



Social Media—A Digital Tool for Promoting Oral Health. A Comprehensive Review

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ABSTRACT:

Social media is a new and advanced means of communication among all age groups in the present era. The integration of social media into the dental profession has been a boon to society, but it also has some loopholes. Social media marketing gives you the opportunity to contact new patients who can otherwise be challenging to reach. In recent years, social media has been used by healthcare professionals in their healthcare practice, and it has emerged as a new platform for the dissemination of knowledge, information exchange, and interpersonal communication. In this review, we highlight the advantages and disadvantages of using social media as a powerful tool to promote oral health.

1. Introduction

Oral health is a critical component of overall health and quality of life; however, it is often underemphasized in public health strategies. Poor oral health is associated with a range of systemic conditions including cardiovascular diseases, diabetes, and respiratory infections [1]. Despite advances in dental care and education, preventable oral diseases such as dental caries and periodontal disease remain prevalent globally [2]. In recent years, the rise of digital technologies has transformed access to and sharing of health information. Among these, social media has become the dominant force in health communication. Platforms such as WhatsApp, Facebook, Instagram, Twitter (now X), TikTok, and YouTube are not only tools for social interaction, but also powerful channels for health promotion and education [3]. Kaplan and Haenlein defined social media as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the

creation and exchange of user-generated content”. Social media refers to web-based and mobile technologies that enable individuals and organizations to create, share, and exchange information, ideas, images, and videos in virtual communities and networks. Unlike traditional media, social media platforms are characterized by user-generated content, interactive communication, and real-time collaboration [4]. Social media’s defining features—openness, participation, and community-driven content—make it a unique tool for health promotion, allowing two-way communication between professionals and the public. Social media provides several unique advantages such as low cost, large-scale reach, real-time feedback, and the potential to engage hard-to-reach populations. Its visual and interactive nature makes it particularly appealing to younger people who are active online. Social media offers several unique advantages: it allows for the real-time dissemination of information, fosters interactive communication, and provides access to diverse audiences across geographic and socioeconomic boundaries. These features make it an



ideal medium for promoting oral health behaviors, raising awareness, and debunking myths [3,5]. This review aimed to explore how social media is being utilized to promote oral health, assess its effectiveness based on the current literature, and discuss the challenges and opportunities associated with this digital approach. The aim was to highlight its transformative potential and provide practical insights for dental professionals, public health practitioners, and policymakers.

2. The Rise of Social Media in Health Communication

In the last two decades, the communication landscape in healthcare has drastically changed because of the widespread adoption of the internet and digital platforms. Social media has emerged as a leading tool for disseminating health information. Social media refers to Internet-based platforms that enable users to create, share, and interact with content in real time. Platforms such as Facebook, Instagram, YouTube, Twitter (now X), and TikTok allow for diverse formats, such as text, images, videos, live streams, and interactive features, making them highly suitable for public health messaging [5].

The global penetration of social media has been substantial. As of 2023, more than 4.9 billion people worldwide are using social media, with usage particularly high among individuals aged 18–34 years [6]. This demographic overlap presents a strategic opportunity for targeting younger audiences with oral health education, especially given that dental behaviors are often established during adolescence and early adulthood.

In the health domain, social media has demonstrated effectiveness in the following areas:

- Promoting health awareness campaigns (e.g., cancer screening, vaccination)
- Influencing health behavior changes (e.g., smoking cessation, physical activity)
- Facilitating peer-to-peer support and communication between health professionals and the public [7].

For oral health promotion, social media offers a channel to share the following:

- Preventive strategies (e.g., brushing, flossing)

- Corrective dental information (e.g., orthodontic care)
- Educational videos (e.g., children’s brushing techniques)
- Public service announcements and campaign materials

Additionally, social media empowers dental professionals and institutions to engage with communities, address public misconceptions, and improve health literacy in a cost-effective manner [8]. Unlike traditional media, these platforms offer two-way interaction, allowing for immediate feedback and dialogue between educators and the public.

However, the democratization of content on social media also presents challenges, such as the spread of misinformation, a lack of content regulation, and variable quality of health information being shared. Despite these concerns, when used responsibly and supported by credible sources, social media remains an invaluable resource for modern oral health communication [5,8,9,10].

3. Uses of social media in dentistry

Social media has become an indispensable tool in modern dentistry, serving a variety of purposes, including clinical practice, public health promotion, patient education, professional development, and research dissemination. The following are the key areas in which social media is actively utilized in dentistry:

3.1. Patient Education and Engagement

Dentists and dental organizations use platforms such as Instagram, YouTube, and Facebook to share oral hygiene tips, demonstrate brushing and flossing techniques, and raise awareness of common dental conditions such as caries, periodontal disease, and malocclusion. Visual content, such as infographics and short videos, simplifies complex procedures for public understanding and increases patient compliance [11].

3.2. Oral Health Promotion Campaigns

Public health entities use social media to conduct mass campaigns aimed at promoting preventive care. Events such as World Oral Health Day, National Smile Month, and school-based dental health programs are amplified



through hashtags, digital challenges, and shareable content, significantly broadening outreach [12].

3.3. Practice marketing and patient acquisition

Private dental practices use social media to build brand identity, promote services, and engage prospective patients. Strategies include showcasing before-and-after treatment results, patient testimonials, clinical tours, and special offers. Platforms such as Facebook and Instagram are particularly popular in localized marketing [13].

3.4. Professional Networking and Continuing Education

Social media platforms like LinkedIn, Facebook Groups, and Twitter/X act as hubs for dental professionals to share ideas, engage in case discussions, attend webinars, and stay current with advances in dental technology and treatment protocols [14]. These platforms also facilitate peer-to-peer learning and collaboration.

3.5. Dental Research Dissemination

Researchers and academic institutions are increasingly using social media to promote new studies, share findings, and boost the visibility of their work. By linking journal articles and presenting research summaries in accessible formats, platforms like Twitter/X help connect academia with the general public [15].

3.6. Crisis Communication (e.g., COVID-19)

During health crises, such as the COVID-19 pandemic, social media has proven essential in informing patients about clinic closures, infection control measures, and tele-dentistry services. It also helps combat misinformation and reduces public anxiety through transparent and timely updates [16].

4. Impact of Social Media in Oral Health Promotion

4.1. Broad reach and accessibility

Social media enables instant communication with large and diverse audiences across geographic and socioeconomic boundaries. This reach is particularly valuable for public health campaigns and for accessing underserved populations [17].

4.2. Cost-effectiveness

Compared to traditional media, social media campaigns require fewer resources and offer higher returns in terms of visibility and engagement. This makes it an attractive tool for government bodies, NGOs, and individual practitioners [18].

4.3. Interactivity and Engagement

Social media allows two-way communication between dental professionals and the public. Comment sections, polls, and live Q&A sessions foster active participation and better engagement with oral health content [19].

4.4. Real-time information sharing

Updates, appointment reminders, preventive tips, and emergency alerts can be shared in real time, enhancing patient compliance and clinical communication, especially during crises such as pandemics [20].

4.5. Visual Learning Tools

Platforms such as YouTube and Instagram support videos, infographics, and visual aids are highly effective in demonstrating techniques such as brushing, flossing, and orthodontic care [21].

4.6. Misinformation and lack of regulation

A major concern is the spread of inaccurate and misleading health information. Users without medical training may share unverified tips or promote unsafe dental products or trends [22].

4.7. Digital Divide and Inequality

Populations without reliable Internet access or digital literacy, such as older adults or rural communities, may be excluded from social media-based health education, exacerbating health disparities [21,22].

4.8. Privacy and ethical issues

Improper handling of patient information, unauthorized sharing of before-and-after photos, and online consultations without consent raise ethical and legal concerns [22].

4.9. Content Credibility

Because anyone can post content, distinguishing between evidence-based dental advice and anecdotal or



commercial material can be difficult for the general public [22].

4.10. Professionalism Risks

Improper social media use by dental professionals, such as sharing unprofessional photos or engaging in controversial posts, can harm public trust and damage professional reputations [21,22].

5. Social Media Versus Traditional Interventions in Promoting Oral Health

The promotion of oral health has historically relied on traditional interventions such as school-based programs, printed brochures, community outreach events, and mass media campaigns (TV, radio, and newspapers). With the advent of digital platforms, social media has emerged as a modern alternative or complementary to these methods. A comparison of both approaches highlights their relative strengths and limitations in health communication.

5.1 Reach and Accessibility

Social Media: Platforms such as Facebook, Instagram, and YouTube can instantly reach millions of users across different regions, particularly younger tech-savvy populations. Social media can overcome geographical barriers and deliver content globally in real-time.

Traditional interventions often have a localized reach, which is limited by the availability of personnel, infrastructure, and logistics. School programs and dental camps are highly effective at the community level but cannot scale rapidly or widely [23].

5.2 Cost and Resource Efficiency

Social media incurs minimal cost to produce and disseminate content. A single, well-designed infographic or video can be shared widely without recurring printing or staffing expenses [24].

Traditional methods: Printing materials, staffing health workers, and organizing in-person events are resource-intensive and involve high operational costs and time commitments.

5.3 Engagement and Interactivity

Social media allows for real-time feedback, comments, questions, and interactive polls. This two-way

communication fosters active engagement and personalized learning [24].

Traditional methods generally involve one-way communication. While face-to-face teaching can be interactive, large-scale interventions such as brochures or TV ads do not provide immediate feedback or dialogue.

5.4 Credibility and Control

Social media: While social media allows broad participation, the lack of content regulation means that misinformation can spread easily unless it is managed by credible sources [25].

Traditional Interventions: Usually managed by qualified health professionals or institutions, ensuring that content is accurate, standardized, and approved [24].

5.5 Audience Segmentation

Social Media: Offers tools for targeted messaging based on age, location, language, and user interests. This precision can make campaigns more effective [24,25].

- **Traditional methods:** Less flexibility in audience targeting. Messages are often generalized for a wide appeal, which may dilute the impact.[25].

5.6 Learning Preferences

Social Media: Support multimedia learning through videos, images, animation, and gamified content. These formats appeal to diverse learning styles and improve learning retention.

Traditional methods: Typically, these methods rely on verbal or textual instruction, which may be less engaging for younger or low-literacy audiences.

Traditional methods remain vital, particularly for reaching offline populations and ensuring controlled, high-quality education. Social media offers unparalleled opportunities for scalability, engagement, and cost-effectiveness. The optimal strategy may be an integrated approach in which both modalities are used to complement each other and extend the reach and impact of oral health promotion [25].

6. Social Media Guidelines for Dentists

As dental professionals increasingly use social media for education, marketing, and public engagement, adherence to ethical, professional, and legal standards is crucial.



While social media offers opportunities to connect patients and the public, misuse can damage professional credibility and patient trust. Adopting best practices ensures responsible and effective online communication.

6.1 Maintaining Professionalism

- Professional language, tone, and visuals were always used.
- Posting content that can be interpreted as offensive, unprofessional, or misleading should be avoided.
- Personal and professional accounts should be separated when possible.

6.2 Protecting patient privacy

- Never shared identifiable patient information (images, names, and treatment details) without informed written consent.
- Even de-identified photos should be used cautiously, especially in small communities where recognition is possible.
- This is consistent with local data protection regulations (e.g., HIPAA and GDPR) [26,27].

6.3 Sharing evidence-based information

- Ensuring that any oral health information shared is accurate, science-based, and consistent with the current guidelines.
- Avoid endorsing unproven treatments or commercial products without transparency and evidence [3].

6.4 Use Disclaimers

- When sharing dental advice online, a disclaimer, in which the content is for general information only and does not replace professional diagnosis or consultation, is included.
- Clarify when content reflects personal views rather than those of an employer or institution.

6.5 Engaging Respectfully

- They respond politely to comments and questions, even when they address criticism.

- Arguments or emotional reactions to public threads should be avoided.
- Block or report users only when necessary (e.g., harassment, spam) [28,29].

6.6 Be Aware of Legal and Ethical Standards

- Understand the ethical codes of national dental associations and local dental councils regarding online behavior.
- Violations can lead to professional complaints or disciplinary actions [29].

6.7 Stay Updated

- Social media platforms and regulations evolve rapidly.
- Webinars should be attended, professional guidelines should be read, and the current best practices in digital professionalism should be held.

7. Ethical and Legal Considerations of Using Social Media as a Dentist

Social media have become an influential tool for dentists to engage with patients, promote services, and disseminate oral health information. However, its use must be aligned with ethical principles and legal standards to maintain trust, uphold professional integrity, and protect patient rights. The following are the key ethical and legal issues that dentists should consider. [21].

7.1 Patient Confidentiality and Privacy

One of the most critical ethical obligations in dentistry is safeguarding patient confidentiality. Social media posts that include identifiable patient information—even unintentionally—can constitute a breach of privacy laws, such as the Health Insurance Portability and Accountability Act (**HIPAA**, USA), the General Data Protection Regulation (**GDPR**, Europe), or national equivalents.

- Explicit written consent is always obtained before the patient images, testimonials, or treatment outcomes are shared.
- Even deidentified content should be reviewed cautiously, as contextual clues (location,



timing, facial features) can lead to re-identification [21].

7.2 Professionalism and Public Trust

Dentists are held to high ethical standards both in clinical settings and online. Unprofessional social media conduct, such as using inappropriate language, sharing misleading content, or making exaggerated claims, can damage public trust and result in disciplinary action by licensing bodies.

- Online behavior should reflect the standards expected in face-to-face professional interactions.
- Content must be truthful, respectful, and medically accurate [30].

7.3 Informed Consent and Misleading Advertising

Promotional content or case photos shared online should be truthful and not misleading. According to dental councils and advertising authorities,

- Avoid using terms such as “guaranteed results” or “painless”, unless supported by evidence.
- Be transparent about paid endorsements, affiliations, or sponsorships.
- Ensure that testimonials do not violate local advertising ethics [28].

7.4 Boundary Maintenance

Social media can blur the lines between professional and personal relationships. Dentists must maintain appropriate boundaries with patients online to avoid ethical dilemmas.

- Refrain from “friending” or following patients on personal social accounts.
- Professional pages are used to communicate and avoid discussing clinical issues via direct messaging, which lacks formal documentation or legal protection [29].

7.5 Legal Liability and Jurisdiction

Posts made on social media may be interpreted as professional advice that could expose the dentist to legal liability if the advice is misapplied. Furthermore, legal

responsibility may extend across borders depending on where the content is accessed.

- Include disclaimers stating that posts are for educational purposes only and not substitutes for in-person consultations.
- Individuals should avoid giving specific clinical advice online.

7.6 Regulatory Compliance

Professional bodies, such as the General Dental Council (UK), American Dental Association (ADA), and Dental Council of India (DCI), have issued social media guidance. Dentists must ensure that their online activities comply with these standards and local laws [30].

Conclusion

Online technologies present both opportunities and challenges to professionalism. They offer innovative ways for physicians and dental professionals to interact with patients and positively affect health. However, professionalism and the patient-physician relationship should govern these interactions. Education about the ethical and professional use of these tools is critical to maintaining a respectful and safe environment for patients, the public, and physicians. As patients continue to turn to the web for health care advice, physicians should maintain a professional presence and direct patients to reputable sources of information. Given the integration of social media and modern technologies into people’s lives, the significance of these tools in shaping oral health behaviors is undeniable. Collaboration between oral health professionals, organizations, and influencers on social media will amplify credibility and reach. However, these advancements come with ethical considerations, demanding vigilance in adhering to privacy regulations and combating misinformation.

Considering these changes, researchers and practitioners must recognize and address research gaps. Future studies should explore unexplored areas to gain deeper insights into the intersection between social media and oral health promotion.



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