Rapid recommendations

Updates from 2019 guidelines: part 1

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Although medical research is being published at a rapid rate, our patients lose the benefit from these novel discoveries when we are unable to implement them in clinical practice. One of the roadblocks to translating new guideline recommendations into practice is not having the salient take-home points easily accessible. This article is a summary of guideline recommendations updated in 2019 that are meaningful to primary care practice. This article is meant to highlight relevant changes and encourage family physicians to explore topics they are interested in or knowledge gaps they might have. As many of these recommendations are cutting edge, the statements are often conditional recommendations and based on low-quality evidence and therefore should be critically appraised before considering their implementation into practice.

Guideline updates

The Canadian Cardiovascular Society recommends using a Canadian definition in the diagnosis of familial hypercholesterolemia (FH).[1] Consider a diagnosis of FH if the low-density lipoprotein cholesterol (LDL-C) level is 5.0 mmol/L or higher in patients 40 years of age and older (≥4.5 mmol/L in those 18 to 39 years of age or ≥4.0 mmol/L in those younger than 18 years). Once secondary causes of elevated LDL-C levels have been ruled out, provide a definite FH diagnosis if a patient has a known DNA mutation, tendon xanthomas, or an LDL-C level of 8.5 mmol/L or higher. Provide a probable FH diagnosis if a patient has a first-degree relative with an elevated LDL-C level or early atherosclerotic cardiovascular disease. Otherwise, the diagnosis is severe hypercholesterolemia. Although the new diagnostic criteria proposed by FH Canada highly agree with the Dutch Lipid Clinic Network and Simon Broome Registry criteria, they have not yet been validated.

The American Heart Association recommends that either amiodarone or lidocaine be considered for ventricular fibrillation or pulseless ventricular tachycardia that is unresponsive to defibrillation (class of recommendation IIb, level of evidence B-R) (weak recommendation, moderate-quality evidence from randomized controlled trials [RCTs]).[2] The addition of lidocaine to the advanced cardiovascular life support algorithm comes from evidence showing equal survival between those given lidocaine and amiodarone and superiority of both to placebo, with end points of return of spontaneous circulation and survival to hospital admission and discharge. Of note, these studies were out-of-hospital RCTs; there were no RCTs for in-hospital cardiac arrests.

The Canadian Thoracic Society (CTS) has recategorized patients within the pharmacotherapy algorithm from having infrequent or frequent (severe) acute exacerbations of chronic obstructive pulmonary disease (AECOPD) to being at low risk or high risk of AECOPD.[3] Previously, patients defined as having frequent AECOPD had 2 or more events requiring antibiotics or oral corticosteroids in the past 2 years or 1 event requiring hospitalization.[4] The update redefines patients as being at low or high risk of AECOPD, where high-risk patients have had 2 or more moderate AECOPD (requiring an antibiotic or oral corticosteroid) or 1 or more severe AECOPD (requiring hospital admission or an emergency department visit) in the past year. Although the descriptors are similar, the time frame was reduced from 2 years to 1 year.

The CTS has incorporated blood eosinophil level as a consideration when determining which inhaled therapy to use.[3] Patients at high risk of AECOPD with a high blood eosinophil level (ie, ≥300/μL) should consider combination inhaled corticosteroid (ICS) and long-acting β_2-agonist (LABA) therapy instead of combination long-acting muscarinic antagonist (LAMA) and LABA therapy. Correspondingly, a low blood eosinophil level (<100/μL) predicts a lower or no response to regimens containing an ICS. This is emerging evidence and has not been tested in an RCT. Consider triple therapy (LAMA-LABA-ICS) for patients with ongoing exacerbations who are taking dual therapy (LAMA-LABA), especially those with high blood eosinophil levels.[5]

The CTS no longer suggests the use of theophylline to prevent AECOPD in patients who are taking optimal inhaled therapies (grade 2B) (weak recommendation, moderate-quality evidence).[3] Theophylline has insufficient evidence to support its use for symptom management such as reducing dyspnea and improving exercise tolerance and health status (grade 2C). In contrast, the use of oral *N*-acetylcysteine for chronic bronchitis in patients who are at high risk of AECOPD has been upgraded from *suggested* to *recommended* (grade 1B).

In patients with community-acquired pneumonia (CAP), the American Thoracic Society (ATS) and the Infectious Diseases Society of America (IDSA) recommend using the Pneumonia Severity Index (PSI) as a

clinical prediction rule over the CURB-65 (confusion, urea nitrogen level, respiratory rate, blood pressure, age ≥65 years) score to determine the need for hospitalization (strong recommendation, moderate-quality evidence).[6] The PSI has higher discriminatory power and classifies more patients as low risk; when the PSI is used, low-risk patients have a lower mortality rate and high-risk patients have a higher 30-day mortality rate.[7] Although the CURB-65 only requires 1 laboratory investigation while the PSI requires 7, about 20% of outpatients will be in PSI risk class I and can be identified without any laboratory investigations.

The ATS and IDSA have de-emphasized macrolides in CAP treatment from* strong *to* conditional *in adult outpatients without comorbidities (conditional recommendation, moderate-quality evidence).[6] Some studies show macrolide treatment failure and a rise of macrolide resistance rates of more than 30%. Monotherapy with macrolides is an option when amoxicillin or doxycycline are contraindicated and local macrolide resistance rates are low (<25%). Only treat *Pseudomonas aeruginosa* or methicillin-resistant *Staphylococcus aureus* infections empirically if there are locally validated risk factors. The category *health care–associated pneumonia* should no longer be used.

The ATS and IDSA recommend not routinely obtaining a follow-up chest x-ray scan in adults with CAP whose symptoms have resolved within 7 days (conditional recommendation, low-quality evidence).[6] Between 1.3% and 4% of adults recovering from CAP might have an underlying malignancy. However, studies show that almost all of them are smokers or ex-smokers and most would meet criteria for lung cancer screening as recommended by the US Preventive Services Task Force and the Canadian Task Force on Preventive Health Care.[8,9]

In patients with unexplained symptoms and an initial chest x-ray scan showing consolidation or unexplained pleural effusion, Cancer Care Ontario recommends a follow-up chest x-ray scan to confirm complete resolution in 4 weeks instead of 6 (expert opinion).[10] This pertains specifically to patients who underwent an initial chest x-ray scan for concerning signs and symptoms (eg, hemoptysis; new finger clubbing; suspicious lymphadenopathy; dysphagia; unexplained cough, weight loss, or shortness of breath) or patients with an underlying chronic respiratory problem with unexplained changes in symptoms.

Cancer Care Ontario recommends that average-risk patients with a low-risk adenoma on initial colonoscopy should return to the average-risk screening strategy of fecal immunochemical testing every 2 years starting 5 years after colonoscopy.[11] A low-risk adenoma is defined as 2 or fewer tubular adenomas 10 mm or smaller without high-grade dysplasia. This conflicts with the 2013 Canadian Association of Gastroenterology (CAG) recommendations of surveillance colonoscopy in 5 to 10 years.[12] Recent literature found these patients were at a similar risk of colorectal cancer as those with normal colonoscopy findings and were at a lower risk than the general population is.

The CAG guideline suggests patients with suspected irritable bowel syndrome (IBS) have celiac disease serology testing (conditional recommendation, low-quality evidence).[13] Patients with IBS have an increased likelihood of having celiac disease (odds ratio of 2.94). Symptoms suggestive of celiac disease, such as diarrhea-predominant IBS (IBS-D) (ie, loose stools >25% of the time and hard stool <25% of the time), should prompt testing. This guideline recommends against routine measurement of C-reactive protein and fecal calprotectin levels, food allergy tests, and lactose hydrogen and glucose hydrogen breath tests. In contrast, the 2019 American Gastroenterology Association guideline recommends measurement of fecal calprotectin levels, testing for *Giardia* species, and measurement of bile acid levels in addition to celiac serology testing.[14]

The CAG guideline recommends a colonoscopy for patients 50 years of age and older with new-onset IBS symptoms (strong recommendation, low-quality evidence).[13] New-onset IBS symptoms are less common in patients 50 years of age and older (odds ratio of 0.75). This recommendation focuses on opportunistic routine colorectal cancer screening in average-risk patients (ie, all patients ≥50 years old) and recommends informed decision making including preferences for colonoscopy or fecal immunochemical testing.

The CAG guideline recommends against routine colonoscopy in patients younger than 50 years of age with suspected IBS regardless of alarm features (strong recommendation without features, conditional recommendation with features).[15] Alarm symptoms such as vomiting, weight loss, gastrointestinal bleeding, anemia, and dysphagia are associated with increased prevalence of organic disease (eg, Crohn disease, celiac disease, microscopic colitis). However, studies in IBS patients found only abdominal mass and dark red rectal bleeding were associated with colorectal cancer. Nevertheless, this recommendation is expressly for routine colonoscopy. Clinical judgment is crucial and colonoscopy might be warranted if there is a combination of or severe alarm features.

The CAG suggests eluxadoline as a treatment option for patients with IBS-D symptoms (conditional recommendation, moderate-quality evidence).[13] Owing to safety concerns and considerable contraindications (eg, chronic or severe constipation), an assessment by

a gastroenterologist is recommended before prescribing. This guideline supports the use of soluble fibre, antispasmodics, peppermint oil, and cognitive-behavioural therapy for all types of IBS patients; a low FODMAP (fermentable oligo-di-monosaccharides and polyols) diet and tricyclic antidepressants for IBS-D; and selective serotonin reuptake inhibitors, linaclotide, and lubiprostone for constipation-predominant IBS. The guideline discourages gluten-free diets, wheat bran supplementation, acupuncture, cholestyramine, and continuous loperamide. Osmotic laxatives should only be used as an adjunct and not to improve overall IBS symptoms.[15,16]

Conclusion

This article is part 1 of 2 in a series that summarizes guideline updates in cardiac care, respiratory medicine, and gastroenterology. Family physicians are encouraged to appraise these recommendations and explore these updates to further their knowledge or confirm their current clinical practice.

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Competing interests
None declared

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