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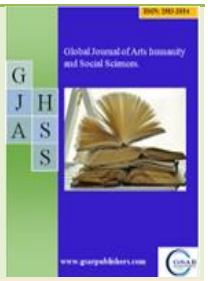

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ARTIFICIAL INTELLIGENCE AND PHARMACEUTICAL ADVERTISING IN TANZANIA: AN EXAMINATION OF THE READINESS OF THE REGULATORY FRAMEWORK

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Abstract

The increasing use of artificial intelligence in digital advertising has introduced new regulatory challenges in the pharmaceutical sector. Artificial intelligence can generate and modify written advertisements, images, videos, voices and personalized promotional messages with considerable speed and scale. These capabilities create legal questions concerning the authenticity of promotional information, responsibility for advertising content, regulatory approval, consumer protection and the monitoring of advertisements after approval. This article examines the readiness of the Tanzanian legal framework to regulate artificial intelligence-driven pharmaceutical advertising. The article adopts a doctrinal legal research approach based on legislation, subsidiary legislation, regulatory materials, international standards and relevant scholarly literature. Particular attention is given to the Tanzania Medicines and Medical Devices Act, the Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, the Personal Data Protection Act and the Electronic and Postal Communications framework. The article establishes that Tanzania has a substantial legal foundation for regulating pharmaceutical advertising. The framework prohibits false and misleading pharmaceutical advertisements and requires promotional activities to obtain regulatory approval. In addition, Tanzania has expressly recognized artificial intelligence-generated content within the online-content regulatory framework. However, the existing framework does not yet provide sufficiently detailed rules addressing AI-generated and AI-modified pharmaceutical advertisements, synthetic professional representations, disclosure of AI involvement, automated targeting and continuous monitoring of modified advertisements. The article argues that the principal regulatory concern is therefore not the complete absence of law, but limited technological specificity and coordination between existing regulatory regimes. It recommends clearer rules on AI-generated pharmaceutical advertising, responsibility and traceability of promotional content, stronger post-approval monitoring, regulatory cooperation and development of specialized technical capacity within the relevant institutions.

Keywords: Artificial intelligence, pharmaceutical advertising, pharmaceutical regulation, consumer protection, Tanzania

INTRODUCTION

Artificial intelligence (AI) has become increasingly integrated into digital communication and advertising. Contemporary AI systems can generate written promotional material, create realistic images and videos, reproduce or synthesize voices, personalize advertising messages and assist advertisers in selecting particular audiences. These developments have transformed advertising from a relatively static communication activity into an increasingly automated and adaptive process. In the pharmaceutical sector, however, the implications of such developments are particularly significant

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because promotional information may influence decisions concerning medicines and other products affecting human health.

The use of AI in pharmaceutical advertising creates regulatory difficulties that differ from those associated with conventional advertising. An advertisement submitted to a regulator may be generated or modified after the original content has been approved. A single campaign may also produce numerous variations of text, images or videos depending on the intended audience or digital platform. AI may further generate synthetic representations of doctors, pharmacists, patients or other persons, thereby creating the appearance of professional endorsement or personal experience where none exists. These developments raise questions concerning whether existing approval mechanisms can effectively regulate content that is capable of changing after submission and approval.

The international regulatory environment increasingly recognizes that AI systems should operate within principles of transparency, accountability, safety and human oversight. The World Health Organization's ethical framework for AI in health emphasizes human autonomy, safety, transparency, accountability, inclusiveness and sustainability.[1] These principles are particularly relevant where AI is used to communicate information about pharmaceutical products because misleading or manipulated promotional content may produce consequences beyond ordinary commercial deception.

Tanzania already possesses a legal framework regulating pharmaceutical advertising. The Tanzania Medicines and Medical Devices Act, Cap. 219 R.E. 2023 provides the principal statutory foundation. Section 95 empowers the Minister responsible for health, on the advice of the Director General, to make regulations governing promotional activities relating to drugs, medical devices and herbal drugs.[2] Sections 96–98 establish substantive restrictions on pharmaceutical advertising, define advertisement broadly and require written approval for promotional activities.[3] The Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025 further provide detailed requirements concerning promotional materials, approval, variations and advertising to different categories of persons.[4]

The regulatory landscape has also developed beyond pharmaceutical legislation. In 2025, Tanzania amended the Electronic and Postal Communications (Online Content) Regulations, 2020 to expressly include unethical, fabricated and AI-generated content, including video clips, audio and still pictures, within prohibited online content.[5] The 2026 amendment further modified the online-content framework and came into operation on 1 July 2026.[6] These developments demonstrate that Tanzanian regulation is beginning to respond expressly to AI-generated digital content.

This article therefore does not proceed from the assumption that Tanzania lacks laws regulating AI. Rather, it examines whether the existing legal framework is sufficiently technologically responsive to pharmaceutical advertising generated or modified through AI. The central argument is that Tanzania possesses a substantial regulatory foundation, but the framework requires greater specificity concerning AI-generated advertising, responsibility for AI-modified content, disclosure, traceability, automated targeting and continuous monitoring.

METHODOLOGY

This study adopts a doctrinal methodology. The primary materials include the Constitution of the United Republic of Tanzania, statutes governing pharmaceutical advertising, personal data protection and electronic communications, relevant regulations, and regulatory materials issued by competent authorities in Tanzania. Particular attention is given to the Tanzania Medicines and Medical Devices Act, the Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, the Personal Data Protection Act, and the Electronic and Postal Communications (Online Content) Regulations. These materials were selected based on their relevance to the regulation of pharmaceutical advertising and the emerging use of artificial intelligence in generating, modifying and distributing promotional content. Secondary sources, including scholarly literature on artificial intelligence, pharmaceutical advertising, digital advertising, deepfake technology and AI regulation in healthcare, were also reviewed based on the principle of relevance. The study confines its analysis to the legal and regulatory framework applicable to artificial intelligence-driven pharmaceutical advertising in Tanzania.

THE CONCEPT OF ARTIFICIAL INTELLIGENCE-DRIVEN PHARMACEUTICAL ADVERTISING

Artificial intelligence-driven pharmaceutical advertising may be understood as the use of AI systems to create, modify, distribute, personalize or optimize promotional communications relating to pharmaceutical products. The technology may be used to generate advertising text, produce images, construct videos, synthesize voices, identify target audiences and adjust advertising messages according to consumer interaction.

[1] World Health Organization. (2021). *Ethics and governance of artificial intelligence for health: WHO guidance*. World Health Organization.

[2] Cap. 219 R.E. 2023, section 95.

[3] Cap. 219 R.E. 2023, sections 96–98.

[4] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulations 5–9.

[5] Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2025, Government Notice No. 57, Regulation 9.

[6] Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2026, Government Notice No. 158, Regulation 1.

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The regulatory significance of AI lies not merely in its ability to produce digital content but in the speed, scale and adaptability with which content can be generated. Traditional advertising normally involves identifiable material prepared by an advertiser and submitted for publication. AI-driven advertising can instead involve automated production of multiple versions of substantially similar promotional content. Consequently, a regulatory authority may approve one version while consumers are subsequently exposed to numerous AI-generated variations.

The problem is particularly important in pharmaceutical advertising because promotional claims must remain consistent with established evidence concerning the quality, safety and efficacy of the product. AI systems may generate persuasive language that appears authoritative but is not necessarily supported by the approved product information. The risk is increased where AI-generated content imitates professional expertise or creates apparently authentic endorsements.

Campbell et al. argue that deepfakes and AI technologies may substantially reshape advertising by changing the relationship between advertisers, advertising content and consumers.[7] Their analysis is relevant to pharmaceutical advertising because synthetic media may make promotional representations appear more authentic than conventional advertising. Whittaker et al. similarly demonstrate the importance of disclosure in shaping consumer appraisal of deepfake advertising.[8]

Accordingly, AI-driven pharmaceutical advertising should not be viewed merely as another form of digital advertising. Its distinctive characteristics require regulators to consider not only the content of an advertisement but also how the content was generated, whether it was subsequently modified, who authorized the modification and whether the consumer can identify its synthetic or AI-generated character.

THE LEGAL FRAMEWORK GOVERNING PHARMACEUTICAL ADVERTISING IN TANZANIA

The Tanzania Medicines and Medical Devices Act, Cap. 219 R.E. 2023

The Tanzania Medicines and Medical Devices Act provides the primary statutory basis for controlling pharmaceutical promotion in Tanzania. Section 95 empowers the Minister responsible for health, on the advice of the Director General, to make regulations governing promotional activities connected with drugs, medical devices and herbal drugs.[9] This provision forms the foundation for detailed subsidiary regulation of pharmaceutical promotion.

Section 96 prohibits the publication, distribution or communication to the public of false or misleading advertisements concerning products regulated under the Act, subject to the applicable promotional regulatory framework.[10] The provision establishes an important substantive control because it focuses on the accuracy and reliability of pharmaceutical advertising rather than merely the medium through which the advertisement is communicated.

Section 97 adopts a broad understanding of an advertisement. It includes advertising through publications, notices, catalogues, price lists, letters, photographs, cinematograph films, sound recordings, sound broadcasting, television and "any other means of communication."[11] The breadth of this provision provides a statutory basis for applying the advertising regime to modern digital communications even though the provision predates contemporary generative AI technologies.

Section 98 provides a more direct substantive restriction. It prohibits advertising a regulated product in a manner that is false, misleading or deceptive or likely to create an erroneous impression regarding the product's character, value, quantity, composition, merit, safety or efficacy. More importantly for regulatory approval, section 98(2) provides that promotional activities concerning regulated products cannot be carried out except after obtaining written approval from the Authority.[12]

The statutory framework therefore provides two central regulatory controls: substantive control over misleading advertising and prior regulatory approval of promotional activities. These mechanisms remain applicable to AI-driven pharmaceutical advertising. The difficulty arises from the fact that the statute does not expressly address whether a materially AI-modified version of an approved advertisement constitutes a new promotional material requiring further approval.

This issue becomes important where an advertiser submits an advertisement containing one image, voice or claim but subsequently uses an AI system to generate numerous variations. A broad interpretation of section 97 may bring those variations within the concept of advertising. However, the Act does not expressly establish a technological procedure for identifying AI-generated modifications or determining when such modification constitutes a new advertisement for approval purposes. The resulting uncertainty may undermine the effectiveness of the pre-approval mechanism.

The Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025

[7] Campbell, C., Plangger, K., Sands, S., Kietzmann, J. H., & Bates, K. (2022). How deepfakes and artificial intelligence could reshape the advertising industry: The coming reality of AI fakes and their potential impact on consumer behavior. *Journal of Advertising Research, 62*(3), 241–251. https://doi.org/10.2501/JAR-2022-017

[8] Whittaker, L., Mulcahy, R., Russell-Bennett, R., Letheren, K., & Kietzmann, J. (2025). Examining consumer appraisals of deepfake advertising and disclosure: Show deepfakes as "real life" or say they're "just fantasy"? *Journal of Advertising Research*, 113–134. https://doi.org/10.1080/00218499.2025.2498830

[9] Cap. 219 R.E. 2023, section 95

[10] Cap. 219 R.E. 2023, section 96

[11] Cap. 219 R.E. 2023, section 97

[12] Cap. 219 R.E. 2023, section 98(1)–(2).

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The regulatory framework has been further developed through the Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025. The Regulations apply to human and veterinary medicines, biological products, biocidal products and herbal medicines intended to be promoted in Mainland Tanzania.[13] They expressly define advertisement broadly to include social media, electronic communications, verbal advertising and other means of communication.[14]

Regulation 5 prohibits promotion of a product that is not registered and prohibits promotional activities that are misleading, deceptive or likely to create an erroneous impression concerning matters such as safety or efficacy.[15] Regulation 6 requires promotional materials to be unbiased, accurate, informative, up to date, not misleading and consistent with information approved during registration.[16] These requirements are highly relevant to AI-generated advertising because AI-generated promotional language may change rapidly and may introduce claims that were not included in the approved product information.

Regulation 7 provides the application requirements for approval of promotional materials. An application for advertising a medicine must be accompanied by a prescribed form, a copy of the proposed advertisement and the applicable fee.[17] The requirement to submit a copy of the proposed advertisement is significant because it reflects a conventional model of regulatory review in which the regulator assesses identifiable promotional material before implementation.

The 2025 Regulations also contain a specific provision on variations.[18] This is particularly important in the context of AI because AI systems can generate modifications to existing advertising content. A regulatory framework dealing with variations can potentially provide a legal basis for controlling modifications, but its effectiveness depends on how "variation" is interpreted and whether AI-generated changes are captured by the regulatory process.

[13] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulation 2.
[14] Ibid, Regulation 3
[15] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulation 5(3).
[16] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulation 6(1)–(2).
[17] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulation 7(1)
[18] Tanzania Medicines and Medical Devices (Control of Human and Veterinary Medicines Promotion) Regulations, 2025, regulation 9.

The current regulatory framework therefore demonstrates considerable progress. It regulates the content, approval and variation of pharmaceutical promotional material and expressly covers digital and social-media advertising. Nevertheless, it does not yet provide detailed procedures specifically addressing AI-generated content, synthetic persons, automated content generation or the technical identification of AI modifications.

AI-GENERATED CONTENT AND ELECTRONIC COMMUNICATIONS REGULATION

The Electronic and Postal Communications framework provides a complementary layer of regulation for digital content. The Electronic and Postal Communications (Online Content) Regulations, 2020 regulate online content and establish obligations for relevant digital-service actors.

A significant development occurred through the Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2025. The amendment expressly inserted "unethical, fabricated and artificial intelligence generated content including video clips, audio and still pictures" into the Schedule dealing with prohibited content.[19] It also introduced obligations concerning internet service providers and social media platform owners, including mechanisms for restricting prohibited content and filtering or removing such content from platforms.[20]

This development is important because it demonstrates that Tanzanian law has begun expressly addressing AI-generated digital content. It would therefore be inaccurate to characterize the Tanzanian legal framework as completely silent on AI.

Nevertheless, the Online Content Regulations do not replace the specialized pharmaceutical advertising regime. The role of TCRA in regulating online content and the role of TMDA in regulating pharmaceutical promotion arise from different statutory mandates. An AI-generated pharmaceutical advertisement may consequently raise questions under both frameworks. For example, TCRA may be concerned with the nature of prohibited online content, while TMDA may be concerned with whether the advertisement is misleading, whether it contains approved pharmaceutical information and whether the promotional activity received prior approval.

The 2026 amendment to the Online Content Regulations demonstrates that the digital regulatory framework continues to evolve.[21] This continuing development reinforces the need for

[19] Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2025, Government Notice No. 57, paragraph 9.
[20] Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2025, regulations 9A and 15A.
[21] Electronic and Postal Communications (Online Content) (Amendment) Regulations, 2026, Government Notice No. 158.

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coordination between general digital-content regulation and sector-specific pharmaceutical regulation.

PERSONAL DATA PROTECTION AND AI-BASED PHARMACEUTICAL ADVERTISING

AI-driven advertising frequently depends on the processing of consumer information to identify audiences and personalize advertising. Pharmaceutical advertising may therefore involve not only content regulation but also data-protection concerns.

The Personal Data Protection Act, 2022 establishes a legal framework governing the collection, use, disclosure and processing of personal data. The Act provides data subjects with specific rights concerning the processing of their information. Section 35 permits a data subject to require a data controller to stop processing personal data for direct marketing purposes.[22] The Act also recognizes rights relating to automated decision-making. Section 36 provides protections where a decision significantly affecting a data subject is based solely on automated processing.[23]

These provisions are relevant to AI-driven pharmaceutical advertising where personal data are used to construct consumer profiles or determine the pharmaceutical advertisements shown to particular individuals. AI-based targeting may make advertising more efficient for commercial actors, but it also creates concerns concerning transparency, consent and the ability of individuals to control the use of their personal data.

The interaction between pharmaceutical advertising regulation and data protection is therefore significant. Compliance with TMDA requirements does not necessarily eliminate data-protection obligations. An advertisement may be factually accurate and properly approved by TMDA while the method through which it was targeted at particular individuals raises separate questions under the Personal Data Protection Act.

This interaction supports a broader regulatory approach in which pharmaceutical advertising is considered not only from the perspective of the truthfulness of the promotional message but also from the perspective of how AI systems identify, target and influence consumers.

SYNTHETIC MEDICAL PROFESSIONALS AND MISLEADING ADVERTISING

One of the most significant risks associated with generative AI is the creation of synthetic representations of real or fictional medical professionals. AI can be used to generate images, video or audio that appears to show a doctor or pharmacist recommending a pharmaceutical product. Similar technology may create apparently genuine patient testimonials.

Such representations create a heightened risk in pharmaceutical advertising because consumers may reasonably attach greater credibility to statements presented as coming from a healthcare professional. If the representation is artificial but presented as genuine, the consumer may be unable to distinguish authentic professional advice from synthetic commercial content.

The existing statutory prohibition against false, misleading or deceptive pharmaceutical advertising is capable of addressing such conduct. Section 98 of the Tanzania Medicines and Medical Devices Act prohibits advertising that is false, misleading, deceptive or likely to create an erroneous impression concerning, among other matters, the safety or efficacy of a regulated product.[24] A synthetic professional endorsement that creates a false impression concerning the source or credibility of an advertisement may therefore fall within the broader statutory concern with misleading promotion.

The difficulty is that the provision does not expressly require disclosure where AI has generated or substantially modified the identity, voice or appearance of a person. This creates uncertainty regarding whether disclosure should be treated as a legal requirement, a regulatory condition or a matter of general consumer transparency.

The importance of disclosure is supported by research on deepfake advertising. Whittaker et al. found that consumer responses to deepfake advertising are affected by whether the synthetic nature of the content is disclosed.[25] In pharmaceutical advertising, disclosure may be particularly important because the credibility of a medical professional can materially influence consumer behaviour.

The appropriate regulatory response should therefore not necessarily prohibit every use of AI in pharmaceutical advertising. Rather, the law should distinguish between legitimate technological assistance and deceptive synthetic representation. AI may be used to produce graphics, translate approved content or optimize presentation without creating a material risk of deception. Conversely, fabricated medical endorsements or AI-generated representations presented as genuine should be subject to stronger controls.

CHALLENGES FACING THE REGULATION OF AI-DRIVEN PHARMACEUTICAL ADVERTISING

[22] Personal Data Protection Act, 2022, section 35(1)– (3).
[23] Personal Data Protection Act, 2022, section 36(1)– (3).
[24] Tanzania Medicines and Medical Devices Act, Cap. 219 R.E. 2023, section 98(1).
[25] Whittaker, L., Mulcahy, R., Russell-Bennett, R., Letheren, K., & Kietzmann, J. (2025). Examining consumer appraisals of deepfake advertising and disclosure: Show deepfakes as "real life" or say they're "just fantasy"? *Journal of Advertising Research*, 113–134. https://doi.org/10.1080/00218499.2025.2498830

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The first challenge is uncertainty concerning AI-modified advertisements. The current pharmaceutical advertising framework requires promotional material to be submitted for approval and establishes controls over variations. However, AI may allow an advertiser to modify approved content after approval or to generate multiple variations from a common source. Without specific rules identifying what constitutes a material AI modification, enforcement may become inconsistent.

The second challenge concerns identification of AI-generated content. Conventional monitoring techniques may not reliably establish whether an image, video, voice or written message has been generated or substantially modified by AI. The problem becomes more complex where content is distributed through social-media platforms, messaging applications or other digital services. Effective enforcement therefore requires technical capacity in addition to traditional legal and inspection expertise.

The third challenge is the speed of digital distribution. Traditional regulatory models often assume that an advertisement can be reviewed before it reaches consumers. AI-driven advertising can generate and distribute content rapidly, potentially reaching a large audience before regulatory authorities identify the material. Consequently, pre-approval remains important but cannot operate effectively without complementary post-approval surveillance.

The fourth challenge concerns institutional fragmentation. TMDA has specialized responsibility for pharmaceutical products and promotion, while TCRA regulates electronic communications and online content and the Personal Data Protection Commission exercises responsibilities under the personal-data framework. The same AI-driven pharmaceutical advertisement may therefore fall within the practical concern of several institutions.

This does not necessarily mean that institutional mandates overlap unlawfully. Rather, it demonstrates the need for structured coordination. Without clear procedures for information sharing, referrals and joint enforcement, regulatory responsibility may become fragmented.

The fifth challenge is technological capacity. The use of AI in advertising requires regulators to understand synthetic media, automated targeting, generative models, digital provenance and platform-based distribution. Regulatory institutions must therefore develop technical expertise capable of supporting legal enforcement.

Existing research on AI regulation in African healthcare indicates that the development of AI technologies is occurring in an environment where regulatory capacity and governance structures remain important determinants of effective implementation.[26] Similarly, research concerning AI in Tanzania's health sector demonstrates the increasing relevance of AI-based technologies to the country's health environment.[27] The regulatory implications of AI advertising should therefore be understood as part of a broader technological transformation rather than as an isolated advertising problem.

RECOMMENDATIONS

First, the Government should develop specific regulatory guidance on AI-driven pharmaceutical advertising. Such guidance should define AI-generated and AI-modified advertising, identify material modifications, establish disclosure requirements and clarify the information that advertisers must provide when seeking approval.

Second, section 98 of the Tanzania Medicines and Medical Devices Act should be reviewed to expressly address AI-generated and materially AI-modified promotional material. The law should clarify that material modifications to approved advertisements require further regulatory approval where such modifications affect pharmaceutical claims, images, voices, endorsements, product information or other substantive elements.

Third, the regulatory framework should establish clear responsibility for AI-generated advertisements. The advertiser, pharmaceutical company or other person responsible for placing promotional material before the public should remain accountable even where AI tools are used to generate or modify the content. The use of an AI system should not create an accountability gap.

Fourth, TMDA should strengthen post-approval monitoring of digital pharmaceutical advertising. Monitoring should include systematic surveillance of social-media platforms and other digital channels and, where technically feasible, comparison between approved advertising material and content actually distributed to consumers.

Fifth, TMDA and TCRA should establish formal mechanisms for regulatory cooperation. These mechanisms should facilitate information sharing, referrals, coordinated monitoring and joint responses where AI-generated pharmaceutical advertising also constitutes prohibited online content.

Sixth, the relevant regulatory institutions should develop specialized technological capacity. Training should cover generative AI, synthetic media, deepfakes, automated advertising, digital evidence and methods for identifying materially modified promotional content. Regulatory capacity should be supported by appropriate technological tools rather than relying exclusively on manual monitoring.

Seventh, advertisers and pharmaceutical companies should maintain records of AI systems and tools used in producing promotional material. Such records would assist regulators in establishing the origin of disputed content and determining whether

[26] Townsend, B. A., Sihlahla, I., Naidoo, M., Naidoo, S., Donnelly, D.-L., & Thaldar, D. W. (2023). Mapping the regulatory landscape of AI in healthcare in Africa. *Frontiers in Pharmacology, 14*, 1214422. https://doi.org/10.3389/fphar.2023.1214422

[27] Sukums, F., Mzurikwao, D., Sabas, D., Chaula, R., Mbuke, J., Kabika, T., Kaswija, J., Ngowi, B., Noll, J., Winkler, A. S., & Wamala Andersson, S. (2023). The use of artificial intelligence-based innovations in the health sector in Tanzania: A scoping review. *Health Policy and Technology, 12*(1), 100728. https://doi.org/10.1016/j.hlpt.2023.100728

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the material distributed to consumers corresponds with the material approved by TMDA.

Finally, public awareness should be strengthened. Consumers should be informed about the possibility of AI-generated pharmaceutical advertisements and encouraged to verify pharmaceutical claims through reliable sources. Awareness is particularly important where synthetic doctors, pharmacists, patients or other apparently authoritative persons are used to promote pharmaceutical products.

CONCLUSION

Artificial intelligence is changing the structure of pharmaceutical advertising by enabling the rapid generation, modification, personalization and distribution of promotional content. These developments create regulatory challenges because pharmaceutical advertising is closely connected with public health, consumer decision-making and the communication of information concerning the safety and efficacy of medicines.

The Tanzanian legal framework provides a substantial foundation for responding to these challenges. The Tanzania Medicines and Medical Devices Act regulates pharmaceutical promotion, prohibits misleading advertising and requires prior written approval for promotional activities. The 2025 pharmaceutical promotion regulations further regulate promotional materials, approval, variations and digital advertising. Tanzania has also taken an important step by expressly recognizing AI-generated content within the online-content regulatory framework.

The principal regulatory concern is therefore not the complete absence of legislation. Rather, the challenge lies in ensuring that existing legal rules remain effective when advertising content can be generated, modified and distributed through AI systems at a speed and scale that conventional regulatory processes were not designed to accommodate.

The readiness of the Tanzanian framework would consequently be strengthened by greater technological specificity, clearer rules concerning AI-generated and AI-modified advertisements, accountability for synthetic promotional content, effective disclosure and traceability requirements, stronger post-approval monitoring and institutional cooperation. A responsive regulatory approach should preserve the existing pharmaceutical advertising safeguards while adapting their application to the distinctive characteristics of artificial intelligence.

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