

Supplemental Material S1. Data extraction form.

Hyperacusis Website Information Analysis – Extraction Form

Project Title – The content and quality of hyperacusis information on websites used by doctors and patients
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Date of Analysis –

Reviewer –

<p><u>Aims of this Research</u></p> <ol style="list-style-type: none">1. Evaluate the accuracy and the reliability of the information relating to hyperacusis2. Examine the content for key concepts related but not limited to the symptoms, causes and treatment of hyperacusis.3. Assess whether the content of these websites is suitable for patients and/or clinicians.
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This extraction form is comprised of 3 sections

1. Website Information' (pages 2-6)
2. 'Content Analysis' (pages 7-10)
3. DISCERN Instrument (pages 11-16)

Website Information

Website Name –

URL –

Produced by	Yes / No	If yes, further Comments that describe the provider of this website
Government		
Not for profit		
Commercial sector		
Other – what?		

Purpose	Comment briefly (in your own words) on what information the website gives on this purpose
<i>Stated purpose from the website as a whole (there may not be one)</i> <i>e.g. NHS Homepage</i>	
<i>Stated purpose of the hyperacusis webpage of that website (there may not be one)</i> <i>e.g. NHS Hyperacusis Page</i>	
Disease management	
Disease prevention	
Evaluation of information from other sources e.g. are studies from journals referenced and described	
Developments in the understanding of the disease e.g. research	
Diagnostic tests or procedures used by clinicians	
Sale of products related to Hyperacusis	
Promotion of complimentary therapies (alternative medicines that fall outside of mainstream healthcare)	
Promotion of self-help	
Raise funds for Hyperacusis patients/research	
Other	

Audience	Comment on all that apply
General public	
Patients with hyperacusis	

GPs	
Other healthcare professionals	
Academics	
University students	
Friends/family of patients	
Government	
Other	
Is the information appropriate to the target audience(s)?	

Functionality	
How many separate webpages are there relating to hyperacusis (e.g. 1)	
Is there a search function + comments on how easy it is to use	
List the top 3 results if search 'Hyperacusis' (only if there is a search function present)	
Is there an online glossary?	
Are there any error pages within the search function?	
Other comments on functionality	

Usability	
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<i>Does the site use...</i>		Comments on if they are beneficial to hyperacusis (your subjective opinion)
Text links to pages within the same website	Yes / No	
Graphic image navigation buttons	Yes / No	
Image maps	Yes / No	
Drop-down menu	Yes / No	
URLs to other pages	Yes / No	
Audio clips	Yes / No	
Video clips	Yes / No	

Overall comments on ease of navigation	
Rating on ease of navigation (1-10) <i>1 – website is broken/all error pages</i> <i>10 – every page works AND very intuitive and easy to use</i>	
Comments on use of colour and backgrounds on website	

Are adverts used on website	
If yes, do the adverts add/subtract from the usability of the website	
General comments about quality of English	

Mobile Functionality		
<i>Does the site have.</i>		<i>Comments</i>
A mobile site	Yes / No	
A mobile app (iOS/Android)	Yes / No	

Is the supplier contactable and how?	
If yes, in what context? e.g. as an information source, to make a donation etc.	

Details of accreditations: (e.g. awards or certification showing competency, success / endorsements)
Where on the site are accreditation details located? (e.g. about section, accessibility page etc.)

This site links to		Comments e.g. prominence
The British Tinnitus Association (BTA)	Yes / No	
Action on Hearing Loss	Yes / No	
Amplifon	Yes / No	
WebMD	Yes / No	
Wikipedia	Yes / No	
National Health Service (NHS)	Yes / No	
National Institute for Clinical excellence (NICE)	Yes / No	
Hyperacusis.net	Yes / No	
Department of Health	Yes / No	
Other		

Content Analysis

For each of the terms below, does the website use these words verbatim or similar phrasing that would have the same meaning

Context and Comments: describe briefly by quoting or in your own words any extra information that may be relevant

Signs & Symptoms

	Yes / No	Context + Comments
Decreased sound tolerance		
Annoyance		
Ear pain		
Sudden hearing loss		
Chronic hearing loss		
Anxiety/Panic Attacks		
Depression		
Stress		
Anger		
Fear		
Phonophobia		
Misophonia		
Lower Quality of Life		
Distress		
Sleep Problems		
Avoidance Behaviour		
Other		

Onset / Causes

	Yes / No	Context + Comments
Loud Noise		
High-pitched noise		
Background noise		
Air travel		
Ear sensitising medication		
Other medication		
Surgery		
Head trauma		
Glue ear		
History of ear infections		
Family History of ear infections		
Other		

Investigations

	Yes / No	Comments + Context
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GP		
Ear nose and throat Specialist		
Audiologist		
Other		

Associated Conditions

	Yes / No	Comments + Context
Tinnitus		
Bell's Palsy		
Migraines		
Lyme Disease		
Tay-Sachs Disease		
Meniere's Disease		
William's Disease		
Addison's Disease		
Post-Traumatic Stress Disorder (PTSD)		
Hearing Loss		
Depression		
Autism Spectrum Disorder		
Other		

Treatments

	Yes / No	Comments + Context
Hearing aids		
Ear wax removal		
Ear infection cure		
Information leaflets		
Education		
Sound Devices		
Earplugs/Earmuffs		
Individual Counselling		
Counselling Groups		
Surgery		
Cognitive behavioural Therapy (CBT)		
Tinnitus retraining therapy		
Pink Noise Therapy		
Anti-depressants		
Anxiolytics		
Night sedation		
Alternative therapies e.g. Acupuncture		

Does the study explicitly mention the use of these studies to back up its information?

Levels of supporting evidence	How much of each? (may be none)
1. Cites systematic reviews / meta-analyses	
2. Cites RCTs, cohort study, clinical decision rule validated in different populations	
3. Cites consistent Retrospective Cohort, Exploratory Cohort, Ecological Study, Outcomes Research, Case-control study; or extrapolations from level 2 studies	
4. Cites case-series study or extrapolations from level 3 studies	
5. Cites expert opinion without explicit critical appraisal, or based on physiology, bench research or first principles	

Further notes on the webpage that have not been addressed in any other sections of this extraction form

Date last updated (it might not say, if so put N/A)	
What is the update related to? (e.g. are there any stated improvements being made to the webpage to provide detail on certain sections, if not say N/A)	

Discern Instrument

'A brief questionnaire which provides users with a valid and reliable way of assessing the quality of written information on treatment choices for a health problem' (DISCERN website)

This has been adapted from the official DISCERN tool and a similar tool used by a study which examined 'The content and quality of tinnitus information on websites accessed by GPs'

More details can be found at <http://www.discern.org.uk/>

Section 1 – Is the publication reliable?

1. Are the aims clear?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for a clear indication at the beginning of:

- what it is about
- what it is meant to cover (and what topics are meant to be excluded)
- who might find it useful

If the answer to Question 1 is 'No', go directly to Question 3

2. Does it achieve its aims?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Consider whether the website provides the information it aimed to as outlined in Question 1

3. Is it relevant?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Consider whether:

- the website addresses the questions that readers might ask.
- recommendations and suggestions concerning treatment choices are realistic or appropriate.

4. Is it clear what sources of information were used to compile the website (other than the author or producer)?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT

- Check whether the main claims or statements made about treatment choices are accompanied by a reference to the sources used as evidence, e.g. a research study or expert opinion.
- Look for a means of checking the sources used such as a bibliography/reference list or the addresses of the experts or organisations quoted, or external links to the online sources.

Rating note: In order to score a full '5' the site should fulfil both hints. Lists of additional sources of support and information (Question 7) are not necessarily sources of evidence for the current publication.

5. Is it clear when the information used or reported in the publication was produced?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for:

- dates of the main sources of information used to compile the website
- date of latest revisions

6. Is it balanced and unbiased?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for:

- a clear indication of whether the website was produced from a personal or objective point of view
- evidence that a *range* of sources of information was used to compile the website, e.g. more than one research study or expert
- evidence of an external assessment of the website.

Be wary if:

- the website focuses on the advantages or disadvantages of one particular treatment choice without reference to other possible choices
- the website relies primarily on evidence from single cases (which may not be typical of people with this condition or of responses to a particular treatment)
- the information is presented in a sensational, emotive or alarmist way.

7. Does it provide details of additional sources of support and information?

No		Partially		Yes
1	2	3	4	5
Comments				

HINT Look for suggestions for further reading or for details of other organisations providing advice and information about the condition and treatment choices.

8. Does it refer to areas of uncertainty?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT

- Look for discussion of the gaps in knowledge or differences in expert opinion concerning treatment choices.
- Be wary if the website implies that a treatment choice affects everyone in the same way, e.g. 100% success rate with a particular treatment.

Section 2 – How good is the quality of information on treatment choices?

N.B. The questions apply to the treatment (or treatments) described in the website. Self-care is considered a form of treatment throughout this section.

9. Does it describe how each treatment works?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for a description of how a treatment acts on the body to achieve its effect.

10. Does it describe the benefits of each treatment?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Benefits can include controlling or getting rid of symptoms, preventing recurrence of the condition and eliminating the condition, both short-term and long-term.

11. Does it describe the risks of each treatment?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Risks can include side-effects, complications and adverse reactions to treatment, both short-term and long-term.

12. Does it describe what would happen if no treatment is used?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for a description of the risks and benefits of postponing treatment, of watchful waiting (i.e. monitoring how the condition progresses without treatment) or of permanently forgoing treatment.

13. Does it describe how the treatment choices affect overall quality of life?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for:

- description of the effects of the treatment choices on day-to-day activity
- description of the effects of the treatment choices on relationships with family, friends and carers.

14. Is it clear that there may be more than one possible treatment choice?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT: Look for:

- a description of who is most likely to benefit from each treatment choice mentioned, and under what circumstances
- suggestions of alternatives to consider or investigate further (including choices not fully described in the publication) before deciding whether to select or reject a particular treatment choice.

15. Does it provide support for shared decision-making?

No		Partially		Yes
1	2	3	4	5
Comments:				

HINT Look for suggestions of things to discuss with family, friends, doctors or other health professionals concerning treatment choices.

Section 3 – Overall Rating of the Website

16. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices

Low		Moderate		High
<i>Serious or extensive shortcomings</i>		<i>Potentially important but not serious shortcomings</i>		<i>Minimal shortcomings</i>
1	2	3	4	5

Also score overall **Quality** according to the **5-star system** for rating the quality of information based on DISCERN (Shepperd et al. 2002 Health Informatics and Libraries Journal)

Highlight the correct option that applies (from questions 1-16)

- If 8 or more questions score 5 = **5 stars**
- If 8 or more questions score 4 and above = **4 stars**
- If 8 or more questions score 3 and above = **3 stars**
- If 8 or more questions score 2 and above = **2 stars**
- All other combinations score **1 star**

THE END