

Background

- Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death in women. On average, one woman is diagnosed with breast cancer every 2 minutes.¹
- In one study, 53.5% of patients stated they use the internet for medical education. 60% of these patients believed the information provided was “the same as” or “better than” the information provided from their doctor.²
- Over 130, 000 patients diagnosed with breast cancer will research their own disease state using the internet.³
- Patients using the internet for medical information may have difficulty finding complete and accurate information which may influence their decisions.⁴

Objective

- To evaluate the quality and validity of breast cancer patient medical education videos

Methods

- A Google search with the key phrase “breast cancer overview” was conducted on January 8, 2019. The first twenty videos of the search which met the inclusion and exclusion criteria were evaluated.
- Any video with the searched phrase with a length of at least thirty seconds was evaluated. Videos that were sponsored by a pharmaceutical company, targeted towards healthcare providers, and/or focused on a specific medical category were excluded from this analysis.
- Since there is no standard assessment tool available for patient medical education video, a rubric was developed to evaluate medical content and user experience. Metrics were also collected for each video, if available.
- The following categories were assessed:

Medical Content

Prevalence
Diagnosis/Staging
Treatment Options
Cost of Treatment
Treatment Side Effects
Surgical Intervention/Complications
Genetic Component
Risk Factors
Prevention
Prognosis/Survival

User Experience

Follow-Up Guidance
Emotional Impact
Medical Accuracy/Current Relevance
Cater to Intended Audience
Visually Appealing
Video Quality
Clear Objectives/Appropriate Transitions
Overall Engagement
Relevant Information to Disease State
Patient-Friendly Language

Methods (Cont'd)

- The medical content category was arranged into 10 subcategories, each assigned one point for a maximum of 10 points.
- User experience was also arranged into 10 subcategories each rated between 0-5 for a maximum of 50 points.
- Five pharmacists independently reviewed each video and adjudicated score discrepancies.

Results

- Of 20 videos identified, three videos were not evaluated because they were duplicates or links were not available for viewing.
- Individual scores for user experience directly correlated with the individual scores for medical content ($r=0.95$).
- From available metrics (14 of 17 evaluated videos), the average number of views per day was 2.23; however, this did not correlated with medical content nor user experience with correlation coefficient being $r=0.0$ and $r=0.22$, respectively.

Category	Score
Medical Content	5.53 out of 10
User Experience	31.55 out of 50

Figure 1: Medical Content vs. User Experience

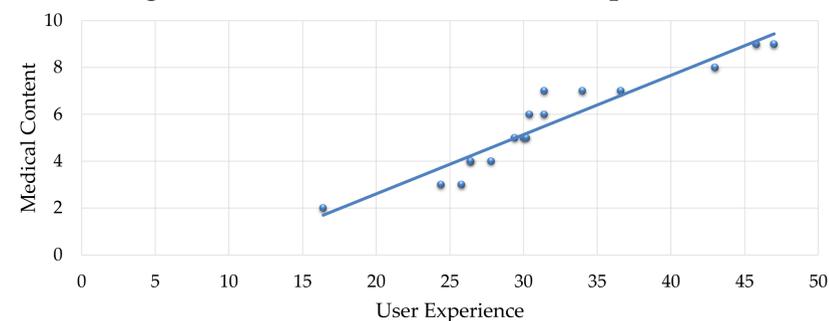


Figure 2: Average Views/Day By Organization Type That Developed Video

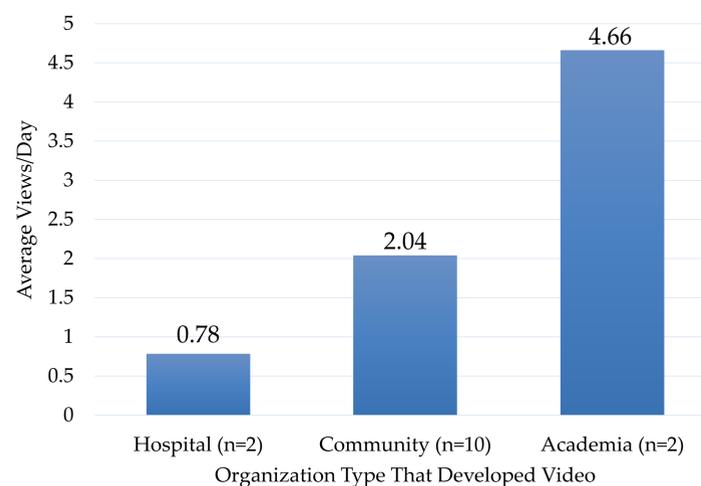
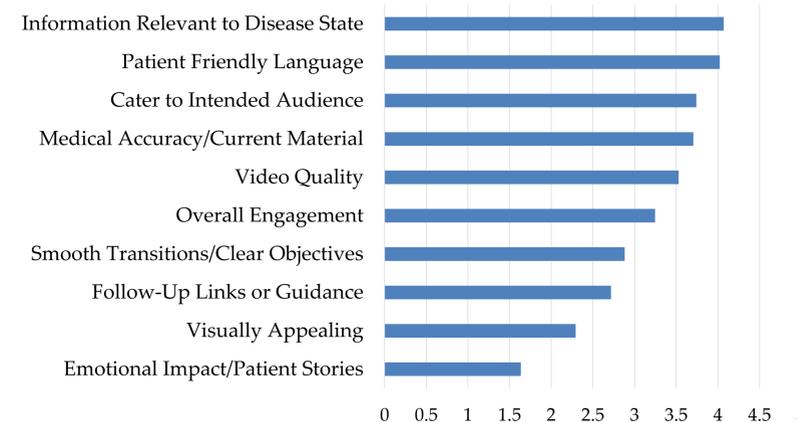


Figure 3: User Experience



Limitations

- The primary limitation of this data analysis is that the rubric is not a validated measure to assess patient medical education.
- Google search results may vary depending on different individual settings and networks.
- There was a small sample size of 20 videos, ultimately 17 that were evaluated. Not all videos provided metrics; only 14 of 17 videos were assessed for views/day.

Conclusions

- Previous literature evaluating breast cancer patient education videos is limited to specific parameters and unable to provide a comprehensive analysis of patient education.
- Based on our results, user experience is positively correlated to medical content, but not all videos were catered to patients.
- Academia-provided videos had the most average views per day compared to the other types. However, the number of videos evaluated each category was not inconsistent. This finding needs to be validated through a larger study with larger and similar sample sizes for each category.
- Patient videos with higher medical content coverage generally have better user experience, but these higher quality videos generally do not reach the patients in need. Although more studies are required to further confirm this finding, increasing efforts to promote these higher quality videos may help provide patients with the appropriate medical education they are seeking.
- Additional resources and prioritization are needed given that many patients rely on digital resources to gather information on their disease.

References

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Disclosure

Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject of the subject matter of this presentation.