Background

- In the last decade, mental health disorder (MHD) was the leading cause of disability in Canada and in the United States, with 1 in 5 people experiencing some form of MHD.
  - MHD poses an enormous economic burden to individuals and healthcare systems.
- People living with HIV (PLWH) have an increased risk of developing MHD than the general population, particularly mood (major depression) and anxiety.
  - Additionally, PLWH suffering from schizophrenia are more likely to have a substance use disorder compared to the general population.
- Therefore, in this study, we focused on assessing the healthcare impact of MHD among PLWH in British Columbia (BC), from 2000 until 2014.

Methods

- Participants were recruited from the BC Seek and Treat for Optimal Prevention of HIV/AIDS (STOP HIV/AIDS) retrospective population-based cohort:
  - Which is derived from linkages among provincial and administrative databases, and contains longitudinal individual-level data on all PLWH ever diagnosed in the province.
- Eligible participants were ≥18 years old, naïve to ART, and started ART between 01/01/2000 and 31/12/2013, and were followed until the earliest of death date, 31/12/2014 or the last contact date.
- The main outcome was bi-annual direct costs calculated in 2015$CDN associated with the number of physician visits and acute care hospitalizations.
- The main exposure was the presence of a MHD (at any point during follow-up). We identified four types of MHD: i) anxiety disorders, ii) mood disorders, iii) personality disorders, and iv) schizophrenia related disorder, using a published case-finding algorithm based on ICD 9 and 10 codes.
- We built a confounder two-part model, using generalized logistic and gamma regression models, adjusting for sex, age, cohort effect, HIV risk group, treatment-related factors, and the number of comorbid diseases other than MHD.

Results (cont.)

- In the 14-years of follow-up, there were 797,368 encounters with the healthcare system (58% due to MHD), incurring an overall cost of $146,905,094 (63% due to MHD) (Fig 1).
- Although only 1% of encounters were due to acute care hospitalizations, the cost associated with these hospitalizations were responsible for 63% of the overall cost.
- Participants with MHD incurred, on average, higher bi-annual costs between 2000 and 2014 than those without MHD ($1,019; 95% CI ($808 - $1,231); Fig. 2). High heterogeneity in cost was observed among confounders (Fig 2).
- The overall age-sex standardized physician visit rate (per 100 person-years) in the non-MHD and the MHD groups was 2,290 (95% CI 2,277-2,302) and 3,873 (95% CI 3,858-3,888), respectively.
- Those with MHD incurring higher costs were female, those younger than 30 years, whose HIV risk was MSM/IDU, who presented late for ART and who maintained sub-optimal adherence during follow-up.

Discussion

- Substantial healthcare-related direct costs were associated with having MHD.
- Those sub-groups with MHD incurring higher costs demonstrate a need to roll out mental health integrated care services.
- The next step will be to understand what MHD is driving the difference among groups.