CCGHR Equity-Centred Knowledge Translation Course

Reaching Out and Connecting with Technology: Optimizing Rural Experiences and Preparedness with Virtual Care

PREPARED BY

Alanna Shwed   Ngoc Huynh
Emily Giroux   Nicole Pal
Meaghan Hagerty   Tannis Andersen

CASE STUDY NAME
DESCRIPTION OF THE CASE (1/2 – 1 PAGE)

WHAT IS THE KTA PROBLEM?

Virtual care is considered a major innovation at multiple levels because of the potential to increase access to and quality of health care services and lower health system expenditures (Bashur et al., 2000; Hailey et al., 2004; Klecun-Dabrowska & Cornford, 2001). However, one could argue that this modality is still being used as a complementary service and has not yet fully realised its capacity to positively impact the delivery of everyday healthcare (Sevean et al., 2008). The pandemic has forced a shift though, providers have been forced to increase their utilisation of telehealth services at the expense of traditional face-to-face patient encounters (Chu et al., 2021). Despite the growth of virtual care options, it is unclear how patients and community members that reside in rural communities experience the use of virtual care, or how prepared they feel to engage in healthcare encounters in this way .Small and seemingly geographically isolated areas have become more interconnected through technological advancements in some areas, while simultaneously being left out of other, often urban-focused, initiatives (LeBlanc et al., 2020). This duality is visible in health service delivery, where eHealth technologies have the potential to improve patient services, care, and outcomes, but where technological and systemic barriers can further isolate patients, caregivers, and providers (Liaw & Humphreys, 2006).

WHO DOES IT AFFECT?

Regarding rural virtual care, there are a diverse range of stakeholders involved. Closest to the issue involve people living in rural regions and their support systems, healthcare providers and health system decision makers. This group represents the stakeholders who are most invested either because they are impacted the most or because they have a higher sphere of influence concerning changes in virtual care.. Those in the outer circle who are invested in the issues but from more of a distance include IT companies, Telehealth companies, Device manufacturers and City/Community Planners.

HOW DOES IT AFFECT THEM?

Concentrating on the inner circle of those closest to the issue, virtual care has a range of benefits and challenges for each stakeholder. In terms of people living rurally, virtual care can help to increase empowerment and improve self-management of one's own health, as well as reduce barriers due to travelling to appointments (costs, time of work). Despite these benefits, some challenges that rural residents may face include barriers to learning and accessing technology, apprehension over privacy and security issues, and the reduced social connection that came with in-person appointments (Granja et al., 2018; LeBlanc et al., 2020). For healthcare providers, the benefits may include improved quality of care and diversification of skill sets and knowledge. Challenges for healthcare providers may be related to lack of training in virtual methods and rural awareness, as well more challenging workflow and workload (Granja et al., 2018; LeBlanc et al., 2020). Lastly, system decision makers may see benefits in reduction of costs over time and in improved access and service delivery. Conversely, they may face challenges in costs and logistics of establishing the IT infrastructure, as well coordination amongst healthcare providers and services may prove difficult (Granja et al., 2018; LeBlanc et al., 2020).

DESCRIBE THE "K"
(1/2 – 1 PAGE)

WHAT DO WE KNOW ABOUT IT?

Virtual care typically consists of interventions that are offered remotely using technology, receiving services not in a face-to-face manner, and may include varied technologies (telephone, video, text, email) and formats for accessing health information (e.g., test results, appointments, health records). Recently, virtual care has proliferated, in part due to the widespread integration of affordable internet services combined with accessible digital technology. Virtual care provides patients and communities with increasing access to primary and specialized services (Bashur et al., 2000).

One subset of the population that may be in a position to greatly benefit from virtual care is that of rural populations. However definitions of rural and remote are diverse yet typically reflect metrics such as population size, density, and distance to metropolitan areas. Despite the common use of these metrics, the way rurality is experienced can be quite different. For the context of our KT work, rural is recognized in relation to these geographical factors, as well as the broader contextual, cultural and access elements of accessing care (for example, transport options, traditional healing) (Campbell et al., 2019; Liaw & Humphreys, 2006).

Health care access has been a major challenge for rural patients in many jurisdictions, particularly for chronic disease management and access to specialist care. Therefore, for rural regions, telehealth is considered a tool that could have a positive impact on several dimensions of health care services delivery including supporting the delivery of specialised services in a timely fashion, reducing hospital visits, facilitating access to education for clinicians, saving travel costs for patients and professionals (Sevean et al., 2008; LeBlanc et al., 2020).

WHAT DO WE THINK WE DON'T KNOW?

While many telehealth systems in use are generally successful, they were often developed without assessing patient and caregiver useability (Foster et al., 2014). Rural residents use technology differently than their urban counterparts (Collins & Wellman, 2010). If we do not intentionally consider those who have been systematically excluded throughout history, we will recreate and exacerbate current health inequities between rural and urban residents. Prioritizing these perspectives is especially important amidst the rapid transitions to virtual care brought on by the COVID-19 pandemic.

WHAT ARE THE BIGGEST GAPS?

How prepared are rural residents and providers to engage in virtual care services?
What supports are needed to assist rural residents and providers to engage in virtual care services?

PROMISING PRACTICES
(1 PAGE)

RECOMMENDATIONS

Macro

Infrastructure development including reliable broadband connections

Policy development for affordable internet access

Policy development across the nation for integrated virtual care services

Establish an encrypted interface platform

Increased funding and focus to ensure Indigenous communities are included in the process of building and accessing virtual care

Chu et al., 2021; Gagnon et al., 2006; Jones et al., 2017; Jong et al., 2019; Kraetschmer et al., 2009; Nightbird, 2020; Reilly et al., 2020; Seto et al., 2019)

Meso

Development and implementation of virtual care readiness assessments and processes for communities, organizations and health care professionals (HCP)

Support and training for HCP to provide telehealth that is responsive to the end users (patients and HCPs)

Collaboration and coordination between HCP and IT Structuring and implementation of virtual care

Sufficient staffing and structuring of telehealth in connection with face-to-face health care

Provision of culturally appropriate community supports for access and use of technology

Development of organizational policies and processes that are flexible, supportive, and responsive to communities and individuals for inclusivity

Further virtual care studies using knowledge translation in communities not previously included in current and past studies

(Chu et al., 2021; Dugstad et al., 2019; Gagnon et al., 2006; Gosse et al., 2021; Granja et al., 2018; Jones et al., 2017; Jong et al., 2019; Kandola et al., 2018; Kraetschmer et al., 2009; Nightbird, 2020; Reilly et al., 2020; Seto et al., 2019)

Micro

Engagement of rural residents and health care providers (HCP) including readiness assessments and process development for use of virtual care

Engagement of HCP to support access and use by community members

Provision of supports, resources, and education for rural residents and their families

Establishment of contingency plans when issues arise

(Gagnon et al., 2006; Gosse et al., 2021; Hawley et al., 2020; Jones et al., 2017; Kandola et al., 2018; Lam et al., 2020)

ADAPTATION FOR LOW-RESOURCE SETTINGS

Collaborative processes between government, health authorities, communities, businesses, and individuals (patients, families, and HCPs) for shared decision making in regards to supply and types of resources required to deliver virtual care equitably.

Continued government policies and funding to support multiple platforms and ways of offering virtual care.

Continued consistent and dedicated supports in providing resources for successful implementation of virtual care (including human, capital, and material resources).

(Chu et al., 2021; Gagnon et al., 2006; Kraetschmer et al., 2021; LeBlanc et al., 2020; & Nightbird, 2020; O'Connell et al., 2018; O'Sullivan et al., 2020).

SYNTHESIS
(2-3 PAGES)
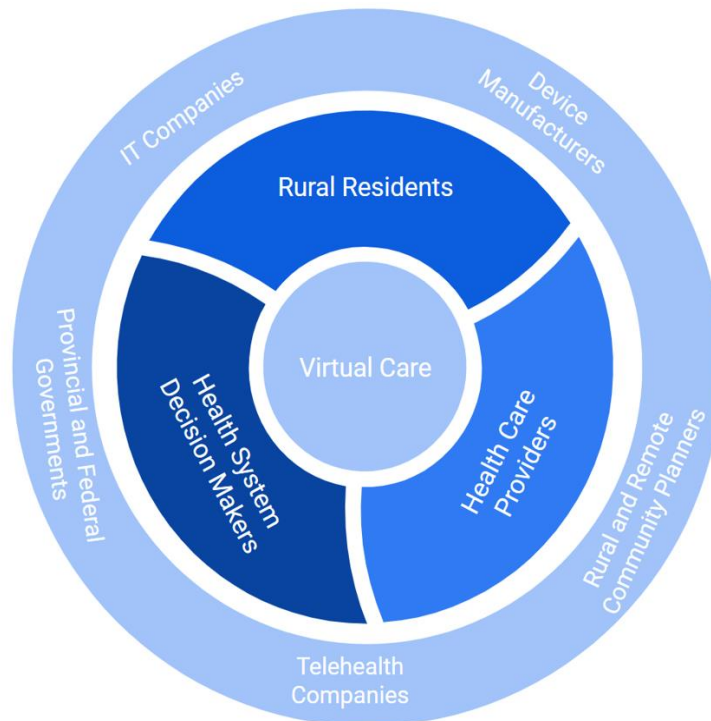
Rural and remote communities are diverse in population size, density, and distance to metropolitan areas with unique cultural and healthcare practices. When developing and implementing healthcare services and resources for equitable access in rural and remote communities geographical, cultural, and experiential factors need to be taken into consideration. With the proliferation of virtual care (telephone, video, text, email) over recent decades and a surge in uptake and availability during the COVID-19 pandemic, virtual care is one way increased access to healthcare services can be delivered to rural and remote communities. However, with virtual care being an option to provide increased access to care in rural and remote communities questions that arise include:

1. Does virtual care really address equitable access to health care?
   a. What factors of virtual health care contribute to further inequities?
   b. How is inclusivity and cultural diversity supported?
   c. What supports are needed to consistently access, assist, and engage rural residents and providers?
   d. What is required to sustain virtual care, particularly in low resource settings?
2. Is virtual care a government and provider solution?
   a. Do the rural residents really want virtual health care services?

       b. How prepared are rural residents and communities to use virtual care?
       c. How do we engage rural residents and communities in continuing implementation of virtual care?
       d. Who does virtual care not serve?
3. What are we losing in healthcare provision virtually?
       a. Face to face interactions?
       b. Physical assessments?
       c. Relationship building?
       d. Dignity and privacy?
4. What lessons were learned with the increased use of virtual care during COVID-19 pandemic?
       a. Positive changes that can be carried forward?
       b. Unintended harm(s) that need to be addressed?

Through our review it is clear that continued use of virtual care post COVID-19 in rural and remote communities requires a collaborative approach between individuals (patients, families, and healthcare providers), businesses, communities, health authorities, and provincial and federal governments. There is a need to move forward with intent and inclusivity with rural residents, their families, and healthcare providers supporting equitable and sustainable virtual care. Governments and the healthcare system cannot put into place what they think is needed for virtual care, but instead need to take the time to understand rural and remote communities, residents, their families, and healthcare providers unique virtual care needs, access, and use. As well, there is a further need to understand that virtual care is not a miracle solution in providing healthcare to rural and remote communities, but rather a tool that can help supplement healthcare provision. Virtual care needs to be an adjunct not a replacement.

Rural residents and health care providers need to be engaged and a part of the dynamic process of implementation and continued use of virtual care in rural and remote communities post COVID-19. This includes the use of knowledge translation- "the synthesis, dissemination, exchange and ethically-sound application of knowledge" (Canadian Institute of Health Research, para.4). To support rural residents, their families, and healthcare providers the following two tip guides have been developed. A Rural Resident Tip Guide (Appendix A) and a Healthcare Provider Tip Guide (Appendix B). These guides are meant to assist the key stakeholders and users of virtual care in being able to actively participate, inquire, and engage in obtaining required knowledge and information for informed equitable and inclusive virtual care access.

Appendix A - Rural Resident Tip Guide

<u>**Accessing Quality Virtual Care:**</u>

In Canada, access to health care is a basic human right. Unfortunately, factors such as where you live or which services are available to you can make it difficult for you to access *high-quality* health care. A possible solution for improving access to high-quality health care is to use virtual options (e.g., telephone, video call), which became popular during the COVID-19 pandemic. In-person and virtual care are different from one another and require different preparation to get the most out of your experience. Here are some tips you can follow to improve your experiences with virtual healthcare.

<u>**General Tips:**</u>

- **Plan ahead.** Set aside time for your appointments just as if you were to set aside time for an in-person appointment.
    - Find a quiet and private location
    - Make sure your internet connection is working and your device is fully charged
    - Write down any questions you have ahead of time
    - Have your medications or a list of your medications with you
    - Have your Care Card or other personal information you will need

- **Work with community centres/buildings.** If you do not have access to the internet in your home, speak with your municipal/city government to see if it is possible to do your appointments in a private space at a local library or community centre.

- **Reach out to friends and family.** Connect with your social network to find other options for accessing the internet and your virtual appointments. For example, a trusted friend might have a stronger internet connection at their house.

- **Be clear with what you want.** Advocate for yourself and what you expect to find out during your appointment. Make sure you do not leave the appointment without expressing all your concerns and/or setting up a follow-up appointment to further discussion.

- **Advocate for better access.** Advocate for better internet and cell service connection in your community. Virtual health care will remain limited without proper internet connection available for all.

<u>Do you have a primary care doctor?</u>

Here are some tips for how you can improve your experiences with virtual care with your primary care doctor:

Before you meet with your primary care doctor:

- **Use virtual health care platforms.** Your provider may use a specific health care application or internet-based website portal. Take time to understand how to navigate the platform (e.g., ask for training or clear instructions prior to the day of your appointment).

- **Plan ahead.** Set aside time for your appointments just as if you were to set aside time for an in-person appointment.
  o Find a quiet and private location
  o Make sure your internet connection is working and your device is fully charged
  o Write down any questions you have ahead of time

- **Communicate your needs ahead of time.** Advocate for how you want your appointments to be conducted and what you expect out of your time with your care provider.
  o For example: Ask your care provider about their different options for virtual care. If their current methods do not work for you, propose a solution that does (e.g., if the clinic does video call appointments and you do not have access to the internet, ask if you can do your appointment over the phone).
  o Also, ask questions ahead of time about the process for sharing your personal information (e.g., images, scans) with your care provider. For example, do you share images through an online portal, text, email, etc.?

During your meeting with your primary care doctor:

- **Ask questions.** Ask your care provider the questions you prepared ahead of time that relate to your appointment. Also ask questions about your next appointment or any follow-up testing.

- **Have what you need.** If you have any medications, test results, or personal information that your care provider might need to see or have questions about, make sure to have those beside you while you are in your appointment.
  o Have your medications or a list of your medications
  o Have your Care Card or other personal information
  o Test results
  o List of questions

<u>Do you have a primary care doctor?</u>

Here are some tips for how you can improve your experiences with virtual care if you do not have a primary care doctor:

Before your meet with a primary care doctor:

- **Familiarize yourself with what is available.** In response to the COVID-19 pandemic, many forms of virtual care have emerged. Educate yourself on the different options to see what works for you. To start you off, here are some virtual care options that are available in British Columbia:
  - https://www.doctorsofbc.ca
  - https://www.phsa.ca
  - Dial 811 to connect with an available BC healthcare provider

- **Use virtual health care apps.** There are many Smartphone applications and internet-based websites that are designed to support people to receive 24-hour care from a certified doctor.
  - Examples of Health Care Applications:
    - Telus Health
      https://www.telus.com/en/health/virtual-care
    - Maple
      https://www.rbcinsurance.com/group-benefits/plan-member/maple-virtual-care.html

During your meeting with a primary care doctor:

- **Ask questions.** Ask your care provider questions you have related to your health concerns. Also ask questions about your next appointment, any follow-up testing, and the process for connecting with a primary care doctor.

Appendix B - Health Care Provider Tip Guide

Patient's top three reservations about virtual care are: privacy and security, lack of relationality, and gaps in technology or infrastructure.

This document is intended to help improve the virtual appointment experience for you and your patients. These tips are based on recent literature and stakeholder consultation. While some may increase the amount of time spent on each patient, the overall impact will improve quality of care and the practitioner-patient relationship.

Before
Consider multiple ways of sharing this information - mail, email, phone call, text messages
- Ensure you have sufficient training and competency to manage patients through virtual care
- Clearly communicate the expectations, intentions and limitations of the appointment
- Assess for and find solutions to communication, language or cultural differences.
- Briefly explain how confidentiality and privacy is protected, especially if there are personal images being shared from the patient to the practitioner.
- Inform patient of what they need to have ready for the appointment (ie medication lists, symptom logs, updates from other health care practitioners)
- Ask the patient if there is anything they need to make it easier to participate in the appointment (recognizing your own limitations)
- Create and communicate a plan in case technology fails
    - Alternative phone numbers, how long to wait or how many times to retry, possibilities for rescheduling, etc.

During
- Take time to check-in about the patient generally - you may need to ask more questions than in a face-to-face appointment to get a well rounded understanding of the patient's condition and to maintain relationships
- Assess/consider the limits of virtual assessment and decide if a physical assessment/examination is needed
- Allow time for patient to process information and ask clarifying questions, if needed
- Avoid technical or medical jargon
- Listen and watch for verbal, emotional, or behavioural cues that can convey important patient information (tone of voice, body language, background noise, etc.)
    - If you have safety concerns or if you sense things didn't go well, explicitly ask if they need additional support and have resources on hand to give to the patient. When possible, notify staff where the patient is doing their appointment.
- Explore patient's self-diagnosis
- Ask open-ended questions to draw out sufficient information for decision-making
- Ask questions in a logical sequence
- Let them know how they can contact you or another resource if additional questions or concerns arise after the appointment
- Discuss how reports or test results can be shared or accessed (process, timelines)

After
- When possible and appropriate, send a brief appointment summary to the patient

If you would like to learn more, information can be found in the following links:
- Physicians:
  - https://www.cpsbc.ca/files/pdf/PSG-Virtual-Care.pdf
  - https://www.cma.ca/sites/default/files/pdf/Virtual-Care-Playbook_mar2020_E.pdf
- Nursing:
  - https://www.crnnl.ca/sites/default/files/documents/Virtual%20Nursing%20Practice%20-%20FINALpublisher.pdf
  - https://www.cno.org/globalassets/docs/prac/41041_telephone.pdf
- Occupational Therapy:
  - https://cotbc.org/wp-content/uploads/COVID-19-Practice-Guidance-Telehealth-in-Occupational-Therapy-Practice-March-31-2020-Update_FINAL.pdf
  - https://www.caot.ca/document/3717/T%20-%20Telehealth%20and%20E-Occupational%20Therapy.pdf
- Physical Therapy:
  - https://cptbc.org/physical-therapists/practice-resources/advice-to-consider/tele-rehabilitation/

REFERENCES

Bashshur, R. L., Reardon, T. G., & Shannon, G. W. (2000). Telemedicine: A new health care delivery system. Annual Review of Public Health, 21(1), 613–637. https://doi.org/10.1146/annurev.publhealth.21.1.613

Bhatia, R. S., Jamieson, T., Shaw, J., Piovesan, C., Kelley, L., & Falk, W. (2020). Canada's virtual care revolution: A framework for success. Toronto: CD Howe Institute.

Chu, C., Cram, P., Pang, A., Stamenova, V., Tadrous, M., & Bhatia, R. S. (2021). Rural telemedicine use before and during the COVID-19 pandemic: Repeated cross-sectional study. Journal of Medical Internet Research, 23(4), N.PAG. https://doi.org/10.2196/26960

Canadian Institute of Health Research. (n.d.). Knowledge Translation. About us - CIHR (cihr-irsc.gc.ca)

Campbell, K. A., MacKinnon, K., Dobbins, M., Van Borek, N., & Jack, S. M. (2019). Weathering the rural reality: Delivery of the Nurse-Family Partnership home visitation program in rural British Columbia, Canada. *BMC nursing*, 18(1), 1-14.

Collins, J. L., & Wellman, B. (2010). Small Town in the internet society: Chapleau is no longer an island. American Behavioral Scientist, 53(9), 1344–1366. https://doi.org/10.1177/0002764210361689

Dugstad, J., Eide, T., Nilsen, E. R., & Eide, H. (2019). Towards successful digital transformation through co-creation: A longitudinal study of a four-year implementation of digital monitoring technology in residential care for persons with dementia. BMC Health Services Research, 19(1), 366-366. https://doi.org/10.1186/s12913-019-4191-1

Foster, M. V., & Sethares, K. A. (2014). Facilitators and barriers to the adoption of telehealth in older adults. Computers, Informatics, Nursing, 32(11), 523–533. https://doi.org/10.1097/cin.0000000000000105

Gagnon, M.-P., Duplantie, J., Fortin, J.-P., & Landry, R. (2006). Implementing telehealth to support medical practice in rural/remote regions: What are the conditions for success? Implementation science, 1(1), 18-18. https://doi.org/10.1186/1748-5908-1-18

Gosse, P. J., Kassardjian, C. D., Masellis, M., & Mitchell, S. B. (2021). Virtual care for patients with Alzheimer disease and related dementias during the COVID-19 era and beyond. Canadian Medical Association journal (CMAJ), 193(11), E371-E377. https://doi.org/10.1503/cmaj.201938

Granja, C., Janssen, W., & Johansen, M. A. (2018). Factors determining the success and failure of ehealth interventions: Systematic review of the literature. Journal of Medical Internet Research, 20(5), e10235-e10235. https://doi.org/10.2196/10235

Hailey, D., Ohinmaa, A., & Roine, R. (2004). Study quality and evidence of benefit in recent assessments of telemedicine. Journal of Telemedicine and Telecare, 10(6), 318–324. https://doi.org/10.1258/1357633042602053

Hawley, C. E., Genovese, N., Owsiany, M. T., Triantafylidis, L. K., Moo, L. R., Linsky, A. M., Sullivan, J. L., & Paik, J. M. (2020). Rapid integration of home telehealth visits amidst COVID-19: What do older adults need to succeed? Journal of the American Geriatrics Society, 68(11), 2431-2439. https://doi.org/10.1111/jgs.16845

Jones, L., Jacklin, K., & O'Connell, M. E. (2017). Development and use of health-related technologies in Indigenous communities: Critical review. Journal of Medical Internet Research, 19(7), e256-e256. https://doi.org/10.2196/jmir.7520

Jong, M., Mendez, I., & Jong, R. (2019). Enhancing access to care in northern rural communities via telehealth. International Journal of Circumpolar Health, 78(2), 1554174-1554174. https://doi.org/10.1080/22423982.2018.1554174

Kandola, D. K., Banner, D., Araki, Y., Bates, J., Hadi, H., & Lear, S. A. (2018). The participant recruitment outcomes (PRO) study: Exploring contemporary perspectives of telehealth trial non-participation through insights from patients, clinicians, study investigators, and study staff. Contemporary Clinical Trials Communications, 11, 75-82. https://doi.org/10.1016/j.conctc.2018.05.005

Klecun-Dabrowska, E., & Cornford, T. (2001). Evaluation and telehealth - an interpretative study. Proceedings of the 34th Annual Hawaii International Conference on System Sciences. https://doi.org/10.1109/hicss.2001.926564

Kraetschmer, N. M., Deber, R. B., Dick, P., & Jennett, P. (2009). Telehealth as gatekeeper: Policy implications for geography and scope of services. Telemedicine Journal and e-health: The Official Journal of the American Telemedicine Association, 15(7), 655-663. doi:10.1089/tmj.2009.0004

Lam, K., Lu, A. D., Shi, Y., & Covinsky, K. E. (2020). Assessing telemedicine unreadiness among older adults in the United States during the COVID-19 pandemic. JAMA Internal Medicine, 180(10), 1389-1391. https://doi.org/10.1001/jamainternmed.2020.2671

LeBlanc, M., Petrie, S., Paskaran, S., Carson, D. B., & Peters, P. A. (2020). Patient and provider perspectives on eHealth interventions in Canada and Australia: A scoping review. Rural and Remote Health, 20(3), 5754. doi:10.22605/RRH5754

Liaw, S.-T., & Humphreys, J. S. (2006). Rural eHealth paradox: It's not just geography! Australian Journal of Rural Health, 14(3), 95–98. https://doi.org/10.1111/j.1440-1584.2006.00786.x

Nightbird, M. (2020). Covid: What's next for Indigenous People? Child & Youth Services, 41(3), 296-298. doi:10.1080/0145935X.2020.1835169

O'Connell, M. E., Scerbe, A., Wiley, K., Gould, B., Carter, J., Bourassa, C., Morgan, D., Jacklin, K., & Warry, W. (2018). Anticipated needs and worries about maintaining independence of rural/remote older adults: Opportunities for technology development in the context of the double digital divide. International Society for Gerotechnology, 17(3), 126-138. http://doi.org/10.4017/gt.2018.17.3.001.00

O'Sullivan, B., Leader, J., Couch, D., & Purnell, J. (2020). Rural pandemic preparedness: The risk, resilience and response required of primary healthcare. Risk Management and Healthcare Policy, 13, 1187–1194. https://doi.org/10.2147/RMHP.S265610

Reilly, R., Stephens, J., Micklem, J., Tufanaru, C., Harfield, S., Fisher, I., Pearson, O., & Ward, J. (2020). Use and uptake of web-based therapeutic interventions amongst Indigenous populations in Australia, New Zealand, the United States of America and Canada: A scoping review. Systematic Reviews, 9(1), 1-123. https://doi.org/10.1186/s13643-020-01374-x

Seto, E., Smith, D., Jacques, M., & Morita, P. P. (2019). Opportunities and challenges of telehealth in remote communities: Case study of the Yukon telehealth system. JMIR Medical Informatics, 7(4), e11353-e11353. https://doi.org/10.2196/11353

Sevean, P., Dampier, S., Spadoni, M., Strickland, S., & Pilatzke, S. (2009). Patients and families experiences with video telehealth in rural/remote communities in Northern Canada. Journal of Clinical Nursing, 18(18), 2573-2579. doi:10.1111/j.1365-2702.2008.02427.x