A Patient-Focused Questionnaire Designed to Support Headache Diagnosis in General Practice

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Abstract

Background: There is an unmet need for the correct diagnosis of primary headache disorders, such as migraine, in primary care. Misdiagnosis is associated with suboptimal management of patients, and it is now widely accepted internationally that better diagnostic support is needed for general practitioners (GPs). In this study, we describe the development of a short, patient-directed questionnaire and supporting documents that aim to help with the diagnosis of headache disorders in primary care. We have also prepared patient feedback material and collected preliminary input from patients, but the main aim of this report is to invite comment and debate on the use of the questionnaire in real-life clinical practice.

Methods: This questionnaire was developed over 18 months using the clinical experience of the authors, current literature review and the International Classification of Headache Disorders (ICHD), 3rd edition, for migraine, tension-type headache, cluster headache and medication-overuse headache. The questionnaire and two supporting documents will hopefully assist the GP to make a correct diagnosis. A patient survey was used to gather feedback from a small number of patients, and based on these comments, the questionnaire and the supporting documents were modified and updated.

Results: Feedback gathering was attempted in Austria, Germany, Switzerland, Ireland and Spain, but was only possible in Austria due to the COVID-19 pandemic restrictions. From the 18 patients who participated, 17 responded about how easy or difficult the questionnaire was to complete, with 14/17 (82%) being able to complete the questionnaire easily on their own. Overall, the patients found the questionnaire averagely helpful in *reminding them of* and *communicating* their headache triggers, symptoms and behaviour changes; on a scale of 1–5, with 1 being very helpful and 5 being not helpful at all, the mean scores were 2.8 and 2.7 (n=18), respectively.

Conclusions: This questionnaire and associated documents were developed with a view to helping GPs to make an accurate headache diagnosis quickly in primary care. Following feedback from patients, updates have been made, including changes to reduce the time it takes to complete the questionnaire. Next steps include wider validation and feedback from primary care physicians.

Background

The burden of headache disorders worldwide

The most recent World Health Organization Global Burden of Disease Study (2019) ranked migraine as the second most disabling non-fatal medical condition in terms of years lived with disability, and the global age-standardised prevalence for migraine was 14% (1) (2). Eurolight, a large cross-sectional survey from more than 10 European countries, confirmed that depression and anxiety are more common in migraineurs and are even more strongly associated with medication-overuse headache (MOH), chronic

migraine (CM) (3). This may increase the overall societal burden of migraine and MOH because symptoms of comorbid illness are expected to create a vicious cycle (3).

Tension-type headache (TTH) is considered to be very common, with a lifetime prevalence in the general population ranging from 30–78% on the basis of different studies (4). Frequent episodic or chronic TTH can be associated with some disability (4); however, patients with TTH rarely seek medical advice from their primary care physicians/general practitioner (GP) (these terms are used interchangeably throughout this manuscript) and pure TTH is a rare condition in hospital settings (5).

Cluster headache (CH), despite being relatively rare (lifetime population prevalence of 0.12%) (6), is considered to be an excruciating primary headache disorder (7) and carries a significant burden of disability. The anxiety caused by the ‘fear’ of having an attack affects the planning of events, socialising, productivity and integration into activities for patients with CH (8).

Headache/Migraine diagnostic challenges in primary care

The International Headache Society is responsible for headache classification globally and publishes the International Classification of Headache Disorders periodically, the most recent being the 3rd edition (ICHD-3). This document is the internationally accepted classification of all primary and secondary headache disorders, including migraine (4). However, not all physicians are familiar with the ICHD diagnostic criteria (9), nor do they have the clinical skills and/or experience which is necessary to be able to diagnose primary headache disorders easily (10).

Migraine is the most common primary headache disorder seen in general practice; in one study, based on longitudinal data after an expert panel review, 94% of patients were diagnosed with migraine or probable migraine (5). However, in a UK primary care database study of 91,121 adults with new-onset headache (patients who had not consulted for headache in the previous year), 70% were not given a ‘diagnostic label’ or proper diagnosis, suggesting a very significant unmet need for additional headache/migraine education, training and diagnostic support in primary care (11). *Lifting the Burden (LTB)*, a multinational group established to raise awareness of headache disorders, further highlighted the lack of headache diagnosis accuracy in primary care (12). In one study, almost all centres inaccurately captured and/or assessed headache history, especially temporal profile, and 20% of patients received a non-specific classification code, rather than a specific diagnosis (12). Overall, this study concluded that a lack of knowledge among GPs is a common cause of suboptimal treatment of patients presenting to primary care with headache (12).

After secondary headache disorders are ruled out, it is important to distinguish between the different types of primary headache conditions (such as migraine, CH, TTH, etc.), as their underlying pathophysiology differs and distinct acute and preventive treatments are used for the separate conditions (13). For example, typical acute treatments for migraine include simple analgesics, non-steroidal anti-inflammatory drugs (NSAIDs) and triptans; whereas simple analgesics and NSAIDs are generally used for

TTH and normally triptans, high-flow oxygen and external vagus nerve stimulation are used for the acute treatment of CH (13).

Migraine is classified as being either CM or episodic migraine (EM), and diagnosis follows clearly defined clinical criteria, i.e. the ICHD-3 criteria (4, 14). In the primary care setting, making a migraine diagnosis is often difficult for many reasons (including lack of time, deficits in clinical experience/training and complex clinical history), and it often involves exclusion of other primary or secondary headache disorders (14). Furthermore, unlike other neurological disorders (15), there are no specific tests or biomarkers that are currently used to support the clinical diagnosis of primary headache conditions, such as migraine (4). In addition, CM specifically is often complicated by the practice of medication overuse (MO), which can lead to MOH (4, 16). According to ICHD-3, MOH is defined as a headache occurring on 15 or more days per month in a patient with a pre-existing primary headache disorder (typically migraine) and is proven to become more chronic and frequent due to 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 (4). In the clinic, it is common to say a patient is practicing MO, but patients are rarely diagnosed with MOH.

The deficits in diagnosis of headache disorders were further demonstrated by The Chronic Migraine Epidemiology and Outcomes Study, a US longitudinal web-based panel study with 1,254 chronic migraineurs included in the analysis. This study concluded that, of the chronic migraine patients who consulted with a healthcare professional (HCP), only 24.6% (n=126) received an accurate diagnosis and 44.4% (n=56) of those with a correct diagnosis received both acute and preventive treatment (17). In other words, only 4.5% (n=56) of those with CM traversed all three barriers to successful CM care (i.e. consulted an HCP for migraine, received an accurate diagnosis and were prescribed minimal acute and preventive pharmacological treatments). This suggests that there is a very significant unmet need for patient education and access to healthcare, as well as a need to significantly improve diagnosis and management of patients with migraine (17).

The role of the GP in the management of patients with uncomplicated EM is well established and generally straightforward. The general expectation is that GPs should feel confident to make a diagnosis, initiate therapy and manage the less refractory patients in the primary care setting (16). However, the management of CM in primary care is debated and varies between countries (16). Many of these more chronic and refractory cases warrant referral to more specialised hospital-based headache services compared with EM (18). Unfortunately, waiting times for new appointments may be long and access to these specialist clinics may be limited (12). In addition, the role of the GP is especially important in some countries because of a low level of headache expertise, even in senior neurology department positions. This will obviously lead to a shortage of headache specialists to manage referrals in the hospital setting (19).

Misdiagnosis (as well as underdiagnosis) of primary headache is also a common problem in primary care; in a study of 162,576 participants who completed a self-administered mailed headache

questionnaire, only around half (56.2%) of those meeting the ICHD, 2nd edition (ICHD-2) criteria for migraine reported that they had received a diagnosis of migraine. Alternative diagnoses included sinus headache (39.0%), TTH (31.2%), stress headache (28.5%) and CH (9.9%) (20). Misdiagnosis can be caused by several factors, including lack of clinical experience/training, failure to take a thorough history and symptoms of migraine being attributed to or mimicking secondary causes, e.g. sinus congestion interpreted as meaning sinusitis (20). Diagnostic delay is a well-recognised hurdle for the appropriate management of patients with migraine (21). For example, it may result in a failure to initiate appropriate treatments, for example NSAIDs and triptans (13), and risk factor modification, e.g. reduce caffeine intake, which ultimately improve functional status and quality of life for people with migraine (14). Misdiagnosis and diagnostic delay of CH is also a widespread problem (22). Patients with CH often consult many different specialists (including medical doctors, surgeons and dentists) and receive multiple varying opinions prior to being correctly diagnosed (22). For example, in a study of 144 patients with episodic CH from Italy and Eastern Europe, the mean number of incorrect diagnoses received per patient with CH was 2.3. Furthermore, in the same study, the average delay to correct diagnosis was 5.3 ± 6.4 years, which led to the majority of patients taking inappropriate acute treatments (such as NSAIDs) and only a quarter had been using a recommended preventive CH therapy (23). Limited knowledge of CH characteristics by patients and HCPs is thought to be one of the major explanations for the delays in diagnosis of these patients (22).

The American Headache Society FrontLine Primary Care Advisory Board on the crisis of diagnosis and management of migraine, have suggested a number of strategies for improvement of headache management in primary care. These included development of important tools and resources for headache education on the front line, e.g. point-of-care applications and considerations for implementing migraine screening tools (24).

The aspiration is that introduction of different diagnostic instruments, (e.g. screening tools such as patient questionnaires), may improve migraine diagnosis in general practice. In one review of migraine screening tools (including items, instruments and scales), it was recommended that a structured intake form and a headache diary are used when diagnosing patients with headache (9). Headache-specific screening tools for doctors and HCP's already exist: for example, ID-Migraine™, which is a three-item migraine screening questionnaire based on the ICHD-2 criteria (9, 25). Another example is the Cluster Headache Screening Questionnaire, which has been developed for rapid identification of CH (26). However, more needs to be done given the level of misdiagnosis and underdiagnosis of primary headache conditions, specifically migraine.

Methods

The aim of this report is to describe the development of a novel, relatively short (two-page) patient questionnaire for primary care and to encourage its routine implementation to help reduce misdiagnosis and underdiagnosis of primary headache. We would like to invite further feedback and debate on its use in real-life clinical practice. A further aim of this project is to collect preliminary patient feedback on the

use of this questionnaire and its supporting materials. To the best of our knowledge, there is no equivalent, widely accepted primary care patient questionnaire to the one detailed in this paper.

Development of the three-part questionnaire

The development of this headache questionnaire and associated supporting materials (total of three documents) for primary care was based on several meetings with the authors (three headache specialists from Germany, Austria and Ireland) and an extensive literature search. Part 1 (Figure 1) is the actual patient questionnaire and is based broadly on the ICHD-3 criteria of primary headache disorders and the authors' clinical experience (4). Parts 2 and 3 comprise the supporting material, and include the diagnostic criteria flowcharts to support a diagnosis (Part 2, Additional file 1) and the question-by-question explanation of how to interpret the answers and the impact this may have for diagnosis (Part 3, Additional file 2). The supporting materials were subsequently developed to aid the GP with the interpretation of the questionnaires and enable them to make a correct diagnosis. This supplementary material is also intended to provide an understanding of the development of the questionnaire. The headache diagnostic questionnaire was developed (pre-Covid) by the authors for completion in primary care by patients with headache symptoms either in the waiting room, prior to coming into their GP office (preferable option due to potential time saving), or to be completed at the beginning of their consultation. The completed questionnaire would then be discussed with the GP during the face-to-face consultation with a goal of making the correct headache diagnosis in a relatively short period of time. The diagnostic criteria flowchart is designed to hopefully assist GPs to quickly analyse the answer combinations and help them to confidently make a diagnosis of a migraine, CH, TTH or MO (see Part 2, Additional file 1). The question-by-question explanation document was designed to assist GPs to understand the importance of what a particular answer may mean for the diagnosis, i.e. an answer may increase or decrease suspicion of a certain primary headache disorder (see Part 3, Additional file 2). We did not include clinical examination or results of investigations, e.g. brain magnetic resonance imaging, in this diagnostic tool for several reasons: firstly, they are not included in the ICHD-3 diagnostic criteria for primary headache disorders (4); secondly, the required investigations are not likely to be accessible to GPs; and thirdly, such investigations may significantly increase diagnostic delay (21).

Questionnaire breakdown

The patient questionnaire is broken down into three sections: *You*, *You and your headache history*, and *You and your current headache problem*. The first section, *You*, is designed to provide specific information (age, gender and smoking history) about the patient that could be useful in supporting a particular headache diagnosis. For example, if the patient is female and between 20–40 years old, this would increase the suspicion of a diagnosis of migraine (27). Alternatively, if the patient is a 55-year-old male smoker, this makes a diagnosis of CH a possibility that could be explored very quickly by the GP. The second section, *You and your headache history*, aims to provide the GP with background information about the history of the patient's headaches, associated features and possible relevant family history. This section comprises relevant questions to support or oppose a diagnosis of a primary headache disorder and, together with the first section, should form the basis of a firm diagnosis. Questions relevant

to secondary causes or red flags are also included in this section. The final section, *You and your current headache problem*, aims to provide the GP with an overview of the current situation with respect to the patient’s headache disorder and includes the relevant follow-up questions to fully support a primary headache diagnosis and design a management plan for the patient. For example, this section has a question for the patient about how many times they use medication per month to treat their headache or migraine, which will help inform the GP about the possibility of MO or a possible diagnosis of MOH.

Collecting feedback from patients

To gather feedback on the draft questionnaire, we circulated them to GPs for use with their patients during the latter half of 2020. We also supplied patient feedback surveys for use once the patients had completed the questionnaire. The goal of the patient feedback survey was to understand:

- if there were any parts of the questionnaire that the patients found difficult to complete on their own
- how long on average the questionnaire took to complete (<5 minutes or >5 minutes)
- whether the questionnaire helped patients to remember parts of their medical history with regard to headache (For example, headache triggers, symptoms and behaviour changes during an attack)
- if the patients felt any questions were missing
- where the patients usually filled in the questionnaire

Any patient presenting with a headache complaint to their GP was eligible for inclusion in completing the questionnaire and the feedback survey. This process was anonymous in order to adhere to General Data Protection Regulation guidelines and to maintain patient confidentiality. Informed consent was gathered from all patients by the GP before using this questionnaire. The need for ethical approval for the use of the Austrian patient data in this study was waived by the Ethics Committee of the City of Vienna (Ethikkommission der Stadt Wien), reference number MA 15-EK 21-216-VK_NZ.

Results

Initial patient feedback survey data

Feedback from the patient survey (n=18) showed that 82% (14/17) of respondents (all Austrian patients in primary care) were able to complete the questionnaire easily on their own and 67% (12/18) of respondents said that it took them less than 5 minutes to complete (Table 1).

Table 1
Ease of headache diagnosis questionnaire completion for the patient

Respondents who were able to complete the questionnaire easily on their own, n/N (%)	Respondents who said it took them <5 minutes to complete the questionnaire, n/N (%)	Respondents who said it took them >5 minutes to complete the questionnaire, n/N (%)
14/17 (82)	12/18 (67)	6/18 (33)

Written free-text feedback from patients included not having enough knowledge to answer some of the questions about their medication (they did not have their list of medications available) and recommendations to have shorter time period options for the duration of the headaches. Overall, the patients found the questionnaire averagely helpful in *reminding them of* and *communicating* their headache triggers, symptoms and behaviour changes; on a scale of 1–5, with 1 being very helpful and 5 being not helpful at all, the mean scores were 2.8 and 2.7 (n=18), respectively (Table 2).

Table 2
Helpfulness of the questionnaire for the patient (n=18)

Mean of responses (based on a scale of 1–5) on how helpful the questionnaire was at reminding the patients of their headache triggers, symptoms and behaviour changes	Mean of responses (based on a scale of 1–5) on how helpful the patient found the questionnaire at helping to communicate their headache triggers, symptoms and behaviour changes
2.8	2.7

These questions in the survey were based on a scale of 1–5, with 1 being very helpful and 5 being not helpful at all; therefore, the lower the score the more the helpful the patients found the survey

The majority (78%; 14/18) of respondents said that there was no further information that they thought was necessary to supply about their headache condition in addition to the questions asked, while one patient reported that she wanted to communicate that her migraines were related to menstruation onset. Of those who responded (n=16), all received the questionnaire from their doctor *during* the consultation, as opposed to in the waiting room prior to the consultation.

The differences in the number of respondents to each question was due to some patients not completing all of the questions in the feedback survey.

Discussion

Based on our clinical experience and literature review, there is a significant unmet need for the timely and effective diagnosis of primary headache disorders and MOH in primary care (14, 21). Specifically, this applies predominantly to the diagnosis of migraine (24).

Revisions to the questionnaire following the initial feedback

The draft questionnaire was revised in response to the initial feedback from patients and GPs (Fig. 1).

GP general practitioner

The actions taken are detailed below.

- Questions about current and prior preventive treatments/medicines were removed, as they are not essential for documenting MO or an MOH diagnosis (this relies on the frequency of symptomatic therapy use, not preventive treatment) (4). This change aims to reduce the questionnaire completion

time by patients and increase the likelihood that they will be able to complete the questionnaire without the help of the GP, by reducing the need for in-depth knowledge of their medications. These updates were based on feedback that the consultation time increased when patients could not complete the questionnaire alone.

- We included a free-text box at the end for patients to share any other comments. This update was based on some patients wanting to discuss other observations they had had about their headaches, e.g. the relationship between headaches and their menstrual cycle.

In light of this preliminary feedback and the subsequent amendments, we believe this questionnaire should be easier to use for both patients and physicians. Furthermore, correspondence with an experienced GP in Ireland with an interest in headache has provided positive feedback on this questionnaire for use in the primary care system.

Limitations of the questionnaire and feedback

One GP with a special interest in headache from Ireland suggested that the questionnaire does not address issues such as anxiety or depression. However, we believe that these conditions are often comorbidities of chronic headache disorders, rather than markers pointing to a specific primary headache diagnosis. Furthermore, one of the main pieces of feedback was to minimise the time it takes for patients to complete the questionnaire, so we decided not to include a question on anxiety and depression.

The most significant limitations of this study are that the questionnaire has not been validated against the diagnosis of headache by a headache expert neurologist and there is a small sample size of patients. Owing to significant pressures on healthcare services related to COVID-19 measures, recruitment of significant numbers of patients presenting with headache in face-to-face consultations was restricted, leading to limited numbers recruited in this study. More extensive feedback-gathering attempts were made in Austria, Germany, Switzerland, Ireland and Spain during 2020, but were only possible in Austria due to COVID-19 restrictions. Changes in the way that primary care is delivered, with a push towards telemedicine to reduce infection risk (28, 29), have meant that the delivery of and future feedback for this questionnaire is likely to be through online platforms as well as face-to-face consultations. However, there is also uncertainty about how the COVID-19 pandemic will affect the way that primary care consultations will be run in the short term. Will future headache consultations in the next 1–2 years remain primarily over video/telephone? Could this questionnaire be sent to patients with a headache complaint ahead of their telemedicine consultation? Even before the COVID-19 pandemic, a proportion of patients with headache disorders had shown a preference for, and a high satisfaction with, video consultations over in-person consultations (30). According to a cross-sectional study in the US, preference for in-office, video or telephone consultation can be determined by sociodemographic status (31). Furthermore, benefits of telemedicine go beyond the benefits of adhering to social-distancing guidelines, for example by reducing the need to travel (31), with examples such as the Migraine Buddy app showing how telemedicine is being adopted in the management of headache for some patients (32).

In this round of feedback, all of the questionnaires were provided to the patients *during* the consultation. However, we feel that this is not the most time-efficient way for this questionnaire to be used; therefore, as a next step, we plan to make this questionnaire more accessible to GPs to use and share with their patients ahead of their consultation. This will allow the patients to complete the questionnaire outside of the consultation time, ultimately saving time for the GP.

A further limitation of this study is that we did not attempt to analyse whether the questionnaire helps to improve diagnostic accuracy in primary care, as too few patients were included and the patients were not then referred on for a second opinion to a headache specialist neurologist. Furthermore, data have not been collected on whether the diagnosis is different when the GP used the questionnaire compared with when they do not use the questionnaire. However, the main aim of this report and draft questionnaire, with attached supporting documents, is to ensure that the right questions are asked with a goal of making a definitive headache diagnosis in primary care.

Next steps: ways to implement this questionnaire and supporting documents

With improving COVID-19 restrictions in Spain at the time of this manuscript development, a validation process is currently underway following an advisory board with Spanish neurologists and GPs. We hope to perform similar validations in other countries.

Considering the unmet need for this type of questionnaire, as well as the rapidly changing way of working in primary care due to the COVID-19 pandemic, we aim to raise awareness of this diagnostic tool and present future strategies for its distribution. As discussed above, we also believe that there is a need for this questionnaire to be accessible via digital routes; therefore, we plan to share this questionnaire online via GP websites (e.g. the Irish College of General Practitioners), the CHANGE PAIN educational website and headache patient organisations (33, 34). In order to continue to receive feedback, we also plan to develop digital versions of the feedback surveys for completion by the patients and GPs who use the questionnaire.

This questionnaire has also been used in a headache specialist hospital-based clinic (12 patients), and similar feedback results have been gathered from patients when compared with the results collected from the primary care setting. Use of this questionnaire in hospital-based or specialist neurology settings such as this could be another strategy to improve the management of patients with headache.

Conclusions

There is a considerable unmet need for the accurate and timely diagnosis of headache patients in primary care. We have developed a patient-focussed questionnaire which we believe will support GPs with making a correct headache diagnosis. Overall, patients reported that the first version of this questionnaire, which has now been updated following initial feedback, helped them to communicate their symptoms to their doctor. Based on the initial feedback from the patients and GPs, this questionnaire has

been revised with the aim to reduce the time it takes the patient to complete it unaided prior to, or during, a primary care consultation. Considering the implications that the COVID-19 pandemic has had on delivery of primary care, we plan to distribute this questionnaire electronically for use during telemedicine consultations and we will continue to gather further feedback with the help of headache neurologists and primary care physicians.

Abbreviations

CH: cluster headache; CM: chronic migraine; COVID-19: coronavirus disease 2019; EM: episodic migraine; GP: general practitioner; HCP: healthcare professional; ICHD-2: International Classification of Headache Disorders, 2nd edition; ICHD-3: International Classification of Headache Disorders, 3rd edition; MO: medication overuse; MOH: medication-overuse headache; NSAID: non-steroidal anti-inflammatory response; TTH: tension-type headache.

Declarations

Ethics approval and consent to participate

Consent was gathered from all patients by the GP before using this questionnaire to support headache diagnosis. We initially assessed this activity as not requiring ethical approval. Following a request from BMC Family Practice, a waiver for ethical approval for the use of the Austrian patient data in this study was generated by the Ethics Committee of the City of Vienna (Ethikkommission der Stadt Wien), reference number MA 15-EK 21-216-VK_NZ. Neither an ethics committee meeting nor voting was deemed necessary. All methods were performed in accordance with the relevant guidelines and regulations. All methods were performed in accordance with the relevant guidelines and regulations.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study available from the corresponding author on reasonable request.

Competing interests

MR has received honoraria as a speaker and advisor for Allergan, Grünenthal, Lilly, Lundbeck, Migraine Association of Ireland, Novartis and Teva.

GB has received unrestricted grants, honoraria, personal fees and travel grants from Allergan, Amgen, AstraZeneca, European FP7 Framework Programme, European Headache Federation (EHF), Fresenius,

Grünenthal, Janssen Cilag, Linde AG, Lilly, Menarini, Novartis, Austrian Academy of Sciences, Austrian Society for Neurology, Austrian Headache Society, Pfizer, Reckitt Benckiser, St. Jude Medical and Teva.

AG has received financial support for advisory boards and talks from AbbVie/Allergan, Amgen, Bayer, Grünenthal, Hormosan, Lilly, Lundbeck, Novartis, Perfood, Stada and Teva.

EH is an employee of Grünenthal GmbH.

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Authors' contributions

MR provided consulting services on the need for and the development of this questionnaire, including a kick-off call and multiple rounds of review of all materials. He provided initial feedback from his neurology clinic for the potential use of this questionnaire in this setting. He outlined this manuscript and reviewed at multiple stages.

GB provided consulting services on the need for and the development of this questionnaire, including a kick-off call and multiple rounds of review of all materials. He shared this questionnaire and the feedback documents that led to the data used in the manuscript. He outlined this manuscript and reviewed at multiple stages.

AG provided consulting services on the need for and the development of this questionnaire, including a kick-off call and multiple rounds of review of all materials. She outlined this manuscript and reviewed at multiple stages.

EH initiated this project with multiple reviews of all documents, including drafting the feedback surveys. She outlined this manuscript and reviewed at multiple stages.

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Authors' information (optional)

Footnotes

Not applicable.

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Figures

Headache questionnaire for patients visiting their GP

This questionnaire is for patients visiting their GP because of a headache complaint. Patients are strongly encouraged to answer as much of the questionnaire as possible whilst waiting for their appointment. Please hand the completed questionnaire to your GP when you enter the consultation.

Please tick the box.

You

Age

Gender ☐ M ☐ F

Are you a smoker or an ex-smoker? ☐ Yes ☐ No

You and your headache history

1 Do any of your immediate family members (mum/dad/ brother/sister) suffer from migraine or other headache issues? ☐ Yes ☐ No

2 Have you previously been to your GP or Accident & Emergency because of headaches or migraine? ☐ Yes ☐ No

If yes, were you:

a Given a diagnosis? ☐ Yes ☐ No

b Referred to a specialist? ☐ Yes ☐ No

c Provided with a headache diary? ☐ Yes ☐ No

d Please explain (e.g. do you have it with you?)

3 Do your headaches occur in bouts lasting weeks or months, with months or years of headache or migraine freedom in between? ☐ Yes ☐ No

4 In the past year, how many days per month did you have your moderate or severe headaches or migraine?

☐ Less than 15 days per month ☐ 15 days or more ☐ I don't know

5 In the past year, how many completely normal or crystal clear days do you have each month?

☐ Less than 15 days per month ☐ 15 days or more ☐ I don't know

6 How old were you when you had your first bothersome moderate or severe headache or migraine?

☐ 0-10 years ☐ 11-20 years ☐ 21-30 years ☐ 31-40 years ☐ 41-50 years ☐ Over 50 years

7 Have you had any non-headache symptoms or complaints that have appeared at a similar time to your headache or migraine?

If yes, have these included (select as many that apply):

a Vomiting ☐

b Dizziness ☐

c Blurred vision ☐

d Fever ☐

e Balance problems ☐

f Brain fog ☐

g Facial pain ☐

h Neck stiffness ☐

i Muscle weakness ☐

Please specify others here:

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You and your current headache problem

8 What treatments, including any prescription (from a doctor) medication and over-the-counter medication, do you use to treat your headaches or migraine? Please also indicate the formulation, e.g. tablet or nasal spray

9 How many days in a month do you take medication to treat your headache or migraine? Please combine both prescription medication (from doctor) and over-the-counter medication here (Do not include treatments that aim to prevent your headache or migraine)

☐ 0-9 days per month ☐ 10-15 days per month ☐ More than 15 days per month

10 When you are experiencing your most severe headache or migraine, does movement worsen your headache symptoms? ☐ Yes ☐ No

11 When you have your most severe headache or migraine, which of these statements are true or false?

a It doesn't impact my behaviour or the activities that I do very much ☐ True ☐ False

b I usually lie or sit down and try to reduce/avoid physical activities ☐

c I feel agitated or restless, and typically rock or pace during my attacks ☐

Please share any further information regarding how your headache affects your behaviour:

12 During your most severe headaches or migraine, do you experience

a Nausea and/or vomiting? ☐ Yes ☐ No

b Sensitivity to light and/or noise? ☐

c The pain is exclusively on one side of your head, neck and face (either right or left sided)? ☐

d A pulsating or throbbing feeling? ☐

e Pressing or tightening? ☐

f Eye-related symptoms e.g. tearing, redness, drooping of the upper eyelid and/or constriction of the pupil on the same side as the head/face pain? ☐

g Running or congestion in the nose? ☐

h Sweating on the face and/or forehead? ☐

i Pain behind, in or above the eye or at the temple? ☐

13 On a scale of 1-10 (10 being the most painful things you have experienced), how would you usually grade your most severe headache or migraine?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

14a Do you have any of the following symptoms just before, during or after the headache or migraine: visual disturbance e.g. zigzag shapes, pins and needles/ numbness and/or speech disturbances? ☐ Yes ☐ No

If yes, on average how long does it last?

☐ Less than 2 minutes ☐ 2-5 minutes ☐ More than 5 minutes

14b Do you have any of the following symptoms in the hours or days before the headache or migraine: hyperactivity, less active, depression, cravings for particular foods (chocolate or sweets), repetitive yawning, fatigue and/or neck stiffness/pain? ☐ Yes ☐ No

15 How many hours do your most severe headache or migraine periods usually last for without treatment or successful treatment?

☐ Less than 2 hours ☐ 2-4 hours ☐ 4-72 hours ☐ Longer than 72 hours

16 Any other comments regarding your headache?

Disclaimer

This questionnaire should be used as a guide to aid GPs with the differential diagnosis of primary headaches. Red flags for secondary headache concerns should be addressed appropriately as part of your consultation with the patient. If you are unsure of the correct diagnosis, please refer your patient to the relevant specialist.

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Figure 1

The revised headache questionnaire for patients visiting their GP (pages 1 and 2)

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Diagnosticcriteriainterpretationguide8.00SUBMITTED29July21Additionalfile1.docx](#)
- [Questionbyquestionexplanation6.00SUBMITTED22Jul21Additionalfile2.docx](#)