Evaluating the Quality and Readability of Swallowing Treatment Resources on the Internet

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ABSTRACT

Objective: To assess the quality and readability of swallowing treatment resources available on the internet.

Study design: Cross-sectional study.

Methods: A Google search for “swallowing treatment” was conducted. The first fifty websites were analyzed using DISCERN, Flesch Ease of Reading Score (FRES), and Flesch Kinscade Grade Level (FKGL). DISCERN is a 16-item validated questionnaire used to assess quality of written health information for patients. FRES and FKGL are instruments used to assess readability of written information. Websites were divided into major versus minor and patient versus professional targeted for further analyses.

Results: Overall DISCERN score was 1.61 ± 0.61 (possible range = 1 to 5). Overall FRES was 39.1 ± 19.0 (possible range = 1 to 100). Overall FKGL was 11.8 ± 3.4 (possible range = 3 to 12). There were significant differences between patient- and professional-targeted websites on FRES (44.0 ± 16.9 vs. 27.0 ± 19.1, respectively; P = 0.01) and FKGL (11.1 ± 3.1 vs. 13.8 ± 3.7, respectively; P = 0.04) and no significant difference between DISCERN scores. Significant differences between major and minor websites on DISCERN (1.79 ± 0.61 and 1.26 ± 0.44, respectively; P = 0.04) were noted. FRES and FKGL scores were not significantly different.

Conclusion: Online swallowing treatment resources are of suboptimal quality. Information is written at a level too difficult for the average American adult to read comfortably. Patient targeted websites were written at a lower reading level and major websites had higher quality information.

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INTRODUCTION

Dysphagia, or difficulty with swallowing, refers to transit problems of food passage from the mouth to the hypopharynx or through the esophagus1. With an incidence approaching 15% amongst community-dwelling individuals and 40% amongst those in institutional settings, swallowing disorders are one of the most common disorders in the United States.2

With such a large patient population, the need for literature addressing treatment options is of great importance. In our technology-driven world, the Internet has become one of the most popular sources of information for patients. In 2003, the Pew Research Center reported that 80% of Internet users have searched online for health information. Because these sources are rarely peer-reviewed, quality is a major problem, thereby providing patients with misleading information.4

Additionally, Internet resources are rarely written at an appropriate reading level for the general population. Since the average American adult reads at an 8th grade level, the American Medical Association (AMA) and National Institutes of Health (NIH) recommend that health education materials should be written between a 4th-6th grade level.5,6 Studies in various fields, however, show that most medical literature is written at an exceedingly high reading level.7,11

This goal of this study was to critically evaluate online swallowing treatment resources for quality and readability.

METHODS

A Google search using the term “swallowing treatment” was conducted on May 28, 2013. From this search, a list of the first 50 websites was compiled. Each website was designated as either a major or a minor website. The websites were also designated as either targeting the professional or the patient. Advertisements, broken links, websites without text, non-English websites, and duplicate websites were excluded.

The DISCERN instrument was used to analyze each website. This is a validated, sixteen-item questionnaire used by a lay person to determine the quality of written health information. Each question was rated out of five.12 The average of the 16 questions was used as an overall DISCERN score for each website. Thus, the possible range of DISCERN scores is from 1 to 5 and a higher score represents a higher quality website.

METHODS (Continued)

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RESULTS

Five websites were excluded due to broken links or the lack of text. A total of 45 websites were evaluated.

DISCUSSION

Aiming to evaluate the readability and quality of Internet resources on swallowing treatments, our study revealed concerning results. With an average FKGL score indicating almost a 12th grade reading level, which far exceeds the AMA recommended 4th to 6th grade level, as well as poor to moderate quality of content, swallowing treatment information available online is quite concerning. These findings, however, are consistent with those of similar, previous studies, which also revealed very poor to good quality and difficult to very difficult readability of online resources.14-16

In separating patient-targeted from professional-targeted websites, patient targeted websites were written at a lower reading level (FRES P = 0.01, FKGL P = 0.04), but the material was still above the recommended 6th grade level. The DISCERN score for the patient-targeted websites was not significantly different than the professional-targeted material.

Between major and minor websites, DISCERN scores for the major websites were higher (P = 0.002) and, therefore, of better quality. Major websites also had a trend towards higher FKGL scores (P = 0.08), but no significant difference in FRES scores. Thus, there was a trend towards the major websites being more difficult to read. The major websites were released from academic institutions and, thereby, of better quality; to uphold this quality, however, most major websites used more sophisticated language, which increased reading difficulty. Even so, both major and minor websites were found to be written at a level above the recommended 6th grade reading level.

CONCLUSIONS

Online swallowing treatment resources are of suboptimal quality. Information is written at a level too difficult for the average American adult to read comfortably. Patient-targeted websites were written at a lower reading level and major websites had higher quality information.

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