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Benefit of social media on patient engagement and satisfaction: Results of a 9-month, qualitative pilot study using Facebook

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ABSTRACT

Background. Despite the potential benefits of social media, health care providers are often hesitant to engage patients through these sites. Our aim was to explore how implementation of social media may affect patient engagement and satisfaction.

Methods. In September 2016 a Facebook support group was created for liver transplant patients to use as a virtual community forum. Data including user demographics and group activity were reviewed. A survey was conducted evaluating users' perceptions regarding participation in the group.

Results. Over 9 months, 350 unique users (50% liver transplant patients, 36% caregivers/friends, 14% health care providers) contributed 339 posts, 2,338 comments, and 6,274 reactions to the group; 98% of posts were reacted to or commented on by other group members. Patients were the most active users compared with health care providers and caregivers. A total of 95% of survey respondents reported that joining the group had a positive impact on their care; and 97% reported that their main motivation for joining was to provide or receive support from other patients.

Conclusion. This pilot study indicates that the integration of social media into clinical practice can empower surgeons to synthesize effectively a patient support community that augments patient engagement and satisfaction.

Over the past decade, use of social media (SM) outlets, including Facebook, Twitter, and YouTube, has grown exponentially. As of March 2017, the number of monthly active Facebook users surpassed 1.9 billion worldwide.[1] This expansion has led to a substantial evolution in the way patients obtain health care information and interact with health care providers (HCPs).[2] Approximately 80% of Internet users search for health care–related information online, and 1 in 4 Americans reports that information obtained through SM sites influences directly future health care decisions.[3,4] By providing patients with an easily accessible venue to participate in their own health care, SM sites have the potential to facilitate discussions of health and policy, to improve physician-patient communication, and ultimately to enhance patient engagement.

Despite the potential benefits of these online forums, surgeons remain hesitant to incorporate SM websites into clinical practice.[5] Furthermore, few academic programs have invested in outreach projects aimed at improving patient engagement and satisfaction specifically through use of SM. Concerns over maintaining confidentiality, professionalism, and appropriate physician-patient boundaries have been cited as barriers to adoption.[6-9] Additionally, the accuracy of medical content available through unmoderated SM platforms is often called into question. Although some studies have explored the contents of community-driven Facebook groups for cancer, congenital anomalies, and chronic kidney disease, the efficacy of institutionally sponsored, online initiatives using SM outlets is not well understood.[10-12] The field of liver transplantation (LT), especially, presents a unique opportunity for impactful use of SM. LT patients often suffer from clinically important, serious comorbidities, endure extensive clinical evaluations, undergo psychosocial assessments before being placed on the waiting list, and ultimately receive a life-altering intervention. As a result, LT patients face considerable stress throughout the course of their care, which can be affected directly by availability of social support resources.[13-15]

The purpose of the current qualitative study was to explore the manner in which the use of SM, specifically the implementation of a Facebook support group for LT patients, may affect patient

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engagement and satisfaction. By assessing our institution's preliminary experience with Facebook, we aim to provide surgeons with a better understanding of what role SM may play in improving patient-centered delivery of care.

Methods

Facebook group

In September 2016, after approval from our hospital administration, a Facebook support group page was created for liver transplant (LT) patients to use as a virtual community forum. The Facebook group was created as a closed group page, meaning membership to the group was required to view and participate in discussions. All posts and comments were unavailable to nonmembers. Any HCPs posting pictures of patients were required to obtain consent before placement on the website. Users requesting access to the group required approval from a site administrator but were given unrestricted posting privileges once approved. Site administrators monitored the group page to identify any offensive content, inappropriate posts, or concerns regarding potential medical emergencies. Users consisted of LT patients receiving care at our institution, family members or caregivers of those patients, and HCPs who were known members of the LT team, including surgeons, hepatologists, mid-level care providers, nurses, pharmacists, social workers, and care coordinators. Patients, family members, and caregivers were made aware of the group page during clinical visits as well as in-person support groups held throughout the course of the study period. This study was approved by the Institutional Review Board at the University of Cincinnati. No funding was received from foundations or other organizations to support the group page.

Data extraction and statistical analysis

Data, including user demographics and group activity, were compiled and reviewed for the first 9 months. We used descriptive statistics to analyze relevant Facebook metrics. Continuous variables were described as either means or as estimates of central tendency (median) and interquartile ratios. Categorical variables were described as percentages (%). Users were categorized as either LT patients, family members and caregivers, or HCPs (physicians, mid-level care providers, nurses, pharmacists, social workers, and transplant team care coordinators). Additionally, detailed attributes were collected for all posts, comments, and reactions, including timing of post, type of post (text, photo, or video), number of impressions, and associated engagement, which measures the activity generated from a post, comment, or reaction.

Content of posts and comments were downloaded and reviewed independently by 2 members of the study team. Qualitative thematic analysis was used to characterize content of posts and comments according to coding schema adopted and modified from a previous study conducted by Ahmed et al.[10] Characterization of the content in the current study consisted of 6 categories: "supportive or inspirational content," "educational content," "progress or status updates," "users seeking recommendations," "users providing recommendations," and "anxiety or mental health content." All posts were read carefully by the 2 reviewers to gain insight into content and categorized accordingly. Discrepancies in coding of content were resolved by consensus.

After 9 months, a survey was conducted evaluating the users' perceptions of SM regarding participation in the Facebook group. The survey consisted of 10 multiple choice and free response questions regarding user demographic information, Facebook usage patterns, and perceptions of the group page (Table 1). The survey instrument used was Survey Monkey (www.surveymonkey.com), and responses were managed using a secure account. The survey was offered to all group members on a voluntary basis. To compare demographics of survey respondents with the demographics of LT patients at the University of Cincinnati, a retrospective review of the institutional LT database was also performed. Data regarding patient age, sex, and race were collected and compared using Pearson's χ^2 test with statistical significance. Statistical analysis was performed using SAS 9.4 software (SAS Institute, Cary, NC).

Table 1
List of questions and answer choices included in the survey.

1	What best describes you? *(Transplant patient, caregiver/friend/family, health care provider)*
2	What is your age? (<18, 18–29, 30–44, 45–59, ≥60)
3	What is your gender? *(Male, female)*
4	What race/ethnicity best describes you? *(Asian, Black, White, Other)*
5	How often do you check the UC LT Facebook group page? *(Multiple times a day, once a day, weekly, once a month or less)*
6	How often do you view or access Facebook in general? *(Multiple times a day, once a day, weekly, once a month or less)*
7	What kind of impact has the UC LT Facebook group page had on your care? *(Very positive, somewhat positive, no impact, somewhat negative, very negative, other)*
8	Would you participate in a similar group for your primary care or other specialties? *(Yes; no, this is unique to transplant; other)*
9	What is your primary reason for participating in the UC LT Facebook group page? *(To provide or receive advice/support from other patients, to provide or receive advice/support from HCPs, no reason at all, other)*
10	How often you believe HCPs are reviewing site content? *(Multiple times a day, once a day, weekly, once a month or less, do not care if HCPs review site content or respond)*

HCPs, health care providers; *LT,* liver transplant; *UC,* University of Cincinnati.

Results

Facebook group metrics

Over a period of 9 months, 350 unique users (50% LT patients, 36% caregivers or friends, and 14% HCPs) contributed 339 posts, 2,338 comments, and 6,274 reactions to the group. Of 350 group members, 290 (83%) were active users, defined as those members who had posted, commented, or reacted on a post at least once per month. As shown in Table 2, patients were the most active users compared with HCPs and caregivers, contributing 64% of posts (vs 23% vs 13%), 79% of comments (vs 7% vs 14%), and 61% of reactions (vs 27% vs 12%); 98% of posts were reacted to or commented on by other group members with an average of 7 comments per post. The average response time to a post or comment was 3 hours and 33 minutes. Posts and comments were most often made during the week (Tuesdays and Thursdays) and in the evenings (after 5 PM).

Table 2
Metrics of Facebook group page from September 2016 until June 2017.

Facebook metric	Patients (*n*/%)	Caregivers and friends (*n*/%)	Health care providers (*n*/%)
USERS (*n* = 350)	175 (50%)	126 (36%)	49 (14%)
POSTS (*n* = 339)	217 (64%)	44 (13%)	78 (23%)
COMMENTS (*n* = 2,338)	1,847 (79%)	327 (14%)	164 (7%)
REACTIONS (*n* = 6,274)	3,827 (61%)	753 (12%)	1,694 (27%)

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