# 1 Background information

Quick info:

**Objective and purpose of the care map**

The purpose of this care map is to define the appropriate diagnosis and management of headaches in adults. The objective is to improve the appropriateness of investigation, prescribing and referral of patients presenting, to healthcare provider organisations in Qatar. It is intended that the guideline will be used primarily by physicians in both primary care and secondary care outpatient settings.

**Scope of the care map**

Aspects of care covered in this care map include the following:

- Diagnosis and assessment of headaches presenting in adults aged over 18 years.
- Diagnosis and management of primary headaches, including:
  - Migraine.
  - Tension headache.
  - Cluster headache, i.e. TACs.
- Consideration of MOH.
- Red flags and indications for emergency referral.

Aspects of care covered in this care map include the following:

- Management of the serious pathological causes of headache.

## Primary headaches

Primary headaches are headaches that do not have an underlying pathological cause [1,2].

- The most common types of primary headache include [3]:
  - Tension-type headaches.
  - Migraine headaches.
  - Cluster headaches.

### TTH

TTH are typically described as an episodic, non-pulsating, bilateral headache which is usually mild to moderate in severity [1,4].

- There are two subtypes of tension headache [4]:
  - Episodic TTH:
    - Intermittent TTH that occurs for up to 1-14 days per month.
  - Chronic TTH:
    - TTH that lasts for ≥ 15 days per month.

### Migraine headaches

Migraine headaches are typically described as recurrent episodic, pulsating, unilateral headaches of moderate to severe intensity lasting 4-72 hours. Migraines are typically triggered by a variety of stimuli and are often accompanied by nausea and vomiting [1,3,5-7][L2].

- There are two major subtypes of migraine [1,3]:
  - Migraine with aura:
    - A clinical syndrome characterised by gradual development of recurrent and fully reversible unilateral visual, sensory, or central nervous features lasting several minutes and usually followed by a headache within one hour [1,3].
  - Migraine without aura:
    - Migraine headaches that occur in the absence of visual, sensory, or central nervous features [1].

### Cluster headaches

Cluster headaches are typically described as attacks of severe, strictly unilateral pain which is orbital, supraorbital or temporal (or in any combination of these sites) and last for 15-180 minutes. Cluster headaches tend to occur in frequencies ranging from once every other day to up to 8 times a day [1].

### Secondary headaches

Secondary headaches are headaches in which an underlying pathological condition is found [1,2].

The various pathologies that may cause secondary headaches include [1,3,6]:

- Vascular headaches, e.g.:
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- Intracranial haemorrhage.
- Carotid dissection.
- Vasculitis including:
  - Temporal arteritis.
- Non-vascular headaches, e.g.:
  - Raised intracranial pressure, e.g. from:
    - Space-occupying lesion.
    - Idiopathic intracranial hypertension.
- Intracranial or systemic infections, e.g.:
  - Encephalitis.
  - Meningitis.
  - Brain abscess.
- Substance misuse or withdrawal, including:
  - Medication-overuse headache:
    - Medication overuse headache is described as a headache that lasts ≥10-15 days for a period of ≥3 months in patients who regularly use medication. The duration of headache depends on type of medication used.
  - Illicit drug use.
- Trauma of the head or neck, e.g.:
  - Head Injury.
  - Whiplash.
- Disorders of surrounding structures, e.g.:
  - Acute glaucoma.
  - Sinusitis.
- Disorders of homeostasis, e.g.:
  - Hypertensive headache.
  - Hypoxia/hypercapnia-induced headache.
- Psychiatric conditions, e.g.:
  - Somatoform disorder.

**Epidemiology**

Headache is a very common clinical disorder and is one of the main reasons for patients to consult a primary care physician [6]. The prevalence of headache in Qatar may be as high as 72.5%, with prevalences for subtypes reported as follows [8,9]:

- Migraine headache: 7.9%.
- TTH: 11.2%.
- Mixed-type headaches: 16%.

References:

Please see the care map's Provenance.

## 2 Key recommendations of this care map

**Quick info:**

The key recommendations of this care map are:

**Investigation:**

- Is indicated only when history or examination suggest headache is secondary to another condition [6][L2].
- Is not recommended simply to reassure patients who have a primary headache [6][L2, RGA1].
- Neuroimaging and lumbar puncture may be appropriate for patients presenting with red flag symptoms or signs (see the 'RED FLAG - Refer to emergency and carry out investigations' care point on the 'Headache assessment' page) [2,10-12].

**TTH:**

When considering management options for TTH note that [4][L2]:
• The type of management depends on the nature of the TTH:
  • Use acute drugs in episodic TTH:
    • Use simple analgesia as first-line treatment [2][L1, RGA1].
    • Use combination analgesics containing caffeine as second-line treatments [2,4][L1, RGA1].
  • Use prophylactic drugs in chronic TTH:
    • Use amitriptyline as first-line prophylaxis [4,6][L2, RGA2].
    • Use either mirtazapine, venlafaxine, or gabapentin as alternative prophylactic choices [4,6][L2, RGA2].
    • Analgesics are often ineffective in chronic TTH.
• Non-pharmacological treatment of chronic TTH should always be considered (see the 'Non pharmacological therapy' care point on the 'Tension-type headache - Management' page).

**Migraine headaches:**

**Pharmacological treatment of migraine:**

• Simple analgesia:
  • Use paracetamol for migraines of mild to moderate severity [2,6][L1, RGA1].
  • Use an NSAID for migraines of all severities [2][L1, RGA1].
• Triptans (available triptans in Qatar) are:
  • Oral zolmitriptan and both oral and subcutaneous sumatriptan.
  • Consider subcutaneous sumatriptan (6 mg) [2][L1, RGA1]:
    • In severe migraine and those who were not adequately managed with oral Triptans or those with vomiting early on during migraine attacks.
    • Consider a combination of oral sumatriptan (50-100 mg) and naproxen sodium (500-550 mg) [2][L1, RGA1]:
      • This may be particularly useful in patients with prolonged attacks and/or headache recurrence.
  • Consider an oral anti-emetic even in the absence of nausea or vomiting [2,15][L1].

**Pharmacological prophylaxis of migraine:**

• Consider using one of the following as prophylactic treatment [2,6,16][L1, RGA1]:
  • Beta-blockers.
  • ARBs and ACE inhibitors.
  • Calcium-channel blockers.
  • Antidepressants.
  • Antiepileptics.

**Cluster headaches:**

• Refer all patients with a first-episode of cluster headache to a neurologist to confirm the diagnosis [R-GDG].
• Acute treatment options include:
  • 100% oxygen therapy [2,3][L2].
  • Subcutaneous triptan [3,23][L2].
• Acute treatment should not include any of the following [3][L2]:
  • Paracetamol.
  • NSAIDs.
  • Opioids.
  • Ergots.
• Transitional preventative treatment allows for rapid suppression of cluster attacks in the interim until the maintenance prophylaxis reaches therapeutic levels [18]. Options include [2,6,18]:
  • Corticosteroids:
    • Occipital nerve block.
  • The goal of maintenance prophylaxis is to provide sustained suppression of headaches during the expected cluster period [2,22]:
    • Use verapamil as first-line prophylaxis.
    • Use lithium as second-line prophylaxis.
• Melatonin may also be used in some patients [2][L1, RGA1].

MOH:
• Medication withdrawal should be attempted in all patients with MOH [2][L3].
• Consider prescribing prophylactic treatment for the underlying primary headache disorder in addition to withdrawal of overused medication [3][L2].
• Do not routinely offer inpatient withdrawal for MOH [3].
• Consider specialist inpatient withdrawal of overused medication for patients [3][L2]:
  • Who are using strong opioids; or
  • Who have relevant comorbidities; or
  • In whom previous repeated attempts at withdrawal of overused medication have been unsuccessful.
• Conduct a review [3,6]:
  • After 2-3 weeks to ensure withdrawal is achieved.
  • After 4-8 weeks to review the diagnosis and further management.
  • Most patients revert to their original headache type, e.g. migraine or TTH within 2 months – further follow up may be necessary during this time [6,25]:
    • Overused medications may be reintroduced after 2 months, with explicit restrictions on frequency of use.
• Relapse is common and occur within the first year after withdrawal [6].
• Consider treatment with behavioural therapies [6][L2].
• Manage failure to withdraw by [6][L2]:
  • Identifying and managing reasons for failure or relapse.
  • Considering counselling.
  • Referral to a neurologist for assessment and further management.
• In some cases, withdrawal of overused medication does not lead to recovery from headaches [6][L2].

References:
Please see the care map's Provenance.

3 Updates to this care map

Quick info:
Date of publication: 19-Mar-2017
Please see the care map's Provenance for additional information on references, contributors, and the editorial approach.

4 Abbreviations used in this care map

Quick info:
The abbreviations used in this guideline are as follows:
ACE
Angiotensin converting enzyme
ARBs
Angiotensin receptor blockers
CBT
Cognitive behavioural therapy
COCP
Combined oral contraceptive pill
COPD
Chronic obstructive pulmonary disease
ECG
Electrocardiogram
EMG
Electromyography
Headache assessment
Medicine > Neurology > Headache in adults

6 History

Quick info:
Take a comprehensive medical history including the following aspects of the headache [2,6][L2, RGA2]:

- Temporal profile.
- Character.
- Pain location.
- Exacerbating or alleviating factors.
- Health between attacks.

Consider the presence of co-existent conditions that may influence treatment choice:

- Depression.
- Insomnia.
- Anxiety.
- Asthma.
- Hypertension.
- History of heart disease or stroke.

References:
Please see the care map's Provenance.

7 Examination

Quick info:
Conduct a physical examination including [2,5,6]:

- Vital signs.
- Examination of extracranial structures, such as:
  - Carotid arteries.
  - Sinuses.
  - Scalp arteries.
  - Cervical para-vertebral muscles for abnormalities.
- Neck examination including:
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- Neck posture.
- Range of movement.
- Palpation of muscle for tender points.
- Focused neurological examination.

Consider performing the following, if indicated [2]:
- Examine for temporomandibular joint disorders:
  - Assess jaw movements.
  - Palpate the muscles of mastication for tender points.
- Eye examination.

References:
Please see the care map's Provenance.

8 RED FLAGS! - Indications for emergency referral and investigations

Quick info:
The indications for emergency referral and investigation are as follows [2,10-12]:
- First and/or worst headache of the patient’s life.
- Focal neurological signs (other than typical migrainous aura).
- Headache with change in personality, mental status or level of consciousness.
- Symptoms or signs of raised intracranial pressure, e.g. headache worsening with Valsalva manoeuvre or papilloedema.
- Rapid onset headache with exercise.
- New headache in older patients (aged over 50 years).
- New headache in pregnancy or the post-partum period.
- New-onset headache in a patient with risk factors for HIV infection, cancer, or immunosuppression.
- Headache with signs of systemic illness (e.g. fever, stiff neck, rash).
- Sudden onset of headache (maximal intensity within seconds to minutes).
- Tenderness over the temporal artery.
- Headache subsequent to head trauma.
- Headache increasing in frequency and severity.
- History of dizziness or lack of coordination.
- Headache associated with severe unilateral eye pain, red eye, fixed and dilated pupil, hazy cornea, or diminished vision.

References:
Please see the care map's Provenance.

9 Investigations

Quick info:
Investigation of headache:
- Is indicated only when history or examination suggest headache is secondary to another condition [6][L2].
- Is not recommended simply to reassure patients who have a primary headache [6][L2, RGA1].

NB: Neuroimaging and lumbar puncture may be appropriate for patients presenting with red flag symptoms or signs (see the "RED FLAGS!" node) [2,10-12].

References:
Please see the care map's Provenance.

10 Primary headache

Quick info:
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Primary headaches are headaches that do not have an underlying pathological cause [1,2].

- The most common types of primary headache include [3]:
  - Tension-type headaches.
  - Migraine headaches.
  - Cluster headaches.

References:
Please see the care map's Provenance.

11 Secondary headache

Quick info:
Secondary headaches are headaches in which an underlying pathological condition is found [1,2].

The various pathologies that may cause secondary headaches include [1,3,6]:

- Vascular headaches, e.g.:
  - Intracranial haemorrhage.
  - Carotid dissection.
  - Vasculitis including:
    - Temporal arteritis.
- Non-vascular headaches, e.g.:
  - Raised intracranial pressure, e.g. from:
    - Space-occupying lesion.
    - Idiopathic intracranial hypertension.
- Intracranial or systemic infections, e.g.:
  - Encephalitis.
  - Meningitis.
  - Brain abscess.
- Substance misuse or withdrawal, including:
  - Medication-overuse headache:
    - Medication overuse headache is described as a headache that lasts \( \geq 10-15 \) days for a period of \( \geq 3 \) months in patients who regularly use medication. The duration of headache depends on type of medication used.
  - Illicit drug use.
- Trauma of the head or neck, e.g.:
  - Head injury.
  - Whiplash.
- Disorders of surrounding structures, e.g.:
  - Acute glaucoma.
  - Sinusitis.
- Disorders of homeostasis, e.g.:
  - Hypertensive headache.
  - Hypoxia/hypercapnia-induced headache.
- Psychiatric conditions, e.g.:
  - Somatoform disorder.

References:
Please see the care map's Provenance.

12 Tension-type headache

Quick info:
14  Cluster headache

Quick info:
Typical features of a cluster headache [1-3,5,21]:
  • Pain is defined as:
    • Unilateral (around the eye, above the eye, and along the side of the head/face).
    • Severe or very severe intensity.
    • Variable quality (can be sharp, boring, burning, throbbing, or tightening).
  • Rapid onset and short-lasting, for 15-180 minutes.
  • Patient is restless during an attack.
  • Often a striking circadian or circannual rhythm.
  • Attacks may be associated with migrainous features such as photophobia, phonophobia, nausea, and vomiting.
Highly characteristic and strictly ipsilateral autonomic features, including any of the following [3]:
  • Red and/or watery eye.
  • Nasal congestion and/or runny nose.
  • Swollen eyelid.
  • Forehead and facial sweating.
  • Constricted pupil and/or drooping eyelid.

Paroxysmal hemicranias [1]:
  • Are attacks with similar characteristics of pain and associated symptoms and signs to those of cluster headaches but are shorter-lasting, more frequent and do not occur in males.

NB: Refer all patients with a first-episode of cluster headache should be referred to a neurologist to confirm the diagnosis [R-GDG].

References:
Please see the care map's Provenance.

15  Medication overuse headache

Quick info:
If taken too frequently, acute medications may worsen a pre-existing headache disorder. Patients who suffer from migraines and other chronic pain disorders appear to be particularly vulnerable to developing a medication overuse headache [2].
Clinical features include [3,6,18]:
  • Headache that has developed or worsened while the patient is taking the following drugs for $\geq$ 3 months:
    • Taking for 10 days per month or more:
      • Triptans.
      • Opioids.
      • Ergots.

References:
Please see the care map's Provenance.
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- Combination analgesic medications containing barbiturates, caffeine, and/or codeine.
  - Taking for 15 days per month or more, either alone or in combination:
    - Paracetamol.
    - Regular-dose aspirin or other NSAIDs.

References:
Please see the care map's Provenance.

16 Episodic type TTH

Quick info:
Clinical diagnostic features include [1,2][L2, RGB]:
- ≤ 10 episodes of headache occurring on average < 1 day per month; and
- Duration lasting from 30 mins to 7 days; and
- Both of the following features:
  - No nausea or vomiting.
  - Either none or one of the following:
    - Photophobia; or
    - Phonophobia.
- The patient has at least two of the following:
  - Bilateral location.
  - Pressing/tightening (non-pulsating) quality.
  - Mild-to-moderate intensity.
  - Not aggravated by routine physical activity.
- Not attributed to another disorder.

NB: Episodic TTH often coexists with migraine without aura [1,2].

References:
Please see the care map's Provenance.

17 Chronic TTH

Quick info:
Chronic TTH clinical features include [1,6]:
- Headache occurring on ≥ 15 days per month on average for ≥ 3 months.
- Headache lasts hours or may be continuous.
- Has at least two of the following characteristics:
  - Bilateral location.
  - Pressing/tightening (non-pulsating) quality.
  - Mild-to-moderate intensity.
  - Not aggravated by routine physical activity.
- Has both of the following features:
  - No nausea or vomiting.
  - Either photophobia or phonophobia.
- May be stress-related or associated with functional or structural cervical or cranial musculoskeletal abnormality.
- Headache not attributed to another disorder.

References:
Please see the care map's Provenance.
19 Migraine without aura

Quick info:
Clinical diagnostic criteria [1,2][L2]:
At least 5 attacks of:
• Headache lasting 4-72 hours.
  • Associated with at least two of the following:
    • Unilateral headache.
    • Pulsatile quality.
    • Moderate or severe intensity.
    • Aggravation or avoidance of routine physical activity.
  • At least one of the following occurs during the headache:
    • Nausea and/or vomiting.
    • Photophobia and phonophobia.
NB: Episodic TTH often coexists with migraine without aura [1,2].
References:
Please see the care map's Provenance.

20 Migraine with aura

Quick info:
Clinical diagnostic criteria [2,3,5,6][L2]:
• At least two attacks of:
  • One or more of the following, fully-reversible aura symptoms:
    • Visual.
    • Sensory.
    • Speech or language disturbance.
    • Motor disturbance.
    • Brainstem symptoms.
    • Retinal symptoms.
  • At least two of the following:
    • At least one aura symptom that spreads gradually over ≥ 5 mins and/or two aura symptoms occurring in quick succession.
    • Each individual aura symptom last 5-60 mins (motor symptoms may last up to 72 hours).
    • At least one aura symptom is unilateral.
    • Headache occurs either with aura or followed within 60 mins of the aura.
  • Transient ischaemic attack is excluded.
References:
Please see the care map's Provenance.

21 Chronic migraine

Quick info:
Diagnose chronic migraine when [2][L2]:
• The patient fulfils the criteria for a migraine diagnosis; and
• The patient experiences ≥ 15 days of migraine per month for > 3 months; or ≥ 8 migrainous attacks per month.
Chronic migraine with medication overuse may be diagnosed if [2][L2]:
• The patient uses any of the following for ≥ 10 days per month:
  • Opioids.
22 Hormone-related migraine

Quick info:
Menstrual migraine [3,6][L2, RGA2]:
- Should be suspected in female patients who experience migraines between 2 days prior and 3 days post menstruation in at least 2 of 3 consecutive menstrual cycles:
  - Confirm diagnosis using a headache diary for at least two menstrual cycles.
- Subtypes include:
  - Pure menstrual migraine:
    - Patient is free from migraine at all other times.
    - Affects < 10% of patients with migraine.
  - Menstrually-related migraine:
    - Additional attacks of migraine (with or without aura) at other times.

Menopause [6]:
- May exacerbate migraine, particularly if surgically-induced without replacement therapy.
- HRT is not contraindicated.

COCP [3,6,16,18,20]:
- Should not be prescribed to women with migraine with aura.
- Are contraindicated in patients with migraine treated with ergotamine.
- Should be stopped in patients who develop new:
  - Migraine with aura.
  - Focal neurological signs.

NB: Progesterone-only contraceptives are indicated in these circumstances [16].

References:
Please see the care map's Provenance.

23 Migraine during pregnancy

Quick info:
Migraine during pregnancy frequently improves but may recur following childbirth [6].

References:
Please see the care map's Provenance.

24 Complications of chronic migraine

Quick info:
Complications of chronic migraine include [4,8]:
- Status migrainosus – a debilitating migraine which lasts for > 72 hours.
- Persistent aura without infarction – aura symptoms lasting for ≥ 1 week with no radiographic evidence of infarction.
• Migrainous infarction – when symptoms of aura last for ≥ 60 minutes and neuroimaging shows signs of infarction.
• Increased risk of ischaemic stroke.

References:
Please see the care map's Provenance.
Headache in adults

Provenance Certificate

Overview

This guideline document has been developed and issued by the Ministry of Public Health of Qatar (MOPH), through a process which aligns with international best practice in guideline development and localisation. The guideline will be reviewed on a regular basis and updated to incorporate comments and feedback from stakeholders across Qatar.

Whilst the MOPH has sponsored the development of the care map, the MOPH has not influenced the specific recommendations made within it.

This care map was approved on 19 Mar 2017.

For information on changes in the last update, see the information point entitled 'Updates to this care map' on each page of the care map.

Editorial approach

This care map has been developed and issued by the Ministry of Public Health of Qatar (MOPH), through a process which aligns with international best practice in guideline development and localisation. The care map will be reviewed on a regular basis and updated to incorporate comments and feedback from stakeholders across Qatar.

The editorial methodology, used to develop this care map, has involved the following critical steps:

- Extensive literature search for well reputed published evidence relating to the topic.
- Critical appraisal of the literature.
- Development of a draft summary guideline.
- Review of the summary guideline with a Guideline Development Group, comprised of practising physicians and subject matter experts from across provider organisations in Qatar.
- Independent review of the guideline by the Clinical Governance body appointed by the MOPH, from amongst stakeholder organisations across Qatar.

Explicit review of the care map by patient groups was not undertaken.

Whilst the MOPH has sponsored the development of the care map, the MOPH has not influenced the specific recommendations made within it.

Sources of evidence

The professional literature published in the English language has been systematically queried using specially developed, customised, and tested search strings. Search strategies are developed to allow efficient yet comprehensive analysis of relevant publications for a given topic and to maximise retrieval of articles with certain desired characteristics pertinent to a guideline.

For each guideline, all retrieved publications have been individually reviewed by a clinical editor and assessed in terms of quality, utility, and relevance. Preference is given to publications that:

1. Are designed with rigorous scientific methodology.
2. Are published in higher-quality journals (i.e. journals that are read and cited most often within their field).
3. Address an aspect of specific importance to the guideline in question.

Where included, the ‘goal length of stay’ stated within this guideline is supported by and validated through utilisation analysis of various international health insurance databases. The purpose of database analysis is to confirm the reasonability and clinical appropriateness of the goal, as an achievable benchmark for optimal duration of inpatient admission.

Evidence grading and recommendations

Recommendations made within this guideline are supported by evidence from the medical literature and where possible the most authoritative sources have been used in the development of this guideline. In order to provide insight into the evidence basis for each recommendation, the following evidence hierarchy has been used to grade the level of authoritativeness of the evidence used, where recommendations have been made within this guideline.

Where the recommendations of international guidelines have been adopted, the evidence grading is assigned to the underlying evidence used by the international guideline. Where more than one source has been cited, the evidence grading relates to the highest level of evidence cited:

- **Level 1 (L1):**
  - Meta-analyses.
  - Randomised controlled trials with meta-analysis.
  - Randomised controlled trials.
  - Systematic reviews.

- **Level 2 (L2):**
  - Observational studies, examples include:
    - Cohort studies with statistical adjustment for potential confounders.
    - Cohort studies without adjustment.
    - Case series with historical or literature controls.
    - Uncontrolled case series.
  - Statements in published articles or textbooks.

- **Level 3 (L3):**
  - Expert opinion.
  - Unpublished data, examples include:
    - Large database analyses.
    - Written protocols or outcomes reports from large practices.

In order to give additional insight into the reasoning underlying certain recommendations and the strength of recommendation, the following recommendation grading has been used, where recommendations are made:

- **Recommendation Grade A1 (RGA1):** Evidence demonstrates at least moderate certainty of at least moderate net benefit.
- **Recommendation Grade A2 (RGA2):** Evidence demonstrates a net benefit, but of less than moderate certainty, and may consist of a consensus opinion of experts, case studies, and common standard care.
- **Recommendation Grade B (RGB):** Evidence is insufficient, conflicting, or poor and demonstrates an incomplete assessment of net benefit vs harm; additional research is recommended.
- **Recommendation Grade C1 (RGC1):** Evidence demonstrates a lack of net benefit; additional research is recommended.
- **Recommendation Grade C2 (RGC2):** Evidence demonstrates potential harm that outweighs benefit; additional research is recommended.
- **Recommendation of the GDG (R-GDG):** Recommended best practice on the basis of the clinical experience of the Guideline Development Group members.
Headache in adults

References


Headache in adults


Guideline Development Group members

The following table lists members of the Guideline Development Group (GDG) nominated by their respective organisations and the Clinical Governance Group. The GDG members have reviewed and provided feedback on the draft guideline relating to the topic. Each member has completed a declaration of conflicts of interest, which has been reviewed and retained by the MOPH.

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<tr>
<th>Guideline Development Group members</th>
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<tbody>
<tr>
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<td>Dr Tageldin Osman Mohammed Ahmed</td>
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Responsibilities of healthcare professionals

This care map has been issued by the MOPH to define how care should be provided in Qatar. It is based upon a comprehensive assessment of the evidence as well as its applicability to the national context of Qatar. Healthcare professionals are expected to take this guidance into account when exercising their clinical judgement in the care of patients presenting to them.

The guidance does not override individual professional responsibility to take decisions which are appropriate to the circumstances of the patient concerned. Such decisions should be made in consultation with the patient, their guardians, or carers and should consider the individual risks and benefits of any intervention that is contemplated in the patient’s care.

Acknowledgements

The following individuals are recognised for their contribution to the successful implementation of the National Guidelines project.

Healthcare Quality Management and Patient Safety Department of the MOPH:

- **Ms Huda Amer Al-Katheeri, Acting Director & Project Executive.**
Headache in adults

- Dr Alanoud Saleh Alfehaidi, Guideline & Standardisation Specialist.
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