Rapid recommendations

Updates from 2020 guidelines: part 2

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Continuing professional development is an essential component of a career in medicine, but keeping up with the growing volume of medical literature can be overwhelming. This article is the second part of a 3-part series[1] summarizing guideline updates from 2020. This synopsis is meant to highlight changes in recommendations and encourage clinicians to explore topics of interest more fully. Readers should note that many of these updates are based on low-quality evidence or expert opinion and should be considered through a primary care lens before integrating them into practice.

Guideline updates

The European Society of Cardiology and the European Respiratory Society recommend using an age-adjusted threshold for serum D-dimer levels when assessing patients for pulmonary embolism (class of recommendation IIa, level of evidence B).[2] D-dimer specificity decreases with age. Using an age-adjusted D-dimer cutoff value improves specificity without sacrificing sensitivity. To rule out pulmonary embolism in patients who are 50 years or older, use a threshold below the patient's age multiplied by 10 (eg, if the patient is 68, a negative D-dimer test result is less than 680 µg/L). For patients younger than 50 years old, use the conventional threshold of 500 µg/L. This approach is supported by Thrombosis Canada but should be used only if pulmonary embolism is unlikely (ie, a Wells score less than 4.5).[3]

The American Thoracic Society recommends varenicline over nicotine patches (strong recommendation, moderate certainty), bupropion (strong recommendation, moderate certainty), and electronic cigarettes (conditional recommendation, very low certainty) as first-line treatment for adults with tobacco dependency.[4] In most trials, patients taking varenicline reported higher abstinence rates and experienced little to no differences in adverse events. The combination of varenicline and nicotine patches was superior to varenicline alone. In patients with comorbid psychiatric conditions, the guideline's authors recommend varenicline over nicotine patches. Varenicline can be started before tobacco discontinuation to help promote abstinence. The authors also recommend an extended duration of 12 weeks or more over a standard course of 6 to 12 weeks.

The National Heart, Lung, and Blood Advisory Council recommends that patients 4 years and older with moderate to severe asthma be treated with a single inhaler combining an inhaled corticosteroid (ICS) and the long-acting β_2-agonist formoterol as both controller and reliever therapy (strong recommendation for patients between 4 and 11 years old; conditional recommendation for those 12 years and older).[5,6] Most studies have been done with budesonide-formoterol (Symbicort). The Council recommends 1 to 2 puffs once or twice a day for maintenance and then as needed, for a maximum formoterol dose of 8 puffs (36 mg) for patients 4 to 11 years old and 12 puffs (54 mg) for patients 12 years and older.[5] This regimen improves asthma control and quality of life and might reduce corticosteroid-associated harms.[5] As outlined in **Table 1**, for patients 5 to 11 years old, this guideline recommends add-on formoterol in step 3,[5] while the Canadian Thoracic Society 2017 position statement recommends increasing low doses of ICS to medium doses before adding on a long-acting β_2-agonist, which potentially exposes children to higher doses of ICS.[7] It is worth noting the Canadian monograph for Symbicort indicates that safety and efficacy have not been established in children younger than 12 years.[8] Add-on long-acting muscarinic antagonists can be prescribed to patients 12 years and older whose asthma is uncontrolled despite treatment with ICS-formoterol.

A practice parameter update developed by a joint task force of experts provides medication algorithms for allergic and nonallergic rhinitis in patients 12 years or older.[9] Mild symptoms can be defined as those that do not affect the patient's quality of life or that the patient rates as less than 5 out of 10 on a visual analogue scale; moderate or severe symptoms affect the patient's quality of life or are rated on the visual analogue scale as 5 out of 10 or greater. Intermittent symptoms occur fewer than 4 days per week or fewer than 4 consecutive weeks per year, while persistent symptoms occur 4 or more days per week and more than 4 consecutive weeks per year. The treatments described in **Figure 1** can be used in conjunction with nasal saline as needed. If the initial presentation is severe, consider a course of oral corticosteroids for 5 to 7 days.

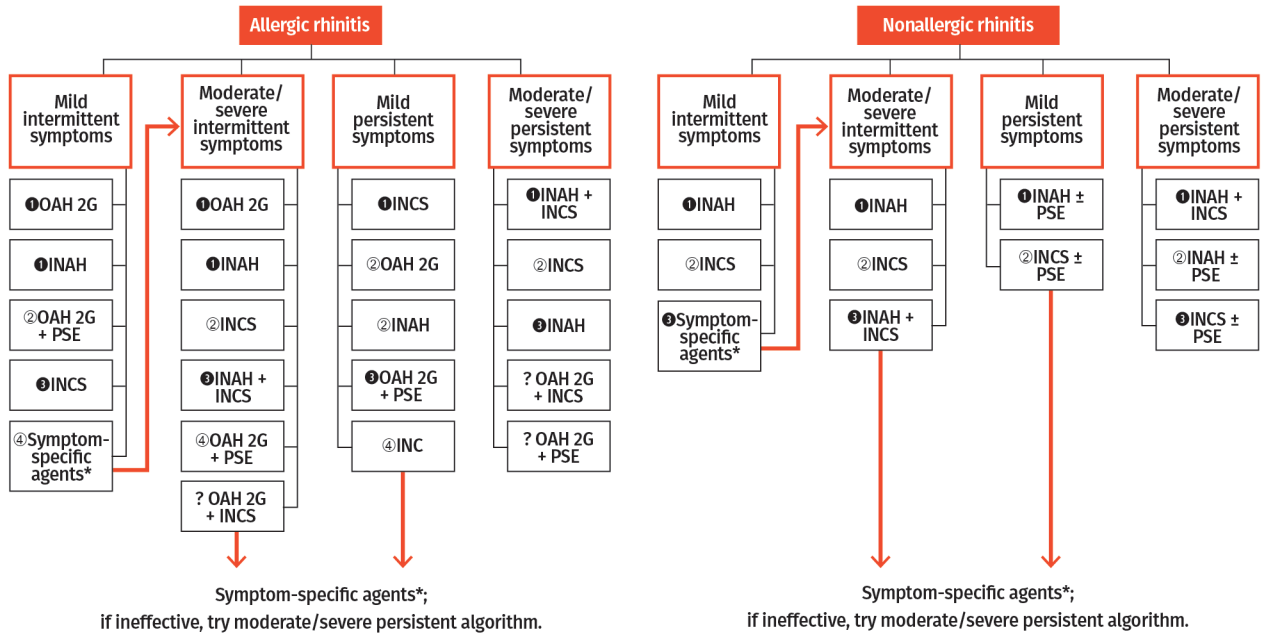
A practice parameter update developed by a joint task force of experts recommends against the use of glucocorticoids or antihistamines to prevent biphasic anaphylaxis (conditional recommendation, very low certainty of evidence).[10] Studies have not shown clear benefit, with confidence intervals crossing 1. Patients are considered at high risk of a biphasic reaction if they require more than

Table 1. Asthma treatment recommendations

AGE GROUP, Y	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Ages 0-4	PRN SABA	Daily low-dose ICS and PRN SABA	Daily low-dose ICS-LABA and PRN SABA	Daily medium-dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA plus oral systemic corticosteroid and PRN SABA
Ages 5-11			Daily and PRN combination low-dose ICS-formoterol	Daily and PRN combination medium-dose ICS-formoterol	Daily medium-high dose ICS-LABA plus LABA and PRN SABA	
Ages ≥ 12						

ICS—inhaled corticosteroid, LABA—long-acting β_2-agonist, PRN—as needed, SABA—inhaled short-acting β_2-agonist.
Step up if the patient has uncontrolled symptoms and reassess every 2 to 6 wk. Step down if symptoms are well controlled for a minimum of 3 consecutive mo. Note that the Canadian monograph for Symbicort indicates that safety and efficacy have not been established in children younger than 12 y.[8]

Figure 1. Medication algorithms for allergic and nonallergic rhinitis in patients



?—no recommendation for or against; INAH—intranasal antihistamine (maximum 4 consecutive wk because of the risk of rebound); INC—intranasal cromolyn; INCS—intranasal corticosteroids; OAH 2G—oral antihistamine, second generation (do not combine with INCS); PSE—pseudoephedrine.
*If the treatments above fail or if nasal edema prevents the delivery of intranasal agents, add or change to symptom-specific agents, as follows: For anterior rhinorrhea—intranasal anticholinergic medication, intranasal ipratropium spray (in nonallergic rhinitis). For nasal congestions or significant edema—intranasal decongestant (maximum 5 consecutive d but can add INCS if using for more than 5 d) or oral pseudoephedrine. If these are ineffective and there is significant edema, consider 5 to 7 d of oral corticosteroids.

Adapted from Cloutier et al.[5]

1 dose of epinephrine for initial treatment. These patients require extended clinical observation. The authors recommend considering glucocorticoids or antihistamines for secondary treatment of anaphylaxis.

A consensus statement from 10 societies including the American Academy of Neurology, the European Academy of Neurology, and the European Geriatric Medicine Society have recommended avoiding terms such as altered mental status, acute brain failure, ***and*** acute confusional state.[11] These terms may have relevance in education but should not be used in clinical or research practices. Use the term *delirium* for a clinical presentation as defined in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, and use *subsyndromal delirium* for acute cognitive changes consistent with delirium that do not fulfill all criteria. The term *coma* can be used for a patient with depressed responsiveness and severely decreased Glasgow Coma Scale score. Finally, use *acute encephalopathy* to describe the rapidly developing process in the brain that can lead to a clinical presentation of subsyndromal delirium, delirium, or coma.

The authors of the Fifth Canadian Consensus Conference on the Diagnosis and Treatment of Dementia (CCCDTD5) recommend considering acetylsalicylic acid for patients with mild cognitive impairment or dementia with covert brain infarcts on neuroimaging without a history of stroke (grade 2C evidence).[12] The benefit of using acetylsalicylic acid is unclear, as it is unknown whether it prevents new or recurrent covert infarcts or vascular cognitive impairment.[13] This recommendation is not for covert white matter lesions without a history of stroke or brain infarcts. The authors also gave a weak recommendation to consider intensive blood pressure lowering in middle-aged adults with vascular risk factors to decrease the risk of mild cognitive impairment (grade 2C evidence).

The CCCDTD5 recommends anatomical neuroimaging (with a preference for magnetic resonance imaging) in most situations when investigating cognitive impairment (grade 1C evidence).[14] Magnetic resonance imaging has a higher sensitivity to vascular lesions than noncontrast computed tomography (grade 2C evidence). Neuroimaging is recommended for any of the following: onset in the past 2 years, unexpected decline in a patient with known dementia, recent and clinically significant head trauma, unexplained neurological symptoms, history of cancer, risk factors for intracranial hemorrhage, symptoms of normal pressure hydrocephalus, or considerable vascular risk factors. There is no longer a recommendation to perform imaging for all patients younger than 60 years, as this age threshold was arbitrary.

The CCCDTD5 recommends testing gait speed (grade 1B evidence), frailty (grade 1B evidence), neuropsychiatric symptoms (grade 1B evidence), sleep history (grade 1A evidence), and hearing (grade 1B evidence) in patients with concerns of cognitive impairment.[15] A gait speed of less than 0.8 m/s is associated with a 94% increase in short-term risk of dementia. Several meta-analyses also identified the frailty index and the frailty phenotype as predictors of dementia when combined with cognitive impairment (hazard ratio of 5.36). In addition, neuropsychiatric symptoms such as low mood, disturbed sleep, low appetite, and personality changes are associated with a higher risk of conversion from mild cognitive impairment to dementia and can be assessed using tools such as the Neuropsychiatric Inventory or the Mild Behavioral Impairment Checklist. Finally, midlife hearing loss is one of the most easily modifiable risk factors for dementia (relative risk of 1.94), although there is no evidence that correcting hearing loss prevents cognitive impairment.[16]

The CCCDTD5 recommends discontinuing a cholinesterase inhibitor or memantine if the patient has been taking it for more than 12 months and there has been clinically significant worsening of the dementia over 6 months in the absence of other medical conditions or environmental factors (grade 1B evidence).[11] These drugs should also be discontinued if the patient has intolerable side effects or poor adherence or if the patient has severe or end-stage dementia. Cholinesterase inhibitors or memantine should not be discontinued until psychotic symptoms, agitation, or aggression have stabilized, unless symptoms are related to the medication (grade 2B evidence). Patients who have had improved neuropsychiatric symptoms with cognitive enhancers should continue taking them despite any cognitive or functional decline (grade 2B evidence).

Conclusion

This article is part 2 of a 3-part series[1] summarizing guideline updates in the areas of respiratory disease, allergies, and neurology. It is recommended that clinicians review and appraise these updates further to expand their knowledge or confirm current practice.

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Competing interests
None declared

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