Nursing Assessment and Management of Primary Headache in Primary Care Settings

Tariq Majed Awad Alhumaid [1], Abdulaziz Ramdan H Almatrafi [2], Alhazmi, Trke Mohammed A [3], Manal Naif M Alruwaili [4], Alharthi,Fayez Ayed E [5], Afaf Naif Alrawelly [6], Mohammed Ayesh Shaman Alanazi [7], Alanazi ,Maram Tajir D [8], Faten Ramah Alenezi [9], Ahod Obeed Alanazi [10]

1- Family Medicine senior Registrar, Ministry of Health Branch- Northern Border Region, Saudi Arabia
2- Family Medicine senior Registrar, Ministry of Health Branch- Northern Border Region, Saudi Arabia
3- Family Medicine senior Registrar, Al-Jawharah Primary Healthcare Center, Arar, Saudi Arabia
4- Nursing Technician, Prince Mutaib bin Abdulaziz Hospital, Sakaka, Saudi Arabia
5- Nursing Technician, Al-Sir Primary Health Center, Turayf, Saudi Arabia
6- Nursing Technician, Al khalidiyeh Healthe Center, Arar, Saudi Arabia
7- Nursing Technician, Turaif General Hospital, Saudi Arabia
8- Nursing Technician, Al khalidiyeh Healthe Center, Arar, Saudi Arabia
9- Nursing Technician, Department of Population and Public Health, Arar, Saudi Arabia
10- Nursing Technician, North Medical Tower, Arar, Saudi Arabia

Abstract:

Nursing assessments in primary care for patients experiencing primary headaches involve a thorough patient history and physical examination to identify the type and frequency of headaches, associated symptoms, and potential triggers. Utilizing tools such as the International Classification of Headache Disorders (ICHD), nurses can classify headaches as tension-type, migraine, or cluster headaches. Important aspects to assess include headache characteristics (onset, duration, intensity, and location), medical history, and family history of headaches. Additionally, assessing psychosocial factors and lifestyle habits can help identify triggering factors, such as stress, sleep patterns, or dietary influences, which may be significant in crafting a comprehensive management plan. Management strategies in primary care focus on education, symptom relief, and preventive measures tailored to the individual patient. Nurses play a critical role in educating patients about headache types, potential triggers, and lifestyle modifications to reduce headache frequency and severity. Pharmacologic treatments may include nonsteroidal anti-inflammatory drugs (NSAIDs), triptans, or preventive medications such as beta-blockers or anticonvulsants, depending on the headache type and severity. Non-pharmacologic interventions, including stress management techniques, biofeedback, and cognitive behavioral therapy, can also be beneficial. Follow-up assessments are crucial to evaluate treatment effectiveness and make necessary adjustments, ensuring that patients achieve optimal headache management.

Keywords: Nursing assessment, primary headache, headache types, patient history, physical examination, triggering factors, management strategies, education, pharmacologic treatment, non-pharmacologic interventions, follow-up assessments.

Introduction:

Headaches represent one of the most prevalent ailments globally, affecting millions of individuals across diverse age groups, cultures, and socioeconomic statuses. The World Health Organization (WHO) estimates that nearly half of the adult population experiences headaches at least once a year, with a significant percentage suffering from recurrent episodes. Among these, primary headaches—namely migraines, tension-type headaches, and cluster headaches—account for a substantial burden on the individual, healthcare systems, and society at large. Given the high incidence of primary headaches and their profound impact on quality of life, effective management in primary care settings becomes imperative [1].

Nursing professionals play a pivotal role in the assessment and management of primary headaches, especially at the primary care level where the vast majority of patients seek treatment. The nursing

process, which involves a systematic approach including assessment, diagnosis, planning, implementation, and evaluation, aligns well with the complexities involved in headache management. An accurate assessment is the cornerstone of effective headache management, comprising a comprehensive history-taking and physical examination aimed at identifying headache type, triggers, and the impact on daily functioning. This is particularly important, as primary headaches can often be misdiagnosed or inadequately addressed, leading to chronicity and increased health complications for the sufferer [2].

The evaluation of primary headaches encompasses a multitude of factors, including the frequency, duration, and characteristics of the headache itself, as well as associated symptoms such as nausea, photophobia, or aura. Additionally, a thorough patient history that considers family and medical backgrounds, lifestyle choices, environmental triggers, emotional states, and other comorbid conditions is essential in forming a holistic view of the patient's health. This enables nurses to develop tailored management strategies that not only address the immediate headache symptoms but also promote overall health and well-being [3].

Effective management strategies for primary headaches in primary care settings involve both pharmacologic and non-pharmacologic approaches. Pharmacological treatments may include over-the-counter analgesics, prescription medications, and preventive therapies, which are often modifications based on the intensity, frequency, and type of headache. Non-pharmacological treatments might encompass lifestyle modifications, stress management techniques, cognitive-behavioral therapies, and complementary therapies such as acupuncture or biofeedback. For nursing professionals, understanding these diverse treatment modalities is essential to providing comprehensive care that meets the unique needs of each patient [4].

In primary care practices, nursing assessment and management also require collaboration among healthcare providers to ensure continuity of care. This approach enhances communication among physicians, nurses, and allied health professionals, fostering an environment that encourages patient education, shared decision-making, and self-management strategies. Such collaboration is particularly vital for patients who experience chronic headache disorders, where multi-faceted treatment plans may be necessary to comprehensively address both acute and chronic manifestations of headaches.

Moreover, cultural competence emerges as a crucial aspect of nursing assessment and management of primary headaches. Nurses must consider the patient's cultural background, beliefs, and preferences, as these can significantly influence their perceptions of health, illness, and adherence to treatment recommendations. Building a culturally sensitive care plan enhances the likelihood of positive patient outcomes, fostering an effective therapeutic relationship centered on trust and respect [5].

Despite the importance of addressing primary headaches in primary care, several barriers exist that can hinder effective nursing management. These include time constraints during patient visits, varying levels of knowledge and training among nursing staff regarding headache disorders, and the perception of headaches as non-serious conditions. Overcoming these barriers requires ongoing professional development, access to headache management resources, and institutional support to prioritize headache assessments as an integral aspect of patient care [6].

Understanding Headache Types and Classifications:

Headaches are a common ailment that affects people of all ages and backgrounds. Defined as pain or discomfort in the head, scalp, or neck, headaches can range from mild to debilitating and can impact daily activities, productivity, and quality of life. Understanding the various types and classifications of headaches is essential for effective management and treatment [6].

The International Classification of Headache Disorders (ICHD) is a standardized system that categorizes headaches into two main groups: primary headaches and secondary headaches. Primary headaches are conditions that are not caused by an underlying health issue but are instead the headache itself. In contrast, secondary headaches are symptoms of an underlying pathology, such as an injury, infection, or other medical condition [7].

Primary Headaches

1. Tension-Type Headache (TTH)

Tension-type headaches are the most common form of primary headache. They are often characterized by a dull, aching pain that typically affects both

sides of the head. Patients may describe the pain as feeling like a tight band around their heads. Symptoms can also include tenderness in the scalp, neck, and shoulder muscles. Tension-type headaches are generally divided into two categories: episodic and chronic. Episodic TTH occurs infrequently, while chronic TTH occurs on 15 or more days per month for at least three months [8].

The etiology of TTH is complex, with contributing factors often including stress, anxiety, fatigue, and poor posture. Treatment for tension-type headaches often involves over-the-counter analgesics, lifestyle modifications, and relaxation techniques [9].

2. Migraine

Migraines are a more severe form of primary headache, often accompanied by other symptoms such as nausea, vomiting, and sensitivity to light and sound. Migraine attacks can last from a few hours to several days and may be preceded by an aura, which involves neurological symptoms such as visual disturbances or numbness [9].

While the exact cause of migraines is not fully understood, they are believed to involve changes in brain activity and blood flow, with a significant genetic component. Triggers can include hormonal changes, certain foods, environmental factors, and lifestyles. Treatment may include acute therapies, such as triptans, NSAIDs, and anti-nausea medications, as well as preventive medications for frequent sufferers [10].

3. Cluster Headache

Cluster headaches are a rare but extremely painful form of primary headache that occurs in cyclical patterns or clusters. The pain is often localized to one side of the head, typically around the eye, and is described as a sharp, burning, or piercing sensation. Cluster headaches can occur multiple times a day and normally last between 15 minutes to three hours.

The exact cause of cluster headaches is not known, but they are believed to be linked to disruptions in the body's biological clock. Treatment options include abortive therapies, such as oxygen therapy and triptans, as well as preventive treatments such as corticosteroids and certain types of anticonvulsants [11].

Secondary Headaches

1. Medication Overuse Headache

Medication overuse headache (MOH) occurs when people take pain relief medications too frequently, often for another type of headache. This condition reinforces a cycle of worsening headaches due to rebound effects from the medications. MOH typically resolves when the overused medications are stopped, but this may require a careful and supervised plan [12].

2. Headaches Due to Trauma or Injury

Headaches can also occur as a result of head or neck injuries, such as concussions or whiplash. These headaches may develop shortly after the trauma or manifest later. Treatment focuses on addressing the underlying injury and may include pain management, physical therapy, and rest [13].

3. Sinus Headaches

Sinus headaches are related to sinusitis or inflammation of the sinus cavities. Symptoms can include pain in the forehead, cheeks, and behind the eyes, often accompanied by other sinus symptoms such as nasal congestion. Management typically includes treating the sinus infection or inflammation with decongestants, antihistamines, or antibiotics when necessary [13].

4. Serious Medical Conditions

Certain serious conditions can also lead to secondary headaches, including meningitis, brain tumors, and intracranial hemorrhage. Headaches associated with these conditions often have specific characteristics, such as sudden onset, worsening with specific movements, or presence of additional neurological symptoms. These cases require immediate medical attention and intervention [14].

Diagnosis and Management

Diagnosing headaches can be challenging given the heterogeneous nature of headache types. It often requires a thorough medical history, physical examination, and possibly imaging studies such as MRI or CT scans. Additionally, keeping a headache diary can provide valuable insights into triggers, duration, and effectiveness of treatments [15].

Management of headaches frequently involves a combination of pharmacological treatments—both abortive and preventive—as well as non-pharmacological interventions including lifestyle

changes, dietary modifications, physical therapy, and cognitive-behavioral strategies. Improving sleep hygiene, reducing stress, and engaging in regular exercise can enhance the overall treatment approach [15].

Comprehensive Nursing Assessment Protocols:

Nursing assessment is the cornerstone of the nursing process, serving as the first phase that leads to effective patient care. It is a systematic, continuous, and dynamic process that involves collecting, analyzing, and synthesizing information about a patient's health status. Comprehensive nursing assessment protocols encompass a range of techniques and guidelines aimed at ensuring that nurses collect essential data effectively while delivering holistic care [16].

Components of Comprehensive Nursing Assessment

A comprehensive nursing assessment typically encompasses several critical components: health history, physical examination, functional assessment, and psychosocial evaluation.

1. **Health History**: This component involves collecting data regarding the patient's medical history, including past illnesses, surgeries, medications, allergies, and family history. Understanding the context of a patient's health status helps nurses identify potential risk factors and the unique needs of each patient. Tools such as standardized questionnaires or clinical interview techniques are often utilized to elicit comprehensive health information [17].
2. **Physical Examination**: A systematic physical examination follows the health history. Nurses assess various body systems through inspection, palpation, percussion, and auscultation. This examination may be targeted based on the findings of the health history or performed comprehensively in situations where there are no readily apparent health issues. The physical examination aims to identify any abnormalities, assess functioning, and establish baseline data, serving as a reference point for future assessments [17].
3. **Functional Assessment**: This aspect evaluates a patient's ability to perform activities of daily living (ADLs), such as bathing, dressing, eating, and mobility. It is crucial for identifying the level of independence a patient possesses and any potential needs for support or rehabilitation. Tools such as the Katz ADL Scale or the Barthel Index may be employed to quantify functional abilities [18].
4. **Psychosocial Evaluation**: This component focuses on understanding the emotional, social, and environmental factors impacting a patient's health and well-being. It encompasses assessing mental health status, coping mechanisms, social support systems, and cultural considerations. Instruments such as the Patient Health Questionnaire (PHQ-9) for depression screening or the Generalized Anxiety Disorder Scale (GAD-7) help gauge psychological health [19].

Significance of Comprehensive Nursing Assessment

Comprehensive nursing assessments are vital for a variety of reasons. First and foremost, they promote patient safety by identifying clinical issues early and laying the foundation for timely interventions. Effective assessments enable nurses to prioritize care, ensuring they allocate resources and time where it is most needed [20].

Moreover, a thorough assessment enhances communication among the healthcare team. By documenting findings accurately and comprehensively, nurses contribute valuable information to the patient's medical record, facilitating collaborative planning and care. Interdisciplinary teams can align their interventions, thus improving the quality of care provided to patients [21].

In addition, continuous assessment contributes to quality improvement in healthcare settings. By gathering and analyzing data on patient outcomes over time, healthcare facilities can identify patterns, assess the effectiveness of interventions, and refine care processes to enhance patient care quality [22].

The methodologies for conducting comprehensive nursing assessments can vary across practice settings but generally adhere to established

frameworks. Several nursing assessment models and tools can guide the process:

1. **The Nursing Process**: The nursing process is a systematic problem-solving approach consisting of five steps: assessment, diagnosis, planning, implementation, and evaluation. In the assessment phase, nurses gather data to identify patient needs, culminating in a comprehensive plan of care [23].

2. **Holistic Nursing Assessment**: Holistic assessment emphasizes the interconnectedness of the mind, body, and spirit in health. Practitioners often adopt frameworks such as the nursing metaparadigms—person, environment, health, and nursing. This approach encourages a deeper understanding of the patient's experience and promotes patient-centered care [23].

3. **Standardized Assessment Tools**: Various validated tools exist to aid in conducting comprehensive assessments. For instance, the Morse Fall Scale assesses fall risk, while the Braden Scale evaluates pressure sore risk. These tools enhance objectivity and ensure that critical areas of assessment are not overlooked [23].

4. **Cultural Competency**: Given the diversity of patient populations, employing culturally competent assessment practices is vital. Nurses are encouraged to utilize culturally tailored approaches, ensuring that assessment methods respect beliefs, languages, and practices related to health among diverse groups [23].

Implementation of Comprehensive Nursing Assessment Protocols

Implementing comprehensive nursing assessment protocols requires a multifaceted approach that incorporates education, ongoing training, and supportive policies [24].

1. **Education and Training**: Continuous education and simulation training in assessment techniques play an essential role in ensuring nurses remain proficient. Formal nursing education programs should emphasize the importance of comprehensive assessments and include practical workshops and clinical placements [25].

2. **Policy Development**: Healthcare institutions should establish clear policies and guidelines regarding assessment protocols. Standardized nursing assessment forms and digital tools can assist nurses in conducting thorough evaluations while maintaining consistency in data collection [25].

3. **Interdisciplinary Collaboration**: Collaboration fosters a holistic understanding of the patient during assessments. Nurses should work closely with other healthcare professionals—physicians, therapists, and social workers—to ensure comprehensive understanding and management of patient needs [25].

4. **Utilizing Technology**: The integration of electronic health records (EHRs) can streamline the assessment process, allowing nurses to document findings electronically and access patient data efficiently. Telehealth technologies have also emerged as valuable tools for conducting assessments in remote or underserved areas [26].

5. **Quality Assurance and Improvement**: Regular audits and evaluations of assessment practices enhance accountability and adherence to protocols. Feedback mechanisms that encourage nurses to reflect on their assessment techniques contribute to ongoing professional development and improved patient care [26].

Identifying Headache Triggers and Risk Factors:

Headaches are among the most common ailments experienced by individuals of all ages. They can range from mild to severe, episodic to chronic, and can significantly impact one's quality of life. Understanding headache triggers and risk factors is crucial for effective management and prevention of these debilitating episodes [27].

Before exploring the triggers and risk factors associated with headaches, it is essential to understand the different types. The International Classification of Headache Disorders categorizes headaches into primary and secondary types [28].

Primary headaches include migraines, tension-type headaches, and cluster headaches. Migraines are typically characterized by intense, throbbing pain that is often accompanied by nausea, vomiting, and sensitivity to light and sound. Tension-type headaches are the most common and are usually described as a dull, aching sensation on both sides of the head. Cluster headaches, though less common, occur in cyclical patterns or clusters and are characterized by severe, unilateral pain, often accompanied by autonomic symptoms such as nasal congestion or tearing [28].

Secondary headaches are symptomatic of underlying medical conditions and can be triggered by factors such as infections (like sinusitis), head injuries, or structural issues in the skull.

Triggers are specific stimuli that can precipitate headache episodes. Various studies have identified a multitude of potential headache triggers, which can differ from person to person. Recognizing these triggers is pivotal for anyone suffering from frequent headaches [29].

Environmental Factors

1. **Weather Changes**: Many individuals report that changes in barometric pressure, temperature, and humidity can trigger headaches. Storm fronts, for example, may lead to increases in migraines for some individuals.
2. **Light and Sound**: Bright lights, especially fluorescent lighting, can be a significant trigger for migraines, as can loud noises. People with light sensitivity, or photophobia, may need to wear sunglasses in bright environments to prevent headache episodes.
3. **Air Quality**: Poor air quality, including exposure to pollutants or allergens, can trigger headaches. Conditions such as air pollution, smoke, and strong odors, including perfumes and cleaning agents, can contribute to the onset of headaches [30].

Dietary Factors

1. **Dehydration and Hunger**: Inadequate hydration can lead to tension-type headaches while skipping meals or prolonged fasting can trigger migraines. Maintaining regular eating and hydration schedules is essential.
2. **Caffeine**: Caffeine consumption can be a double-edged sword; it can both alleviate and provoke headaches. While small amounts of caffeine can relieve headache pain, withdrawal from caffeine can trigger migraines or headaches if consumed in large quantities regularly.
3. **Certain Foods**: Specific foods have been linked to headaches, particularly migraines. Common culprits include aged cheese, processed meats, chocolate, and foods containing monosodium glutamate (MSG) or nitrates. Keeping a food diary can help individuals identify and eliminate such dietary triggers [31].

Lifestyle Factors

1. **Stress**: Psychological stress is a well-known trigger for tension-type headaches. Stress reduction techniques, including mindfulness meditation, yoga, and regular physical exercise, can significantly mitigate headache frequency and severity [32].
2. **Sleep Patterns**: Irregular sleep patterns, such as insufficient sleep or excessive sleep, can trigger headaches. Maintaining a consistent sleep schedule and ensuring quality sleep can be beneficial for headache management [32].
3. **Hormonal Fluctuations**: For many women, hormonal changes related to menstruation, pregnancy, or menopause can trigger migraines. Tracking hormonal cycles may help in identifying and anticipating headaches [33].

Risk Factors for Headaches

Understanding the risk factors associated with headaches is equally important as identifying triggers. Some risk factors are inherently personal, while others may relate to lifestyle or environmental influences [34].

A family history of headaches can significantly increase an individual's likelihood of experiencing similar issues. Studying family medical history can provide insights into potential hereditary patterns and guide preventive measures [35].

Headaches can occur at any age, but certain demographic trends have been observed. For instance, migraines are more prevalent in women than men, particularly during their reproductive years. Puberty, menstruation, pregnancy, and menopause can contribute to the frequency and severity of migraines in women [36].

Individuals with certain medical conditions, such as anxiety, depression, or chronic pain disorders, often experience an increased frequency of headaches. Additionally, conditions such as hypertension and sleep apnea can also contribute to headache prevalence [37].

Pharmacologic Management Strategies:

Headaches are one of the most common medical conditions that affect individuals worldwide. They can range from mild tension-type headaches to severe migraines and cluster headaches. The pharmacological management of headaches is essential for alleviating symptoms, enhancing the quality of life, and improving the functional capabilities of patients [38].

Types of Headaches

Headaches can be broadly classified into two categories: primary and secondary headaches. Primary headaches are not caused by an underlying medical condition and include tension-type headaches, migraines, and cluster headaches. Secondary headaches, on the other hand, are symptomatic of another health issue, such as a sinus infection, hypertension, or head trauma [38].

1. **Tension-Type Headaches (TTH):** This is the most prevalent form of headache, characterized by a dull, aching pain that can surround the head. The underlying pathophysiology involves muscle tension and sensitivity in the cranial region, often exacerbated by stress and poor posture [39].
2. **Migraine:** This severe, often incapacitating headache is typically unilateral and associated with other symptoms such as nausea, vomiting, and sensitivity to light and sound. Migraines are thought to be the result of neurovascular dysfunction involving the trigeminovascular system, leading to inflammation and vasodilation [39].
3. **Cluster Headaches:** These headaches appear in cyclical patterns or clusters, typically characterized by intense, sharp pain localized around one eye. They are believed to be linked to abnormalities in the hypothalamus and circadian rhythms [40].
4. **Secondary Headaches:** These arise from other medical conditions. Examples include headaches due to infection, head trauma, or vascular abnormalities [40].

Pharmacological Management of Headaches

The pharmacological approach to headache management varies significantly based on the type and severity. It encompasses both acute and preventive treatment strategies.

Acute Treatment Strategies

Acute treatment, also known as abortive treatment, focuses on alleviating headache symptoms as fast as possible. The choice of medication often depends on the type of headache being treated [41].

1. **Tension-Type Headaches:** Over-the-counter analgesics such as aspirin, ibuprofen, or acetaminophen are commonly used for TTH management. In cases of chronic tension-type headaches, prescription medications such as muscle relaxants or certain antidepressants (e.g., amitriptyline) may be recommended as adjunct therapies [42].
2. **Migraines:** For acute migraine attacks, triptans (e.g., sumatriptan, rizatriptan) are often the first line of defense. These medications specifically target serotonin receptors, alleviating pain by promoting vasoconstriction. Other alternatives for migraine treatment include non-steroidal anti-inflammatory drugs (NSAIDs), antiemetics for associated nausea, and ergots (e.g., ergotamine) [42].
3. **Cluster Headaches:** The acute treatment of cluster headaches often involves the administration of 100% oxygen inhalation, which can provide quick relief. Triptans, particularly subcutaneous sumatriptan or intranasal zolmitriptan, are effective as well [43].

Preventive Treatment Strategies

Preventive strategies aim to reduce the frequency, duration, and intensity of headache attacks. These strategies are particularly important for individuals who experience frequent or debilitating headaches [44].

1. **Tension-Type Headaches:** For chronic cases, preventive treatments may include behavioral therapies, physical therapy, and medications such as tricyclic antidepressants, particularly amitriptyline. Non-pharmacological approaches such as cognitive-behavioral therapy (CBT) have also shown promise [44].
2. **Migraine:** Preventive therapies for migraines often include the use of beta-blockers (e.g., propranolol), anticonvulsants (e.g., topiramate), antidepressants (e.g., amitriptyline), and newer pharmacological classes such as calcitonin gene-related peptide (CGRP) inhibitors (e.g., erenumab) [44].
3. **Cluster Headaches:** Preventive treatments for cluster headaches include corticosteroids for short-term control, while long-term management may incorporate verapamil, a calcium channel blocker, or lithium. Occipital nerve blocks are also used in certain cases to mitigate the frequency of attacks [45].

Emerging Therapies

Recent years have witnessed advancements in headache management. New classes of medications, such as CGRP monoclonal antibodies, have emerged, proving effective for managing both episodic and chronic migraines. These biologic agents, including galcanezumab and fremanezumab, show promise due to their targeted action and favorable side effect profile [46].

Moreover, neuromodulation techniques, such as transcranial magnetic stimulation and peripheral nerve stimulation, are being explored as alternative or adjunct therapies for patients that are non-responsive to traditional pharmacological strategies [47].

Non-Pharmacologic Interventions for Headache Relief:

Headaches are a common ailment that affects a vast majority of the population at some point in their lives. These discomforting sensations can range from mild to debilitating and can significantly impair an individual's quality of life. While pharmacological approaches, such as over-the-counter pain relievers and prescription medications, are often used to alleviate headache symptoms, there is a growing interest in non-pharmacological interventions. These approaches are particularly valuable for individuals seeking alternatives to medication, those who experience chronic headaches, or those who wish to minimize the potential side effects and dependency associated with medications [48].

1. Lifestyle Modifications

A comprehensive understanding of headache triggers is essential in developing effective non-pharmacological interventions. Lifestyle modifications can play a pivotal role in alleviating headache frequency and intensity. Some common triggers include stress, poor sleep quality, dehydration, and dietary factors [49].

- **Hydration**: Dehydration is a significant trigger for headaches and can lead to tension-type headaches and migraines. Maintaining adequate hydration throughout the day by drinking water and consuming water-rich foods can help prevent headache onset.
- **Dietary Changes**: Nutrition significantly influences headache patterns. Certain foods, including aged cheeses, processed meats, and foods containing tyramine, can act as triggers. Keeping a headache diary can assist individuals in identifying specific food sensitivities, which can be avoided to minimize headache occurrences [49].
- **Sleep Hygiene**: Sleep disorders, including insomnia and sleep apnea, can exacerbate headache conditions. Establishing a regular sleep schedule, creating a comfortable sleep environment, and practicing good sleep hygiene can improve sleep quality and reduce headache frequency [50].
- **Stress Management**: Chronic stress is a well-known headache trigger. Techniques

such as time management, regular exercise, and engaging in enjoyable activities can reduce stress levels.

2. Physical Therapies

Physical therapies are increasingly recognized for their efficacy in managing headaches, especially tension-type headaches and cervicogenic headaches, which stem from issues in the cervical spine [51].

- **Massage Therapy**: Regular massage therapy targeting the neck, shoulders, and upper back can help alleviate muscle tension, which often contributes to tension-type headaches. Massage increases blood circulation, reduces muscle tightness, and promotes relaxation, serving as a constructive tool for headache management [51].
- **Physical Therapy and Exercises**: Consultation with a licensed physical therapist can provide individuals with personalized exercise programs that focus on strengthening the neck and upper back muscles. These exercises can improve posture, which is crucial for individuals who spend an extensive period seated at desks [52].
- **Chiropractic Care**: Chiropractic adjustments, particularly in the cervical area, can offer substantial relief for certain headache types. Research indicates that spinal manipulation therapy can reduce the intensity and frequency of headaches, particularly tension headaches and migraines [52].

3. Cognitive-Behavioral Strategies

Cognitive-behavioral therapy (CBT) is an evidence-based psychological intervention that can help individuals manage and prevent headaches through changing negative thought patterns and behaviors.

- **Cognitive Restructuring**: Individuals may develop maladaptive thought patterns that exacerbate stress and pain perception. CBT helps individuals identify negative beliefs related to their headaches and replace them with more positive and constructive thoughts [53].
- **Relaxation Techniques**: CBT often incorporates relaxation strategies that help reduce stress and tension. Techniques such as progressive muscle relaxation, guided imagery, and deep-breathing exercises can mitigate headache symptoms by promoting relaxation and reducing muscular tension [53].
- **Biofeedback**: This technique helps individuals become aware of physiological functions, such as muscle tension and heart rate, and learn how to control them. By monitoring physiological responses through sensors and displaying feedback in real time, individuals can learn to manage their body's responses to stress and tension, potentially reducing headache occurrence and severity [54].

4. Mindfulness and Alternative Therapies

Mindfulness practices and alternative therapies offer unique approaches to headache management that involve enhancing overall well-being and self-awareness.

- **Mindfulness Meditation**: Research has indicated that mindfulness meditation, which promotes a focused awareness on the present moment without judgment, can significantly reduce headache severity and frequency. By improving emotional regulation and reducing stress, mindfulness techniques can help individuals manage their pain perception [55].
- **Acupuncture**: Acupuncture, an ancient Chinese therapy involving the insertion of thin needles at specific points on the body, has been found effective for various types of headaches, particularly migraines. Studies suggest that acupuncture can reduce headache frequency and intensity by promoting the release of endorphins and improving blood flow [55].
- **Yoga and Tai Chi**: These mind-body practices combine physical movement with breath control and meditation, making them effective for headache management. Yoga has been shown to improve postural alignment, reduce muscle tension, and enhance mental relaxation, while Tai Chi promotes flexibility, balance, and stress relief [56].

Patient Education and Self-Management Techniques:

Headache diseases represent one of the most prevalent neurological disorders worldwide, affecting a significant portion of the population regardless of age, gender, or geographic location. They vary in intensity, frequency, and symptomatology, with the most common types being tension-type headaches, migraines, and cluster headaches. Given their widespread impact on quality of life, effective management strategies, including patient education and self-management, are crucial not only for alleviating symptoms but also for enabling patients to take control of their health [55].

Headaches can be classified into primary and secondary types. **Primary headaches** are conditions in which the headache itself is a primary disorder, including tension-type headaches, migraines, and cluster headaches. **Secondary headaches**, on the other hand, are secondary to other underlying conditions, such as sinus infections, head injuries, or neurological disorders. Understanding the type of headache one is experiencing is paramount for effective treatment and management [56].

Migraine is characterized by recurrent episodes of moderate to severe headaches, usually unilateral, and often accompanied by nausea, vomiting, and sensitivity to light or sound. Tension-type headaches are more commonly described as a feeling of tightness or pressure around the forehead or the back of the head and neck. Cluster headaches are intensely painful, occurring in "clusters" or episodes, often prevalent in men. Each type of headache presents unique challenges, underscoring the importance of educating patients about their specific type [56].

Patient education is a foundational component in managing headache diseases. It involves providing patients with comprehensive, accessible, and relevant information that helps them understand their condition, potential triggers, and available treatments. Proper education empowers individuals to recognize early warning signs, identify triggers, and make informed decisions about their health management [56].

1. **Understanding Triggers**: One critical element of education is helping patients identify headache triggers, which can vary significantly from one person to another. Common triggers include stress, dietary factors (such as caffeine or alcohol), hormonal changes, changes in sleep patterns, and environmental factors (like bright lights or strong odors). By understanding their triggers, patients can develop strategies to avoid them or mitigate their effects [57].
2. **Medication Education**: Patients frequently benefit from education regarding available pharmacological treatments. This includes understanding both acute medications (which are used to abort a headache) and preventive medications (which reduce the frequency or severity of headaches). Informing patients about the objectives, side effects, and appropriate usage of medications fosters adherence and promotes better outcomes [57].
3. **Alternative Therapies**: Education should also extend to alternative therapies, including cognitive behavioral therapy (CBT), mindfulness practices, acupuncture, and physical therapy, which have proven to relieve headache symptoms in many individuals. Knowing about such options enables patients to consider a multi-faceted approach to their treatment [58].
4. **Lifestyle Modifications**: Teaching patients about the benefits of specific lifestyle changes can play a pivotal role in managing headache diseases. Instructing patients on the importance of regular exercise, maintaining a consistent sleep schedule, practicing relaxation techniques, and adhering to a balanced diet can create significant improvements in their overall well-being and headache management.

Self-Management Techniques

While patient education lays the groundwork for understanding headache diseases, self-management techniques empower individuals to actively participate in their care and improve their quality of life. Self-management involves a combination of strategies that help individuals monitor and control their condition [58].

1. **Headache Diary**: Keeping a headache diary is a vital self-management tool that

helps patients track their headache occurrences, triggers, and the effectiveness of treatments. This record can reveal patterns that might otherwise remain unnoticed, facilitating tailored management strategies in collaboration with healthcare providers [59].

2. **Stress Management**: Given the relationship between stress and headaches, incorporating stress management techniques is essential. Practices such as mindfulness, meditation, yoga, and progressive muscle relaxation can mitigate stress levels and contribute to a reduction in headache frequency and severity.

3. **Ergonomics**: For many individuals, particularly those who work in desk jobs or spend extended periods on computers, ergonomics can significantly impact headache frequency. Educating patients about spinal alignment, proper seating position, and minimizing screen time can alleviate muscular tension that contributes to headaches [59].

4. **Hydration and Nutrition**: Dehydration is a common headache trigger. Patients need to be educated on maintaining adequate hydration levels and the potential impacts of skip meals, excessive caffeine consumption, and alcohol on headache exacerbation.

5. **Regular Physical Activity**: Exercise is beneficial for overall health and can help reduce the frequency and intensity of headaches. Patients should be encouraged to engage in regular, moderate physical activity, tailored to their capabilities, as a part of their self-management plan [59].

6. **Emergency Plans**: For patients with chronic headaches, especially those with migraines or cluster headaches, formulating an emergency plan can be essential for effective self-management. This plan should outline pre-emptive medications, lifestyle modifications, and coping strategies to use when a headache episode occurs [60].

7. **Peer Support**: Engaging with support groups or educational forums can provide encouragement, shared experiences, and coping strategies. Connecting with others who face similar challenges can foster a sense of community and reduce feelings of isolation [60].

Follow-Up Care and Outcome Evaluation:

Headaches are one of the most common health complaints, affecting individuals across all demographics and significantly impacting quality of life. Among these headaches, primary headaches, including migraines, tension-type headaches, and cluster headaches, have no identifiable secondary causes. As patients navigate the complexities of headache management, follow-up care and evaluation play crucial roles in ensuring effective treatment plans and enhancing patient outcomes [61].

Primary headaches are characterized as disorders where head pain itself is the primary problem. Unlike secondary headaches where symptoms are the result of another condition (e.g., infections or tumors), primary headaches are categorized by their own unique pathophysiology. Migraines, for example, are often vascular in nature, associated with changes in blood flow to the brain and may involve neurological disturbances, nausea, and sensitivity to light and sound. Tension-type headaches, the most prevalent form, are still poorly understood but are thought to be linked to muscle tension and psychological stress. Cluster headaches are less common but incredibly painful, often occurring in cyclical patterns [62].

As the prevalence of these conditions continues to rise, effective management becomes paramount. Follow-up care is integral to optimizing treatment strategies, tailoring personalized approaches, and enhancing communication between healthcare providers and patients.

Follow-up care encompasses ongoing support and evaluation of patients after an initial diagnosis or treatment. It aims to monitor treatment effectiveness, identify potential side effects, and support patients in understanding and managing their conditions. For primary headache sufferers, follow-up care can include various components: regular appointments, lifestyle assessments, and open channels for real-time reporting of headache frequency and severity [63].

1. **Regular Appointments**: Scheduled follow-ups are critical to ensuring that treatment plans remain effective. The

frequency of these appointments can vary but typically starts at monthly intervals for new patients or after treatment changes and can shift to quarterly or biannual check-ins for established patients. These meetings allow healthcare providers to evaluate headache frequency, duration, and intensity while assessing the effectiveness of prescribed medications or lifestyle interventions [64].

2. **Lifestyle Assessment**: Lifestyle factors, such as stress levels, sleep patterns, diet, and exercise, can substantially impact the frequency and intensity of headaches. During follow-up appointments, healthcare providers may use standardized questionnaires to evaluate these elements and recommend appropriate changes. Emphasizing the significance of holistic care, providers can integrate behavioral health approaches, physical therapy, or dietary modifications as part of a comprehensive management plan [65].

3. **Real-Time Reporting**: Technological advancements have facilitated innovative methods for patients to report headache history. Utilizing headache diaries or mobile applications allows patients to log headache episodes, triggers, and the efficacy of relief measures. Providers can review this data before follow-up appointments, making informed adjustments to treatment plans based on objective evidence [65].

Evaluation of Treatment Results

A vital component of follow-up care is the evaluation of treatment results. This process includes measuring the effectiveness of medications, understanding patient satisfaction, and assessing the overall impact on the patient's quality of life [66].

1. **Effectiveness of Medications**: Various medication types are prescribed for primary headache management, including acute treatments (abortive) for immediate relief and preventive medications aimed at reducing the frequency and severity of headaches. The evaluation of treatment results involves assessing patients' responses to these medications, which can be complex due to individual variability in reactions. Providers often utilize tools such as the Migraine Disability Assessment Scale (MIDAS) or the Headache Impact Test (HIT-6) to quantitatively assess treatment efficacy and consequent lifestyle limitations [66].

2. **Patient Satisfaction**: A subjective but critical metric of treatment success is patient satisfaction. Engagement with patients in discussions about their experiences regarding treatment side effects and their perceived effectiveness allows providers to make informed decisions. Tools such as patient-reported outcome measures (PROMs) can assist in quantifying patient satisfaction and encouraging open communication regarding treatment preferences and adherence challenges [67].

3. **Impact on Quality of Life**: Headaches can considerably detract from an individual's quality of life, affecting work, relationships, and general well-being. Therefore, follow-up evaluations often include quality-of-life assessments to gauge the broader effects of headache disorders. Favorable treatment outcomes should ideally correlate with improvements in daily functioning and emotional well-being, reinforcing the importance of holistic management strategies [68].

Conclusion:

In conclusion, the nursing assessment and management of primary headaches in primary care settings play a pivotal role in enhancing patient outcomes and improving quality of life. Through comprehensive assessments, nurses can accurately diagnose headache types, identify individual triggers, and tailor interventions to meet the unique needs of each patient. By combining pharmacologic treatments with non-pharmacologic strategies, such as lifestyle modifications and stress management techniques, nurses can empower patients to take an active role in their headache management.

Furthermore, ongoing patient education and follow-up care are essential components in ensuring effective treatment and long-term success. By fostering a supportive care environment and encouraging open communication, nurses can build strong therapeutic relationships that facilitate patient adherence to treatment plans. As primary headaches remain prevalent and can significantly impact daily

functioning, a proactive and holistic approach in nursing practice is crucial. Continued education and research in this field will further enhance nursing competencies and contribute to improved care for those suffering from primary headaches.

References:

1. Stovner L, Hagen K, Jensen R, Katsarava Z, Lipton R, Scher A, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia. 2007;27(3):193–210. doi: 10.1111/j.1468-2982.2007.01288.x.

2. Cooke LJ, Becker WJ. Migraine prevalence, treatment and impact: the Canadian Women and Migraine Study. Can J Neurol Sci. 2010;37(5):580–7. doi: 10.1017/s0317167100010738.

3. Lipton RB, Bigal ME, Diamond M, Freitag F, Reed ML, Stewart WF, et al. Migraine prevalence, disease burden, and the need for preventive therapy. Neurology. 2007;68(5):343–9. doi: 10.1212/01.wnl.0000252808.97649.21.

4. Latinovic R, Gulliford M, Ridsdale L. Headache and migraine in primary care: consultation, prescription, and referral rates in a large population. J Neurol Neurosurg Psychiatry. 2006;77(3):385–7. doi: 10.1136/jnnp.2005.073221.

5. Bigal M, Krymchantowski AV, Lipton RB. Barriers to satisfactory migraine outcomes. What have we learned, where do we stand? Headache. 2009;49(7):1028–41. doi: 10.1111/j.1526-4610.2009.01410.x.

6. Hazard E, Munakata J, Bigal ME, Rupnow MF, Lipton RB. The burden of migraine in the United States: current and emerging perspectives on disease management and economic analysis. Value Health. 2009;12(1):55–64. doi: 10.1111/j.1524-4733.2008.00404.x.

7. Brouwers MC, Kho ME, Browman GP, Burgers JS, Cluzeau F, Feder G, et al. AGREE II: advancing guideline development, reporting and evaluation in healthcare. CMAJ. 2010;182(18):E839–42. doi: 10.1503/cmaj.090449.

8. Muth C, Gensichen J, Beyer M, Hutchinson A, Gerlach FM. The systematic guideline review: method, rationale, and test on chronic heart failure. BMC Health Serv Res. 2009;9:74. doi: 10.1186/1472-6963-9-74.

9. The AGREE Collaboration Development and validation of an international appraisal instrument for assessing the quality of clinical practice guidelines: the AGREE project. Qual Saf Health Care. 2003;12(1):18–23. doi: 10.1136/qhc.12.1.18.

10. Fervers B, Burgers JS, Haugh MC, Latreille J, Mlika-Cabanne N, Paquet L, et al. Adaptation of clinical guidelines: literature review and proposition for a framework and procedure. Int J Qual Health Care. 2006;18(3):167–76. doi: 10.1093/intqhc/mzi108.

11. Scott NA, Moga C, Harstall C. Making the AGREE tool more user friendly: the feasibility of a user guide based on Boolean operators. J Eval Clin Pract. 2009;15(6):1061–73. doi: 10.1111/j.1365-2753.2009.01265.x.

12. Becker WJ, Gladstone JP, Aube M. Migraine prevalence, diagnosis, and disability. Can J Neurol Sci. 2007;34(Suppl 4):S3–9.

13. The AGREE Next Steps Consortium. Appraisal of Guidelines for Research & Evaluation II. London, UK: The AGREE Next Steps Consortium; 2009.

14. Yale University. GuideLine Implementability Appraisal (GLIA) New Haven, CT: Yale University; 2005.

15. Harstall C, Taenzer P, Angus DK, Moga C, Schuller T, Scott NA. Creating a multidisciplinary low back pain guideline: anatomy of a guideline adaptation process. J Eval Clin Pract. 2011;17(4):693–704. doi: 10.1111/j.1365-2753.2010.01420.x.

16. Shiffman RN, Dixon J, Brandt C, Essaihi A, Hsiao A, Michel G, et al. The GuideLine Implementability Appraisal (GLIA): development of an instrument to identify obstacles to guideline implementation. BMC Med Inform Decis Mak. 2005;5:23. doi: 10.1186/1472-6947-5-23.

17. Institute of Health Economics. Ambassador program guideline for management of primary headache in adults: background document.

Edmonton, AB: Institute of Health Economics; 2013.

18. Guideline for primary care management of headache in adults. Edmonton, AB: Toward Optimized Practice; 2012.

19. Groot P, Hommersom A, Lucas P. Adaptation of clinical practice guidelines. Stud Health Technol Inform. 2008;139:121–39.

20. Robbins MS, Lipton RB. The epidemiology of primary headache disorders. Semin Neurol. 2010;30(2):107–19. doi: 10.1055/s-0030-1249220.

21. Akpunonu BE, et al. Subcutaneous sumatriptan for treatment of acute migraine in patients admitted to the emergency department: a multicenter study. Ann Emerg Med. 1995;25(4):464–9. doi: 10.1016/s0196-0644(95)70259-8.

22. Corbo J, et al. Randomized clinical trial of intravenous magnesium sulfate as an adjunctive medication for emergency department treatment of migraine headache. Ann Emerg Med. 2001;38(6):621–7. doi: 10.1067/mem.2001.119424.

23. Oldman AD, et al. Pharmacological treatments for acute migraine: quantitative systematic review. Pain. 2002;97(3):247–57. doi: 10.1016/S0304-3959(02)00024-6.

24. Colman I, et al. Parenteral metoclopramide for acute migraine: meta-analysis of randomised controlled trials. Bmj. 2004;329(7479):1369–73. doi: 10.1136/bmj.38281.595718.7C.

25. Dodick D, et al. Consensus statement: cardiovascular safety profile of triptans (5-HT agonists) in the acute treatment of migraine. Headache. 2004;44(5):414–25. doi: 10.1111/j.1526-4610.2004.04078.x.

26. Vinson DR. Treatment patterns of isolated benign headache in US emergency departments. Ann Emerg Med. 2002;39(3):215–22. doi: 10.1067/mem.2002.121400.

27. Jones J, et al. Randomized double-blind trial of intravenous prochlorperazine for the treatment of acute headache. Jama. 1989;261(8):1174–6.

28. Schreiber CP, et al. Prevalence of migraine in patients with a history of self-reported or physician-diagnosed “sinus” headache. Arch Intern Med. 2004;164(16):1769–72. doi: 10.1001/archinte.164.16.1769.

29. Loder E. Safety of sumatriptan in pregnancy: a review of the data so far. CNS Drugs. 2003;17(1):1–7. doi: 10.2165/00023210-200317010-00001.

30. Winner P, et al. A double-blind study of subcutaneous dihydroergotamine vs subcutaneous sumatriptan in the treatment of acute migraine. Arch Neurol. 1996;53(2):180–4. doi: 10.1001/archneur.1996.00550020092020.

31. Vinson DR. Diphenhydramine in the treatment of akathisia induced by prochlorperazine. J Emerg Med. 2004;26(3):265–70. doi: 10.1016/j.jemermed.2003.11.011.

32. Hunter JG, et al. The efficacy of subcutaneous sumatriptan in the treatment of acute migraine. N Engl J Med. 1991;325(5):316–21. doi: 10.1056/NEJM199108013250504.

33. Friedman BW, et al. A clinical trial of trimethobenzamide/diphenhydramine versus sumatriptan for acute migraines. Headache. 2006;46(6):934–41. doi: 10.1111/j.1526-4610.2006.00467.x.

34. Dodick D, Silberstein S. Central sensitization theory of migraine: clinical implications. Headache. 2006;46(Suppl 4):S182–91. doi: 10.1111/j.1526-4610.2006.00602.x.

35. Vinson DR, Migala AF, Quesenberry CP. Slow infusion for the prevention of akathisia induced by prochlorperazine: a randomized controlled trial. J Emerg Med. 2001;20(2):113–9. doi: 10.1016/s0736-4679(00)00297-3.

36. Miner JR, et al. Droperidol vs prochlorperazine for benign headaches in the emergency department. Acad Emerg Med. 2001;8(9):873–9. doi: 10.1111/j.1553-2712.2001.tb01147.x.

37. Burstein R, Collins B, Jakubowski M. Defeating migraine pain with triptans: a race against the development of cutaneous allodynia. Ann Neurol. 2004;55(1):19–26. doi: 10.1002/ana.10786.

38. Ridsdale L. ‘I saw a great star, most splendid and beautiful’: headache in primary care. Br J Gen Pract. 2003;53(488):182–184.

39. Rasmussen BK. Epidemiology of headache. Cephalalgia. 1995;15(1):45–68. doi: 10.1046/j.1468-2982.1995.1501045.x.

40. Wonderling D, Vickers AJ, Grieve R, McCarney R. Cost effectiveness analysis of a randomized trial of acupuncture for chronic headache in primary care. BMJ. 2004;328(7442):747. doi: 10.1136/bmj.38033.896505.EB.

41. Dowson AJ, Bradford S, Lipscombe S, et al. Managing chronic headaches in the clinic. Int J Clin Pract. 2004;58(12):1142–1151. doi: 10.1111/j.1742-1241.2004.00341.x.

42. Lipton RB, Hamelsky SW, Stewart WF. Epidemiology and impact of headache. In: Silberstein SD, Lipton RB, Dalessio DJ, editors. Wolff's headache and other head pain. 7th edn. New York: Oxford University Press; 2001. pp. 85–107.

43. Hu H, Markson LE, Lipton RB, et al. Burden of migraine in the United States: disability and economic costs. Arch Int Med. 1997;159(8):813–818. doi: 10.1001/archinte.159.8.813.

44. Headache Classification Committee of the International Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. Cephalalgia. 1988;8(Suppl 7):1–96.

45. Murray CJ, Lopez AD. Regional patterns of disability-free life expectancy and disability-adjusted life expectancy: Global Burden of Disease Study. Lancet. 1997;349(9062):1347–1352. doi: 10.1016/S0140-6736(96)07494-6.

46. Silberstein SD, Lipton RB. Epidemiology of migraine. Neuroepidemiology. 1993;12(3):179–194. doi: 10.1159/000110317.

47. Menken M, Munsat TL, Toole JF. The global burden of disease study: implications for neurology. Arch Neurol. 2000;57(3):418–420. doi: 10.1001/archneur.57.3.418.

48. Lipton RB, Stewart WF, Simon D. Medical consultation for migraine: results from the American Migraine Study. Headache. 1998;38(2):87–96. doi: 10.1046/j.1526-4610.1998.3802087.x.

49. Dowson AJ. Your questions answered: migraine and other headaches. Edinburgh: Churchill Livingstone; 2003.

50. Lipton RB, Stewart WF. Migraine in the United States: a review of epidemiology and health care use. Neurology. 1993;43(6 Suppl 3):6–10.

51. Stewart WF, Lipton RB. Migraine headache: epidemiology and health care utilization. Cephalalgia. 1993;13(Suppl 12):41–46. doi: 10.1177/0333102493013S1209.

52. Rasmussen BK. Epidemiology and socio-economic impact of headache. Cephalalgia. 1999;19(Suppl 25):S20–S23. doi: 10.1177/0333102499019s2505.

53. Ramadan NM, Silberstein SD, Freitag FG, et al. US Headache Consortium; 2000. Evidence-based guidelines for migraine headache in the primary care setting: Pharmacological management for prevention of migraine.

54. Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders: 2nd edn. Cephalalgia. 2004;24(Suppl 1):9–160. doi: 10.1111/j.1468-2982.2003.00824.x.

55. Cull RE, Wells NEJ, Miocevich ML. The economic cost of migraine. Br J Med Econ. 1992;2:103–115.

56. Nash JM, Park ER, Walker BB, et al. Cognitive behavioural group treatment for disabling headache. Pain Med. 2004;5(2):178–186. doi: 10.1111/j.1526-4637.2004.04031.x.

57. Evers S, Afra J, Frese A, Goadsby PJ, Linde M, May A, et al. EFNS guideline on the drug treatment of migraine—revised report of an EFNS task force. Eur J Neurol. 2009;16(9):968–81.

58. Canadian Medical Association. CMA Infobase: clinical practice guidelines database. Record ID 13271. Ottawa, ON: Canadian Medical Association; 2013.

59. May A, Leone M, Afra J, Linde M, Sandor PS, Evers S, et al. EFNS guidelines on the treatment of cluster headache and other trigeminal-autonomic cephalalgias. Eur J Neurol. 2006;13(10):1066–77.

60. Ramadan NM, Silberstein SD, Freitag F, Gilbert TT, Frishberg BM. Evidence-based guidelines for migraine headache in the primary care setting: pharmacological management for prevention of migraine. St Paul, MN: US Headache Consortium; 2000.

61. Lipton RB, Dodick D, Sadovsky R, Kolodner K, Endicott J, Hettiarachchi J, et al. A self-administered screener for migraine in primary care: the ID Migraine validation study. Neurology. 2003;61(3):375–82.

62. Géraud G, Lantéri-Minet M, Lucas C, Valade D, French Society for the Study of Migraine Headache (SFEMC). French guidelines for the diagnosis and management of migraine in adults and children. Clin Ther. 2004;26(8):1305–18.

63. Bendtsen L, Evers S, Linde M, Mitsikostas DD, Sandrini G, Schoenen J. EFNS guideline on the treatment of tension-type headache—report of an EFNS task force. Eur J Neurol. 2010;17(11):1318–25.

64. Matchar DB, Young WB, Rosenberg JH, Pietrzak MP, Silberstein SD, Lipton RB, et al. Evidence-based guidelines for migraine headache in the primary care setting: pharmacological management of acute attacks. St Paul, MN: US Headache Consortium; 2000.

65. Campbell JK, Penzien DB, Wall EM. Evidence-based guidelines for migraine headache: behavioral and physical treatments. St Paul, MN: US Headache Consortium; 2000.

66. Scottish Intercollegiate Guidelines Network. Diagnosis and management of headache in adults. A national clinical guideline. Publication no. 107. Edinburgh, Scotland: Scottish Intercollegiate Guidelines Network; 2008.

67. Guideline summary. Rockville, MD: Agency for Healthcare Research and Quality; 2013. National Guideline Clearinghouse.

68. Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders: 2nd edition. Cephalalgia. 2004;24(Suppl 1):9–160.