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Abstract #91

Trends in Annual Healthcare Costs among People Living with HIV in Ontario, Canada from 2003 to 2018: Results from a Population-Based Study

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Introduction: HIV care and related costs are expected to evolve over time. However, Canadian studies on healthcare costs over time are scarce. Our study quantified trends in annual mean healthcare costs per person living with HIV (PLWH) in Ontario (2003-2018) from a publicly funded healthcare system perspective.

Methods: We conducted a population-based study of PLWH in Ontario health administrative databases diagnosed from 1992-2018 (merged ICES-HIV and ICES-Ontario HIV Treatment Network Cohort Study [OCS] cohorts [merged: n=25842; ICES-OCS only: n=3516]). We examined three time-periods: 2003-2009; 2009-2015 (following guidelines for HIV treatment as prevention); and 2015-2018 with the expansion of generic ART regimens. Costs were estimated using a previously validated algorithm and inflated to 2018 Canadian dollars. Descriptive analyses were performed, and cost estimates were stratified by sociodemographic factors (age, sex, rurality, neighbourhood-level income, immigration status), year of entry into HIV care, and HIV-related characteristics (nadir CD4 count, ART use; ICES-OCS cohort only).

Results: Among the merged cohorts, the mean age at entry into HIV care was 38 years (SD:15) and 78% were male. The annual mean cost per PLWH increased from \$9726 (2003) to \$13594 (2018), rising by 46% from 2003 to 2009, 2% from 2009 to 2015, and declining by 7% from 2015 to 2018; trends were consistent across populations. Medications accounted for the largest share of annual healthcare costs (47-62%), increasing from \$4749 in 2003 to \$8974 in 2015, and declining to \$7867 in 2018. Stratified analyses revealed that healthcare costs were higher among PLWH diagnosed at an older age, long-term residents, resided in low-income neighbourhoods, or had a nadir CD4 count less than 200copies/mL.

Discussion: Healthcare cost trends for PLWH in Ontario have fluctuated over time, primarily reflecting changes in medication costs. Differential healthcare costs across populations warrants further study, including the role of delayed diagnoses and care.