


Strengthening learning and research in health equity – opportunities for university departments of primary health care and general practice

Jennifer Reath^{A,*}, Phyllis Lau^{A,B}, Winston Lo^A, Steven Trankle^A, Miriam Brooks^A , Yasin Shahab^A and Penelope Abbott^A

For full list of author affiliations and declarations see end of paper

*Correspondence to:

Jennifer Reath
Department of General Practice, Western
Sydney University, Campbelltown,
NSW 2560, Australia
Email: j.reath@westernsydney.edu.au

Received: 13 July 2022
Accepted: 18 October 2022
Published: 8 November 2022

Cite this:

Reath J et al. (2023)
Australian Journal of Primary Health, **29**(2),
131–136.
doi:[10.1071/PY22146](https://doi.org/10.1071/PY22146)

© 2023 The Author(s) (or their
employer(s)). Published by
CSIRO Publishing on behalf of
La Trobe University.
This is an open access article distributed
under the Creative Commons Attribution-
NonCommercial-NoDerivatives 4.0
International License ([CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)).

OPEN ACCESS

ABSTRACT

This paper explores the roles of university departments of primary health care (PHC) and general practice in promoting health equity. The coronavirus disease 2019 (COVID-19) pandemic has exposed long-standing health and workforce inequities in Australia, as elsewhere. Addressing these inequities will require wide-ranging responses particularly focussed on PHC and the PHC workforce. Well-resourced university departments of PHC and general practice have potential to lead research informing PHC transformation and strategies to reduce health inequity, as well as to train and inspire a future PHC workforce. Examples from such academic departments in Australia and internationally are briefly described, and the experience of a recently established department of general practice is considered, in order to recommend enablers including institutional support, curriculum design, and partnerships with communities and between institutions. Support for community-based clinical schools, practice-based research networks and strengthening PHC research capacity will enable the PHC and general practice academy to engage more effectively in addressing health inequity.

Keywords: general practice, general practice research, graduate medical education, health inequity, practice-based research networks, primary health care, undergraduate medical education, workforce.

Introduction

In their seminal review of evidence at that time, [Starfield et al. \(2005\)](#) reported that health systems with strong PHC deliver more equitable, cost-effective care resulting in better health outcomes. This is stated to result from PHC providing access (especially for relatively deprived populations) to high-quality, continuing, person-centred, holistic care, with a focus on prevention and early management of health problems, and the role of PHC in restricting access to more expensive and sometimes harmful specialist care ([Starfield et al. 2005](#)). Yet, health care, especially when driven by market forces, often does not reach those in most need ([Hart 1971](#)). The coronavirus disease 2019 (COVID-19) pandemic has brought health inequity into stark relief, with communities in Australia at greatest risk of complications from COVID-19 missing out on timely vaccinations and suffering higher rates of infection and mortality. These have included Aboriginal and Torres Strait Islander communities, migrants and refugees, and those in prison. Impacts of the COVID-19 pandemic on developing countries and failure of the international community to adequately address these inequities are even more confronting ([Shadmi et al. 2020](#)).

General practice has been at the forefront of the Australian COVID-19 pandemic response, supported by Primary Health Networks (PHNs) struggling to implement changing guidelines. The enormous burden on general practitioners (GPs) has exacerbated long-standing challenges in Australian general practice, including inadequate remuneration and an

aging, inequitably distributed workforce. Little wonder fewer medical graduates choose to specialise in general practice (Primary Health Reform Steering Group 2021).

This 'perfect storm' requires transformation of healthcare and educational systems to better support Australian PHC (including general practice) to provide care, especially in disadvantaged communities (Primary Health Reform Steering Group 2021). Well-supported university departments of PHC and general practice are ideally placed to provide evidence for PHC reform and encouragement for medical students to consider a career in this critical area. In this paper, we review the learning from such departments, including our own experience at Western Sydney University (WSU). We propose ways forward that will optimise the contribution of PHC academia in addressing health inequities in Australia.

The potential of academic departments of general practice

There is ample evidence of Australian departments of PHC and general practice working in areas of health inequity. Some have impressive track records of national and international research and others exemplify effective teaching approaches.

The potential for academic general practice to address health inequities is evident in their research. The University of Melbourne Department of General Practice is a key partner in the 'MRFF Million Minds project – Bringing family, community, culture and country to Indigenous youth mental health care', investigating integrated approaches across health, education and welfare. Innovative Models Promoting Access-to-Care Transformation (IMPACT), a 5-year Canadian–Australian research program exploring best practice interventions to improve access to PHC for vulnerable populations, is an international collaboration addressing health inequity (University of Melbourne 2022).

Social accountability has become a key focus of medical education, as institutions increasingly expand training to address societal needs as well as clinical competencies (Abbott and Hu 2022). At the University of New South Wales, the Centre for Primary Health Care and Equity partners with the School of Population Health in medical student teaching about social determinants of health and supervises student research on social justice and health inequalities. Campus-based learning explores health needs of vulnerable populations, barriers to accessing health care, and how health systems can address these barriers. Students attend clinical placements with health services caring for refugees and asylum seekers, Aboriginal and Torres Strait Islander and culturally and linguistically diverse communities, the homeless, people in prison and those living with mental illness.

The localisation of social accountability in medical education is important, and includes teaching activities equipping graduates with the knowledge, attitudes and

skills needed to meet local needs. The undergraduate medical program at James Cook University (JCU) commenced in 2000 with a strong focus on social justice, health equity and a mandate to train doctors to respond to health needs of rural, remote, Indigenous and tropical populations in northern Australia, including Pacific neighbours. This has been operationalised through curriculum, leadership, role modelling, research and clinical placements focussed on general practice, PHC and rural generalist practice. Students at JCU undertake at least 20 weeks of clinical placements in rural and remote towns with generalist clinicians, in addition to regional general practice rotations. Demonstrating the effectiveness of this approach, 70% of graduates practise in rural, regional or remote settings and approximately 50% choose generalist career paths (Sen Gupta *et al.* 2018). Since 2016, JCU has also delivered post-vocational general practice training for 90% of Queensland. This provides an opportunity to reinforce undergraduate learning about health inequities in the vocational training environment.

A review of the role of medical education in promoting health equity and social inclusion describes approaches such as whole-of-school social accountability, consideration of staff and student selection, role-modelling, and equity focus throughout the curriculum. Community engaged learning fits well with general practice teaching and monitoring frameworks, including measurement of impacts of these approaches on health outcomes in underserved, marginalised communities, links teaching and research activities (Abbott and Hu 2022).

Clinical placements with underserved communities, situated in welcoming, well-organised learning environments, can provide students with opportunities for 'eye opening' moments, decreasing stereotyping and increasing confidence to work with marginalised individuals and communities (Brooker *et al.* 2018). Service-learning opportunities, where students work with community agencies, are another valuable strategy to promote awareness of community needs and the role of doctors in social accountability advocacy (Abbott and Hu 2022).

The important role of PHC providers as advocates for health equity can occur at national and local levels, and across clinical, professional and research PHC spheres. Supporting academic PHC departments, the Australasian Association for Academic Primary Care (AAAPC) encourages and supports research that celebrates diversity and addresses inequity in populations including refugees, Aboriginal and Torres Strait Islander communities, elderly people, and those with disabilities (Ball and Sturgiss 2020). Many Australian general practice academics have been inspired by Glasgow University's GPs at the Deep End, whose research moved from describing inequitable health outcomes in lower socioeconomic areas of Scotland and the experience of GPs working with these communities, to informing changes in health policy and improved funding in these areas. A group of Canberra GPs working with at-risk people have

established their own Deep End GPs group focussed on advocacy, peer support and learning (Sturgiss *et al.* 2019).

The Western Sydney University Department of General Practice experience

The WSU School of Medicine was established in 2007 to address medical workforce needs of communities in greater western Sydney (GWS) and, through the establishment of two rural clinical schools, in rural New South Wales (NSW). Students enrolling in the 5-year undergraduate program, preferentially recruited from GWS and rural NSW, are often the first in their family to study medicine and come from diverse cultural backgrounds. Aboriginal and Torres Strait Islander students apply through a separate pathway, including community oversight, and receive individualised support (Marjadi *et al.* 2020).

Prior to commencement of the Department of General Practice at WSU in 2010, a local GP recruited colleagues keen to supervise students predominantly from GWS and perceived likely to choose a career in this underserved area of Sydney. These teaching practices were bolstered through a unique collaboration with the Department of General Practice at Sydney University Westmead Clinical School, resulting in a shared network of GP Supervisors in the west. Academic GP leads from WSU visited established Departments of General Practice, including at the University of Melbourne, to learn from the experts.

The Department agreed on a mission and values with social accountability at their core (Box 1). Western

Sydney University provided 10 years of funding for a Research Officer and shorter-term funding for a GP Senior Lecturer who, with the Research Officer, built departmental research.

The general practice curriculum at WSU supports students to recognise the importance of PHC and the GP role, and to value opportunities provided by general practice to work with marginalised communities. Interactive learning is facilitated mostly by GPs, including GP academics; many themselves working in areas of need. With support from the Dean and senior academics, general practice teaching and/or placements are now provided across all years of the program and substantially reflected in assessment. Students undertake placements in settings of health inequity such as prisons, and assist in community initiatives like health checks for the homeless.

General practice learning in the first 3 years of the program is part of a flagship course component – Medicine in Context. Students attend a combination of community and GP placements to learn about the interplay between social determinants of health and clinical medicine. This experiential learning is supported through campus-based tutorials with the course overseen by community partners (Marjadi *et al.* 2020).

According with the department's values, research is focussed on local needs and initially largely funded by PHNs in western Sydney. Requests to engage the department in research are screened using a framework reflecting the department's values and focussed on social justice. In 2020, the research strategy was translated into a Program Logic Model to enable planning across all elements of the

Box 1. Western Sydney University Department of General Practice Mission and Values

Mission

The Department of General Practice will work collaboratively to deliver best practice teaching and learning experiences so that WSU Graduates will understand and value the many roles of general practitioners in primary health care, and are inspired to consider a career in general practice, particularly in areas of need.

Values

Social justice

We promote equity, prioritising areas of need in health, education and the healthcare workforce.

Collaboration

We work collaboratively within the School of Medicine, and more widely across Western Sydney University and beyond. We will build and sustain respectful and effective partnerships with general practitioners and other primary healthcare providers, their related organisations, teaching and healthcare institutions and with the communities in which we work.

Excellence through innovation

We use innovative, evidence-based teaching and research activities that are informed by – and will inform – other programs, locally, nationally and internationally.

People focused

In all our work, we value people and respond to the needs and hopes of the patients, students, colleagues and community members with whom we work.

research process and to monitor achievement of intended outcomes (Fig. 1).

There was an early focus on enhancing research skills of GP supervisors (Brooks *et al.* 2021) and students have increasingly engaged with the department's research. Partnerships, including with the University of Sydney, The Menzies School of Health Research and The George Institute, were critical in attracting large funding grants.

The department at WSU has grown to 17 staff. Research income of A\$8M since commencement includes two NHMRC Grants totalling A\$4M. The department has hosted 17 academic registrars and four visiting fellows including from the United Kingdom, The Netherlands and Sri Lanka, and supported student exchanges with a similarly socially accountable university in Nepal. Academic registrars joining the team at WSU are often attracted by the health equity focus.

Though the COVID-19 pandemic provided challenges for teaching and research, with support from the GP teaching network, students witnessed first-hand the importance of general practice in a health crisis (Reath *et al.* 2020). Although across Australia, the proportion of students choosing general practice as a career was only 16% in 2021 (Primary Health Reform Steering Group 2021), between 2017 and 2020, approximately 30% of Western Sydney students chose to train in general practice (Froggatt, Kate, Chief Marketing Officer, GP Synergy: Email to Jennifer Reath 6 July 2021, pers. comm.).

Learning

University departments of PHC and general practice can inspire the future medical workforce to work in areas of health inequity and support research addressing health inequity.

Students are influenced to work in areas of disadvantage by curricula highlighting social determinants of health and enabling immersive learning with disadvantaged communities. Academic and clinical role-models working in these areas inspire students to consider a similar career, especially when students are engaged in advocacy with local communities. Whole-of-institution support reinforces this. Research in areas of health inequity can be strengthened by academic and regional collaborations, including with consumers and community organisations. Partnerships with other institutions and support such as seeding funding are valuable facilitators for new departments. Research training of PHC providers including GPs, will enhance research capacity in the community and support research that promotes health equity.

The future

Although academic departments make important contributions to improving health equity in Australia and internationally, there are opportunities to enhance this work.

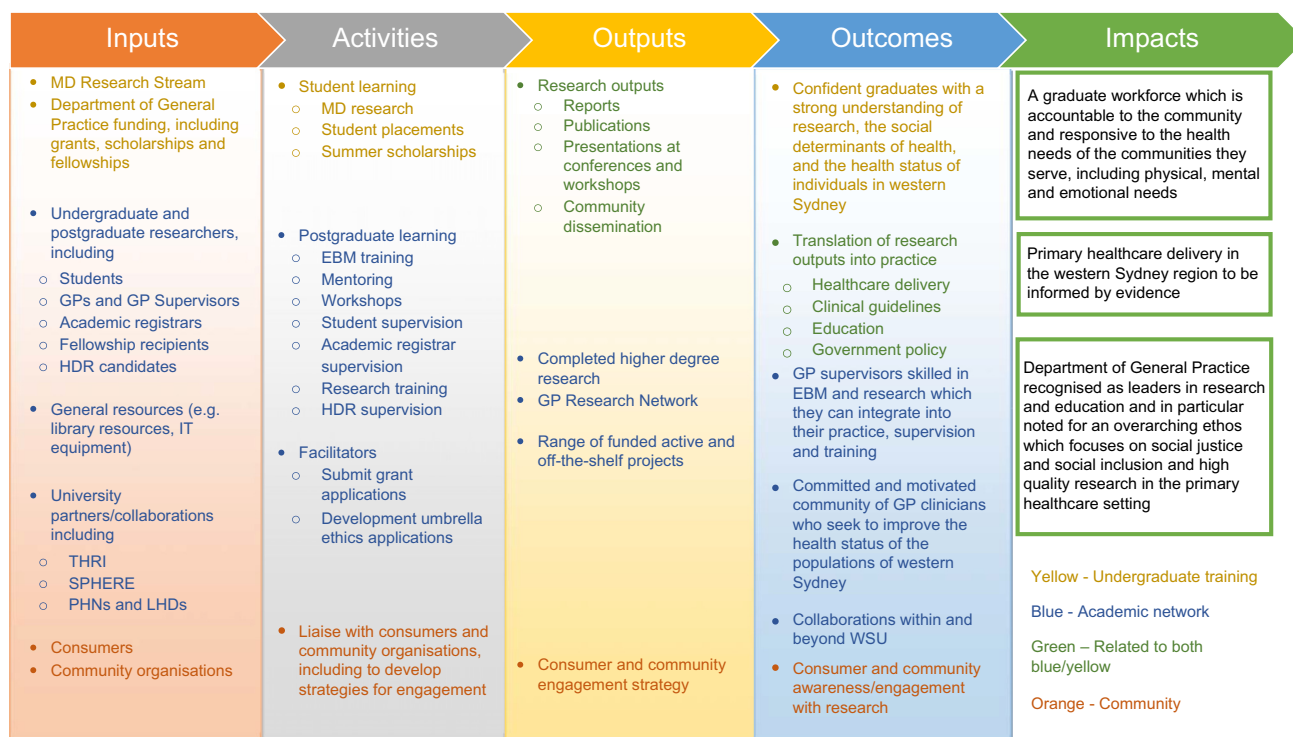


Fig. 1. Research Program Logic Model. DM, Doctor of Medicine; EBM, Evidence Based Medicine; LHDs, Local Health Districts; SPHERE, Sydney Partnership for Health, Education, Research and Enterprise (Maridulu Budyari Guma!); THRI, Translational Health Research Institute.

Partnerships between different academic departments and institutions can support multidisciplinary team-based approaches to both teaching and research aligned with new models of PHC (Primary Health Reform Steering Group 2021). Although Rural Clinical Schools are long-standing exemplars of such academic collaborations, similar longitudinal community-engaged learning in urban settings can also engage students with health inequity (Mahoney *et al.* 2014). Such initiatives require ongoing funding and support to realise similar outcomes to those associated with rural clinical schools.

Improved collaboration between university departments and the two Australian colleges of general practice, soon to assume responsibility for GP training, could increase recruitment of graduates to the GP workforce and may encourage GPs to supervise students. Programs that maintain interest and provide community experience, especially in areas of need, during hospital training, are key to bridging the gap between undergraduate interest and final career choice (Medical Deans of Australia and New Zealand 2021).

For research to inform development of models of equitable, high-quality, cost-effective health care, addressing needs of underserved communities, ongoing support for PHC research is required, including through Practice Based Research Networks (PBRNs). These sustained collaborations between general practices, communities and academics, working together on study design and translating new knowledge into practice, enable community-engaged research meeting local needs (Pearce *et al.* 2004). Adequate funding is required to sustain these collaborations, and a national PBRN network could provide support, thereby enabling Australian PHC to contribute to impactful national and international research addressing inequity and improving health outcomes. The AAAPC is well placed to provide a platform for such a national network.

Community-engaged research addressing health inequity will require training for the PHC workforce and well-resourced university departments. Support for GPs, GP registrars and other PHC providers to undertake research training, including PhD studies in areas that promote social accountability, is key to building an expert PHC academy capable of addressing health inequities confronting our nation and our world.

Strong PHC is vital in addressing health inequity. At a time of widespread support for healthcare reform in Australia, particularly focussed on strengthening PHC, the role of the academy in advocating, informing and providing workforce for this reform agenda is critical.

As we emphasise the importance of comprehensive, integrated primary health care in our health systems, we need to strengthen the role of the primary health sector in scholarship, education and training. (Medical Deans of Australia and New Zealand 2021, p. 20)

This requires ongoing support and investment of governments, specialist colleges, universities and medical schools.

References

- Abbott PA, Hu WCY (2022) Social inclusion and medical practitioners. In 'Handbook of social inclusion.' (Ed. P Liamputtong) pp. 2123–2140. (Springer: Cham) doi:10.1007/978-3-030-89594-5_126
- Ball L, Sturgiss E (2020) Celebrating diversity and adaptability in academic primary care. *Australian Journal of Primary Health* 26, i–ii. doi:10.1071/PYv26n4_ED
- Brooker R, Hu W, Reath J, Abbott P (2018) Medical student experiences in prison health services and social cognitive career choice: a qualitative study. *BMC Medical Education* 18, 3. doi:10.1186/s12909-017-1109-7
- Brooks M, Reath J, McDonnell L, Abbott P (2021) Increasing general practitioner use of evidence-based medicine in teaching and clinical practice through evidence-based journal clubs. *Australian Journal of Primary Health* 27, 271–275. doi:10.1071/PY20267
- Hart JT (1971) The inverse care law. *The Lancet* 1(7696), 405–412. doi:10.1016/S0140-6736(71)92410-X
- Mahoney S, Boileau L, Floridi J, Abi-Abdallah C, Lee B (2014) How social accountability can be incorporated into an urban community-based medical education program: an Australian initiative. *Education for Health* 27, 148–151. doi:10.4103/1357-6283.143746
- Marjadi B, Mapedzahama V, Rogers G, Donnelly M, Harris A, Donadel D, Jakstas E, Dune T, Lo W, Micheal S, McKnight T, Henness A, Ganapathy AV, Pacey F (2020) Medicine in Context: ten years' experience in diversity education for medical students in Greater Western Sydney, Australia. *GMS Journal for Medical Education* 37, Doc21. doi:10.3205/zma001314
- Medical Deans of Australia and New Zealand (2021) 'Discussion paper: Training tomorrow's doctors – all pulling in the right direction.' Medical Deans of Australia and New Zealand: Sydney, Australia. Available at <https://medicaldeans.org.au/resource/training-tomorrows-doctors-all-pulling-in-the-right-direction/> [Verified 11 July 2022]
- Pearce KA, Love MM, Barron MA, Matheny SC, Mahfoud Z (2004) How and why to study the practice content of a practice-based research network. *Annals of Family Medicine* 2, 425–428. doi:10.1370/afm.133
- Primary Health Reform Steering Group (2021) Recommendations on the Australian Government's Primary Health Care 10 Year Plan 2022–2032. Available at <https://tinyurl.com/mrxyctj2> [Verified 7 July 2022]
- Reath J, Tan L, Brooks M, Burges J, Lindsay N, Lo W, Shakur S, Trankle SA, Wong KC (2020) One medical school's experience of sustaining general practice teaching in the time of COVID-19. *Australian Journal of General Practitioners* Jul 10, 49. doi:10.31128/ajgp-covid-29
- Sen Gupta T, Johnson P, Rasalam R, Hays R (2018) Growth of the James Cook University Medical Program: maintaining quality, continuing the vision, developing postgraduate pathways. *Medical Teacher* 40, 495–500. doi:10.1080/0142159X.2018.1435859
- Shadmi E, Chen Y, Dourado I, Faran-Perach I, Furler J, Hangoma P, Hanvoravongchai P, Obando C, Petrosyan V, Rao KD, Ruano AL, Shi L, de Souza LE, Spitzer-Shohat S, Sturgiss E, Suphanchaimat R, Uribe MV, Willems S (2020) Health equity and COVID-19: global perspectives. *International Journal for Equity in Health* 19, 104. doi:10.1186/s12939-020-01218-z
- Starfield B, Shi L, Macinko J (2005) Contribution of primary care to health systems and health. *Milbank Quarterly* 83, 457–502. doi:10.1111/j.1468-0009.2005.00409.x
- Sturgiss E, Tait PW, Douglas K, Chew JI, Balglo S, Watt G (2019) GPs at the Deep End: identifying and addressing social disadvantage wherever it lies. *Australian Journal of General Practice* 48, 811–813. doi:10.31128/AJGP-06-19-4960
- University of Melbourne (2022) General Practice Research. Available at <https://medicine.unimelb.edu.au/research-groups/general-practice-research> [Verified 6 July 2022]

Data availability. Data sharing is not applicable as no new data were generated or analysed during this study.

Conflicts of interest. Dr Phyllis Lau has a part-time academic role at the University of Melbourne and has been employed there since 2004. She is also the current chair of the Australasian Association for Academic Primary Care. Dr Winston Lo was employed at the University of New South Wales from 2010–17.

Declaration of funding. This research did not receive any specific funding.

Acknowledgements. The authors acknowledge Professor Sarah Larkins who provided a synopsis of the work at James Cook University. We also acknowledge past and present members of the Department of General Practice at Western Sydney University, including colleagues at our Rural Clinical Schools.

Author affiliations

^ADepartment of General Practice, Western Sydney University, Campbelltown, NSW 2560, Australia.

^BDepartment of General Practice, The University of Melbourne, Carlton, Vic. 3050, Australia.