Editorial

Population-based Healthcare: The Experience of a Regional Health System

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Introduction

Asian populations are experiencing a much faster rate of ageing compared to western countries.[1] Western countries such as France and the United States took 115 years and 69 years respectively for the percentage of population aged 65 years and over to rise from 7% to 14%. In contrast, it is projected that countries such as South Korea, Singapore, Thailand and China would experience this increase within a much shorter time frame of 18 to 26 years. In Singapore, the percentage of population aged 65 years and over is projected to increase from 8.4% in 2005 to 18.7% in 2030.[2] Accordingly, the period that Singapore has to respond to the demands of a rapidly ageing population in terms of socio-cultural changes and healthcare system is much shorter.

Singapore has a healthcare system that is ranked highly internationally in terms of performance and efficiency. It was ranked sixth for health system performance in the World Health Report 2000[3] and first in the Bloomberg second annual ranking of countries with the most efficient healthcare.[4] A key contributing factor is Singapore's continued investment and development of the healthcare system. In response to the increasing demand for healthcare, the government health expenditure has increased by 46% from $4.1 billion in 2011 to $6 billion in 2013.[5]

With a rapidly ageing population, there will be more frail older persons with chronic diseases living in the community. There will be a need to support these older persons in terms of healthcare services and social support to live independently in the community. Similarly, there will be a need to engage them in advance care planning and support them in end-of-life care. It is imperative to shift from an acute hospital centric model of care to a population-based approach where the healthcare services that a person needs across different settings are well-planned and coordinated.

Development of Regional Health Systems

In 2000, the public healthcare institutions in Singapore were organised into 2 healthcare clusters—SingHealth and National Healthcare Group. The aim was to allow better integration of public health institutions such as polyclinics, acute hospitals and national specialty centres. This allowed the competition to shift from being between individual institutions to integrated networks. However, the limitation of the 2 cluster systems was that it included only public sector institutions which might not have necessarily corresponded to the way patients accessed healthcare services. It was also constrained in addressing healthcare at the population level as some key stakeholders (e.g. general practitioners (GPs) and voluntary welfare organisations) were not included.

The Singapore healthcare system further evolved with the formation of 6 regional health systems (RHS). Each RHS was responsible for the population in a region. The aim was to move from episodic to patient level care; from providing healthcare services to also keeping individuals in good health; and from interventions at individual level to also include systems level interventions focussing on population health. This necessitated close partnerships and collaboration beyond the public health institutions to also include voluntary welfare organisations and private healthcare providers in particular primary care providers.

Eastern Health Alliance and Changi General Hospital

The Eastern Health Alliance, the RHS for the population in eastern Singapore, was officially launched on 18 November 2011. Amongst the 6 RHS, the Eastern Health Alliance is unique in its formal partnership with a range of healthcare organisations each with a specific focus along the healthcare continuum. These foundation partners are Changi General Hospital (CGH), Health Promotion Board, St Andrew's Community Hospital, SingHealth Polyclinics and the Salvation Army Peacehaven Nursing Home. Each of these organisations is independent as only Changi General Hospital is owned by the Eastern Health Alliance. They have joined together with the shared purpose of providing seamless integrated care in the east. This in turn provided for the close partnership between the management and operations teams of the various organisations.

The Eastern Health Alliance takes a population health approach in the development and delivery of health services in the eastern region of Singapore which has a population of more than one million residents. At the RHS HQ level, the Eastern Health Alliance has a convenor and coordinating

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role. This is analogous to being the conductor of an orchestra. It analyses and understands the profile and healthcare needs of specific populations and local communities; it identifies partners, resources and assets in the community; and it coordinates programme delivery, link partners and where necessary develop new services. This allows residents in the east to have access to a comprehensive range of services across the healthcare continuum that is coordinated by the RHS HQ in collaboration with its partners.

Community-led initiatives such as the Naturally Occurring Retirement Communities[6] and the Village model[7] have an important role in facilitating ageing-in-place. Learning from these initiatives, the Neighbours for Active Living programme was set up by the Eastern Health Alliance in partnership with the South East Community Development Council (SE CDC) in July 2013. This programme supports patients with high medical and social needs who are living in the east. It has a team of social work professionals and para-professionals who assess and ensure that clients receive the support services that they require. The programme is unique in several aspects. Firstly, the community care team is embedded in the community. Each team is sited full time in a local community where they support clients living in the area and work closely with the organisations sited there. An added advantage of this is that they also serve as "sensors" in the community to detect and help those who may not step forward to seek assistance. Secondly, there is close participation by the community. The SE CDC organises the Friend-a-Senior programme to engage and train residents in the community to be volunteer befrienders. With the strong support from the community, clients can continue to be monitored and follow-up longitudinally by the RHS for as long as they require it. Thirdly, the programme bridges both the health and social needs of the client. Since the launch of the programme, more than 1000 clients have been enrolled in the programme.

Within this ecosystem, the hospital is a very important component. It is an expensive resource but it can be a cost-effective resource if used appropriately. CGH has defined its role in the healthcare ecosystem to focus on 4 key thrusts. Firstly, it is to save lives through timely intervention. The hospital still remains the most appropriate place to manage patients with acute conditions such as myocardiac infarct, stroke and serious trauma that require complex investigations and interventions. Secondly, the hospital plays a critical role in restoring functionality by mitigating the deconditioning effects of hospitalisation and illness. The aim is to present patients in as good a condition as possible within as short a time as possible to our partners in the community to continue the recovery process. For example, operating to fix fragile hip fractures within 48 hours accompanied by active rehabilitation has been shown to improve functional status of patients (and also reduce use of resources and saving costs).[8] Thirdly, with the increasing capability of primary care providers, outpatient care at the hospital should focus on patients with complex medical conditions requiring multidisciplinary, multispecialty care. Fourthly, CGH also serves as a resource for the Eastern Health Alliance and its partners. For example as part of the GPFirst programme, there is a 24/7 hotline for GPs on the programme to discuss cases with the emergency department consultant if necessary.

It is critical for the hospital and RHS to work in tandem and collaboratively to meet the needs of the population—complementing and leveraging on each other's strengths to ensure that individual and systems/population perspectives are addressed.

Conclusion

The setting up of the RHS has allowed for a population-based approach to healthcare. It has led to a healthcare system that is more responsive to the needs of our population. It takes into account the life cycle stages and needs of the patient and their caregiver as an important factor. For example, the needs of a single young adult may be different from a married person with young children even if they have the same medical condition. Finally, it has allowed us more options in considering the patient experience and to address what matters to the patient even as we manage issues such as compliance with treatment.

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