Chapter VIII

Reliability and Evaluation of Health Information Online

Elmer V. Bernstam,
University of Texas, Health Science Center at Houston, USA

Funda Meric-Bernstam,
University of Texas, M.D. Anderson Cancer Center, USA

Abstract

This chapter discusses the problem of how to evaluate online health information. The quality and accuracy of online health information is an area of increasing concern for healthcare professionals and the general public. We define relevant concepts including quality, accuracy, utility, and popularity. Most users access online health information via general-purpose search engines, therefore we briefly review Web search-engine fundamentals. We discuss desirable characteristics for quality-assessment tools and the available evidence regarding their effectiveness and usability. We conclude with advice for healthcare consumers as they search for health information online.

Introduction

The healthy, the newly diagnosed, and the chronically ill turn to the Internet for health information. In spite of some controversy regarding the number of individuals that are accessing online health information at any given time, most experts agree that the numbers are enormous. Indeed, some have estimated that on any given day, more people consult the Internet for health information than see a physician (Fox & Rainie, 2002). Furthermore, there is evidence that patients are making treatment decisions based on the information that they encounter online (Helft, Hlubocky, Gordon, Ratain, & Daugherty, 2000). Therefore, researchers, clinicians, and the general public are increasingly concerned about the reliability of health information online that is directed toward consumers of healthcare. In this chapter, we consider the problem of how to enable healthcare consumers to evaluate online health information.

Definitions: Information Quality vs. Information Accuracy

One of the major impediments to research into online information quality is the lack of clear, consistent, and generally accepted definitions. In this section, we define relevant terms to provide a vocabulary for discussion.

The factual correctness (accuracy) of health information online may be difficult to assess. Indeed, even experts often disagree regarding accuracy. Therefore, review of information content by a panel of experts is considered to be the gold standard of accuracy.

Most Internet users are not healthcare experts. Therefore, they cannot judge the accuracy of online health information. Since consumers cannot assess accuracy, surrogate measures that they can assess are appealing. We refer to these surrogate measures as measures of quality and collections of these measures as quality-assessment tools. Measures of information quality are useful to the extent that they (a) can be effectively assessed by healthcare consumers and (b) correlate with outcomes of interest such as whether the information is factually incorrect or whether the information has the potential to harm health (i.e., if the advice were followed).

An example of an information quality measure is authorship (i.e., is an author identified?). The JAMA benchmarks (Silberg, Lundberg, & Musacchio, 1997) are a commonly cited quality-assessment tool. The JAMA benchmarks consist of four quality measures: authorship, attribution, disclosure, and currency. These generally came to be known as the "clarity in publishing" criteria and are similar in spirit to the type of questions one might ask about a textbook or scientific paper.

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/reliability-evaluation-health-information-online/31157

Related Content

An Improved Face-Emotion Recognition to Automatically Generate Human Expression With Emoticons

Basetty Mallikarjuna, M Sethu Ramand Supriya Addanke (2022). *International Journal of Reliable and Quality E-Healthcare (pp. 1-18).*

www.irma-international.org/article/an-improved-face-emotion-recognition-to-automatically-generate-human-expression-with-emoticons/314945

Android-Based Telemedicine System for Patient-Monitoring

M. A. Matinand Riaz Rahman (2012). *E-Healthcare Systems and Wireless Communications: Current and Future Challenges (pp. 164-178).*

www.irma-international.org/chapter/android-based-telemedicine-system-patient/60190

Transformation of the Hospital Supply Chain: How to Measure the Maturity of Supplier Relationship Management Systems in Hospitals?

Tobias Mettler (2013). *Healthcare Information Technology Innovation and Sustainability: Frontiers and Adoption (pp. 180-192).*

www.irma-international.org/chapter/transformation-hospital-supply-chain/73821

Analysis of Pediatric Respiratory Disease Trends Using the 2016 KIDs' Inpatient Database

Shilpa Balanand Shailja Pandit (2023). *International Journal of Healthcare Information Systems and Informatics (pp. 1-16).*

www.irma-international.org/article/analysis-of-pediatric-respiratory-disease-trends-using-the-2016-kids-inpatient-database/326800

Identifying Bands in the Knowledge Exchange Spectrum in an Online Health Infomediary

Dobin Yim, Jiban Khuntiaand Young Argyris (2015). *International Journal of Healthcare Information Systems and Informatics (pp. 63-84).*

www.irma-international.org/article/identifying-bands-in-the-knowledge-exchange-spectrum-in-an-online-health-infomediary/138132