

Medical influence: what does success look like?

Diane Wintz , Kelly Wright and Kathryn B. Schaffer

Abstract

Background: Social media influencers have revolutionized information, gaining viewers, retention, and interest with short videos. Medical teams could potentially benefit from this medium for educating patients. Defining success in this endeavor remains unclear.

Objective: We are a surgeon-nurse team that sought to promote our messages on social media to gain viewers and interest in our website.

Design: An educational podcast focusing on end-of-life discussions was linked to social media platforms, including *Instagram* and *TikTok*, to gain views on our website.

Methods: Eleven podcast episodes were produced and published over a 3-month period, between November 2023 and January 2024. The podcast episodes were promoted to “similar clients” based on internal algorithms by a podcast streaming service, *Spotify*. The promotion provided by *Spotify* and website views were compared to responses evident by other social media posts.

Results: After 3 months of publishing podcast episodes on *Spotify*, with free publicity, our podcast gained 10,400 promotions, 486 listeners, 49 followers, and approximately 1200 random website views. In comparison, the podcast content garnered more than 50,000 video clip views on *TikTok* and *Instagram*, after funding these brief video promotions. *TikTok* and *Instagram* both charged \$20 or more per promotion. Paid promotion opportunities resulted in no website visits or podcast followers.

Conclusion: Our own experience with social media promotion was inadequate in generating interest in our content. The authors would encourage other teams to be strategic with paid promotions and to consider engaging a marketing expert to improve the potential for mass interest in content and promotional efficiency. Additionally, based on these findings, the authors would appreciate more transparency in the algorithms behind successful promotions to better understand “what success looks like” for medical messaging.

Keywords: end of life, geriatrics, podcast, social media

Received: 8 July 2024; revised manuscript accepted: 16 October 2024.

Background

Social media has evolved as a mechanism for self-promotion, to engage an audience, to advertise startups or established businesses, and to foster relationships with payer sources.¹ It is responsible for creating superstars overnight, with any single viral post having the potential to erupt into endorsements, exposure, and popularity in mainstream pop culture.² The ease of posting a video or picture story with a

background of artificial intelligence to add music, text, or a slogan, and connect people of all ages, races, religions, or cultural backgrounds to appealing media as well as to push campaigns of interest, has created millions of amateur marketing teams with no training or education in advertising. Some campaigns have resulted in virality, massive viewership, meme creation, and sharing, regardless of durable talent or a sustainable product.

Palliative Care & Social Practice

2024, Vol. 18: 1–9

DOI: 10.1177/

26323524241297695

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Correspondence to:
Diane Wintz
Jay’s Heart, a Private Corporation Registered in San Diego, 7660-H Fay Avenue #154, La Jolla, CA 92037, USA

Generational Health Division, Trauma Division, Sharp HealthCare, Sharp Memorial Hospital Trauma and Acute Care Surgery, San Diego, CA, USA
diane@jaysheart.com

Kelly Wright
Independent Consultant for Jay’s Heart; Generational Health Division, Advanced Illness Management, Sharp HealthCare, Sharp Memorial Hospital, San Diego, CA, USA

Kathryn B. Schaffer
Independent Researcher - Epidemiological Consultant for Jay’s Heart, Sharp HealthCare, Sharp Memorial Hospital Trauma and Acute Care Surgery, San Diego, CA, USA

Healthcare teams looking to take advantage of social media exposure are enticed in part because this is the fastest way to spread a major message to a tremendous volume of patients.^{3,4} Consider the social media marketing during the COVID-19 pandemic. While social media can certainly spread negative or false information quickly and broadly, social media may have been the reason for success in worldwide vaccination, education on quarantine or containment, and expansive knowledge and ongoing research on coronavirus.^{5,6}

Pop culture clearly influences large populations, but healthcare teams may need clarification on the best mechanisms to promote professional messages through social content.^{7,8} Concerns over professionalism and the ramifications of crossing political or cultural boundaries or violating workplace policies or behavioral standards, punishments of which could include sanctions by governing or credentialing boards, are legitimate concerns for healthcare teams considering large population exposure through social media marketing.^{7,9,10} However, as the consumer market has evolved, the need for healthcare teams to appeal to the public has emerged.¹¹

TikTok and *Instagram* are popular platforms for exposure and promotion. In 2020, *TikTok* averaged 300 million monthly users¹² and based on *TikTok*'s marketing report, the app has been downloaded more than 2.6 billion times worldwide.¹³ *Instagram* touts more than one billion users and claims to be the most popular social networking app today.¹⁴

For healthcare teams engaging in entrepreneurship, there may be interest in promoting on social media. Social media influencers have revolutionized information, gaining viewers, retention, and interest with short videos. Medical teams could potentially benefit from this medium for educating patients.^{15,16} Defining success in this endeavor remains unclear.

We are a surgeon-nurse team that sought to promote our messages on social media to gain viewers and interest in our website. As observers of the success of other healthcare professionals' social media accounts, we were interested in understanding whether social media promotions would enhance traffic to our content or impact a relevant population.

Design

This was a single-team study evaluating the success of a 3-month, amateur social media campaign. The study did not require IRB as there was no patient contact or involvement. The study was a retrospective review of the 3-month social media campaign.

A surgeon expert contracted to provide geriatric and trauma services at one American College of Surgeons verified Level II trauma center and one oncology-certified nurse managing the geriatric inpatient program wanted to formalize education for patients facing end of life. Their interest was based on personal and family experiences and their backgrounds as professionals in the space. The educational modules were created in the form of podcast episodes meant to be engaging, raise crucial questions, or encourage discussion of difficult topics related to code status, advance care planning, and goals of care.

Methods

Education was mostly provided by way of a podcast, which was produced weekly for 3 months from November 1, 2023, through January 31, 2024. The surgeon and nurse team designed the content of the podcast, produced it through a company logo unrelated to the hospital, and recorded it outside of active work hours, specifically at night and on weekends. Due to a potential conflict of interest with inpatient care, the podcast was never advertised, mentioned, or encouraged to any active hospitalized patient. It was not included in discharge paperwork or promoted in a clinic or by the team. The podcast was personally named without any linkage to either team member. A disclaimer naming both the surgeon and the nurse was added after the 3-month campaign was completed, in February 2024.

During the 3-month study pilot, eleven total podcast episodes were produced and published for public access. There were five episodes that offered a video transcript through which either the surgeon or nurse could have been identified by a viewer, but their names were not otherwise advertised. Each episode was designed to stand alone and did not require the listener to follow the episodes in any specific order. Listeners had no obligation to participate in more than one episode and could pick and choose based on interest in the topic or title. The episodes were free on *Spotify*, *iHeart*

Table 1. Podcast episode topics.

Episode date	Episode title	Description
11/27/2023	Intro to End of Life	We start the conversation on end of life and discuss why a plan is important.
11/27/2023	Details on Choosing Code Status	Do you know what code status is? Do you or a family member need help deciding on code status? This is a discussion on options and an opportunity to ask more questions.
11/29/2023	Young Patients, Difficult Decisions	We address the healthcare provider's perspective on difficult conversations with young patients.
12/14/2023	There Is No Place Like Home	For those who have been hospitalized and are unable to return home.
12/22/2023	The Reason Why	How and why did Jay's Heart come about? The road to palliative and difficult decision making.
12/30/2023	Mental Toughness and Resiliency	A story behind bouncing back in difficult scenarios; a healthcare perspective.
1/8/2024	Advance Healthcare Directive	AHCD—What is it, why do you need it, why do we need it?
1/17/2024	Palliative Care, Hospice, What Are These?	Can you describe the difference between palliative and hospice? Knowing the difference and understanding these pathways can improve your healthcare journey.
1/19/2024	Positive Vibes Only	You have more options than you think. One family's journey with pancreatic cancer.
1/25/2024	Healthy Aging	Some things to consider on your healthy aging journey.
1/31/2024	When You Can't Speak for Yourself, Then What?	What is the process for when you cannot speak for yourself? How does the care team follow your wishes?

AHCD: advance health care directive.

Radio, Apple Podcasts, or through a dedicated website where there was no obligation to subscribe or provide personal or contact information.

Weekly topics were inspired by real-life experiences of the surgeon and nurse and discussed in conversational dialogue during the podcast (Table 1). There was one episode wherein the surgeon discussed mental toughness and resiliency; there was one episode where the surgeon discussed end-of-life decisions for her father. Two episodes included an interview with an invited guest. All episodes were specific to end-of-life care, including code status decisions, advance care directives and machine-driven support, or healthy aging and related topics. Unidentified and modified patient stories were frequently used as examples of situations or to explain how decisions could be made. The listener audience was able to respond to the podcast or comment on

content directly to the team via email or on the podcast site.

For the 3-month study period, both the surgeon and nurse had accounts on *TikTok*, *Instagram*, and *Spotify*. The podcast Episodes 1–5 were recorded on a privately owned iPhone and then uploaded to *Spotify* and to the business website. These episodes contained video and audio content. Following Episode 5, the podcasts were recorded directly into the *Spotify* application and posted. The *Spotify* application process offered better audio than the earlier recordings but did not allow video. The nurse edited each podcast episode into a short video clip and posted it to *TikTok*, *Instagram*, or both during the same week that the podcast was produced.

TikTok and *Instagram* offered paid promotions with promises of clicks, viewers, likes, or other

engagement estimates. Each promotional offer was priced to reflect the estimated engagement, and once that engagement level was reached, the promotion was considered over, and the content did not generate additional interest. The nurse-surgeon created each promotional clip on their own, added relevant hashtags, and tagged collaborators to increase the distribution of the clip. The podcast website and direct podcast link were included in each posting. Clicks to the website were then able to be tracked through each campaign. All social media clip posts were created through standard editing tools available on the *TikTok* or *Instagram* applications. Some clips were portions of the podcast audio, some included music or edited photo or video content related to the podcast. All included text explanation, email or website address, related keyword hashtags, and appropriate, relevant contributor citations. Professional marketing consultants or artificial intelligence creators were not used during the study period.

The nurse and the surgeon determined randomly whether the post would be promoted or boosted for more views. Promoted content was chosen based on quotes from the podcast that they found critical for patients or families going through similar situations. Promotions or boosts were at a cost, funded by either the nurse or the surgeon depending on whose account would display the video. Both the surgeon and nurse funded video promotions. If one of them promoted, the other would share the content on their own account thus increasing exposure to the video.

Results

The nurse and surgeon both became facile with the social media lingo during the pilot. “Promoting a podcast” or “promotion” meant that either the nurse or the surgeon paid to post the video onto a social media site for the return value of gaining viewers, “likes,” comments, or other action from anyone accessing the video. A “view” was counted as “one view” for any amount of time that the video ran, even if the viewer scrolled immediately past the video without actually watching it. A “like” indicated that a viewer hit a heart or thumbs-up action button while watching the video, and each of these actions translated to “one like” or one positive interaction with the content. Viewers could also comment on videos, which would also translate to a positive interaction. Videos posted to any social media would automatically play “on a reel” for a period of

views even without paid promotion. On non-promoted content, positive interactions kept the video auto-generating longer, meaning that *TikTok* or *Instagram*’s internal algorithm continued to allow it on the reel for random viewer interaction. Very popular videos with a quick accumulation of thousands of positive interactions would be considered “viral.” If the video received poor interaction, then *TikTok* or *Instagram*’s internal algorithm curtailed its non-promoted play, and it would cease to be shown or played on the reel. A “campaign” defined the period of time that the promotion ran.

The podcast was promoted for free on *Spotify* 10,000 times per month on average during the study period. There was no opportunity to pay for promotion on *Spotify*, so free promotion by *Spotify* using their own internal algorithm was the only option and was included in the terms of producing through this platform. *TikTok* and *Instagram* both offered paid promotions which the team took advantage of during the study period. Out of the 11 episodes produced, the nurse directly promoted 6 video clips at a cost on *TikTok* and 1 at a cost on *Instagram*. The surgeon reposted or shared these on her *TikTok* or *Instagram* account. She also separately promoted six clips on *TikTok* and two on *Instagram*. The surgeon reshared all the nurse’s promoted posts from the two platforms.

In 3 months, there were 486 podcasts “listens” through the *Spotify* platform, meaning that one podcast episode was played for at least 10 min by one person. *Spotify*’s free promotion led to 49 followers, who opted-in to alerts on new episodes. The website was triggered or opened 1200 times directly linked to the *Spotify* traffic. No money was spent to achieve these outcomes.

TikTok promotions cost a total of \$275, which included the use of two discount coupons. Cost per video averaged \$27.50 per campaign with each campaign running for 5 days. *TikTok* promotions generated more than 50,000 views and 3121 “likes.” Less than 1% of viewers commented and most watched the video for less than 5 seconds. One hundred ninety-three followers to the *TikTok* account were added, but none clicked into the website, and none tracked interest in the podcast. Viewers aged 25–34 were the most likely to play the video per *TikTok* insights collected at the termination of each promotion.

Table 2. November 2023 to January 2023 data from each social media platform.

Media Platform	Podcast listen	Impressions	Video view	Followers	Website hits	Expense (dollars)
<i>Spotify</i>	486	10,000 promotions	N/A	49	1200	0
<i>TikTok</i>	0	3121 likes	53,685	193	0	275
<i>Instagram</i>	0	30 likes	1582	62	0	60

Instagram promotions cost a total of \$60, calculated to be \$20 per video promoted on a variable timeline campaign. *Instagram* videos generated a total of 30 “likes” and 1582 views. Both nursing and surgeon accounts had a total of 62 followers. *Instagram* did not stimulate any podcast interest or any website clicks (Table 2).

On *Spotify*, only 1.9% of impressions resulted in listens. Most listeners were friends or colleagues and did not engage based on recommendations made through *Spotify* promotions for similar content. On *TikTok*, 8.4% of promoted content or views of promoted content resulted in “likes,” but only 0.3% became followers with none of them becoming podcast listeners or having interest in the website content. On *Instagram*, 2.2% of impressions or views of promoted content resulted in “likes,” and 2.5% of impressions or views of promoted content resulted in followers, of whom none were further influenced to listen to the podcast or engage in the website. Any website clicks tracked from social media came directly from paid promotion specifically targeting this outcome measure. Promotional clicks were not reflective of interest since those occurred whether the user intended to click or not. None of these promotional clicks resulted in further time or interest in the content. After the 3-month review, the team continued to produce podcast episodes, with another 10 episodes being produced between February and the end of May 2024. The accumulation of data continued to show similar trends: that paid views, “likes,” or impressions led to minimal additional interest in the podcast or the educational website (Table 3).

Since “no clicks” phenomenon was deemed statistically unusual on both social media platforms, the website was republished and checked numerous times during the study period for errors that would inhibit tracking. The website offered an easy tracking process and allowed users to enter an email address if they were interested in

receiving additional information. Number of users could be tracked whether they entered an email or not. Using this tracking feature ensured accuracy for the number of associated clicks to the website or podcast.

Discussion

This review showed that not all promotion on social media has equitable influence. The full podcast episodes were recorded, produced, and posted on *Spotify* at no cost to the surgeon-nurse team. *Spotify* promoted the podcast episodes as per their internal algorithm to other registered *Spotify* listeners. The podcast was suggested to listeners in lists of similar shows, which increased the likelihood of shared interest. Promotions on *TikTok* were discounted in price based on previous use of the app and account engagement. The cost was therefore variable and dependent on coupons offered directly from the site which were determined by recent posting history. *TikTok* offered a range volume of projected viewers or anticipated “likes” based on the user’s goal, such as “to get more views” or “to generate more followers.” *Instagram* offered promotions as “boosted post” and the boost cost was based on promoter preference for number of views, “likes,” or followers.

Spotify was initially deemed the most cost-effective in generating interest in our podcast and our website. *Spotify* promotion was free. Listeners did not have to subscribe to our podcast. Through *Spotify*’s data evaluation, which was accessible to us in real-time, we found that the majority of the listeners and followers were people we knew, not people who became interested based on promotion. *TikTok* generated the most views, although the views were of inadequate time to appreciate the posted information and did not generate any interest in our true content, which was educational through the podcast. *Instagram* generated the most followers, although those followers still

Table 3. November 2023 to May 31, 2024 data from each social media platform.

Media Platform	Podcast listens	Impressions	Video view	Followers	Organic website hits	Expense (dollars)	Paid for auto-clicks to website
<i>Spotify</i>	1374	Estimated 70k	NA	94	94	0	NA
<i>TikTok</i>	0	78,512	54,315	186	0	674	674 PAID
<i>Instagram</i>	0	2812	2519	63	0	80	367 PAID
NA, not applicable to platform.							

did not translate to interested listeners of our content. *Instagram* offered more options for budgeting while *TikTok* consistently generated more views and “likes” per video but at a higher cost per posting.

While we realized that our campaign content may not have been something that would go viral, based on the sheer volume of views alone, we anticipated we would generate at least a few listeners from the paid promotions. During the study period, there was an open chat feature on the *Spotify* podcast application wherein listeners could add comments or ask questions. Comments were enabled on all posted *TikTok* and *Instagram* clips, but very few viewers posted comments. A comment quota metric was not included in any of the promotions. Despite the total amount spent, as well as time devoted to creating the clips, no additional listeners were influenced. Based on our own experience with social media we would recommend ensuring a strategic approach to social media promotion to be cost conscious and efficient with the business aspect of posting.

The social media outlets *Instagram* and *TikTok* were specifically noted to have limited options to target other like-minded or like-interested potential consumers, clients, or other experts who might secondarily promote the platform. We observed that once the promotional paid period was completed, the video would generate no more views, not even randomly, and that the sites essentially removed the video from the natural queue. We also realized that unpromoted content would generate around 200 views almost immediately, but if those views did not result in “likes” or comments, the video would similarly be removed from the reel. This was similar to what other creators have observed and have described as “*TikTok* jail.”¹⁷ The internal site algorithm for promotion was unclear and not transparent to us.

In that social media has become mainstream and worldwide, there are many publications addressing mechanisms to improve success in this space.^{18,19} We attempted dance content and popular posted templates following the study with minimal improvement in engagement. Focusing on visually captivating content was another strategy since audio-only content was thought to be irrelevant to those using these platforms. We adjusted the video length, which also did not impact interest. Most viewers watched or listened to the social media postings for seconds versus minutes. With this feedback, we attempted to create very short captivating clips with the most important information disseminated immediately to the viewer in visual effects and sound, hoping to foster interest. Literature has consistently supported social media as a medium to share researched, expert palliative topics, such as end-of-life care, so the topic of our content was not necessarily the reason for mediocre interest.^{20,21}

While social media can be associated with negative social outcomes such as misinformation or effects on self-worth, it also enables opportunities for peer support and peer networking, which may have value with end-of-life topics.^{22–24} Social support of such topics could enable commonplace conversation.²⁵ Other medical teams have noted that formal marketing campaigns have had a tremendous influence on large population trends.^{26–28}

There was also no opportunity to obtain a customer list or contact information for potential consumer leads through any of the posting sites. Since we could not obtain potential customer contact information, there was no mechanism in place to continue to warm clients or engage them further in our content.

We also noted that while our content was reliable, researched, and based on our expertise in this space, other content creators who seemed to

demonstrate more success were not always as accurate in their portrayal or promotion of similar end-of-life issues. The concern over content accuracy, especially when content is medical, has been validated by other teams.^{29,30}

Statistics were offered on every platform to track progress and success with posts, but the formulas behind the statistics were not published and could not be validated. While the statistics for our posts on each site appeared favorable in views or “likes,” we did not have adequate information on where the success of the campaign was or whether it was even accurate data. We had concerns that the data may have misrepresented our popularity on the app and could have influenced us to spend more money without improving the business of the podcast or the website. Because acquiring “likes,” comments, and followers on interactive applications can be addictive, and in that money is being spent to promote, in theory, healthcare teams could be vulnerable to any campaign that does not drive business. Based on our experience over the 3-month study and then through the additional 5 months of continued production of our podcast, promotion on social media was not tailored to specific viewers or to potential podcast listeners and did not clearly target a relevant audience for our content.

There was no mechanism to verify account owners of followers or of those who had interest unless they messaged our feed first. This included identifying views or “likes” created artificially by “bots,” which are automated programs used to engage in social media platforms. We could not determine if the vast number of “likes” without comments were fake accounts, which made it difficult to modify content based on viewers or potential customer trends.

Critics may have said that our content was not geared toward viewer preferences, but *TikTok* and *Instagram* are meant to be managed by non-marketing experts. Any individual has the potential to “go viral” on these applications and does not have to have specific credentials. The apps have created an environment where novice advertisers or those without training in crowd management could create pleasing or popular content.³¹

Limitations

In order to effectively receive the information or access the podcast, the listeners needed to have

intact or adequate hearing or be literate to access the text portion of the post. Therefore, there was the potential for sensory (lack of hearing) or educational (inability to read) bias. Anyone accessing the podcast had to have access to the internet. Those listening through a platform, specifically *Spotify*, *TikTok*, *iHeart Radio*, or *Apple*, had to be registered through those sites. The podcast was also available through the separately established business website which did not require any personal information or registration but may not have been readily apparent through an internet search.

We were unable to explore the correlation between listening to the podcast and listener behavior.³² None of the platforms offered contact information or profile access for their users. Only individual users could release this personal information, so there was no mechanism to further engage consumers with targeted ads or strategies. Although we were able to review basic information on “likes” or “impressions,” the social media platforms provided no descriptive data for the individual listeners. Statistical causation could therefore not be applied as there was no information gathered on total sample size, multiple observations per independent variable, or comparable groups. This paper describes the process of determining whether using social media platforms is innately effective.

A lack of social media presence predating the launch of marketing efforts may have further contributed to the “no clicks” phenomenon. The surgeon and nurse created their *TikTok* accounts simultaneously to the launch of the first marketing campaign. The nurse utilized an established *Instagram* account with close friends and family as followers. Having a large following prior to launch may have led to an increased number of shares, likes, followers, and opportunities to increase podcast listeners.

We did not use a professional marketing team during the study, so it remains unknown if that would have improved engagement in our content. The podcast was not advertised outside of social media promotion. Using print media or web-based advertisement may have improved visibility of the podcast or engaged an apropos audience. Our hypothesized audience was older given the prevalence of end-of-life care in that population.³³ Younger people have a stronger presence on *TikTok* and *Instagram* social media markets than older people, but literature shows that social

media has been strongly adopted in older communities when the content is relevant.^{34,35}

Conclusion

Our own experience with social media promotion was inadequate in generating interest in our content. The authors would encourage other teams to be strategic with paid promotions and to consider engaging a marketing expert to improve the potential for mass interest in content and promotional efficiency. Additionally, based on these findings, the authors would appreciate more transparency in the algorithms behind successful promotions to better understand “what success looks like” for medical messaging.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Consent granted.

Author contributions

Diane Wintz: Conceptualization; Methodology; Resources; Supervision; Validation; Visualization; Writing – original draft.

Kelly Wright: Conceptualization; Methodology; Resources; Writing – review & editing.

Kathryn B. Schaffer: Conceptualization; Data curation; Methodology; Supervision; Validation; Writing – original draft; Writing – review & editing.

Acknowledgements

Thank you to Christina Depippo, who shared her family’s story in episode 9: Positive Vibes Only. Thank you to Melissa Karren for designing the Jay’s Heart™ logo.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Competing interests

All Disclosure forms have been supplied and are provided as supplemental digital content where requested. Sharp HealthCare has no relationship with Jay’s Heart. KS and KW are employed at

Sharp HealthCare. DW is a contracted physician at Sharp HealthCare and is the CEO of Jay’s Heart, a San Diego, CA corporation, for-profit entity. KS and KW did not receive compensation for time spent on this submission, abstract, or manuscript.

Availability of data and materials

As seen in manuscript or accessible through access to account information on Spotify, TikTok, or Instagram for relevant dates.

ORCID iD

Diane Wintz  <https://orcid.org/0009-0003-3276-4152>

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