

Reinforcing healthcare equity, access, and resilience by fine-tuning the pharma supply chain in ASEAN market

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In conversation with Patrick Bergstedt, Senior Vice President, and Head of Emerging Markets at Moderna



As the world is progressively rebounding from pandemic impact, Moderna is constantly developing next-generation combination vaccines capable of battling COVID, Respiratory Syncytial Virus (RSV), flu and other respiratory viruses, thus extending the capabilities of its mRNA vaccine platform pioneered during the pandemic. As its clinical trials for respiratory disease programs have advanced to Phase 3, Moderna is pursuing mRNA therapeutics for oncology, and latent, rare and infectious diseases. The Company has advanced six programs into late-stage development, including two approved or filed for approval, and three more that have completed Phase 3 enrollment. Further, it aims to double the number of programs in Phase 3 by 2025 and launch up to 15 products in five years across cancer, rare disease, and infectious disease. Up to four of those launches could come by 2025. Currently, Moderna is developing multiple generations of single-virus and combination respiratory vaccines that address significant public health needs. In an exclusive interview, **Patrick Bergstedt, Senior Vice President, and Head of Emerging Markets at Moderna** shared further insights on strengthening healthcare equity, access, and achieving resilient therapeutic infrastructure by building a sustainable pharma supply chain and combating potential Tripledemic in the future.

What are the current priorities in ASEAN's health agenda, and how are they aligned with global health priorities?

ASEAN'S health priorities mirror global health goals, emphasizing collaboration, equity, and preparedness to address

regional and global health challenges effectively. Some of these agendas include:

- Universal Health Coverage aims to ensure that everyone has access to essential healthcare services without facing financial hardship.
- Expanding healthcare coverage and improving access to healthcare services, which ASEAN countries have been already working on.
- Strengthening healthcare systems and pandemic preparedness to respond effectively to outbreaks, also aligns with global health priorities for infectious disease control.

Additionally, ASEAN countries are facing an increasing burden of non-communicable diseases[2] (NCDs) such as diabetes, cardiovascular diseases, and cancer. Addressing NCDs is a shared priority to reduce the impact of these diseases on public health. Regional organizations like ASEAN Plus Three (APT) Health Cooperation, contribute to regional and global health security by fostering cooperation among member states.

How can ASEAN leverage emerging technologies and digital innovation to drive advancements in healthcare delivery and outcomes?

ASEAN is home to some of the world's most technologically advanced and digitally savvy economies, where telemedicine, e-pharmacy and AI-aided medical research are part of its social and business landscape. However, the degree of technology penetration and adoption is not even across ASEAN nations. Thus, there is an acute need to reduce this gap through economic collaboration and knowledge transfer.

Emerging technology such as AI digital innovation could help ASEAN make breakthroughs in new class of medicines, increase crisis preparedness, and customize patient care therapies and services. At Moderna, AI has been a part of our foundation for years, and that was one reason why Moderna was able to develop an effective COVID-19 vaccine so quickly during the pandemic. In 2021, Moderna launched the AI Academy, in partnership with Carnegie Mellon University, Pennsylvania, U.S which aimed to educate and empower employees at all levels to identify and integrate AI and machine learning solutions into every Moderna system and process to bring mRNA medicines to patients.

ASEAN nations can look to new technologies to improve the quality of healthcare delivery and costs. One way is to nudge consumers to monitor their health and lower the long-term cost of care. Many of the largest health ecosystem players in the region have rapidly grown by combining telemedicine and e-pharmacy services to address underserved populations. The Doctor Anywhere app in Malaysia and the Alodokter app in Indonesia for example teamed up with the Government in 2021 to provide remote medical services during the pandemic.

How can ASEAN better attract investment in manufacturing and research and development to foster a more sustainable innovation ecosystem?

One way for ASEAN to continue to attract investment in manufacturing and research and development is by enabling exchange of knowledge and expertise for mutual growth with new and existing parties.

The ASEAN nations have emerged resilient from the pandemic, largely due to their effective immunization programs and making vaccines widely and readily available. To attract more investment in manufacturing and research and development (R&D), ASEAN must maintain this momentum and focus on fostering a more sustainable and innovation-focused ecosystem.

Additionally, the region can leverage its unique strengths to draw investors into ASEAN for knowledge exchange and expertise sharing. For example, Indonesia, can expand its role in the electric vehicle (EV) industry beyond its traditional strength as a commodity supplier, enticing manufacturing and tech investors. Thailand and Singapore, known for medical tourism and medical device production, can attract investors in the medical and tech sectors. Malaysia presents opportunities in tech-related manufacturing and supply chain development.

A united ASEAN front can tap into this investor pool, enabling cross-collaboration opportunities. Investors can benefit from the diverse expertise within these markets, while ASEAN markets gain access to more investment opportunities.

How can ASEAN as an institution collaborate with its member states to coordinate critical health aspects, such as vaccine availability and access, as well as R&D and manufacturing? How can the private sector support these initiatives?

Southeast Asia's health systems are remarkable however, more can be done to accelerate meaningful regional collaboration. Health security is a crucial component of regional security, and is best handled by a united ASEAN supported by private sector partnerships and not by countries operating alone or retreating into the safety of national borders. We can only be healthy if our neighbours are healthy, and that is reason enough to collaborate.

To enhance collaboration, immediate actions that can be encouraged include establishing a regional stockpile for vaccines and personal protective equipment (PPE), facilitating the exchange of health professionals via mutual recognition pathways, reinforcing existing institutions like the Collaborating Centre for Disaster Management and the Regional Laboratory Network with ASEAN-wide commitment, engaging the local, regional, and global private sectors (especially those with a presence in ASEAN) for knowledge and expertise sharing, and implementing policies promoting fair and effective collaboration and knowledge-sharing in vaccine development, deployment, and equitable access, not only for COVID-19 but also for future pandemics.

Much of the healthcare in Asia and the Pacific, especially in urban areas, is delivered by the private sector, which is an important investor in pharmaceuticals, supply chains, and administrative and information systems. It is crucial for the private sector to build capacity in underserved areas where profitability is less certain, and to ensure the affordability of services.

Forging partnerships with higher learning institutions within the ASEAN network is also key. This allows skillsets transfer, enhancement of research capabilities, and could even accelerate the development of new safe and effective medicines that could be further leveraged by the ASEAN region. The Monash University partnership with Moderna in Australia is a good example. The university also has an offshore campus in Malaysia which enables for cross-border integration of research and knowledge sharing for a broad range of diseases.

What practical steps can ASEAN, as an institution, take to help foster One ASEAN Health market? What can be done to foster greater movement of scientific ideas, healthcare commodities and/or healthcare professionals?

One ASEAN health is a vision and framework for creating a more integrated and collaborative healthcare system among members in different states. To accelerate the healthcare supply chain and foster a One ASEAN Health Market, ASEAN could potentially:

- Simplify customs and trade procedures to expedite the import and export of healthcare commodities, including pharmaceuticals and medical devices, across member states.
- Develop regional distribution centers strategically located within ASEAN to efficiently store and distribute healthcare supplies to member states.
- Invest in transportation and logistics infrastructure to facilitate the swift and cost-effective movement of healthcare products within the region.
- Harmonize regulations related to healthcare supply chains, including product standards, labeling, and quality control, to reduce trade barriers.
- Explore Telemedicine/ E-pharma capabilities further.
- Make training available to member nations to expand the base of healthcare talents that member countries can tap into to meet trained manpower demand.

The pandemic served as a stark reminder that an outbreak taking place in one member country can have far-reaching impacts on the entire region. What are some of the immediate measures or 'quick wins' that can improve the region's health resilience?

In addition to health equity, access and resilience, the COVID-19 pandemic has shown that the entire health and pharmaceutical supply chain must work in tandem towards a common goal in double quick time. ASEAN nations are part of this equation.

mRNA vaccines, like Moderna's, were developed in record time, in contrast to the usual 5–10-year vaccine development

timeline. Factors expediting COVID-19 vaccine development included pandemic-specific regulatory processes; regulatory applications for initial human doses processed in under a week, rather than the typical 30 days. These measures may seem reasonable in a major humanitarian crisis, driven by pandemic urgency, but are unlikely to become status quo for all drug development programs.

These learnings from the COVID-19 pandemic are still relevant today, it shows that it is possible to consider new ways of working, in parallel rather than in a liner timeline.

Some of the key commendable initiatives that are already in place within the ASEAN region include establishment of the ASEAN Centre for Public Health Emergencies and Emerging Diseases (ACPHEED) to bolster the region's emergency preparedness, prevention, detection, and response capabilities towards becoming a Centre of excellence and regional resource hub. Indonesia, Thailand, and Vietnam will host its functions, with a main secretariat in Thailand, focusing on prevention, detection, and response. Maintaining these initiatives with regular oversight and involving the private sector are vital for further advancing the region's health resilience.

What is required is for countries, particularly economic groupings such as ASEAN, is to be ready to share critical information, to allow for synergistic research, and if necessary to allow for more expeditious regulatory approvals, bearing in mind the risk-safety ratio.

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