

Building an artificial intelligence-enabled telehealth future for South Africa: The case for regulatory vision and sectoral strategy

As South Africa (SA) seeks to position itself at the forefront of digital innovation, the urgency of reform is nowhere more visible than in the healthcare sector. The COVID-19 pandemic exposed critical vulnerabilities in our health systems, but it also created a powerful opportunity to reimagine service delivery through telehealth and emerging technologies such as artificial intelligence (AI). Despite pockets of innovation and an expanding global evidence base, SA's telehealth landscape remains fragmented – technologically, regulatorily and strategically. Two interlinked issues stand in the way of meaningful progress: first, the absence of a dedicated national AI-in-healthcare strategy, and second, regulatory ambiguity that stifles both innovation and investment.

The missing link: A sector-specific AI strategy for healthcare

SA's 2024 National Artificial Intelligence Policy Framework^[1] sets out ethical principles and infrastructure goals but falls short of providing a concrete vision for healthcare. It does not answer critical questions such as how AI should be deployed to strengthen clinical efficiency, address inequalities, and expand access to underserved populations. Without a clear roadmap tailored to our specific health challenges, from rural clinics to overburdened urban hospitals, SA risks falling behind.

International examples offer valuable lessons. The World Economic Forum's 2025 White Paper^[2] outlines a phased roadmap for AI in healthcare, grounded in robust data governance, system interoperability, and public-private partnerships. Small nations such as Malta have already embraced sector-specific strategies, despite their limited size and resources.

Malta's experience is particularly instructive. With a population of just over 570 000, Malta has invested heavily in digital health innovation underpinned by strong governance. In 2018, the government appointed a national AI Taskforce, which produced an Ethical AI Framework^[3] recognising sectoral risks and opportunities, including in healthcare. Complementing this, Malta introduced the Innovative Technology Arrangements and Services (ITAS) Certification Regulations,^[4] a voluntary recognition framework for digital innovations managed by the Malta Digital Innovation Authority,^[5] a centralised body established precisely to guide ethical innovation while safeguarding public trust. In 2022, Malta further strengthened its position with the National Health Systems Strategy 2023 - 2030,^[6] appointing a high-level Digital Health Steering Committee to oversee digital health policy and innovation. In contrast, SA has yet to establish an equivalent authority or strategy, despite its significantly greater need and scale.

Regulatory uncertainty: A barrier to scale and impact

In addition to lack of a sector-specific strategy, SA suffers from outdated and fragmented regulation. Current telehealth governance remains anchored in the Health Professions Council of South Africa guidelines,^[7] which are narrow in scope and lag behind technological realities. No single authority co-ordinates the integration of digital health technologies across public and private sectors, leaving innovators lost in legal uncertainty, unclear data-sharing practices, and siloed systems.

Once again, Malta demonstrates the benefits of proactive regulatory leadership. By consolidating oversight under a central authority and establishing clear ethical frameworks, Malta has created an environment where innovation can flourish responsibly. SA urgently needs to follow suit.

A historic opportunity – but time is running out

SA once led the continent in telehealth innovation. In 2001, the country established Africa's first university-based telemedicine department at the Nelson R Mandela School of Medicine, University of KwaZulu-Natal,^[8] integrating rural healthcare with tele-education. Despite decades of research proving the effectiveness of telehealth models, SA has not standardised telehealth regulations, licensed providers nationally, or translated its academic leadership into systemic reforms.

Meanwhile, preparations for a National Health Insurance (NHI) scheme^[9] are underway. However, without a coherent national strategy for digital health, including AI integration and telehealth governance, NHI risks entrenching inefficiencies rather than overcoming them. The costs of inaction are growing: continued healthcare inequalities, missed investment opportunities, and the erosion of public trust in emerging health technologies.

Moving forward: A practical roadmap for SA

SA has the talent, the tools, and foundational policy frameworks. What is missing is co-ordinated action. To build an AI-enabled telehealth future, SA must:

- develop a national AI-in-healthcare strategy, grounded in SA realities, that prioritises clinical impact, equity, system interoperability, and public-private collaboration
- establish a centralised digital health authority, a dedicated body similar to Malta's Digital Innovation Authority, that could harmonise regulation, certify innovative solutions, and safeguard patient rights and trust
- invest in AI literacy for healthcare workers and equip them to understand, evaluate, and safely deploy AI technologies, not just in specialist centres but in clinics nationwide
- create a secure, interoperable national health data exchange platform that ensures that patient privacy is protected while smarter, data-driven care models essential for an effective NHI system are enabled.

The promise of AI-enabled telehealth lies not just in technological advancement but in the radical democratisation of healthcare access. SA is well positioned to lead. The question now is not one of capacity, but of vision, political will, and co-ordinated execution.

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1. Department of Communication and Digital Technologies, South Africa. South African National Artificial Intelligence Policy Framework. 25 October 2024. <https://www.dcdt.gov.za/sa-national-ai-policy-framework/file/338-sa-national-ai-policy-framework.html> (accessed 21 March 2025).
2. World Economic Forum. The future of AI-enabled health: Leading the way. White Paper. January 2025. https://reports.weforum.org/docs/WEF_The_Future_of_AI_Enabled_Health_2025.pdf (accessed 21 March 2025).
3. Government of Malta. Malta AI Taskforce. Malta: Towards trustworthy AI: Malta's Ethical AI Framework. October 2019. https://malta.ai/wp-content/uploads/2019/10/Malta_Towards_Ethical_and_Trustworthy_AI_vFINAL.pdf (accessed 28 April 2024).
4. Government of Malta. Innovative Technology Arrangements and Services (ITAS) Certification Regulations. Subsidiary legislation 591.01. 14 June 2024. <https://legislation.mt/eli/sl/591.1/eng> (accessed 28 April 2025).
5. Malta Digital Innovation Authority. Malta Digital Innovation Authority Act No. XXXI of 2018, as amended by Act No. XIX of 2024. <https://legislation.mt/eli/cap/591/eng/pdf> (accessed 28 April 2025).
6. National Health Strategy, Malta. A National Health Systems Strategy for Malta 2023 - 2030: Investing successfully for a healthier future. December 2022. https://health.gov.mt/wp-content/uploads/2023/04/A_National_Health_Systems_Strategy_for_Malta_2023_-_2030_Investing_Successfully_for_a_Healthy_Future_EN.pdf (accessed 12 June 2025).
7. Health Professions Council of South Africa. General medical guidelines for good practice in telehealth. Booklet 10. Revised December 2021. Pretoria: HPCSA. 2021. https://www.hpcsa-blogs.co.za/wp-content/uploads/2022/08/Booklet-10_Telehealth_Dec_2021_.pdf (accessed 21 March 2025).
8. Mars M. Telemedicine in KwaZulu-Natal: From failure to cautious optimism. *J Telemed Telecare* 2007;13(3_Suppl):57-59. <https://doi.org/10.1258/135763307783247310>
9. National Department of Health, South Africa. National Health Insurance Act 20 of 2023. https://www.gov.za/sites/default/files/gcis_document/202405/50664nathhealthinsuranceact202023.pdf (accessed 29 April 2025).

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