COMMENTARY

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Re-examining the roles of generalists and specialists in healthcare

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ABSTRACT

Increasing workload and case complexity of a multimorbid ageing population have catalysed primary care transformation for general practitioners to meet these challenges. There is also a need to re-examine the role of hospital specialists as overly disease-centric, hospital-based specialist care is no longer sustainable. A new specialist-generalist model can maximise the potential of generalists and specialists to provide person-centred care, increase cost-effectiveness, improve appropriateness of referrals, decrease length of hospital stay and lower mortality.

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Singapore is one of many Asian countries facing the challenge of an ageing population. Its population grew from 1.65 million to 5.45 million from 1960 to 2021. By 2030, 25% will be aged 65 or older.[1] Meanwhile, the proportion of older adults with three or more chronic diseases nearly doubled from 2009 to 2017.[2] While increasing workload and case complexity have challenged general practitioners (GPs) and catalysed primary care transformation, there is also a need to re-examine the role of hospital specialists.

Specialisation has advanced medical science since the 19th century.[3] Grouping populations with similar diseases and organ involvement has allowed doctors to promote research and efficiently master domains. In its first 3 decades post-independence, Singapore's health policy and funding catered to the growth of specialist-led hospitals and national centres.[4] Correspondingly, public attitudes increasingly swung towards specialist as opposed to generalist care.

However, overly disease-centric, hospital-based specialist care is no longer sufficient or sustainable.[5] Patients with more than 1 comorbidity, who are increasingly the norm, are now referred from one specialist to another specialist, with several consequences including lack of clear clinical accountability, long referral wait time, care fragmentation and polypharmacy. Greater inconvenience and higher bills are incurred by patients from more visits to specialist outpatient clinics. For the healthcare system, manpower and financial sustainability is challenged by the need for more specialists, and the associated supporting staff and clinical spaces.

Will generalists be able to fill the gap? Generalists are typically defined as physicians who provide care to patients as a whole unit irrespective of age, sex and illness; they include GPs, paediatricians and internists who largely practise in the community.[6] This article describes hospital-based specialist-generalists who are arbitrarily divided into 2 broad groups: (1) advanced internal medicine (AIM) physicians, geriatricians and family medicine physicians, who receive broad-based training; and (2) all other specialists with an internal medicine (IM) background, e.g. nephrologists, endocrinologists, etc. (Fig. 1). Both groups are better able than other non-IM physicians to handle medical conditions beyond their own specialties because of their background training. All IM specialists in Singapore today are required to complete 3 years of IM junior residency before entering 2–3.5-year senior residency programmes. These senior residency programmes then mandate an additional 6 months of general medicine

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(GM) and geriatrics rotations. Meanwhile, the 2-year AIM senior residency programme specifically provides further honing of IM competencies. While the specialist-generalist care concept may in the future apply to non-IM disciplines like surgery, this commentary is limited to IM and family medicine physicians in hospitals, for whom such a concept is more readily achievable.

At present, various care models exist in Singapore. Tertiary hospitals' inpatient and outpatient activities are primarily specialist rather than generalist-driven. Non-tertiary regional hospitals tend to admit more patients under GM, an umbrella term used for the care of patients not assigned to specific specialties. While GM is ideally covered by AIM, only 138 of Singapore's 15,430 medical practitioners were IM-accredited in 2020.[7] Thus, non-AIM medicine specialists also provide care in GM. Separately, outpatient care in most hospitals remains largely helmed by specialists who narrowly focus on their own expertise.

Is generalist or specialist care better? While comparison between generalists and specialists has been a subject of interest, there is a scarcity of literature on specialist-generalists, with most studies having evaluated primary care physicians as generalists. The validity of these studies is often questionable due to selection and publication biases. In a systematic review, 24 of 49 studies suggested better outcomes with specialists and only 4 studies suggested that generalist care was superior.[8] The studies were mostly observational and involved discrete diseases. It is unsurprising that specialists fare better in their domain expertise, just as they may better master procedural skills and adhere to disease-specific guidelines.

In contrast, some studies have reported generalists outperforming specialists in managing certain conditions. One demonstrated lower resource use by older adults with diabetes who were managed by a primary care physician instead of a medical specialist.[9] In a Singapore retrospective study, inpatients cared for by family physicians as generalists had shorter lengths of stay and lower costs than those cared for by specialists managing general medicine inpatients, with equivalent outcomes in hospital mortality and 30-day all-cause unscheduled readmissions.[10]

Existing research has generally failed to evaluate indicators of quality of care for the patient's whole journey, across conditions and settings. While specialists tackle fewer new complaints and focus less on

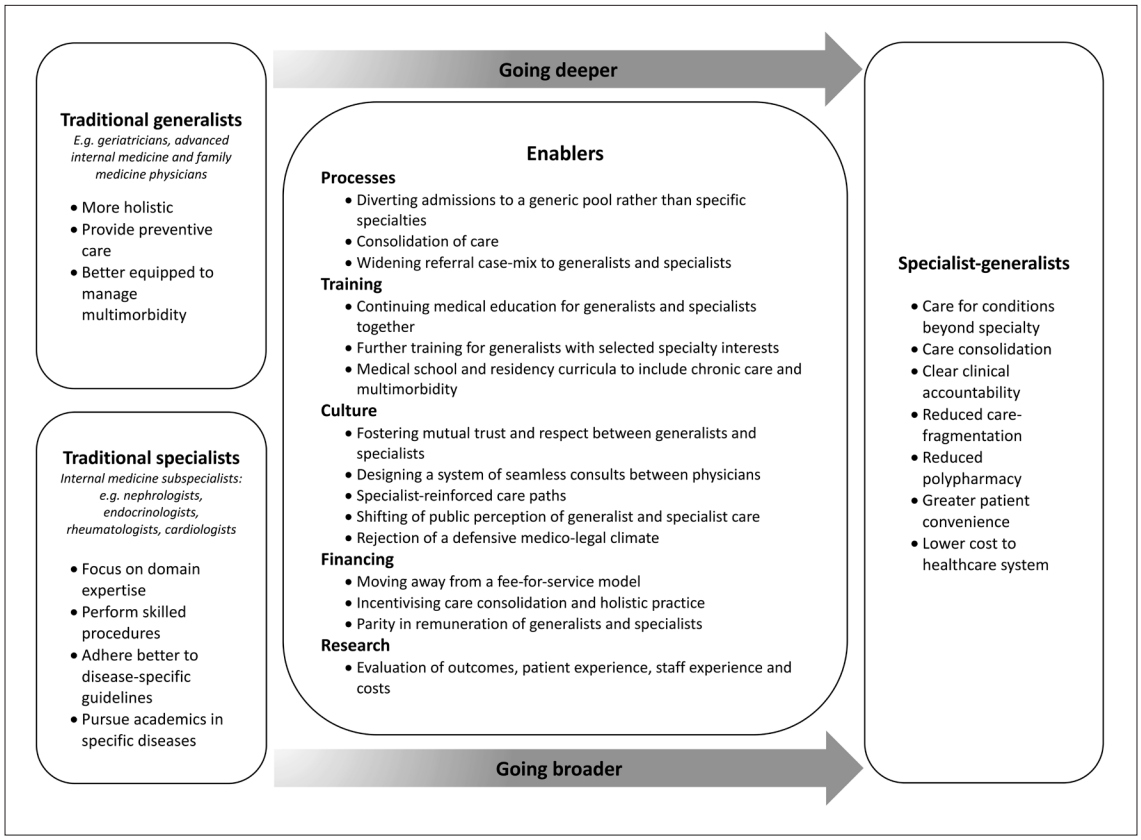


Fig. 1. Overview of traditional and generalist and specialist models.

preventive care,[11] generalists often see patients with undifferentiated problems on top of their existing conditions. Generalist physicians are trained to provide comprehensive care within the context of a patient's multimorbidity and psychosocial circumstances. Indeed, it is not always appropriate to follow guidelines upon which disease-specific quality indicators are based.

Can generalists go deeper? Generalists may take a holistic, whole-person approach, but strengthening their ability to deal with specific diseases, systems and organs may lead to multiple benefits including increased cost-effectiveness, improved appropriateness of referrals to specialists, reduced reliance on tertiary care centres,[12] and enhanced job satisfaction. Examples of interventions to strengthen generalist care include greater adoption of guidelines that address multimorbidity as identified by symptom complexes and burdens,[13] development of question lists to better manage clinical scenarios, and additional training in specific specialty areas.[14-15] In the UK, GPs with special interests lead strategic planning through the primary care lens, for areas traditionally helmed by specialties.[16] In the US, inpatient hospitalist care has become the norm. In Singapore, success in involving family medicine doctors in inpatient GM care has been achieved.[10]

Can specialists go broader? Specialists may focus on their respective domain expertise, but greater ability to deal with their patients' other comorbidities will make care substantially more holistic. A Singapore study described a model of inpatient care where physicians including those from family medicine performed generalist duties.[17] This model was associated with similar healthcare costs, shorter length of stay and lower mortality vis-à-vis a model in which specialists predominantly looked after their own specialties. However, chronic care, which involves longer-term follow-up, may be more challenging. Specialists who manage most or all their patients' health concerns as principal physicians exist but are often confined to specific populations. For example, in a survey of nephrologists, 75% led care beyond nephrology for their dialysis patients, including cancer screening, immunisation and comorbidity management.[18] Practice guidelines for chronic kidney disease encourage managing physicians to provide holistic care in the form of glycaemic control, cardiovascular risk reduction, hyperuricaemia management and lifestyle modification.[19] While specialists may provide holistic care of common chronic conditions if empowered and incentivised,[20] the tussle with diminished time left for specialty work as well as a lack of familiarity with the management of other comorbidities precludes this.

Are there systemic solutions? To maximise the potential of generalists and specialists to provide person-centred care, a specialist-generalist model facilitated by several elements is required, both in Singapore and beyond (Fig. 1).

First, hospitals should create processes that enhance such a model. In inpatient care, more systematic diversion of IM-related admissions to generic GM areas is needed. Such areas may be led not only by AIM, geriatrics and family medicine physicians, but also other committed IM specialist-generalists. In hospitals where admissions are directed to specific specialties, physicians should likewise be encouraged and empowered to practise as specialist-generalists. In outpatient care, Singapore's Alexandra Hospital's integrated general hospital model provides an example of care integration. Defragmented care by multiple specialists is consolidated to a single specialist who also manages conditions besides his/her expertise,[20] coordinates care and only refers to other specialists when necessary. To improve accessibility, referrals from primary care that are usually directed to certain specialties (especially those with long wait times), are instead channelled to generalists by condition-based triaging. Patients whose integrative care plans have been determined and who are deemed fit for discharge are appropriately right-sited to primary care.

Second, training for specialist-generalist care is required. In the hospital, regular continuing medical education sessions can be conducted, where generalists and specialists upskill each other by sharing about management of common conditions. These sessions should be bite-sized and targeted for busy physicians. Further formal training for generalists with selected interests in specialist fields should be encouraged. For IM residency and undergraduate trainees, curricula must emphasise holistic management of multimorbidity and include exposure to outpatient continuity clinics.[21]

Third, a culture that supports specialist-generalists should be built. Frequent communication and role negotiation between generalists and specialists, conducted with trust and respect and facilitated by hospital leadership are essential. A system of seamless consults between physicians should be designed, as should rapid advice provided via video, phone and text messaging when appropriate. Specialist-reinforced care paths for prevalent chronic diseases should be developed for use by specialist-generalists. Notably, patients often want access to clinicians with a deep expertise in their

illness, but simultaneously like the benefits of seeing a generalist.[22] While specialist-generalists may provide the best of both worlds, this is dependent on greater acceptance by the public. Therefore, deeper engagement with the community by political office holders, policymakers and physician leaders, particularly through traditional and social media, is necessary. Concurrently, the courts and health ministries must reject a medico-legal climate that promotes defensive medicine by censuring physicians solely because they have not referred patients to another specialist, if the clinical decision is justifiable and the generalist has provided an appropriate level of care.

Fourth, healthcare financing should move away from a fee-for-service model that incentivises hospitals and physicians to quickly see as many patients as possible. This would align with value-based healthcare initiatives—of which holistic person-centred care is an important component—that the regional healthcare systems in Singapore are embarking on.[23] Potential initiatives include reorganisation of financing models towards raising public awareness on the role of specialist-generalists and developing digital solutions for more seamless communication between specialists and community-based family medicine physicians. This will encourage a practice change among physicians practising as generalist-specialists.

Furthermore, clinics must be restructured to allow more time for each holistic patient review. Instead of reimbursing by volume, incentives should be provided for care consolidation—a practice that saves costs for the healthcare system, given the resultant reduction in care episodes. Opportunities to make this a reality is abundant in Singapore, where capitation for public healthcare will soon be implemented.[24] In tandem, gaps in remuneration due to legacy reasons which benefit procedural specialists and disadvantage non-procedural generalists should be closed.

Fifth, governments, grant agencies and academic health systems should promote more health service research on the specialist-generalist approach, with emphasis on the quadruple aim of improved outcomes, better patient experience, better staff experience and reduced costs.

Moving forward, the focus should no longer be on a generalists and specialists divide. It should instead be on creating an environment that nurtures the right skillset and mindset for all physicians to practise holistically—where with adequate support, generalists can be specialists and vice versa. William Osler once said, "The good physician treats the disease; the great physician treats the patient who has the disease". It is time to re-imagine the roles of generalists and specialists, and elevate them from good to great.

Disclosure

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