Memorandum

SUBJECT: CorHealth COVID-19 Cardiac Memo #2 – **RECOMMENDATIONS FOR AN ONTARIO APPROACH TO PROVISION OF HOSPITAL ECHOCARDIOGRAPHY SERVICES DURING COVID-19**

TO: Echocardiography Laboratory Medical and Technical Directors, Cardiac Hospital Administrators, Cardiac Program Medical Directors, Cardiac Leadership Council, Members of the Clinical Advisory Committee, Members of the EQI Advisory Panel

FROM: Office of the CEO, CorHealth Ontario

DATE: September 16, 2020

TIME: 3:00 PM

VERSION: 2

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 as circumstances and conditions. This information is intended to be "guidance rather than directive," and is not meant to replace clinical judgment.

Provision of Hospital Echocardiography Services During COVID-19

PREAMBLE

COVID-19 is an unprecedented crisis and poses a significant risk to the community as the landscape is rapidly evolving. On March 15, 2020 the Ministry of Health (MOH) issued Directive #2 for Health Care Providers (Regulated Health Professionals or Persons who operate a Group Practice of Regulated Health Professionals) requesting that all hospitals ramp down all non-essential services, elective surgeries, and other non-emergent clinical activity. Subsequently on May 26, 2020, an amendment was issued for Directive #2 indicating that all deferred and non-essential and elective services carried out by health care providers may be gradually restarted subject to the requirements of this Directive. On June 8, 2020, Ontario Health provided further recommendations to support the gradual return to full scope of service for outpatient care, primary care, and home and community care. CorHealth Ontario has worked with cardiac experts and stakeholders across the province to discuss how best to preserve care capacity for those cardiac patients in greatest need, while we gradually restore health care capacity in the context of COVID-19. The following guidance and recommendations reflect advice from this engagement.

To access resources related to COVID-19 from the Canadian Cardiovascular Society (CCS) and the American Society of Echocardiography (ASE), please visit the CorHealth COVID-19 Resource Centre.

GUIDING PRINCIPLES

1. Minimize impact of COVID-19 on known mortality/morbidity of the cardiac patient population.
2. Limit and/or redeploy use of hospital resources in preparation of surge (i.e. health care human resources, personal protective equipment, procedure rooms, Intensive Care Units, Emergency Departments).
3. Protection of health care workers and patients.

RECOMMENDATIONS

Echocardiography as practiced in most hospital settings provides both in-patient and out-patient examinations. The latter brings large numbers of patients into the buildings and all examinations require close and prolonged contact between patients and sonographers. Transesophageal examinations have the added potential for aerosolization of the coronavirus from the respiratory tract. For these reasons, the following recommendations are being put forward to address guidelines issued by the Ministry of Health and Public Health organizations.

EXAMS

1. Hospitals should ensure echocardiograms are only being performed when absolutely necessary and are pivotal for patient management. As a working definition, an echocardiogram should be considered necessary at this time if it would be expected to prevent an adverse patient outcome or hospital admission within the next two weeks. All other echocardiograms should be considered elective and should be deferred at this time.
2. All currently scheduled echocardiograms that do not meet these criteria should be deferred. Deferred studies must be tracked so that they can be re-scheduled when normal operations resume. Referring physicians must be made aware of the deferrals.
3. Each hospital based facility should designate an experienced and qualified echocardiographer, such as the Medical Director of the echocardiography lab or their designate, to be the point of contact for triaging all booked procedures, tracking of deferred examinations, and contacting referring physicians (both for notification of deferrals and consultation regarding patients potentially requiring urgent examination). Hospitals must designate appropriate administrative support to this individual.
4. Hospitals should minimize scanning time by completing measurements off-line and/or conducting limited studies. Physicians should direct sonographers to obtain what they deem to be the essential images (2D and Doppler) to address the indication. This should be done in consultation with the designated interpreting physician and be reflected in the report. Additional investigation, as is standard practice, should continue to occur where warranted.
5. Transesophageal Echocardiography (TEE) should be treated as high-risk procedures as they have the potential for aerosolization. This procedure should only be performed when the indication is pivotal for patient management in the near future, and where no other imaging modality is available to answer the clinical question. If a TEE must occur, for a COVID-19 positive or suspected patient, it should be with essential staff only, and full precautions should be undertaken in accordance with local hospital Personal Protective Equipment (PPE) and Infection Prevention and Control (IPAC) protocols and policies. In recognition of the recommendations by clinical experts and opinion leaders, professional organizations and national societies, CorHealth supports the identification of TEE as an Aerosol Generating Medical Procedure (see Appendix).

PERSONNEL

Recognizing that echocardiograms require close patient contact, ensure the safety and protection of all staff in accordance with local hospital PPE and IPAC protocols and policies.

EQUIPMENT

1. Thorough equipment cleaning can be difficult due to crevices and extra attention is required to ensure full disinfection.
2. Ensure all equipment and probe cleaning products are appropriate. Contact the vendor of the machine as necessary, to confirm the cleaning products being used will effectively eradicate the virus. Follow local hospital IPAC protocols.
3. Handles on ultrasound probes (particularly TEE) may not be able to be fully disinfected. Using a double-glove is necessary and operators have to be vigilant in ensuring proper double glove procedures are followed.
4. Where possible, set aside the machine that is simplest to fully sanitize and use that one only for any patients known or suspected to have COVID-19. Remove any extraneous equipment.

VERSION HISTORY

Version	Description of Changes
2	• Update to Preamble • Updated wording in EXAMS section to bullet point #5 • Addition of Appendix

APPENDIX

Title: Transesophageal Echocardiography and Aerosol Generating Medical Procedure Designation

CorHealth Ontario Position In recognition of the recommendations by clinical experts and opinion leaders, professional organizations and national societies, CorHealth Ontario supports the identification of Transesophageal Echocardiography as an Aerosol Generating Medical Procedure.

Background

Echocardiography is an important cardiac imaging modality that cardiac specialists use to assess and help manage patients with cardiovascular disease. Transesophageal Echocardiography (TEE) is a procedure that is used to visualize the structure of the heart, including heart valves that cannot be adequately visualized using traditional transthoracic modalities.

The procedure is performed while the patient is awake, using conscious sedation (versus a general anesthetic) to help them relax. The physician is required to directly visualize of the patient's anatomy to ensure the TEE probe is positioned correctly into the esophagus while avoiding the trachea. Despite extreme care when ensuring the critical placement of the probe and minimizing patient discomfort, it is not uncommon for patients to experience coughing or gagging and there is a risk of inadvertent endotracheal intubation or extensive coughing that requires suctioning of the oropharynx during the procedure.

Rationale

The opinion from multiple national and provincial experts and organizations indicate that a TEE should be considered an Aerosol Generating Medical Procedure (AGMP). CorHealth Ontario has engaged with key stakeholders to provide direction to enable a consistent approach for the necessary IPAC for TEE procedures in Ontario during the COVID-19 pandemic.

The following documents support the designation of TEE as an AGMP:

1. Canadian Society of Echocardiography. *Practice of Echocardiography During the COVID-19 Pandemic: Guidance from the Canadian Society of Echocardiography*. March 30, 2020. http://csecho.ca/2020/03/30/practice-of-echocardiography-during-the-covid-19-pandemic-guidance-from-the-canadian-society-of-echocardiography/

2. American Society of Echocardiography. ASE Statement on the Reintroduction of Echocardiography Services During the COVID-19 Pandemic. May 13, 2020. https://www.asecho.org/wp-content/uploads/2020/05/ASE-Reintro-Statement-FINAL.pdf

3. Zayas G., Chiang M.C., Wong E., MacDonald F., Lange C.F., Senthilselvans A., King M. Cough aerosol in health participants: fundamental knowledge to optimize droplet-spread infectious respiratory disease management. BMC Pulmonary Medicine, 2012, 12:11. https://bmcpulmmed.biomedcentral.com/articles/10.1186/1471-2466-12-11