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Editorial

Innovation in primary care for cost effective health services

Moyez Jiwa MD MA MRCGP FRACGP
Professor of Health Innovation, Curtin Health Innovation Research Institute, Curtin University of Technology, Perth, Australia

Annual spending on health care constitutes a large percentage of Gross Domestic Product in the OECD countries and yet the demand for healthcare in those countries continues to soar.[1] Policy makers worldwide recognise that we must reduce the growing dependence on expensive medical treatments for many preventable conditions and aim to diagnose them sooner, when treatment can be curative, rather than later when the best we can do is to reduce morbidity or forestall death.[2] The situation we face may be summarised as shown in Figure 1.

There are many definitions of primary care, the sector that holds the key to health improvement. My favourite, one that does not assume that primary care is delivered only by doctors, states that: 'primary care refers to a span or an assembly of first-contact healthcare services directly accessible to the public'.[3]

For many decades Barbara Starfield and others have published evidence of better outcomes when people maintain a long-term relationship with a health professional and when the earliest signs of treatable pathology are recognised and treated sooner rather than later.[4] More than that, the best that primary care can offer is to apply Bayes' theorem, which predicts that in an affluent community, where the prevalence of organic pathology is low, symptoms are most likely to be the manifestations of benign but distressing physical, social and or psychological problems.[5] Primary healthcare in countries like Australia has much to offer and yet we are not even close to enjoying the benefits of an integrated primary healthcare sector, perhaps because it is not geared to offering the sort of solutions that will reverse the nation's dependence on hospital services. In this essay we will explore some of the factors that may be contributing to this situation, basing our observations on the Australian health system.

In Australia most people live on the periphery of the continent in coastal towns and cities. The minority living in rural and remote areas may be disadvantaged in a variety of ways, most especially if they are of indigenous culture.[6] At first glance, care is delivered

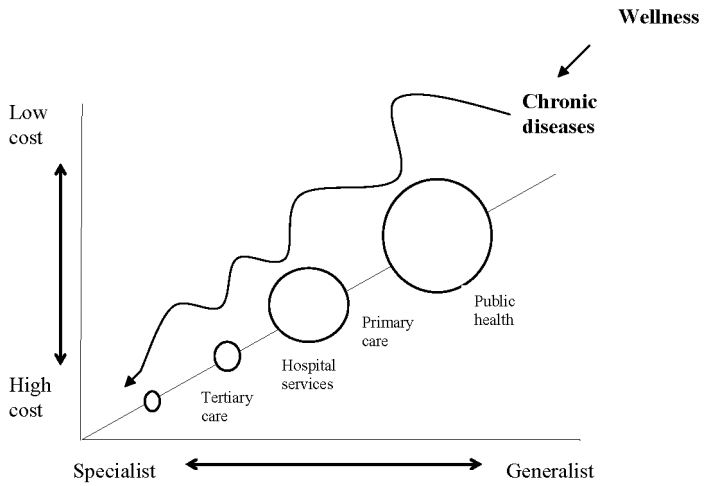

Figure 1 The trajectory of patients with chronic diseases. Note the slide from wellness through chronic diseases and dependence on high cost hospital services. The size of the circles represents the proportion of people treated in each sector.

very much as it is in the UK with GPs acting as 'gatekeepers' to specialist medical services. Primary care is funded by the federal government, centrally through a national insurance system known as Medicare. Hospital and specialist services are funded by each state or territory.[7] Added to these complexities, Australians have a vibrant private healthcare sector and doctors are allowed to charge more than the government remunerates for those services; the fees are paid either by the patient or by a private insurer.[8] The exception is state-funded health care which is delivered more or less free at the point of need. It may not be a coincidence in the current economic climate that experts are predicting escalating queues at hospital emergency departments.[9] It was also surprising to me as a UK trained practitioner to see private specialist services set up plush offices in shopping centres, offering everything from cardiology to colonoscopy. In theory you cannot access these services without a GP referral. We are not quite at the stage of the USA, where I heard it said by one plenary conference presenter that you can now buy your wife a CT scan for her birthday!

Therefore we have a siloed healthcare system, which has to encompass a diverse range of healthcare provision. Allied health, nursing and community pharmacy services are not formally involved in delivering Medicare provision unless sanctioned by doctors, therefore people with complex and chronic conditions are dependent on health insurance and the alignment of their GPs towards integrated healthcare. GPs are said to be overworked and stressed and yet some metropolitan practices now offer cosmetic procedures. This commercialisation is a major challenge in Australia where the population is ageing, lifestyle related conditions are growing at an exponential rate, continuity of care is not promoted by a fee for service payment structure and hospitals are said to be struggling to keep up with demand. For example in 2005 to 2006, South Australia experienced record demand in its hospital emergency departments, with attendances increasing by about 17 900, a 5.8% increase on 2004 to 2005. By 2012, it is predicted that there will be an 11% increase in the number of hospital admissions. This will mean an extra 43 750 hospital admissions in an already overburdened system.[10]

- What of the future? There are many groups lobbying government for policy change. One might suggest that we particularly require solutions that have the best prospects of making an appreciable difference to the lives of our patients, clients or customers. To that end one may want to focus on generating solutions that are grounded in the realities of primary health care in this part of the world.
- Most services are delivered in Australia through small and medium-sized businesses – general practice, community pharmacy, allied health and even some nursing services.
- There is a vibrant private healthcare sector and a growing number of people are accessing health care facilitated by private insurance providers.
- The quality of primary care is still moderated by the quality of the interaction between service provider and patient, client or consumer.

Within these constraints a 60-year-old Australian may or may not be encouraged to attend for bowel screening. The impact of the public health messages will depend on a variety of factors, not least where the person lives, their gender and their ethnic background. Even in the UK, where bowel screening has been established for some years, only 20% of cancers will be detected before symptoms manifest themselves.[11] Once the symptoms of colorectal cancer are apparent the person may or may not consult a medical practitioner while curative treatments are still possible. Recent evidence from Australia suggests that only one in three people with rectal bleeding will consult a doctor, including those at significant risk of cancer.[12] In the meantime the person may attend a local pharmacist and buy over-the-counter treatments for their symptoms. They may or may not be questioned about the nature and duration of those symptoms. In some states topical treatments for haemorrhoids are available without the need to consult a pharmacist. Elsewhere the person may or may not be advised by a pharmacist and may or may not be encouraged to consult a doctor. Access to general practice will similarly depend on the person's locality; those in rural and remote areas will be disadvantaged as there is a severe shortage of GPs in some parts of the country.[13]

Having consulted a medical practitioner, the chances of the patient being referred to a specialist will depend on the leaky pipeline from evidence to practice so eloquently described by Glasziou and Haynes.[14] According to their analysis, the person will be offered evidence-based care if the doctor is aware of the evidence, if they accept the evidence, if they target the relevant patients, if what has to be done is 'doable', if they remember to do it, if the patient agrees with what needs to be done and finally if it is done. If the tasks are completed 80% of the time at each stage then only 21% of cases will receive evidence-based treatment. If, as sometimes happens, the disease is only detected once the prospects of curative treatment are drastically diminished then the patient will be more likely, at least in this case, to require palliative care.

Patients in the palliative phase are most likely to need home visits, lengthy discussions with relatives or caregivers and 'non-contact' services such as telephone prescriptions or discussions with community nurses. These services are generally poorly funded or

entirely unfunded by the government. It has therefore been suggested that this may account for the reticence of some GPs to provide palliative care for their patients and for occasional friction between GPs, community health nurses and palliative care services. The integration of service providers for patients with chronic and complex conditions, including those requiring palliative care, offers the scope to improve the quality of health care and in many cases the outcomes for all Australians. There is scope for those other than medical practitioners to support and advise patients through a greater awareness of the evidence, and most especially by having access to innovations that are deliverable within the particular context of the health services hosted by small to medium-sized independent businesses. There may be scope for pharmacists to be more active in providing what has been dubbed 'cognitive' services, services that do not involve the dispensing of drugs and for which there is no incentive or fee. Similarly allied health professionals are well placed to recognise and refer people with a variety of health problems when it is possible to reduce morbidity or even mortality. Allied health professionals may even be better placed to deliver some interventions than those who are constrained by the framework of a standard 15-minute consultation. The challenge is to innovate, to redefine roles and to empower all health professionals to contribute to and integrate the healthcare agenda.

The challenge for researchers is to develop complex interventions in order to serve a healthcare system that urgently requires innovation. The development of these complex interventions mandates painstaking attention to detail.[15] Work is required to ensure that ideas for improvement are tailored to their context before interventional studies are embarked upon. One would want to document evidence to support the feasibility; the acceptability to subjects (including the service provider); the attrition rate, in a setting where people may be attending the provider on an *ad hoc* basis; the most appropriate and clinically relevant outcome measure, given that in many cases people will be reluctant to participate in research that requires close and intrusive follow up, and the likely effect size as the basis of the size of a fully powered study. In short, innovation in primary care is challenging, not only because of the nature of the most effective interventions but also because of the context in which those innovations are delivered. However, the prize for those who do it well is to have a role in making health care accessible to all.

REFERENCES

1 Organisation for Economic Co-operation and Development. *OECD Health Data 2006*. From the OECD internet subscription database updated 10 October 2006. www.oecd.org/health/healthdata
2 Department of Health and Ageing. *Primary Health Care Reform in Australia*. 2009. www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/nphc-draftreportsupp-toc/$FILE/NPHC-supp.pdf
3 World Health Organization Regional Office for Europe. *Definition of Primary Care*. www.euro.who.int/InformationSources/MtgSums/2002/20030506_1 (accessed September 2009).
4 Haggerty JL, Reid RJ, Freeman GK, Starfield BH, Adair CE and McKendry R. Continuity of care: a multidisciplinary review. *British Medical Journal* 2003;327:1219–21.
5 Summerton N. The medical history as a diagnostic technology. *British Journal of General Practice* 2008;58:273–6.
6 Anderson IP. Closing the indigenous health gap. *Australian Family Physician* 2008;37:982,1001.
7 Department of Health and Ageing. *Overview of the Australian Healthcare System*. www.health.gov.au/internet/main/publishing.nsf/Content/healthsystem-overview-3-funding
8 Banks E, Jorm L, Lujic S and Rogers K. Health, ageing and private health insurance: baseline results from the 45 and Up study cohort. *Australia and New Zealand Health Policy* 2009;6:17.
9 Masso M, Bezzina AJ, Siminski P, Middleton R and Eagar K. Why patients attend emergency departments for conditions potentially appropriate for primary care: reasons given by patients and clinicians differ. *Emergency Medicine Australasia* 2007;19:333–40.
10 Government of South Australia. *South Australia's Health Care Plan*. www.library.health.sa.gov.au/Portals/0/south-australias-health-care-plan-2007–2016.pdf
11 Hamilton W. Five misconceptions in cancer diagnosis. *British Journal of General Practice* 2009;59:441–5, 447; discussion 446.
12 Eslick GD, Kalantar JS and Talley NJ. Rectal bleeding: epidemiology, associated risk factors, and health care seeking behaviour: a population-based study. *Colorectal Disease* 2009;11:921–6.
13 Kamien M and Cameron WI. Solving the shortage of general practitioners in remote and rural Australia: a Sisyphean task? *Medical Journal of Australia* 2006;185:652–3.
14 Glasziou P and Haynes B. The paths from research to improved health outcomes. *ACP Journal Club* 2005;142:A8–10.
15 Campbell M, Fitzpatrick R, Haines A *et al*. Framework for design and evaluation of complex interventions to improve health. *British Medical Journal* 2000;321:694–6

PEER REVIEW

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CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Professor Moyez Jiwa, Professor of Health Innovation, Curtin Health Innovation Research Institute, Curtin University of Technology, Perth, Western Australia. Tel: +61 (0)8 9266 1768; email: m.jiwa@curtin.edu.au

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