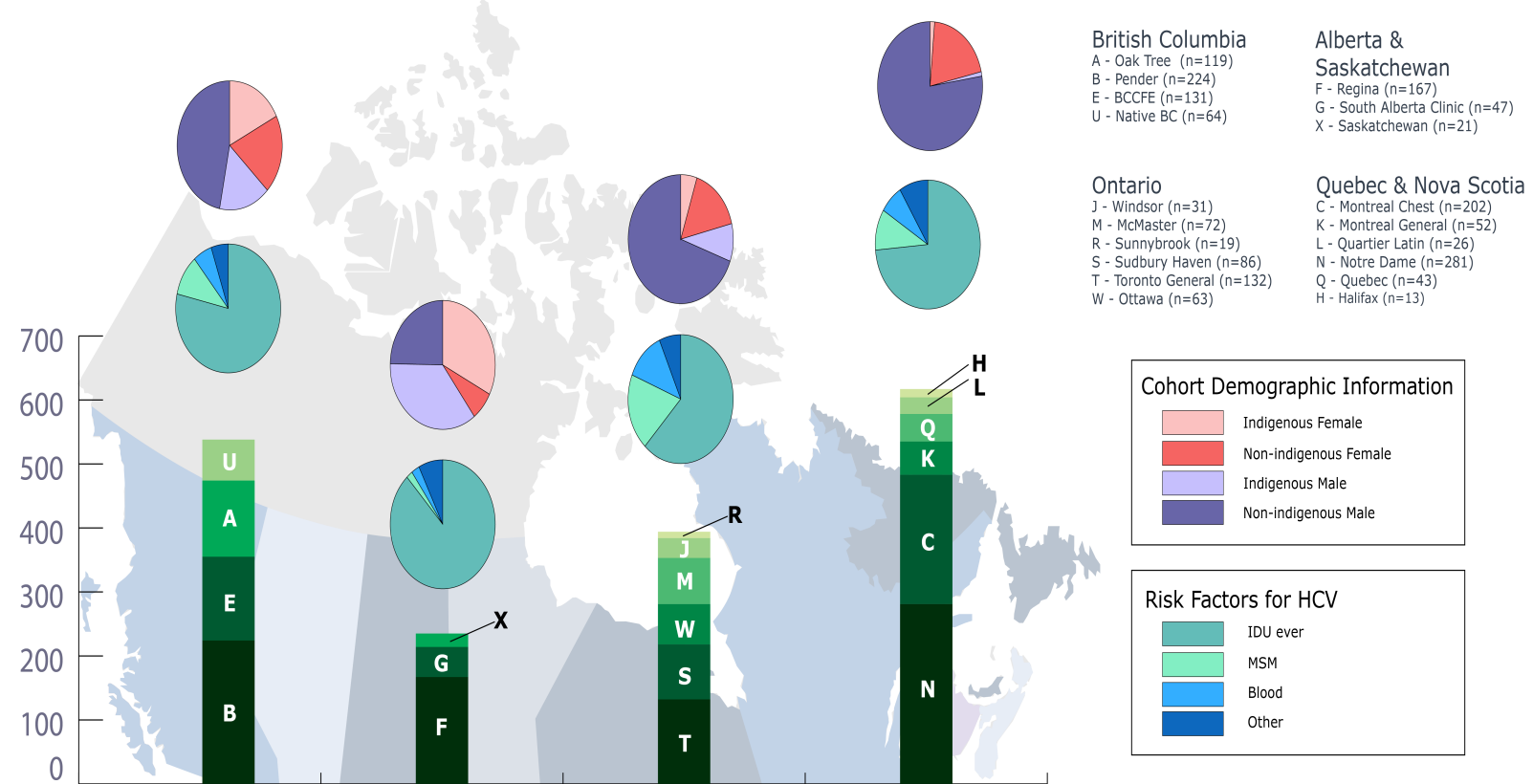
Background

- Engagement in care is critical to achieve good health outcomes for HIV and HCV. Deprivation can impact access and retention in healthcare
- We previously developed a 9-item individual-level deprivation index for evaluation of HIV-HCV co-infected participants of the Canadian Co-infection Cohort (CCC). The index included education level, incarceration history, injection drug use ever, injection drug use in the last 6 months, sexual orientation, employment status, income level, history of psychiatric hospitalization, and indigenous status.
- The aim of this study was to examine the association between deprivation at baseline and non-attendance of a second study visit, a proxy for disengagement from care.

Methods

- The CCC is a cohort of co-infected Canadians following more than 2000 participants. (Figure)
- We compared the association between participants' baseline deprivation index versus each of the variables that compose the index with non-attendance at a second visit using univariable and multivariable logistic regression.
- Analyses were done in a Bayesian framework.

Figure: Descriptive breakdown of key characteristics of CCC participants



Results

- Of 1537 eligible participants, 457 (30%) didn't attend a second visit.
- Results of the regression analyses are presented in the table.
- A one-unit increase in the deprivation index was associated with a 17% (95% credible interval, 2%, 34%) odds of not attending a second visit.
- Some covariates that make up the index (e.g. unemployment) were associated with the outcome in univariable analyses, but estimates were less precise in the multivariable analysis (Table). Including all covariates in a multivariable regression reduced the precision of individual estimates as variables were highly correlated.

Table: Univariable and multivariable regressions. The point estimates are the mean of the posterior summary and the 95% credible interval of the exponentiated odds ratios.

Variables	Univariable analyses	Multivariable analysis
Index score (per unit)	1.17 [1.02, 1.34]	NA
Education > high school	0.87 [0.68, 1.11]	0.83 [0.62, 1.11]
Incarceration history	0.89 [0.71, 1.13]	0.83 [0.63, 1.10]
Injection drug use ever	0.87 [0.66, 1.17]	0.87 [0.62, 1.24]
Injection drug use in the last 6 month	1.08 [0.86, 1.35]	1.12 [0.88, 1.44]
Not identifying as gay or bisexual	1.28 [0.98, 1.69]	1.51 [1.11, 2.05]
Unemployed	1.22 [0.92, 1.63]	1.35 [0.98, 1.86]
Income less than 1500 \$CAD a month	0.91 [0.70, 1.18]	0.84 [0.62, 1.14]
History of psychiatric hospitalization	0.96 [0.74, 1.23]	0.98 [0.75, 1.27]
Indigenous	0.95 [0.73, 1.22]	0.96 [0.74, 1.25]

Conclusions

- We found that our deprivation index was associated with disengagement from care.
- Given the highly-correlated nature of the covariates captured by the index, our score has advantages over traditional methods for studying the impact of deprivation on access to care and health outcomes in coinfecting Canadians.

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