



Invited Commentary

Social media: frenemy of public health?

The landscape of product advertising has rapidly changed, as companies have moved to social media to reach millions of online global consumers⁽¹⁾. As Greene et al show in their study, food and beverage brands are leveraging the popularity and targeted audience features of social media to blur the line between entertainment and advertising⁽²⁾. Platforms such as Twitter, Instagram, Facebook and TikTok offer benefits beyond traditional, static advertising mediums, including popularity across age groups, messages tailored to specific audiences and opportunities for direct engagement with consumers⁽³⁾. Worryingly, marketing of food and beverages on social media has only increased during the COVID-19 pandemic, including for alcohol⁽⁴⁾. Described as a ‘vector through which risky behaviours are enabled and associated diseases transmitted’⁽⁵⁾, social media presents enormous challenges for chronic disease prevention efforts. However, many of these same social media attributes also present opportunities for public health practitioners and researchers to build emotive connections and shift the community towards healthier behaviours.

Framing messages on social media

The enemy – using humour and trends to build connections with brands

Greene and colleagues found that the use of personality (such as humour, trendy language, memes and desirable lifestyle traits) on Twitter was a powerful advertising and engagement tool that generated millions of likes and retweets⁽²⁾. Using sarcasm, humour and memes to comment on current events or play into internet trends, rather than provide information about a product, is a common technique used by brands across several social media platforms, including Instagram⁽³⁾ and Facebook⁽⁶⁾. Paid or sponsored posts from social media influencers further blur advertising lines as product promotion is a key feature of the relationship between these popular users and their audience. Children and young people are known to be particularly susceptible to these marketing techniques, which may be generated in one country but often reach a global audience. The covert and direct to consumer nature of

social media advertising, as well as this cross-border element, makes it particularly difficult to implement effective public health regulations to protect children and young adults from exposure⁽⁷⁾.

The friend – social media’s potential to support healthier behaviours

How can public health researchers and practitioners use the research findings of Greene and others to combat the effects of pervasive advertising of products that harm our health? An increasing number of public health organisations are adopting social media as a platform for health promotion campaigns⁽⁸⁾. However, organisations need to be more engaging in their approach to social media use⁽⁹⁾, as well as employ comprehensive evaluation methods to better understand their strengths and weaknesses. Personality, including the use of compelling emotions, and a clear call to action have been identified as important components of successful online campaigns⁽¹⁰⁾. Some examples of this in a public health context include asking followers to contact their local politician, or to add their name to a petition advocating for change⁽¹⁰⁾. The personal stories from real people included in the *Tips From Former Smokers* Campaign were instrumental to its success in helping others quit smoking⁽¹¹⁾. A recent example of a popular online campaign is the upbeat and humorous video from New Zealand promoting the uptake of the COVID-19 vaccine⁽¹²⁾. Membership groups on social media platforms can also provide accessible social and emotional support, such as for those looking to lose weight⁽¹³⁾. However, due to the lack of publicly available, comprehensive evaluations of digital health campaigns, demonstrated successes are limited⁽¹⁰⁾. Currently, it is most common for easily collectable impact metrics, such as views, shares and comments, to be used as a proxy for effectiveness of social media messages. While this is a demonstration of campaign reach, much less is known about how social media-based campaigns lead to behaviour change, particularly over the longer term. Further investment in campaigns, evaluations and research is needed to determine how public health can use social media to effectively communicate counter messaging and shift towards healthier behaviours^(8,10).



Targeted messaging using social media

The enemy – profiling consumers and targeting advertising

A unique and powerful aspect of social media is the ability to personalise advertisements that are tailored to an individual consumer's specific interests⁽¹⁴⁾. Engagement optimising algorithms ensure certain messages reach certain consumers based on their demographics, interests and previous online and social media use patterns and behaviours. Social media platforms measure user engagement to finely tune their algorithms, attracting increased engagement with content, increased time spent on their platforms and ultimately greater profits for both the platform and advertiser⁽¹⁵⁾. A recent report investigating profiling for commercial advertising purposes found that Facebook is collecting and using young people and adults' data in this way, and companies can buy access to audiences with relevant interests, including fast food or alcohol⁽¹⁶⁾. As an example, around Mother's Day food and beverage companies integrate gifts or events for mothers with products and promote these posts to social media users based on demographics, location or previous engagement.

The friend – delivering health and research messages to the right audiences

How can social media's targeted messaging be utilised by public health research and practice? First, it provides opportunities for citizen science approaches to studying these algorithms. While we know targeted advertising is used by social media platforms, the algorithms themselves are undisclosed. Studies recruiting youth to submit the ads they actually see will be a valuable mechanism for both research and public health communities to better understand the nature and extent of tailored advertising of unhealthy products⁽¹⁷⁾. With this information we will be better equipped as researchers and practitioners to design effective interventions, such as alternative, healthy messaging, and to inform necessary regulatory changes such as bans on unhealthy advertising and requirements to disclose advertising funding and origins. Second, these same engagement optimising algorithms can be utilised by public health practitioners to ensure health promoting messages reach the right audiences. For example, targeting parent groups to promote healthy lunch box tips. A third opportunity is research participant recruitment, where social media allows researchers to reach a specific audience with anonymity and at a lower cost than traditional methods of advertising. For example, a recent study of rare paediatric diseases recruited a previously unattainable number of subjects in <1 year, with low associated costs⁽¹⁸⁾. In a study of young cancer survivors, a typically difficult to recruit group for research, social media was found to be an effective national recruitment strategy⁽¹⁹⁾.

As these new recruitment tactics grow in popularity, researchers and Human Ethics Review Committees need to be appropriately equipped to address the ethical considerations of these methods, including privacy, transparency, potential risks and authorisation^(20,21).

Peer to peer communication

The enemy – the blurred advertising lines of the influencer

Featuring a relatable and trusted consumer testimonial is a known and familiar traditional advertising technique, but social media amplifies this and enables direct peer to peer advertising. Sponsored content from social media influencers offers a new avenue for advertising that is perceived as more authentic and trusted than ads coming directly from the company⁽²²⁾. A recent study monitoring the extent of children's exposure to food and beverage marketing online found that almost 60% of promotions seen were peer endorsed⁽¹⁷⁾. Another troubling aspect of peer to peer advertising on social media is its ability to circumvent existing attempts to regulate product advertisements. For example, the WHO International Code of Marketing of Breast-milk Substitutes states there should be no advertising of products to the general public⁽²³⁾. However, sponsored or gifted posts from social media influencers may not be covered under this Code, and recommendations presented as being from one parent to another may also be perceived as more trustworthy, even when they are sponsored.

The friend – the rise of the 'doctorfluencer'

How can social media's ability to directly communicate with key target groups be harnessed by public health? The COVID-19 pandemic has exposed the need and desire for reliable and expert scientific information on social media channels. Social media provides opportunity for researchers and public health nutrition experts to engage with audiences directly, and in real time, to explain and promote their work⁽²⁴⁾. The rise of the 'doctorfluencer' is a potential antidote to the misinformation about health that is increasingly prevalent online⁽²⁵⁾. Health professionals, like high-profile ob/gyn Dr Jennifer Gunter (<https://twitter.com/DrJenGunter>) and medical doctors/nutritionist Dr Hazel Wallace (<https://www.instagram.com/thefoodmedic>), have taken to social media to 'take up space in feeds' and fill them with easy to digest, evidence-based health information and become influencers in the process. Public engagement is increasingly recognised as essential for public health impact, and social media offers a platform for researchers and practitioners to proactively participate, spreading health messages.



Recommendations for public health experts

1. Embrace social media as a tool to engage the community in both health promotion and research, using lessons from industry including the incorporation of personality and tailored messaging.
2. Those working with social media should incorporate comprehensive evaluation methods beyond post engagement (e.g. likes or retweets) to determine what elements of social media campaigns lead to increased knowledge and skills and prolonged behaviour change.
3. As an individual, try social media as a medium to directly communicate your expertise to the public.

The uptake of these lessons is critical for shifting the power of social media from enemy to friend.

Conclusion

Pervasive food and beverage advertising is just one way that social media use is known to negatively influence health outcomes. Better regulation of advertising on social media is essential to combat these impacts. There are also opportunities that could be leveraged by the public health community – including targeted and personality filled public health messaging, research recruitment particularly for neglected populations and increasing the number of credible community facing public health experts. The time has come for public health to step out of the traditional confines of scientific communication, put the latest evidence in action and build community connections through social media to influence better health.

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