Virtual Dermatology Clinics in Remote and Northern Saskatchewan Indigenous Communities: Addressing challenges and exploring opportunities

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BACKGROUND

Dr. Rachel Netahe Asiniwasis has established clinics in Regina and rural outreach virtual clinics to the remote communities of Northern and Southern Saskatchewan. She frequently encounters atopic dermatitis ("eczema"), a chronic skin condition that is characterized by recurrently itchy, painful, oozing, inflamed, and dry rashes ranging in severity. Atopic dermatitis is the most common reason for accessing healthcare services for many First Nations children and youth living on reserves. When poorly controlled it can lead to secondary bacterial or viral infection (e.g., impetigo, MRSA, or eczema herpeticum), sleep disturbances, and other physical and mental health comorbidities.

Other than impacts stemming from an impaired skin barrier and impaired cutaneous immunity, many skin conditions can be exacerbated by environment (i.e., water access, access to basic skin care regimens such as moisturizers or cleansers) or inadequate fundamentals of washing bodies or clothes. Crowded housing conditions can lead to increased transmission of contagious diseases such as scabies, impetigo, MRSA, or lice. This further complicates care and management of patients with a skin disease and compromised skin barrier as seen in atopic dermatitis.

Indigenous peoples in rural and remote areas are historically underserved by healthcare providers, and the COVID-19 pandemic has created an additional layer of barriers, jeopardizing all patients in need of healthcare and dermatology. Virtual clinics are being encouraged to help contain COVID-19, which may also address the barriers of geographic location and transportation issues observed in many First Nations communities. However, it is important to identify the needs of patients being served regardless of the mode of healthcare delivery, and it is necessary to explore the feasibility and acceptability of virtual clinics before implementing it widely.

OBJECTIVES

- **What are the current dermatology care needs of Indigenous communities?**
- **What is the impact of COVID-19 on dermatology care in Indigenous communities?**
- **What are the facilitators and barriers to providing dermatology care virtually in these communities?**

METHODS

Phase one: explore perspectives of healthcare professionals via a national survey and semi-structured qualitative interviews with healthcare providers servicing rural and remote areas of Saskatchewan.

Phase two: review the perspectives of patients accessing dermatologic care through virtual clinics and assess satisfaction of care received (semi-structured interviews). Patients will be encouraged to share their stories regarding dermatology care needs, barriers to accessing care during COVID-19, and their experience with virtual care.

METHODS continued

Phase three: retrospective anonymous review of virtual dermatology clinic patient charts for the period of *January 1, 2020, to December 31, 2021*. Data on age, gender, diagnosis, severity of conditions, medical history and comorbidities, previous treatment, number of in-person and virtual clinics attended, follow-ups, time between follow-ups, documented barriers, and limitations to virtual care, will be taken from these charts.

RESULTS

Preliminary results of phase one: A total of 50 healthcare professionals from across Canada completed the national dermatology survey between July 2021 and November 2021. The following tables summarize the main findings. **Not all findings are reported here and will be further assessed in our final publication.**

Table 1. Healthcare providers were asked to rank the top 5 skin diseases they noted to be the most prevalent in rural/remote/reserve communities, using a scale between 1 to 5 with 1 being the most common.

Top 5 skin conditions ranked
#1 "**Atopic dermatitis (eczema)**" was the 1st most observed, at 64%**.** The majority were rated as moderate to severe (87.5%)
#2 "**Bacterial skin infections** (MRSA or non-MRSA)" was the 2nd most observed. The majority were rated as moderate to severe (81%).
"Disease of the hair, nails, and/or mucous membranes" and "acne and rosacea" were tied for 3rd most observed.
"Scabies" and "hidradenitis suppurativa" were tied for 4th most observed.

Table 2. Healthcare providers were asked to indicate the extent to which they think the provided options act as barriers to providing dermatology care in rural/remote/reserve communities.

Barriers to providing dermatology care
90% agree or strongly agree that proximity (i.e., long distance travel to see health care practitioner/specialist) acts as a barrier.
70% agree or strongly agree that cost (i.e., of skin care products or other costs associated with skin treatment) acts as a barrier.
80% agree or strongly agree that supply and access (i.e., to pharmacy, moisturizers, or other basic skin care items) act as a barrier.
70% agree or strongly agree that level of comprehension (i.e., patient or caregiver understanding of skin conditions/treatment instructions/reading materials) acts as a barrier.
82% agree or strongly agree that extensive and overwhelming skin care regimens/instructions act as a barrier.
74% agree or strongly agree that long waiting times to see specialist and/or primary care practitioner is a barrier.
70% agree or strongly agree that there are cultural barriers.
70% agree or strongly agree that transportation issues (i.e., patient has no vehicle; fly-in community) act as a barrier.
62% agree or strongly agree that unclear diagnosis/challenging cases (i.e., primary caregivers not clear on diagnosis or treatment of the condition, case is too complex to deal with at primary care level or needs dermatology referral) act as a barrier.
54% agree or strongly agree that lack of Non-Insured Health Benefits coverage for skin problems acts as a barrier.
78% agree or strongly agree that limited resources within the community (i.e., ongoing follow up is required and the resources to meet this requirement aren't available) acts as a barrier.
80% agree or strongly agree that there are implementation barriers (i.e., home care, access to clean water, bathing and skin care products, overcrowding, etc.).

Table 3. Healthcare providers were asked to indicate the extent to which they felt the provided options might help improve dermatology care in rural/remote/reserve communities.

Improvements
80% agree or strongly agree that increasing teledermatology and/or virtual care to remote communities might help improve dermatology care.
94% agree or strongly agree that increasing in-person dermatologist visits to remote communities would improve dermatology care.
86% agree or strongly agree that having an employee or nurse who can help co-ordinate care and referrals for skin conditions would improve dermatology care.
90% agree or strongly agree that increasing educational programs on dermatology to health care practitioners in rural and remote areas would improve dermatology care.
78% agree or strongly agree that increasing cultural awareness programs with regards to skin diseases would improve dermatology.

Table 4. Healthcare providers were asked to consider the existing services and resources in rural/remote/reserve communities, the impacts of COVID-19, and facilitators and barriers to virtual care.

Availability of dermatological services and resources
88% of providers (n=44) feel rural/remote/reserve communities are underserved by the available dermatological services and resources.
Impacts of COVID-19 on dermatology care
68% of providers agree or strongly agree that wait times to see a dermatologist has increased during the pandemic.
70% of providers agree or strongly agree that COVID-19 has helped establish virtual care for dermatology.
36% of providers agree or strongly agree, and 22% are neutral to whether COVID-19 has increased spread of communicable infectious disease and infestations due to over-crowding in homes. 38% ranked 'Not Applicable.'
70% of providers agree or strongly agree that COVID-19 has increased the severity of certain dermatology conditions due to problems with access to care.
Facilitators and barriers of virtual dermatology
64% of providers agree or strongly agree that virtual care has addressed travel barriers for patients in remote and rural areas.
74% of providers agree or strongly agree that virtual care makes dermatology care more accessible.
70% of providers agree or strongly agree that virtual care is not reliable due to poor internet and other infrastructure issues in rural areas.
32% of providers agree or strongly agree that images sent by remote patients for virtual care are of adequate quality, indicating that quality needs to be further explored.
82% of providers agree or strongly agree that virtual care should be supplemented with in-person visits.
86% of providers agree or strongly agree that virtual care is useful for follow up.
88% of providers agree or strongly agree that virtual care can be used for co-ordination of care with allied health professionals (e.g., nursing) after initial consult.
86% of providers agree or strongly agree that virtual care can be useful for patient education.
78% of providers agree or strongly agree that virtual care can be cost effective compared to seeing patients in person, with 10% neutral.

COVID-19 has increased severity of certain dermatology conditions due to problems with access to care – exacerbating an already high health issue in rural/remote/reserve communities requiring urgent attention. **Atopic dermatitis and bacterial skin infections are the top two recurrent themes that need to be further explored, similar to our previous survey of SK remote health care practitioners.**

Barriers to providing dermatology care in rural/remote/reserve communities such as proximity, long wait times to see specialists and/or primary care practitioner, and transportation issues may be addressed with the use of virtual care, but further studies are needed.

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