Family Medicine Clerkship Student Projects   Larner College of Medicine

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Patient Guide to Access Quality Health Information Online

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The Problem

There is a Proliferation of health related information online that is unregulated:

"With more than 100,000 health-related websites estimated to be in existence, Internet users may have difficulty accessing evidence-based sources and often seek information through simple search engine (eg, Google, Yahoo, Bing) queries that may prioritize sites of lower quality, undisclosed commercially sponsored content, irrelevant information, and/or at worst, misinformation." (1)

"Despite the fact that a large number of people base important health decisions on information they find on the Internet, there is very little being done to ensure the accurate reporting of health information online. Currently, it is the responsibility of the individual site to determine the quality of health-related content."(2)

A large percentage of patients use online search engines to access health information:

"There are an estimated 6.75 million health searches daily in Google representing 4.5% of all searches performed." (3)

"8 in 10 online health information seekers started with a search engine (Google, Bing, or Yahoo)." (4)

Critical evaluation of online health information is generally inadequate. There is a gap between online health resources available and consumers skills for accessing and evaluating them:

"A survey conducted by the Pew Research Center found, only 15% of online health information seekers said they "always" checked the source and the publication date of the information they found online. This means that nearly 115 million Americans are gathering health information online without evaluating its quality."(2)

"Many challenges arise especially from the low quality information content for people who might be literate enough to find, understand, and process such information and store it in their memories, but not literate enough to recognize it for what it is (false, irrelevant, or fraudulent)." (4)

The sources of online content are not available:

"A study conducted under the direction of the U.S. Department of Health and Human Services calculated that only 4% of the most frequently visited health web sites published the source of their content and just 2% revealed how the content was updated"(2)

Public Health Concerns

Online health information impacts decisions about health care:

"53% of American respondents stated that their last Internet search impacted their personal health care in some way or the way they cared for someone else. Further, one third of e-Patients reported that what they found online specifically affected their decision whether or not to see a doctor" (2)

"It has been reported that one in every two people searching for health information online do so to self-diagnose, with the highest rates of this practice occurring in Russia, the United States, the United Kingdom, and Australia."(2)

Misinformation online can compromise clinician-patient relationships:

"Inaccurate online health information can lead to clinicians advocating guideline-supported recommendations different from those read on reputable online sources. This mismatch of information can lead to a breakdown in trust in the clinician-patient relationship." (5)

Misinformation tends to effect less educated and vulnerable patients:

"This is a barrier to patient education and results in those vulnerable patients who seek reliable information being misinformed. This is of greater importance to nonexpert patients (majority) who may be less able to evaluate the reliability of online information and be susceptible to the bias and inaccuracies contained within.(5)

Patients with lower levels of literacy may be unable to access and or comprehend legitimate online health information:

The readability level was also assessed for health-related websites which showed that the majority of health-related websites required high school level or above. (4)

Low-literacy adults participating in our study did not use optimal search terms to answer questions, encountered difficulties finding health information at the appropriate reading level, and were unable to successfully interpret Internet health information". (6)

Misinformation can be harmful physically, psychologically, and financially:

"Potential for harm from inaccurate online information is significant and can be: (1) physical, from inappropriate treatments, adverse effects, or untreated disease; (2) emotional, from anxiety or false hope arising from inaccurate diagnostic, prognostic, or therapeutic information; and (3) financial, from costs incurred from unnecessary purchase of ineffective health services or products."(7)

Community Perspective

"The internet can be very useful but also potentially harmful for patients. The majority of my patients use the internet to access health information and many come to me with inaccurate information or expectations. We need to figure out a way for patients to become more selective when choosing health information."

-Dr. Rachel Inker, MD, Community Health Centers of Burlington

"I often use the internet to look up medications prescribed by doctors. I really don't know anything about what makes a website credible. I usually just assume the information is correct"

-CHCB patient

Intervention and Methodology

Intervention: The goal is to educate patients about health information online including how to identify accurate and evidence-based information, and strategies to detect biased, misleading or potentially false information.

Methodology: Created a brochure that includes: a section about how to critically evaluate online information, tips to identify and avoid fraudulent or misinformation, and provided a list of credible online sources that off resources in a variety of languages.

Results

- The pamphlet was reviewed and approved by Dr. Heather Stein and Dr. Adam Greenless for display in the **Community Health Centers of Burlington, Riverside location**.

- Pamphlets were placed in waiting rooms for patients to look over and take home.

Why It Matters

The internet is a **great support tool** to help patients understand medical conditions and to aide in decision making.

However, online health information **is not always accurate**.

False online health information may be **harmful** to one's health and the health of others

When accessing health information online it is important to **be skeptical** and to take a moment to find out if the information is coming **from a reliable source**

Never rely solely on online resources when making health care decisions. Always discuss with your healthcare provider

Check out this free online lesson to help you evaluate online health information: https://medlineplus.gov/webeval/webeval.html

Tips to help you identify rip-offs

One product does it all. Be suspicious of products that claim to treat a variety of diseases.

Personal testimonials. Success stories, such as, "It cured my cancer" or "My diabetes is gone," are easy to make up.

Quick fixes. Few medical conditions can be treated quickly. Beware of language such as, "Lose 30 pounds in 30 days" or "eliminates skin cancer in days."

"Miracle cure." Alarms should go off when you see this claim or others like "scientific breakthrough". If a real cure was discovered, it would be widely reported and prescribed by providers.

Conspiracy theories. Claims like "The pharmaceutical industry and the government are working together to hide information about a miracle cure" are always untrue.

Fraudulent health products are not always easy to spot. If you're tempted to buy a product online check with your provider.

Reference: FDA.gov

NAVIGATING ONLINE HEALTH INFORMATION

How To Access Quality Health Information and What to Avoid

NAVIGATING ONLINE HEALTH INFORMATION
Community Health Project
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Use Caution Sites

CAUTION WATCH YOUR STEP

Commercial Sites: All websites with addresses that end in **.com** are commercial sites. Anyone can create a .com website. While many offer accurate information it is important to **double check what you read.** These sites may be published by someone trying to sell products or services or have something to gain.

Blogs: Use care when reading blogs. While many contain useful information, some include rumors, myths, or inaccurate information.

Wikipedia: Anyone who has access to the internet can write and make changes on Wikipedia. Because of this, health related articles on Wikipedia may have inaccurate, outdated, or misleading information.

Anti-Vaccine Sites: Vaccines are extremely important to protect yourself and others from serious life-threatening diseases. The information published on these sites is extremely biased and typically false. These websites are often disguised to look like a credible medical website. Be suspicious of any "medical website" that advises against vaccines.

Recommended Sites

HealthReach: health info, including videos, in multiple languages including English, **Somali, Nepali,** and more. https://healthreach.nlm.nih.gov/

KConnect Health: A search engine like google but only includes trustworthy health info. https://search.kconnect.eu/beta/

Medical Library Association: Recommends health websites by topic and offers guidelines for evaluating websites. https://www.mlanet.org/resources/userguide.html

MedlinePlus: Reliable info about diseases, and medical conditions. https://medlineplus.gov/webeval/webeval.html

National Center for Complementary and Integrative Health: Info on supplements, herbs, and alternative medicine. https://nccih.nih.gov/

National Institute on Aging: Evidence-based info on health and aging. https://www.nia.nih.gov/health

Center for Disease Control (CDC): US public health agency https://www.cdc.gov/

Familydoctor.org: Medical and health info from the American Academy of Family Physicians.

KidsHealth.org: Articles, videos, and health tools for kids, teens, and parents.

When looking at health information ask yourself WHO, WHAT, WHERE, WHEN and WHY

WHO: Who runs or created the website or app? Can you trust them? What is their background and education level?

WHAT: What is the website or app promising or offering? Do the claims seem too good to be true? What do they want from you?

WHERE: Where does the information come from? Is it based on scientific research? Does the website provide references that prove the information is backed by actual data and evidence? Is the information reviewed by experts?

WHEN: When was the information written or reviewed? Is it up-to-date? Health care and medicine is constantly changing. For example, medications prescribed in the past, are often replaced by more effective medications

WHY: Why does the site or app exist? Is it trying to sell a product or sponsored by a for profit company? Sites that sell products may only provide information that promotes sales

**The "About Us" page can help answer these questions

Be cautious when websites ask for personal info. Review the "Privacy Policy" to ensure your private information isn't shared with others.

Evaluation of Effectiveness and Limitations

Evaluation of Effectiveness

The project could be evaluated by surveying patients who reviewed the brochure to gather data on the brochure's efficacy and to determine if the information led to positive changes in patients online searching behaviors.

Limitations

- The 6 week timeframe was not enough to both create and evaluate the effectiveness of the brochure.

- The brochures were only displayed in one of the Community Health Center's locations.

- Patients may be unaware of the resource given lack of advertisement.

Recommendations For Future Interventions

- Offer a course on health literacy and online health information.

- Create a mobile app that covers teaching points in the brochure.

- Work with providers so they can educate patients on online health information, and refer to pamphlet and online education tools.

- Develop online health information in multiple languages and for lower literacy levels.

- Survey patients to determine the brochure's efficacy.

References

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Interview Consent Form

Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.

Yes __X___

Name: Dr. Rachel Inker, MD