Policy Report

Integration of Primary Care with Hospital Services for Sustainable Universal Health Coverage in Singapore

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Abstract—Primary care services have been developed and extended, with the support of the Singapore government, in order to address the increasing needs of the aging population and non-communicable diseases and to achieve the goal of universal health care. Though countries across the Asia Pacific aspire to achieve universal coverage, there is no set pathway. In Singapore, various service models, quality assurance methods, and financing mechanisms have been piloted and some have been scaled up. Significant effort has also gone into building links and establishing networks between hospitals and local primary care providers, including dental and allied health professionals. Several initiatives have also been introduced to support professional development, provide financial safety nets, and integrate and resource community clinics to provide family-oriented care. Social support has also been improved for isolated elderly through formalized networks linking government agencies, health providers, and community welfare groups.

Ongoing challenges include integration of private providers, maintaining affordability of out-of-pocket charges, resources to meet increasing chronic disease management needs, and achieving economies of scale to sustain universal health coverage (UHC).

INTRODUCTION

The adoption of Sustainable Development Goals (SDGs) by the United Nations in 2015 recognized universal health coverage (UHC) as one of the central health-related goals that all countries should work toward. UHC ensures that all people have access to essential health services that are needed, while being protected against high out-of-pocket (OOP) health care expenditures.
The World Health Organization recognizes that there is no one way to achieve UHC and that there are different pathways toward attaining UHC. There is a diversity of financing systems, with some adopting a tax-based system and others adopting a social health insurance system. Within all of these, there are certain quintessential elements of UHC—among others, a well-trained health care workforce, well-developed health care infrastructure, and a strong primary care sector.

Though Singapore has achieved top levels of UHC by international standards (rating over 80 on SDG 3.8.1 for essential health services coverage), one of the key concerns now is the ability to sustainably provide UHC for future generations in the face of population aging.

This article discusses the importance of a strong and integrated system of public and private primary care in achieving as well as sustaining UHC, drawing from Singapore’s experience. Physicians, nurses, and allied health professionals working in primary care play an important role in health promotion, disease prevention, and acute and chronic disease management, as well as serving both as a gatekeeper and gateway to specialist and hospital care.

ROLE AND IMPORTANCE OF INTEGRATED PRIMARY CARE FOR UHC IN ASIA

Asian countries will age far more rapidly than European countries. Using the definition that an aging society has a proportion of those aged 65 and above exceeding 7% and an aged society has a proportion exceeding 14%, France and Sweden took 115 years and 85 years, respectively, to move from an aging to an aged society. In contrast, for Asian countries, Japan took 25 years to make this transition, with Singapore and Thailand expected to make this transition in 22 years and Vietnam in only 19 years.

Because health care costs escalate with age and tend to be concentrated in the elderly, population aging will increase the health care financing resources necessary to provide UHC. The aging population also reduces the number of people in the working population who can rely on to finance UHC. In Singapore, the resident old-age support ratio will fall from 6.7 in 2012 to 2.6 in 2030 and 1.8 in 2060—in simple terms, effectively doubling and tripling, respectively, the financing burden over the next few decades.

Much of the health care burden is driven by complications arising from chronic conditions. The most recent National Health Survey reports prevalence rates among 18- to 69-year-olds of 11.3% for diabetes, 23.5% for hypertension, and 17.4% for high cholesterol levels, which are high risk factors for cardiovascular complications. Better management of these and other chronic conditions by primary care physicians can reduce the financial burden of disease arising from complications of these diseases. A strong primary care sector can also help triage patients and reduce patient care at emergency departments or tertiary hospitals. Primary care can also help raise health literacy and improve patient engagement and ownership for taking care of one’s own health, which in turn can improve health outcomes.

For primary care to be effective in delivering UHC, all health providers need to work closely together with acute hospitals providing tertiary care. A critical success factor in this process is the redefinition of the role and position of hospitals in the system. This requires a paradigm shift from hospitals being an “island” within the health system (albeit a highly skilled and well resourced island compared to other parts of the ecosystem) to be jointly responsible for the health and well-being of a population.

SINGAPORE’S HEALTH CARE SYSTEM

Singapore’s health care system has been able to achieve good outcomes at comparatively low levels of health care expenditure, with national healthcare expenditure at 4.3% of gross domestic product in 2016. Singapore was ranked first in healthy life expectancy at birth and also ranked second using health-related measures in the SDGs.

Achieving independence in 1965, Singapore inherited the British National Health System with public provision of acute inpatient services and primary care services provided largely through private general practitioners (GPs), along with a smaller share provided by government-run outpatient dispensaries. One of the key lessons in Singapore’s attainment of UHC is the recognition of the importance of infrastructure, service quality, and manpower development. Another key lesson is the importance in pursuing health in all policies and the need to adopt a whole-of-government approach in developing and implementing these policies.

The key focus in the 1960s and 1970s was enhancing social determinants of health through the provision of public housing, clean water, improved sanitation, and good education, combined with better nutrition to improve the health status of the population coupled with public health initiatives such as immunization programs. Polyclinics—one-stop primary care clinics—were introduced in the 1970s. In the 1980s, tertiary services were expanded with the building of new hospitals and establishment of national specialist centers.
Despite Singapore’s success in achieving UHC, the Ministry of Health (MOH) recognizes that UHC is an ongoing endeavor and has called for a “3 Beyonds” strategy of going beyond health care to health, hospital to community, and quality to value. First, there is a need to go beyond the delivery of health care services to improving the health of individuals through wellness and prevention programs. Second, there is a need to move more of our care to the community, home, or primary care setting. Third, beyond increasing the quality of care, we need to ensure that there is value for money in our health care expenditures and investments.

Primary care plays a critical role in all three strategies. Primary care is important in strengthening both prevention and chronic disease management, thus enabling the shift of focus from health care services to health and transferring the nexus of care from hospitals to the community. Given that primary care interventions largely cost less than interventions in specialist settings with comparable outcomes for appropriate cases, shifting more of such care to primary care is part of the move beyond quality to value.

SINGAPORE’S PRIMARY CARE SYSTEM

The private sector plays a dominant role in primary care, with more than 1,500 private clinics offering primary care services. The majority of these clinics are solo practices. They are complemented by 20 polyclinics, operated by the public sector, and distributed throughout the island. Polyclinics are multi-doctor (usually more than 10) clinics that provide a comprehensive range of services for the family, functioning as a one-stop center for acute and chronic disease management (including maternal and child health care) through physician-led, team-based care; health education; immunization; and diagnostic and pharmacy services. Some also provide dental, psychiatric, and allied health services. Polyclinics provide 20% of primary care services overall but provide a larger percentage of care for patients with chronic diseases, especially those with more complex conditions. These patients are drawn to the polyclinic because they receive good care with comprehensive services at highly affordable rates (polyclinic consultations, medications, and related services are highly subsidized, especially for the elderly). Referrals from polyclinics to specialist outpatient clinics (SOCs) in public hospitals are also accorded subsidized status. In contrast, there have been few subsidies until recently, at private GP clinics, and GP referrals to the SOC are treated as private (therefore unsubsidized) patients. As a result, polyclinics are challenged by high patient volumes.

Over the years, the MOH has launched several initiatives to address the challenge of high volumes in public polyclinics and SOCs by tapping into the capability and capacity of private GPs. This included reducing OOP payments for GP patients (especially for chronic disease management), providing support services for GPs to mirror the services that are available in polyclinics, and educating the public on the
benefits of seeing their primary care provider before utilizing specialist services.

The Chronic Disease Management Program (CDMP) was launched in October 2006 for diabetes, hypertension, lipid disorders, and stroke. It involves structured, evidence-based disease management programs, with an option for patients to draw on their MediSave to help reduce OOP payments for outpatient treatment required in the management of their chronic disease at participating clinics. It was later expanded to other conditions (including mental health conditions) and now a total of 19 chronic diseases are covered under CDMP. Under this program, participating clinics/medical institutions are expected to provide care to patients in line with the latest MOH clinical practice guidelines and/or best available evidence-based practice, as well as to track clinical data at the patient and clinic/medical institution level to monitor patient outcomes. Clinical data submission is required for six of the conditions under CDMP and essential care components are expected to be documented for the other conditions and may be subjected to periodic audits.\textsuperscript{13}

CHAS, formerly known as the Primary Care Partnership Scheme, was introduced in 2012 to enable lower- to middle-income Singapore citizens to receive subsidies for medical and dental care at CHAS GPs and dental clinics.\textsuperscript{14} Since its introduction, chronic conditions included under CHAS and CDMP have been kept the same, allowing CHAS to complement CDMP. Eligible patients with selected chronic conditions are thus able to enjoy CHAS subsidies, as well as tap into MediSave for outpatient treatment of their chronic conditions. The number of CHAS GP clinics has grown from 550 clinics in 2012 to over 1,000 clinics in 2017.

As the benefits of early detection are realized with proper subsequent management to avoid unnecessary complications, the MOH enhanced the Screen for Life program in 2017 to encourage more Singaporeans to undergo recommended health screenings and have the necessary follow-up with their GPs. Under this program, eligible Singaporeans can access subsidized screening for cardiovascular risk, screening for colorectal and cervical cancer, and one postscreening consultation (as needed) at a fixed low fee at CHAS GP clinics, as long as they meet the requirements based on age and screening frequency.

As part of the effort to site care in the most appropriate setting, the GPFirst program was introduced at Changi General Hospital in January 2014. GPFirst aims to encourage patients with nonemergency conditions to seek treatment from GPs rather than in the emergency department (ED). Patients assessed by participating GPs as subsequently requiring ED care are given a $50 subsidy to offset the patient’s ED bill. The program helped to reduce nonemergency cases seen in Changi General Hospital ED, thus enabling the ED to attend to patients with more urgent and serious conditions in a timelier manner.\textsuperscript{15} The success of the scheme has led to the decision to extend it to more public hospitals in 2018.

The MOH also introduced several other strategies, including financial support to enable private GPs to come together to set up family medicine clinics, which are private primary care clinics with two or more GPs, and co-located supporting services. MOH also set up community health centers to provide services such as diabetic foot and eye screening to support solo GPs, who may not have the economies of scale to provide such services by themselves.

One of the latest initiatives is the scaling up of primary care networks (PCNs) in 2018 (which was piloted in 2012), with eight new PCNs joining two existing PCNs, with a total of 340 GP-participating clinics. The MOH introduced the PCN scheme to encourage private GP clinics to organize themselves into networks to achieve economies of scale and optimize resources to deliver more holistic care in a team-based care model. Under the scheme, patients will receive care through a multidisciplinary team (including doctors, nurses, and primary care coordinators) for more effective management of their chronic conditions. Patients are also able to access additional ancillary and support services provided by the PCN. These include diabetic foot and eye screening, as well as nurse counseling, which are important for good management of chronic conditions.\textsuperscript{16}

The PCN scheme is part of the MOH’s strategic shift to move care beyond the hospital to the community, so that patients can receive effective care closer to home, with the MOH providing funding and administrative support. The PCN scheme also provides participating GPs a platform for cross-sharing of best practices for patient care. In return, GPs participating in the PCN scheme need to adhere to stipulated clinical requirements designed for effective care to patients.\textsuperscript{17}

Concurrent with efforts to enhance the private GP sector, the MOH continues to build new polyclinics and refresh existing ones to evolve the polyclinics according to changing care needs. One of these initiatives is the establishment of family physician clinics within the polyclinic to provide more holistic management of patients with chronic diseases such as diabetes, hypertension, ischemic heart disease, stroke, and asthma. Patients in these clinics are seen by appointment and their care is coordinated and managed by a designated senior doctor and care team that includes nurses and allied health professionals to ensure continuity of care.
For patients who require shared care with specialists, polyclinic doctors are working closely with the public hospitals to co-design care protocols that provide holistic and more seamless care for patients with complex conditions. Direct access for advanced diagnostic services in gastroenterology, cardiology, and physiotherapy services for orthopedic patients have also been effected between polyclinics and public acute hospitals. New care models such as the development of a geriatric service hub, made up of a co-located family medicine clinic, community health center, and senior care center in an integrated complex, are also being developed.18

To ensure that care is integrated, the MOH reorganized the health care delivery system into three regional health systems to catalyze this transformation with the aim of managing the health of the population and also improving the health of the population.19 This decentralization has allowed providers to innovate and leverage on the capabilities of other institutions within each system in improving service provision as well as to be more responsive to the health needs of their respective populations. In addition to closer collaboration between public and private primary care, public institutions in each regional system work closely with other players in the broader health and social ecosystem. To this end, the government has set up the Community Network for Seniors to enable more systematic collaboration between government agencies, regional health systems, and community-based stakeholders (such as voluntary welfare organizations and grassroots organizations) and to leverage each other’s strengths and resources to jointly engage and support seniors in the community. The objectives of the Community Network for Seniors are to promote active aging among seniors to keep them well, extend befriending services to seniors living alone, and link up health and social support to care for seniors with needs.

CONCLUSION

The key challenges of an aging population, increasing burden of chronic diseases, and system sustainability have required these changes in the service delivery system toward integration of hospital- and community-based services, as well as developing networks with other health and social providers, including enabling the private sector to play a meaningful role in health care provision for Singaporeans. Ongoing challenges include further scaling up of successful pilot models, enhancing jobs and skills to build a future-ready health care workforce, raising productivity, catalyzing innovation,20 and maintaining affordability of OOP charges.

One further challenge is the lack of quantitative evidence to support the cost-effectiveness of these initiatives. Our review of the literature turns up few studies.21–23 This may be due to the difficulties in conducting studies on the effectiveness of primary care interventions, due to their multi-dimensional nature and the longer time horizon, to show impact compared to acute care. Without such evidence, however, it would be challenging to justify funding for such initiatives. There is thus a need for more well-constructed studies using quantitative and qualitative methods and involving social and behavioral scientists as well as more traditional medical researchers.24

Nevertheless, we believe that there are several lessons from Singapore’s experience that other countries could find helpful. First, our experience illustrates the importance of ensuring sufficient resources flow into the development of primary care, even as countries invest in building up their acute hospitals. Very often, there is underprovisioning for primary care, because investments in expensive tertiary care are more visible and easily justified. Second, one of our key lessons is the need to work with both public- and private-sector practitioners, in the context of a hybrid health care delivery system, in delivering primary care, because public sector capacity alone is usually insufficient to fully meet the needs of the community. Lastly, Singapore’s experience highlights the need to create the organizational structures to facilitate primary care institutions and hospitals to work together.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

No potential conflict of interest was reported by the authors.

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