Pivoting to Telemedicine in a **Naturopathic Undergraduate Educational Setting: Lessons Learned**

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Abstract:

The pandemic has driven healthcare technology forward at a record pace, prompting the rapid implementation of virtual care in Ontario, and across Canada. This case report will look at the transition of a naturopathic undergraduate teaching clinic to a virtual care delivery model, including the initial implementation using both available and new technologies, and the key learning opportunities from the transitional period. It will also review the process of continual monitoring and innovation in naturopathic clinical workflows to reduce administrative burden, promote sustainable practices in virtual care, and improve patient experiences, including decreasing barriers and increasing access to care. Lastly, we will review the importance of innovation when embracing technological change to ensure that naturopathic doctors and interns are adequately prepared for the future of virtual care.

Introduction

Technology adoption in healthcare has historically been a slowmoving process.1 The onset of the pandemic forced adoption of telemedicine/virtual care and the implementation of new technologies at a pace that had never previously been seen in healthcare.2 While implementing these new technologies and providing virtual care provide clear advantages, some key learning opportunities can be applied to virtual care delivery post-pandemic and for future adoption of new technologies in naturopathic care. As an educational institution for health care providers, the curriculum must mirror the innovation and growth seen in the health care sector to ensure future naturopathic doctors can provide the care needed to meet the needs of the patients.

Transition to Virtual Care Review

In ten days, CCNM teaching clinics went from 1% virtual visit types to 100% virtual visits. Pivoting towards a fully operational virtual clinic, with 100 interns, 60 supervising naturopathic doctors, 7000 patients, and 10 different clinics required heavy reliance on current technology. The clinics were at an advantage with an electronic medical record (EMR) system, virtual appointment reminders, and a virtual messaging system already in place. From there, a telemedicine platform and patient communication platform were added, and systems were put in place to fill the gaps of what was needed to provide high-quality telemedicine care.

These gaps included a telemedicine platform that would enable video calls with multiple participants at once. As an educational institution, one of the unique needs required for providing care and high-quality education is the ability for multiple participants in a visit. Unfortunately, most telemedicine platforms are built for one-to-one interaction, doctor and patient. We choose a system that could allow group calls, although with limited functionality. The system was often overburdened with our need for a supervisor, intern, learning students, and the patient. This ultimately led to an undesirable patient visit and learning opportunity for our interns. A second gap was finding the best way to communicate with patients both from a staff perspective (collecting payments, booking follow-ups) and from a practitioner perspective sending treatment plans in a secure platform. We were able to find a messaging system that integrated with our EMR, which allowed treatment plans to come directly from the chart, as well as allowed staff to send forms, and questionnaires electronically and once completed would automatically load into the chart. This integration is key in decreasing the overall administrative burden on operational staff and faculty while ensuring proper information was channeled into the medical chart. The other significant gap in our pivot to virtual care was students' limited training and understanding of conducting a telemedicine visit, as was the case for a portion of our clinical faculty. Providing training to staff and students on the importance of a "webside" manner and supporting supervisors modeling safe virtual care also allowed us to train interns in preparation for future practice.

To pivot quickly, as stated we used resources in place, added additional resources, and most importantly communicated often through our messaging system. Daily communication on the transition and processes were sent out. These communications were intentionally short, with 'how-to' videos so that users could digest the significant change in small bites. Additionally, we created a centralized platform

for supervisors on our already in-place communication platform to facilitate communication, link out to helpful resources, and create short-cuts to administrative documents. Many townhalls, group meetings for internal stakeholders were held to address the changes and get feedback. Patients were also involved in the process, as they have been significant stakeholders in how we offer our services. The Patient Advisory Committee (PAC) was consulted four times throughout this year and their role was pivotal in providing feedback and reviewing our processes. This was/is a huge change for all stakeholders, compounded by the fact that everyone was living in a pandemic. Managing people's expectations, emotions, and ability to cope was always at the forefront of decisions and communication.

While the initial focus was on continuing to offer care to patients, the complexity of clinical workflows had increased because no single system could meet the needs of a large teaching clinic. The use of multiple systems that did not communicate, combined with increased access to staff working from home quickly increased administrative workflow for interns, supervisors, and operations staff. It was through monitoring workflows with a critical reflection on the complexities and administrative burden that it was decided to refocus on simplifying and centralizing clinical systems.

The introduction of an online system that sends booking reminders, treatment plans, and processes payments allowed us to replace four outdated systems while allowing patients the option to book online if they were uncomfortable with calling to book. Centralizing communication also supported patients receiving consistent messaging while reducing patient communications coming directly from supervisors' emails. Introduction of a 15-minute follow-up for patients who were emailing or calling supervisors to clarify questions also formalized a process for facilitating boundaries between visits.

Finally, while our virtual teleconferencing system offered group calls as stated it was often overburdened with the number of participants on the call. To improve the patient experience and the learning experience the telemedicine platform was changed to the same platform we were using for our student-faculty interactions. This singular platform was capable of handling multiple participants in the same call, but also allowed us to reduce two systems down to one singular system for communication within the clinic.

Discussion (Review of Lessons Learned, Research and Future Directions)

The rapid transition to virtual care delivery across the medical community pushed technology adoption quickly, allowing CCNM Clinics to continue to provide care to current patients throughout the pandemic. While the initial transition occurred at a rapid pace to ensure ongoing patient care and student education, the pace of the transition brought a lot of change for both faculty and students paired with a period of high uncertainty throughout the pandemic. The change was managed using short and frequent feedback with supportive resources. Microsoft Teams was one of our most successful

platforms, allowing us to centralize internal communications for staff and interns who felt this was a more efficient way to communicate and share resources. There was also a strong appreciation from staff and patients throughout the process as we worked to improve our processes as well as streamline and automate workflows.

There continues to be clear advantages to virtual care delivery including the ability to provide care in a way that removes physical barriers for people who cannot come into the clinic while also allowing naturopaths to serve wider populations across Ontario. Given these advantages, virtual care is a practice that is expected to continue beyond the pandemic, so ensuring that best practices are integrated into naturopathic clinics and that clinical workflows are sustainable in the long term is vital to the health of the profession.

KEY LEARNING OPPORTUNITIES

BOUNDARIES IN COMMUNICATIONS

- Clear communication in visits to reduce access to emailing outside of appointments
- Providing shorter appointments for answering questions about treatment plan

MONITORING AND REFINING CLINICAL WORKFLOWS

- Monitoring inefficient clinical workflows and streamlining processes
- Updating technologies to simplify workflows

FACILITATING ACCESSIBILITY

- Virtual care can increase accessibility to services for certain individuals
- On the other hand, it is imperative that alternative options are made available for individuals with limited access to the technology required for virtual care

Some of the key learning opportunities from this implementation included the importance of boundaries in a virtual world, monitoring and refining workflows, and building strategies to facilitate accessibility. While boundaries are unique to each provider, clinicwide policies and technology can be used to manage expectations and ensure stronger boundaries are in place to support long-term sustainability in any healthcare practice. This process requires continuous monitoring and communication between healthcare providers, operations staff, and patients.

Further, to support sustainable practice in virtual care delivery, the process of monitoring workflows is another key avenue for practicing naturopathic doctors as part of any change management process. While embracing change can be challenging, especially implementing new systems a year after the original implementation,

there are clear advantages to problem-solving and simplifying clinical workflows that use significant resources and/or administrative time with the end goal of reducing administrative burden. Working with staff and healthcare providers to identify areas for improvement, to collaborate on possible solutions, and streamline clinical workflows is something that will continue to be necessary for the future of naturopathic practices and the shifting technology landscape.

Conclusion

There is no doubt that digital health is in a "cultural transformation" and a paradigm shift is occurring within the healthcare field.³ As an educational institution, virtual care and the use of technology in healthcare must be built into the curriculum. This is to ensure future naturopathic doctors have the skill to provide high-quality healthcare in a virtual setting. As well as model best practices for processes and systems in workflow monitoring, boundaries in clinical care, and integration of new technologies. $\[\]$

About the Authors

Dr. Lindsey White, ND (she/her) – a 2012 CCNM graduate. Lindsey owned and operated a multi-disciplinary clinic in downtown Toronto for five years (2013-2018) with a focus on working with the LGBTQ community. Currently, Director, Clinical Services at CCNM and is responsible for the operations and strategic growth of CCNM's teaching clinics across the GTA. Lindsey works towards ensuring a high-level of customer service is provided to all stakeholders – students, faculty and patients. Lindsey works passionately towards developing strategy for clinic modernization, growth, and improved patient experience within the lens of a teaching institution.

Dr. Jennifer Whalley, ND (she/her) – a 2016 CCNM graduate. Jennifer has a private practice with a focus on supporting people who experience persistent pain and she supports the adoption of new technologies at CCNM Clinics. Jennifer is passionate about supporting the adoption of virtual care and finding ways to use technology to improve patient experiences and drive meaningful clinical change.

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