



# **Chronic Headache Classification Interview**

## **Nurse Training Manual**

**2017**

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## **Background**

Chronic headache disorders, headaches on 15 days or more per month for more than three months, are a major cause of pain and disability. Their main impact is in young adults many of whom have both work and family commitments. The commonest chronic headache disorders are tension type (TTH), migraine, and medication overuse headaches (MOH). TTH and migraine are primary headaches, MOH is a secondary headache that can develop in people with frequent headaches who take analgesic, or specific anti-migraine medication (e.g. triptans) on  $\geq 10$ -15 days per month.

## **Epidemiology and burden of the condition**

Around 2-4% of the population have a chronic headache<sup>1,2</sup> and approximately 25-50% of those affected also have MOH, which has a prevalence of 1%<sup>3-5</sup>. Around 4% of primary care consultations and 30% of neurology out-patient appointments are due to headache disorders.<sup>6-9</sup> TTH and migraine are the second and third most common disorders globally.<sup>10</sup> The annual cost of headache disorders to the UK is an estimated £5-7 billion.<sup>11</sup>

## **Headache Diagnosis**

Many patients with chronic headaches do not have an accurate diagnosis, or diagnoses (all three common headache types can co-exist) and can receive inappropriate drug treatment and management of their headaches. There are deceptively simple diagnostic criteria for different headache types; for example, NICE headache guidance.<sup>12</sup> In reality, it can be challenging for a non-expert clinician to make an accurate diagnosis.

As part of the CHES study we have developed a logic model to inform the structure and content of a telephone classification interview to be conducted by a non-headache specialist to classify chronic headache types. The classification interview has two purposes 1) to allow classification of headache type for reporting and analysis 2) to be used as part of the study intervention to allow targeted, individualised, treatment and advice.

## **Interview Development**

Initially we conducted a systematic review to identify any existing tools used to classify or diagnose different headache types. The search identified an unexpectedly high number of tools to diagnose migraine, but no tools that allow the exclusion of secondary headaches or primary headaches other than migraine and TTH. The findings from the review confirmed the need to develop our own classification interview.

In October 2015 we held a classification consensus conference to inform the design and content of the classification interview. The conference was attended by headache specialist neurologists, general neurologists, GPs with a special interest in headaches, headache nurse specialists and patient representatives.

Participants worked in mixed-discipline groups to address the following questions:

- What do we need to know from a person to exclude secondary headaches?
- What do we need to know from a person to exclude primary headaches other than chronic migraine and tension type headache?
- What do we need to know from a person to distinguish between chronic tension-type headache and chronic migraine?
- What do we need to know from a person to identify medication overuse headache?

Following discussion and voting, consensus was achieved on the essential components of the telephone classification interview. Further work by the research team developed and refined the final classification logic model which forms the basis of the classification interview.

### **Evaluation of the classification interview**

To validate the nurse classification interview participants taking part in the CHES feasibility study were invited to take part in two telephone interviews, the first a classification interview conducted by a nurse, the second a diagnostic interview conducted by a doctor specialising in headache. We trained six research nurses to conduct the classification interviews and four doctors from the National Migraine Centre conducted the diagnostic interviews. We completed 100 paired interviews, the level of agreement between interviews was very good.

### **Interview structure**

Although the classification interview is based around a logic model, it is not intended to be a rigid interview schedule. Instead, the nurse conducting the interview is encouraged to use the logic model to inform their clinical reasoning and decision-making. The structure and sequence of the telephone interview will be determined by the nurse's individual consultation style, questioning, and by participants' responses. However, it is important that by the end of the telephone interview the nurse has gleaned sufficient information to be able to assess that the participant has chronic headache, classify the headache type (chronic TTH, definite chronic migraine, probable chronic migraine, and medication overuse headache), rule out any serious underlying pathology, and exclude other rarer primary headache disorders.

The logic model (appendix 1) can be used to help ensure that the key components of the classification interview are addressed:

- Exclude serious pathology (secondary headaches other than medication overuse headache)
- Exclude primary headache disorders other than migraine and tension type headache
- Distinguish between chronic migraine, probable chronic migraine, and chronic TTH
- Identify medication overuse headache

The key components are described in more detail below; with examples of questions and prompts that can be used during the classification interview to help elicit sufficient information from the participant to address each of the key components sufficiently.

### **Diagnostic criteria for chronic headache**

As part of the study eligibility criteria we have already confirmed that the participant has chronic headache (i.e. headache for  $\geq 15$  days for  $>3$  months), and the purpose of the interview is therefore to decide on the headache classification and not to confirm that chronic headache exists. However as an opening question it can be useful to ask about headache frequency.

#### *Example questions*

On average how many days each month do you get headaches?

### **Excluding serious underlying pathology**

It is very unlikely that we are going to pick up participants with headaches caused by serious underlying pathology. Participants recruited to the study will have been identified from GP records and a GP will have screened the list of patients identified for known secondary causes of headache (other than medication overuse headache).

For those participants who report having headaches for more than one year it is important to establish whether the headache has changed in frequency, characteristics, or associated symptoms in the previous three months. Many participants will report that their headache has become more frequent over the last three months (and this may be why they have chosen to join the study because the headache has worsened). The purpose of the questioning here is to identify any important changes that may be indicative of underlying pathology rather than an exacerbation of their chronic headache symptoms.

Significant headache change in last 3 months

*Example Question*

Has your headache changed substantially in the last three months?

Prompt: I mean more than your headache getting more frequent or severe; have your symptoms changed?

For participants who report having headaches for less than one year it is important to establish whether the headache is **triggered** by Valsalva manoeuvre (e.g. coughing, sneezing, straining or bending over), indicative of raised intracranial pressure. It is important to make the distinction between “triggering” of headache versus “exacerbation” of headache by these Valsalva manoeuvres. Headaches that are “triggered” by Valsalva manoeuvres need further investigation. Many people with primary headaches (such as migraine and tension-type headache) report that their headaches are transiently “exacerbated” by Valsalva manoeuvres when they already have a headache; this feature is not generally of any clinical concern

Headache triggered by coughing, sneezing, straining etc

*Example Question*

Does anything particular make your headaches worse?

Prompt: What about coughing, sneezing or straining? A bit worse is expected but if it is strongly associated with Valsalva then may need further consideration

**Excluding primary headache disorders other than migraine and tension type headache**

The majority of primary headache disorders are either migraine or TTH, but there are a number of rarer primary headache disorders that require specialist management by neurologists. The logic model has been designed to help screen for these rarer primary headache disorders:

New daily persistent headache (NDPH) is unique in that the headache is daily from onset, and the pain becomes continuous and unremitting within 24 hours and is present for >3 months.

It typically occurs in individuals without a prior headache history. Patients with NDPH can usually recall and accurately describe its onset.

Constant headache from onset

*Example Question*

Has your headache been present (every day) from when it first started?

Prompt: Can you recall the day your headaches first started?

Trigeminal autonomic cephalalgias (TACs) are very rare and usually characterised by attacks of severe strictly unilateral pain associated with prominent ipsilateral (on the same side) cranial autonomic features (tears, red eyes, eye lid oedema, nasal congestion etc) and/or restlessness. Attacks last less than 4 hours in most types of TACs such as cluster headache and paroxysmal hemicranias (see appendix 2 for

more information about these rarer headache types).

Headache always lasting < 4 hours (when untreated)

Strictly unilateral AND any one of the cranial autonomic features OR restlessness

*Example Questions*

How long does your headache last?

Prompt: If you don't take medication how long does your headache last?

Is your headache always on the same side?

Prompt: always on either the right or left side?

At the time of the headache do you experience any of the following features on the same side as you headache? (ask for Yes/No response)

- Watering of the eye or tears (lacrimation)
- Reddening of the eye (Conjunctival injection)
- Puffy eyelids (Eyelid oedema)
- Drooping of the eyelid (Ptosis)
- Runny nose (Rhinorrhoea)
- Blocked nose (Nasal blockage)
- Facial sweating or reddening
- Fullness of the ear (aural fullness)

When you have the headache do you feel restless or agitated?

Prompt: unable to sit still, pace, rock yourself

Hypnic headache is distinct in that the headache attacks only develop during sleep, cause wakening, and generally only last for up to 4 hours (see appendix 2 for more detail)

Headache always lasting < 4 hours (when untreated)

Headache only wakes at night

#### *Example Question*

Does your headache only ever wake you at night? If yes, if you don't take medication how long does your headache last?

Hemicrania continua (a type of TAC) is a headache that is a continuous, strictly unilateral and associated with at least one of the following symptoms ipsilateral to the headache: tears and/or red eyes, nasal congestion and/or rhinorrhoea, eyelid oedema, forehead and facial sweating or flushing, sensation of fullness in the ear, miosis and/or ptosis OR a sense of restlessness or aggravation of the pain by movement.

Continuous headache

Strictly unilateral AND any one of the cranial autonomic features OR restlessness

#### *Example Questions*

Is your headache continuous (there all the time)?

Is your headache always on the same side?

Prompt: always on either the right or left side?

Do you experience any of the following features on the same side as you headache? (ask for Yes/No response)

- Watering of the eye or tears (lacrimation)
- Reddening of the eye (Conjunctival injection)
- Puffy eyelids (Eyelid oedema)
- Drooping of the eyelid (Ptosis)
- Runny nose (Rhinorrhoea)
- Blocked nose (Nasal blockage)
- Facial sweating or reddening

When you have the headache do you feel restless or agitated?

Prompt: unable to sit still, pace, rock yourself

#### ***Distinguishing between chronic migraine, probable chronic migraine and chronic TTH***

Differentiating between migraine attacks and tension type headache attacks should be relatively simple as the two types of headache have quite distinct features. The distinction between chronic migraine and chronic TTH however is more challenging; participants can experience more than one headache type, and the characteristics of the headache may change from day to day, or even within



the same day. The logic model has been designed to help guide the classification of the participant's headache type into one of three categories: chronic migraine, probable chronic migraine and chronic TTH.

#### Migraine with aura

Aura is a unilateral, fully reversible, visual, sensory or other central nervous system symptoms that usually develop gradually and are usually followed by headache and associated migraine symptoms. The attacks tend to develop over 5-20 minutes and last 20-60 minutes. Visual aura is the most common form (90 %), followed by sensory aura, in the form of pins and needles or numbness affecting one side of the body, face and/or tongue. Less frequent are speech aura symptoms. When the aura includes motor weakness, the disorder is called hemiplegic migraine. Many patients who have migraine attacks with aura also have attacks without aura.

#### *Example questions*

Do you experience aura with your headaches?

Do you experience any of the following symptoms immediately before or during your headaches?

- Blind spots or black spots in your vision
- Zig zags, wavy lines or shimmering patterns
- Pins and needles or tingling of your lips, tongue, fingers or legs
- Weakness or numbness on one side of your body

#### Migraine without aura

The headache has at least two of the following four characteristics:

- unilateral location
- throbbing/pulsating quality
- moderate or severe pain intensity
- aggravated by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)

Plus during the headache at least one of the following two features:

- nausea and/or vomiting
- photophobia and/or phonophobia

#### Definite Chronic Migraine

Headache occurring on 15 or more days per month for more than three months, which has features of migraine on at least eight days per month.

#### Probable Chronic Migraine

- a) headache occurring on 15 or more days per month for more than three months, which has features of migraine on less than eight days per month.

- b) headache occurring on 15 or more days per month for more than three months, which has two of four headache characteristics or one of two associated features associated with migraine.

Participants who experience aura on eight days or more a month, for three months have **definite chronic migraine**

Aura  $\geq$  8 days month  
for 3 months

### Chronic Tension Type Headache

Headache occurring on  $\geq$ 15 days per month on average for  $>$ 3 months, lasting hours to days, or unremitting, and with at least two of the following four characteristics:

- bilateral location
- pressing or tightening (non-pulsating) quality
- mild or moderate intensity
- not aggravated by routine physical activity such as walking or climbing stairs

Plus the following:

- no more than one of photophobia, phonophobia or mild nausea
- neither moderate or severe nausea nor vomiting

Participants who report two of the four headache characteristics, plus at least one of the two associated features on eight or more days a month for three months have **definite chronic migraine**.

2 of 4 headache characteristics:

- unilateral,
- pulsating,
- moderate/severe pain intensity
- aggravated by physical activity

1 of 2 associated features:

- nausea and/or vomiting
- photophobia and/or phonophobia

$\geq$  8 days month  
for 3 months

### *Example questions*

#### *Headache characteristics:*

Is the pain usually on one side of the head?

Prompt: on either the right or left side?

What words would you use to describe the pain (throbbing, pulsating, pressing, tightening or squeezing)

On your worst days would you describe your pain as mild, moderate or severe?

Do you prefer to sit still when you have a headache?

Prompt: Does exercise like walking or climbing stairs tend to make it worse?

*Associated features*

When the pain is there, does light bother you?

Prompt: do you prefer to be in the dark?

When the pain is there, does sound bother you?

Prompt: do you prefer to be in the quiet?

When the pain is there do you vomit, or feel like you may be sick?

Participants who report headache with either two of four headache characteristics or one of two associated features have **probable chronic migraine**

Participants who only report headache with less than two of four headache characteristics and no associated features have **chronic tension type headache**.

***Identifying medication overuse headache***

Medication overuse headache is a headache occurring on 15 or more days per month developing as a consequence of regular overuse of acute or symptomatic headache medication on 10 or more, or 15 or more days per month, depending on the medication, for more than 3 months. If a participant does not take acute or symptomatic headache medication (not preventative medication) on at least 10 or more days per month they do not have medication overuse headache.

Headache medication taken  $\geq 10$  days/month for 3 months

*Example Questions*

How many days a month do you take medication to relieve your headache attacks?

What type of medication do you take?

Participants taking one type of simple analgesics (paracetamol or acetylsalicylic acid) or non-steroidal anti-inflammatory drugs (NSAIDs) on 15 or more days per month, for the acute or symptomatic treatment of headache for more than three months have medication overuse headache.

Common examples include:

- Paracetamol
- Aspirin

- Ibuprofen
- Naproxen
- Tolfenamic acid
- Diclofenac

Paracetamol or NSAID taken  $\geq$  15 days/month for 3 months

Participants taking ergots, triptans, or a combination of analgesics (any combination of ergots, triptans, simple analgesics, NSAIDs, and/or opioids) on 10 or more days per month, for the acute or symptomatic treatment of headache for more than three months have medication overuse headache (see appendix for list of medication).

These will include opiates (tramadol, codeine etc), mixed analgesics (co-codamol, co-dydramol etc) and over the counter headache preparation such as migraleve which are often a mixture of things like paracetamol/codeine/caffeine. If participants mention a medication that you don't recognise, write it down, and 'google it' later to check what's in it. There are so many OTC medications, and even preparations bought on the internet, the list is endless! The most commonly prescribed triptans are:

- Sumatriptan
- Rizatriptan
- Zolmitriptan
- Almotriptan
- Eletriptan
- Frovatriptan
- Naratriptan

Other combination of drugs taken  $\geq$  10 days/month for 3 months

Medication overuse headache usually, but not always, resolves after the overuse is stopped. Approximately half of people with chronic headaches have medication overuse headache.

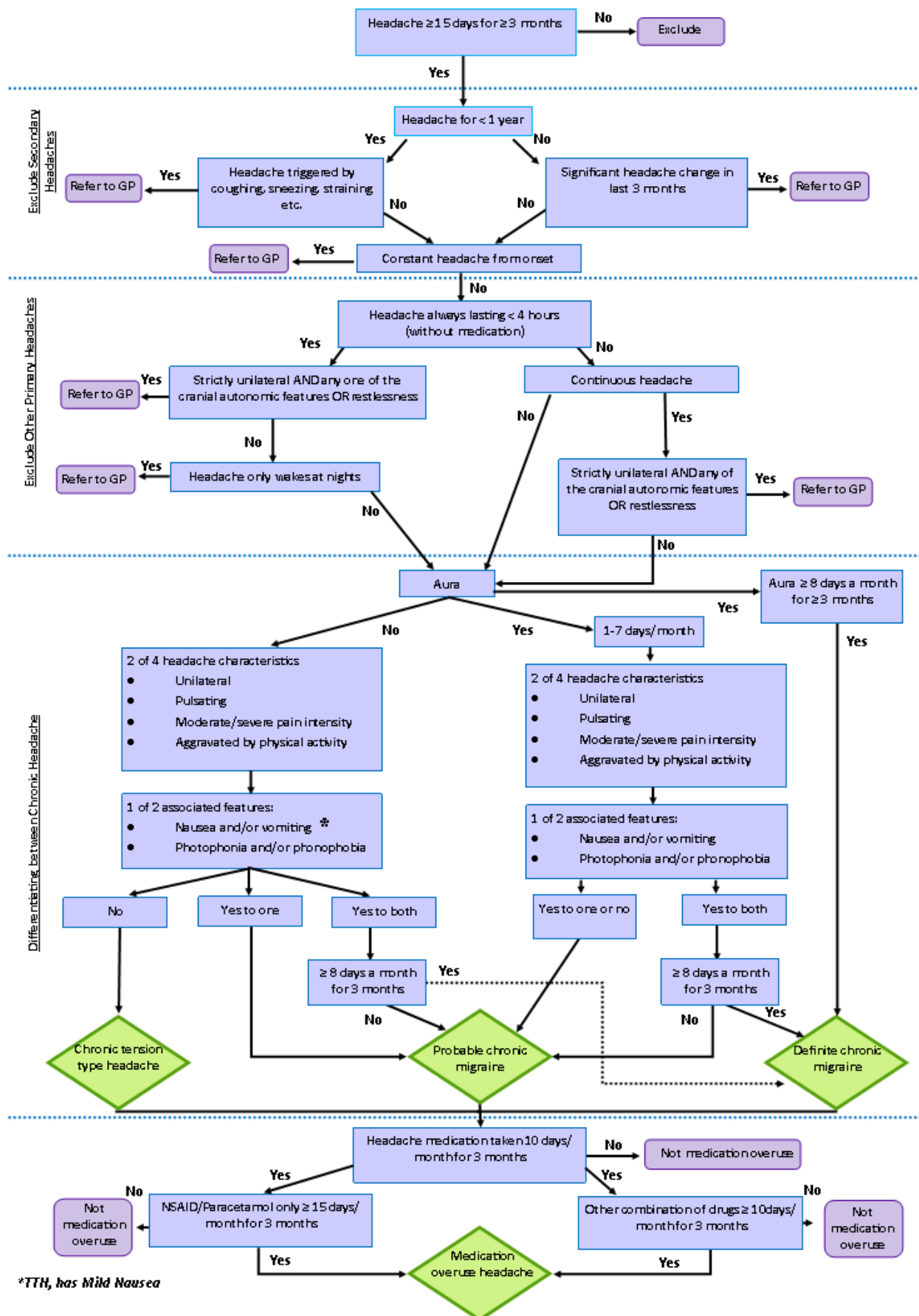
### **Interview Process**

- Participant's contact details will be provided by the research team.
- Contact the participant to arrange a convenient time for the telephone classification interview to take place.
- Explain to the participant that the purpose of the nurse telephone interview is to classify their headache type and not to diagnose their headache, and they will not be informed of

the outcome at the end of the interview; but that we will write to them with the outcome of their classification interview and provide written information about their headache type.

- Complete the nurse classification form (appendix 4).

# Appendix 1 Logic Model



## **Appendix 2 Primary headache disorders other than migraine and TTH**

### *Trigeminal autonomic cephalalgias (TACs)*

The trigeminal autonomic cephalalgias (TACs) are rare and usually characterised by attacks of severe unilateral pain associated with prominent ipsilateral (on the same side) cranial autonomic features (tears, red eyes, eye lid oedema, nasal congestion etc).

### *Cluster headache*

Cluster headache is the most common TAC (estimated prevalence 1:1000) with attacks causing severe, strictly unilateral pain. Each attack starts and ends abruptly, lasts 15–180 minutes and occurs from once every other day to eight times a day. The pain is associated with at least one of the following symptoms or signs, ipsilateral to the headache: conjunctival injection (red eye), and/or lacrimation, nasal congestion and/or rhinorrhoea, forehead and facial sweating/flushing, miosis (constriction of the pupil), ptosis (drooping of the upper eyelid) and/or eyelid oedema, plus restlessness or agitation.

There is often a striking circadian rhythm, attacks often occur at the same time each day and clusters occur at the same time each year. Attacks can last weeks to months, separated by periods without headache. About 10–15% of patients have chronic cluster headache, without remission periods. During the worst attacks, the intensity of pain is excruciating. Patients are usually unable to lie down, and characteristically pace the floor. Age at onset is usually 20–40 years. For unknown reasons, men are affected three times more often than women.

### *Paroxysmal hemicrania*

Paroxysmal hemicranias has similar characteristics to cluster headache, but attacks are shorter (2-45 minutes), more frequent (up to 40 per day) and it is more common in women. Attacks are severe, with strictly unilateral pain and associated with ipsilateral conjunctival injection, lacrimation, nasal congestion, rhinorrhoea, forehead and facial sweating, miosis, ptosis and/or eyelid oedema. They respond absolutely to indomethacin.

### *Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT)*

Attacks of moderate or severe, strictly unilateral head pain lasting seconds to minutes. They occur as single stabs, groups of stabs or in an overlapping fashion (“sawtooth”) at least once a day and are usually associated with prominent lacrimation and redness of the ipsilateral eye.

*Short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms (SUNA)*

SUNA is a proposed classification for patients with the same headache characteristics of SUNCT, but with other cranial autonomic features.

*Hypnic Headache*

Hypnic headache usually begins after age 50 years, but may occur in younger people. The pain is usually mild to moderate, but severe pain is reported by one fifth of patients. Pain is bilateral in about two-thirds of cases. Attacks usually last from 15 to 180 minutes, but longer durations have been described.

- Developing only during sleep, and causing waking
- Occurring  $\geq 10$  days per month for  $>3$  months
- Lasting  $\geq 15$  minutes and for up to 4 hours after waking
- No cranial autonomic symptoms or restlessness

**Appendix 3**

**Nurse Classification Form**



## References

1. Stovner L, Hagen K, Jensen R, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. *Cephalalgia : an international journal of headache*. Mar 2007;27(3):193-210.
2. Hagen K, Zwart JA, Vatten L, Stovner LJ, Bovim G. Prevalence of migraine and non-migrainous headache--head-HUNT, a large population-based study. *Cephalalgia : an international journal of headache*. Dec 2000;20(10):900-906.
3. Lu SR, Fuh JL, Chen WT, Juang KD, Wang SJ. Chronic daily headache in Taipei, Taiwan: prevalence, follow-up and outcome predictors. *Cephalalgia : an international journal of headache*. Dec 2001;21(10):980-986.
4. Castillo J, Munoz P, Guitera V, Pascual J. Kaplan Award 1998. Epidemiology of chronic daily headache in the general population. *Headache*. Mar 1999;39(3):190-196.
5. Wang SJ, Fuh JL, Lu SR, et al. Chronic daily headache in Chinese elderly: prevalence, risk factors, and biannual follow-up. *Neurology*. Jan 25 2000;54(2):314-319.
6. Latinovic R, Gulliford M, Ridsdale L. Headache and migraine in primary care: consultation, prescription, and referral rates in a large population. *Journal of neurology, neurosurgery, and psychiatry*. Mar 2006;77(3):385-387.
7. Hopkins A, Menken M, DeFriese G. A record of patient encounters in neurological practice in the United Kingdom. *Journal of neurology, neurosurgery, and psychiatry*. Apr 1989;52(4):436-438.
8. Gahir KK, Larner AJ. Primary headache disorder in the emergency department: perspective from a general neurology outpatient clinic. *Emergency medicine journal : EMJ*. Feb 2006;23(2):135-136.
9. *UK audit of the care of common Neurological disorders*. Association of British Neurologists (Services Committee);1991.
10. Vos T, Flaxman AD, Naghavi M, et al. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. Dec 15 2013;380(9859):2163-2196.
11. Steiner T. *The economic cost of migraine and other headache disorders in the UK: A Report of the All-Party Parliamentary Group on Primary Headache Disorders (APPGPHD)*, . House of Commons;2010.
12. Carville S, Padhi S, Reason T, Underwood M. Diagnosis and management of headaches in young people and adults: summary of NICE guidance. *BMJ*. 2012;345:e5765.