Memorandum

SUBJECT: CorHealth COVID-19 Cardiac Memo #12 - **RECOMMENDATIONS FOR AN APPROACH TO THE PROVISION OF CARDIOVASCULAR REHABILITATION DURING COVID-19 IN ONTARIO**

TO: Outpatient Cardiovascular Rehabilitation Stakeholders

FROM: Office of the CEO, CorHealth Ontario

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DISCLAIMER: The information in this document represents general guidance based on current practice and available evidence. The document was developed by provincial clinical experts, reflecting best knowledge at the time of writing, and is subject to revision based on changing conditions and new evidence. This information is *intended to* be "guidance rather than directive," and is *not meant to replace clinical judgment, regulatory body requirements, organizational, or hospital policies*. Reference to Infection Prevention and Control (IPAC) or Personal Protective Equipment (PPE) in this document should not replace or supersede the IPAC and PPE protocols or directives in place at your hospital.

Recommendations for an Approach to the Provision of Cardiovascular Rehabilitation during COVID-19 in Ontario

PREAMBLE

COVID-19 is an unprecedented crisis and a poses significant risk to the community as the landscape is rapidly evolving. The Ministry of Health has requested that all hospitals ramp down non-essential services, elective surgeries and other non-emergent clinical activity. CorHealth Ontario has been engaging with cardiovascular rehabilitation experts and other stakeholders across the province to discuss how best to preserve health care capacity in light of increasing COVID-19 cases requiring health care. The following guidance and recommendations reflect advice from this engagement.

GUIDING PRINCIPLES

1. Keeping front line health care providers healthy and patients protected is vital.
2. Minimizing the impact of COVID-19 on the mortality and morbidity of patients with cardiovascular disease is a priority.
3. Aligning with province- and organization-specific infection prevention and control policies and protocols is important.
4. Promoting clinical activities aimed at preserving health service resources (e.g., health care human resources, personal protective equipment, procedure rooms, Intensive Care Units, Emergency Departments) is a priority.
5. Ensuring that patients continue to have access to urgent and/or essential care across the continuum is a priority.

BACKGROUND

Cardiovascular rehabilitation (CR) is an important specialized component of chronic cardiovascular disease care and chronic disease management that uses a multifaceted approach that includes: reducing cardiovascular risk factors, using behaviour modification strategies to sustain healthy lifestyles and promote

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pharmacological adherence, and providing therapeutic exercise training[1]. Participation in traditional, centre-based, supervised CR is associated with decreased mortality and morbidity[2] and health care utilization[3]. Alternative home-based and tele-rehab CR program models have shown benefits in exercise capacity and quality of life [4,5].

During the COVID-19 pandemic, patients may feel a heightened level of uncertainty and anxiety as hospital stays are often shortened and family access to the acute setting is restricted. As such, opportunities for patient and family learning during the acute care stay may be limited and patients may require additional reassurance and education on discharge. Furthermore, ambulatory patients referred to CR may also experience additional emotional burden imposed by COVID-19 and/or awaiting treatment that has been delayed. Given the positive benefits of CR and increased patient need at this time, it is vital that CR services continue to operate as much as possible during the COVID-19 pandemic.

Regulated health professionals operating outside of the in-patient hospital sector are required to adhere to the restrictions put forward by the province of Ontario to reduce contact between people and to stop the spread of COVID-19. For further guidance, refer to section 15 under the *List of Essential Services* posted on the Government of Ontario website. In addition to this document, health care professionals should follow the requirements put forward by their respective regulatory body. This document aims to provide further clarification on the components of cardiovascular rehabilitation that may align with the provincial/regulatory colleges' definitions of urgent/essential services.

This document aims to provide guidance on how the delivery of CR can strive to meet the Standards for the Provision of Cardiovascular Rehabilitation in Ontario (CR Standards) in a virtual based environment during the COVID-19 pandemic. This document provides general guidance for which health care providers may adapt in response to their local program delivery model, resources, local environment and the need of their community and target population. For a definition of virtual care please see Appendix A. For the initial resource list, please refer to Appendix B. Over time, additional tools and resources to support the delivery of CR during the COVID-19 pandemic will be available on the CorHealth Ontario COVID-19 Resource Centre.

RECOMMENDATIONS

1. INDICATIONS AND REFERRALS FOR CARDIOVASCULAR REHABILITATION (CR)

1.1. A coordinated, needs-based approach for screening and triaging patients for virtual CR services in the setting of limited access during the COVID-19 pandemic should consider individual patient risk for adverse cardiac events and patient well-being.

[1] Arthur HM, Suskin N, Bayley M, et al. The Canadian Heart Health Strategy and Action Plan: Cardiac Rehabilitation as an Exemplar of Chronic Disease Management. Can. J. Cardiol. 2010; 26: 37-41
[2] Anderson, L, Oldridge N, Thompson DR, et al. Exercise-Based Cardiac Rehabilitation for Coronary Heart Disease Cochrane Systematic Review and Meta-Analysis. J. Am. Coll. Cardiol. 2016; 67:1–12
[3] Alter D, Yu B, Bajaj RR, Oh P. Relationship Between Cardiac Rehabilitation Participation and Health Service Expenditures Within a Universal Health Care System. Mayo Clinic Proceedings. 2017; 92: 500-511
[4] Anderson L, Sharp GA, Norton RJ, et al. Home-based versus centre-based cardiac rehabilitation. Cochrane Database of Systematic Reviews 2017; Issue 6
[5] Rawstorn JC, Gant N, Direito A, et al. Telehealth Exercise-Based Cardiac Rehabilitation: A Systematic Review and Meta-Analysis. Heart 2016;102: 1183–1192

1.2. Although programs may continue to provide virtual CR services for eligible broader patient populations indicated in the CR Standards during the COVID-19 pandemic, priority for individualized virtual CR may include (but is not limited to) patients who are discharged from hospital following:

- Acute coronary syndrome;
- Heart failure;
- Cardiac surgery; and/or
- Percutaneous coronary or cardiac interventions.

1.3. Patients with unstable cardiac status (e.g., uncontrolled ischemia, arrhythmia, heart failure or severe valvular lesion) should be deferred in most circumstances until a more fulsome supervised option for CR becomes available again.

1.4. Programs should consider initial screening and triaging of patients referred with other indications for CR to determine urgency and need prior to offering individualized virtual CR services using clinical judgement and consideration of availability of program staff and resources. Where possible, CR programs may offer their virtual services to patients referred to other programs that are unable to deliver virtual CR during the COVID-19 pandemic. Programs with available capacity may wish to reach out to cardiology clinics to consider referral to virtual CR services for eligible patients on the wait list for cardiac procedures if safe to do so.

1.5. Should a CR program not have the capacity to provide an individualized virtual CR program for all referred patients, patients should be encouraged to use self-directed alternatives including resources for lifestyle/risk factor management and behaviour change where available (e.g., UHN's Cardiac College, UOHI Patient Guides). Additional resources are listed in Appendix B.

Initial screening

1.6. Following referral, patients should undergo initial screening through 1:1 virtual conversation with a member of the CR program to determine:

- Eligibility for individual virtual CR program;
- Technical capacity for virtual care options;
- Patient and/or caregiver capacity for virtual care options; and
- Patient interest in participating in virtual CR program.

Note: Communication channels may include telephone and regular mail.

Obtaining consent for virtual care

1.7. The process for obtaining and documenting consent will depend on institution-specific policies and procedures and specific college regulations. The following should be discussed, and verbal consent documented in the patient chart, to ensure an informed and shared decision-making process for individualized virtual CR program participation:

- The current virtual care service options available;
- The communication tools offered by the CR program;

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- Information regarding the potential privacy/security risks with the virtual care options identified above; and
- The specific risks of receiving, delaying or not receiving virtual CR services.

2. CARDIOVASCULAR REHABILITATION INTAKE

2.1. An intake assessment should include a 1:1 virtual interaction between the patient and regulated health care provider. At a minimum, information collected needs to inform an individualized CR program that is:

- Safe;
- Effective;
- Aligned with patient needs and goals;
- Aligned with patient preference and choice; and
- Plausible in a virtual environment.

2.1.1. Where possible, video conferencing may provide additional information and value as part of the intake assessment.

2.2. We encourage assessment within each of the core domains as outlined in the CR Standards. Recognizing the limitations within the typical intake process arising from restrictions imposed by the COVID-19 pandemic, programs should consider:

2.2.1. Assessing some physical exam components (e.g., visualization of procedure-related sites such as sternum, musculoskeletal deficits) through video consultation or secured means.

2.2.2. Conducting a more fulsome subjective assessment of functional capacity using validated self-administered instruments such as the Duke Activity Status Index (DASI)[6] or RARE score[7] in the absence of access to formal exercise testing.

2.2.3. Using alternative methods (e.g., mail or email) for delivery and completion of screening tools and/or assessments traditionally self-administered by a patient on paper. Forms may be completed verbally as appropriate.

2.3. Patients should be provided with information regarding their risk factors, recognizing that their profile may be incomplete (e.g., without intake bloodwork, blood pressure and/or stress test results). This may be provided in verbal, written, or electronic format (as per institutional policies).

2.4. An intake letter should be sent to the patient's primary care provider and/or cardiovascular specialist as appropriate to summarize the patient's intake assessment, care plan and goals, or at a minimum should indicate enrollment in the CR program.

[6] Hlatky MA, Boineau RE, Higginbotham MB, et al. A brief self-administered questionnaire to determine functional capacity (the Duke Activity Status Index). Am J Cardiol 1989;64(10):651-4.
[7] file:///C:/Users/kharkness/Downloads/Lacombe_2014_RAREScoreArticle2013JCRP.pdf

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3. CARDIOVASCULAR REHABILITATION CORE COMPONENTS

3.1. Where possible, CR programs are encouraged to continue to deliver all of the core components of CR through virtual group and/or 1:1 programming.

3.1.1. Should a CR program not have the capacity to provide all elements of a virtual CR program, the CR program could be supplemented by self-directed or community resources for lifestyle/risk factor management and behaviour change where available. Where these supports are not available, referral back to a patient's Primary Care Provider or equivalent should be considered.

3.2. Prescriptions should be individualized and based on patient's current physical activity capacity, cardiac history and symptom burden and on any additional subjective measures of functional capacity such as the Duke Activity Status Index (DASI)[8] . The following are considerations for an approach for providing services to support physical activity and exercise in the absence of formal exercise testing:

3.2.1. Guidance should align with the F.I.T.T. principles and focus more on the importance of physical activity and exercise and encourage patients to:

Frequency: Reaching a goal of being active for at least 5 days a week.

Intensity: Individualized based on assessment, prescription for exercise low to moderate intensity. Patients should be encouraged to use the Rating of Perceived Exertion (RPE) scale and the Talk Test to monitor intensity of physical activity and exercise. For the majority of patients enrolled in CR through a virtual platform, the prescription of high intensity exercise should be delayed until formal exercise testing is available.

Time: Progress to a minimum of 150 minutes of activity a week. This can be achieved in bouts as short at 10 minutes.

Type: Aerobic, strength, balance and flexibility and reducing sedentary time ("sit less, move more")

3.2.2. Wearable devices (e.g., step counter, heart rate monitor) may add additional value to encourage regular physical activity and/or monitoring of exercise intensity.

3.2.3. The frequency of monitoring/contact is based on individual patient risk assessment and clinical judgement. Patients are encouraged to have a plan in place if they are experiencing escalating symptoms

3.3. Health care providers should balance the risk to patients accessing community lab services for baseline bloodwork and/or monitoring following medication changes for risk factor management or cardioprotective pharmacological optimization. If safe to do so, consideration should be given to delaying medication changes if follow-up bloodwork is required.

[8] Hlatky MA, Boineau RE, Higginbotham MB, et al. A brief self-administered questionnaire to determine functional capacity (the Duke Activity Status Index). Am J Cardiol 1989;64(10):651-4.

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3.4. Health care providers may rely more heavily on integrating motivational interviewing techniques, behavior change models and self-management education into their virtual CR programming to build patient confidence, skills and motivation to successfully create and sustain heart healthy changes.

4. PROGRAM ADMINISTRATION, HUMAN RESOURCES AND PROGRAM EVALUATION

4.1. Ideally CR programs should have a dedicated team leader or champion to oversee and work with the team for implementing a virtual CR program with the following considerations:

4.1.1. Determining the type of virtual options that will be made available for patient care and ensuring staff have appropriate resources, training and support (e.g., technical, workspace)

4.1.2. Exploring opportunities to enhance peer-peer support for patients using virtual methods.

4.1.3. Ensuring health care providers have access to all of the information that may be required for patient care and the safe delivery of CR services

4.1.4 Ensuring health care providers have access to a physician with specialized knowledge of CR to guide them in managing high risk patients or symptoms that may arise.

4.1.5. At each encounter, patients are monitored for safety and symptom concerns and the CR program has a plan to respond to escalating risk situations (e.g. who to contact if event occurs in real time or reported by patient history).

4.1.6. Follow established privacy standards for the workplace, clinician at home and patient at home

4.1.7. Responding to staff health and safety needs to deliver safe, effective care (e.g., infection control, wellness, ergonomics within a home office setting)

4.1.8. Setting up standardized virtual workflows to ensure consistency of patient care delivery (e.g., dose, frequency and content). These workflows may also consider logistical issues (e.g., scheduling appointments, contingency plans if virtual link fails, documentation and communication, cross coverage in the event of staff redeployment or illness)

4.1.9. Enabling regular engagement with CR team for bidirectional communication to evaluate current processes and address concerns and challenges.

4.2.0. Managing the need for CR human resources to deliver CR program services within your own program and within the broader health care system needs. (e.g., adapting caseloads for virtual delivery).

Program evaluation

Although the COVID-19 pandemic represents an unprecedented situation and CR health care providers are working through many challenges to continue to deliver CR. Moreover, understanding's one's ability to thrive with chronic disease and to manage one's disease is an important goal of this care type. This unique situation presents an opportunity to collect information that can be used to evaluate and inform program development for virtual delivery of CR in a post-COVID environment.

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4.3. At a minimum, collecting information regarding the patients referred, the reason for referral and the start and end dates of CR participation may provide the opportunity to link this information with administrative data sets for future evaluation.

4.4. Collecting process indicators such as the number and frequency of patient virtual visits and services accessed (1:1, group) will help to describe the experience of virtual CR and may inform future CR program planning.

4.5. Existing CR program databases/registries, such as the CACPR registry, can provide platforms to support data collection and evaluation.

4.6. Collect key data to assess virtual CR against key pragmatic national quality indicators where available. Given the inability to complete cardiometabolic testing (or equivalent), consider additional evaluation metrics consistent with the national quality indicators and usual program outcomes (e.g. quality of life, cardiac or chronic disease self-efficacy).

5. PROGRAM COMPLETION AND LONG-TERM PLAN

5.1. At program completion, patients should be provided with information, including self-management strategies regarding their risk factor profile, leading a heart healthy lifestyle, engaging in regular exercise, and working towards long-term management goals. There is recognition that these may be incomplete (e.g., without bloodwork, blood pressure and/or stress test results) due to restrictions from COVID-19 pandemic. This information may be provided in verbal, written, or electronic format (as per institutional policies).

5.2. A discharge letter should be sent to the patient's primary care provider and/or cardiovascular specialist to summarize the patient's risk factor profile, current medications, guidelines for ongoing exercise and long-term management goals, or at a minimum should indicate completion of the CR program.

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Appendix A: Considerations for use of Virtual Care

Virtual care has been defined as any "interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies (e.g. videoconferencing, telephone, email, mail) with the aim of facilitating or maximizing the quality and effectiveness of patient care".[9p.3]

Note: Regular mail should also be included within this definition of virtual care.

IN ADDITION TO CONSULTING PROFESSIONAL REGULATORY COLLEGE GUIDELINES, CLINICIANS SHOULD:

1. Consider if virtual care is a feasible means to deliver the rehabilitation intervention;
2. Consider patient access to technology and internet and other practical limitations;
3. Consider if patient is able to participate independently or caregiver is able to provide assistance for both the safety of tasks during intervention and/or technical support;
4. Ensure and document consent considering that any electronic means cannot be 100% secure;
5. Ensure an environment that considers privacy for both yourself and the participant (e.g., are there others around in your office or does the client have a private space at their home/workplace);
6. Ensure an alternate way of contact (e.g., phone number) in case of technology failure;
7. Ensure an emergency plan (e.g., call 911 or local number) if there is an incident such as a fall;
8. Be aware of the limitations of virtual care (e.g., inability to provide physical support, difficulty in perceiving emotions and level of effort) and adapt therapy accordingly; and
9. Consider interpretation services for those with language barriers for obtaining an informed discussion.

[9] Canadian Medical Association. (n.d.). Virtual Care in Canada: Discussion Paper. Retrieved from https://www.cma.ca/sites/default/files/pdf/News/Virtual_Care_discussionpaper_v2EN.pdf

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Appendix B: Resources to Support the Delivery of Virtual Cardiovascular Rehabilitation

The following list represents some of the initial resources identified to assist CR team members in supporting patients for lifestyle/risk factor management and behaviour change. Additional resources to support CR team members in the delivery of virtual CR within the five major sections of this document will be made available on the COVID-19 section of the CorHealth website in the near future.

University Health Network- Cardiac College UHN's Cardiac College

University of Ottawa Heart Institute UOHI Patient Guides

Central East Cardiovascular Rehab Program https://gethearthealthy.ca/patient-education/

Cardiovascular Rehabilitation Network of Ontario https://www.crno.ca/

Canadian Association of Cardiovascular Prevention and Rehabilitation https://www.cacpr.ca/COVID-19

Heart and Stroke Foundation of Canada https://www.heartandstroke.ca/heart

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