1 Adults with headache

2 General history and physical exam (see **Sidebar 1**)

3 Does this patient need urgent/emergent evaluation/treatment or have red flags? (see **Sidebar 1**)
- Yes → 4 Consider evaluation in urgent care or ED
- No

5 Is there a secondary headache (see **Sidebar 2**), complicated headache presentation, or multiple headache types requiring specialist referral?
- Yes → 6 Refer to specialist for further diagnosis and evaluation
- No

7 Is there clinical concern for TTH? Including:
- Bilateral headache
- Non-pulsatile pain
- Mild to moderate pain
- Not worsened by activity

(see **Sidebar 3**)
- Yes → 8 Definitive or probable diagnosis of TTH → 9 TTH treatment (see **Sidebar 4**); also, assess for MOH (see **Sidebar 5**)
- No

13 Is there clinical concern for migraine? Including:
- Nausea
- Throbbing
- Headache-related interference in activities

(see **Sidebar 3**)
- Yes → 14 Definitive or probable diagnosis of migraine → 15 Migraine treatment (see **Sidebars 6a and 6b**); also, assess for MOH (see **Sidebar 5**)
- No

16 Is there clinical concern for cluster headache? Including:
- Bouts of severe and brief headaches (lasting <3 hours)
- Unilateral (always same side)
- Autonomic signs ipsilateral to headache
- Restlessness during attacks

(see **Sidebar 3**)
- Yes → 17 Definitive or probable diagnosis of cluster headache → 18 Cluster headache treatment (see **Sidebar 7**); also, assess for MOH (see **Sidebar 5**)
- No → 19 Revisit general history and physical exam and consider alternate diagnoses or referral for specialty evaluation

9, 15, 18 → 10 Did the patient's condition improve? (see **Sidebar 1**)
- Yes → 11 Continue effective treatment and reassess as needed
- No → 12 Refer to specialist

Sidebar 1: General History and Physical Exam

History: Frequency, character; onset, prodrome/aura; location, duration; relieving or exacerbating factors; associated symptoms; autonomic symptoms; jaw symptoms; neck symptoms; visual deficits/changes; dizziness and imbalance; current medications, abortive dose and frequency per month, prophylactic dose; prior medication trials; diet and nutrition, hydration; alcohol, caffeine intake; sleep; exercise; aggravated by routine physical activity; sense of restlessness; foreign body sensation in the eye; nicotine and other stimulant use; risk factors for MOH; history of trauma to the head, neck, or both; other comorbid conditions that might contribute to or exacerbate headaches; mental health (e.g., depression, anxiety, PTSD); menstrual cycle and proximity to menopause

Red flags SNOOP(4)E:

Systemic symptoms, illness, or condition (e.g., fever, chills, myalgias, night sweats, weight loss or gain, cancer, infection, giant cell arteritis, pregnancy or postpartum, or an immunocompromised state – including HIV)

Neurologic symptoms or abnormal signs (e.g., confusion, impaired alertness or consciousness, changes in behavior or personality, diplopia, pulsatile tinnitus, focal neurologic symptoms or signs, meningismus, or seizures, ptosis, proptosis, pain with eye movements)

Onset (e.g., abrupt or "thunderclap" where pain reaches maximal intensity immediately or within minutes after onset; first ever, severe, or "worst headache of life")

Older onset (age ≥50 years)

Progression or change in pattern (e.g., in headache frequency, severity, clinical features)

Precipitated by Valsalva (e.g., coughing, bearing down)

Postural aggravation

Papilledema

Exertion

Examination: Blood pressure; general neurologic (upper extremities reflexes, sensation, strength, UMN, pathologic reflexes); cranial nerves (including funduscopic exam); cervical spine and surrounding musculature (palpation, ROM, Spurling's sign test); temporomandibular joint (palpation, ROM, symmetry, jaw claudication); pericranial muscle palpation; temporal artery palpation, pertinent findings may include tenderness, cord-like artery, or lack of pulse

Standardized headache assessments: MIDAS (migraine-related disability), HIT-6 (impact of headache on daily life and pain severity), MSQL (quality of life), ID Migraine (migraine), Patient Headache Diary (7 day, 3 months)[a]

Additional screening tools: PHQ-2 and PHQ-9 (depression); GAD-2 and GAD-7 (anxiety); CAGE (ethanol overuse headache); AUDIT-C (ethanol overuse headache); PC-PTSD (PTSD); STOP-BANG (sleep)

[a] See the headache diaries included in the Patient Provider Tools for the VA/DoD CPG for the Management of Headache, available at: https://www.healthquality.va.gov/guidelines/Pain/headache/index.asp

Sidebar 2: Criteria for Determining Primary Versus Secondary Headache Disorders

Initial evaluation of headache should aim to determine whether a secondary cause for the headache exists or whether the diagnosis of a primary headache disorder is appropriate. Emergent evaluation should be considered based on red flag features. In general, a secondary headache can be diagnosed if the headache is new and occurs in close temporal relation to another disorder known to cause headache. It can also be diagnosed when a preexisting headache disorder significantly worsens in close temporal relation to a causative disorder, in which case both the primary and secondary headache diagnoses should be given. ICHD-3 diagnostic criteria are below.

General diagnostic criteria for secondary headaches:

A. Any headache fulfilling C
B. Another disorder scientifically documented to be able to cause headache has been diagnosed. Evidence of causation demonstrated by at least two of the following
   a. Headache has developed in temporal relation to the onset of the presumed causative disorder.
   b. Either or both of the following: headache has significantly worsened in parallel with worsening of the presumed causative disorder or headache has significantly improved in parallel with improvement of the presumed causative disorder.
   c. Headache has characteristics typical for the causative disorder.
   d. Other evidence of causation exists.
C. Not better accounted for by another ICHD-3 diagnosis

The secondary headaches include headache attributed to trauma or injury to the head, neck, or both; cranial or cervical vascular disorder; non-vascular intracranial disorder; substance or its withdrawal; infection; disorder of homeostasis; disorder of the cranium, neck, eyes, ears, nose, sinuses, teeth, mouth, other facial or cervical structure; or psychiatric disorder.

Abbreviations: AUDIT-C: Alcohol Use Disorders Identification Test-Concise; CAGE: Cut, Annoyed, Guilty, and Eye; ED: emergency department; GAD: Generalized Anxiety Disorder; HIT-6: Headache Impact Test, 6th edition; HIV: human immunodeficiency virus; ICHD-3: International Classification of Headache Disorders, 3rd Edition; MIDAS: Migraine Disability Assessment Test; MOH: medication overuse headache; MSQL: Migraine-Specific Quality of Life Questionnaire; PC-PTSD: Primary Care PTSD Screen; PHQ: Patient Health Questionnaire; PTSD: posttraumatic stress disorder; ROM: range of motion; STOP-BANG: Snoring history, Tired during the day, Observed stop breathing while sleep, High blood pressure, BMI more than 35 kg/m2, Age more than 50 years, Neck circumference more than 40 cm, and male sex; TTH: tension-type headache; UMN: upper motor neuron

Sidebar 3: Common Primary Headache Disorders Abbreviated from the ICHD-3 criteria

		Tension-Type Headache	Migraine Headache	Cluster Headache
Headache Duration and Frequency	Duration	30 minutes to 7 days	4–72 hours	15–180 minutes
	Frequency	Variable	Variable	Once every other day to eight per day; often occurring at the same time of day
Headache Characteristics	Severity	Mild to moderate	Moderate to severe	Severe or very severe
	Location	Bilateral	Unilateral	Unilateral orbital, supraorbital, or temporal pain or any combination of such pain
	Quality	Pressing or tightening, non-pulsating	Throbbing or pulsating	Stabbing, boring
	Aggravated by routine physical activity	Not aggravated by routine activity	Aggravated by routine activity	Causes a sense of agitation or restlessness; routine activity might improve symptoms
Associated Features	Photophobia and phonophobia	Can have one but not both	Both	Variably present
	Nausea, vomiting, or both	Neither	Either or both	Might be present
Other Features	Autonomic features	None	May occur, but are often subtle and not noticed by the patient	Prominent autonomic features ipsilateral to the pain (see Appendix B in full VA/DoD Headache CPG)

Sidebar 4: Treatment Options for Tension-Type Headache[b]

Treatment
Physical therapy ♦
Aerobic exercise or progressive strength training ♦
Amitriptyline ♦
Ibuprofen 400 mg or acetaminophen 1,000 mg ♦♦

Sidebar 5: Medication Overuse Headache Criteria

ICHD-3 diagnostic criteria include:

A. Headache occurring on 15 or more days per month in a patient with a preexisting headache disorder
B. Regular overuse for more than 3 months of one or more drugs that can be taken for the acute or symptomatic treatment of headache (see table below)
C. No better accounted for by another ICHD-3 diagnosis

Medication Overuse Headache Type	Medication Overuse Frequency
Butalbital overuse	≥5 days/month for >3 months
Opioid overuse	≥8 days/month for >3 months
Triptan overuse	≥10 days/month for >3 months
Ergotamine overuse	
Combination-analgesic overuse (any combination of classes, not to include combinations that only include non-opioid analgesics)[c]	
Non-opioid analgesic overuse (e.g., aspirin, NSAIDs, acetaminophen, steroids, and combinations of non-opioid analgesics)	≥15 days/month for >3 months

[c] Combination-analgesic refers to a headache abortive medication that contains more than one active ingredient and may refer to over-the-counter or prescription agents.

Sidebar 6a: Pharmacologic Treatment Options for Migraine[b]

Treatment
Candesartan or telmisartan ♦
Lisinopril ♦
Valproate ♦
Memantine ♦
Atogepant ♦
Rimegepant ♦
Levetiracetam ♦
Erenumab, fremanezumab, or galcanezumab ♦
Propranolol ♦
Magnesium, oral ♦
Topiramate ♦
Fluoxetine or venlafaxine ♦
Combination pharmacotherapy ♦
Aspirin/Acetaminophen/Caffeine ♦♦
Eletriptan, frovatriptan, rizatriptan, sumatriptan (oral or subcutaneous), the combination of sumatriptan/naproxen, or zolmitriptan ♦♦
Acetaminophen, aspirin, ibuprofen, naproxen, or oral solution celecoxib ♦♦
Rimegepant or ubrogepant ♦♦
Lasmiditan ♦♦

Sidebar 6b: Infusion/Procedural/Invasive and Non-pharmacologic Treatment Options for Migraine[b]

Treatment
OnabotulinumtoxinA ♦
GON block ♦/♦♦
Pulsed radiofrequency of upper cervical nerves or sphenopalatine ganglion block ♦
Eptinezumab IV ♦
Physical therapy ♦
Aerobic exercise or progressive strength training ♦
Neuromodulation ♦/♦♦
SON block ♦♦
IV antiemetics (e.g., chlorpromazine, metoclopramide, prochlorperazine), IV magnesium, or intranasal lidocaine ♦♦

Sidebar 7: Treatment Options for Cluster Headache[b]

Treatment
Non-invasive vagus nerve stimulation ♦♦
Galcanezumab ♦
Verapamil ♦
Sumatriptan subcutaneaous ♦♦
Zolmitriptan nasal spray ♦♦
Oxygen therapy ♦♦

Table 1: Treatment Options for Headache in General

Treatment
Acupuncture
CBT, biofeedback, or mindfulness-based therapy
Dietary trigger avoidance
Dry needling
Immunoglobulin G antibody testing
Fluoxetine or venlafaxine ♦
IV metoclopramide, IV prochlorperazine, or intranasal lidocaine ♦

[b] For the full recommendation language, see Recommendations in the full VA/DoD Headache CPG. *Weak against* and *Strong against* recommendations have been excluded from this table.

♦ indicates preventive treatment; ♦♦ indicates abortive treatment; ♦/♦♦ indicates abortive and preventive treatment

Access to the full guideline and additional resources are available at the following link:
https://www.healthquality.va.gov/guidelines/headache

Abbreviations: CBT: cognitive behavioral therapy; CPG: clinical practice guideline; GON: greater occipital nerve; ICHD-3: International Classification of Headache Disorders, 3rd Edition; IV: intravenous; mg: milligram; NSAID: nonsteroidal anti-inflammatory drug; SON: supraorbital nerve