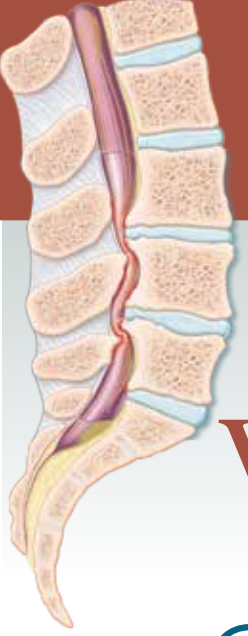

Virtual Care for Low Back Pain Patients

ABSTRACT

The COVID-19 global pandemic has had a rapid and massive impact on health care delivery worldwide. Two of the first public health measures applied in Canada and most other developed nations have been some variety of social distancing and "stay at home" orders, which limit the ability of patients to access non-urgent health care services. Patients with chronic pain including low back pain comprise some of the most disadvantaged populations where ongoing support from their family physician is an essential aspect of management. Virtual patient care has rapidly become one of the primary means to deliver of non-urgent management and is, in many ways, ideally suited for the support of chronic low back pain patients. It will continue to be used not only until face to face appointments are again permitted but may become a permanent feature of continuing care.

KEYWORDS: COVID-19; Virtual Care; Video appointments; Low Back Pain; Communication

CME Pre-test Quiz

Introduction

The delivery of health care through virtual appointments is not a new concept, and the challenges of Canadian geography have led to our nation developing and leading the world in telehealth and telemedicine technologies. At the same time, the cellular and internet revolution have led to new and low-cost forms of consumer communication. Patients have become accustomed to doing their shopping and banking on-line and are pressuring their medical providers to take advantage of these new forms of connection and update their contact options. The widespread use of electronic medical records means that most physicians have existing connections to the internet, which can be leveraged for direct patient contact.

Into this existing pressure for change has come the 2020 COVID-19 pandemic. In short order, it has become imperative that health care providers expand their com-

Ted Findlay, DO, CCFP, FCFP *is on Medical Staff with the Calgary Chronic Pain Centre at Alberta Health Services, Calgary Zone in Calgary, Alberta.*

Dr. Hamilton Hall, MD, FRCSC, *is a Professor in the Department of Surgery at the University of Toronto. He is the Medical Director, CBI Health Group and Executive Director of the Canadian Spine Society in Toronto, Ontario.*

munication options to provide care for patients who cannot access treatment in any other way.

Arguments for Virtual Care for Low Back Pain

The COVID-19 pandemic is having a significant negative impact on the traditional models of health services delivery for those Canadians who live with chronic pain, including chronic low back pain.[1] The inability to access their family physicians for face to face appointments and limited access to physiotherapy, chiropractic, massage therapy as well as mental health therapists results in reduced quality of life, increased disability, and significant distress. One response to these patients' needs has been a rapid increase in the use of virtual care appointments. This new direction requiring modifications to the rules governing patient appointments and related fee structures demands support from various provincial Ministries of Health. These ongoing changes are specific to each province and will not be the focus of this article.

THE COVID-19 PANDEMIC IS HAVING A SIGNIFICANT NEGATIVE IMPACT ON THE TRADITIONAL MODELS OF HEALTH SERVICES DELIVERY FOR THOSE CANADIANS WHO LIVE WITH CHRONIC PAIN INCLUDING CHRONIC LOW BACK PAIN.[1]

In February of 2020, less than a month before the institution of pandemic related limitations and restrictions on patient care, the Canadian Medical Association in partnership with the College of Family Physicians of Canada and the Royal College of Physicians and Surgeons of Canada published the "Report of the Virtual Care Task Force".[2] It was the intent of this report "to outline the actions required to promote excellence in virtual care in Canada and set the stage for broader discussion and more detailed efforts". Virtual care was defined as "any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care." It was noted that virtual care is distinct from telemedicine and telehealth, and reflects increasing consumer and patient demand for timely and convenient access to health care. In response, "it is essential that physicians providing publicly insured medical services in Canada are enabled to keep pace." One of the key recommendations was to "encourage provincial and territorial governments and provincial and territorial medical associations to develop fee schedules that are revenue neutral between in-person and virtual encounters."

The American Agency for Healthcare Research and Quality (AHRQ) published a White Paper Commentary in May 2020 focused on the rapid explosion of telehealth in response to the COVID-19 pandemic, "fueled by necessity and rapid legislative and regulatory changes to payment and privacy requirements".[3] In this review it was noted that, "Telehealth is beneficial for specific uses and patient populations" with outcomes as good as or better than usual care. The White Pater stated, "The evidence of benefit was concentrated in specific uses" and highlighted areas such as remote home monitoring for patients with chronic conditions, communicating and counseling patients with chronic conditions, and providing psychotherapy as part of behavioural health.

The following considerations have been proposed as important ethical considerations with respect to chronic pain including low back pain:[4]

- Providing safe and timely patient care while optimizing available patient care resources (e.g. hospital and ICU beds) and preserving the health of involved healthcare professionals.
- Being aware of and adhering to evolving national, provincial or local guidelines, rules and regulations that have an impact on our practice and patient care.
- Continuing regular follow-up and remaining available for patients via telemedicine, minimizing face to face clinic visits to mitigate disease transmission risks and optimizing the use of critical Personal Protective Equipment (PPE).
- Assuring that ongoing pain medication regimes remain uninterrupted to avoid withdrawal and other potential adverse effects, and to maintain pain control to the extent possible with pharmacotherapy.
- In some circumstances postponing interventional pain management procedures until the crisis passes.
- Performing interventional pain management procedures only if delaying the procedure is likely to cause harm to the patient.
- Advising patients about various approaches that they can pursue on their own at home using online instructions. These may include physical exercise, yoga, Tai Chi, mindfulness medications and other mind-body therapies, relaxation techniques, online supportive counseling sites.

The American Society of Regional Anesthesia and Pain Medicine and the European Society of Regional Anaesthesia and

Pain Therapy have published a Joint Statement on Chronic Pain Practice during the COVID-19 pandemic and noted:[5]

- The susceptibility of chronic pain patients (to the COVID virus) may be higher as many are elderly with multiple comorbidities and potential immune suppression.
- Chronic opioid therapy may cause immune suppression in some patients.
- Use of steroids in interventional pain procedures may induce immune suppression. Intraarticular corticosteroid injections have been associated with higher influenza risk.
- Whenever possible, telemedicine should be considered.
- In chronic pain patients, withholding pain management services could lead to inability to work anxiety and depression, and reliance on opioid therapy.
- All patients who have been prescribed or use NSAID drugs on a regular basis should continue using them.
- Consider evaluating the risks and benefits of steroid injections, and use a decreased dose, especially in high-risk populations. There are many procedures in which steroids are routinely used, where the evidence does not support the practice.

Drawbacks

While there are practical and cost advantages to virtual care, it does have obvious limitations. Many aspects of a physical examination cannot be performed and can only be observed. The examiner is dependent on the patient to accurately measure and report tests such as vital signs, urine analysis or blood sugars or even pulse oximetry. Assumptions must be made about the accuracy and calibration of the instruments involved. While video visits can provide limited ability to interpret body language or the response to recommendations, the experience cannot be as rich (one example is the value of touch) as that of an in-person appointment.

Virtual visits by telephone can be performed with voice only while newer software-based platforms that add the capacity for video communication require the patient to have the necessary equipment and software, an internet connection of adequate bandwidth and reliability and to be able to implement a connection.

Safety and Security

While patients may appreciate the convenience of virtual video appointments, they are often understandably concerned about the security of any discussions or shared information and maintaining privacy in the on-line world. There have been significant con-

sumer concerns about Zoom, Google Meet, Microsoft Teams and Webex.[6] In fact, medical electronic medical record venders have been able to develop virtual visit software that meets provincial standards. Zoom for Healthcare, for example, has commercial versions that can meet privacy requirements for medical appointments. Nonetheless, it is always prudent to document that the patient has been informed about the potential risks of a privacy breach using video software and to obtain consent for that method of communication. With its increased security and greater familiarity this is less important for a telephone consultation. Some provinces have authorized the temporary use of unregulated communications technologies such as WhatsApp, Skype and Facetime when they are the only available solution for an urgent clinical need.

FREQUENTLY OVERLOOKED IN CONSIDERING A VIRTUAL LINK IS THE OPPORTUNITY TO ASSESS SAFETY AND SECURITY WITHIN THE PATIENT'S HOME. UNFORTUNATELY, DOMESTIC VIOLENCE APPEARS TO BE INCREASING IN RESPONSE TO A BROAD RANGE OF SOCIAL STRESSORS SUCH AS JOB LOSS.

During the visit, address security considerations such as confirming the patient's identity by basic demographics such as birthdate and province health care number. Encourage the patient to choose in a comfortable, private, quiet and well-lit location where their computer screen is not likely to be inadvertently seen by anyone else. Although a patient may record the conversation without the professional's consent, the medical practitioner cannot use audio or video recording without specific patient consent.

An example of a Provincial Virtual Health "Toolkit" that covers the range of standards applicable for British Columbia can be found at:

http://www.phsa.ca/health-professionals-site/Documents/Office%20of%20Virtual%20Health/Provincial_VirtualHealth-Toolkit_lv.pdf

Frequently overlooked in considering a virtual link is the opportunity to assess safety and security within the patient's home. Unfortunately, domestic violence appears to be increasing in response to a broad range of social stressors such as job loss. The Learning Network at the Centre for Research and Education on Violence Against Women and Children has a very useful infographic that further details signs of potential intimate partner violence, and can be downloaded at:

http://www.vawlearningnetwork.ca/our-work/infographics/

LN-COVID-19-Related-Controlling-Behaviours-PDF-2.pdf

The Canadian Women's Foundation is encouraging a simple one-handed sign that someone can surreptitiously use during a video consultation to show that they need help and ask someone to check in on them:

How to perform a Virtual Care appointment:

If preliminary triage at the time the patient requests a visit reveals no urgency requiring immediate attention, the clinical staff should offer the option of a virtual consultation as an alternative to the in-person examination. Patients who consider their condition to be urgent, emergent, or inappropriate for a virtual visit should be redirected to an urgent care centre or emergency room. If the patient expresses a preference for a video virtual visit instead of a telephone consultation ensure that the patient has a computer and the requisite software as well as access to the internet or Wi-Fi at the arranged time. All components should be tested prior to the visit. The patient requires explicit instructions on how to connect or to respond to a meeting invitation. If the consultation is by telephone, the physician will likely be calling on a line with the caller ID disabled so the patient must be instructed to disable call blocking for unrecognized or absent numbers. Encourage the patient to be early to their appointment so they are waiting for the connection. They should have any required measurements (blood pressure, weight, blood sugar) available. In cases where there are hearing impairment issues the patient should have assistive devices prepared or be accompanied by a trusted individual. They should prepare an updated medication list and, if they will be seeking medications or a prescription refill, have

their pharmacy contact information and fax number available.

Confirm the patient's identity through some combination of physical and/or voice recognition, health care number or birthdate. Review verbal consent virtual appointment for delivery of care with an explanation and patient expressed understanding of the limitations inherent to this method.

When the purpose of the visit is to discuss back pain, question the state of bowel and bladder function. Cauda Equina Syndrome is the only surgical emergency in low back. Determine the location of the dominant pain and whether that pain is constant or intermittent.

Establish the duration of the symptoms, the level of disability and inquire about any symptom progression. Review significant co-morbidities.

Suitable questions include:

1. Since the start of your pain has there been any change in your bowel or bladder function (how you use the bathroom)? If so, please describe.
2. Where is your pain the worst? Please be very exact. You can select only one location.
3. Where else do you feel pain (or burning, tingling etc.)? You can pick as many locations as you like.
4. Is your pain constant or intermittent? Is there ever a moment (best position, best time of day) when you are completely free of your symptoms (no matter for how short a time)?
5. Does bending forward increase your typical pain (your typical pain is the pain you described in Question 2)?
6. Does prolonged sitting increase your typical pain?
7. What other positions/movements make your typical pain worse?
8. What things can't you do now that you could do before the start of the pain? What is the precise reason(s) you are unable to do them?
9. What positions/movements reduce your typical pain?
10. Have you had this same pain before?

10a. If yes, what treatment did you receive? Did it help?

With a video link the physical examination will, by necessity, be limited. It is possible to view the back for gross discolouration or deformity. The clinician can assess the range of back movement with a report of the motions that reproduce the typical pain. Radicular leg dominant pain can be reproduced with seated straight leg raising (perhaps with assistance if someone is available). Function of the L5 and S1 nerve roots can be judged with heel and toe walking respectively; in both cases with a

minimum of five steps at maximum elevation.

The majority of low back pain patients can be managed conservatively and provided with education, medication, and referrals for community rehabilitation as appropriate. Most back pain is the result of minor alterations in spinal mechanics. Less than 3% results from sinister pathology.

Many back pain patients will also have "Yellow Flags" associated with significant psychosocial stressors, which can be especially prevalent during times of widespread social disruption such as the COVID-19 pandemic. Virtual care counselling visits and virtual connections to other allied health team members such as behavioural health consultants and social workers, can be of tremendous value.

While not specifically designed for virtual care appointments, the Centre for Effective Practice Clinically Organized Relevant Exam (CORE) Back Tool provides an excellent algorithm.[7] On the basis of history alone the patient can be classified into one of four common patterns of back pain. The tool includes advice for management including exercises specific for each pattern and links to additional resources. Should the questions arise, the indications for imaging and the criteria for surgical referral can be reviewed with the patient.

At the conclusion of the examination the patient can be provided with an individualized exercise prescription, education, medications when required, and instructions for how and when to contact the clinician with further concerns or for routine follow up. The visit needs to be entered into the clinician's paper or electronic medical record.

From Virtual Care to Self-Care

Evidence-based non-pharmacological treatment for low back pain includes exercise, spinal manipulation, mindfulness-based stress reduction, yoga, and a range of other options.[8]

Patients can be directed to several on-line resources and applications that provide some guidance in these aspects of care. These are helpful while patients remain unable to obtain face-to-face care or for those who prefer to access care virtually on their own schedule. The following is a non-exhaustive list of currently available resources:

- The government of Canada and the Canadian Pain Task Force have collated a list of on-line resources for patients as well as practitioners that can be found at: https://www.canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/external-advisory-bodies/resources.html
- The Western University Bone and Joint Institute in partnership with the Canadian MSK Rehab Research

SUMMARY OF KEY POINTS

1. Virtual patient care is not a new concept, but its use has been accelerated due to the COVID-19 pandemic.
2. Even pre-dating the COVID-19 pandemic, organized medicine in Canada has come out strongly in favor of the delivery of health care by virtual means.
3. There are many on-line resources that can be accessed by patients to help manage their low back pain during pandemic limitations on direct patient contact.
4. Positive patient identification and documentation of consent are requirements for virtual care delivery.
5. Both the physician and the patient have a role to play in ensuring appropriate privacy for the virtual visit.

CME

Post-test Quiz

Members of the College of Family Physicians of Canada may claim MAINPRO-M2 Credits for this unaccredited educational program.

Network has developed a list of "Trusted Resources" that includes links to recommended at-home exercises as well as others: https://boneandjoint.uwo.ca/public/resources.html

- Pain BC has an on-line "Pain BC Toolbox" that includes links to various online resources and apps: https://www.painbc.ca/sites/default/files/inline-files/PainBC-PainToolbox-2016-Digital.pdf
- During the COVID-19 pandemic, Pain BC is offering on-line free live-streamed guided movement and relaxation for people living with pain. Sign up is required: https://www.painbc.ca/gentle-movement-at-home
- "Headspace" is a mindfulness app that is available without cost for a free year for

CLINICAL PEARLS

Have your patient download and test any required communications software prior to their virtual appointment.

Commercial video communication software can be compliant with provincial personal privacy and information protection laws, check with your provincial medical association and/or provincial College of Physicians and Surgeons to be certain that approved software is being used.

Have the patient perform any required clinical measurements and list current medications and any required refills prior to the start of the virtual appointment.

Make sure that unidentified number call blocking does not prevent the virtual appointment from being completed.

those currently unemployed: https://www.headspace.com/
- Another on-line mindfulness and meditation resource or app is "Calm": https://www.calm.com/
- The "Recognize" app uses Graded Motor Imagery to treat many complex pain and movement problems: https://www.noigroup.com/product/recogniseapp/
- Tame the Beast has on-line patient education materials for understanding persistent pain and moving towards recovery: https://www.tamethebeast.org/#tame-the-beast
- The University of Calgary website for the Calgary Chronic Pain Centre also includes links to some of the above as well as other resources for patients wishing to stay active at home during COVID-19: https://cumming.ucalgary.ca/sites/default/files/teams/88/Resources%20for%20Staying%20Active%20at%20home.pdf

Conclusion

While the COVID-19 pandemic is undoubtedly a crisis, it has had the beneficial effect of accelerating the virtual delivery of health care services. This delivery of new forms of care may have positive consequences. When it comes time to regroup and redesign services in the post-pandemic world we will have learned a great deal about what worked, can modify what did not, and build new models of virtual care to assist our patients living with chronic low back pain.[9] There will be no going back to the way things used to be done. And maybe for back pain sufferers that is a good thing.

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