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Title: Broken Hearts and Broken Promises: How Overly Technical Websites are Letting Heart Patients Down

Background:

According to the CDC, heart disease is the leading cause of death in the United States. Given this fact, a large percentage of the U.S. population will go to internet resources to learn more about heart-related conditions, as well as where and how to seek care. Providers need to be aware, however, that much of the medical information online is overly technical and inaccessible to patients. Additionally, providers must prepare their patients for the frustration and anger they are likely to encounter when trying to make sense of online information. This readability study seeks to assess the level at which information is presented on the most visited sites on myocardial infarctions/heart attacks. The goal of this study is to improve patient understanding of their condition and to educate care providers, public health workers, and others involved in the prevention and treatment of heart-related conditions on the current accessibility of information online.

Methods:

Web searches in both English and Spanish were performed. In English, the terms “Acute Myocardial Infarction” and “Heart Attack” were searched on Google in Incognito Mode. In Spanish, searches for “Ataque al Corazon” and “Infarto de Miocardio” were also performed on Google in Incognito Mode. In both cases, standard healthcare IT research practices were followed. Readability in both languages was assessed using multiple readability indices. The quality of the information was assessed using the validated DISCERN instrument.

Results:

The National Institutes of Health and the American Medical Association recommends that information be presented at the 6th grade reading level. The information reviewed in this study was far more difficult. Readability for all websites in English was at an undergraduate or graduate student level. 45% of the websites were “very difficult,” and 40% were “difficult.” For Spanish-language websites, readability was primarily at a graduate student level. 85% of the websites were “very difficult”, and the remaining 15% were “difficult”. Quality scores using DISCERN are given on a 1 (poor) to 5 (excellent) Likert-type scale. For the English-language websites, the DISCERN result average was 2.6, with 30% receiving below a score of 2. For the Spanish-language websites, the DISCERN result average was 2.5, with 33% receiving below a 2. These results indicate that many of the most visited sites having to do with myocardial infarctions are of only poor to moderate quality with regards to the information they present,

and how easily information is found on the site.

Conclusion:

Readability of online information is an often overlooked aspect of patient care. This study helps physicians prepare their patients for the frustration and anger they may encounter when attempting to learn more about their condition online. This will allow physicians to better set expectations and encourage their patients to come to them with questions if online information is overly technical, incomprehensible, or contradictory. These results also encourage organizations that publish information about heart-related conditions to better serve patients by evaluating the readability and quality of their sites.