



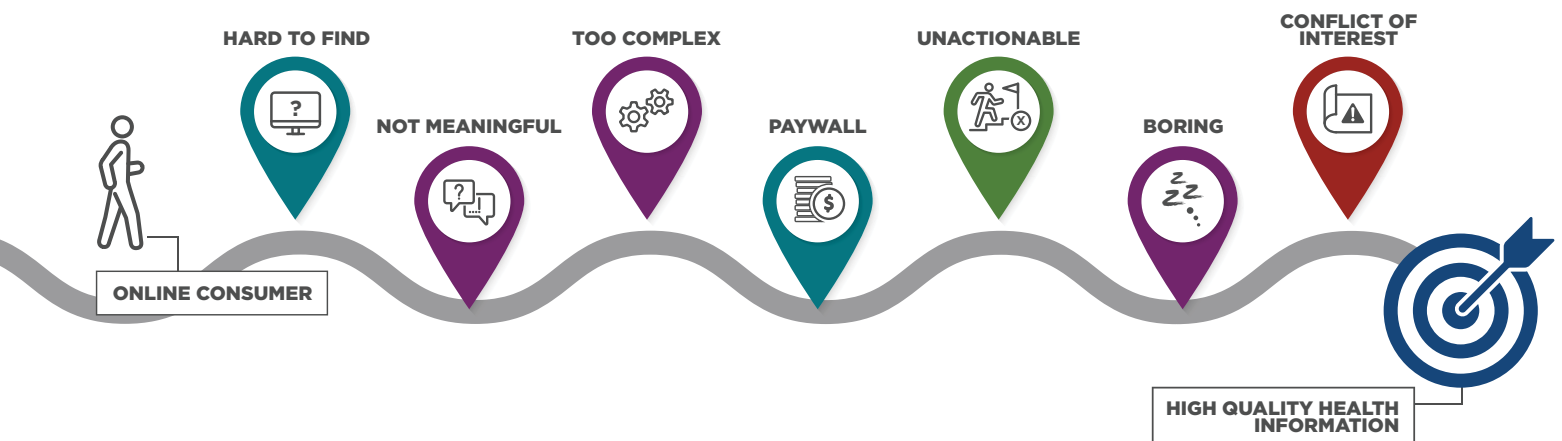
Improving the Accessibility of High Quality Online Health Information

INTRODUCTION

The rise of internet use and the prevalence of technology platforms (“tech platforms”)^a has altered the way people seek, navigate, and access both healthcare and health information.^{1,2} Approximately 74 percent of surveyed Americans use search engines to start their patient journey, with other countries reflecting similar or higher numbers, particularly in Southeast Asia.^{3,4,5} As more health information consumers (“consumers”) turn to tech platforms for answers to their questions, health sources (i.e., organizations or individuals who create and/or communicate high quality health information) increasingly leverage the digital landscape to communicate findings and broaden outreach.⁶

Tech platforms expand a consumer’s access to facts, opinions, and advice about healthcare. Information on these platforms can be disconcerting, confusing, and even misleading, leaving the onus on the consumer to decipher the information. Diet and exercise fads, e-cigarettes, and vaccines are examples from the complex, convoluted, and contradictory health information landscape that consumers must navigate. Though the proliferation of information online is not a new challenge to healthcare, the COVID-19 pandemic exacerbated its impact on patients. The overexposure of information and, most importantly, the prevalence of misinformation and disinformation are recognized by many, including the United States (U.S.) Surgeon General, as a public health threat.⁷ **A significant gap in accessibility exists between the information from credible sources and the information that consumers find, understand, and use.** This gap is even wider for consumers affected by digital access, health literacy, and other factors related to health equity and disparities.

Figure 1.1 Barriers to Accessing High Quality Health Information



^aFor the purposes of this issue brief, technology platforms refer to social media, search engines, apps, and other online technology that allows for the searching and sharing of information which can be delivered through a variety of mediums such as text, audio, images, animations, or video.

Many efforts are underway to close this gap, including elevating accurate and credible information for consumers' use, with a particular focus on identifying credible sources and increasing awareness of the high quality health information supplied by these sources. Credibility is foundational, but that alone will not fully close the gap between consumers and high quality health information.

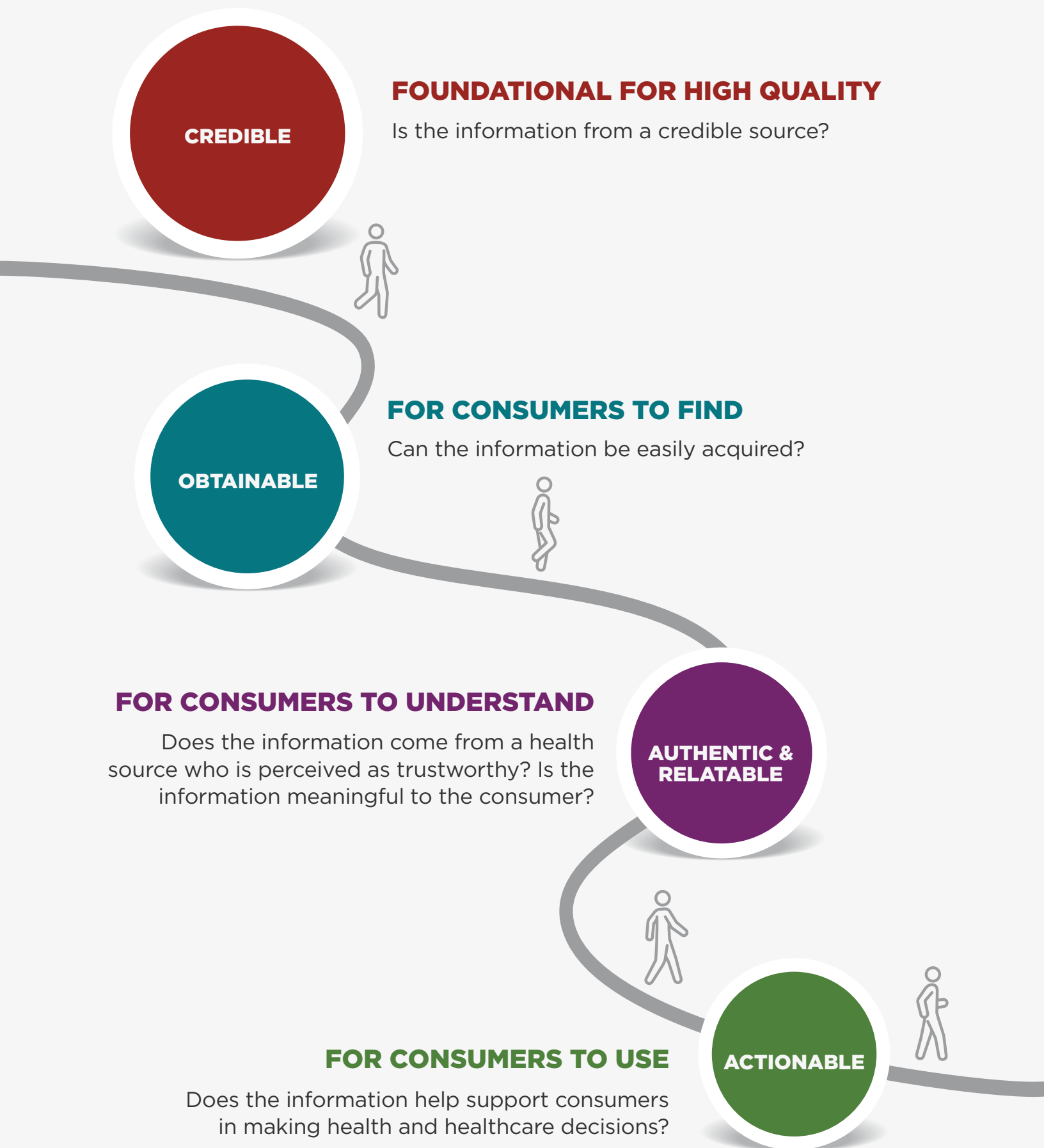
National Quality Forum (NQF), with support from YouTube Health, developed guidance for health sources on making high quality online health information accessible to consumers. In addition, NQF conducted key informant interviews and convened a virtual forum to elicit insights from experts across health communication science, social media content creation, and healthcare professional organizations. The experts debated characteristics of credibility and effective messaging, identifying ways to advance the accessibility and use of health information. NQF synthesized the expert insights into a framework of five fundamentals to aid health sources in improving the accessibility of high quality online health information across all health literacy levels.

The framework depicts the sequence of five fundamentals, which culminate in consumers having access to high quality health information. The first fundamental, "Credible," serves as a foundation for the rest: If online health information is not from a credible source, it cannot be high quality. Once the fundamental of credibility is met, health sources can move through the remaining four fundamentals, which focus on how consumers find, understand, and use the information. If any of the fundamentals are not adequately addressed when considering the creation or dissemination of health information, consumers may experience significant barriers in accessing or engaging with the information.

The goal of making high quality health information accessible should be to elevate consumers' comprehension and health literacy levels to allow them to make informed decisions concerning their health and healthcare. As a result, this issue brief addresses how health sources can elevate personal health literacy levels. As defined by Healthy People 2030, personal health literacy is the degree to which **consumers have the ability to find, understand, and use information** to shape health-related decisions and actions for themselves and others.⁸

This issue brief showcases each fundamental by highlighting key challenges for consumers as well as considerations for health sources. Each section of the issue brief also includes an example scenario; a list of key characteristics for application; and notes on how the fundamental, when enacted, helps to elevate the personal health literacy of consumers. This issue brief reflects the insights synthesized through the convening of experts and is not intended to be exclusive of other considerations.

Figure 1.2 Framework for Improving Accessibility of High Quality Health Information



CREDIBLE

Is the information from a credible source?

In today's online health information landscape, consumers are challenged with deciphering information from multiple sources. Some of these sources are credible, while others may promote misinformation or disinformation. To help ensure consumers are exposed to factual guidance, many organizations are focused on combating misinformation and/or elevating evidence-based information. In 2021, the National Academy of Medicine (NAM) convened an expert panel that introduced initial guidance in identifying credible sources of health information. **In this work, NAM defined “Credible” as it relates to sources of online health information: “Offering information that is consistent with the best scientific evidence available at the time and employing processes to reduce conflict of interest and promote transparency and accountability.”**⁹ Based on this existing definition, the “Credible” fundamental stands as the foundational requirement of high quality health information.

When developing content for consumers, the initial step is to determine whether the information comes from a source that stands up to the principles and attributes of credible sources of health information. This issue brief utilizes the foundational principles of credible sources established by NAM to define the attributes of the “Credible” fundamental:⁹

SCIENCE BASED: Sources should provide information that is consistent with the best scientific evidence available at the time and meet standards for the creation, review, and presentation of scientific content.

OBJECTIVE: Sources should take steps to reduce the influence of financial and other forms of conflict of interest or bias that might compromise or be perceived to compromise the quality of the information they provide.

TRANSPARENT AND ACCOUNTABLE: Sources should disclose the limitations of the information they provide, as well as conflicts of interest, content errors, or procedural missteps.

NAM, in collaboration with the Council of Medical Specialty Societies (CMSS) and the World Health Organization (WHO), have worked to [expand this work](#) across a broader set of sources (e.g., individuals, for-profit organizations, and international organizations). As this work continues to evolve, health sources should reference the latest findings and updates to these principles and attributes.

Evaluating content sources using NAM's principles and attributes provides a solid foundation from which to communicate high quality health information to the intended audience; however, that alone is not sufficient to close the gap between high quality online information and the consumer. The presence of high quality health information from credible sources does not mean consumers can easily find, understand, and use the content.

Example

After answering several questions from her friends and family about the COVID-19 boosters, a public health analyst at the Centers for Disease Control and Prevention (CDC) decides to create a video for her YouTube channel. In the video, she provides information on the purpose and benefits of the booster, potential side effects, who should get it based on medical guidelines, and when they should get it. She shares citations of two recent peer-reviewed articles as well as a new CDC report. She verbally discloses in the video that she is an employee of the CDC and she worked on an unrelated vaccine research study, but neither she nor her colleagues worked on the CDC COVID-19 report or the peer-reviewed journal articles.

If health sources apply the ‘Credible’ characteristics:

Science-based

Objective

Transparent and accountable

Then, consumers have access to high quality health information from a **credible source**.

When communicating health information to consumers, health sources must base their content on information from credible sources. This step ensures that consumers have the best information available. The U.S. Department of Health & Human Services (HHS) has emphasized that “misinformation also thrives in the absence of easily accessible, credible information.”⁷ The remaining four fundamentals, Obtainable, Authentic, Relatable, and Actionable, focus on how health sources can ensure consumers not only have the best information, but can also find, understand, and use it. “Obtainable” centers on consumers finding information, “Authentic” and “Relatable” both focus on ensuring consumers understand the content, and “Actionable” centers on how consumers can use the information.

Find

OBTAINABLE

Can the information be easily acquired?

Consumers face various challenges with acquiring high quality health information, many of which relate to (1) difficulties with finding high quality information online, and/or (2) the barriers that hinder consumers’ engagement with the information when they do find it. **“Obtainable” refers to the consideration of the ease with which consumers access health information.**

Health sources should help consumers overcome barriers (e.g., paywalls and tech platform design) to finding timely information. Since only 28 percent of all scholarly publications are free to the public (for some healthcare sectors, the rate is as low as 7 percent)¹⁰ and often not written in a way that is accessible to the lay public, consumers are not highly likely to find or understand the information they contain. Health sources play a pivotal role in sharing peer-reviewed information in ways that increase the ease with which consumers can access information. Tech platforms, particularly social media, allow health sources to share information easily and to a broad audience. To be successful in reaching their intended audience, health sources should identify

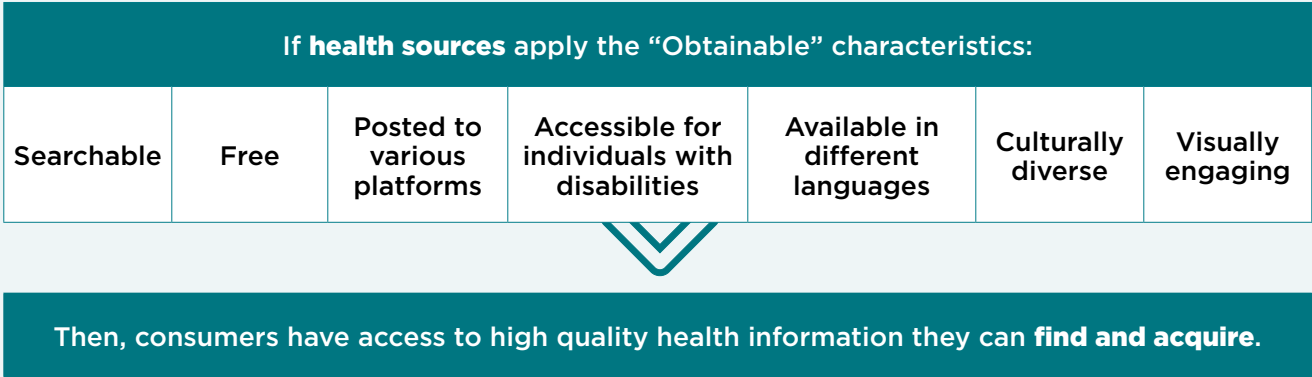
which platform(s) their intended audience is using, understand the unique features and differences between each platform, and determine how to meet the consumers’ expectations of content within the platform(s). If health sources limit their content to one platform, they could limit outreach to their intended audience. Health sources need to also understand search engine optimization techniques (e.g., how the platform utilizes titles, tags, and key words) and how they differ across platforms. Health sources must also understand the best way to communicate on each platform (e.g., short videos on TikTok and/or Instagram, longer in-depth videos on YouTube, or concise information on Twitter).

Health sources should remove barriers that prevent consumers from engaging with high quality health information. Limited digital access, low health literacy rates, and physical and cognitive disabilities all impact the ease with which consumers can acquire health information.^{11,12} One important way to do this is to follow guidelines outlined by the Americans with Disabilities Act (ADA) when sharing high quality health information. Incorporating ADA guidance (e.g., using alternative text for images, closed-captioning for videos, and graphics and pop-ups for long text) can help consumers with

disabilities have equal access to high quality health information.¹³ In addition to disabilities, health sources should consider the potential for other barriers to engagement, such as language. Communicating health information in multiple languages allows high quality health information to be available to a culturally diverse audience.¹⁴ Another way to engage consumers is to leverage existing best practices for tech platforms, such as hashtags and visually engaging graphics. These practices grab consumers’ attention, flag and summarize relevant information, and lower the cognitive load.

Example

As the public health analyst talks to her friends and family members about her video on COVID-19 boosters, she realizes that one of the peer-reviewed sources she referenced is behind a paywall. She also receives an email from a friend who is deaf and cannot access all of the information in the video because it does not include closed-captions. The analyst re-records the video and adds captions in English and Spanish, to ensure her close friends’ families can understand the content. She also updates graphics, changing those that could be difficult to read for viewers with red-green colorblindness. She verbally acknowledges that one of the articles she cited is behind a paywall and adds a new citation to an open-access article that contains comparable findings. She tweets links to the updated video as well as the open-source reference.



Understand

Even if consumers can find high quality health information online, it holds little value if the target audience cannot understand it. The next two fundamentals, “Authentic” and “Relatable,” help health sources create content that consumers can trust and understand.

AUTHENTIC

Does the information come from a health source who is perceived as trustworthy?

While credible and authentic might seem synonymous, the two fundamentals are different. **The “Authentic” fundamental focuses on the consumer’s perception of whether a health source is trustworthy, honest, and acting with good intentions.** While the “Credible” fundamental is objective, the “Authentic” fundamental is subjective because consumers may have varying perceptions of a source’s authenticity. For example, a consumer is likely to perceive their grandmother as having good intentions, but her advice to treat an infection with chicken soup is not consistent with the best scientific evidence available.

Consumers evaluate information based on personal criteria, such as trustworthiness and truthfulness.¹⁵ Studies have found that consumers turn to tech platforms for various reasons, including to reassure, challenge, or learn.¹ These individualized criteria, along with the vast quantity of health information available online, create a challenge for consumers: They must quickly and intuitively gauge whether they perceive the information they find to be authentic and therefore capable of meeting their needs. Health sources should present high quality health information in a nonjudgmental way. Tech platforms provide various benefits to consumers of health information, including a level of anonymity, interactivity, and social support.¹⁶ As a result, health sources who present information in a stigmatizing or judgmental way can deter consumers from engaging with the content.¹⁷ Successful communication of high quality health information creates room for respectful discussion and dialogue so that consumers feel comfortable asking questions or sharing their concerns. In this same spirit of discussion and dialogue, health sources can influence consumers’ perception of authenticity through open communication about uncertainties, gaps, or the complexity of the information. With honest dialogue about existing research and its limitations, health sources

can foster consumers’ trust in the information shared and increase engagement in seeking and embracing additional information.^{18,19}

Similarly, health sources should consider how to connect with their intended audience by being approachable without compromising the quality of the content. Approachability considers how a health source balances current trends (e.g., memes, video structures, and trending hashtags) with more traditional styles of information sharing to determine which strategy will be more accepted by the intended audience. A connection with the intended audience can also build over time through multiple exposures and dialogue opportunities with health sources. While not every health source will choose to incorporate the latest trends from tech platforms, they can leverage trusted voices to help convey and humanize information through personal stories, concerns, or questions.

By delivering high quality health information in an honest, nonjudgmental, and approachable manner, health sources can positively influence consumers’ perception of content, minimizing the gap between high quality information and consumers.

RELATABLE

Is the information meaningful to the consumer?

Like “Authentic,” the “Relatable” fundamental focuses on increasing accessibility by garnering trust and enhancing consumers’ comprehension of high quality information. While “Authentic” addresses how information is perceived, “Relatable” focuses on forming a connection between the consumer and the information. Historically, healthcare

information has been delivered in a transactional manner: A physician in a white coat tells the consumer what to do. On tech platforms, however, content creators try to attract consumers by offering entertaining and emotional content that is easy to understand. Consumers face challenges both because high quality information is not always relatable and relatable information is often not from a credible source. **The “Relatable” fundamental refers to health sources who engage with consumers where they are and strive to ensure that all consumers have equal access to high quality health information.**

Health sources should consider accessible health information as relational, not transactional. Health sources who present high quality information in a relatable manner can attract consumers’ attention and build lasting connections. This is important in a landscape where high quality health information competes against misinformation and disinformation. Although experts primarily evaluate health information based on the source’s credibility, consumers also consider peripheral cues and contextual factors. Peripheral cues may include the amount and style of the information, the presence of media elements (e.g., videos and pictures), the framing of the material, and the emotions it elicits. Contextual factors may include the consumer’s beliefs, past experiences, and the need which they are trying to fulfill.^{20,21}

Health sources need to develop content that resonates with consumers while understanding there is not one single audience for health information. Different consumers will gravitate to different types of relatable material. When messaging high quality content, health sources should incorporate appropriate language and be informed by a social context that is specific or meaningful to the targeted audience. This includes

considering the feelings, questions, concerns, and challenges that shape consumers’ perspectives, as well as how health literacy levels and social determinants of health (SDOH) may influence consumers’ viewpoints on a topic. Health sources should also consider ways in which a single message can relate to multiple audiences. For example, a health source can present information in an easy-to-understand manner that caters to consumers with lower health literacy levels and still provide additional sources for those with higher levels. Health sources may also widen outreach by leveraging trusted voices and messengers who the audience finds similar, familiar, or likeable; this can be particularly important when building connections with marginalized communities.²² For example, health sources can partner with national or local community leaders, religious leaders, celebrities, or trusted healthcare organizations to amplify the reach of high quality information.^{23,24}

Creating and sharing relatable content is an investment in providing equal access and opportunity for consumers. As health sources consider the relatability of their content, consumers will be more likely to engage with the information because it meets them where they are and in a way they can understand.

Example

Although the changes to the video increased its obtainability, the public health analyst learns from some friends that their parents and grandparents, who speak Spanish, are still resistant to COVID-19 boosters. In an effort to make the information on boosters more understandable to this newly identified audience, she asks a colleague at the CDC if he would interview his vaccine-hesitant parents for a new video on her personal YouTube channel. The analyst introduces her colleague and his parents during a new video, then he talks with his parents in Spanish about their concerns and how the literature addresses it. He speaks in plain language instead of medical jargon, and he has an honest conversation about his parents’ confusion and points of worry. The video is captioned in both English and Spanish, and the analyst asks her audience to share the video within their networks, especially focusing on tech platforms like Facebook and WhatsApp that are prevalent with Hispanic consumers.

If health sources apply the “Authentic” and “Relatable” characteristics:

Honest and approachable

Targeted to a specific audience

Leverages trusted voices and messengers

Nonjudgemental or stigmatizing

Relational, not transactional

Inclusive of different health literacy levels and SDOH

Then, consumers have access to high quality health information they can **trust and understand**.

Use

If consumers find and understand high quality health information but do not act on it, there may be little effect on consumers’ decisions or behaviors. The last fundamental, “Actionable,” helps health sources promote informed decision making and advocates for a strong connection between consumers and their care team.

ACTIONABLE

Does the information help support consumers in making health and healthcare decisions?

Many consumers start their patient journey with the use of search engines and gather information to either initiate, verify, or change decisions.^{7,25} Consumers may shape their decisions with their healthcare team or independently without any further discussion. In either scenario, consumers must determine whether they possess the right information to make an informed and appropriate decision. **The final fundamental, “Actionable,” encourages health sources to consider how consumers may use high quality health information to make decisions and change behaviors and how to foster strong ties to the healthcare community.**

Health sources cannot simply make high quality information available. They must help empower consumers to use it. High quality health information may not always lead or incentivize consumers to take a specific action, but it can invoke a decision, support an existing decision, or influence the patient-provider relationship.²⁶ Consumers use information to advocate for themselves and others, but if they are unclear about the next steps, they may not benefit from having the information. When presenting health information, sources should consider including where to access additional information and how to further investigate options that

will help consumers make informed healthcare decisions. Health sources can also direct consumers to other credible sources of high quality health information.

As consumers become empowered to gather information and shape their healthcare decisions, health sources can also encourage collaboration between the care team and consumers. Accessible high quality health information can increase the knowledge of both consumers and care teams. Therefore, health sources should encourage consumers to share and discuss newly discovered information with their providers.

Example

The video interview goes viral after the public health analyst's friends share it within their networks, and a new question emerges in the comments: What is the best way for older, Spanish-speaking people to get vaccines? The analyst uses the fundamentals of credible, obtainable, authentic, and relatable to create a series of Instagram and Facebook posts to help Spanish-speaking viewers advocate for their personal health. These posts include information to help viewers find and schedule appointments for COVID-19 boosters in their communities.



Conclusion

Healthcare and online platforms are experiencing changes every day. Information evolves, as do consumers' preferred modes of communication and engagement. Over the past three decades, the internet has grown as a powerful tool to bridge consumers and the healthcare community. Tech platforms provide many benefits to consumers, but they can also lead to information overload and confusion. To improve health outcomes, health sources have a responsibility to do more than inform consumers. This responsibility includes actively sharing high quality health information in ways that build engagement and develop personal health literacy. This issue brief provides a starting point for health sources by highlighting key fundamentals that enable consumers across all health literacy levels to find, understand, and use high quality online health information.

NEXT STEPS

Numerous individuals and organizations, including NQF, are committed to increasing the availability of high quality online health information and minimizing the effects of misinformation and disinformation. However, additional work is needed. Tech platforms must continue to support efforts to identify and implement best practices that allow for high quality health information to rise above misinformation and disinformation. Furthermore, person-centered healthcare quality organizations must develop and disseminate guidance to help consumers recognize and use information from credible sources and avoid low-quality information. While some health sources are large healthcare organizations that can disseminate high quality information in accessible ways, many content creators are individuals with diverse life experiences who are attempting to help their communities; healthcare and technology leaders must develop additional guidance and resources to help this latter group of change agents.

NQF High Quality Online Health Information Experts

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