Expanding the role of community hospitals to promote population health in Singapore

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The Lancet Regional Health - Western Pacific 2025;55: 101477

Published Online xxx https://doi.org/10.1016/j.lanwpc.2025.101477

Summary

Population health encompasses health outcomes, their determinants, and the distribution within the group of individuals. A life course approach, involving residents regardless of health status and disease complexity, and addressing their needs holistically and contextually is a key policy for improving population health. Healthier SG represents Singapore's transformation towards population health. Under this initiative, Singapore's three healthcare clusters have been tasked with new roles as population health managers and regional health managers, on top of being healthcare service providers. We propose that beyond intermediate and post-acute care, community hospitals, as service providers, have an opportunity to (a) innovate new models of integrated and appropriate care, (b) adopt life-course approaches which include prevention and end-of-life care extended to community settings, (c) strengthen person-centred and holistic care approaches through social prescribing, (d) lead capability building and sector development for person-centred care, and (e) galvanize the health-social care ecosystem.

Keywords: Community hospital; Population health; Person-centred care; Life course; Healthier SG

Introduction

Singapore's public healthcare system comprises three regional health systems which are managed by three distinct healthcare clusters. Each cluster consists of acute hospitals (AH), community hospitals (CH), day surgery centres, specialist outpatient clinics, and public primary care clinics. Clusters also work with private health and social care providers in their jurisdiction including general practices, senior care centres and nursing homes. They are responsible for the health and wellbeing of their population and provided with an annual capitated sum to do so.

The first CH in Singapore was established in 1992, with nine more built since. They account for 22,000 admissions (~4.5% of all public acute hospital admissions) per year.[1] Over the years, CH governance structures and physical locations have evolved. Earlier CHs, managed by private charities, were built separate from AHs. Subsequent CHs, integrated within clusters and co-located with AHs, fostered closer partnerships and enhanced capabilities. However, the core mission of CHs has remained unchanged: to fulfil national needs as an intermediate inpatient facility for patients requiring time-limited continuing convalescent care following stabilisation of acute, specialist care needs in an AH setting.[2] CHs play a pivotal role in rehabilitative and sub-acute care, enabling patients to return home and resume daily activities more swiftly. This mirrors the functions of a traditional inpatient rehabilitation facility model,[3] but with an added service of generalist-led care for patients who have clear diagnoses and need continuation of treatment follow an acute hospital stay, such as intravenous antibiotics or complex wound care. Many patients who are admitted to CHs would therefore be older, frail and have concomitant psycho-social issues, making them harder to reach.

Singapore's population is rapidly ageing, with one in four citizens aged 65 years and above by 2030.[4] The concomitant increase in prevalence of multi-morbidity and health-social complexity has resulted in substantial strain on AH resources, and indeed the whole health system. Population health refers to the health outcomes of a group of individuals, the determinants of health, and their distribution within the group.[5] Accordingly, a life course approach, involving residents regardless of health status and disease complexity to address their needs holistically and contextually is a key policy to improve population health.[6] Healthier SG, launched in July 2023, represents a national transformation towards

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population health, emphasizing preventive care and chronic disease management anchored by longitudinal relationships with family physicians and communities of care which support residents from birth to death, and across health and social care domains.[7] Under Healthier SG, Singapore's three healthcare clusters have been tasked with new roles as population health manager and regional health manager, on top of being a healthcare service provider.[7]

Healthier SG has provided the impetus for a relook at the role of CHs as a service provider within the health ecosystem, to improve population health outcomes. While the core function of the CH as an intermediate, post-acute care setting remains, we propose that CHs can (a) innovate new models of integrated and appropriate service provision for continuity of care, (b) adopt a life-course approach which extends broader and deeper into prevention and end-of-life care including in community settings, (c) strengthen person-centred and holistic care approaches through social prescribing, (d) lead capability building and sector development for person-centred care, and (e) serve as a key node to galvanize the health-social care ecosystem. Herein, we exemplify the good directions, principles and efforts in early stages of implementation at small scale or in single institutions, which can serve to inform a future, coordinated direction for CHs in Singapore.

New models of integrated and appropriate service provision for continuity of care

Local studies have shown that subsets of medical and post-operative patients can be right-sited to a lower acuity setting during their AH stay, and certain patients may only require sub-acute or rehabilitative care and can be directly admitted from the community.[8–11] Several focus areas have been worked upon by the Ministry of Health (MOH), MOH Office for Healthcare Transformation, clusters, AHs and CHs to improve patient flows and appropriately site patients for continuity of care. First, to avoid AH admissions by expanding existing and future inflow sources direct to the CHs from nursing homes, primary care, specialist outpatient clinics, and emergency departments. Second, earlier transfers or "green lanes" for AH inpatients, initially for well-defined, high impact conditions such as stroke and hip fracture but subsequently expanding to the larger population consisting of sub-sets of general medicine and geriatric patients. Finally, promoting early supported discharge in partnership with community care providers.

Enhancements to these flows will require innovative care models that leverage technology, telemedicine, and greater collaboration across care settings and disciplines. For example, allied health capabilities may be leveraged to deliver specialized, evidence-based and technology-enabled rehabilitation including virtual reality and gamification, in support of efficient in-hospital care, and appropriate care in the community.[12,13] CHs will also need to be resourced with adequate manpower and to have access to premise-neutral subsidised investigations, some of which includes advanced imaging, and premise-neutral subsidized post-discharge community care. Such funding considerations must be balanced at the cluster level, to be overall cost-saving to the system within a capitated budget. There may also be workforce challenges, given salary differentials between AH and CH settings and expectations related to work-life balance.[14] System level changes to tackle these issues are ongoing, including recognition of Family Medicine as a specialty,[15] launch of a Hospital Clinician scheme for doctors,[16] broadening foreign nurse hiring sources and introducing new retention schemes.[17] Importantly, several domains of clinician capability building include the implementation of protocolized care pathways, cross-sectorial training and job rotation, multidisciplinary and shared patient care, understanding the health-social ecosystem, addressing social determinants of health, and person-centred care education. When in place, CHs stand ready to "step up" and take on this higher complexity of subacute medical and surgical patients, through an upskilling of the professional healthcare workforce and sufficient national policy support.[14]

Expanding care across the life-course to include prevention and end-of-life services

Looking upstream, CHs can immediately do more to enhance primary, secondary, and tertiary prevention for their patients by providing opportunistic age-appropriate and evidence-based vaccination, screening and referral, and goal-directed rehabilitation of function respectively. For example, the national influenza and pneumococcal vaccination rate among elderly in 2021 is only 32% and 22% respectively.[18] One area of renewed focus is community-based screening for frailty, and direct referral to CHs for intensive multi-disciplinary rehabilitation and stabilization for a subset of patients for which frailty may be reversible. Pre-operative rehabilitation is also well documented to improve surgical outcomes, and can be considered as an inpatient CH service, or a CH-supported service in the community depending on the intensity of rehabilitation requirements and patient and caregiver considerations.[19] These efforts should dovetail with Healthier SG to facilitate integrated care processes between CHs and primary care providers. Close partnerships can be developed as an extension of cluster—primary care provider governance and collaboration structures.

CHs currently provide inpatient hospice and palliative care services. In support of the National Strategy for Palliative Care,[20] we propose that CHs play a significant role in enhancing end-of-life care with choices and

dignity, through increasing the uptake of good quality Advance Care Planning,[21] which could first focus on higher needs groups such as those in nursing homes or have a Clinical Frailty Score of ≥6. This can be enabled by standardization of workflows, and awareness and training of healthcare professionals, spanning doctors, nurses and allied health professionals—to embark on Advance Care Planning conversations.[22] To improve access to palliative care services aligned to patients' needs and wishes, CHs can facilitate direct admissions into the CH from community palliative care services, build up the capabilities of nursing homes to co-manage patients through case discussions, tele-consultation, education and training, and adopt the Singapore Hospice Council compassionate discharge workflow.[23] Finally, CHs can foster an ecosystem of palliative care by partnering with end-of-life community care providers. One example is the Hospice Care Association Oasis@Outram Day Hospice which is co-located with Outram Community Hospital.[24] Beyond physical co-location, this relationship can leverage shared usage of facilities, streamlined direct admission pathways and research.

Person-centred and holistic care

Person-centred care is well established as a central principle in population health.[25] With the aforementioned demographic shifts, patients who need CH admission are now more medically and socially complex, and often had sustained significant health shocks that necessitated substantive health-social care interventions. An approach which harnesses shared decision-making, care integration and coordination, compassionate communication and an accepting environment, thereby empowering patients and caregivers to co-produce care, should be adopted for this group to improve their outcomes and reduce costs.[26,27] Any CH model of care enhancement must therefore be undergirded by a person-centred care philosophy to deliver care which optimizes the physical, mental, emotional and social aspects of health and wellbeing more effectively.

CHs can engage in person-centred care planning and social prescribing to address the social determinants of health by connecting a person to assets within their community, taking advantage of their longer duration of stay in the CH compared with AHs.[28] For this to work, patients admitted to CHs can be screened for social determinants of health. Those who require support may be enrolled into a programme which engages patients in wellness activities both during their inpatient stay and after discharge back home. Patients and their caregivers should also be educated and empowered to take charge of their health, including shared decision making and efficacy in self-care. To lessen the burden on existing healthcare staff, this approach could also rely on dedicated well-being coordinators (WBCs) and an ecosystem of community care providers (CCPs), coordinated by CH physicians, to identify and support patients in meeting their health and social needs.[29] Locally, social prescribing has been adopted and is being evaluated.[30] A structured competency framework and formalization of career pathways for this group of WBCs will support the sustainability of this model.

Capability building and sector development for person-centred care

To enable the spread of social prescribing practices, the SingHealth Community Hospitals Office of Learning (SCHOOL) was launched in 2019 to train health, social and CCPs across Singapore on social prescribing.[21] The Singapore Community of Practice in Social Prescribing (SCOMP) was also established in 2023 to spark an intersectorial and inter-disciplinary ecosystem to drive ground-up approaches, foster collaboration and innovation to promote social prescribing. These centres can support person-centred care training, which is supported by government co-funding, for healthcare and social sector workers.

Key node in the health-social ecosystem

CHs are well placed as a key node between AHs and primary and community care settings. CHs currently hold multi-disciplinary meetings with joint discharge planning with CCPs. However, more can be done through an ecosystem effort between CHs, AHs, primary care, CCPs, government agencies, Institutes of Higher Learning, private enterprises and start-ups in healthcare and social sectors. WBCs must be able to cut across the various sites of care, to streamline care plans and deliver seamless coordination for the patient. Shared care, which is the joint participation and accountability of various care providers across settings and disciplines, including the patient and their caregivers, in care delivery, is also necessary.[31] Finally, common health and social integrated pathways with both upstream (between AHs and CHs) and downstream partners (between CHs and primary care providers and CCPs) should be co-developed with all stakeholders to facilitate this.

Holistic care requires seamless health-social care integration, and data and IT systems should accordingly allow better flow of patient data to various sites of care and care providers. Secure health information exchanges with select healthcare institutions' electronic medical record data, such as admissions, outpatient appointments, and care plan information can be useful to WBCs for streamlining care, and CCPs in delivering care. System level facilitators include the upcoming Health Information Bill which provides a framework for cross-institutional sharing of data,[32] a common electronic medical record system, and National Electronic

Health Record, which will be rolled out across all public and private healthcare institutions.[33] Similarly, the wealth of information on social determinants of health accumulated through longstanding relationships between CCPs and residents should be made readily available to clinicians, in a structured format. One Care Plan is an early example of this effort, which can be built upon in national systems.[34] These efforts can reduce duplication of work and enhance integration across care providers.

Conclusion

Singapore's pivot towards population health with a focus on addressing the complex health-social needs of an ageing population provides an impetus for the roles of CHs to be re-evaluated. CHs are home to a wealth of general physician, nursing and allied health capabilities anchored on care for elderly patients, with deep ties with AHs, primary care, and the community. CHs also have access to cluster clinical care, education, and research resources. We propose that community hospitals have an opportunity to (a) innovate new models of integrated and appropriate service provision for continuity of care, (b) expand care across the life-course to include prevention, care beyond hospital into the community and end-of-life, (c) strengthen person-centred and holistic care approaches through social prescribing, (d) lead capability building and sector development for person-centred care, and (e) serve as a key node to galvanize the health-social care ecosystem.

Looking ahead, CHs must be supported to perform these expanded functions through tailored strategies to address frailty, palliative care, and supporting young seniors in ageing well and in place, in alignment with Healthier SG. The health system should also move beyond the institution-specific measures to measuring person-centric outcomes including function, wellbeing, and the meeting of health and social needs that is aligned with a life-course journey approach. Aligning incentive frameworks would be a critical enabler to changing existing paradigms in healthcare services delivery.

Contributors

KW Teo wrote the first draft of the manuscript. All the authors contributed equally to conceptualization, reviewing and editing of the manuscript.

Declaration of interests

We declare no competing interests.

Acknowledgements

This paper received no funding.

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