Editorials

High-performing primary care:

reinvigorating general practice as a learning health system

THE FUTURE OF GENERAL PRACTICE

The future of general practice is on a precipice. A perfect storm of an ageing general practice workforce, 1,2 a declining interest in general practice as a career,1 and widespread burnout exacerbated by the COVID-19 pandemic³ leaves general practice in a precarious position worldwide. Nearly a quarter of England's GP workforce are aged ≥55 years,² with an even bleaker picture in Australia with the proportion closer to 40%.1 Final-year medical students from Australian medical schools listing general practice as their first preference specialty is at a 9-year low of 13.8%.^{1,4} A recent systematic review has highlighted how GPs' wellbeing across the globe has been adversely affected by the pandemic, with reports of many GPs planning to leave medicine entirely.3

A shrinking GP workforce, combined with the increasing prevalence of chronic diseases with complex comorbidities, increasing prevalence of mental health issues, and an ageing population will further overburden primary care systems, leading to increased presentations to emergency departments, delayed care, missed test results, and poorer health outcomes. This will ultimately result in increased costs for governments and individuals. Recent data from consumers indicates these issues have already emerged in Australia (Box 1). Resolving such workforce issues will take years, and despite various commitments from governments the jury is still out as to whether we are seeing the beginnings of true primary care reform or just more band-aid solutions. This article proposes applying the concept of a learning health system (LHS) as a framework to revitalise general practice and drive the transformation

and sustenance of high-performing primary care systems.

LEARNING HEALTH SYSTEMS

cost-effectiveness of practice in managing chronic diseases and multimorbidity is well demonstrated.6 It is vital that we capitalise on the value that primary care systems can offer in their current state while waiting for governments in many countries, including the UK, to translate election promises into action.^{7,8} To do this, there needs to be concerted effort from within the profession to enable the creation and sustenance of high-performing general practice clinics. Working with effective teams in efficient operational models will mean GPs can avoid burnout while maintaining confidence in the impact their work is having on their patient population.

Much work is being done at the macro- (for example, national and state governments) and meso-levels (for example, Primary Health Networks [PHNs] in Australia and Integrated Care Systems [ICSs] in England) of primary care systems on measuring the quality and cost-effectiveness of care. However, there is a scarcity of literature at the micro-level where the 'rubber hits the road' - where GP-led, multi-stakeholder teams operate, and patients interact with, general practice clinics and their staff. How practices can best utilise such macro- and meso-level data to implement change and improve performance at the practice level is all-too-often missing from reform models. Developing a system that facilitates the translation of such data insights into improvements of day-to-day practice is a key next step. There have been a handful of concepts proposed that facilitate

high performance, such as the '10 building blocks of high-performing primary care'9 and the patient-centred medical home (PCMH)¹⁰ models, which originated from the US, and the NHS productive series, 11 which provides practical implementation guides for quality improvement. However, there is a real risk that recommendations made at a macro-level and based on broad principles but with limited understanding of local factors will exacerbate rather than relieve current pressures. Specifically, there is little evidence-based guidance for GPs and practice managers on how to best implement high-performing operational models and systems within their practices. This represents an opportunity for an emerging field of research and implementation within primary care micro-systems.

We propose applying the concept of an LHS as a framework to drive the transformation and sustenance of high-performing general practice. It refers to a healthcare system that 'consistently delivers reliable performance and constantly improves, systematically and seamlessly, with each care experience - in short, a system with an ability to learn'. 12 Core features of an LHS include: 1) science and informatics to measure real-time access to knowledge and digital capture of the care experience; 2) patient-clinician partnerships that engage and empower patients; 3) incentives that reward high-value care and emphasise transparency; 4) a continuous learning ethos that focuses on a leadership-instilled culture of learning and provides supportive system competencies; and 5) developing organisational structures and governance mechanisms that take into account relevant policies and regulations, and facilitate collaboration, learning, and research.13

LHSs can exist at all levels of the primary care system: at a macro-level within state and national governments, at a meso-level within PHNs and ICSs, and at a micro-level within individual practices. Most LHSs described in the literature have been hospital-based systems in the US, 14 with minimal studies about LHSs within primary care systems outside of the US. We have initiated a programme of work in Australia investigating how the concept of an LHS may be applied in our unique primary health system, with applications to other primary care systems including those in Britain. 15 Our recent case study, modelling a university-based general

Box 1. A snapshot of health care in Australia during the COVID-19 pandemic⁵

In 2021, a survey was distributed to 5100 Australian adults providing insights into health service use and satisfaction during the COVID-19 pandemic. Results showed:

- 24% experienced serious psychological distress—these rates are higher than pre-pandemic population prevalence rates;
- 59% reported having ≥1 chronic condition;
- 14% of people with chronic conditions could not pay for health care or medicine because of a shortage of money;
- 66% had visited a GP in person in the previous 12 months, down from 85% in 2018;
- accessing needed care out of usual business hours was difficult for 34%, up from 24% in 2018; and
- satisfaction with GP services remained high (>80%).

practice in Sydney against LHS principles, has indicated that the practice is operating across several dimensions of the LHS framework, and that staff are willing to embrace additional elements of an LHS.15 Practical examples of how the domains of an LHS are implemented at the practice-level are also provided, which serve as useful references for practices operating in different contexts. The study also shows overlap between the dimensions of the LHS framework and the quadruple aim framework,16 which is often used as a key measure for health system performance.

CONCLUSION

The time is ripe for a broader examination of the LHS concept within primary care settings. A scoping review¹⁷ has identified key focus areas for future research: 1) addressing barriers and facilitators to engaging GPs, clinic management staff, and patients in LHS research, including upskilling them in knowledge of complex systems theory, implementation science, and informatics, and the appropriate use of mixed-methods study designs; 2) the development of rapid analytic tools for practices to obtain timely feedback and evaluation instead of the traditional, closed-system plan-do-study-act (PDSA) models; and 3) the application of implementation frameworks specifically for LHSs within primary care.

Successful implementation of the LHS framework within primary care systems at the micro-level could well lead to significant measurable improvements in systems' performance, thereby improving population health, enhancing the patient experience,

reducing cost of care, and improving clinician satisfaction. Clearly, we must not lose sight of the greater recognition and investment needed in primary care at national levels, but there is an opportunity for practices to shape implementation of change at the local level. The LHS framework is a concept worthy of further investment and research in the effort to build sustainable and high-performing primary care systems for the future.

Darran Foo,

(ORCID: 0000-0002-7778-9420) GP, MQ Health General Practice; Conjoint Lecturer, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, New South Wales.

Janani Mahadeva,

GP, MQ Health General Practice; Conjoint Senior Lecturer, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, New South

Francisco Lopez,

Adjunct Fellow, Australian Institute of Health Innovation, Macquarie University, Sydney, New South

Louise A Ellis,

(ORCID: 0000-0001-6902-4578) Senior Research Fellow, Centre for Healthcare Resilience and Implementation Science; National Health and Medical Research Council (NHMRC) Partnership Centre for Health System Sustainability, Australian Institute of Health Innovation, Macquarie University, Sydney, New South Wales.

Kate Churruca,

(ORCID: 0000-0002-9923-3116) NHMRC Leadership Fellow Centre for Healthcare Resilience and

ADDRESS FOR CORRESPONDENCE

MQ Health General Practice, Suite 305, Level 3, 2 Technology Place, Macquarie University, NSW 2109,

Email: zhiyongdarran.foo@mqhealth.org.au

Implementation Science, Australian Institute of Health Innovation, Macquarie University, Sydney, New South Wales.

Genevieve Dammery,

(ORCID: 0000-0002-8188-712X) Research and Administration Officer, Centre for Healthcare Resilience and Implementation Science; NHMRC Partnership Centre for Health System Sustainability, Australian Institute of Health Innovation, Macquarie University, Sydney, New South Wales.

Simon Willcock,

Clinical Program Head of Primary and Generalist Care, Wellbeing and Diagnostics, MQ Health; Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, New South Wales.

Jeffrey Braithwaite,

(ORCID: 0000-0003-0296-4957) Professor of Health Systems Research, Centre for Healthcare Resilience and Implementation Science; NHMRC Partnership Centre for Health System Sustainability, Australian Institute of Health Innovation, Macquarie University, Sydney, New South Wales.

Provenance

Freely submitted; not externally peer reviewed.

Competing interests

The authors have declared no competing interests.

DOI: https://doi.org/10.3399/bjgp23X731505

REFERENCES

- Royal Australian College of General Practitioners (RACGP). General practice: health of the nation 2022. Melbourne: RACGP, 2022.
- 2. NHS Digital. General practice workforce, 30 September 2022. London: NHS Digital, 2022.
- Jefferson L, Golder S, Heathcote C, et al. GP wellbeing during the COVID-19 pandemic: a systematic review. Br J Gen Pract 2022; DOI: https://doi.org/10.3399/BJGP.2021.0680.
- 4. Medical Deans Australia, New Zealand Inc.. Medical Schools Outcomes Database national data report 2015. Sydney: Medical Deans Australia and New Zealand Inc., 2015.
- 5. Zurynski Y, Ellis LA, Dammery G, et al. The voice of Australian health consumers: the 2021 Australian health consumer sentiment survey. Deakin: Consumers Health Forum of Australia,
- Scott A, Jan S. Primary care. In: Glied S, Smith PC, eds. The Oxford handbook of health economics. Oxford: Oxford University Press,
- 7. Australian Government Department of Health and Aged Care. Strengthening Medicare

- Taskforce. 2022. https://www.health.gov. au/committees-and-groups/strengtheningmedicare-taskforce (accessed 6 Dec 2022).
- 8. Dayan M, Rolewicz L, Morris J. What are the health and care promises that the new Prime Minister inherits? Nuffield Trust 2022; 6 Sep: https://www.nuffieldtrust.org.uk/news-item/ what-are-the-health-and-care-promises-thatthe-new-prime-minister-inherits (accessed 6 Dec 2022).
- 9. Bodenheimer T, Ghorob A, Willard-Grace R, Gumbach K. The 10 building blocks of highperforming primary care. Ann Fam Med 2014; 12(2): 166-171
- 10. Agency for Healthcare Research and Quality. Patient Centered Medical Home (PCMH). 2022. https://www.ahrq.gov/ncepcr/tools/pcmh/ index.html (accessed 5 Dec 2022).
- 11. NHS Digital. Releasing time to care, the NHS Productive Series. https://www.england.nhs. uk/improvement-hub/productives (accessed 5
- 12. Smith M, Halvorson G, Kaplan G. What's needed is a health care system that learns: recommendations from an IOM report. JAMA 2012; 308(16): 1637-1638.

- 13. Zurynski Y, Smith CL, Vedovi A, et al. Mapping the learning health system: a scoping review of current evidence. 2020. https://researchmanagement.mq.edu.au/ws/portalfiles/ portal/134364432/Publisher_version_open_ access_.pdf (accessed 5 Dec 2022)
- 14. Nash DM, Brown JB, Thorpe C, et al. The Alliance for Healthier Communities as a learning health system for primary care: a qualitative analysis in Ontario, Canada. J Eval Clin Pract 2022; **28(6):** 1106-1112.
- 15. Dammery G, Ellis LA, Churruca K, et al. The journey to a learning health system in primary care: a qualitative case study utilising an embedded research approach. Research Square 2022; DOI: 10.21203/rs.3.rs-1943704/
- 16. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. Ann Fam Med 2014; 12(6):
- 17. Ellis LA, Sarkies M, Churruca K, et al. The science of learning health systems: scoping review of empirical research. JMIR Med Inform 2022; 10(2): e34907.