

TELEHEALTH USE IN RURAL SASKATCHEWAN AND INFLAMMATORY BOWEL DISEASE OUTCOMES

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Background: Appropriate management of inflammatory bowel disease (IBD) often requires multiple specialist appointments per year. Living in rural locations may pose a barrier to regular specialist care. Saskatchewan (SK) has a large rural population. Prior to COVID-19, telehealth (TH) in SK was not routinely used for either patient assessment or follow up. Furthermore, TH was exclusively between hospitals and specific TH sites without direct contact using patient's personal phones.

Aims: The objective of this study was to assess the differences in demographics, disease characteristics, outcomes, and health care utilization between patients from rural SK with IBD who used TH and those who did not.

Methods: A retrospective chart review was completed on all rural patients (postal code S0*) with IBD in SK who were followed at the Multidisciplinary IBD Clinic in Saskatoon between January 2018 and February 2020. Patients were classified as using TH if they had ever used it. Information on demographics, disease characteristics, and access to IBD-related health care in the year prior to their last IBD clinic visit or endoscopy was collected. Data was not collected for clinic visits after March 1, 2020 as all outpatient care became remote secondary to the COVID-19 pandemic. Mean, standard deviations, median and interquartile ranges (IQR) were reported. Mann-Witney U and Chi-Square tests were used to determine differences between the groups.

Results: In total, 288 rural SK IBD patients were included, 30 (10.4%) used TH and 258 (89.6%) did not. Patient demographics were not significantly different between the two groups; although, there was a statistically significant difference in the proportion of ulcerative colitis patients (17% TH vs. 38% non-TH, $p=0.02$). The percentage of patients with clinical remission was 87% for TH patients and 74% for non-TH patients ($p=0.13$). There were no significant differences in health care utilization patterns and biochemical markers of disease, including c-reactive protein

(CRP) and fecal calprotectin (FCP) ($p>0.05$).

Conclusions: Prior to the pandemic, a small percentage of patients with IBD in rural SK ever used TH. A small proportion of UC patients used TH. No significant differences in disease characteristics, outcomes, or health care utilization were identified. Further study is warranted to identify barriers to use of this technology to tailor care to this patient group and improve access to care, especially now as the COVID-19 pandemic has drastically changed the use of virtual care.

	Telehealth (n=30)	Non-Telehealth (n=258)	P-value
Harvey-Bradshaw Index, median (IQR)	2(0.25-4)	1(0-4.25)	0.62
Partial Mayo Score, median (IQR)	0(0-0.25)	0(0-2)	0.14
CRP<5, n(%)	23(79)	176(72)	0.38
FCP<50, n(%)	9(47)	52(29)	0.12
Clinical Remission, n(%)	26(87)	191(74)	0.13
Clinic visits within the last 12 months, median (IQR)	2 (1-2.25)	2 (1-3)	0.18

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