Migraine is underrecognized and undertreated. A recent study found that the one-year prevalence for migraine in the US was 11.7 percent, consistent with prevalence data over the last decade and a half. Migraine affects more than three-times as many women (17.1 percent) as men (5.6 percent). This same study showed that nearly one-third (31.3 percent) of migraineurs had three or more attacks per month.

The impact of migraine can be significant. The potential negative impact of migraine on quality of life and functioning has been well established. More than half of migraineurs (53.7 percent) have reported severe impairment or the need for bed rest as a result of headaches. In the US, migraine drives healthcare utilization. In one study, 13.9 percent of episodic migraine sufferers reported visiting a primary care physician for headache care in the preceding three months, while nearly twice as many (26.2 percent) chronic migraine sufferers had been to primary care. The quarterly costs of migraine management ranged from $383 (±$807) per patient for episodic to $1,036 (±$1334) per patient for chronic migraines.

Studies show that consistent use of preventive medications can reduce migraine frequency by more than half and reduce the severity of attacks. In addition to reducing pain and improving patients’ quality of life, effective management of migraine is expected to reduce healthcare utilization and contain costs. Yet, while 25.7 percent of
American migraineurs clearly meet criteria for preventive therapy and an additional 13.1 percent should be considered for prevention, only 13 percent report current use of daily preventive migraine medication.¹

Neurologists and other physicians who care for patients with migraine must be prepared to offer appropriate preventive treatments. In episodic migraine, specifically (characterized by 0-14 headache days per month, compared to 15 or more headache days per month in chronic migraine),⁴ clinicians should be ready to offer therapies with the greatest potential to reduce the frequency, severity, or duration of migraines for that particular patient. The newly published "Update: Pharmacologic Treatment for Episodic Migraine Prevention in Adults" and "Update: NSAIDs and Other Complementary Treatments for Episodic Migraine Prevention in Adults" offer updates to the 2000 guidelines for migraine prevention. The current guidelines, published in Neurology, were issued by the American Academy of Neurology and co-developed with the American Headache Society.

The focus on non-prescription and non-traditional interventions for migraine is especially important. Studies suggest that patients with migraine are more likely to use complementary and alternative therapies than those without headache.⁵ Although some clinicians are dismissive of complementary therapies, the comprehensive literature review undertaken for the guideline development shows that controlled trials have been conducted for some therapies. Furthermore, some of these trials show that these non-prescription agents may offer promise in the management of migraine. Those individuals interested in treatment alternatives can be directed to agents with evidence.

The current guidelines do not address the role of onabotulinumtoxinA for the management of episodic migraine. It should be noted, however, that guidelines specific to the role of BTX for episodic migraine are in development. Current guidance regarding the use of onabotulinumtoxinA for neurologic indications was published in 2008,⁶ before phase III trials investigating its use in chronic migraine were reported. OnabotulinumtoxinA was approved for the treatment of chronic migraine in 2010 based on the positive evidence from those trials.

Importantly, the new guidelines are intended, as their name suggests, to guide treatment decisions, not to outline a standard approach to patient care. In fact, no “standard approach” is possible. No regimen works in every patient. Treatment regimens must be designed on a case-by-case basis and may include the use of various agents in combination. Sometimes nontraditional approaches are appropriate. Patients must be involved in therapeutic decision-making, as they are equipped to help identify an optimal therapy—one that balances efficacy, adverse events, coexisting/comorbid conditions, and personal considerations.

Despite the existence of these guidelines and the wealth of data that they represent, I and my guideline co-authors note that sometimes trial and error remain necessary. Patients may be frustrated by their headaches and previous failed attempt at management, but they require a therapeutic approach that considers their previous experience and focuses on addressing their current needs.

OVERVIEW: CONCLUSIONS FROM THE PHARMACOLOGIC THERAPIES GUIDELINES⁷

Lisinopril and candesartan are possibly effective for migraine prevention (one Class II study each). Telmisartan is possibly ineffective for reducing the number of migraine days (one negative Class II study).

Divalproex sodium and sodium valproate are established as effective in migraine prevention (multiple Class I studies). Data are insufficient to determine the effectiveness of gabapentin (one Class III study). Lamotrigine is established as ineffective for migraine prevention (two Class I studies). Oxcarbazepine is possibly ineffective for migraine prevention (one Class II study). Topiramate is established as effective for migraine prevention (four Class I studies, multiple Class II studies; one negative Class II study). Topiramate is probably as effective for migraine prevention as propranolol (one Class I study), sodium valproate (one Class I study), and amitriptyline (two Class II studies).

There is conflicting Class II evidence for use of fluoxetine. Venlafaxine is probably effective for migraine prevention (one Class I study) and is possibly as effective as amitriptyline in migraine prevention (one Class II study). Amitriptyline is probably effective for migraine prevention (multiple Class II studies); it is probably as effective as topi-
Neurologists and other physicians who care for patients with migraine must be prepared to offer appropriate preventive treatments.

ramate (two Class II studies) and possibly as effective as venlafaxine (one Class II study) for migraine prevention.

Metoprolol is established as effective for migraine prevention (two Class I studies) and is possibly as effective as nebivolol or aspirin for migraine prevention (one Class II study each). Propranolol is established as effective for migraine prevention (multiple Class I studies) and is possibly as effective as cyproheptadine for migraine prevention (one Class II study).

Data from older studies regarding verapamil and nimodipine are insufficient when current AAN classification criteria are applied.

The efficacy of cyclandelate is unknown (conflicting Class II studies).

Frovatriptan is established as effective for the short-term prevention of MAMs (two Class I studies). Zolmitriptan and naratriptan are probably effective for the short-term prevention of MAMs (one Class I study each). The utility of these agents in receiving a separate indication for pure menstrual migraine is currently being deliberated by US regulatory authorities.

The efficacy of acetazolamide is unknown at this time (one Class II study terminated early).

CONCLUSIONS FROM THE NSAIDS AND COMPLEMENTARY THERAPY GUIDELINES

Histamine SC is established as probably effective (three Class II studies) for migraine prevention. Cyproheptadine is possibly effective for migraine prevention and possibly as effective as propranolol for migraine prevention (single Class II study). Montelukast is probably ineffective for migraine prevention (one Class I study).

The efficacy of aspirin for migraine prevention is unknown (conflicting Class II studies).

Petasites is established as effective for migraine prevention (two Class I studies).

Riboflavin is probably effective for migraine prevention (one Class I trial and one imprecise Class II study).

Co-Q10 is possibly effective for migraine prevention (one Class II study).

A combination of soy isoflavones (60mg), dong quai (100mg), and black cohosh (50mg) is possibly effective for migraine prevention (one Class II study). Percutaneous estradiol is possibly effective for migraine prevention (one Class II study); however, there is an increased risk of migraine recurring after estradiol patch discontinuation.

Magnesium is probably effective for migraine prevention (multiple Class II trials). MIG-99 (feverfew) is probably effective for migraine prevention (one Class I study, one positive Class II study, and one underpowered negative Class II study).

The efficacy of HBO for migraine prevention is unclear (one imprecise negative Class II study).

The efficacy of omega-3 for migraine prevention is unclear (one imprecise Class I study).

Dr. Silberstein is on the advisory panel of and receives honoraria from AGA, Allergan, Amgen, Capnia, Coherex, Colucid, Cydex, GlaxoSmithKline, Lilly, MAP, Medtronic, Merck, Minster, Neuralieve, NINDS, NuPath, Pfizer, St. Jude Medical, and Valeant. He is on the speakers’ bureau of and receives honoraria from Endo Pharmaceuticals, GlaxoSmithKline, and Merck. He serves as a consultant for and receives honoraria from Amgen and Novartis. His employer receives research support from AGA, Allergan, Boston Scientific, Capnia, Coherex, Endo Pharmaceuticals, GlaxoSmithKline, Lilly, MAP, Medtronic, Merck, NINDS, NuPath, St. Jude Medical, and Valeant Pharmaceuticals.

Stephen D. Silberstein, MD is Professor of Neurology and Director of the Jefferson Headache Center at Thomas Jefferson University. He is a Fellow of the American College of Physicians (ACP) and the American Headache Society (AHS), and the American Academy of Neurology (AAN).