

Virtual Pre- and Post-Operative Care in the COVID-19 Context

As the health care system resumes elective surgeries during the COVID-19 pandemic, virtually enabled models of care can help streamline both pre- and post-surgical care delivery and processes while minimizing in-person contact. Virtual and digital tools enable more efficient and effective ways for teams of providers in the circle of care to work together to support patients, particularly now that physical encounters must be limited. Overall benefits can include improved wait-time management, improved patient experience, reduced length of stay, and reduced readmissions.

<u>Virtual surgical care patient pathway</u>: The following hip and knee replacement example illustrates how patients can be supported virtually before and after surgery.



Pre-Operative

Surgical Management

Tools are being used regionally to organize, streamline, schedule and balance surgical case load. Ocean eReferral – primarily used for primary care to specialists –is a solution being used by the System Coordinated Access (SCA) Program led by the eHealth Centre of Excellence in Waterloo Wellington. Novari eRequest is being used for surgical booking and central intake in the acute sector. Currently being used in the north west and is available through a provincial VOR spearheaded by Thunder Bay Regional Health Centre.

Video visits for intake, assessment, and pre-anesthesia

Pre-operatively, pre-anaesthetic care clinics have been virtualized using multiple models of care. Patients can be assessed and undergo pre-anaesthetic consults via direct or multipoint videoconference if the patient has a stable internet connection and microphone-enabled smartphone, tablet or computer. Preoperative education can also be delivered in this way.

Integrated multi-feature platforms to support the patient journey

A number of surgical platforms support the patient before, during, and after surgery, providing integrated features like personalized care plans, symptom monitoring, video, messaging, and patient education. (See 'Vendor Solutions')

Post-Operative

Monitoring via integrated platforms

A number of surgical platforms provide integrated features such as personalized care plans, symptom monitoring, reminders/alerts, video, messaging, and patient education. The University Health Network uses Vivify Pathways Go, a "bring your own device" solution for remote peri-operative patient care. Information sharing to patients pre surgery helps to avoid surgery delays and post-op symptom and medication reminders help to ensure a timely recovery.

<u>Video visits for scheduled follow-up, routine/ongoing monitoring, and issues management</u> Pre-operatively, patients can be re-assessed and undergo pre-anaesthetic consults via direct-to-patient video visits if the patient has a stable internet connection and microphone-enabled smartphone, tablet or computer.

<u>Specialist consultation</u>: The Ontario eConsult Program enables primary care clinicians to access specialist advice online to help in the management of patients post-operatively.

<u>Virtual primary care</u>: The eVisit Primary Care <u>pilot</u>, in use in five regions in Ontario, can support patients with post-operative management to direct questions to their primary care provider using secure messaging, audio or video. For more information email <u>primarycareproject@otn.ca</u>.

Vendor Solutions

A surgical transitions Vendor of Record arrangement for Ontario provides streamlined procurement access to three solutions provided by **Intouch Health, Seamless MD, and Vivify Health**. Click <u>here</u> for more information. Other vendors provide surgical transition solutions (e.g. **Novari Health**'s Access to Care platform, which is available for provincial procurement through Thunder Bay Regional Health Sciences Centre at (807) 684-6000.)

Additional Resources

Video connects chronic and post-surgical patients to care team: **St. Joseph Healthcare Hamilton** <u>https://otn.ca/providers/ohts/video-supports-chronic-post-surgical-care-home/</u>

Post-surgical support with hospital and home monitoring: **Hamilton Health Sciences** <u>https://otn.ca/providers/ohts/post-surgical-support-hospital-home-monitoring/</u>

Journal References

The following publications and documents may also be helpful to understand how pre-and post-operative surgical care can be supported virtually.

- Asiri, A., AlBishi, S., AlMadani, W., ElMetwally, A., & Househ, M. (2018). The Use of Telemedicine in Surgical Care: A Systematic Review. Acta Informatica Medica, 26(3), 201. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6195401/</u>
- Gunter, R. L., Chouinard, S., Fernandes-Taylor, S., Wiseman, J. T., Clarkson, S., Bennett, K., ... & Kent, K. C. (2016). Current Use of Telemedicine for Post-discharge Surgical Care: A Systematic Review. Journal of the American College of Surgeons, 222(5), 915-927. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5660861/</u>
- MGillion, M. H., Duceppe, E., Allan, K., Marcucci, M., Yang, S., Johnson, A. P., & Henry, S. (2018). Postoperative Remote Automated Monitoring: Need for and State of the Science. Canadian Journal of Cardiology. <u>https://www.sciencedirect.com/science/article/pii/S0828282X18303192</u>
- 4. A.M Williams, U.F. Bhatti, H.B. Alam and V.C. Nikolian The role of telemedicine in postoperative care. Mhealth. 2018: 4:11. Published online 2018 May 2. Doi 10.21037/mhealth.2018.04.03 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5994447/
- Yahanda, A.T., Marino, N.E., Barron, J., Concepcion, A., St. John, T., Lu, K., Chermside-Scabbo, C., Aladegbami, B., Ross, W., Clohisy, J. and Kirby, J.P., 2018. Patient Engagement and Cost Savings Achieved by Automated Telemonitoring Systems Designed to Prevent and Identify Surgical Site Infections After Joint Replacement. Telemedicine and e-Health, 25(2), pp.143-151. <u>https://www.ncbi.nlm.nih.gov/pubmed/30192209</u>

Help?

Ontario Health (OTN) would be pleased to help you target an approach that meets your facility's unique needs. Please contact us at <u>info@otn.ca</u>.