



# Research Week 2020

## The Quality of Self-retrieved YouTube Videos for Professional Medical Education: Qualitative and Semi-quantitative Review of the Literature

Andrew Helming, M.D., David Adler, Austin Igelman, Case Keltner  
helming@ohsu.edu  
OHSU

### Keywords

Medical Education, YouTube, Literature Review

### Abstract

#### Purpose

Determine through a comprehensive review of available literature:

- 1) Is the quality of YouTube videos sufficient for professional medical education?
- 2) Are video characteristics or engagement metrics associated with quality?

#### Methods

The literature was searched for English-language studies on YouTube video quality for medical student and physician education. The primary outcome was scores on externally and internally developed quality rating tools for the assessment of video educational quality. Secondary outcomes included subjective global ratings of video fitness for medical student and physician education and the association of video characteristics (likes, views, search return order, author type) with the primary outcome.

#### Results

Following inclusion and exclusion, 32 studies were included in the final analysis; 3 studies utilized an externally validated rubric, 20 utilized an internally derived rubric, and 12 utilized a qualitative assessment of quality; several studies utilized more than one evaluation tool. Studies using externally validated rubrics had average scores of 1.32/4, 26/80, and 1.69/5 as assessed by GQS, Discern, and JAMA respectively. Studies using internally derived rubrics had a mean content score of 44% with a range of 10% to 71%. Studies using qualitative review found variable levels of accuracy, comprehensiveness, and usefulness. Video engagement metrics (likes, views, search return order) and author type were not shown to correlate with video content quality.

#### Conclusions

Lack of peer review, errors in presentation of medical topics, and suboptimal search algorithms render search results for medical content on YouTube inadequate for professional medical education. Video engagement metrics and author type are not reliable indicators of content quality. Learners may be unable to distinguish which videos are appropriate for professional medical education. The medical education community should consider peer review and other methods of quality ratings to help learner's identify appropriate video content for their professional education.

