

PROTOCOL

Towards a standardized process of onboarding advanced practice providers into headache medicine practices in the United States: Expert consensus from the American Headache Society practice management committee

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Abstract

Objectives: Discuss the current status of advanced practice providers (APPs) onboarding to headache medicine (HM) practices in the United States and present recommendations of the American Headache Society (AHS) APP Work Group to improve the onboarding process.

Background: A high demand for care, national shortage of specialists, and multiple advancements in HM have led to an increasing interest and presence of APPs of various backgrounds in the field, currently without a unifying onboarding process. Efforts to standardize and optimize the onboarding process for APPs in HM practices are necessary, to ensure high standards in quality of care.

Methods: The APP Work Group of the AHS Practice Management Committee developed comprehensive recommendations through literature review, survey of AHS members, and expert consensus. A modified Delphi protocol was used to establish key onboarding goals, definitions, and best practice recommendations.

Results: Recommendations are made regarding duration of onboarding, appropriate supervision, formal education and procedural skills, scope of practice, grading and documentation of competence, and reciprocal feedback.

Conclusion: Currently, there are no standard onboarding and training guidelines for APPs in the field of HM. We provide recommendations for a more systematic approach to help develop qualified providers and enhance their retention in HM practices.

Plain Language Summary

Across US healthcare systems, including headache medicine (HM), the role of advanced practice providers (APPs) is growing due to high demands for care. To achieve optimal headache care at the national level, an important step is streamlining onboarding and

training for APPs. In this protocol paper, the American Headache Society provides recommendations for the onboarding of APPs into HM, including onboarding processes, supervision, education, and scope of practice.

KEYWORDS

advanced practice providers, curriculum, headache medicine, onboarding, procedures, supervision

INTRODUCTION

A high demand for care coupled with a national shortage of specialists are realities in headache medicine (HM).¹⁻⁴ At the same time, advances in scientific knowledge and therapeutic interventions have made HM an attractive field for various types of health care providers. Notably, there has been a surge of advanced practice providers (APPs) in HM practices and professional organizations, like the AHS,⁵ indicating an increased desire of APPs to work with the headache patient population. The APPs represent approximately 15% of current AHS membership (approximately 2500 members, data on file), and this presence is expected to continue to grow, as in most specialties.⁶⁻⁸ The contribution of APPs to the success of HM practices can be very broad, including the enhancement of patient access, care delivery, and financial feasibility. APPs include nurse practitioners (NPs) and physician associates, and their scope of practice (SOP) laws are state-specific.^{6,7} Some states allow NPs or physician associates to practice independently without the supervision of a physician, whereas other states require collaboration with a physician, with or without a written practice agreement. Generally, APPs diagnose, treat, and manage patients with acute and chronic illnesses, order and interpret diagnostic tests, prescribe medications, and provide education and counseling to patients. Aside from clinical care, APP roles can include teaching, research, wellness, and advocacy endeavors. Defining and maximizing APPs' SOP is necessary to guide their integration.⁹⁻¹³ The background and prior training of APPs entering HM is diverse, and discernment of the potential challenges and opportunities of introducing them into neurology and HM is critical.¹⁴⁻¹⁸

Onboarding and training for new APPs may exist at most HM practices; however, this is accomplished with varying levels of formality, and the optimal method is unknown. Whereas many HM practices in the United States have already incorporated APPs, the available data indicate that there has not been a unifying approach to onboarding. A lack of standardized onboarding process can lead to variability in training, patient care and satisfaction, as well as diminished trust among providers and patients.^{14,19} The current expert consensus recommendations were developed based on a survey of the AHS membership, partially informing the creation of a "recommendations" draft, which was advanced to the final document through multiple iterations of revisions within the APP Work Group members until consensus was reached. This document presents, to

our knowledge, the first systematic effort to standardize and optimize the onboarding process for APPs in HM practices in the United States, focused on clinical training.

METHODS

Survey

The primary endpoint of this survey was to identify the experience and beliefs of established AHS APP and physician members regarding the onboarding of APPs in HM and the effect onboarding has on APPs professional development. The APP Work Group of the AHS Practice Management Committee developed a semi-structured survey questionnaire, collecting information about practice settings, educational backgrounds, current onboarding processes, and optimal APP onboarding and training perspectives (Table S1). This study was reviewed by the Emory University Institutional Review Board and found to be exempt. The survey was created within Survey Monkey (Emory 45 CFR 46.104(d)(2)(ii)) by the AHS headquarters and distributed online to the entire AHS membership in December 2023 and January 2024. Anonymous responses were tabulated, and data were also presented to the study group as graphs and percentages. Results were analyzed by the APP Work Group members over multiple sessions. A biostatistician was consulted, and statistical analysis was provided as frequency tables (data not shown).

Modified Delphi protocol to reach consensus

A draft of recommendations was created based on literature review, the above survey results, and consultations with colleagues from individual HM practices with experience in APP onboarding. The draft was reviewed in multiple iterations of point-by-point revisions using a modified Delphi protocol (three rounds performed to establish consensus on key onboarding goals, definitions, and best practices recommendations). Disagreements and refining the document for clarity were solved through additional discussions among APP Work Group members, and input from the AHS Practice Management Committee at large. The final version of the consensus statement was reviewed and approved by the AHS Board of Directors.

Summary of the survey results

These results were presented in poster format at the 2024 AHS Annual Scientific Meeting.¹⁹ Briefly, 202 AHS members accessed the survey (approximate 8.8% participation rate). Respondents were 49% APPs and 49% physicians, the remainder being non-clinician members. Most respondents were employed in academic (46%), neurology (84%), outpatient (78%), and adult (63%) practices. Most APP respondents (83%) were advanced practice registered nurses certified as NPs. Formal certification in HM was reported by 28% of APPs (Added Qualification in Headache [AQH]) and 81% of physician (United Council of Neurological Subspecialties) respondents, respectively. Based on the survey results, the most common roles APPs serve in HM practices are to evaluate returning patients (91%–92%), perform procedures (82%–89%), and answer patients' messages (90%–94%). Performing procedures is an essential part of daily work for established HM APPs. Of note, in our survey, during onboarding of APPs, supervisors directly observed the APPs performing procedures 87% of the time according to physician respondents and 82% of the time according to APP respondents. Some inconsistencies arose regarding the roles established HM APPs serve or can serve; most significant discordant responses were noted between APP and physician respondents in terms of evaluating new patients (75% vs. 41%) and prescribing controlled substances (71% vs. 48%). The two most common onboarding methods reported by both physician and APP responders were shadowing (98% vs. 98%) and reviewing patients between the supervising provider and onboarding APP (98% vs. 90%), respectively. The APP responders consistently reported less formal education during onboarding (including written curriculum, lectures, online or paper educational materials recommendations, attending HM conferences) than those reported by the physicians for their

onboarding APPs, with percentage differences between 14% and 28%. There was agreement between APP and physician respondents that the current onboarding process is suboptimal and may impact retention in the field (Figure 1).

RECOMMENDATIONS

Goal

Our primary aim is to help develop best practices at a national level, toward standardization of expectations and knowledge of what an APP should have as a competent provider in a headache specialty practice. These recommendations outline essential clinical skills, diagnostic and treatment proficiencies, and procedural competencies for APPs practicing in HM. These recommendations should be viewed as guiding tools, not formal guidelines or prerequisites, applicable to diverse HM practices. Certain local or state regulations may limit or mandate particular training elements.

Definitions

- **Lead clinician (physician or APP):** The primary clinician accountable for an APP's training and integration, ensuring that the APP receives appropriate clinical and professional support. Whereas the lead clinician is accountable, onboarding responsibilities may be shared or delegated to other clinicians in the practice.
- **Collaborating clinician (physician or APP):** A licensed provider partnering with APPs, per state regulations. The collaborating physician/APP may also serve as the lead clinician, if necessary.

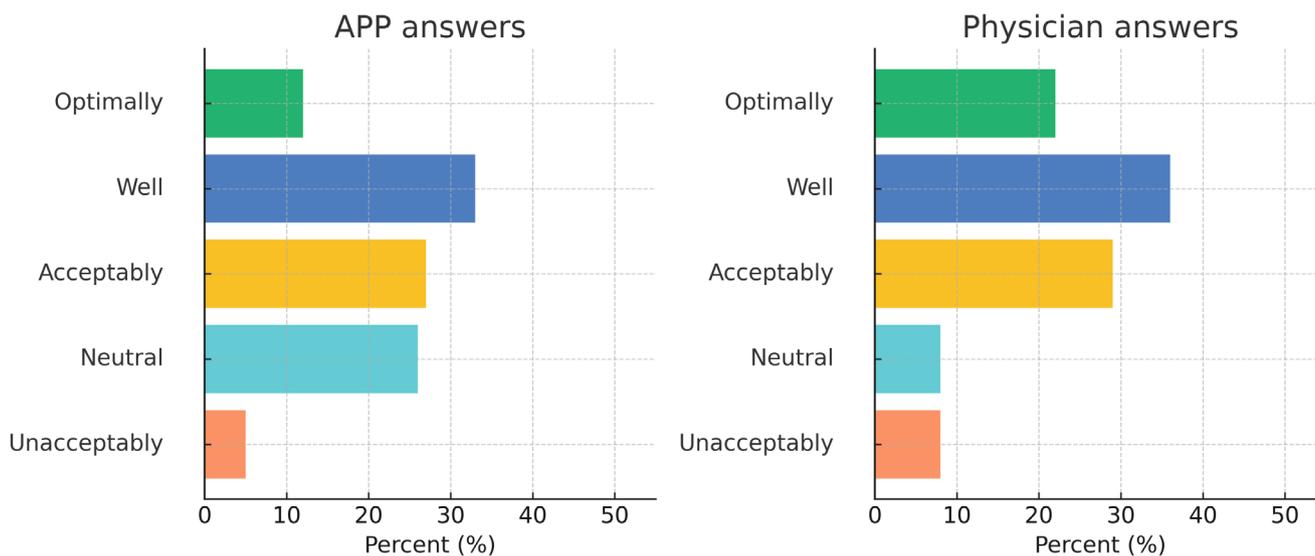


FIGURE 1 Current AHS physicians and APP insights into the outcomes of the APP onboarding process in their practices. AHS, American Headache Society; APP, advanced practice provider.

- **Supervising clinician:** Any provider overseeing the APP's patient encounters during onboarding.
- **Onboarding:** The structured period from an APP's start in clinic until the APP manages a full schedule autonomously. This period includes shadowing and supervised patient visits with direct patient responsibilities.

A **Shadowing:** The initial phase involving observational learning without direct patient care responsibilities.

B **Supervised patient visits:** The latter phase whereby APPs conduct patient encounters under supervision, with structured feedback.

Comment: above and below, the terms clinician and provider are used interchangeably.

Onboarding timeline

Total duration: 3 months (adjustable based on APP progress and practice needs).

A **Shadowing:** 0.5–1 month (varies by practice norms and APP experience)

Comment: Shadowing all available HM clinicians in the practice is desirable. Shadowing other relevant specialties, neurology subspecialties, and technology/ancillary services (e.g., neuroimaging, infusion clinic) is recommended as well.

B **Supervised patient visits:** 2–2.5 months, with structured mentorship and graded clinical responsibility

Comment: The intervals above were based on the AHS member survey results, chosen by most APP and physician respondents, and agreed upon by the current APP Work Group members. This timeline presumes a 40-h work week. A shorter or longer onboarding period may be considered, depending on the APP progress and individual needs of the practice. "Ramp-up" phases of building onboarding APP template schedules can be used.

Practice integration and professionalism

Early discussions between the lead clinician and onboarding APP should define roles, responsibilities, professional expectations, and goals. Ongoing training should cover details of the HM practice, including electronic medical records, policies and procedures, ethical and legal considerations, billing/coding, controlled substance prescribing, disability assessments, and federal/state SOP requirements. Regular check-ins between the APP and lead clinician should assess progress and address concerns.

Comment: The SOP for APPs may be variable, depending on the individual practice needs as well as state and federal regulations. Further, this scope may change over time. Upfront and ongoing discussions between the lead and collaborating clinicians and the onboarding APP on SOP may provide enhanced team integration and practice retention.

Supervision during onboarding

A lead clinician in the HM practice should oversee onboarding and ensure that the APP receives the clinical and professional support needed to succeed. Examples of support include developing a schedule of formal education, mentorship, check-ins, and performance evaluations, as well as ensuring that all medical protocols and state regulations are followed. In practices with multiple providers, rotations with different clinicians can enhance clinical exposure, including diverse perspectives and approaches. Because supervised visits require not only patient-clinician face-to-face time but also review and feedback by a supervising clinician, these patient visits should have a longer appointment window.

Comment: Practices may need to adjust lead clinician's schedules to allow dedicated supervision time and support for the potential loss of financial (relative value units) productivity, if applicable.

Clinical competencies

- **Evaluation and management of patients:** The lead clinician will create a process to ensure that review of patients seen between the onboarding APP and the supervising clinician occurs. Responsibilities could include case-based teaching before and/or after each clinical visit. Time for patient encounter reviews and clinical knowledge discussions, as well as for APP notes reviews, should be formally allocated by the supervising clinician as part of the clinic day. The lead clinician will observe the onboarding APP taking history and performing neurological examination to an established satisfactory level.

Comment: Dedicated time for in-depth case-based discussions may be easier to add at the beginning or end of the day. Scheduled weekly sessions between the onboarding APP and the lead provider may be necessary to ensure that the APP has seen a wide breadth of clinical cases during the onboarding process.

- **Procedures:** The onboarding APP will receive didactics, watch supervising providers during the procedures, and then successfully perform and document a minimum of five supervised procedures of each kind before performing them independently. The recommended procedures include: (1) onabotulinumtoxinA injections (chronic migraine protocol), (2) occipital nerve blocks, (3) trigeminal nerve blocks (supraorbital, supratrochlear, auriculotemporal), (4) trigger point injections, and (5) sphenopalatine ganglion blocks.

Comment: Individual HM practices will establish their own requirements for this phase of APP training, assuming that not all practices are currently performing all procedures above. The lead clinician must clear the independent performance of procedures by the onboarding APP and may increase the minimum number of supervised procedures, depending on the following: (1) patient safety, (2) APP proficiency, (3) APP comfort, (4) organizational policy or bylaws, and (5) the credentialing process within institutions. Procedures performed on mannequins or similar models may be utilized in APP training but should not be substituted for live patients.

Knowledge competencies

- The APP should receive a written **curriculum** from the lead clinician in the first week of onboarding to guide continuous learning, set expectations, and help assess competencies at the end of onboarding. The curriculum includes the following categories:
 - *Basic science:* for example, migraine pathophysiology, cerebrospinal fluid (CSF) dynamics abnormalities
 - *Clinical science:* for example, headache relevant anatomy, epidemiology, comorbidities, critical look at the headache literature
 - *Clinical practice:* for example, current ICHD edition,²⁰ neuroradiology, diagnosis, and treatment of common primary and secondary headaches, painful cranial neuropathies and face pains, details of non-pharmacologic and pharmacologic therapies.

Comment: Mastery of all information listed in the curriculum below is not expected at the conclusion of onboarding, except where specifically mentioned. The lead clinician may present the curriculum to the new APP hire as soon as the letter of offer is accepted, to encourage preparation.

Formal education of APP during onboarding

- **Lectures (live or recorded)** covering primary and secondary headache disorders, ICHD criteria, red flags, and treatment principles, to be delivered by lead and collaborating clinicians. Active APP participation in local as well as remote HM relevant didactics or other educational events during onboarding is encouraged.
- **Independent study resources** (see [Table 1](#) for a selection of recommended materials):
- **AHS membership:** AHS membership during APP's first year of employment is strongly encouraged and should be sponsored to promote integration into the HM specialty field.

Comment: Whereas this paper is focused on onboarding, there is value in ongoing sponsored AHS membership due to

TABLE 1 Independent study resources recommendations for the APP onboarding into HM.

Online materials	
International Classification of Headache Disorders (current edition)	https://ichd-3.org/
AHS education on demand	https://cme.americanheadachesociety.org/
First contact	https://americanheadachesociety.org/primarycare/
Additional online video/materials can be used to expand onboarding APP's knowledge	(e.g., Video Library American Headache Society)
Guidelines and position statements	
AHS	https://americanheadachesociety.org/resources/guidelines/guidelin
AAN	https://www.aan.com/Guidelines/home/Search?topic=Headache
Printed materials (if not available online)	
Landmark resources	ICHD (current edition), AHS consensus statements on headache management, AAN continuum on headache, AAN pediatrics statement, and AHS expert consensus statement on procedures, for example ²¹
Books	As recommended by the lead and/or collaborating clinicians.
Additional articles	As recommended by the lead and/or collaborating clinicians

Abbreviations: AAN, American Academy of Neurology; AHS, American Headache Society; APP, advanced practice provider; ICHD, International Classification of Headache Disorders.

comprehensive educational resources and tools, networking opportunities, growth and identity as a HM specialist, and support of lifelong learning.

- **AHS annual meetings:** Onboarding APPs should consider attending an AHS Annual Meeting (AHS Scientific Meeting or AHS Scottsdale Symposium). We recommend providing continuing education funds to cover or defray costs of attending.

Comment: The AHS Scottsdale Symposium is preferred due to clinical relevance. Participation may be in-person (recommended), virtual, or "on demand" if the onboarding APP is not able to attend in real time. Other relevant educational meetings on HM, outside AHS, should be considered by the onboarding APP.

Competency assessment

Competencies should be assessed and documented by the lead clinician on a grading scale, with feedback provided to the onboarding APP before the onboarding is considered finished (see

TABLE 2 Competency assessment recommendations for onboarding APPs into HM practices.

Evaluation methods
Chart reviews and case discussions
Direct observation of history-taking and neurological examination
Direct observation of procedures performance
Feedback from all supervising clinicians
Face-to-face discussions with feedback, particularly by the lead clinician
Core competencies to be assessed
Patient history-taking and examination
Clinical decision-making
Pharmacologic and non-pharmacologic management
Patient counseling
Clinical documentation
Procedural competency
HM content knowledge

Abbreviations: APP, advanced practice provider; HM, headache medicine.

Table 2 for specific competencies and methods of assessment). Upon completion of skills and knowledge, the APP's full schedule for autonomous clinical visits may be opened.

Comment: The National Headache Foundation offers AQH certification; other certificate programs in HM open to APPs exist and can be considered. Specific requirements for obtaining such certifications may apply, including time spent in independent direct diagnosis and management of headache disorders and completing category 1 continuing medical education focusing on HM.

Onboarding APP feedback and process improvement

- APPs should provide structured feedback on their onboarding experience during and after onboarding.
- Feedback sessions between onboarding APP and the lead clinician can allow for adjustments in current and future training. This may include the approach to bedside teaching, supervision of procedures, additional specific lectures, and extending the onboarding duration.

Additional considerations

- **Ongoing training:** Post-onboarding training should be maintained as needed, depending on the progress, needs, and regulations of individual practices. Continued reciprocal feedback is advised to maximize integration and improve retention.
- **New patient visits:** Debate exists whether it would behoove APPs to independently perform new patient evaluations. A high degree of neurological competency is mandatory when initially assessing patients, to certify ability to diagnose primary and

secondary headache disorders and develop a comprehensive management plan. Furthermore, federal insurance plans currently designate different fee schedules depending on whether the APP is using a "direct billing" or an "incident to" service. Some APPs may feel comfortable managing new patient evaluations post-onboarding and can be encouraged, based on their background, approved readiness by the supervisor, and practice regulations.

- **Wellness:** Onboarding APPs should be directed to wellness, mentorship, and diversity-related resources at their institution, to maximize APP's well-being and integration into practice.
- **Career planning:** Onboarding should include ongoing discussions on career growth, promotion pathways, and long-term professional development. These may be important for the APP's commitment/retention and understanding of employer's expectations and should be adapted to local, state, and national regulations.

Curriculum^{i,ii,iii}

(i) Basic science (*lecture based + individual reading*)

1. Understand the pathophysiology of migraine with and without aura, including the trigeminovascular system and cortical spreading depolarization.
2. Understand the basics of neurotransmitters, including serotonin and calcitonin gene-related peptide (CGRP).
3. Describe central versus peripheral sensitization.
4. Understand the basic mechanisms of high and low cerebrospinal fluid pressure/volume disorders.

(ii) Clinical science (*lecture based + individual reading*)

1. Understand the basic anatomy of the head, neck, and face.
2. Describe the epidemiology of migraine, tension-type headache, cluster headache (and other trigeminal autonomic cephalalgias, TACs), and the more common secondary headaches (e.g., medication-overuse headache, post-traumatic headache).
3. Describe the most common comorbidities of migraine.
4. Recognize natural migraine ebbs and flows, including chronification and reversal to episodic patterns.
5. Understand the values and limitations of CSF opening pressure in CSF pressure/volume dynamics disorders.
6. Evaluate a HM clinical trial paper:
 - a. Understand clinical trial endpoints, including pain relief, pain freedom, and most bothersome symptom relief/freedom (acute); decreased frequency of attacks or headache/migraine days; and other outcomes such as changes in functioning and quality of life (preventive).
 - b. Understand terms such as placebo, nocebo, therapeutic gain, and statistical significance.
 - c. Understand the applicability of clinical trials data versus real-world experience, including age (pediatric to geriatric), sex, and race/ethnicity.

(iii) Clinical practice (*lecture based + individual reading + clinical skills*)

1. Describe the ICHD (current edition) overall, with *mastery* of main primary headache disorders classification criteria.
 - a. Distinguish features of primary headache disorders in adults, children, and adolescents.
 - b. Know the categories of secondary headaches.
 - c. Appreciate episodic syndromes associated with migraine in children and adolescents.
2. Learn neurological and head and neck structures exam.
3. Differentiate primary and secondary headache disorders.
 - a. *Master* red flags interpretation.
 - b. Understand imaging options and order correct imaging for secondary headaches, avoid excessive/unnecessary imaging, strive to personally interpret common imaging modalities (e.g., brain/spine MRI, magnetic resonance angiogram, magnetic resonance venogram, computer tomographic angiogram, myelogram).
 - c. Know utility and normal values for commonly used laboratory, ophthalmologic, vestibular, and other tests.
4. Understand migraine aura and its subtypes and distinguish from seizure, stroke, and other mimics.
5. Describe basics of menstrually-related migraine and vestibular migraine.
6. Describe trigeminal autonomic cephalalgias (cluster headache, paroxysmal hemicrania, hemicrania continua, short-lasting neuralgiform headache with autonomic symptoms/short-lasting neuralgiform headache with conjunctival injection and tearing).
7. Describe preventive and acute medications for primary headaches.
 - a. *Master* formulations, dosing, side effects, appropriate trial periods, and contraindications for first-line medications to treat migraine, tension-type headache, cluster headache, and other TACs.
 - b. Describe migraine treatment in women who are pregnant, trying to become pregnant, or are breastfeeding. Know which medications should be avoided and which are generally considered “safe” in this population.
 - c. Describe migraine treatment in children and adolescents (recognizing the limited US Food and Drug Administration (FDA)-approved options and the evidence for behavioral treatment).
 - d. Understand the differences between on-label and off-label treatments.
8. Describe indications for urgent, emergent, and inpatient headache care.
9. Define status migrainosus and describe its treatment options.
10. Learn to recognize, manage, and prevent medication-overuse headache.
11. *Master* the indications, risks, and benefits of commonly performed procedures, including onabotulinumtoxinA injections, nerve blocks, trigger point injections, and sphenopalatine ganglion blocks.
12. Understand and describe the use of current FDA-cleared neuromodulation products for headache disorders.
13. Describe relevant behavioral interventions (e.g., cognitive behavioral therapy, relaxation training, biofeedback, mindfulness) and other nonmedicinal treatments (e.g., acupuncture, acupressure, physical therapy).
14. Describe commonly used nutraceutical supplements (e.g., magnesium, feverfew, coenzyme Q10, riboflavin).
15. Recognize and manage potential migraine triggering and worsening factors, such as caffeine overuse, obesity, sleep impairment, stress (emotional health), muscle tension, temporomandibular joint dysfunction, and poor nutritional status/diet; be aware of potential overlap with prodromal symptoms.
16. Describe other important primary headache disorders, including:
 - a. New daily persistent headache
 - b. Hypnic headache
 - c. Headache associated with exercise and sexual activity
 - d. Primary stabbing headache
17. Describe the diagnosis and management of common secondary headache disorders, especially:
 - a. Idiopathic intracranial hypertension or pseudotumor cerebri
 - b. Headache attributed to cerebrospinal fluid leak
 - c. Temporal arteritis
 - d. Thunderclap headaches, especially vascular emergencies (e.g., aneurysm rupture/intracranial bleeding/reversible cerebral vasoconstriction syndrome, cerebral vein thrombosis)
 - e. Cervicogenic headache
 - f. Concussion and post-traumatic headache
 - g. Headache attributed to infection.
18. Describe trigeminal neuralgia diagnosis and treatment.

CONCLUSION

This AHS Board-approved statement represents best practice recommendations for APPs onboarding into HM practices. It is not a prerequisite for any clinician engaging in the care of patients with headache disorders, and recommendations can be adjusted to the specifics of individual practices.

AUTHOR CONTRIBUTIONS

Calli Cook: Conceptualization; methodology; formal analysis; resources; investigation; writing – review and editing; writing – original draft. **Marshall C. Freeman:** Writing – review and editing; resources; investigation; methodology; formal analysis; conceptualization. **Jessica Ailani:** Writing – review and editing; resources; project administration; formal analysis. **Annika Ehrlich:** Writing – review and editing; resources; formal analysis. **Brian Grosberg:** Writing – review and editing; resources; formal analysis. **Marielle Kabbouche:** Writing – review and editing; resources;

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Calli Cook has received personal compensation for serving as a consultant for AbbVie, Allergan, and Pfizer. Dr. Cook has a non-compensated relationship as a board member with Alliance for Patient Access. **Jessica Ailani** reports consulting (Honoraria): Abbvie, Axsome, Amneal, Aspya, Bausch, Eli-Lilly, Lundbeck, Ipsen, Merz, Pfizer, Kaliyope, and Satsuma; clinical trials (grant to institution): Parema, Ipsen, Lundbeck, Pfizer, Merz, and ShiraTronic; clinical trials (grants to PI): Mi-Helper; editorial boards/steering committee: *Self* magazine (medical editor). **Annika Ehrlich** reports the following conflicts: Abbvie: consultant, speaker bureau, advisory board; Axome: speaker, non-branded content; eNeura: advisory board; Focus MedEd: consulting; Lundbeck: advisory board; Pfizer: consultant and worked on a project funded by an educational grant, authored a study funded by Pfizer, and podcast faculty/consultant; Pharmamark: consulting; QDCME: consulting; and Theranica: advisory board. **Brian Grosberg** receives book royalties from Wiley and honoraria as a member of medical advisory boards for Theranica, Abbvie, Pfizer, and Amneal. He also receives honoraria from Medlink neurology. In addition, he also receives research funds directly to his institution from Abbvie, Pfizer, Eli Lilly, and Teva. **Marielle Kabbouche** has received research funding for participation in past and ongoing studies sponsored by Amgen, Eli-Lilly, Teva, Impax, Biohaven, Lundbeck, Upsher-Smith, Biohaven, Pfizer, Lundbeck, Patient-Centered Outcomes Research Institute, PCORI, and the National Institutes of Health. All consulting and research funds for this work are paid directly to Cincinnati Children's Hospital Medical Center. She has participated in a speaker bureau for Theranica and as a consultant for Merz. **Maureen Moriarty** is a consultant/speaker for Abbvie and Pfizer. **Juliana VanderPluym** reports research support from

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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