

From Lifespan to Healthspan:

Reimagining the Role of Longevity Clinics in Singapore

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Having practised hospital medicine, and now working in general practice and preventive medicine, I have seen both ends of the healthcare journey: the acute, often irreversible effects of advanced disease, and the underutilised potential of prevention and early intervention.

The healthspan imperative

At a time when Singapore faces an ageing population, increasing chronic disease prevalence and rising healthcare costs, the conversation must urgently move beyond lifespan – the number of years we live – to focus on healthspan – the years lived in good health, free from functional decline and chronic illness – instead.

While the average life expectancy in Singapore has surpassed 83 years, the health-adjusted life expectancy remains significantly lower. On average, Singaporeans spend the last eight to ten years of life managing at least one chronic illness, often accompanied by disability, dependency or cognitive decline. These final years are not only costly to the healthcare system, but also carry immense emotional, social and financial burdens for families and caregivers.

Chronic non-communicable diseases, such as type 2 diabetes, hyperlipidaemia, cardiovascular disease, hypertension, osteoarthritis, cancer and neuro-degenerative conditions, are often seen as inevitable consequences of ageing.

Yet, research increasingly suggests that many of these diseases are preventable or, at the very least, can be delayed. They share overlapping risk factors and biological pathways, including insulin resistance, chronic inflammation, mitochondrial dysfunction, sarcopenia and hormonal decline, all of which can be detected and addressed before the onset of clinical symptoms.

The core question is thus “how do we operationalise this knowledge in clinical practice?” How then do we do so in a way that is accessible, scalable and aligned with our broader healthcare goals?

The emergence of longevity clinics

Longevity clinics represent a new model of care – one that is proactive, predictive and personalised. These clinics provide in-depth risk stratification using advanced biomarkers, lifestyle assessments, diagnostic testing and, when indicated, the use of validated therapeutics (ranging from nutritional interventions to metabolic modulators). The aim is to prevent or delay disease onset, maintain physiological resilience and support healthy ageing at a cellular, metabolic and functional level.

Globally, however, many longevity clinics operate on a high-cost, concierge model, offering everything from full-body imaging to proprietary therapies.

These services, while sometimes innovative, often place longevity care out of reach for most patients and fall outside the scope of evidence-based guidelines. The perception that longevity medicine is only for the wealthy or biohacking elite has, understandably, limited its acceptance among clinicians, policymakers and the public.

My clinic’s approach has thus been to reframe and restructure this model for the Singaporean and hopefully, the global context, making it clinically rigorous, financially sustainable and aligned with population health strategies.

A clinically grounded, public-health-aligned model

We have a different philosophy to longevity. We take a tiered and modular approach and infuse it with primary care – this means that we provide acute as well as preventive care. Our entry point for longevity is a comprehensive health assessment. This includes an in-depth consultation and biomarkers such as fasting insulin, homocysteine and apolipoprotein B – each selected for its predictive value in chronic disease or ageing-related decline.

Based on the results, we co-create a health optimisation plan with the patient. This may include structured nutrition strategies, targeted supplementation, resistance and cardiovascular training,

and sleep and stress interventions. When indicated, we also explore pharmacological options supported by clinical evidence, such as metformin or statins. The need for other advanced diagnostics is also discussed with the patient. This empowers the patient and brings down the costs for longevity management.

Importantly, our goal is not to over-medicalise healthy individuals, but to identify and act upon modifiable risk factors before irreversible pathology develops. Every recommendation is grounded in research and adjusted based on longitudinal data.

Synergy with Healthier SG

The vision behind the Healthier SG initiative – anchoring patients with trusted GPs, promoting preventive health and shifting care from hospitals to the community – is both necessary and timely. We strongly support these goals and see our work as a complementary layer that can enhance and personalise the national strategy.

While Healthier SG provides essential population-wide services such as screenings, vaccinations and chronic disease follow-ups, our clinic focuses on the earlier slope of decline, before a diagnosis is even considered. Deeper biomarker panels, diagnostic assessments and preventive strategies tailored to the individual are used, often before abnormalities are picked up on standard testing.

We also share Healthier SG's commitment to continuity of care. Patients in our programmes are encouraged to remain connected to us, and where appropriate, we refer them back to their primary care and specialist practitioners for specific management. Our role is not to replace, but to **augment** healthcare systems, especially for those who wish to go beyond minimum health standards into the optimisation of energy, cognition, metabolic function and ageing trajectories.

This alignment with national objectives ensures that our version of longevity medicine remains grounded in Singapore's population health needs, not just market demand.

Expanding the framework of preventive medicine

If implemented at scale, the principles of longevity medicine could have transformative implications for healthcare planning and chronic disease management. Delaying the onset of type 2 diabetes, cardiovascular disease or neurodegeneration by even five to ten years could significantly reduce long-term healthcare costs, reduce hospital load, preserve workforce productivity and lessen caregiver burden.

That said, longevity medicine is not a magic bullet. It must work alongside primary care and public health initiatives. For this to happen, we need:

- 1. Guidelines and governance:** Clearer clinical frameworks for biomarker use, supplementation and therapy thresholds, tailored to the local population.
- 2. Professional development:** Upskilling GPs and specialists to integrate the use of preventive biomarkers into their everyday practice.
- 3. Data and evaluation:** Longitudinal data collection and outcome tracking to assess cost effectiveness and validate this model locally.
- 4. Public-private collaboration:** Greater integration between longevity clinics and Healthier SG GPs through shared records, coordinated care and joint planning.

Towards a future of extended healthspan

To my colleagues in general practice, endocrinology, cardiology, geriatrics and beyond: longevity medicine is not a fringe movement. It is a logical, science-based evolution of what many of us already do: prevent illness and stratify, optimise and personalise care. I invite us to engage in this space, not as sceptics, but as partners. Let us shape the development of longevity medicine together so that it integrates seamlessly with Singapore's healthcare vision and is accessible to all who can benefit, not just a privileged few.

Ageing is inevitable. But the rate and quality of ageing is increasingly

modifiable. By focusing on healthspan, addressing upstream drivers of chronic disease, and building a model of care that is accessible, affordable and aligned with national strategies, we can reimagine what it means to age in Singapore.

Longevity clinics, when designed with integrity and equity in mind, can serve not as luxury outposts, but as strategic partners in national health. The future of healthcare lies not just in adding years to life, but life to years. ♦

Further readings

1. Ministry of Health Singapore. *White Paper on Healthier SG*. 2022. Available at: <https://bit.ly/431Kquq>.
2. Department of Statistics Singapore. *Complete Life Tables for Singapore Population 2022-23*. Available at: <https://bit.ly/3EOkPvF>.
3. Kennedy BK, Berger SL, Brunet A, et al. *Geroscience: Linking Aging to Chronic Disease*. *Cell* 2014; 159(4):709-13.
4. Barzilai N, Crandall JP, Kritchevsky SB, Espeland MA. *Metformin as a Tool to Target Aging*. *Cell Metab* 2016; 23(6):1060-5.
5. Lopez-Otin C, Blasco MA, Partridge L, Serrano M, Kroemer G. *The Hallmarks of Aging*. *Cell* 2013; 153(6):1194-217.

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