

The Pareto principle in healthcare

As Singapore embarks on Healthier SG to drive better health for Singaporeans, the 80/20 rule can help focus efforts and resource maximisation. **By Dr Bryan Chow**

CELEBRATED Italian economist Vilfredo Pareto was credited with developing the 80/20 principle when he saw that 80 per cent of the land in Italy was owned by 20 per cent of the population. This concept continues to hold true in many industries.

Similarly, in seeking to prioritise and optimise the use of medical resources in the rollout of Singapore's 2022 white paper "Healthier SG", there should be a targeted approach in choosing which healthcare challenge to solve.

Launched by the Ministry of Health in 2022, Healthier SG promises a major transformation of the local healthcare system, and shifts the care from being reactive to proactively managing chronic disease conditions.

This is achieved via multi-pronged approaches ranging from co-opting primary care physicians, employers and community partners, to leveraging technology to deliver health consults and monitoring.

Healthcare expenditure continues to rise in Singapore.

Multiple studies have noted that 80 per cent of healthcare costs are consumed by 20 per cent of the populace, especially those with chronic conditions.

Given the expansive aims of Healthier SG, it is important to consider how the nation's limited healthcare and financial resources need to be streamlined to achieve the twin aims of better health outcomes with sustainable costs.

Targeting the highest impact chronic conditions

First, health efforts should continue to be directed towards chronic conditions where they would yield the most impact. This is best evidenced by diabetes.

One in three individuals in Singapore is at risk of developing diabetes in their lifetime, and if nothing is done, one million Singaporeans will be living with diabetes by 2050.

Poor control of diabetes leads to serious complications including heart disease, stroke and kidney failure – which translate to increased healthcare costs, productivity losses, and caregiver burden.

Fortunately, interventions at the early stage for diabetes can be undertaken by primary care physicians.

However, the role of medical practitioners is circumscribed for such lifestyle diseases. Efforts should be integrated with community partners ranging from fitness gyms, exercise programmes, dietary advice to ensure that we close the knowledge gap between early diagnosis and regular follow-up.

Whilst the long-term scope of Healthier SG extends to multiple conditions ranging from age-related osteoporosis to women's health, there should continue to be sustained efforts in addressing chronic conditions that have the highest social cost and disease burden in Singapore.



Mental health as the foundation to physical health

Recent efforts have been made at the national level to improve mental health awareness and support. Between 2013 and 2018, the rise in depression diagnosis in youth was greater than in the adult and elderly population. This is an emerging disease condition that demands attention.

Interestingly, mental health diagnoses occur more frequently in primary care settings. The 2016 Singapore Mental Health Study noted that economic burden tends to be higher for individuals suffering from mental disorders than those without. Moreover, rarely is depression a standalone diagnosis; and this is often associated with other medical issues such as hypertension.

Healthcare planners must continue to invest in mental health programmes that seek to improve screening and prevention outcomes. This achieves value-driven results by reducing the costs of mental disease burden on both individuals as well as caregivers, family members, and employers.

An ageing population in Singapore has seen a rise of elderly living with dementia with one in 10 above age 60 living with the disease. Current efforts within the community, including polyclinic memory clinics and allied health interventions help to reduce the downstream costs to the healthcare system.

Consider shifting away from 80/20: leveraging on existing resources

The bulk of healthcare in Singapore continues to be handled by the public healthcare sys-

tem, in particular the tertiary healthcare institutions. This is both manpower- and resource-intensive. Given the global shortage of nurses and the limitations in Singapore's resident adult workforce going forward, there is a need to achieve maximisation of existing healthcare professionals' expertise and efforts.

With Healthier SG, there is a strategic direction to bring primary care physicians into a team-based model within the various healthcare clusters. Internationally, healthcare is shifting from inpatient to outpatient. Today's inpatient is tomorrow's outpatient.

There should be continued efforts on the local population health front to harmonise primary care and investigations conducted in clinics physically away from the specialist centres.

Additionally, allied health practitioners from dietitians to occupational therapists can continue to step up and play a significant role in delivering health advice and care for patients who require intermediate and long-term care. The usage of technology, which was first widely adopted during the Covid-19 pandemic, has shown that virtual delivery of care is an enabler that combats resource limitations.

Telehealth can be an avenue for engagement for patients and primary care physicians with the aim of reducing after-hours direct emergency department referrals.

Finally, healthcare financing and funding reform remain important levers that healthcare policymakers can tap to achieve value-driven outcomes. The work of the Agency for Care Effectiveness and health technology assessment will be even more relevant as the pace of healthcare delivery picks up in the decades ahead.

The safeguarding of general population health with an eye on costs will ensure that Singaporeans continue to have access to the best medical practices internationally.

Conclusion

A confluence of rising patient expectations, health technological progress, and the rising costs of healthcare presents a challenge. Yet, this is also an opportunity to redefine healthcare in Singapore. Bloomberg's Global Health Index ranks Singapore's healthcare system as one of the most efficient in the world.

By focusing efforts on select few medical conditions, strategically investing in technology enablers, and co-opting community and social partners, Singapore is well poised to achieve Healthier SG goals of sustainable health – and not just healthcare – for all its residents.

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