Platform Specific Social Media Strategies for Content Pertaining to Brain Tumors

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INTRODUCTION

With over 700,000 Americans living with a form of brain tumor, Social Media (SM) has become a powerful tool in helping patients find support, evidence-based information, and resources online.

Due to differences in the way SM platforms present information, content must be optimized based on its platform. Awareness of the optimal practices in delivery of content can help healthcare professionals reach a larger audience online.

This study aims at identifying such practices.
METHODS

The fifteen-year online popularity of neuro-oncology terms was compared on google trends and “Brain Tumor” was selected for having the highest popularity.

This term was used to search Facebook (FB), Twitter (TW), and YouTube (YT). FB pages with over 500 likes, TW accounts with frequent brain tumor posting and YT videos with over 5,000 average annual views were selected.

Platform-specific metrics such as account name and audience size were collected. Audience size is defined as a number of FB page likes, TW account followers, and YT video views.

A qualitative analysis of 50 posts (considered saturation point in previous studies) and tweets for each SM account was performed. Accounts were categorized for belonging to an Organization, Healthcare professional, or other. Seven qualitative themes were identified by two independent reviewers. Up to 2 themes were assigned to each account and correlations were assessed with the Pearson test.
RESULT - Themes

Charity and Fundraising - Content that requested or encouraged the user to donate money

Education and Research - Educational content and news relating to research and therapy

Experience and support - Content relating to brain tumor patient and their experiences

Promotional - Content that promoted a product or medical practice

Events - Content promoting awareness, fundraising, and educational physical events

Procedural - Case presentations and procedural videos

Pseudomedicine - Content promoting non-scientific approaches to the treatment of Brain tumors

### THEME SPECIFIC AUDIENCE SIZE ACROSS SM PLATFORMS

<table>
<thead>
<tr>
<th>Theme</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Youtube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charity &amp; Fundraising</td>
<td>75%</td>
<td>39%</td>
<td>5%</td>
</tr>
<tr>
<td>Education &amp; Research</td>
<td>13%</td>
<td>37%</td>
<td>19%</td>
</tr>
<tr>
<td>Experience &amp; Support</td>
<td>19%</td>
<td>29%</td>
<td>61%</td>
</tr>
<tr>
<td>Promotional</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Event</td>
<td>1%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Procedural</td>
<td>0%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>Pseudomedicine</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

The audience size of a theme can be an indicator of its popularity across different platforms.
RESULT

**Facebook**
Sixty-eight FB pages with a total of 304,581 likes met our inclusion criteria. The average likes per page were 4,546. 43 of 67 pages belonged to organizations. Charity and Fundraising had the highest popularity among the identified themes, accounting for 75% of the likes (228,112 likes).

**Twitter**
25 accounts (69,283 total following) met our inclusion criteria with a relatively even distribution of organizations and personal accounts (13 and 11 out of 25, respectively). Education and research was the prominent theme on this platform (37% of following).

**Youtube**
128 youtube videos (43 million total views) met our inclusion criteria. Organization had the most number of videos (64 of 128) but less viewership (12 million) when compared to personal videos. Accounting for only 38 videos, personal videos had a total viewership of 27 million. Experience and support theme had the largest viewership with 26 million and accounted for 80% of user interactions (Likes, Dislikes, and comments).
DISCUSSION

In this study, we aimed at identifying guidelines for optimal utilization of Social-media platforms.

Content can benefit from thematic considerations when choosing a platform. For example, promotion of a clinical trial on youtube can achieve a much higher viewership if the video includes a patient story.

We did not find correlation between the quality of the production and number of views. This allows for making of high impact videos at very low costs.

Utilization of media, attaching a photo or video to a post, was a common practice among all FB pages and correlated with a larger following on twitter (Rho 0.66, P<0.05).

Success on Twitter is closely associated with consistency on twitter. Quantity of tweets strongly correlated with an account number of followers (Rho 0.76m P < 005).
CONCLUSION

Content centered around patient experiences has the highest audience across all platforms. Facebook has the greatest potential for successful virtual fundraising campaigns. When it comes to allocating time, daily Twitter activity is key in increasing Twitter followers. However, the frequency of activity does not have a significant impact on growing a Youtube or Facebook audience.