Rapid recommendations

Updates from 2022 guidelines: part 1

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Staying current with evolving guideline evidence is crucial in medicine, yet the sheer volume of lengthy articles being published can make this challenging. This article is the first in a 3-part series summarizing clinical guideline recommendations updated in 2022 that are relevant to primary care in Canada. As always, family physicians are advised to appraise the recommendations before considering implementation, as some may be based on low-quality evidence or expert opinion.

Guideline updates

The Canadian Cardiovascular Society (CCS) and Canadian Pediatric Cardiology Association issued new guidelines recommending universal screening for dyslipidemia in children aged 2 to 10 (expert opinion).[1] This guideline was developed based on the prevalence of familial hyperlipidemia (approximately 1 in 300 Canadians), ease of detection, and availability of effective management options. Furthermore, the American College of Cardiology (ACC) and American Heart Association (AHA) 2018 guideline also recognizes the importance of pediatric lipid screening; according to this guideline, children with a family history of early cardiovascular (CV) disease or hypercholesterolemia should be screened between the ages of 2 and 10, and it may be reasonable to screen children without CV risk factors or family history of CV disease once between the ages of 9 and 11 and again between the ages of 17 and 21 (class 2a recommendation, level B evidence).[2] The CCS and Canadian Pediatric Cardiology Association guideline recommends assessing patients for secondary causes of dyslipidemia and repeating fasting lipid screening in 2 to 12 weeks if initial laboratory results are abnormal. Initial treatment focuses on health behaviour modifications, including diet and exercise. Referral to a specialized lipid clinic is recommended if low-density lipoprotein cholesterol (LDL-C) levels are greater than or equal to 4.1 mmol/L, triglyceride levels are greater than or equal to 5.5 mmol/L, or risk factors are present. Statin therapy can be considered starting at age 8, depending on LDL-C levels and risk factor severity, with an LDL-C target of less than 2.6 mmol/L for patients at high risk or 3.4 mmol/L for patients at moderate risk.

The ACC, AHA, and Heart Failure Society of America recommend treatment for pre–heart failure (HF) in patients who are asymptomatic with structural changes or have risk factors for HF with elevated levels of B-type natriuretic peptides.[3] This 2022 guideline recommends the use of angiotensin-converting enzyme inhibitors (ACEIs) (class 1 recommendation, level A evidence) and β-blockers (class 1 recommendation, level C evidence) for patients with left ventricular ejection fraction (LVEF) less than or equal to 40% to prevent symptomatic HF and reduce mortality.

The ACC and AHA and the CCS recommend consideration of sodium-glucose cotransporter-2 inhibitors (SGLT2Is) to reduce risks of hospitalization and cardiac death in patients with HF, including those with HF with mildly reduced ejection fraction (LVEF 41% to 49%), HF with improved ejection fraction (LVEF previously ≤40% but now >40%), or HF with preserved ejection fraction (HFpEF; LVEF >50%) (class 2a recommendation).[3,4] The EMPEROR-Preserved (Empagliflozin Outcome Trial in Patients with Chronic Heart Failure with Preserved Ejection Fraction) study demonstrated a reduction in rates of hospitalization and CV death but not in all-cause mortality in patients taking empagliflozin with symptomatic HF and LVEF greater than 40%.[3] The ACC and AHA continue to recommend guideline-directed medical therapy, including the use of ACEIs, β-blockers, and mineralocorticoid receptor antagonists (MRAs) for patients with HF with improved ejection fraction and consideration of the same for patients with HF with mildly reduced ejection fraction.[3] In patients with HFpEF, consider an MRA if the serum potassium level is less than 5.0 mmol/L and estimated glomerular filtration rate (eGFR) is greater than 30 mL/min/1.73 m^2 to improve diastolic function and quality of life and decrease the risk of hospitalization. Additionally, in a post hoc group analysis, there appeared to be a possible benefit of angiotensin receptor–neprilysin inhibitor in women with HFpEF with LVEF close to 50%.[3]

American Diabetes Association guidelines recommend the use of SGLT2Is or glucagonlike peptide 1 receptor agonists with or without metformin as initial agents for the treatment of hyperglycemia in patients with diabetes and cardiorenal risk factors or disease independent of hemoglobin A_{1c} (grade A recommendation).[5,6] The authors suggest an SGLT2I for patients with HF or chronic kidney disease (CKD) and either glucagonlike peptide 1 receptor agonists or SGLT2Is for indicators of or established atherosclerotic CV disease. The overall recommendation is to include agents that reduce cardiorenal risks for adults with type 2 diabetes

who are at high risk of these conditions. Although the Kidney Disease: Improving Global Outcomes (KDIGO) organization continues to recommend metformin as first-line therapy,[7] these authors recommend an SGLT2I for patients with diabetes and CKD regardless of glycemia. The KDIGO guidelines recognize that in trials with SGLT2Is, most patients were first treated with metformin, but if a patient is intolerant of metformin or if a pharmacologic agent for glycemic control is not needed, an SGLT2I alone is reasonable.

The KDIGO guidelines recommend a nonsteroidal MRA for patients with type 2 diabetes, normal serum potassium levels, and persistent albuminuria despite maximally tolerated first-line treatment (grade 2A recommendation).[7] The guideline reminds readers that renin-angiotensin system inhibitors such as ACEIs are first-line treatments for albuminuria in patients with or without hypertension. Finerenone (a nonsteroidal MRA) can be added to both a renin-angiotensin system inhibitor and an SGLT2I and has benefits for both renal and CV systems. It can be used for patients with eGFR greater than 25 mL/min/1.73 m^2 and serum potassium levels less than or equal to 4.8 mmol/L. However, a steroidal MRA should be considered for patients with refractory hypertension, HF, or hyperaldosteronism.

The CCS and the UK Kidney Association recommend an SGLT2I for the treatment of CKD in patients with urine albumin-creatinine ratios greater than 20 to 25 mg/mmol and eGFR greater than or equal to 25 mL/min/1.73 m^2 (strong recommendation, moderate-quality evidence).[4,8] Evidence from the DAPA-CKD (Dapagliflozin and Prevention of Adverse Outcomes in Chronic Kidney Disease) trial demonstrated benefits in preventing kidney disease progression. The DAPA-CKD study excluded patients with type 1 diabetes, kidney transplants, polycystic kidney disease, lupus nephritis, or antineutrophilic cytoplasmic antibody–associated vasculitis and those who had received immunotherapy for renal disease in the 6 months before enrolment; therefore, this recommendation does not apply to these patients.[9] The authors recommend continuing treatment until kidney disease progresses to the point that patients need dialysis or transplant.[8]

Conclusion

This article summarizing guideline updates in cardiac care, diabetes management, and renal disease is part 1 in a series of articles summarizing guideline updates from 2022. Family physicians can advance their knowledge or confirm their current practices by evaluating and exploring these guideline updates.

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Competing interests
None declared

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