
Residents and Fellows

Milestones in Fellowship Training in Headache Medicine

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The Accreditation Council for Graduate Medical Education (ACGME) mandated a transition from competency-based assessment of resident progress to a “milestone-based” approach in 2012.¹ After July 2014, neurology residency programs were required to follow milestones corresponding to all goals of training in the 6 areas of competency, with specific anchoring language for assessing progress. This evaluation format is now a requirement for all ACGME residency and fellowship programs. Moreover, Clinical Competency Committees are now expected to assess progress of each resident in each milestone domain at least semiannually.

Fellowship training programs not accredited by the ACGME, including those for Headache Medicine, are not bound to pursue this new approach to evaluating postgraduate learners. However, it is probably a proactive and generally useful exercise to begin to formulate milestones for progress in fellowship training in Headache Medicine. The United Council for Neurologic Subspecialties, the accreditation agency for Headache Medicine, in its program description content, seems to be leaning in this direction as well.²

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Adapting language and format details from the Neurology Residency Milestone Project,³ this article will present a proposed set of milestones for fellowship training in Headache Medicine with detailed anchors. We will be assessing the usefulness of this document and a companion evaluation tool in the UCSF Headache Medicine Fellowship program.

There have been a number of challenges to meeting the goal of achieving effective milestone based-evaluation, and it is beyond the scope of this brief article to enumerate, much less to propose overarching solutions. However, it is worth mentioning the major obstacle which must be navigated to succeed with this approach to fellow evaluation in Headache Medicine, that is, the necessity for devising valid and reliable tools for assessing the level of competency in each of these domains. It has been suggested that each domain should be evaluated using one or more “observable practice activities” (OPAs), and some have been developed in neurology.⁴ This is a fertile area in our subspecialty as there are a number of fairly clear and finite goals, some of which might easily lend themselves to an OPA such as familiarity with the ICHD or performance of greater occipital nerve blockade.

All Headache Medicine program directors are probably in agreement that there should be a valid and reliable way to “vet” graduates of HM training

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fellowships. What will be hard to agree on however is which areas are most important. Similarly, there may be differences of opinion regarding which lev-

els must be attained in each domain by the completion of fellowship. Thus, any milestone document will need to be a bit flexible. As methods of

UCSF HEADACHE MEDICINE FELLOWSHIP MILESTONES

1. History – Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> Obtains a headache and pain history. 	<ul style="list-style-type: none"> Obtains a complete and relevant headache and pain history. 	<ul style="list-style-type: none"> Obtains a complete, relevant, and organized headache and pain history. 	<ul style="list-style-type: none"> Efficiently obtains a complete, relevant, and organized headache and pain history. 	<ul style="list-style-type: none"> Efficiently obtains a complete, relevant, and organized headache and pain history incorporating subtle verbal and nonverbal cues.
2. Head and Neck Exam – Patient Care				
<ul style="list-style-type: none"> Performs complete Head and Neck Exam. 	<ul style="list-style-type: none"> Performs complete Head and Neck Exam accurately. 	<ul style="list-style-type: none"> Performs a relevant Head and Neck Exam incorporating some additional appropriate maneuvers. 	<ul style="list-style-type: none"> Efficiently performs a relevant Head and Neck Exam accurately incorporating all additional appropriate maneuvers. 	<ul style="list-style-type: none"> Consistently demonstrates mastery in performing a complete, relevant, and organized Head and Neck Exam.
3. Headache Specific Neurological Exam – Patient Care				
<ul style="list-style-type: none"> Performs complete neurological exam. 	<ul style="list-style-type: none"> Performs complete neurological exam accurately. 	<ul style="list-style-type: none"> Performs a relevant neurological exam incorporating some additional appropriate maneuvers. 	<ul style="list-style-type: none"> Efficiently performs a relevant neurological exam accurately incorporating all additional appropriate maneuvers. 	<ul style="list-style-type: none"> Consistently demonstrates mastery in performing a complete, relevant, and organized neurological exam.
4. Headache Diagnosis – Medical Knowledge				
<ul style="list-style-type: none"> Summarizes history and exam findings. Generates a short list of possible headache diagnoses. 	<ul style="list-style-type: none"> Summarizes key elements of history and exam findings and is able to generate a good Headache differential diagnosis using the framework of the ICHD-3. 	<ul style="list-style-type: none"> Synthesizes information to focus and prioritize Headache diagnostic possibilities using the ICHD-3. Correlates the clinical presentation with basic anatomy of the disorder. 	<ul style="list-style-type: none"> Efficiently uses ICHD-3 criteria, pointing out pitfalls in diagnosis. Accurately correlates the clinical presentation with detailed anatomy of the disorder. Continuously reconsiders diagnosis as clinical presentation evolves. 	<ul style="list-style-type: none"> Effectively educates others about ICHD diagnostic reasoning. Explains controversies in HA diagnosis.
5. Diagnostic Investigation – Medical Knowledge				
<ul style="list-style-type: none"> Demonstrates general knowledge of diagnostic tests in Headache Medicine. 	<ul style="list-style-type: none"> Discusses general diagnostic approach appropriate to Headache presentation. Lists risks and benefits of tests to patient. 	<ul style="list-style-type: none"> Individualizes diagnostic approach to the specific patient. Accurately interprets results of common diagnostic tests. 	<ul style="list-style-type: none"> Explains diagnostic yield and cost effectiveness of testing. Accurately interprets results of less common diagnostic testing. Recognizes indications and implications of genetic testing. Recognizes indications of advanced imaging and other diagnostic studies. 	<ul style="list-style-type: none"> Demonstrates sophisticated knowledge of diagnostic testing and controversies.

6. Management/Treatment – Patient Care

- Demonstrates basic knowledge of management of patients with common headache disorders.
- Discusses general approach to initial treatment of common headache disorders, including risks and benefits of treatment.
- Identifies neurologic and other emergencies in headache medicine.
- Discusses approach to all primary headache types as well as common secondary headache disorders.
- Appropriately requests consultations from non-neurologic care providers for additional evaluation and management.
- Adapts treatment based on patient response.
- Identifies and manages complications of therapy.
- Independently directs management of patients with headache emergencies.
- Demonstrates sophisticated knowledge of treatment subtleties and controversies.
- Explains to patients and teaches learners about new and experimental treatments for headache disorders.

7. Management/Treatment – Advanced Procedures – Patient Care

- Demonstrates basic knowledge of nerve blocks and botulinum toxin use for headache disorders.
- Demonstrates advanced knowledge of nerve blocks and botulinum toxin use for headache disorders.
- Demonstrates advanced knowledge and skills in nerve blocks, trigger point injections, and botulinum toxin use for headache disorders.
- Demonstrates superior knowledge of nerve blocks, trigger point injections, and botulinum toxin use for headache disorders.
- Explains rationale and indications for injection in headache medicine.
- Teaches skills in nerve blocks, trigger point injections, and botulinum toxin use for headache disorders.

8. Communicate Effectively with Patients, Families and Colleagues – Communication Skills

- Relates well in an outpatient setting with patients and their families and is able to communicate key medical information to health care team members.
- Relates well with patients, families, and health care team members in outpatient and inpatient settings.
- Communicates well in all settings including phone discussions with referring providers.
- Communicates well with multiple providers in all settings including telemedicine venues.
- Engages in teaching activities regarding headache medicine on regional and national level.

9. Attention to Responsibilities – Professionalism

- Is punctual and attends to all clinical duties required most of the time.
- Is punctual and attends to all required clinical duties at all times.
- Adheres to principles of confidentiality and informed consent.
- Demonstrates a high level of sensitivity to diverse attributes in patients.
- Altruistically puts patients and their families' needs paramount.
- Participates in institutional activities that improve systems.
- Participates in research and patient advocacy projects.
- Designs and participates in patient safety projects.
- Serves as a role model for professional behavior.

10. Self-Directed Learning – Practice Based Learning and Improvement

- Acknowledges gaps in knowledge and expertise.
- Incorporates feedback well.
- Develops an appropriate learning plan based upon clinical experience.
- Completes an appropriate learning plan based upon clinical experience.
- Engages in scholarly activity regarding personal or systems improvement.

12. Decisions Regarding Cost, Risk, and Benefit Assessment – Systems Based Practice

- Describes basic cost and risk implications of care.
- Consistently makes clinical decisions that balance cost and risk benefit ratios.
- Understands and accesses resources needed to provide the best care for patients.
- Efficiently helps patients to acquire all necessary services.
- Incorporates available quality measures in patient care.
- Engages in scholarly activity regarding cost effective and efficient practice in the prevailing system.

evaluating milestones evolve, what will emerge in all likelihood is the need to revisit the milestones, and adapt them not only to address content that is in fact testable, but to address the changing nature of our field and what the public expects of us.

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