



Driving Innovation in ASEAN Healthcare: Clinical Solutions for a Resilient and Inclusive Future

Kris Kek Shyang

Founder and Managing Director, FFT Management, Kassel, Germany.

afiehn@t-online.de

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ABSTRACT

The Association of Southeast Asian Nations (ASEAN) represents a community of nearly 650 million people, belonging to diverse cultures, economic backgrounds, and health systems. In the transformative era of unprecedented challenges, the healthcare systems across ASEAN stand at a pivotal crossroads. From the learnings of the COVID-19 pandemic and the pressures of aging populations followed by urbanization and shifting disease burdens, the future health of the region depends on both recovery and reinvention initiatives. Innovation no longer stands as a buzzword but is the heart of this transformative phase, acting as the lifeline for building resilient, inclusive, and future-ready clinical systems. This journey beyond the pandemic stands at a demanding and critical stage of the need for investment in clinical solutions beyond technology, needing to be also resilient, equitable, and inclusive.



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1. Embracing Digital Transformation in Healthcare

The aftermath of the pandemic era has led to an upsurge in the innovation of digital health technologies, turning them into the cornerstones for healthcare in ASEAN. Through the phase of the pandemic, telemedicine gained widespread traction, creating it as a new normal for the healthcare sector. Several consultation platforms gained popularity, such as in Indonesia, where Halodoc and Alodokter enabled remote consultations, medicine delivery, and diagnostic booking, serving over 20 million users and reducing the burden on the overstretched health facilities (Anshari *et al.*, 2024). The Indonesian government has since supported telemedicine integration into its JKN national health insurance system. Meanwhile, Singapore continues to support seamless data sharing across service providers, hence emerging as the regional leader in health innovation through its National Electronic Health Record (NEHR) system. Thus, improving the continuity and safety of care (De Foo *et al.*, 2023). Moreover, Singapore launched the Healthier SG initiative in 2023 to shift the healthcare model from curative to preventive, backed by digital tools for chronic disease management and citizen engagement.

2. Malaysia: System Reforms for Equitable and Tech-Enabled Care

In Malaysia, innovation is being steered through systemic reforms. The 2023 Health White Paper outlines a long-term plan to restructure the healthcare system by strengthening primary care, integrating digital health, and fostering universal health coverage (Awang *et al.*, 2023). One of the key digital innovations has been the MySejahtera app, initially developed for pandemic management. It is now being re-engineered into a digital health platform that includes health screenings, vaccination records, and appointment scheduling. Meanwhile, the PeKa B40 program offers free health screenings, medical devices, and cancer treatment incentives for lower-income groups, representing a significant step toward inclusive healthcare access.

3. Community-Based and Inclusive Models of Care

Resilience in ASEAN healthcare also stems from community engagement. In Thailand, the long-standing Village Health Volunteer program has been instrumental in delivering grassroots care, health education, and disease surveillance in

rural areas. During COVID-19, over 1 million volunteers were mobilized to support contact tracing, vaccine outreach, and public communication, showcasing how community-based models can be scaled effectively (Tangcharoensathien *et al.*, 2024). Vietnam has similarly leveraged its primary healthcare network for pandemic response and chronic disease management. The country has integrated non-physician health workers and digital health tools into its community health stations, which serve as the frontline for managing NCDs and maternal-child health (Quyen *et al.*, 2021). Public-Private Partnerships and Regional Collaboration in the Philippines has prioritized universal healthcare through its Universal Health Care Act, which aims to integrate public and private services under one national system. Key innovations include service delivery networks and digital health pilot programs targeting underserved communities (Dayrit *et al.*, 2018). At the regional level, ASEAN's Digital Health Dialogue and Post-2015 Health Development Agenda encourage inter-country collaboration on eHealth, data governance, and technology sharing. The ASEAN Digital Masterplan 2025 provides a broader framework to ensure digital connectivity and innovation flow across borders, which is vital for harmonizing standards and expanding access (Ing *et al.*, 2023).

4. Fostering Inclusive Innovation

The healthcare innovation needs to be human-centric and inclusive. The ASEAN countries are focusing on and adopting culturally adapted solutions wherein ethnicity is taken care of. In Myanmar, women and child health outreach has been extended to minorities, aiming to meet the needs of the community, enabling mobile clinics and culture-sensitive training of the midwives despite the political and cultural challenges. Gender equity in healthcare leadership should also be a priority. Where women who are the region's majority workforce are still underrepresented in leadership. The ASEAN governments and policymakers must promote gender-sensitive health policies and leadership development to meet the needs of the population (Boniol *et al.*, 2019).

5. The Way Forward

The ASEAN healthcare innovation initiative must invest in the health workforce, leveraging community strengths to ensure that none are left behind. Focus should be shed on scalability, culture-sensitive approaches, and resource-appropriate solutions aiming to reinforce resilience and equity.

ASEAN must adopt a multi-pronged strategy:

- Foster regional collaborations to establish common standards, shared funding mechanisms, and cross-

border regulatory processes to accelerate innovative diffusion.

- Invest in human capital to equip health workers, clinicians, and administrators with leadership skills and literacy to be able to lead change.
- Encourage public-private partnerships to enhance synergism in collaborative initiatives between government, academia, startups, and multilateral institutions.
- Measure and learn using data and real-world evidence to continually refine and scale solutions that work.

The policymakers must prioritize funding the digital infrastructure, strengthen the health policy governance, and promote the exchange of knowledge by building sustainable platforms. This is a complex path demanding a clear direction. ASEAN can lead the world in crafting resilient healthcare systems that are future-ready as well as inclusive by design. Innovation, when guided by empathy, science, and a commitment to equity, can be the engine of a healthier, stronger region.

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Chitkara University, Saraswati Kendra, SCO 160-161, Sector 9-C,
Chandigarh, 160009, India

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