

Helping MedlinePlus Users Evaluate Online Health Information

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Abstract

Introduction

Many people search for health information online. Many different sources provide health information online but not all provide reliable and accurate information. The consumer must determine whether the information can be trusted. One goal of this project was to create an infographic to help MedlinePlus users better evaluate online health information.

Methods

Research on health literacy, health information seeking behavior online, health information on social media, and design best practices was examined in a literature review. Infographic content was created after reviewing health information evaluation and information literacy guidelines. Infographic designs were produced in Easel.ly and Piktochart. Readable was used to evaluate the reading level of infographic content.

Outcomes

A literature review of related research and a review of existing MedlinePlus health information evaluation resources were completed. These reviews informed the content and design of the health information evaluation infographic. Four designs were created for the 5 Questions to Find Good Health Information Online infographic using Easel.ly. Five additional infographic designs were created in Piktochart using the expanded 5 Questions.

Discussion

This project switched focus from producing a recommendation of formats for presenting information to producing an infographic to help consumers evaluate health information online. Although several infographic designs were created, the project did not extend to planning or creating a video. Reviewing the literature on health literacy gave context on audiences who may benefit from the infographic.

Recommendations

1) Continue to explore formats and adapt infographic to Spanish. 2) Tap into the affective motivations of health information seeking behavior when creating infographics and other educational materials by helping consumers feel empowered to take charge of their health and connected to a community with similar health concerns. 3) Bring together relevant info from multiple topic pages in a 'toolkit' approach and supplement them with infographics, videos, or tutorials.

Introduction

The Pew Research Center's Health 2013 survey indicated that 59% of U.S. adults had looked online for health information in the previous year. There are many different sources providing health information online but not all of them provide reliable and accurate information. It is up to the consumer to determine whether the information can be trusted. However, almost 9 out of 10 English-speaking adults in the U.S have limited health literacy and may not have the necessary skills to accurately evaluate health information online (National Action Plan to Improve Health Literacy, 2014).

MedlinePlus is the National Institute of Health's consumer health information website which is produced by the National Library of Medicine. MedlinePlus provides tutorials and links to resources to help consumers evaluate online health information. Expanding the formats on MedlinePlus to video and infographics could attract new users, and content with images is often more frequently engaged with on social media platforms (Rus & Cameron, 2016).

This project involved researching the role of social media in consumers' search for health information, investigating different formats for presenting information (specifically infographic format), and exploring resources for presenting information at a 7th to 8th grade reading level. The goal was to create an infographic which could be used on the MedlinePlus website and social media channels and to plan (and potentially create) a video for the website and the NLM YouTube channel based on the infographic.

Methods

A literature review was completed looking at research on health literacy, health information seeking behavior online, health information on social media, and design best practices. The team identified nine areas to focus on:

1. Research recent literature on consumer health information seeking behaviors online
2. What makes an online health information source acceptable, reliable, credible, or true?
3. Who seeks health information online? Why?
4. The demands and barriers of eHealth literacy
5. Use of mobile in health information seeking
6. Heuristic and systematic use of search engines for consumer health information
7. Assessing credibility of online health resources
8. Impact of web searching, search engine rankings, and social feedback on consumer decision making, also social media influences, endorsement
9. The mental shortcuts that lead people to trust information found online

Citations were collected in Mendeley and select research findings were brought to team meetings for discussion.

A review of the health information evaluation resources on MedlinePlus was completed which examined the Evaluating Health Information health topic page, the MedlinePlus Guide to Healthy Web Surfing page, and the Evaluating Internet Health Information Tutorial. Following a review of existing information literacy and health information evaluation tools and frameworks, I created a set of five questions for consumers to ask when evaluating health information online. An 'expanded' version of the five questions was also created which further elaborates on each evaluation question. Both the original five questions and the expanded versions were checked for reading level using the Readable website.

Infographic designs were created using Easelly and Piktochart which were chosen due to the availability of a free version of the tools and the ease of downloading image files (Wright, 2016). Easelly allows you to create and download infographics without any branding being applied. The free version of Piktochart applies their logo to the bottom of the image file. However, Piktochart has a greater number of free images and icons than Easelly. Easelly was used to create designs for the 5 Questions to Ask to Find Good Health Information Online infographic. Piktochart was used to create the expanded version infographic designs. Team meetings were scheduled to give feedback and guidance on infographic designs.

Outcomes

A literature review of research and a review of existing MedlinePlus health information evaluation resources were completed. The literature review and review of existing MedlinePlus resources are provided as appendices. These reviews informed the content and design of the health information evaluation infographic. Four designs were created for the 5 Questions to Find Good Health Information Online infographic using Easel.ly. Five additional infographic designs were created in Piktochart using the expanded version of the 5 Questions. Images and text for the infographics can be found in the appendix. Readable gives a letter rating from their ReadablePro scoring system as well as Flesch-Kincaid Grade Level and Gunning Fog Index numbers. The two readability scores consider different factors, but both scores roughly correspond with educational level. Results of the readability checker are shown in Table 1. The text for the expanded questions was run together as one text, which may account for the slightly higher scores.

5 Questions to Ask to Find Good Health Information	5 Questions Expanded
ReadablePro Rating: A	ReadablePro Rating: A
Flesch-Kincaid Grade Level: 5.1	Flesch-Kincaid Grade Level: 7.0
Gunning Fog Index: 8.2	Gunning Fog Index: 10.7

Table 1: Scores from the readability checker (Readable.com).

Discussion

This project underwent significant changes from the initial proposal. Initially the project was comprised of five parts: 1) evaluating the Understanding Medical Words and Evaluating Internet Health Information tutorials on MedlinePlus, determining their relevance, and recommending if they should be updated; 2) exploring the need for a tutorial on using MedlinePlus; 3) researching the role of social media in consumer's search for health information; 4) investigating formats for presenting information, such as infographics or image series; 5) exploring resources for presenting information at a 7-8th grade reading level. The deliverable in this project proposal would have been recommendations of methods and formats to present information to consumers on the MedlinePlus website to help them find reliable, trusted health information.

In the interval between project selection and beginning the project, the two tutorials in question were updated and so no longer required an evaluation. The new project proposal switched focus from producing a recommendation of formats for presenting information to producing an infographic to help consumers evaluate health information online. This project proposal maintained the components of research into the role of social media in consumer's search for health information, investigating formats for presenting information, and exploring resources for presenting information at a 7-8th grade level. However, the deliverables were now an infographic for the MedlinePlus website and social media channels, planning/creating a video/animation for the NLM YouTube channel and MedlinePlus website, and A/B testing of the infographic vs. animation on the MedlinePlus website (if time permitted).

Although several infographic designs were created, the project ultimately did not extend to planning or creating a video which could be tested against the infographic. In order to make the infographic useable by and relevant to a wide audience the content had to be both actionable and written at the 7th-8th grade reading level. Actionable content can be easily and quickly understood and provides the next

steps to act on the information. For each of the 5 Questions to Find Good Health Information Online, the first item of content is the question, the specific question to ask to evaluate the health information, and finally how to take action after answering the question, i.e., determine whether something is good health information or not. For example: Who? (Question) Who wrote the information? (Specific question) Check for the author's name and qualifications. Good health info is written or reviewed by a health professional. (Action—determine if this is good health information)

The infographic design was influenced by the findings of the literature review. Reviewing the literature on trust and credibility revealed that these terms have been defined and measured in a variety of ways in research. Quality of the information, authority of the author, and readability are all ways in which content positively influences perceptions of credibility. Clear layout and website design, contact details, and interactivity are all ways in which design positively influences credibility. Research into cognitive load also informed content and design decisions for the infographic. Use of chunking, white space, and using a left-to-right reading order are all ways of lowering cognitive load in infographic design. Reviewing the literature on health literacy gave valuable context on audiences who may benefit from the infographic as well as areas to strengthen and develop MedlinePlus resources in the future. The infographic will not solve the problem of low health literacy but could be part of a toolkit for teaching health literacy skills.

Recommendations

- (1) Adapt infographic content for Spanish speaking MedlinePlus users and continue exploring formats for presenting health information online.

The evaluation questions presented in the infographic can be translated and adapted to meet the needs of Spanish speakers. The questions could also be adapted to an animated video format or broken down into an image series to elaborate further on the questions.

- (2) Tap into the affective motivations of health information seeking behavior when creating infographics and other educational materials by helping consumers feel empowered to take charge of their health and connected to a community with similar health concerns.

There is a strong affective component to health information seeking behavior online. Consumers are motivated by both autonomy and relatedness. Infographics and other educational materials may be more effective when they tap into these motivations by helping consumers feel empowered to take charge of their health and connected to a community with similar health concerns.

- (3) Bring together relevant info from multiple topic pages in a 'toolkit' approach and supplement them with infographics, videos, or tutorials.

Although MedlinePlus currently organizes some resources by demographic groups or broad categories (e.g. Disorders and Conditions, Diagnosis and Therapy, Health and Wellness) it can be difficult for a consumer to access all the resources they need with one search. Compiling resources which are frequently used together in toolkits could help ameliorate some of the navigation issues experienced by less web savvy consumers. Additionally, having customized toolkits of resources moves closer towards the personalized information many consumers are seeking when they look for health information online.

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Appendices

Review of Health Information Evaluation Resources

A review of the MedlinePlus website shows that there are currently three resources related to evaluating health information: the Evaluating Health Information health topic page, the MedlinePlus Guide to Healthy Web Surfing page, and the recently updated Evaluating Internet Health Information Tutorial. The health topic page links to the other two resources as does the MedlinePlus Guide to Healthy Web Surfing page.

The Evaluating Health Information page follows the same structure as other health topic pages, providing a summary and then links to resources arranged by category. Linked resources include guides to evaluating health information created by NCI, NCCIH, American Academy of Physicians, and the Trust It or Trash It? tool created by Genetic Alliance.

The NCI guide “Using Trusted Resources” organizes its information under the headings Websites, Social Media, Books, Magazines, and Where to Get More Help. Under the heading Websites a series of questions is used to evaluate credibility: Who manages this information? What are the letters at the end of the web address? Who is paying for the project, and what is their purpose? What is the original source of the information that they have posted? How is information reviewed before it gets posted? How current is the information? If they are asking you for personal information, how will they use that information and how will they protect your privacy? Under the heading Social Media are the cautions to “only follow social media from reputable sources” and to be wary of information from personal social media accounts where the origin of the information presented is unknown.

The NCCIH guide suggests ‘five quick questions’ for evaluating online sources of health information: Who runs or created the site or app? What is the site or app promising or offering? When was its information written or reviewed? Where does the information come from? Why does the site or app exist? The guide gives more specific advice in collapsed menus recommending specific consumer health websites to start with, and how to verify the quality of information from social media or a health app. The page is organized with two boxes at the top highlighting “The Bottom Line” and “Five Quick Questions” other information is in collapsed dropdowns.

The American Academy of Physicians guide focuses on 3 questions: Where did this information come from? How current is this information? Who is responsible for the content of the website? It goes on to describe how answering these questions can help users evaluate health information. The guide encourages users to verify information they have found online with their doctor and provides a list of questions to ask their doctor.

The Trust It or Trash It? Tool from Genetic Alliance begins with 3 questions: Who said it? When did they say it? How did they know? Clicking on one of the questions brings up a list of points and whether the information source should be ‘trusted’ or ‘trashed.’ For example, “Think about TRUSTING IT if: The author’s name is easy to find. Think about TRASHING IT if: You don’t know who wrote it, or you can’t find the author’s name.” There is also a “Dig deeper for more information” button which introduces 3 additional questions to consider: Is the information complete or are there topics not covered? Is the information right? Is the information presented in a way that is understandable and accessible?

The MedlinePlus Guide to Healthy Web Surfing provides similar content on evaluating health information to the linked resources on the health topic page. The main points are: consider the source, focus on quality, be a cyberskeptic, look for the evidence, check for currency, beware of bias, protect your privacy, and consult with your health professional.

The Evaluating Internet Health Information Tutorial was recently updated from a video format to a click-through style tutorial with approximately 16 'slides.' The tutorial is also available as a 31-page PDF. The tutorial focuses on 3 areas of evaluation: Provider and Purpose, Information Quality, and Privacy. Linked at the beginning and end of the tutorial is a checklist with questions related to each of the 3 evaluation areas identified in the tutorial, as well as the additional category Funding.

The resources vary in length and are mostly not interactive. The two exceptions are the Trust It or Trash It tool and the Evaluating Internet Health Information Tutorial which require you to click through to get more information. All the resources suggested questions that users should ask to evaluate health information online, although some also offered prescriptive advice as well, e.g. "only follow social media from reputable sources." All resources address the concepts of authority or authorship, currency, and accuracy. Except for the NCI guide, only the MedlinePlus resources include privacy as an important criterion in evaluating health information. The NCCIH guide provides some advice about privacy, but it is under a dropdown and not part of the "five quick questions." Guides on evaluating health information have similar criteria to general guides on evaluating information online or information literacy guides, albeit tailored to fit health information. Two models which exemplify this are CRAAP (Currency, Relevance, Authority, Accuracy, Purpose) and CARS (Credibility, Accuracy, Reasonableness, and Support).

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Review of Research

Health Literacy

Health literacy has been defined in various ways. In the National Action Plan to Improve Health Literacy (2014) it is defined as: “[T]he degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions....” The Calgary Charter (2008) defines health literacy as “the use of a wide range of skills that improve the ability of people to act on information in order to live healthier lives. These skills include reading, writing, listening, speaking, numeracy, and critical analysis, as well as communication and interaction skills.” The WHO Health Promotion Glossary (1998) states that health literacy “represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.” These three definitions identify tasks such as obtaining, accessing, processing, understanding, and acting upon health information. The National Network of Libraries of Medicine provides additional examples of tasks on their Health Literacy webpage: access health care services, analyze relative risks and benefits, calculate dosages, communicate with health care providers, evaluate information for credibility and quality, and interpret test results. While one definition describes health literacy as a capacity, the two other definitions list specific skills like reading, writing, listening, speaking, numeracy, critical analysis, communication, interaction, cognitive, and social skills. The NNLM also provides additional examples of skills such as visual literacy (being able to interpret graphs and other visual information), information literacy, and computer literacy.

These definitions focus on individual skills and capacities, but we can also relate the concept of health literacy to health care providers, health care systems, and the broader social context. Health literacy applies to both individuals and institutions, health care providers and patients. So, focus is on both improving individual health literacy skills as well as the communication skills of health care providers and accessibility of health information. Health literacy must address “interactions among individuals, materials, and messages designed and delivered by health professionals, as well as the norms, policies, and practices within institutions” (Rudd, 2017).

Several tools have been developed to measure health literacy in patients including the Newest Vital Sign (NVS), the Test of Functional Health Literacy in Adults (TOFHLA), and the eHealth Literacy Scale (eHEALS). The NVS and TOFHLA both measure literacy and numeracy, but the NVS is a short 6 item evaluation while the TOFHLA has 50 questions assessing reading comprehension and 17 assessing numeracy (Weiss, et al., 2005; Parker, Baker, Williams, & Nurss, 1995). The eHEALS looks at patients’ self-reported skill and confidence in finding, evaluating, and using electronic health information (Norman & Skinner, 2006). The Patient Education Materials Assessment Tool (PEMAT) provides a way of evaluating print and audiovisual patient materials for understandability and actionability (Shoemaker, Wolf, & Brach, 2014).

A systematic review by Diviani, van den Putte, Giani, and van Weert (2015) looked at the relationship between health literacy and evaluating online health information. Some studies reviewed used the health literacy assessment tools, but others used educational level or literacy level as proxies for health literacy. Most of the studies reviewed found that lower education level was associated with lower trust in online health information. One of the studies reviewed noted that when the information is harder to understand there is less trust in online health information. There were four categories of evaluation

criteria identified in the studies: heuristics, authorship, credentials, and consistency with search intentions. Heuristics included position in search results, quality of images, and celebrity endorsement. Studies looking at authorship as an evaluation criterion found that higher levels of education were associated with higher trust in medical universities and federal sources of information. Studies looking at credentials found that lower levels of education were associated with decreased likelihood of checking website credentials. In the study looking at consistency with search intentions, they found that participants with different skill levels (defined by both education level and web experience) defined consistency differently. High skilled participants defined consistency with search intentions as a website containing the information they searched for while low skilled participants defined consistency as a website confirming their pre-existing opinions.

Lower levels of education correspond to both lower health literacy and worse health outcomes (Zajacova & Lawrence, 2018). Educational inequality produces social inequalities which can result in worse health outcomes. Specifically, educational inequality impacts: economic, health-behavioral, social-psychological, and access to health care. “Inadequate education is a fundamental driver of deficiencies in other social determinants of health” (Johnston, 2019).

Seeking Health Information Online

There are many factors which influence whether an individual will choose to search for health information online. Jacobs, Amuta, and Keon (2017) found that younger age, high socioeconomic status, and high internet skill were all positively correlated with seeking health information online while older age, low socioeconomic status, and low internet skill correlated with seeking health information from traditional media sources (print materials and telephone). Reasons individuals indicated for searching for health information online were self-management of a condition, determining need to see a doctor, reassurance, seeking a second opinion, wanting more information after seeing a doctor, or due to barriers accessing information from other sources. Some benefits specific to using online health information were convenience, broad coverage of topics, anonymity, interactivity, and being able to get personalized information.

Information-seeking models or perspectives inform research on health information seeking behavior. The instrumental perspective takes the view that individuals seek information to fulfill specific tasks and research from this perspective focuses on identifying what those specific tasks are. In contrast to the instrumental perspective is the self-determination perspective. This perspective focuses on individual feelings of autonomy, competence, and relatedness as motivators for information-seeking. Lee and Jin (2016) found that these three motivators were higher for online health information seeking than more office visits with physicians. Autonomy and relatedness were found to explain online health seeking behavior. Lee and Jin (2016) theorize that competence was not a significant factor explaining behavior due to issues individuals face in interpreting, understanding, and using online health information.

Sbaffi and Rowley (2017) reviewed the literature on trust and credibility in online health information. Trust and credibility were sometimes defined separately and sometimes conflated in the literature with no real consensus, a finding that is consistent with previous research (Johnson, Rowley, and Sbaffi, 2015). They grouped the factors influencing trust/credibility into three broad categories: design, content, and other factors. Design factors that positively influenced trust and credibility were having a clear website layout or design, providing contact details, the authority of the website owner, and having interactive features. Factors that negatively influenced trust and credibility were the presence of

advertising, a website that was slow to load, complex website layout or design, lack of navigation aids, and have no search or poor search features. Content factors that positively influenced trust and credibility were the authority of the author, ease of use, readability, familiarity, currency, and relevance. Content factors which negatively influenced trust and credibility included inappropriate information and irrelevant information.

Under the category of other factors influencing trust and credibility Sbaffi and Rowley (2017) discuss information quality and use of information. The studies reviewed identified several components to perceived information quality including the presence of relevant referral links; accuracy, reliability, credibility, trustworthiness, and clarity; and trustworthiness, truthfulness, readability, and completeness. One study found that while improving the readability of a website improved perceptions of quality it did not improve trust in the website. Use of information or intent to use information was associated with trust and credibility in the following ways: usability and usefulness of information on a website contributed to trust and the likelihood that a website would be returned to in the future; and health information was more likely to be used when there was perceived benefit, high interactivity, and trust in the website.

Social Media

A systematic review by Smailhodzic, Hooijsma, Boonstra, and Langley (2016) identified several effects of social media use on patients and their relationship with healthcare professionals. Patients use social media for many reasons: emotional support, informational support, esteem support, network support, social comparison, and emotional expression. The effects of social media use on patients are mixed. Some positive effects are improved self-management, enhanced psychological well-being, and enhanced subjective well-being. Psychological well-being in this case refers to feeling of self-actualization and having positive relationships with other people while subjective well-being refers to feeling good about yourself and your life. However, negative effects such as diminished subjective well-being, addiction to social media, loss of privacy, and being targeted for promotion were also identified by research. Research also identified mixed effects of the patient-health care provider relationship.

Some research indicated that patients had more equal communication with their health care provider, felt better prepared for their appointments, and felt more willing to seek medical care. Some patients also indicated more harmonious relations as getting affective support on social media and having a space to release negative emotions acted as a complement to the clinical support from their provider. However, some patients experienced negative effects on their relationship with their provider when the provider expressed negative reactions to their social media such as that their knowledge was being questioned or that evaluating information from social media required additional work. The review found that patients use social media as a complement to professional health care services to meet emotional and information needs—especially bridging the gap between clinical information and ‘everyday information’ about their condition. Additionally, while esteem support and emotional support both predicted a patient’s increased sense of empowerment, informational support was the strongest predictor of empowerment.

Borah and Xiao (2018) examined the effect of framing and social endorsement on perceived credibility of health information in Facebook messages. Social endorsement was determined by number of likes on a post. In general, loss-framed messages have been shown to work best for encouraging illness-detection behaviors while gain-framed messages work best for encouraging illness-prevention

behaviors. The study examined perceived credibility of Facebook messages with a gain or loss frame, expert or non-expert opinion, and high or low number of likes. Gain-framed posts and expert source posts were perceived to be more credible. Simply having more likes did not correlate with higher perceived credibility. Borah and Xiao theorized that psychological reactance—an individual avoids messages which make them feel their freedom is threatened—could explain the preference for gain-framed messages.

Rus & Cameron (2016) looked at which message features predicted higher user engagement on ten diabetes-related pages on Facebook. User engagement was measured by the numbers of likes, shares, and comments. The study looked at the message features: imagery, identity information (symptoms or diabetes), causal information (factors contributing to diabetes), timeline information (onset and duration), consequence information (potential effects of diabetes), control information (behaviors and beliefs influencing health outcomes), positive affect (expressions of hope, optimism, etc.), negative affect (expressions of doubt, sadness, anger, etc.), social support, positive identity (preservation of identity in spite of diabetes), crowdsourcing, and external links. They found that imagery in a post was the strongest predictor of likes and shares. Imagery increased engagement in the context of crowdsourcing and positive identity posts. However, imagery had a negative effect on user engagement under certain post conditions. Messages featuring control information, negative affect, consequence information, positive identity, and causal information all had higher user engagement when not paired with imagery. Negative affect in a post predicted higher numbers of likes and comments.

Design Best Practices

Cognitive load theory postulates a certain ‘load’ for cognitive tasks which prevents us from learning when exceeded. Cognitive load is composed of extraneous load—the mode of method by which learning tasks are presented, intrinsic load—the nature of the learning task, and germane load—our working memory available for learning. Van Merriënboer and Sweller (2010) identify ways to decrease extraneous load, manage intrinsic load, and optimize germane load. Extraneous load can be decreased by having learners engage in goal-free tasks, study and question a worked example, complete a partial solution, providing all learning information in one place, and by using multiple modes of presenting the information. Intrinsic load can be managed by progressing from simple to complex tasks and from a practice environment to a ‘real world’ environment. Germane load can be optimized by practicing tasks with variable features, practicing tasks in different orders or in different contexts, and asking the learner to explain concepts or principles in their own words. Majooni, Masood, and Akhavan (2018) looked at cognitive load in the context of infographic design using eye-tracking. Tracking users eye movements as they read four infographic designs allowed them to determine which designs had lower cognitive loads. They identify three design principles that lower cognitive load: chunking content into smaller text blocks, scaffolding information by building on previous concepts, and using a left-to-right or top-to-bottom layout for infographic elements.

Dunlap (2016) examined the top 20 liked infographics on Visual.ly and created an assessment instrument which ranked them on measures of immediacy, malleability, compellingness, resonance, and coherence. Immediacy refers to how quickly the learner becomes involved with the infographic. Malleability refers to the extent to which learners can make their own meaning from the infographic. Compellingness refers to how well the infographic grabs the learner’s attention and interest. Coherence refers to the logic, clarity, and consistency of the infographic and its message. The study resulted in

design recommendations related to structure, content, and visual elements. Effective infographics should have a concise structure, be only 1-2 pages long, have a clear title, and provide orienting text. The content of an infographic should have only one learning objective or 1 to 3 associated learning objectives. Effective infographics have visual elements that are relevant not merely decorative. The visual elements should relate to the content and the relationships between textual elements where possible.

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Health Literacy Resources

Health Literacy Online

<https://health.gov/healthliteracyonline/>

Patient Education Materials Assessment Tool (PEMAT)

<https://www.ahrq.gov/ncepcr/tools/self-mgmt/pemat.html>

Health on the Net (HON)

<https://www.healthonnet.org/HONcode/>

Design Resources and Tools

Research-Based Web Design & Usability Guidelines

https://www.usability.gov/sites/default/files/documents/guidelines_book.pdf

Readable

<https://readable.com>

Easelly

<https://www.Easelly/>

Piktochart

<https://piktochart.com/>

5 Questions to Find Good Health Information Online

You don't have to be an expert. You may already know some of the questions to ask to be a smart searcher.

Who?

- Who wrote the information?
- Check for the author's name and qualifications. Good health info is written or reviewed by a health professional.



What?

- What information is on the website?
- Good information will be backed up by science.



Where?

- Where is the information coming from?
- The end of the URL will tell you if the website is run by a company (.com), a university (.edu), or a government agency (.gov).



When?

- When was the information created or updated?
- Look for the date it was posted or updated.
- New research is happening all the time.

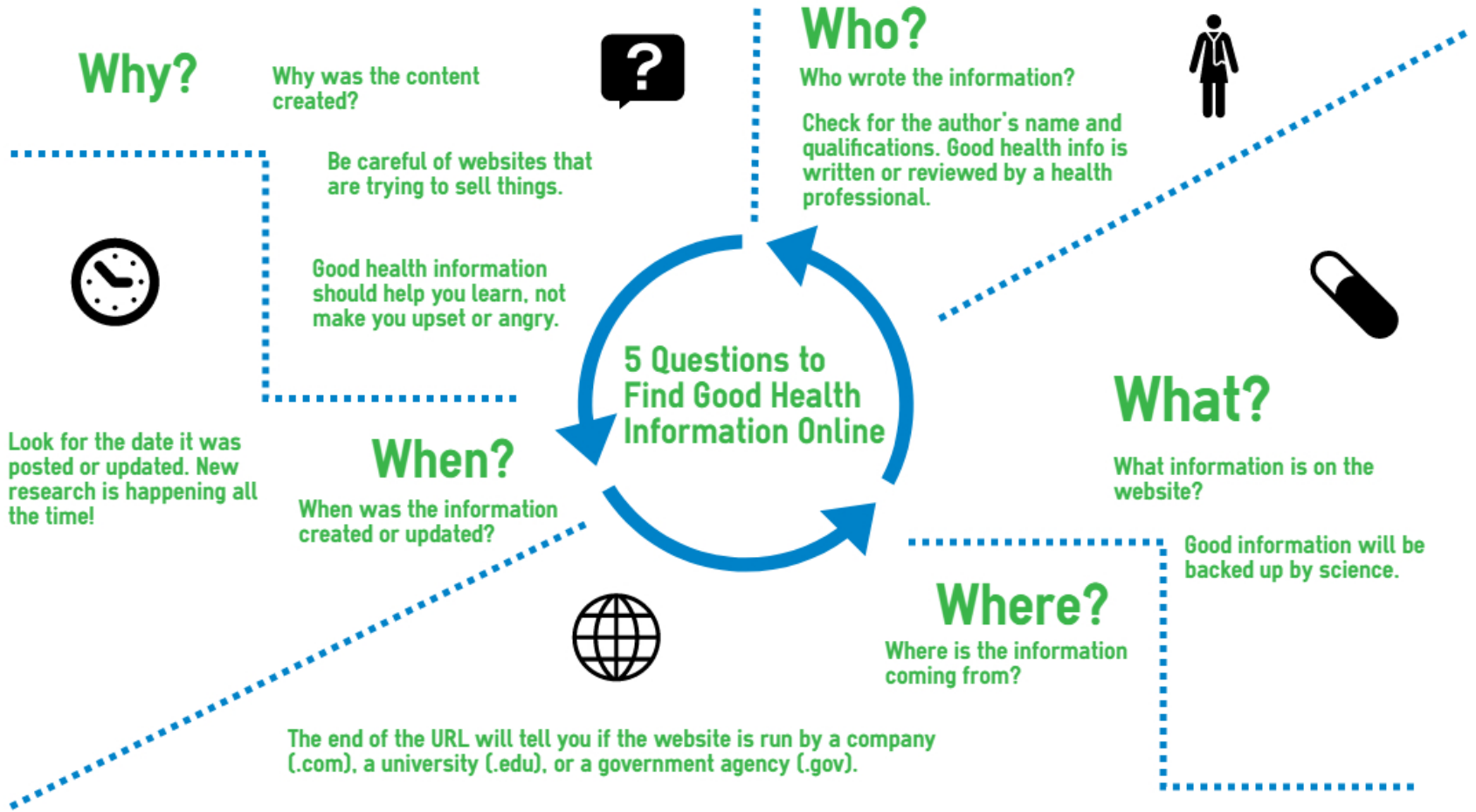


Why?

- Why was the content created?
- Be careful of websites that are trying to sell things to you.
- Good health information should help you learn, not make you upset or angry.



Remember: A website cannot diagnose you or provide treatment advice. You should always ask a medical professional about your health concerns.





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5 Questions to Find Good Health Info: Who?

Who wrote the information?



Information written or reviewed by a medical professional is more accurate and trustworthy.

Good websites for health information tell you who writes and reviews their content.



You might also ask: Who pays for this website?

Companies will pay for health information websites to promote a product they are selling.



Sometimes websites are paid for by people with strong opinions or beliefs about health which are not supported by scientific research.

Remember: Your health care provider is always the best resource when you have a medical question or concern.

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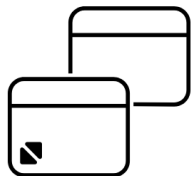
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Opinions and personal stories are not always a good source of health information.



You might also ask: What information is missing?

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5 Questions to Find Good Health Info: Where?

Where is the information coming from?

The end of the URL tells you who runs the website:



.com = company

.org = organization



.edu = educational institution

.gov = government



You might also ask: Where can I look to find out if this information is correct?

If you don't know if the information you have
found is correct, check it against a trusted source.



Health care providers can help you better
understand health information and how it may
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The end of the URL can help tell you who runs the website:

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5 Questions to Find Good Health Info: When?

When was the information created or updated?



Scientific research moves quickly, so it's important to check for a date to make sure you have the latest information.

If you find information with no date or from several years ago, see if you can find more recent information.



You might also ask: When do I need to talk to a doctor?

A website cannot diagnose you or tell you how to treat a health condition.



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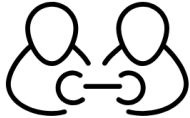
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5 Questions to Find Good Health Info: Why?

Why was the content created?



Sometimes websites share health information or connect people with the same health condition to share stories and experiences.

However, sometimes websites are created to sell products or to push beliefs or opinions about health which are not scientifically supported.



You might also ask: Why does this seem too good to be true?

Health conditions can be complicated and there usually isn't a 'quick fix' or 'miracle cure.'



Ask your doctor before making important decisions about your health.

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