

A Comprehensive Analysis of Gastrostomy Tube Education Across YouTube

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Background

- Common ENT indications for gastrostomy tube placement include inability to maintain adequate oral intake due to head and neck tumors or trauma, need for prolonged enteral nutrition following major head and neck surgery, and prevention of aspiration in patients with severe laryngeal or pharyngeal dysfunction.^{1,2}
- Home gastrostomy care is challenging and requires regular tube flushing, meticulous cleaning of the tube and stoma, vigilance for infection, prevention of accidental tube dislodgement, and management of the emotional and logistical burden on caregivers.³
- YouTube is a leading platform for health information, yet the quality of content for patient education for gastrostomy care has been insufficiently evaluated.⁴

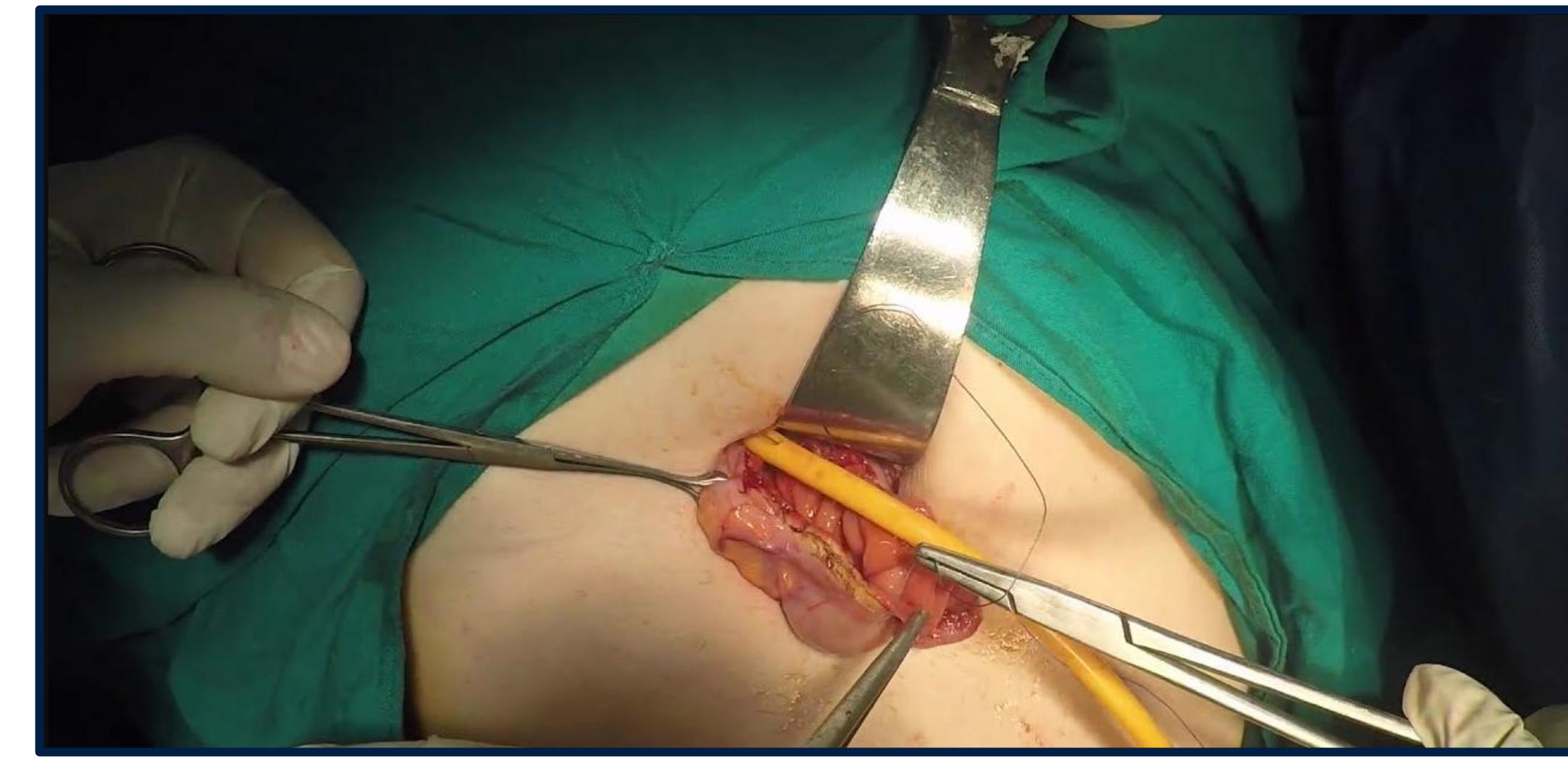


Fig 1: Screen capture of intraoperative video⁵

Objectives

- Evaluate the current state of YouTube videos available to patients' seeking assistance with understanding how to care for their gastrostomy tube.
- Understand factors that predict which videos will be of higher educational value.
- Analyze whether the current YouTube algorithm adequately promotes high-quality videos for patients.

Score	Global Quality Score Index Criteria
1	Poor quality, poor flow, most information missing, not useful
2	Generally poor quality and poor flow, some information missing, very limited use
3	Moderate quality, suboptimal flow, some important information discussed but others not, somewhat useful
4	Good quality and generally good flow, most of the relevant information is listed but some topics not covered, useful
5	Excellent quality and excellent flow, very useful

Methods

- YouTube was searched using the phrases "G Tube", "Gastrostomy Tube", "Keofeed Tube", and "NG Tube"
- The first 50 videos from each search were included.
- Duplicates, YouTube shorts, non-English videos, and non-medical content was excluded.
- Videos were analyzed using Modified DISCERN, Global Quality Score (GQS), and JAMA Benchmark metrics of video quality, educational value, and transparency, respectively.
- Analysis of video metadata and scores was performed.

Gastrostomy Tube Video Quality Markers

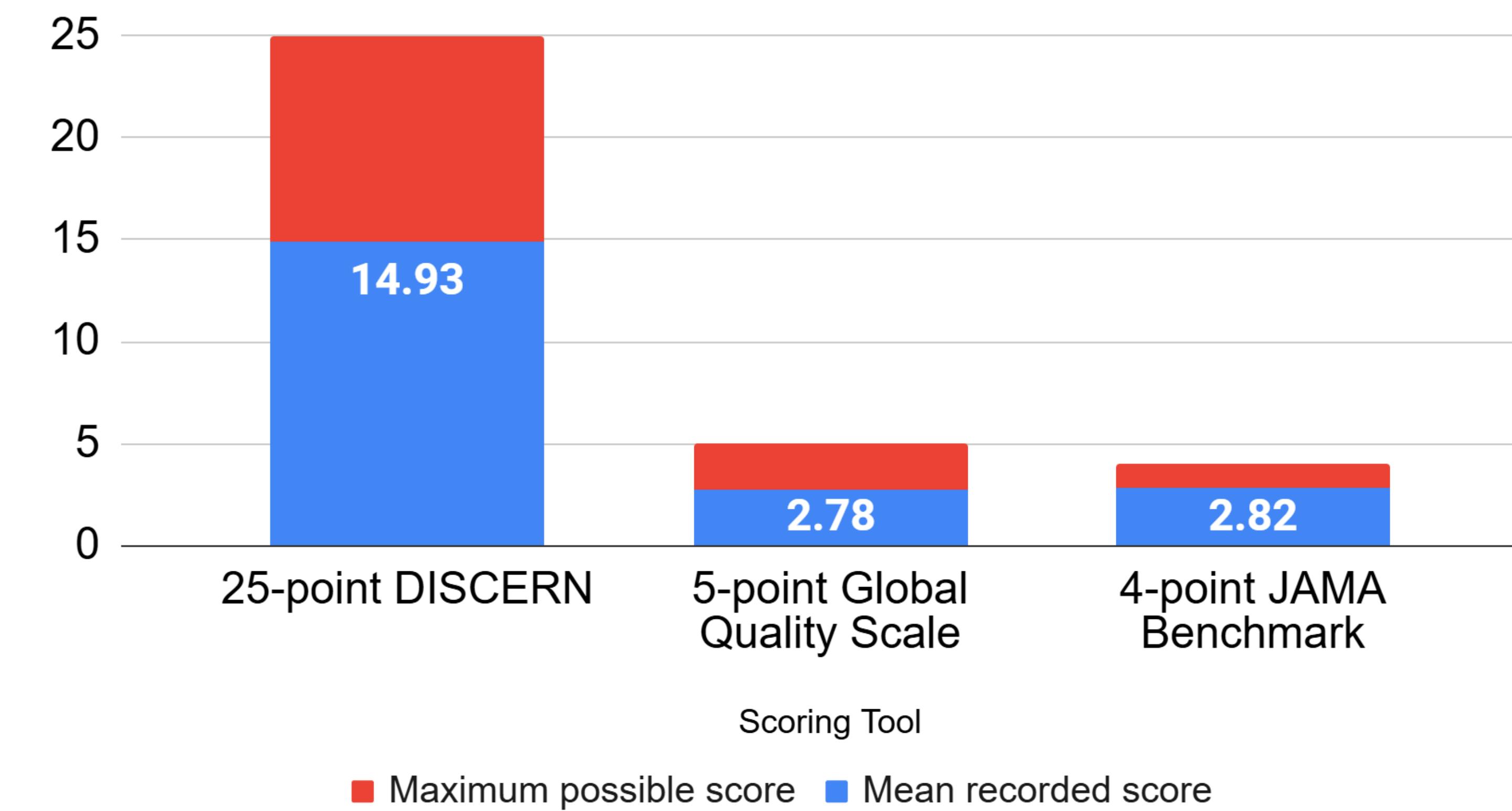


Fig 2: Gastrostomy video quality markers

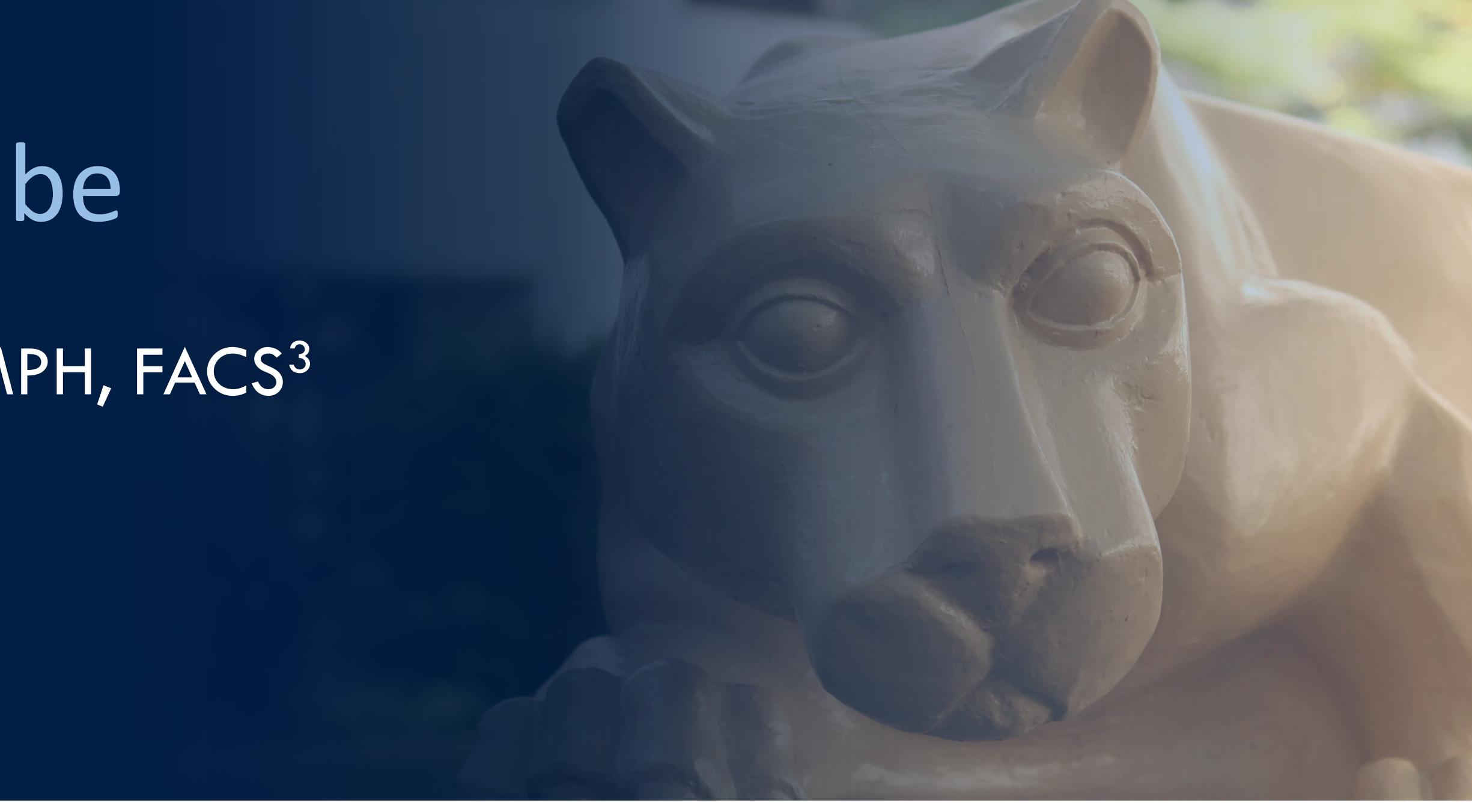
Results

- N=197 videos (46.4 million total views).
- Most were informational videos for patients (46.19%) or healthcare professionals (43.15%), created by healthcare organizations (47.72%) or third parties (38.58%), and published within the last five years (58.37%).
- Average DISCERN, GQS, and JAMA scores were 14.93/25, 2.78/5, and 2.82/4, respectively.
- Videos from healthcare organizations had higher DISCERN and GQS scores ($p < 0.0001$), influenced by audience and type ($p < 0.0001$).
- JAMA scores were higher in videos by board-certified physicians ($p < 0.0001$).
- Views weakly correlated with DISCERN ($p = 0.1429$, $p = 0.045$).

Item	Modified DISCERN Criteria Questions
1	Are the aims clear and achieved?
2	Are reliable sources of information used?
3	Is the information both balanced and unbiased?
4	Are additional resources listed for reference?
5	Are areas of uncertainty mentioned?

References

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Discussion

- Our study found that most videos on the topic of tracheostomy care were intended for patients (46.19%).
- Videos created by healthcare organizations or physicians were associated with higher scores for video quality and educational value.
- Videos with higher DISCERN scores were only weakly associated with higher view counts, indicating that YouTube's popularity-based algorithm does not reliably promote higher-quality content.

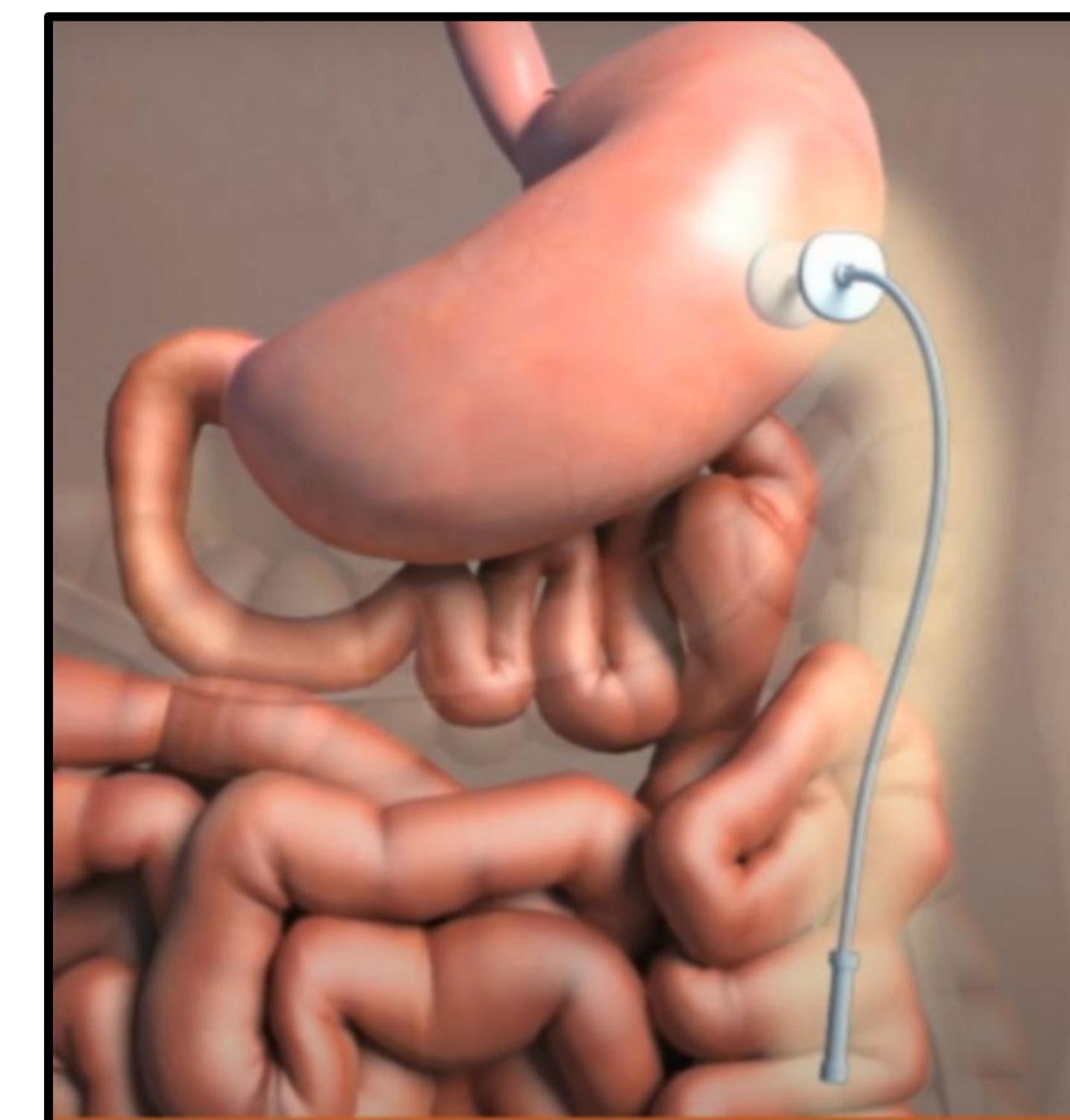


Fig 3: Screen capture of animation⁶

Conclusion

- This analysis found that YouTube videos on gastrostomy tube education had moderate quality scores.
- As patients increasingly rely on YouTube, the prevalence of lower-quality resources highlights the need for healthcare professionals to guide patients to vetted content or develop high-quality resources.
- Videos from healthcare organizations or professionals were notably more effective, emphasizing their critical role in improving public medical education.

Item	JAMA Benchmark Criteria
1	Authorship – Authors and contributors, their affiliations and relevant credentials, should be provided
2	Attribution – References and sources for all content should be listed clearly, along with copyright information
3	Disclosure – Video "ownership" should be prominently and fully disclosed, as should any sponsorship, advertising, underwriting, commercial funding
4	Currency – Dates that content was posted and updated should be indicated

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