

Singapore launches Phase III of National Precision Medicine (NPM) Programme

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Strategic Partnership goals for scaling research insights into tangible outcomes that will translate into real-world healthcare outcomes



Precision Health Research Singapore (PRECISE) marked the launch of Phase III of the National Precision Medicine (NPM) programme, with the signing of a Memorandum of Understanding (MOU) between PRECISE and senior representatives from NHG Health, National University Health System (NUHS) and SingHealth.

The MOU reflects the shared commitment of PRECISE and Singapore's three public healthcare clusters to work together and enrol about 10% of Singapore's local resident population as study participants over the next five years.

NPM Phase III will be conducted as a large-scale research initiative to generate robust, population-specific evidence as to the cost and effectiveness of using genomic information in healthcare when scaled beyond pilots to population levels. These insights will help guide how genomic information could, in the future, be responsibly integrated into healthcare to support physicians and patients in preventive and more targeted care.

NPM Phase III: From research insights to real-world impact

Professor Patrick Tan, Executive Director of PRECISE explained that "In Phase II, we studied healthy cohorts to contribute to population health research. In Phase III, we will work with individuals receiving medical treatment and clinical services, including those with specific disease conditions. This will allow important studies to better understand how genomic information may be used to support improved health outcomes. Importantly, Phase III is about understanding and addressing the practical challenges of integrating precision medicine into clinical care in a thoughtful, sustainable, and equitable way."

"DNA (genetic) testing is already making a difference in selected clinical settings—helping doctors detect conditions earlier, explore targeted therapies, and refine care approaches," said **Professor Tai E Shyong, Chief Medical Officer at PRECISE**. "Over time, as more gene-disease pairs are identified, greater awareness of how genes and genomic background can predispose some individuals to inherited conditions could encourage more preventive and timely healthcare, helping individuals make informed choices earlier. Insights from one patient's data could, in turn, guide better care for the next."

Building on strong foundations

Precision medicine is a key strategic priority initiated under Singapore's Research, Innovation and Enterprise (RIE) 2025 plan, and is recognised by the Ministry of Health as a key enabler of future-ready healthcare. **Professor John Chambers, Chief Scientific Officer at PRECISE**, said, "Singapore is uniquely positioned to lead precision medicine in Asia. Our multi-ancestry population, strong public healthcare and research infrastructure, and ability to integrate health and research data make it possible to generate insights that are clinically relevant for the Chinese, Malay, Indian and other Asian communities."

"We are working to apply recent biomedical advances to expand genomics' role in healthcare," said **Clinical Associate Professor Tan Ee Shien, Chief Innovation Officer at PRECISE**. "Together with our hospital partners and MOH, we are working systematically to assess clinical utility, population health impact, system readiness, and patient perspectives in more disease areas so as to guide these innovations through the appropriate pathways for clinical adoption."

To date, the NPM programme has sequenced over 100,000 Singapore citizens and Permanent Residents. It has driven innovation in screening and diagnosis, and positioned Singapore as a regional leader in genomics research and implementation. As Phase III begins, members of the public receiving care in public healthcare institutions may be invited to participate. By contributing to this study, patient participants can help **advance research that may shape future healthcare** for families and communities. Participation is voluntary, and all data collected will be securely stored and handled.