

## Tips, pitfalls and red flags for family physicians caring for patients with cardiovascular disease during the COVID-19 pandemic

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### Telehealth first

Substitute a telehealth visit for a routine, in-person medical visit. This limits possible contact with others who may have the virus.



Hearing loss, language barriers and difficulty obtaining a medication history may present challenges for telephone communication, particularly with the elderly. Instructions by phone still may not be understood. Consider mailing written instructions to these patients to avoid confusion or misinterpretation.

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### Heart failure patients

Do not discontinue ACEI/ARB/Entresto in patients with heart failure in order to reduce the risk of contracting COVID-19, nor in people with confirmed/suspected COVID-19. There is no evidence to support this and doing so may lead to worsening heart failure. [See the CCS RRT document on COVID-19 and cardiovascular medications.](#)

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Telehealth follow-up is helpful to prevent or recognize decompensation in heart failure patients. Ask patients to monitor their weight and to adjust diuretics if they experience weight gain of 2-4 lbs. (1-2 kg), increasing edema or congestion.



Patients may contract COVID-19 mimicking symptoms of CHF and may need COVID-19 screening and a chest X-ray. Biomarkers (NT-BNP/BNP) are not always helpful to differentiate COVID-19 infection from CHF. [See the CCS RRT document on heart failure vs. COVID-19.](#)

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### Acute coronary syndromes

Patients are staying home and not presenting to the emergency room (ER) with acute chest pain or subsequent complications of ischemic events during the COVID-19 crisis — although the risk of avoiding medical attention including the ER is likely greater than the risk of contracting COVID-19. Patients may be more likely to communicate with their primary care physician about acute symptoms. Encourage patients to present to the ER if they exhibit concerning symptoms or signs.

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### Chronic chest pain syndromes

Patients with stable chest pain with a moderate to high probability of obstructive coronary disease may benefit from a functional or anatomic test for diagnosis and prognosis (exercise treadmill test, nuclear stress test, or coronary CT angiography). Consider referral to Cardiology prior to initiating testing to determine the highest-yield test and to minimize unnecessary testing.

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### Arrhythmias

Consider using personal devices such as smartwatches or consumer-directed ECG recording devices to investigate and manage palpitations and atrial fibrillation, rather than using ambulatory monitoring (i.e. Holter, event recorder).



The personal device diagnosis may not be correct in heart rate or arrhythmia due to technically poor tracings, contributing to patient anxiety. Patients can transmit recorded arrhythmia to their physician and use phone management. This will require a referring physician to review and potentially request advice from a cardiovascular specialist.



Do not initiate anticoagulation based on device-detected probable or even likely atrial fibrillation in the absence of known atrial fibrillation. Strongly consider referring to Cardiology to determine if the patient should be initiated on anticoagulation for stroke prophylaxis, particularly if the patient has a high CHADS score.

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There will likely be an increase in symptomatic palpitations (PACs/PVCs) and atrial fibrillation in patients with known arrhythmias and in de novo patients with the current stressors (isolation, excessive alcohol and caffeine intake, financial stressors). It may be necessary to adjust medications.



Consider referral to Cardiology before adjusting antiarrhythmic therapies (propafenone, flecainide, sotalol and amiodarone) due to potential risks affecting QT, bradyarrhythmias or pro-arrhythmia).

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### COVID treatment and cardiac risks

Unproven treatments with unclear efficacy that are being used or considered for COVID-19 mainly in hospitalized patients are potentially pro-arrhythmic, particularly if used in combination with known medications that prolong the QT interval, or in patients with risk factors for QT prolongation. The most commonly considered medications, hydroxychloroquine and azithromycin, both prolong the QT interval and are associated with a small but important risk of fatal arrhythmias. Guidance is summarized by the [Canadian Heart Rhythm Society](#). Consider referral to a cardiologist for review and recommendations.

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### Laboratory testing

Limit routine blood work unless absolutely necessary, particularly for the elderly and those in long-term care homes who are the most vulnerable high-risk population for increased morbidity/mortality. Consider using an extramural service to perform blood work at home or in a long-term care home. Be aware that standing laboratory testing is postponed at present and will need review once routine services resume.



The frail, the elderly and patients with advanced left ventricular dysfunction will require periodic assessment of routine laboratory testing including electrolytes and renal function, and adjustment of therapies for patients with heart failure. Without regular surveillance, these patients are at risk of severe metabolic derangement necessitating a potential hospitalization.

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### Anticoagulation

Consider switching patients from warfarin to a direct oral anticoagulant (DOAC - Rivaroxaban, Dabigatran, Apixaban and Edoxaban) to limit INR monitoring. Some provincial drug plans now cover DOAC prescriptions if appropriate forms are completed that include the term “COVID-19” as a qualifier.



Take renal function into consideration if switching to DOAC use (see the [CCS atrial fibrillation guidelines](#)). Avoid DOACs if creatinine clearance is <15 ml/min.



You **cannot** substitute a DOAC for warfarin in patients with a mechanical valve prosthesis. An alternative to warfarin in select patients with labile INRs is temporarily switching from warfarin to low molecular weight heparin injections to minimize repeated laboratory testing, provided the patient or their coverage plan can pay for it.

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### Patients awaiting cardiac procedures

Patients who have had cardiac procedures postponed (surgery, coronary or valvular intervention, ablation, pacemaker or ICD) require regular phone follow up by medically trained personnel. Give waitlisted patients the phone number of the specialty center that has postponed their procedure. It is reasonable to keep in contact with these patients by telephone every 4 weeks. Encourage patients to report any escalation of symptoms to their family physician and cardiovascular specialist. Refer to the CCS RRT [guidance on waitlist management](#)



Patients awaiting surgical or catheter intervention for severe aortic stenosis are a particularly high-risk group for acute heart failure and sudden death and require regular phone follow up (2-4 weeks). If symptoms worsen, refer urgently to their cardiovascular specialist.

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## Prescriptions

For patients who have a 30-day restriction on prescriptions for their cardiac medications, ensure regular renewal by automatically renewing with their pharmacy. Use fax, electronic or call-in prescriptions to minimize in-person interactions with the pharmacy.

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## Cardiac medications during intercurrent illness

Patients who develop intercurrent gastrointestinal illness may need their medications adjusted. See the SADMANS table of recommendations (below). Note that sacubitril-valsartan (Entresto) follows the same rules as ACE inhibitors/ARBs.

**SADMANS rules.** There are several classes of drugs that should be temporarily stopped in conditions that could lead to complications.

S	Sulfonylureas	May increase the risk of hypoglycaemia, especially if dietary intake is reduced
A	ACE inhibitors	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing acute kidney injury due to reduced renal efferent vasoconstriction
D	Diuretics	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing acute kidney injury
M	Metformin	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing lactic acidosis
A	ARBs	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing acute kidney injury
N	NSAIDs	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing acute kidney injury due to reduced renal efferent vasoconstriction
S	SGLT2 inhibitors	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing euglycaemic diabetic ketoacidosis

ACE=angiotensin-converting enzyme; ARB = angiotensin receptor blocker; NSAID = non-steroidal anti-inflammatory drug; SGLT2 = sodium-glucose cotransporter 2

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## Assessing outpatient cardiology care

Many centers have established or recently initiated rapid access telephone consultation or clinics for urgent patient assessment. Access these resources for telephone, online or in-person consultation when patients report concerning cardiac symptoms

### Additional resources:

[Canadian Medical Association's telehealth guidance](#)

[SADMANS medication instructions during intercurrent illness](#)