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Artificial Intelligence Use in the Public Health Campaign Marketing

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ABSTRACT

The purpose of this scoping study is to demonstrate the use of AI-driven tactics in marketing campaigns for public health. To fulfill this purpose, the method we used to read all the relevant papers was that 80 possibly pertinent papers were first found by searching the WOS, Scopus, ResearchGate, Google Scholar, and PubMed databases using the PRISMA approach. Only 9, nevertheless, satisfied the predetermined inclusion requirements. Through this we identified that there are few scoping reviews of AI-driven strategies in PHCs Marketing. Most of the research focused on the integrations of AI use in commercial marketing. However, the application of AI in PHCs has been limited. This study supports the usefulness of the AI application in health care. It helps in generating communication with the public. However, the use of the effectiveness of AI is not seen in terms of equity or ethics. Furthermore, the finding also suggests that the policymaker for the use of AI is safe, secure, and fair, even for the campaign designers, who can use the AI to have a more personal message, engage more people, and make their campaign work more effective.

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INTRODUCTION

Health was defined as "a state of complete physical, mental, and social well-being, not merely the absence of disease and infirmity" in the World Health Organization's Constitution, which went into effect on April 7, 1948 (Sartorius, 2006). The Alliance for Health Promotion, in partnership with WHO, the International Federation of Medical Students (IFMSA), and the International Pharmaceutical Students Federation (IPSF), hosted the 14th Global Forum on Health Promotion; all of them make an innovation in the health and well-being name of the theme as “Digitalisation as a Growing Determinant of Health and Well-being: Getting It Right” (WHO, 2024). The WHO and other international organizations have acknowledged that access to high-quality palliative care is part of the right to health.

One way to describe public health is the mix of knowledge, abilities, and ideologies aimed at maintaining and enhancing everyone's health through social or communal acts (Panteli et al., 2025). The organizations, services, and initiatives in question place a strong emphasis on illness prevention and the general public's health requirements Long et al. (2020). The objectives of public health initiatives stay the same despite shifting attitudes and technological advancements: lowering the prevalence of illness, early mortality, and disability (Giest, 2017).

PHCs now use public media campaigns to discourage unhealthy conduct and encourage healthy behavior as a key weapon in their attempts to enhance public health. Among many other things, these campaigns are meant to increase public awareness of a wide range of health concerns, such as the promotion of immunization, mental health, road safety, avoidance of alcohol, tobacco, and other drug use, and the encouragement of physical exercise or a good diet (Chu et al., 2019). “The practice of empowering individuals to take charge of and enhance their health is known as health promotion” Health Promotion Glossary, 1998 (Patil et al., 2024). Furthermore, reliable information must be provided via health communication, together with facts and messages that swiftly refute the vast majority of false information that consumers encounter nowadays (Krishna & Thompson, 2021).

The dissemination of false information can influence the efficacy of public health initiatives and cause the public to adopt harmful and unsuitable attitudes and behaviors (Matagi, 2024). Anyone may use social media to

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spread misleading information about health concerns, and regrettably, incorrect messages typically go viral more often than accurate ones (León, Martínez-Costa & López-Goñi, 2022). In this regard, PHCs need to work to make sure that their message is visually appealing and backed by medical experts who the public views as trustworthy.

A key field in communication studies is health communication, which aims to prevent the development of harmful attitudes and ideas that endanger public health as well as to generate positive behavioral changes and disseminate information (Korda & Itani, 2013). To ensure the social effect of its messages and enable it to reach all population groups, irrespective of their sociodemographic features, public health communication necessitates the creation of certain techniques (Anwar et al. (2023); Gollust et al., 2019). Social media and digital platforms have also been utilized recently because of their capacity for high and quick dispersion, particularly among the younger generation (Shaheen, 2025). As a result, digital marketing makes it easier to assess the user experience, increase user participation, and make the campaign accessible to people worldwide (Moorhead et al., 2013). Due to their ability to spread quickly and widely, especially among younger people, social media and digital platforms have also been used recently. Consequently, digital marketing facilitates user experience evaluation, boosts user engagement, and makes the campaign available to individuals all over the world (Kraus et al., 2020).

AI has been easily integrated into many facets of health marketing (Wu & Monfort, 2022). According to recent studies, AI is revolutionizing marketing practices by enabling more individualized and effective methods and providing new avenues for marketers to interact with consumers Ranjan J, Bhatnagar D (2020). Digital marketing and AI-powered interactive messaging services, often known as chatbot e-services, have advanced at the quickest rate (Lies, 2019). Chatbots driven by AI are automatic, often customized virtual assistants (Cheng & Jiang, 2021). With the goal of identifying risks of stillbirth, infant mortality, and brain impairment, the UK NHS will deploy the first AI-based early warning system in the world to analyse hospital data in real time (H. Li et al., 2023). These advancements demonstrate the quick and extensive use of AI in healthcare, which promises to improve productivity and expand access to knowledge.

Meanwhile, the emergence of new technologies such as machine learning, artificial intelligence, big data, and augmented reality has significantly changed the way public health communication campaigns are designed (Biswas et al., 2023; (Luo et al., 2016). It includes a wide range of technologies that allow computers to do activities that frequently need human intellect, such as predictive analytics, natural language processing (NLP), and machine learning (Unanah & Mbanugo, 2025). Where campaign development may benefit from these new technologies in a number of ways. On the one hand, they enable a more thorough comprehension of the needs and behavioral patterns of the populace, which helps identify the issues facing various risk groups and, as a result, produces a sufficient population segmentation for the creation of upcoming public health initiatives (Giest, 2017). However, they also aid in the development of more individualized and powerful communication tactics, which raises viewer empathy and may also increase their ability to influence attitudes and actions (Baclic et al., 2020).

According to this theory, the ability of new technologies to analyze vast amounts of data would enable the identification of social network users' behavioral patterns and, as a result, segment the audience based on their propensity to process this kind of message through the central or peripheral routes (H. Li et al., 2023). By providing comprehensive information to those who have been recognized as being highly motivated by the issue, public health content might be tailored in this way (Fenella Chadwick., 2025). Conversely, brief and eye-catching messages that grab attention and make an impression without requiring complex processing are targeted to those who often choose the sideways path when it comes to this kind of material (Miller et al., 2024).

The limitation of the current research focuses on AI in commercial marketing or healthcare services, or in the other sector, but very few examine AI applications in the context of PHCs (Cheng & Jiang, 2021). Mostly academic research on AI’s application in PHCs is highly fragmented, resulting in a lack of comprehensive understanding regarding AI’s potential uses for PHCs (Yousefi et al., 2025). The objectives of this study are to provide details on their potential as instruments to maximize potential difficulties in future development, the current scoping assessment examines the interaction of growing AI, particularly in marketing, with the design and evaluation of PHCs.

METHODOLOGY

This study used a scoping review methodology in order to achieve its goal. This approach entails thorough data gathering, analysis, and a conclusive synthesis study on a particular subject in accordance with a set process.

As a result, the scoping review followed conventional procedures based on expert literature and conformed with PRISMA-SCR quality standards and protocols.

Step 1: Identification of the Research Question

This stage involved defining the study subject and establishing the content-related inclusion and exclusion criteria, which set boundaries for the selection of articles for review. Accordingly, the goal of the current scoping assessment is to comprehend how AI is used in PHCs marketing (Botha et al., 2024). As a result, a study was conducted on a number of topics pertaining to the subject under analysis, Kreps and Neuhauser (2013) including the use of these technical systems in the various stages of the procedure from planning and audience segmentation to message design, dissemination, monitoring, and evaluation using these technologies in political campaigns, commercial marketing efforts, or any other kind of communication campaign that has a direct connection to public health promotion, awareness building, and behaviour change aimed at improving community well-being (Snyder, 2007). On the other hand, studies unrelated to this concept were excluded, such as those focusing solely on clinical interventions, medical diagnostics, or technological applications without any connection to PHCs or marketing strategies (M. Liu et al., 2025).

Step 2: Search for Relevant Previous Studies (Sources of Information)

A scoping review, which is crucial in research and often comes before a thorough systematic review, was carried out in the first case. This mapping of the literature makes it easier to identify the potential and extent of the study aims by enabling a grasp of the diversity and range of information on the issue discussed. Additionally, this method aids in determining the best key phrases to employ in the scoping review's future search tactics. The literature search was conducted using the PubMed, Scopus, Google Scholar, ResearchGate, and Web of Science databases, which were chosen because the scientific community unanimously supports them as trustworthy measures of quality. Specifically, this platform provides access to health and clinical research and health communication. Furthermore, the reference lists of scientific publications that could have been relevant but were overlooked by the search methods were examined.

Step 3: Selection Criteria

Articles that had no direct connection to the subject of the inquiry were disqualified during this stage of the review procedure. The writers of this paper separately conducted the data extraction, review, and selection in order to reduce selection bias. The Boolean operators used in the search were (“public health campaign”) AND (“(artificial intelligence OR artificial intelligence OR big data OR emerging technologies OR emerging technologies"), (“Social Media”), AND (“marketing”). In others, other keywords related to the potential campaign topic were used, such as “other” if you search “chatbot,” “communication,” or “strategies,” among others.

Step 4. Synthesis and Reporting of Results

Table 1, which gathers and organizes the information supplied, including the variables authors, year, country, aims, techniques, and primary findings, presented the papers that made the short list.

RESULT

Study Selection

Figure 1. Show the PRISMA flow diagram, which summarizes the study selection process, including the number of records identified, screened, and excluded and the final studies included in the review. After the first three phases of the search procedure were finished, 80 articles that may be used for the study were retrieved after the potentially duplicate articles were filtered and removed. This search of papers is done from the WOS, Scopus, Google Scholar, and ResearchGate. A total of 30 studies were eliminated throughout this procedure due to their failure to fully satisfy the predetermined inclusion criteria. Consequently, as Figure 1 graphically depicts, 9 unique and noteworthy publications were incorporated into the study.

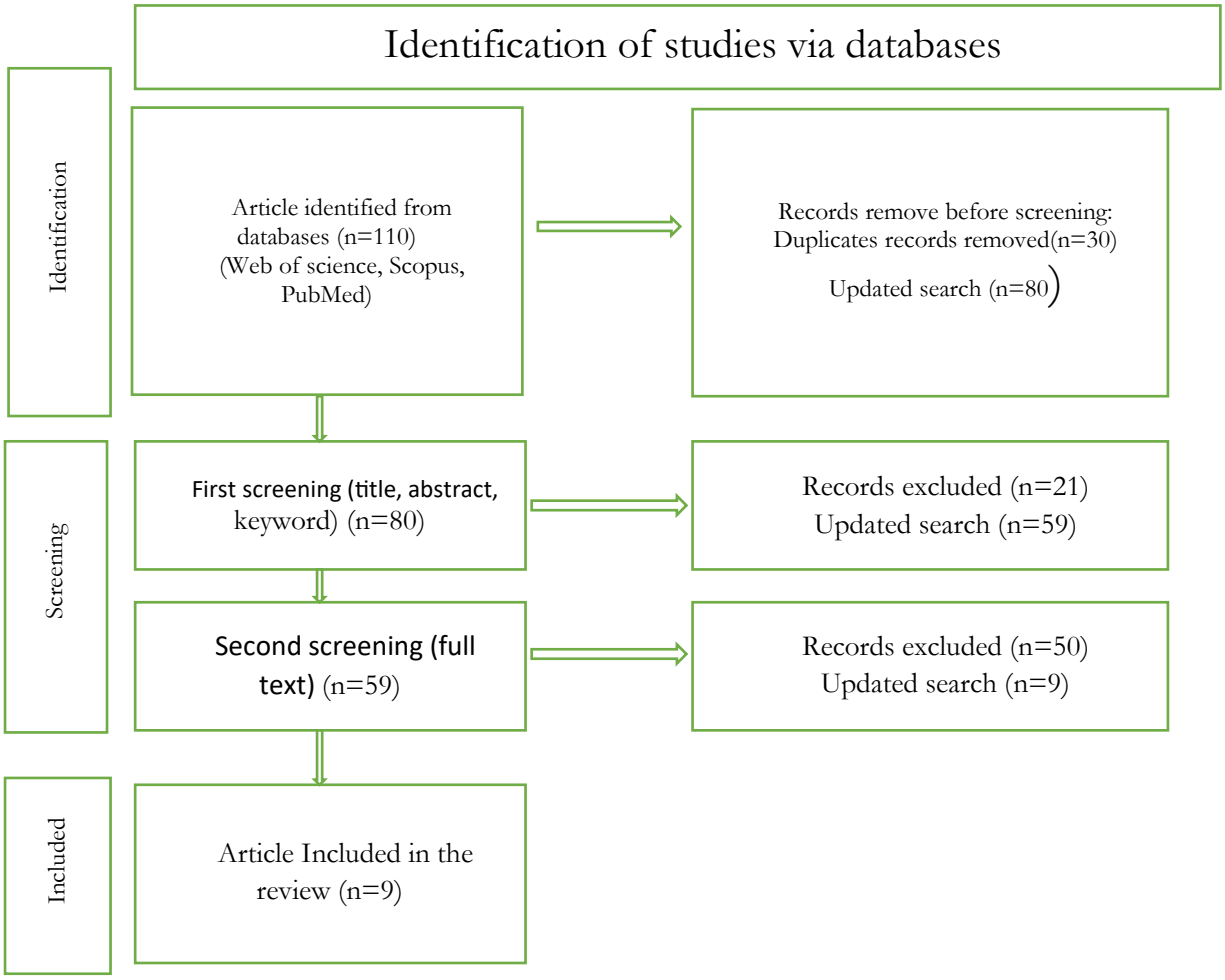


Figure 1. PRISMA Diagram

Inclusion and Exclusion Criteria

Selected publications were subjected to the following inclusion criteria: included research had to have used AI in the design, creation, or distribution of communications; utilized these AI techniques to enable public health campaigns; and offered empirical proof of AI's impact on health behaviors and results. For consideration, articles have to be written in English. Studies that did not specifically apply AI in health campaigns and concentrated only on other decision support systems were excluded.

Risk of Bias/Quality Assessment Statement

Due to the diversity of study designs included in the review, no formal risk of bias or quality assessment was conducted, keeping in mind that this study did not use any exclusion criteria related to the publication date.

Content-Based Analysis

Regarding the method used in this paper, there are scoping/systematic reviews (5), experimental (2), data analysis (1), and commentary (1). Every paper offers theoretical conceptualizations and/or empirical findings regarding the application of new technology in public health initiatives. Nevertheless, there are various variations based on the campaign's intended use of this technology. The main features of the chosen research papers are displayed in Table 1, which offers a summary of the findings.

The years of the paper are from 2019 to 2025. Its insight that AI use in public health is applicable, yet its implication is not theoretical integration; ethics and equity remain underexplored.

Table 1. Summary of Characteristics of Studies AI tools in health communication, ethics/equity, behavioral impact, and campaign optimization of PHCs.

Authors, Year, Country	Objectives & Methods	Main Finding
Han Li; Renwen Zhang; Yi-Chieh Lee; Robert E. Kraut; David C. Mohr, 2023, Multi-country	To assess how well AI-based conversational agents improve mental health outcomes and to pinpoint the variables that affect both their efficacy and user enjoyment. Systematic review and meta-analysis of experimental studies published before May 26, 2023. Twelve databases were searched, resulting in 35 eligible studies, including 15 randomized controlled trials for meta-analysis.	AI-based conversational agents significantly reduced symptoms of depression and distress but showed limited improvement in overall well-being. Greater effectiveness was observed in multimodal, generative AI systems delivered via mobile platforms. User engagement and therapeutic interaction quality strongly influenced outcomes.
David B. Olawade, Ojima J. Wada, Aanuoluwapo C. David-Olawade, Edward Kunonga, Olawale Abaire & Jonathan Ling, 2023, UK	To review recent trends in AI applications for public health, highlighting both potential benefits and challenges. PRISMA- guided scoping review of studies from databases like PubMed, Scopus and Web of Science.	- AI enhances disease forecasting, surveillance, and risk prediction. - Predictive modeling and machine learning improve outbreak detection and resource allocation. - Ethical and regulatory concerns include data privacy, algorithmic bias, and transparency. - Global disparities exist in AI adoption due to infrastructure and data governance challenges.
Sam Weingott & Joy Parkinson, 2024, Australian	To investigate how AI may be used with social, behavioral, and communication theories to improve health behavior interventions. Scoping Review following PRISMA guidelines; systematic search of articles published through February 2024; 28 studies identified from 13,723 screened	AI-powered products, such as chatbots and applications, are used to health problems like diabetes, chronic illnesses, musculoskeletal injuries, quitting smoking, and mental health. - There is a disconnect between theoretical frameworks and technological breakthroughs. - This gap is intended to be filled by the AI Impact Communications Model (AI-ICM), which provides a road map for further study and application.
A. A. Olagoke; C. T. Adebayo; J. A. Aderonmu; E. A. Adeaga; K. J. Johns, 2025, US	To evaluate the effectiveness of an AI-generated health communication material on bird flu precautions. Survey-based evaluation among 100 U.S. adults; material developed using ChatGPT for text generation and Leonardo.AI for illustrations.	- High perceived effectiveness (77%) and quality (77%) of the AI-generated material. - Significant predictors of perceived effectiveness: message quality, realism, relevance, attractiveness, and visual informativeness. - 23.8% of the correlation between perceived efficacy and material attractiveness was explained by visual informativeness.
Neil K.R. Sehgal; Sunny Rai; Manuel Tonneau; Anish K. Agarwal; Joseph Cappella; Melanie Kornides; Lyle	To evaluate the effectiveness of brief conversations with AI chatbots in increasing HPV vaccine intentions	- When compared to no message, chatbot interactions considerably raised self-reported vaccination intent

Ungar; Alison Buttenheim; Sharath Chandra Guntuku, 2025, US, Canada, UK	among vaccine-hesitant parents, compared to standard public health messaging Pre-registered, multi-country randomized controlled trial involving 930 vaccine-hesitant parents. Participants were assigned to one of four conditions: (1) no message (weak control), (2) public health reading material (strong control), (3) conversational chatbot, or (4) default chatbot.	by 7.1–10.3 points on a 100-point scale. - The conversational chatbot performed significantly worse than the public health reading material. - During a 15-day follow-up, the impacts of public health content remained, whereas the short-term effects of chatbot interactions diminished.
Chu K-H, Colditz J, Malik M, Yates T, Primack B, 2019, US	To identify key target audiences for PHCs addressing hookah tobacco smoking using machine learning techniques. Using machine learning techniques, Twitter data is analyzed to find trends and patterns associated with hookah tobacco use.	- Identification of specific demographic groups engaging in discussions about hookah tobacco smoking. - Insights into the language and topics associated with hookah tobacco smoking on social media platforms.
Samantha Ghanem, Marielle Moraleja, Danielle Gravesande, Jennifer Rooney, 2025, Canada	To synthesize health equity considerations related to AI application in public health across Canada, identifying challenges and opportunities. Rapid narrative review of 54 peer reviewed articles and grey literature with data extraction and thematic synthesis.	Major health equity challenges include gaps in AI epistemology, algorithmic bias, accessibility issues, unrepresentative datasets, privacy concerns, limited transparency, and skill shortages. Equity-focused approaches, human oversight, diverse AI frameworks, advanced modeling, intersectoral collaboration, and standardized ethics/privacy guidelines are recommended.
Mark R Miller, Connie Moon Sehat, Robert Jennings, 2024, USA	To discuss the opportunities and risks of leveraging artificial intelligence (AI) in public health communication and provide practical steps for responsible AI use. Commentary based on practical experience and emerging research, highlighting AI applications, ethical concerns, and governance in public health communication.	AI can enhance targeted messaging, real-time monitoring, automation, accessibility, and engagement in public health communication. Risks include privacy concerns, bias, misinformation, and technical challenges. Human oversight and ethical governance are critical.
Mireia Faus, Francisco Alonso, Cesareo Fernandez, Cristina Esteban, 2025, Spain	To analyze the scientific literature on the application of emerging technologies like AI and Big Data in optimizing public health communication strategies. Systematic review following PRISMA guidelines; 129 articles identified from WOS, Scopus and PubMed: 18 articles met inclusion criteria	- Limited scientific articles on the application of emerging technologies in public health campaigns. - Most research focused on audience segmentation and impact assessment; fewer studies on campaign design. - Emerging technologies are useful at any stage of campaign implementation.

Thematic Findings

Thematically, the studies focus on four areas. The first is AI-driven strategies, for example, chatbots, generative AI, and personalized health messaging in health communication and campaigns. Second, ethics, equity, and governance issues, for example, privacy, bias, and accessibility. Third, behavioral impact and campaign effectiveness, improving health-related behaviors and engagement. The last is evaluation of PHCs focusing on overall.

Summary of Evidence

Overall, the studies suggest that using the AI in PHCs can target the audience, personalize messages, and measure results effectively. Yet, behind it there are some problems from using it as the ethic, privacy, and trust. So, this issue should be addressed successfully if the AI is used fairly and works well for everyone.

DISCUSSION

This study discovered that the usage of AI in PHCs Such as chatbots, automated messaging is becoming more and more integrated into their operations, especially when it comes to managing patient data, personalizing messages, and raising awareness of health issues. Overall, the results show that applying AI in PHCs has both potential and drawbacks.

Few scientific studies assess the use of emerging technologies in public health campaigns, despite the fact that numerous studies have recently been developed that examine the use of social networks for health promotion, particularly for the dissemination of communication campaigns and messages on various issues covered in this field. According to the earlier report, the application of AI is expanding more quickly outside of the PHC industry. They use it in targeting the right audience, customizing messages, and studying behavior. Overall, its use in PHCs has started, yet its ethics and fairness are ignored, it is not long-lasting, and it is not fully integrated with PHC strategies and theories.

AI-Driven strategies role in PHCs.

The findings confirm that AI is increasing in health care, from the campaign design and audience segmentation to content personalization and behavioral analysis. Even the AI is used in campaigns from planning to analyzing. Tools like the chatbots and personalized messages help to generate more effective public health communication.

Ethical and Equity Considerations

The main or common concern using the AI is the trust, ethics, or privacy. Floridi et al. (2018) as previous studies show, AI systems make inequalities worse, for example, bias in data and transparency. To avoid this, AI should be designed with ethics and inclusion in mind.

Behavioural Impact and Audience Engagement

Like chatbots or AI-generated campaign materials, they can become more interested and willing to take healthy actions. Yet they make engagements for a short time, and the messages are the same for everyone. So, this is the limitation of the AI-generated content.

Implication for Practice or Policy

The finding of this review suggests several implications of AI for PHCs marketing in practical terms: (1) Using this to enhance more efficient and tailored community needs using AI tools. (2) Policymakers should establish guidelines and governance to prevent bias in AI-driven communication. (3) AI should evaluate the long-term impact of AI-assisted campaigns, as currently it is using short-term monitoring and feedback. (4) Policymakers should bridge the gap between AI tools and the practice they are using now to enhance the overall effectiveness of PHCs.

Limitations

Every scoping review has some constraints that need to be considered. Publication bias may thus be at play, whereby studies with favourable outcomes are more likely to be published while those with unfavourable outcomes would not be as noticeable. This could skew perceptions of the evidence as a whole. Additionally, excluding research conducted in languages other than English may result in linguistic bias, which might lead to the exclusion of pertinent data from other languages (Grzybowski & Kanclerz, 2019). The paper consists of a small number of studies (n=9). Furthermore, these studies were different from each other; I could not use a single method to check the quality or bias of all of them, nor could I compare them directly.

Future Research

In order to gather data on the long-term efficacy of these efforts, it is also advised that longitudinal studies be conducted utilizing Big Data. This kind of study would support the identification of possible new demands in the way communications are sent, since the social environment and context are changing. Similarly, future studies should take into account multidisciplinary methods, including experts from other fields, such as public health, technology, and communication through marketing.

CONCLUSION

This systematic review shows that AI represents the planning, implementation, and evaluation of PHCs. AI tools enhance message personalization, feedback, behavioral targeting, public engagement, and campaign efficiency. However, the effectiveness of AI is under-realized due to the limited theoretical integration, geographical adoption, ethics, and equity. So, to make it effective, it is important to develop the ethical and inclusive design principle, evaluation framework, and bridge the gap between technological and social impact.

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Conflict of Interest

The authors declare no conflict of interest.

Data Availability

The author declared that the availability of data is available publicly.

REFERENCES

Agrawal, A., Gans, J., & Goldfarb, A. (2018). Economic policy for artificial intelligence. Innovation Policy and the Economy, 19, 139–159. https://doi.org/10.1086/699935

Aggarwal, A., Tam, C. C., Wu, D., Li, X., & Qiao, S. (2023). Artificial Intelligence–Based Chatbots for Promoting Health Behavioral Changes: Systematic review. Journal of Medical Internet Research, 25, e40789. https://doi.org/10.2196/40789

Anwar, A., Malik, M., Raees, V., Anwar, M., & Anwar, A. (2023). Role of mass media and public health communications in COVID-19 vaccination. Medical Research Archives, 11(2). https://doi.org/10.18103/mra.v11i2.3544

Baclic, O., Tunis, M., Young, K., Doan, C., Swerdfeger, H., & Schonfeld, J. (2020). Artificial intelligence in public health: Challenges and opportunities for public health made possible by advances in natural language processing. Canada Communicable Disease Report, 46(6), 161.

Basu, S., Bermudez-Canete, P., Hall, T. C., & Rajpurkar, P. (2025). Optimizing AI solutions for population health in primary care. npj Digital Medicine, 8(1), 434.

Bhatt, A. B., & Bae, J. (2023). Collaborative Intelligence to catalyze the digital transformation of healthcare. Npj Digital Medicine, 6(1), 177. https://doi.org/10.1038/s41746-023-00920-w

Biswas, S. S. (2023). Role of Chat GPT in Public Health. Annals of Biomedical Engineering, 51(5), 868–869. https://doi.org/10.1007/s10439-023-03172-7

Bray, N. N., Wheeler, D., & Zumwalt, J. (2025). AI-Enhanced rural Medical Education: bridging gaps and building trust. Academic Medicine, 100(9S), S39–S42. https://doi.org/10.1097/acm.0000000000006105

Botha, N. N., Segbedzi, C. E., Dumahasi, V. K., Maneen, S., Kodom, R. V., Tsedze, I. S., Akoto, L. A., Atsu, F. S., Lasim, O. U., & Ansah, E. W. (2024). Artificial intelligence in healthcare: a scoping review of perceived threats to patient rights and safety. Archives of Public Health, 82(1), 188. https://doi.org/10.1186/s13690-024-01414-1

Campbell, C., Sands, S., Ferraro, C., Tsao, H. Y. J., & Mavrommatis, A. (2020). From data to action: How marketers can leverage AI. Business horizons, 63(2), 227-243.

Chadaga, K., & Sampathila, N. (2025). Behavioural intentions to adopt artificial intelligence in healthcare: Exploring the perception of healthcare professionals. Journal of Technology in Behavioral Science, 1-11.

Cheng, Y., & Jiang, H. (2021). Customer–brand relationship in the era of artificial intelligence: understanding the role of chatbot marketing efforts. Journal of Product & Brand Management, 31(2), 252–264. https://doi.org/10.1108/jpbm-05-2020-2907

Chu, K. H., Colditz, J., Malik, M., Yates, T., & Primack, B. (2019). Identifying key target audiences for public health campaigns: Leveraging machine learning in the case of hookah tobacco smoking. Journal of Medical Internet Research, 21(7), e12443. https://doi.org/10.2196/12443

D'Elia, A., Gabbay, M., Rodgers, S., Kierans, C., Jones, E., Durrani, I., Thomas, A., & Frith, L. (2022). Artificial intelligence and health inequities in primary care: a systematic scoping review and framework. Family Medicine and Community Health, 10(Suppl 1), e001670. https://doi.org/10.1136/fmch-2022-001670

Dasgupta, A., Gharat, S., Madhiwalla, N., Hegde, A., Tambe, M., & Taneja, A. (2025). Beyond Listenership: AI-Predicted Interventions Drive Improvements in Maternal Health Behaviours. arXiv preprint arXiv:2507.20755.

Dankwa-Mullan, I. (2024). Health equity and ethical considerations in using artificial intelligence in public health and medicine. Preventing chronic disease, 21, E64. https://doi.org/10.5888/pcd21.240245

Faus, M., Alonso, F., Fernández, C. & Esteban, C. (2025). Use of big data, artificial intelligence and other emerging technologies in public health communication campaigns: A systematic review. Review of Communication Research, 13, 31–48. https://doi.org/10.52152/RCR.V13.3

Fenella Chadwick. (2025) Healthy Futures: The Transformative Power of AI in Public Health. KOS J Pub Health Int Med.

Fisher, S., & Rosella, L. C. (2022). Priorities for successful use of artificial intelligence by public health organizations: a literature review. BMC Public Health, 22(1). https://doi.org/10.1186/s12889-022-14422-z

Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., ... & Vayena, E. (2018). AI4People—An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. Minds and machines, 28(4), 689-707. https://doi.org/10.1007/s11023-018-9482-5

Ghanem, S., Moraleja, M., Gravesande, D., & Rooney, J. (2025). Integrating health equity in artificial intelligence for public health in Canada: a rapid narrative review. Frontiers in Public Health, 13, 1524616. https://doi.org/10.3389/fpubh.2025.1524616

Giest, S. (2017). Big data for policymaking: fad or fasttrack?. Policy Sciences, 50(3), 367-382. https://doi.org/10.1007/s11077-017-9293-1

Grzybowski, A., & Kanclerz, P. (2019). Language bias and methodological issues in determining reliable evidence for systematic reviews. JAMA Ophthalmology, 137(1), 118-119.

Hassan, M., Kushniruk, A., & Borycki, E. (2024). Barriers to and Facilitators of Artificial intelligence adoption in Health Care: Scoping review. JMIR Human Factors, 11, e48633. https://doi.org/10.2196/48633

Kraus, S., Schiavone, F., Pluzhnikova, A., & Invernizzi, A. C. (2021). Digital transformation in healthcare: Analyzing the current state-of-research. Journal of Business Research, 123, 557-567.

Kreps, G. L., & Neuhauser, L. (2013). Artificial intelligence and immediacy: Designing health communication to personally engage consumers and providers. Patient Education and Counseling, 92(2), 205–210. https://doi.org/10.1016/j.pec.2013.04.014

Krishna, A., & Thompson, T. L. (2021). Misinformation about health: A review of health communication and misinformation scholarship. American behavioral scientist, 65(2), 316-332.

Korda, H., & Itani, Z. (2013). Harnessing social media for health promotion and behavior change. Health Promotion Practice, 14(1), 15-23.

León, B., Martínez-Costa, M. P., Salaverría, R., & López-Goñi, I. (2022). Health and science-related disinformation on COVID-19: A content analysis of hoaxes identified by fact-checkers in Spain. PloS One, 17(4), e0265995.

Lies, J. (2019). Marketing Intelligence and Big Data: Digital Marketing Techniques on their Way to Becoming Social Engineering Techniques in Marketing. International Journal of Interactive Multimedia and Artificial Intelligence, 5(5), 134. https://doi.org/10.9781/ijimai.2019.05.002

Li, H., Zhang, R., Lee, Y. C., Kraut, R. E., & Mohr, D. C. (2023). Systematic review and meta-analysis of AI-based conversational agents for promoting mental health and well-being. NPJ Digital Medicine, 6(1), 236. https://doi.org/10.1038/s41746-023-00979-5

Liu, M., Ning, Y., Teixayavong, S., Liu, X., Mertens, M., Shang, Y., Li, X., Miao, D., Liao, J., Xu, J., Ting, D. S. W., Cheng, L. T., Ong, J. C. L., Teo, Z. L., Tan, T. F., RaviChandran, N., Wang, F., Celi, L. A., Ong, M. E. H., & Liu, N. (2025). A scoping review and evidence gap analysis of clinical AI fairness. Npj Digital Medicine, 8(1), 360. https://doi.org/10.1038/s41746-025-01667-2

Luo, J., Wu, M., Gopukumar, D., & Zhao, Y. (2016). Big data application in biomedical research and health care: A literature review. Biomedical Informatics Insights, 8, BII-S31559. https://doi.org/10.4137/bii.s31559

Long, H. A., French, D. P., & Brooks, J. M. (2020). Optimising the value of the critical appraisal skills programme (CASP) tool for quality appraisal in qualitative evidence synthesis. Research Methods in Medicine & Health Sciences, 1(1), 31–42. https://doi.org/10.1177/2632084320947559

Mahl, D., Schäfer, M. S., Voinea, S. A., Adib, K., Duncan, B., Salvi, C., & Novillo-Ortiz, D. (2025). Responsible artificial intelligence in public health: a Delphi study on risk communication, community engagement and infodemic management. BMJ Global Health, 10(5), e018545. https://doi.org/10.1136/bmjgh-2024-018545

Menz, B. D., Modi, N. D., Abuhelwa, A. Y., Ruanglertboon, W., Vitry, A., Gao, Y., Li, L. X., Chhetri, R., Chu, B., Bacchi, S., Kichenadasse, G., Shahnam, A., Rowland, A., Sorich, M. J., & Hopkins, A. M. (2025). Generative AI Chatbots for Reliable Cancer Information: Evaluating web-search, multilingual, and reference capabilities of emerging large language models. European Journal of Cancer, 218, 115274. https://doi.org/10.1016/j.ejca.2025.115274

Miller, M. R., Sehat, C. M., & Jennings, R. (2024). Leveraging AI for public health communication: opportunities and risks. Journal of Public Health Management and Practice, 30(4), 616-618.

Moinuddin, M., Usman, M., & Khan, R. (2024). Decoding consumer behavior: the role of marketing analytics in driving campaign success. International Journal of Advanced Engineering Technologies and Innovations, 1(4), 118-141.

Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of Health care: Systematic review of the uses, benefits, and limitations of social media for health communication. Journal of Medical Internet Research, 15(4), e85. https://doi.org/10.2196/jmir.1933

Nong, P., & Platt, J. (2025). Patients' trust in health systems to use artificial intelligence. JAMA Network Open, 8(2), e2460628-e2460628. https://doi.org/10.1001/jamanetworkopen.2024.60628

Nong, P., Adler-Milstein, J., Apathy, N. C., Holmgren, A. J., & Everson, J. (2025b). Current use and evaluation of artificial intelligence and predictive models in US hospitals. Health Affairs, 44(1), 90–98. https://doi.org/10.1377/hlthaff.2024.00842

Olagoke, A. A., Adebayo, C. T., Aderonmu, J. A., Adeaga, E. A., & Johnson, K. J. (2025). Evaluation of an Artificial Intelligence-Generated Health Communication Material on Bird Flu Precautions. Zoonotic Diseases, 5(3), 2

Olawade, D. B., Wada, O. J., David-Olawade, A. C., Kunonga, E., Abaire, O., & Ling, J. (2023). Using artificial intelligence to improve public health: a narrative review. Frontiers in Public Health, 11, https://doi.org/10.3389/fpubh.2023.1196397

Panteli, D., Adib, K., Buttigieg, S., Goiana-Da-Silva, F., Ladewig, K., Azzopardi-Muscat, N., Figueras, J., Novillo-Ortiz, D., & McKee, M. (2025). Artificial intelligence in public health: promises, challenges, and an agenda for policy makers and public health institutions. The Lancet Public Health, 10(5), e428–e432. https://doi.org/10.1016/s2468-2667(25)00036-2

Patil, S. R., Gopalakrishnan, L., Sai, V. S., Matikanya, R., & Rajpal, P. (2024). Markets, incentives, and health promotion can improve family planning and maternal health practices: a quasi-experimental evaluation of a tech-enabled social franchising and social marketing platform in India. BMC Public Health, 24(1), 264.

Pinto, R., Silva, L., Valentim, R., Kumar, V., Gusmão, C., Oliveira, C. A., & Lacerda, J. (2022). Systematic Review on Information Technology Approaches to evaluate the impact of public health campaigns: real cases and possible directions. Frontiers in Public Health, 9, 715403. https://doi.org/10.3389/fpubh.2021.715403

Quazi, F. (2024). Ethics & Responsible AI in Healthcare. International Journal of Global Innovations and Solutions (IJGIS). https://doi.org/10.21428/e90189c8.a16c4bb9

Sartorius, N. (2006). The meanings of health and its promotion. PubMed, 47(4), 662–664. https://pubmed.ncbi.nlm.nih.gov/16909464

Shaheen, H. (2025). Social media marketing research: a bibliometric analysis from Scopus. Future Business Journal, 11(1). https://doi.org/10.1186/s43093-025-00465-2

Sehgal, N. K. R., Rai, S., Tonneau, M., Agarwal, A. K., Cappella, J., Kornides, M., Ungar, L., Buttenheim, A., & Guntuku, S. C. (2025). Conversations with AI Chatbots Increase Short-Term Vaccine Intentions But Do Not Outperform Standard Public Health Messaging. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2504.20519

Snyder, L. B. (2007). Health communication campaigns and their impact on behavior. Journal of nutrition education and behavior, 39(2), S32-S40. https://doi.org/10.1016/j.jneb.2006.09.004

Unanah, N. O. V., & Mbanugo, N. O. J. (2025). Integration of AI into CRM for Effective U.S. healthcare and pharmaceutical marketing. World Journal of Advanced Research and Reviews, 25(2), 609–630. https://doi.org/10.30574/wjarr.2025.25.2.0396

Valaboju, P. K. (2024). Transformative Impact of AI and Cloud Technologies: A Comparative Analysis across Healthcare, Retail, and Mobile Financial Services. International Journal for Multidisciplinary Research, 6(6). https://doi.org/10.36948/ijfmr.2024.v06i06.29894

Weingott, S., & Parkinson, J. (2024). The application of artificial intelligence in health communication development: A scoping review. Health Marketing Quarterly, 1–43. https://doi.org/10.1080/07359683.2024.2422206

Wu, C., & Monfort, A. (2022). Role of artificial intelligence in marketing strategies and performance. Psychology and Marketing, 40(3), 484–496. https://doi.org/10.1002/mar.21737

World Health Organization. (2024). 14th Global Forum on Health Promotion.

Yousefi, F., Dehnavieh, R., Laberge, M., Gagnon, M., Ghaemi, M. M., Nadali, M., & Azizi, N. (2025). Opportunities, challenges, and requirements for Artificial Intelligence (AI) implementation in Primary Health Care (PHC): a systematic review. BMC Primary Care, 26(1), 196. https://doi.org/10.1186/s12875-025-02785-2