11 Essential Guideline Updates
The American Academy of Neurology released its first clinical practice guidelines for the treatment of tics associated with Tourette syndrome and chronic tic disorders in May 2019. The guidelines, which are endorsed by the Child Neurology Society and the European Academy of Neurology, include 46 recommendations regarding the assessment and management of tics and feature an emphasis on behavioral interventions to help reduce the frequency and severity of tics.

Key Recommendations:

• Watchful waiting is an acceptable approach in patients who do not experience functional impairment from their tics.

• Clinicians may prescribe Comprehensive Behavioral Intervention for Tics (CBIT) as an alternate to watchful waiting if a patient does not experience functional impairment but is motivated to attempt treatment.

• Clinicians should refer patients to relevant psychoeducation resources.

• Clinicians should be aware that Tourette syndrome and tic disorders are often associated with comorbid psychiatric disorders; patients should be screened for and appropriately treated for attention deficit hyperactivity disorder, obsessive compulsive disorder, anxiety, depression, and oppositional deficit disorder if it is associated with functional impairment.

• CBIT, when accessible, should be prescribed as first-line intervention relative to other psychosocial or behavioral interventions or medication; CBIT may be delivered via telemedicine.

• As self-medication with cannabis for tics is widespread, clinicians must direct patients to appropriate medical supervision where regional legislation and resources allow.
Guidelines for the Acute Treatment and Prevention of Migraine in Children and Adolescents

In a joint effort, the American Academy of Neurology and the American Headache Society released updated practice guidelines for the treatment and prevention of migraine in pediatric patients. While the guidelines emphasize the importance of counseling on lifestyle and behavioral factors and early treatment, they do not address the use of anti-calcitonin gene-related peptide therapies or devices, as there is little efficacy data available in the pediatric population. The guidelines, which were last updated in 2004, are endorsed by the American Academy of Pediatrics and the Child Neurology Society.

Key Updates:

- Nonsteroidal anti-inflammatory drugs, such as ibuprofen or naproxen, can be offered in addition to triptans to patients who have an incomplete response to a triptan to improve migraine relief.

- Intranasal sumatriptan or zolmitriptan may be prescribed to patients who experience headache with rapid onset or peak, experience nausea or vomiting, or when oral formulations fail to provide pain relief.

- Amitriptyline in combination with cognitive behavioral therapy is more likely to reduce headache frequency and headache-related disability in patients with chronic migraine than amitriptyline plus headache education.
Guidelines for the Early Management of Acute Ischemic Stroke

The American Heart Association/American Stroke Association issued an update to their 2018 guidelines that clarify prior recommendations and take into account new clinical trial data. The updated guidelines offer comprehensive practice recommendations that cover symptom onset through poststroke care, including recommendations for prehospital care, urgent/emergency evaluation and treatment with intravenous and intra-arterial therapies, as well as secondary prevention measures.

Key Updates:

- Dysphasia screening is effective for identifying patients at high risk for aspiration.
- Intravenous aspirin should not be administered within 90 minutes of intravenous alteplase.
- Patients who experience noncardioembolic ischemic stroke should not be given triple antiplatelet therapy, such as aspirin, clopidogrel, and dipyridamole, for secondary prevention.
- Standard intravenous alteplase dosing at 0.9mg/kg per hour with 10% bolus per 1 minute is considered beneficial for those with wake-up stroke or those who have an unclear time of onset (>4.5 hours) and have a diffusion-weighted imaging lesion smaller than one-third of the middle cerebral artery territory without visible signal change on fluid-attenuated inversion recovery imaging.
- Tenecteplase is acceptable for treatment in patients who are ineligible for or who have contraindications to alteplase.
Guideline for the Treatment of Obstructive Sleep Apnea With Positive Airway Pressure

The American Academy of Sleep Medicine issued updates to a guideline for the use of positive airway pressure for the treatment of obstructive sleep apnea, to be used in conjunction with other Academy sleep guidelines for evaluating and treating sleep-disordered breathing. The guidelines update previous guidance issued in 2006 and 2008 and emphasize a more patient-centered approach to care.

Key Recommendations:

• Clinicians should prescribe positive airway pressure versus no therapy in patients with obstructive sleep apnea who experience excessive sleepiness.

• Positive airway pressure therapy should be initiated using either auto-adjusting positive airway pressure at home or in-laboratory positive airway pressure titration in adults with obstructive sleep apnea and no significant comorbidities.

• Continuous positive airway pressure or auto-adjusting positive airway pressure should be used for ongoing treatment of obstructive sleep apnea in adults.

• Initiation of positive airway pressure therapy should be accompanied by educational interventions.
Guideline on Vaccine-Preventable Infections and Immunization in Multiple Sclerosis

The American Academy of Neurology issued an update to the 2002 practice guidelines for immunizations in people with multiple sclerosis. The guidelines, which are endorsed by the Consortium of Multiple Sclerosis Centers and the Multiple Sclerosis Association of America, recommend that patients with multiple sclerosis receive recommended vaccines, including the annual influenza vaccine.

Key Recommendations:

• Clinicians should discuss patients’ opinions, preferences, and questions regarding immunizations and be prepared to address an optimal immunization strategy.

• Patients should follow all local vaccine standards unless there is a specific contraindication to immunization.

• Clinicians should recommend that patients receive the annual influenza vaccination unless there is a specific contraindication.

• Clinicians should counsel patients on infection risks associated with immunosuppressive or immunomodulatory therapies for multiple sclerosis, and should assess vaccination status before prescribing these therapies.

• Clinicians should screen for active or latent infections, including hepatitis and tuberculosis, prior to starting immunosuppressive or immunomodulatory therapies. Clinicians should consult with infectious disease specialists prior to initiating these therapies in patients who screen positive for infection.

• Vaccination should be delayed in patients experiencing a relapse.
Canadian Guideline for Parkinson Disease

The previous Canadian guideline for Parkinson disease, published in 2012, focused narrowly on the role of community pharmacists in assessment and management. The 2019 guidelines are more broad, intended for all healthcare providers as well as policy makers, funding bodies, and people with Parkinson disease and their families. The new guideline, like the old, includes sections on diagnosis and treatment, but it also includes new sections on communication, non motor features of Parkinson disease, and palliative care.

Key Changes:

- CT or MRI brain scanning should not be routinely used to diagnose Parkinson disease.
- Patients, especially young, who request genetic testing should be assessed by a movement disorders specialist.
- Impulse control disorders can develop on dopaminergic therapy at any stage in the disease but are more common in patients on dopamine agonists.
- Deep brain stimulation and gel infusion are now routinely used to manage motor symptoms.
- If the patient asks, the option of medical assistance in dying should be discussed.
Management of Pediatric Severe Traumatic Brain Injury

The third edition of the guidelines for the management of pediatric severe traumatic brain injury includes 22 recommendations, 9 of which are new or modified from the last set of guidelines issued in 2012. In addition, the committee issued a new algorithm for the management of first- and second-tier therapies. Because many gaps in knowledge remain that limit the translation of the guidelines to bedside management, the algorithm is meant to be a synthesis of evidence-based and consensus-based assistance to clinical decision-making.

New or Modified Recommendations:

- In comatose patients, excluding the possibility of elevated intracranial pressure (ICP) with CT examination is not suggested.
- Bolus hypertonic saline (3%) is recommended for patients with elevated ICP.
- Bolus hypertonic saline (23.4%) is suggested for patients with refractory ICP.
- When using multiple ICP treatments in the ICU, avoid bolus administration of midazolam or fentanyl during ICP crises.
- Consider prophylactic treatment to prevent early (within 7 days) postraumatic seizures.
- Prophylactic moderate hypothermia (32–33°C) is not recommended to improve overall outcomes.
- Moderate hypothermia (32–33°C) is suggested for ICP control.
- Initiation of enteral support within 72 hours is suggested to decrease mortality and improve outcomes.
- Corticosteroids are not suggested to improve outcomes or reduce ICP.
Mechanical Thrombectomy in Acute Ischemic Stroke (Europe)

The previous consensus statements on the treatment of acute ischemic stroke were made in 2014/2015 and 2016. Since that time, major scientific advances have been made, particularly in the treatment of patients in late time windows. The new recommendations cover both early and late time windows, encourage emergency imaging of all patients, encourage treatment even of patients over the age of 80, and discourage the use of clinical scales to triage patients before they reach the hospital.

Key Changes:

- In adults with anterior circulation large vessel occlusion-related acute ischemic stroke presenting between 6 and 24 hours, the panel recommends mechanical thrombectomy plus best medical management over best medical management alone.

- Patients should be treated with mechanical thrombectomy plus best medical management up to approximately 7 hours after stroke onset, without the need for perfusion imaging-based selection.

- In patients eligible for both treatments, the panel recommends intravenous thrombolysis plus mechanical thrombectomy over mechanical thrombectomy alone, and both treatments should be performed as early as possible. Mechanical thrombectomy should not prevent the initiation of intravenous thrombolysis, and intravenous thrombolysis should not delay mechanical thrombectomy.

- In the prehospital field, there is insufficient evidence to use a clinical scale in routine care to help triage potential thrombectomy candidates.

- All patients suspected of having an acute stroke, irrespective of the time of onset, should undergo emergency imaging of the brain, including vascular imaging.

- Even patients over 80 years of age should be treated with mechanical thrombectomy plus medical management, including intravenous thrombolysis, if indicated.

- The panel does not recommend an upper NIHSS score limit for decision-making on mechanical thrombectomy.
• In both the 0- to 6-hour and 6- to 24-hour time windows, the panel recommends mechanical thrombectomy plus best medical management (including intravenous thrombolysis whenever indicated) over best medical management alone in patients with large vessel occlusion-related anterior circulation stroke.

• Advanced imaging is not recommended for patients with anterior circulation large vessel occlusion-related acute ischemic stroke presenting from 0 to 6 hours. Advanced imaging is necessary for patients presenting beyond 6 hours.

• For adults with large vessel occlusion-related acute ischemic stroke, the panel recommends that interventionalists should attempt a TICI grade 3 reperfusion, if achievable with reasonable safety.
Cerebral Palsy in Adults (National Institute for Health and Care Excellence [NICE; United Kingdom])

In 2017, NICE published guidelines on the diagnosis and treatment of cerebral palsy in children and young adults up to the age of 25. With improved treatment, more people with cerebral palsy are living well into adulthood, and the new guideline is intended to address the needs of the adult population. The new guidelines provide recommendations on the treatment of spasticity, dystonia, bone and joint disorders, mental health problems, difficulties with eating, respiratory disorders, and pain.

Key Recommendations:

- Enteral baclofen should be considered as the first-line drug treatment for adults with cerebral palsy and generalized spasticity causing functional impairment, pain, or spasms. The initial dose should be low and should be increased gradually over 4 weeks.

- Do not offer diazepam for spasticity except in acute situations.

- Consider referring adults with cerebral palsy for botulinum toxin type A treatment if they have spasticity in a limited number of muscle groups that is affecting their care (such as hygiene or dressing), causing pain, or impairing activity and participation.

- The guidelines suggest procedures for considering continuous pump-administered intrathecal baclofen therapy or selective dorsal rhizotomy.

- For dystonia, levodopa should not be used except in rare situations. If dystonia does not improve with enteral anti dystonic drugs or botulinum toxin type A treatment, consider referring the patient to a specialized center experienced in using deep brain stimulation.

- Adults with cerebral palsy frequently experience osteoporosis and fractures secondary to osteoporosis. Refer these patients to a specialist orthopedic or musculoskeletal service if a bone or joint disorder is suspected and causing pain or affecting posture or function.

- Adults with cerebral palsy with severe spasticity and dyskinesia may have an increased metabolic rate and a higher risk of malnutrition. Consider referring these patients to a dietitian or a speech and language therapist.
Cerebral Palsy in Adults (National Institute for Health and Care Excellence [NICE; United Kingdom]) — continued

- To address respiratory disorders, which are common in this population, consider prophylactic treatments for respiratory infections, such as vaccinations, and consider non invasive ventilation first in the case of respiratory failure.

- Because adults with cerebral palsy may not be able to communicate that they are in pain, assess for the presence, location, and severity of pain, and ensure that healthcare professionals and families are trained in the use of pain assessment tools.
Motor Neuron Disease: Assessment and Management (NICE)

In July 2019, NICE made a single change to the 2016 guidelines on the assessment and management of motor neuron disease related to recommended symptomatic treatment.15

Key Change:

• The 2016 guidelines listed gabapentin as a possible first-line treatment for muscle stiffness and a third-line treatment for muscle cramps. In April 2019, the Medicines and Healthcare Products Regulatory Agency listed gabapentin as a controlled substance under the 1971 Misuse of Drugs Act, and in response, NICE added a footnote to its recommendations directing clinicians to evaluate patients for a history of drug abuse before prescribing gabapentin and to monitor patients for evidence of dependence or abuse.
The previous guideline on trigeminal neuralgia (TN) was published in 2008. Since then, there have been important changes in terminology and classification, with TN being divided into 3 etiological categories: idiopathic TN, classical TN, and secondary TN. In addition, there have been significant developments in diagnosis, clinical characteristics, imaging, and treatment which are covered in the updated guidelines.

**Key Recommendations:**

- Magnetic resonance imaging (MRI) is the first-choice tool for diagnosing secondary TN. If MRI is contraindicated or unavailable, testing of trigeminal reflexes can distinguish secondary TN from primary TN. Evoked potentials should not be used to identify secondary TN.

- Demonstration of neurovascular contact (NVC) should not be used to confirm the diagnosis of TN, but it may help to decide if and when patients should be referred for microvascular decompression (MVD).

- For long-term pain treatment, carbamazepine (200–1200 mg/d) or oxcarbazepine (300–1800 mg/d) are the most effective, but higher doses are sometimes needed.

- Medical management should be tried before offering surgery.

- MVD is preferred over gamma-knife surgery in patients with classical TN who are willing to undergo posterior fossa surgery. Neuroablative treatments are preferred if MRI does not demonstrate NVC.
References


