Examining Healthcare Service Utilization Patterns of People Living with HIV in Rural British Columbia, Canada

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Background

- In 2016, **10.9%** of British Columbia's (BC's) total population lived in rural areas[1]
- Rural-dwelling British Columbians often have to travel long distances for healthcare
- People living with HIV (PLWH) in rural settings face **unique challenges**, including:
  - Lower **accessibility** to care[2]
  - Lower **quality** of care services[3]
  - Greater levels of **stigma** surrounding HIV/AIDS[4]
  - Less **education** about HIV/AIDS[5]

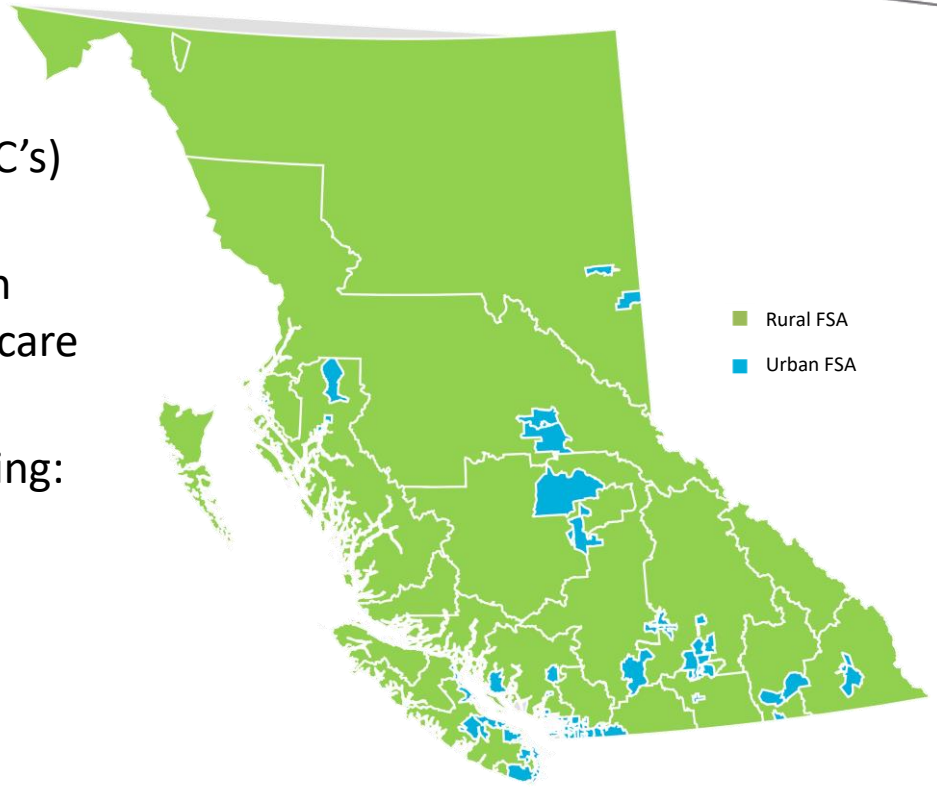

Figure 1. Province of British Columbia split into FSAs (first three digits of postal codes). Rural FSAs have a second digit of zero. Abbr: FSA = Forward Sortation Area

Objective and Methodology

- **Objective**: To examine the healthcare service utilization patterns of rural- and urban-dwelling PLWH in BC using physician encounters as defined in the Medical Services Plan (MSP) data
- **Data source:** Administrative health data from the Seek and Treat for the Optimal Prevention of HIV/AIDS (**STOP HIV/AIDS**) Study[6]. This cohort of PLWH in BC was formed using linkages of MSP data from the BC Ministry of Health and clinical/treatment data from the BC Centre for Excellence in HIV/AIDS[7-14]
- **Participants:** 11996 PLWH in BC between 1996 and 2017
- **Variables of Interest:** Rurality of home address (determined using a categorical postal code method – rural postal codes have a second digit of 0); frequency of physician encounters; physician specialty (general practitioner or specialist physician); and whether participants traveled for care (based on Health Service Delivery Area)
- **Statistical Analyses:** Chi-square tests and Welch's t-tests for comparing rural- and urban-dwelling participant demographics and key population groups, physician encounter frequency, physician specialty, and frequency of travel between rural- and urban-dwelling groups

Results

Table 1. Participant demographics stratified by rurality. Participants who lived in rural or urban settings for the entire study period were placed in the Rural and Urban columns respectively. Those who moved between settings were placed in the "Both" column.

	Rural (n=317)	Urban (n=10,992)	Both (n=687)	P-value
Sex				
Male	74.8%	83.1%	79.9%	<0.001
Female	25.2%	16.9%	20.1%	<0.001
Year of Birth				
<1940	2.5%	2.3%	1.5%	<0.001
1940-1960	40.7%	32.3%	35.5%	<0.001
1960-1980	46.7%	55.0%	56.3%	<0.001
>1980	10.1%	10.3%	6.7%	<0.001
Key Population Groups				
MSM	28.7%	36.6%	30.0%	<0.001
IDU	23.0%	26.4%	38.3%	<0.001
MSM/IDU	4.7%	8.8%	10.8%	<0.001
Heterosexual	23.7%	12.0%	9.3%	<0.001
Other/Unknown	19.9%	16.3%	11.6%	<0.001

Abbr: MSM = Men who have sex with men; IDU = injection drug use

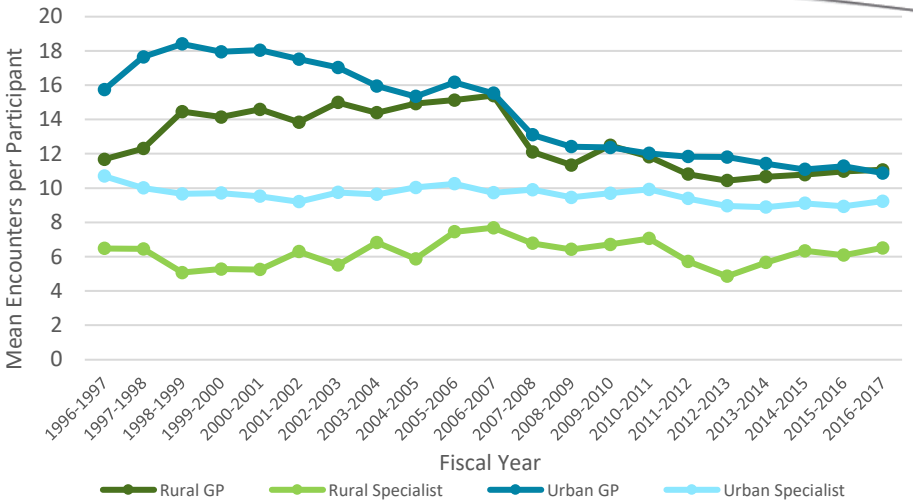

Figure 2. Mean number of physician encounters per participant per year, stratified by participant rurality and physician specialty. Abbr: GP = General Practitioner

Table 2. Likelihood of travelling for physician encounter (determined by whether or not the encounter took place outside of the participant's home Health Service Delivery Area).

	Encounters while living in rural area (n=94,180)	Encounters while living in urban area (n=2,149,225)
Did not travel for encounter	45.8%	72.4%
Travelled for encounter	54.2%	27.6%

Discussion

- A smaller proportion of PLWH in BC are rural-dwelling compared to the general population[1], and this group is more often **female, heterosexual, and born before 1960**
- Rural-dwelling participants had, on average, significantly **fewer physician visits per year**, and were significantly **less likely to see specialists** *(p<0.001)*
- Rural-dwelling participants were also **twice as likely to travel for care**
- **CONCLUSION:** Our study highlights key differences in the healthcare service utilization patterns of rural- and urban-dwelling PLWH.

Thank You for Reading!

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