Examining Patient Characteristics and Continuity of Care Across Primary Care Service Locations for Individuals with Schizophrenia in British Columbia

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BACKGROUND

- Nearly 6 million Canadians do not have a primary care provider
- Individuals with serious mental illness have difficulty accessing primary care
- Continuity of care is associated with better outcomes in primary care
- The Medical Services Plan in BC introduced Service Location Codes to capture diverse treatment locations
- Primary care service locations:
  - Comprehensive
  - Walk-in and episodic
  - Virtual
- There is little evidence on whether specific service locations differ in the populations they serve

RESEARCH QUESTION

Do patient socioeconomic, demographic and health characteristics differ across primary care service locations among adults in British Columbia? Do these differences vary across the general population, individuals seeking mental health and substance use treatment, and individuals with schizophrenia?

METHODS

Study Design:
- Retrospective cohort study

Study population:
- Individuals ≥ 18 years of age
- Registered for provincial health insurance in British Columbia
- Identified through the Health Data Platform BC

Exclusion Criteria:
- Missing age
- Missing administrative sex/gender

RESULTS

Figure 1. Distribution of each population across primary care service locations

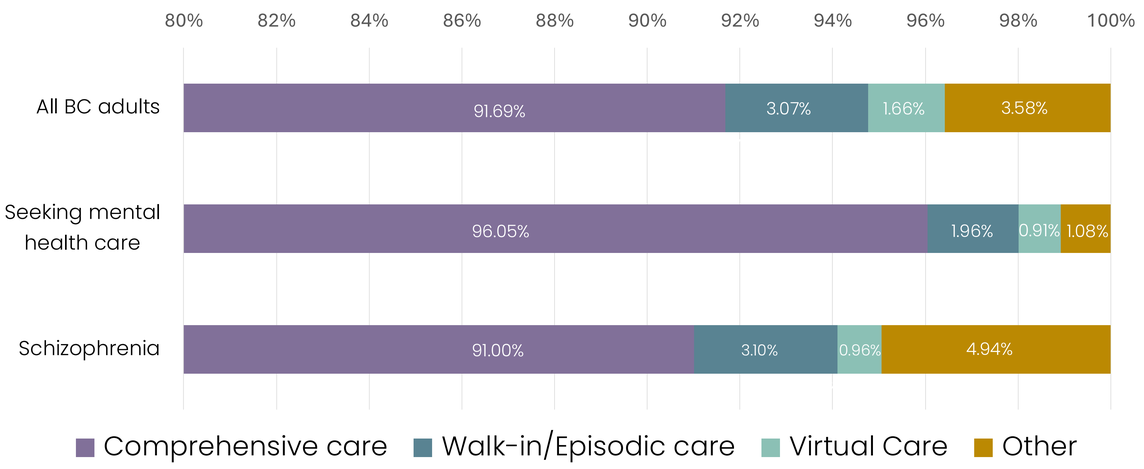


Table 1. Visit-level characteristics of all BC adults

Characteristic	Comprehensive care (N = 18,495,203)	Walk-in/ episodic care (N = 619,592)	SMD	Virtual care (N = 334,771)	SMD
Age, mean (SD), years	55.07 ± 18.88	47.04 ± 18.53	-0.43	46.17 ± 17.02	-0.49
Female, n (%)	11,093,888 (59.98)	368,048 (59.40)	-0.01	212,274 (63.41)	0.07
Metropolitan residence, n (%)	14,045,360 (75.94)	457,485 (73.84)	0.12	260,929 (77.94)	0.06
Lowest income quintile, n (%)	3,838,282 (20.75)	145,634 (23.50)	0.09	74,954 (22.39)	0.06
Enrolled in low-income drug program, n (%)	1,207,895 (6.53)	55,047 (8.88)	0.09	26,538 (7.93)	0.05
≥ 2 chronic conditions, n (%)	3,220,765 (17.41)	54,868 (8.86)	-0.26	35,320 (10.55)	-0.2
Usual Provider of Care Index, mean (SD)	0.81 ± 0.21	0.60 ± 0.25	-0.92	0.53 ± 0.24	-1.24

Note: SMD = standardized mean difference, SD = standard deviation. Standardized differences compare each primary care service location with comprehensive care.

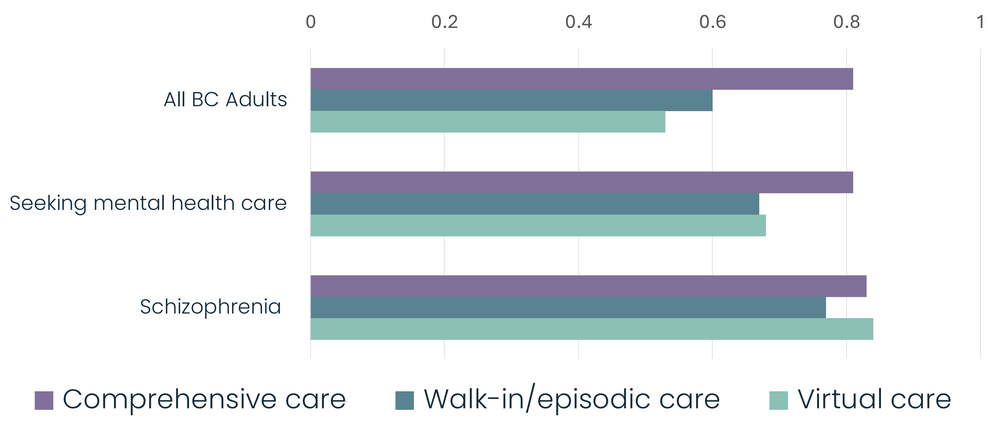
Table 2. Person-level characteristics of adults with schizophrenia

Characteristic	Comprehensive care (N = 17,663)	Walk-in/ episodic care (N = 601)	SMD	Virtual care (N = 186)	SMD
Age, mean (SD), years	48.05 ± 16.31	43.76 ± 15.15	-0.27	45.15 ± 14.76	-0.19
Female, n (%)	7,633 (43.21)	228 (37.94)	-0.11	73 (39.25)	-0.08
Metropolitan residence, n (%)	13,786 (78.05)	439 (73.04)	0.24	152 (81.72)	0.09
Lowest income quintile, n (%)	6,180 (34.99)	248 (41.26)	0.19	81 (43.55)	0.31
Enrolled in low-income drug program, n (%)	10,412 (58.95)	382 (63.56)	0.09	122 (65.59)	0.14
≥ 2 chronic conditions	6,342 (35.91)	138 (22.96)	-0.29	58 (31.18)	-0.10
Usual Provider of Care Index, mean (SD)	0.83 ± 0.22	0.77 ± 0.26	-0.25	0.84 ± 0.26	0.04

Table 3. Person-level characteristics of adults seeking mental health and substance use treatment

Characteristic	Comprehensive care (N = 814,231)	Walk-in/ episodic care (N = 16,577)	SMD	Virtual care (N = 7,721)	SMD
Age, mean (SD), years	47.89 ± 18.65	41.87 ± 16.16	-0.35	39.99 ± 14.64	-0.47
Female, n (%)	488,172 (59.95)	8,740 (52.72)	-0.15	4,048 (52.43)	-0.15
Metropolitan residence, n (%)	600,620 (73.77)	11,912 (71.86)	0.12	5,871 (76.04)	0.06
Lowest income quintile, n (%)	173,119 (21.26)	4,651 (28.06)	0.22	2,113 (27.37)	0.07
Enrolled in low-income drug program, n (%)	94,577 (11.62)	3,132 (18.89)	0.20	1,066 (13.81)	0.07
≥ 2 chronic conditions, n (%)	89,310 (10.97)	818 (4.93)	-0.22	301 (3.90)	-0.27
Usual Provider of Care Index, mean (SD)	0.81 ± 0.22	0.67 ± 0.29	-0.53	0.68 ± 0.30	-0.47

Figure 2. Mean UPCI by population and primary care service location



DISCUSSION

DESCRIPTIVE CHARACTERISTICS:
- Adults with schizophrenia accessing different primary care service locations demonstrated differences in age, socioeconomic characteristics, place of residence, and chronic disease burden
- Walk-in/episodic and virtual care users were more likely to belong to the lowest income quintile than comprehensive users

CONTINUITY OF CARE:
- Mean UPCI scores were consistent across comprehensive care users across all populations (0.81-0.83)
- Adults with schizophrenia demonstrated higher mean UPCI scores in walk-in/episodic (0.77) and virtual care (0.84) settings compared with the general BC population (0.60 and 0.53, respectively)
- Individuals with schizophrenia may experience greater continuity with their usual provider across service locations

STRENGTHS:
- Use of administrative health data and newly introduced service location codes
- Comparative analysis allows us to identify population-specific differences across each service location

LIMITATIONS:
- UPCI measures continuity of care with one provider and does not account for the number of specialists an individual with schizophrenia is likely to see
- Primary care service location does not reflect the quality or comprehensiveness of care received

FUTURE IMPLICATIONS:
- Longitudinal examination of this population is needed to identify how service location and continuity change over time

Further information on the data sets used for this project is at: https://my.popdata.bc.ca/project_listings/24-097. All inferences, opinions, and conclusions drawn in this material are those of the author(s), and do not reflect the opinions or policies of the Data Steward(s).