

## ***TexMed 2016 Clinical Abstract***

Please complete all of the following sections:

### **Procedure and Selection Criteria**

- Submissions not directly related to quality improvement or research may be accepted and should follow the standardized format outlined below. Content should enhance knowledge in the field of clinical care and be relevant to a given patient population.

**PROJECT NAME:**Improving Alzheimer's Disease Awareness, Role of Social Media: Facebook

**Institution or Practice Name:**Texas Tech University HSC-Amarillo

**Setting of Care:**Community Population

**Primary Author:**Taru Bharadwaj

**Secondary Author:**Ravindra M Bharadwaj

**Other Members of Project Team:**Caitlin Tallant, MS4; Clinton Permenter, MS3; Marge Dean, NP-C, MSN; Hena Tewari, MD; Roger Smalligan, MD, MPH

**Is the Primary Author, Secondary Author or Member of Project Team a TMA member (required)?**

Yes No

Please provide name(s): Ravindra M Bharadwaj

Enhanced Perioperative Recovery/Future of Surgical Care program

## Clinical

**Background (15 points max):** *Describe the purpose for sharing the content. What caused this subject matter to be approached? Why is this content important to share? What is the potential impact if this content is not shared?*

- The prevalence of Alzheimer's disease (AD) is predicted to increase to an astounding 16 million cases by 2050 from the current 5.3 million cases and is the 6th leading cause of death in the United States.
- There is a need to increase awareness to improve quality of life of AD patients and their family members and to help accelerate research/development towards better treatment options or a possible cure.
- Facebook and other social media are used because of its popularity, simplicity, availability and utility
- We believe social media can play an important role in this process of educating individuals and increasing awareness about AD.
- The Status of AD on Facebook and effectiveness of Facebook and other social media is not clear and more research is needed to determine the usefulness of social media for not only to improve awareness but also to use this media as a tool to improve care.
- To further observe the advantages of social media, this study was conducted to evaluate the status of AD awareness on Facebook.

**Intended Stakeholders (15 points max):** *Identify those individuals, organizations, or interest groups that could be potentially impacted by this information or benefit by obtaining this information.*

- Care providers: such as Physicians, Nurses and other service providers.
- Interested Groups: Interested groups such as researchers, Community support groups and use this forum for not just discussion forum but also can deliver services such easy contact to seek help (eg. replacing 1-800 number)
- Care givers: such as family members and friends
- General population: to improve understanding about Alzheimer's disease

**Description of Accomplished Work (25 points max):** *Provide an overview of the work that was accomplished, including any specific methods, tools or techniques. Also, include any milestones or key accomplishments. Note charts, graphs and tables here and send as addendum with abstract form.*

A search was conducted on Facebook using the keyword "Alzheimer's disease", in February, Same search was repeatd again in March 2016. Search criteria initially included the total number of pages, number of groups, number of people in each group, number of events, and number of videos. From the resulting pages the following information was collected: name of the page, year page was started, type of organization, type of service provided, number of likes, and number of people talking about the page. For a comparison, searches for the other 6 of the top 7 leading causes of death in the U.S. were also conducted, using keywords "breast

cancer”, “lung disease”, “COPD”, “asthma”, “heart disease”, “Heart Association”, “Accidents”, “stroke”, and “diabetes”. The top 5 resulting pages were included for data collection. Data was organized in Excel and transferred to SPSS for descriptive analysis.

**Results:**

**Alzheimer’s Disease:**

Included 98 pages, 224 groups, 372 events, and 120 videos (Table 1).

A total of 1,132,331 likes were calculated for the resulting pages.

No apps related to AD were found.

Community and nonprofit organizations constituted 52% (n=51) of the pages (Figure 3).

Most popular pages were associated with large institutions providing information or care.

The top two Facebook pages captured 84% of resulting Facebook followers. While the top 5 Facebook pages captured 91.5% of resulting Facebook followers.

Of 224 total Facebook groups, 67.0% (n=150) had less than 10 members/followers. 22% had more than 100 followers. (Figure 1).

The involvement increased by 28% with AD pages on Facebook just in one month. (Figure 4).

**Top 7 leading causes of death in the U.S.: (Figure 3)**

Cancer was most discussed topic on Facebook.

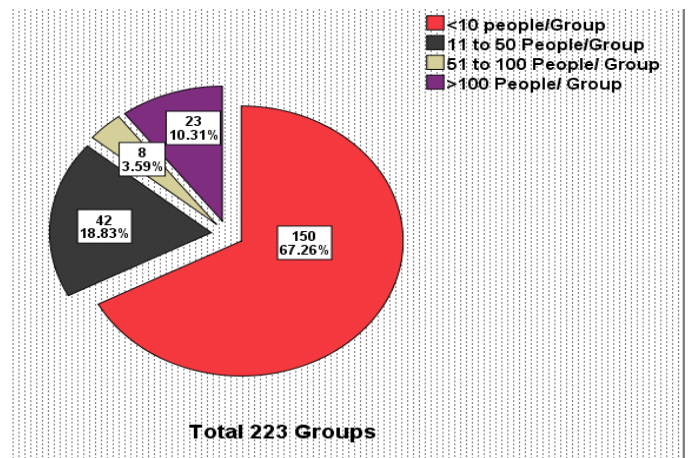
Breast cancer pages/groups captured more followers than all other topics combined.

Total followers for top 5 Facebook pages in each category:

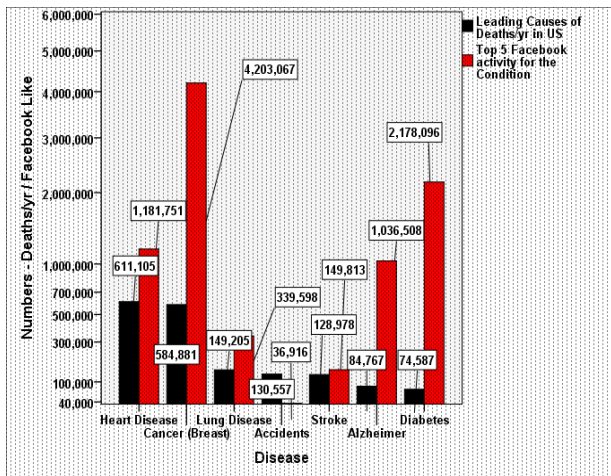
Breast Cancer:	4,203,000
Diabetes:	2,178,000
Heart disease:	1,100,000
Alzheimer’s disease:	1,036,508
Lung disease:	339,000
Stroke:	149,000
Accidents/Trauma:	36,916

<b>Pages</b>	<b>98</b>
<b>-Total Likes</b>	<b>1132331</b>
<b>Groups</b>	<b>224</b>
<b>-Followers</b>	<b>9,566</b>
<b>Events</b>	<b>372</b>
<b>Videos</b>	<b>120</b>
<b>Apps</b>	<b>0</b>

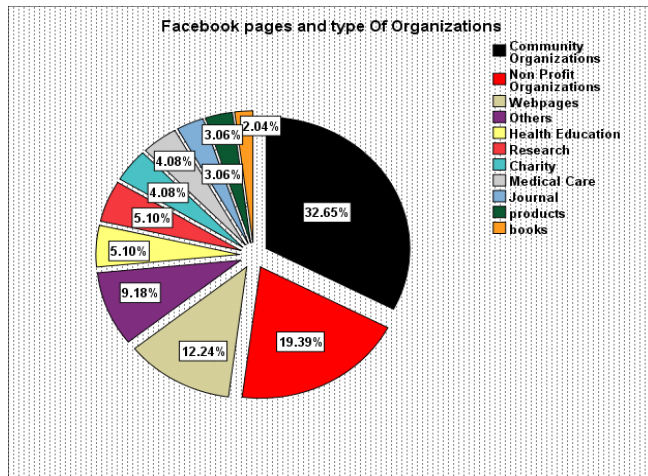
**Table 1.** Results of Facebook search for “Alzheimer’s disease”



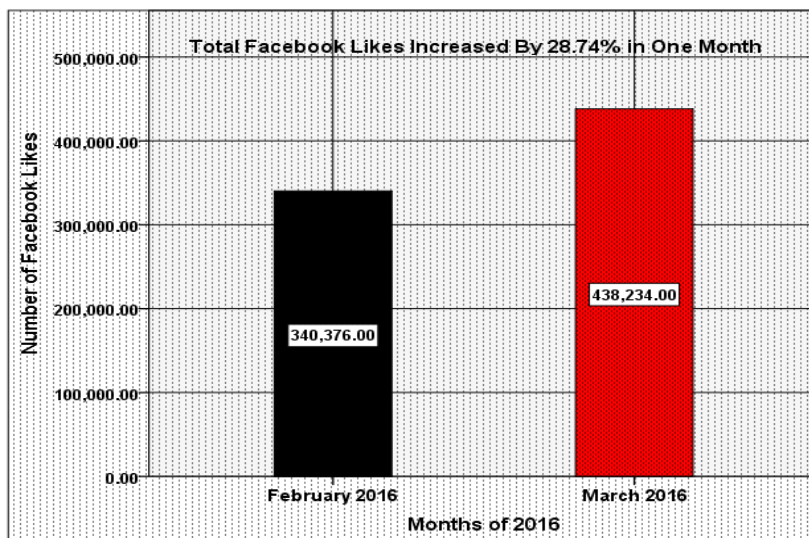
**Figure 1.** Facebook Groups for Alzheimer’s disease according to number of followers



**Figure 2.** Comparison of the number of Likes on Facebook pages



**Figure 3.** Classification of Facebook pages for Alzheimer's disease



**Figure 4.** Increasing Trend of Facebook likes for Alzheimer's Disease


**Timeframe and Budget (20 points max):** Provide the start and end dates for the work along with any financial implications that were incurred due to the work accomplished. Note charts, graphs and tables here and send as addendum with abstract form.

- No funding is needed to implement this resource in current format.
- Funding may be needed, if one decides to use this tool to provide a service. One suggestion is to start social media service to answer the questions from patients and direct caregivers and use it as a hub to link other available community resources.

**Intended Use:**

1. Highlight the importance to recognize Facebook as a medium to reach affected population
2. Utilize Social media as a great tool to educate patients, family members and population about Alzheimer’s disease
3. Stimulate medical community to utilize social media as important tool to provide easy and better care
4. To stimulate more research regarding the effectiveness of social media to improve AD awareness and education.
5. Suggesting to start a social media based service to provide care, including answering questions and directing the caregiver to available community resources.

**Intended Use (25 points max):** Describe how this information could be used moving forward to impact patient care.



## Improving Alzheimer’s Disease Awareness: Role of Social Media

### facebook

**Taru Bharadwaj; Caitlin Tallant, MS4; Clinton Permenter, MS3; Marge Dean, NP-C, MSN; Hena Tewari, MD; Roger Smalligan, MD, MPH; R. Bharadwaj, MD**

**Department of Internal Medicine and School of Medicine**

*Texas Tech University Health Sciences Center, Amarillo*

#### Introduction

The prevalence of Alzheimer’s disease (AD) is growing at a staggering rate. By 2050, the prevalence of AD is predicted to increase to an astounding 16 million cases from the current 5.3 million cases.<sup>1</sup> This will become increasingly more important for our country, as Alzheimer’s disease is currently the 6th leading cause of death in the United States.

With the number of cases projected to grow so rapidly there is a need to increase awareness in order to help accelerate research and development towards finding better treatment options or a possible cure. We believe social media can play an important role in this process of educating individuals and increasing awareness about AD.

Social media is used because of simplicity and utility<sup>4</sup>. However, currently more research is needed to determine the effectiveness of social media.<sup>2,3</sup> To further observe the advantages of social media, this study was conducted to evaluate the status of AD awareness on Facebook.

#### Results

**Alzheimer’s Disease:**

- Included 98 pages, 224 groups, 372 events, and 120 videos (Table 1)
- A total of 1,132,331 likes were calculated for the resulting pages
- No apps related to AD were found
- Community and nonprofit organizations constituted 52% (n=51) of the pages (Figure 3)
- Most pages were associated with large institutions providing information or care.
  - The top two Facebook pages captured 84% of resulting Facebook followers.
  - While the top 5 Facebook pages captured 91.5% of resulting Facebook followers.
- Of 224 total Facebook groups, 67.0% (n=150) had less than 10 members/followers. 22% had more than 100 followers. (Figure 1)
- There is an increasing trend of Alzheimer’s awareness on Facebook (Figure 4)

**Top 7 leading causes of death in the U.S.: (Figure 3)**

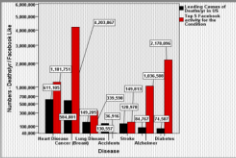
- Cancer was most discussed topic on Facebook.
- Breast cancer pages/groups captured more followers than all other topics combined.
- Total followers for top 5 Facebook pages in each category:
  - Breast Cancer: 4,203,000
  - Diabetes: 2,178,000
  - Heart disease: 1,100,000
  - Alzheimer’s disease: 1,036,508
  - Lung disease: 339,000
  - Stroke: 149,000
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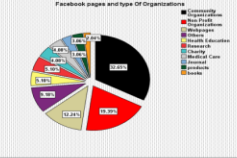
**Methods**

- A search was conducted on Facebook using the keyword “Alzheimer’s disease”, in February and March 2016
- Search criteria initially included the total number of pages, number of groups, number of people in each group, number of events, and number of videos.
- From the resulting pages the following information was collected: name of the page, year page was started, type of organization, type of service provided, number of likes, and number of people talking about the page.
- For comparison, searches for the other 6 of the top 7 leading causes of death in the U.S. were also conducted, using keywords “breast cancer”, “lung disease”, “COPD”, “asthma”, “heart disease”, “Heart Association”, “Accidents”, “stroke”, and “diabetes”. The top 5 resulting pages were included for data collection.
- Data was organized in Excel and transferred to SPSS for descriptive analysis.

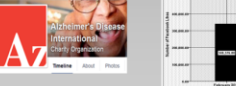
**Table 1. Results of Facebook search for “Alzheimer’s disease”**



**Figure 2. Comparison of the number of Likes on Facebook pages**



**Figure 3. Classification of Facebook pages for Alzheimer’s disease**



**Figure 4. Increasing Trend of Facebook Likes for Alzheimer’s Disease**

#### Conclusion

- Pages associated with large non-profit organizations attract more followers on Facebook.
- Participation at the local level may be relatively infrequent.
- Facebook is a popular media for Alzheimer’s awareness and popularity is still growing.
- Cancer remains the most popular topic of discussion on Facebook.
- There is a clear lack of dedicated services (such as 800 calling services) that provide assistance to individuals seeking information about Alzheimer’s disease.
- Creating a service that would take advantage of social media, such as Facebook, to raise awareness and reach out to communities could play a very important role in filling this national and community need.
- The effectiveness of social media and Facebook on the ability to raise awareness about Alzheimer’s disease requires further investigation.
- However, based on the national responses, participation, and efforts arising from breast cancer awareness, we believe utilizing social media and Facebook for Alzheimer’s disease awareness has the potential to make strides in research and development towards finding better treatment options or a possible cure.

**References:**

1. 2013 Alzheimer’s disease facts and figures. *Alzheimer’s Dements*, 2015, 11(3): 332-84.
2. Varrone-Neves, R., et al., Content analysis of neurodegenerative and mental disease social groups. *Health Informatics*, 3, 2015, 22(4): 267-80.
3. Huhner, C.A., et al., Are health behavior change interventions that use online social networks effective? A systematic review. *J Med Internet Res*, 2014, 16(2): e86.
4. Baskerville, R., et al., The Role of Social Network Technologies in Online Health Promotion: A Narrative Review of Theoretical and Empirical Factors Influencing Intervention Effectiveness. *J Med Internet Res*, 2015, 17(9): e141.