EDITORIAL

Time to Reap the Benefits of Digital Technology in Public Health

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Digital Revolution: A Historical Perspective

Technology, derived from the Greek words *technē* (art or craft) and *logos* (discourse), has evolved from applied arts to encompass tools, systems, and processes that enable humans to modify and control their environment. (1) The digital revolution has been driven largely by rapid advances in mobile communication and internet technologies. Mobile telephony progressed from early vehicle-mounted systems to handheld devices in 1973, when Martin Cooper of Motorola made the first mobile phone call, (2) followed by successive transitions from 1G analog networks to the current emergence of 5G technology, offering high-speed connectivity and low latency. (3)

In parallel, the internet evolved from ARPANET (Advanced Research Projects Agency Network) to the World Wide Web, social media platforms, and mobile internet, fundamentally transforming communication and access to information.(4) The commercialization of the internet in the 1990s and the introduction of smartphones in 2007 further accelerated the development of mobile health applications and telemedicine services.

Globally, smartphone connections have reached approximately 7.2 billion, accounting for nearly 87% of all mobile devices. (5) In India, nearly 1.12 billion mobile connections were recorded in early 2024, covering about 78% of the population. (6) National initiatives such as *Digital India* (2015), *Unified Payments Interface* (2016), and digital health platforms such as *CoWIN* during the COVID-19 pandemic demonstrated the feasibility of delivering large-scale public health interventions through digital systems. The *Ayushman Bharat Digital Mission (ABDM)*, launched in 2021, further strengthened digital integration by facilitating electronic health records and expanding teleconsultation services through platforms such as *eSanjeevani*.

Collectively, these developments present unprecedented opportunities to strengthen public health through telemedicine, mobile health applications, digital health education, disease surveillance, electronic health records, and data-driven decision-making. Strategic integration of digital technologies can enhance access to care, particularly in underserved areas, promote preventive health services, and improve health system efficiency and equity.

Youth Engagement with Digital and Social Media

In India and other developing countries, young adults constitute a substantial proportion of the population and represent the most active users of digital platforms. Easy availability of affordable smartphones and low-cost mobile data has resulted in widespread social media use among adolescents and young adults. Platforms such as YouTube, Instagram, and WhatsApp are frequently used to obtain information related to fitness, dietary practices, mental health coping strategies, sexual and reproductive health, and preventive behaviors.

Health messages delivered through visually appealing formats, including short videos, infographics, peer testimonials, and influencer narratives, tend to attract greater attention and are often perceived as relatable and credible. The interactive nature of social media allows users to seek clarification, observe peer behaviors, and participate in discussions, thereby reinforcing health-related attitudes and intentions. Consequently, social media not only informs young users but also actively shapes their health perceptions and practices, making it a powerful determinant of health behavior in this age group.

Health Content on Social Media

Platforms and Formats

Health-related content is disseminated across multiple social media platforms, each offering distinct formats and engagement styles:

YouTube: Video-based health education, tutorials, and awareness content

Facebook and Instagram: Text, images, reels, and short videos

WhatsApp: Private and group messaging for rapid sharing of health advice and campaign messages

X (formerly Twitter): Microblogging for health discussions, updates, and commentary

Short-form visual content, particularly reels and videos, has become increasingly dominant due to higher engagement and ease of consumption.

Providers of Health Content

Health content on social media is generated by diverse sources, including: (7)

Healthcare professionals and institutions, such as doctors, hospitals, and public health agencies
Public health organizations and non-governmental organizations, including WHO and national health authorities
Peer communities and support groups, sharing lived experiences and coping strategies
Influencers and non-experts, often lacking formal medical training but possessing large followings
Automated or algorithm-driven sources, including AI-generated or platform-recommended content without clear authorship

Quality of Health Content: Benefits and Risks

Health-related content on social media can have both beneficial and harmful effects. Evidence-based information disseminated by healthcare professionals and public health institutions can improve health awareness, promote preventive practices, and support healthy behavior change. Digital platforms played a crucial role during public health emergencies, such as the COVID-19 pandemic, by enabling rapid dissemination of verified information through official channels. (8)

Conversely, a substantial proportion of health content shared on social media is misleading, incomplete, or scientifically inaccurate. Unverified claims, promotion of extreme lifestyle practices, and sensationalized health narratives can contribute to confusion, erosion of trust in healthcare professionals, and adoption of unsafe practices. The rapid spread of misinformation highlights the dual-edged nature of social media in public health. (9)

Assessing the Credibility of Online Health Information

To identify reliable health information on social media, users should consider:
Source credibility, with preference for official health agencies and verified medical professionals
Evidence support, including alignment with established guidelines and scientific references
Transparency of authorship, with clear identification of content creators and their qualifications
Balanced presentation, addressing both benefits and risks rather than one-sided claims

Strengthening digital health literacy is essential to empower users, particularly youth, to critically appraise online health information.

Common Health Topics on Social Media

Health-related discussions on social media commonly focus on:

1. Preventive health and lifestyle practice
2. Chronic disease management, including diabetes and cardiovascular disease
3. Mental health awareness and coping strategies
4. Vaccination and infectious disease prevention
5. Sexual and reproductive health

Potential of Social Media for Health Promotion and Disease Prevention

Despite its challenges, social media holds considerable potential for public health promotion and disease prevention. Its massive reach enables rapid and cost-effective dissemination of health messages, while interactive features encourage user engagement and community participation. When evidence-based content is delivered strategically, social media can improve health knowledge, influence attitudes, and support preventive behaviors.

Illustrative Example: Obesity and Adolescent Health

Emerging evidence highlights the role of social media as a powerful tool for engaging adolescents and young adults on obesity prevention and management. Research presented at the European Congress on Obesity (2024) demonstrated that short educational videos on platforms such as TikTok achieved substantial engagement, particularly content related to obesity treatment, healthy lifestyle practices, and stigma reduction. Interactive formats, including live question-and-answer sessions with healthcare professionals, facilitated direct communication, increased health awareness, and encouraged care-seeking behavior.

However, the same platforms are extensively used to market energy-dense foods, fad diets, and unverified weight-loss products, potentially contributing to unhealthy body image, weight stigma, and increased risk of obesity-related disorders. This example illustrates how social media can simultaneously serve as a tool for health promotion and a source of health risk, reinforcing the need for ethical content creation and regulatory oversight.

Need for Laws and Regulatory Frameworks

While social media provides a scalable and cost-effective platform for health communication, inadequate regulatory oversight allows the unchecked spread of misinformation and commercialized health content. Youth, despite high digital familiarity, remain particularly vulnerable to repeated exposure to misleading health information. The growing influence of unregulated health influencers further underscores this concern. (10)

Several countries have initiated regulatory measures to address these challenges. China enforces stringent verification of medical credentials for individuals sharing health-related content, while Nepal withdrew proposed social media regulations following public protests related to freedom of expression. In India, the Information Technology Rules (2021) (11) primarily focus on content removal rather than proactive verification of health information. These examples highlight the challenge of balancing misinformation control with freedom of speech and public acceptance.

CONCLUSION

The digital revolution offers an unprecedented opportunity to enhance health awareness, promote healthy behaviors, and strengthen disease prevention efforts. However, these benefits can only be realized through informed users, responsible content creation, and robust regulatory mechanisms. A balanced public health approach that integrates technological innovation with ethical oversight and regulation is essential to effectively leverage digital platforms, particularly social media, for population health improvement. Furthermore, beyond the youth population, adults and older generations can also effectively utilize social media for health promotion, disease prevention, and improved health-seeking behavior, provided adequate digital literacy and supportive policies are ensured.

RECOMMENDATION

To effectively harness the benefits of digital technology in public health while minimizing risks, the following measures are recommended:

1. Strengthening digital health literacy and critical appraisal skills, particularly among youth
2. Verification or certification of health content created by qualified healthcare professionals
3. Active and sustained engagement of government health agencies and public health institutions on social media platforms
4. Platform-level monitoring, reporting, and prompt correction or removal of health misinformation
5. Development and enforcement of national guidelines and legal frameworks for digital health communication
6. Ethical disclosure of sponsored health content and advertisements

AUTHORS CONTRIBUTION

All authors have contributed equally.

CONFLICT OF INTEREST

There are no conflicts of interest.

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REFERENCES

1. Encyclopedia Britannica (2024). History of technology. Available from: https://www.britannica.com/technology/history-of-technology [Last accessed on 06/02/26]
2. Wikipedia contributors (2024). History of mobile phones. Wikipedia, The Free Encyclopedia. Available from: https://en.wikipedia.org/wiki/History_of_mobile_phones [Last accessed on 06/02/26]
3. Wikipedia contributors (2024). Mobile phone. Wikipedia, The Free Encyclopedia. Available from: https://en.wikipedia.org/wiki/Mobile_phone [Last accessed on 06/02/26]
4. Wikipedia contributors (2024). History of the Internet. Wikipedia, The Free Encyclopedia. Available from: https://en.wikipedia.org/wiki/History_of_the_Internet [Last accessed on 06/02/26]
5. Ericsson. Latest data and forecasts – Ericsson Mobility Report. Available from: https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/mobile-traffic-update [Last accessed on 06/02/26]
6. GSMA. GSMA Report: Representing the worldwide mobile communications industry. Available from: https://www.gsma.com/ [Last accessed on 06/02/26]
7. Wikipedia contributors (2025). Health Unlocked. Wikipedia, The Free Encyclopedia. Available from: https://en.wikipedia.org/wiki/HealthUnlocked [Last accessed on 06/02/26]
8. China Daily. Online Newspaper (2025). China set to clean up online health content: New rules mandate verification, ban ads and crack down on misinformation. Available from: https://global.chinadaily.com.cn/a/202508/04/WS688ff13aa310c0209d01abff.html [Last accessed on 06/02/26]
9. Afful-Dadzie E, Afful-Dadzie A, Egala SB. Social media in health communication: A literature review of information quality. Health Information Management Journal 2021;52(1):3-17.
10. Ghahramani A, de Courten M, Prokofieva M. The potential of social media in health promotion beyond creating awareness: an integrative review. BMC Public Health 2022;22(1):2402.
11. Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 [Gazette of India, Vide G.S.R 139 (E) Ministry of Electronics and Information Technology] dated 25.2.2021. Available from: https://www.meity.gov.in/static/uploads/2024/02/Information-Technology-Intermediary-Guidelines-and-Digital-Media-Ethics-Code-Rules-2021-updated-06.04.2023-.pdf [Last accessed on 06/02/26]