Introduction

- Health literacy is particularly important in radiology, due to limited direct patient care compared to other specialties.
- The average reading level for an American is at 7th grade.
- RadiologyInfo was a national attempt to provide accurate and accessible information for patients, yet studies completed in 2014 and 2019 showed content was written with advanced language, measured at the 10th-14th grade level.
- The editors of RadiologyInfo released a statement in 2020 addressing the higher readability and their attempts at improving comprehension.

Objectives

- Our primary goal is to re-evaluate the readability of online radiological educational resources from various providers.
- We sampled their patient information landing page text with three websites from each source of information provider across all three categories is comparatively less than other private practice groups (23%), academic health institutions (30%), and national websites (29%).
- Although Radia did have the most content on their pages, this is due to having multiple pages rather than a single landing page for patients. The number of complex words (16%) is still comparatively less than other private practice groups (23%), academic health institutions (30%), and national websites (29%).
- The data show content presented from these nine radiology information providers across all three categories is significantly above the reading ability of the average American patient.
- This puts patients at a significant disadvantage in being able to understand the specifics of their medical experience but more importantly limits their ability to make informed medical decisions and receive care specifically tailored to their needs.

Study Methods

- Three websites from each source of information provider (institutional resource, academic health institution, and private practice group) were selected for analysis.
- RadiologyInfo, ChoosingWisely, and ImageGently are three common/popular informational websites, created and vetted by the American College of Radiology (ACR) and Radiological Society of North America (RSNA).
- The top three academic institutions, Stanford University, University of Pennsylvania, and Washington University at St. Louis were selected based on the extent of their research.
- Radiology Associates of North Texas (RANT), Radia, and Advanced Radiology Services, were the three largest private practice groups listed on Radiology Business.
- We sampled their patient information landing page text with the Readability Test Tool, Test by Direct Input feature from Webfx.com to measure their readability metrics and compared readability scores (Flesch-Kincaid reading ease, Flesch-Kincaid grade level, and automated readability index) and text statistics.
- Text originating from titles, subtitles, and hyperlinks were excluded from the study.

Results

- The average Flesch-Kincaid grade level of each category was found to be institutional website: 15th, academic institution: 17th, and private practice group: 13th, with Stanford’s content being regarded with the highest grade level (20th) and ImageGently’s content the lowest grade level (11th).
- The averages of the Flesch-Kincaid reading ease were institutional website: 22.5, academic institution: 15, and private practice group: 36, with Stanford having the lowest reading ease (3.6) and Radia having the highest (51.1).
- Each webpage had a variable amount of text content, with Radia providing the most information on each imaging modality and RadiologyInfo providing the least text on their patient information landing page.
- The institutional websites had an average of 159 words, of which 29% were considered complex words. There was an average of about 28 words in each sentence.
- Academic institutions had an average of 301 words, of which 30% were considered complex words. There was an average of 24 words in a sentence.
- Private practice groups had an average of 458 words, of which 23% were considered complex words. There was an average of about 21 words in a sentence.

Conclusion

- Although Radia did have the most content on their pages, this is due to having multiple pages rather than a single landing page for patients. The number of complex words (16%) is still comparatively less than other private practice groups (23%), academic health institutions (30%), and national websites (29%).
- The data show content presented from these nine radiology information providers across all three categories is significantly above the reading ability of the average American patient.
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References