HEALTH

LIFELINE FOR HEALTH

Meeting New Zealand's need for General Practitioners

Des Gorman
Murray Horn

THE NEW ZEALAND INITIATIVE

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About the New Zealand Initiative

The New Zealand Initiative is an independent public policy think tank supported by chief executives of New Zealand businesses. We believe in evidence-based policy and are committed to developing policies that work for all New Zealanders.

Our mission is to help build a better, stronger New Zealand. We are taking the initiative to promote a prosperous, free and fair society with a competitive, open and dynamic economy. We are developing and contributing bold ideas that will have a profound, positive and long-term impact.

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Contents

CHAPTER 1

"For want of a nail, the kingdom was lost"

Clinical Vignette 1: "A little neglect may breed great mischief"– Benjamin Franklin

Maria is a 29-year-old single mother of two children – an eight-year-old daughter (Anita) and a two-year-old infant son (Tyson). Maria works as a receptionist at a local engineering firm and has a history of eczema and asthma. Anita has had asthma since infancy.

All three are enrolled at a local general practice where they have been under the care of Dr Jones, a female GP, for several years now. Dr Jones has seen Anita several times when her asthma had severely exacerbated.

Following several days of a runny nose and sore throat, one Monday Anita became increasingly breathless. She initially responded well to Ventolin taken using a spacer and the inhaled steroid she took daily as a preventer, but then deteriorated until she became agitated.

The next morning, Maria rang the general practice anxiously for an appointment, knowing Dr Jones would not be available until later in the week. The reception confirmed Maria's fears. Worse, no other doctor was free that morning, but a nurse could see Anita in the parking lot if Maria remained in her car with Anita. Maria drove Anita to the clinic and informed the receptionist after arriving there.

The nurse came after 20 minutes wearing full PPE to follow Covid-19 precautions. He first gave Anita a rapid antigen test, which came negative for Covid-19. He then examined Anita through the car window and found she had a slightly raised temperature and heart rate, was breathing rapidly, and had a wheeze.

Based on the symptoms, the nurse said Anita's asthma had exacerbated and she needed to continue taking Ventolin and increase the frequency of the inhaled steroid. Maria was to bring Anita back to the clinic if she got any worse and needed antibiotics and oral steroids.

Maria took the day off work to look after her daughter. Anita was reasonably well during the day but deteriorated after 9pm – by which time the general practice had closed. After asking her mother, Maria left Tyson in her care and drove Anita to the local urgent care clinic.

The urgent care clinic had a 45-minute wait time. Thankfully, the triage nurse arranged for Anita to be seen straightaway. The doctor confirmed the diagnosis of severe asthma exacerbation but said Anita could not be managed at the clinic because all the treatment rooms were occupied. Anita was more likely to receive treatment at the local hospital.

Maria and Anita arrived at the local hospital about 20 minutes away to an even-more crowded emergency department (ED). A nurse gave Anita a high-priority rating and took her vital signs. An hour later, a doctor apologised for the delay and the extremely busy ED. He examined Anita and gave her nebulised Ventolin to stabilise her worrisome condition long enough to be taken to Starship Children's Hospital and admitted there. The ambulance left with Maria and Anita 20 minutes later.

Maria was sick with worry and Anita was both upset and increasingly anxious during the ambulance ride to Starship. The ED there was crowded with sick children, many of whom had similar problems to Anita's. A nurse took Anita's vital signs and reassured Maria that a doctor would see them shortly. After 45 minutes, the ED doctor gave Anita more nebulised Ventolin and inhaled steroids, and instructed the nurse to keep Anita hydrated.

Clinical Vignette 1 (continued)

Anita responded well, soon passing urine and breathing better. She was speaking complete sentences, which the doctor said was an encouraging sign. The doctor told Maria to take Anita to their family doctor in case her condition deteriorated, and she needed additional medication. Anita was discharged from Starship at 5am, and she and her mother took a taxi to their local hospital, picked up their car, and returned home.

Anita's condition deteriorated again that night; the following morning, she was both lethargic and breathless. Maria rang her general practice to find Dr Jones had agreed to relieve a colleague and was consequently available. Dr Jones was alarmed by the severity of Anita's problem and Maria's anxiety and distress. She prescribed Anita oral steroids. By mid-afternoon, Anita had improved and kept improving over the next three days. She returned to school the following week.

CHAPTER 2

Redefining a GP's role

The authors have been tasked with reviewing the state of general practice in New Zealand for The New Zealand Initiative and suggesting remedies for any shortcomings unearthed. Our data comes from the Ministry of Health (MOH) and the New Zealand Medical Council (NZMC). This data was either publicly available or obtained through *Official Information Act* requests.

Redefining the role of GPs in primary healthcare

There is a case for the general practitioner (primary care physician, family physician, etc. – collectively referred to as the GP) to be seen as a cornerstone of primary care in New Zealand.

Clinical Vignette 1 illustrates the healthcare experiences of many New Zealanders.[1] These experiences are frustratingly fragmented, and do not meet people's needs nor expectations. This 'story' also reveals significant costs for all parties: Maria (lost wages), her employer (lost work), and Anita (lost school days). The societal costs are avoidable clinic and hospital services, and delayed care for others in urgent care, the initial hospital, and Starship.

If a GP (particularly, Maria and Anita's usual and preferred GP) had been available at the outset, this story would have ended there and then. Clearly, we need more GPs and more of those who are easily accessible and able to build a long-term relationship with their patients and community. The traditional role of a GP must be adapted to the realities of the state of healthcare today in terms of migration, funding, ageing population, telehealth, etc.

Clinical Vignette 2: How many is enough?

In a high-health-needs region of apartheid-era South Africa, a public health physician was tasked with delivering public health care for 4 million people. At any one time, he had only 40 or fewer doctors available to serve such a huge population. Nevertheless, he was able to provide healthcare that was comparable with almost every other region in the country.[2] He achieved this by limiting doctors to roles (such as patient differentiation and decision-making under uncertain conditions) that absolutely could not be provided by other providers.

Our review of the state of general practice in New Zealand shows primary healthcare needs a once-in-a-generation paradigm shift. Today, we have nurses specialising in legal consultancy, research and forensics, medical records of an entire country are stored in a central hub, telesurgery and virtual surgery are no longer novel, and even the venerated stethoscope is ceding its place to ultrasound devices. It is time to radically redefine and refine the traditional GP roles and tasks, especially when there is precedence. Clinical Vignette 2 shows how such a redefinition has already successfully implemented on a large scale in South Africa.[3]

Such a constructive approach, which we prefer, will significantly reduce the cohort of roles and tasks than a deconstructive approach. Accordingly, the traditional GP role can be broken up into roles that can be delivered:

1. only by GPs and not by other providers – this would involve starting with a 'blank slate' and constructing a role for GPs, and

2. by substitute providers but without compromising the quality of care: a nurse practitioner or physician assistant, extended pharmacy services, online AI mechanisms, etc.[4]

The vignette from South Africa shows how only doctors can adequately perform some core roles of first-contact providers. Many health system architects argue that doctors should be restricted to these roles. This is commonly described as "working at the top end of their licence."

Requiring doctors to engage in higher-order deductive reasoning their entire practising-day would be exhausting for them – and unsustainable.[5] The economic calculus underpinning the capitation sum paid to New Zealand GP practices for every enrolled patient is based on a patient consultation lasting about 15 minutes.[6] This brevity is a hangover from the traditional fee-for-service approach and is inconsistent with desirable GP-specialist services today. The solution is variable length consultations, with significantly more time allocated for initial and complicated presentations or mental health consultations.

Resistance comes from the inherent human trait of "loss aversion" and everybody who needs to necessarily change their embedded and practised roles (e.g. GPs, specialist doctors, nurses, technicians, and all other medical professionals).[7] The pain of the transitional changes will seem much bigger than the potential benefits of rearranging general practice roles.

The limitations of funding capitation in place are discussed in Chapter 3.

What is "primary" in primary healthcare?

While it is generally accepted that general practice is a cornerstone of primary care and strong primary care is essential for community health and wellbeing, there is disagreement about what 'primary' means.

The word primary widely refers to first-contact providers for injured and ill people. It involves triage and patient referrals to more appropriate and specialised secondary, tertiary, and quaternary service providers. In this hierarchy of skills and knowledge, primary care providers sit at the base and "specialists" at the apex. This approach results in preferential allocation of funds to secondary, tertiary, and quaternary care providers. It also depreciates the status and necessary clinical expertise required for those engaged in first aid and triage.

'Primary' has another definition of broad and holistic practice. Secondary, tertiary, and quaternary service providers are considered "partialists" rather than "specialists" (acknowledging the narrower scopes of their specialisation). "Partialists" support the primary care community as required. Adopting this broad and holistic model of primary care would confer "specialist" status on GPs and underline their singular skills and knowledge. It would also significantly shift funding away from hospitals to community-based services, and eventually to all New Zealanders. We endorse this model of primary care providers as "specialists."

Chapter 3 deals with two topics:

- The extent to which health service in New Zealand meets community needs, and
- The existing size and distribution of the GP community regarding primary care needs (and what needs to be done for optimum supply of health services).

CHAPTER 3
Healthcare system not meeting demand

Does New Zealand have a health system?

A good health system enhances and maintains community wellbeing to improve both citizen participation and independence and increases social productivity and wealth. Unfortunately, many New Zealanders are having bad experiences with healthcare because instead of a health system, we have an activity-based system that is focused on managing injuries and illnesses.[8] This is a long-standing criticism of health services not just in New Zealand but also in the rest of the developed world.

Another valid observation is that our healthcare system serves the needs of providers more than those of the community.[9] This activity-based system inevitably concentrates investment and political attention on hospital care and end-of-life care.

"Customers" are also dissatisfied that healthcare does not behave like a regular service industry.[10] Inequality is embedded and sustained in health services despite the core principle of universalism.[11] As in most jurisdictions, health inequality in New Zealand largely rises from social inequities (i.e. in housing, education and employment) and cultural factors.[12] The medical workforce is also poorly distributed against need (by discipline, geography, demography and culture). As a result, any total headcount of doctors in New Zealand will be misleading as it will underestimate supply-demand imbalances.[13]

That the point of healthcare delivery should be shifted as much as is possible from hospitals into the community, and then into people's homes has long been acknowledged. But attempts at such shifts have had limited success. Similarly, transferring the locus of responsibility from providers to people has largely failed. In fact, the *status quo* has been actively sustained by (usually provider-led) politically influential aggregates protecting their interests (regardless of whether health spend relative to GDP is stable, decreasing or increasing).[14]

Injury and illness management

Given this background, it is reasonable to evaluate the performance of the New Zealand 'health system' based on activity (as compared to outcomes, which are not regularly reported).[15] Regardless of metric, MOH data shows increasing wait times for the injured and ill in EDs, and for elective surgery, specialist appointments, first cancer treatments, radiological investigations, etc. All these metrics are well below determined baselines.[16] Along with patients not being able to see GPs of their choice due to unavailability (see Clinical Vignette 1), the system is failing to adequately meet community needs. The government's position that this is a long-standing problem does not explain how between 2008 and 2014, most public health providers met much higher standards of performance (i.e. activity relative to demand).

- Baselines, such as 95% of people being seen and managed within six hours of arrival at a hospital ED, have been in place for several decades. Between 2008 and 2014, almost all District Health Boards (DHBs) met or exceeded baseline activity levels nearly all the time. So, baselines are achievable rather than aspirational targets.
- From a behavioural economics perspective, the primary accountability measure in 2008–14 was to publish DHB performance data in mainstream media (without commentary).[17]

In addition to shifting the point of care and locus of responsibility, the 'health system' must focus more on outcomes and value.[18] This is necessary not only to improve community health and wellbeing, but also to enable a disinvestment or at least a reduced rate of investment in hospitals and hospital care. MOH data shows that the capital needed to just maintain the public health estate in New Zealand well exceeds allocated budgets.

By way of mitigation, the limited capacity of community health providers is a possible reason for healthcare remaining so hospital centric. People are more likely to go to an ED when they cannot access timely primary care; those admitted to hospital are more likely to stay longer than necessary if they cannot be safely discharged into the community. There is little objective data available about the accessibility and value of primary healthcare services in New Zealand.

- Anecdotal evidence suggests wait times at urgent care facilities have blown out (see Clinical Vignette 1). No data exists to establish mean waiting times in primary care settings. This is disappointing given that this should be one of the key performance measures of any capitated funding scheme.
- The further someone lives from a general practice and the closer they are to a hospital, the more likely they are to have an "avoidable hospital admission," according to MOH data. Convenience and access are thus strong drivers of health-seeking behaviour.

Left alone, this situation is only likely to worsen. The Commonwealth Fund recently released a comprehensive review of the primary care medical workforces in 10 high-income countries.[19] The study highlights the level of stress and projected number of GPs wanting to leave medical practice, along with how the doctors perceive the quality of care they provide to their patients.

- 18% of GPs in New Zealand aged under 55 and 59% of those aged above 55 say they will leave general practice within the next one to three years.
- All GPs (especially those aged under 55) reported increased workload, more work stress, and lower quality of care to patients,[20] both during and after the Covid-19 pandemic.
  - This runs counter to the complaints about reduced "walk-up customers" and lower income (i.e. fewer fees-for-service) from many GPs during Covid-19 lockdowns and periods of less stringent but real constraints on public movement and association.
  - High levels of stress among medical workers recently may have been due to the mismanaged Covid-19 pandemic in New Zealand and the unwise projection of tens of thousands of deaths.[21] Indeed, health workers in all areas of our health system feared a tsunami of infected people overwhelming health resources and becoming infected themselves and dying. This has elevated anxiety levels in all aspects of life New Zealand.
  - Attention to the wellbeing of GPs is essential.[22] It is noteworthy that the original IHI Triple Aim (i.e. better individual **care**, improved population **health** and at lower **cost**) was extended to include **the health of the workforce**.[23]

"Crisis" in healthcare in New Zealand

Findings about the intention of GPs to retire, their distress, and perceptions of reduced quality of care provided further establish the case for healthcare in New Zealand as being in *crisis*.

- Juliet in *Romeo and Juliet* asks: "What's in a name? That which we call a rose by any other name would smell just as sweet." We believe the nomenclature of *crisis* applies to the state of the healthcare system in New Zealand. The word *crisis* comes from Greek, through Latin, largely unchanged although the ancients imbued the word with the implication of a turning point. The turning point is a superior definition of *crisis* for our purposes.
- *Crisis* validates the distress healthcare workers in New Zealand are experiencing.[24] It also indicates the urgent need for a "crisis" response, not a "business as usual" response.

The GP remains core to community health provision, and any reform for a better performing health system depends on a fit-for-purpose GP community. All available data suggests that demand well exceeds supply in the healthcare system in general and GP and other community services specifically. We have a crisis, and it needs a crisis response.

CHAPTER 4
The missing GP

The Royal New Zealand College of General Practitioners iteratively signalled an imminent crisis in the GP workforce due to a "missing generation of GPs." Fewer doctors have been entering the GP training scheme – down from a historic annual mean of about 100 entrants to 50 (2008–17). This reduced uptake – combined with the "relative ageing" of the community, the relatively large number of older GPs retiring, underpaid GPs, barriers to hiring GPs from overseas, fewer graduates choosing to become GPs, and GPs reducing their work hours – is creating a shortfall in the workforce and skewing GP demographics. Stock-and-flow modelling by Health Workforce New Zealand (HWNZ) using NZMC data has found this concern valid. Indeed, this modelling showed that more than 300 GPs are needed to join the workforce every year over the next decade just to maintain a steady state of GPs per capita (age adjusted).

Fewer hours and lower salaries

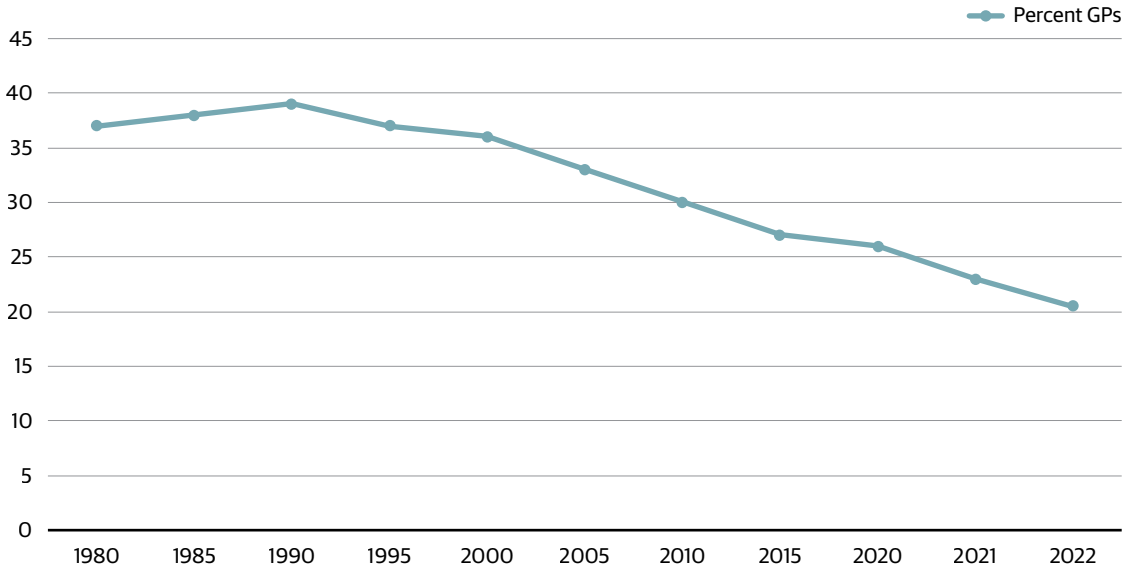
Not only are fewer GPs entering the workforce but a significant number of them are also reducing their workload, according to the Medical Council of New Zealand (NZMC) workforce survey data (see Figures 1 and 2). From 2003 to 2022, GPs reduced their individual workload by about one day per week (a 7.3 hour mean reduction in hours worked per week). This is equivalent to 403 full time GP resignations.[25]

Just as worrying are the reduced after-hours and on-call work for GPs from a mean of ten hours to four per week. The latter is associated, at least temporally, with a proliferation of urgent care clinics and increased presentations to EDs. Continuity is a fundamental principle in general practice. Episodic care in urgent care clinics may be 'connected' via a common health record but is still a significant breach in continuity of care. Real continuity depends on a long-standing relationship between GPs and 'patients' (see Clinical Vignette 1).

Andrew Little, a former Minister of Health argued that a big reason for new doctors eschewing general practice is the lower salary they are paid as trainees compared to hospital registrars.[26] Through the Royal New Zealand College of General Practitioners, HWNZ introduced the General Practitioner Education Programme (GPEP) funding model under the aegis of the Ministry. The GPEP aims to improve the recruitment and retention of GPs by attracting local registrars and foreign healthcare workers to build a medically competent and culturally diverse GP workforce across New Zealand.[27] A nationwide recruitment programme was launched to entice residents in New Zealand public hospitals to join the GPEP. Salaries were increased by 13–23% while the new immigration settings attracted more than 1,000 healthcare workers.[28]

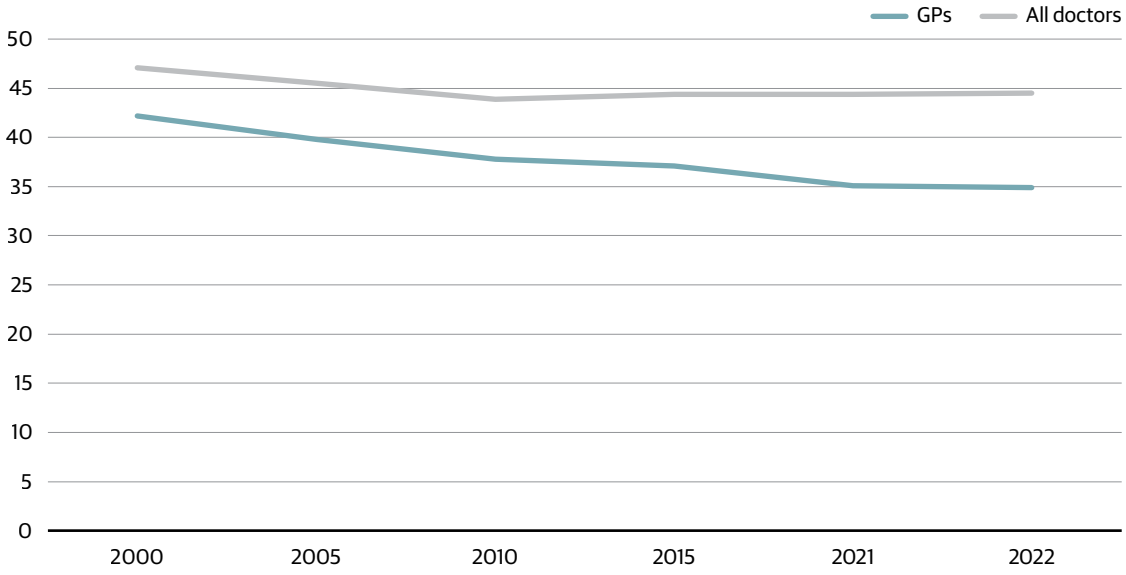
The programme was successful in increasing GP enrolment numbers to about 200 per year. However, this number must be depreciated because many enrolees said (anecdotally) they only intended to work part-time – a major attraction to their taking up the three-year GP training.

Figure 1: Percentage of medical workforce working as GPs (1980–2022)



Source: Medical Council of New Zealand (NZMC) Workforce Survey 2022.

Figure 2: Hours worked per GP and all doctors per week (2000–22)



Source: Medical Council of New Zealand (NZMC) Workforce Survey 2022.

Our analysis of contemporary NZMC workforce survey data is summarised below:

- An additional 403 full-time equivalent (FTE) GPs would be needed to restore the ratio of GPs to 'patients' to the early 2000s level. The major driver of this shortfall are people aged 60 years and older who consume considerably more healthcare than younger people.[29]
- Largely driven by the relatively ageing community, 317 doctors would need to become GPs each year over the next decade to maintain the current ratio of GPs to population.

- Based on retention rates since the early 2010s, more than 400 doctors with their primary medical degrees obtained in New Zealand would need to become GPs each year over the next decade to maintain the current ratio of GPs to population and to reduce to 20% our reliance on overseas-trained doctors in general medical practice (the 20% figure cited for immigrant doctors is entirely conjectural).
  - The ideal ratio of doctors trained overseas and locally is not known. Overseas-trained GPs certainly add value by way of different perspectives, but they also inevitably reduce the average cultural competence of the health workforce in New Zealand (see Clinical Vignette 3). These GPs must be trained in New Zealand culture to facilitate their acceptance by the communities they will serve.
  - Over 40% of the New Zealand medical workforce had their initial medical training overseas. In 2008, the World Health Organisation called this dependence unethical and unsustainable because it deprives developing countries of their already sparse resources.[30] The situation has not improved in the 15 years since. The easiest way to fix this problem is to produce more home-grown GPs to fulfil our domestic needs and send doctors elsewhere in the world where they are more needed.
- If the Commonwealth Fund survey predictions are accurate, and 18% of New Zealand's GPs aged under 55 and 59% of GPs aged 55 or above retire in the next year or so, the actual loss of GPs will be about 1,500 (i.e. 39% of the total GP workforce).

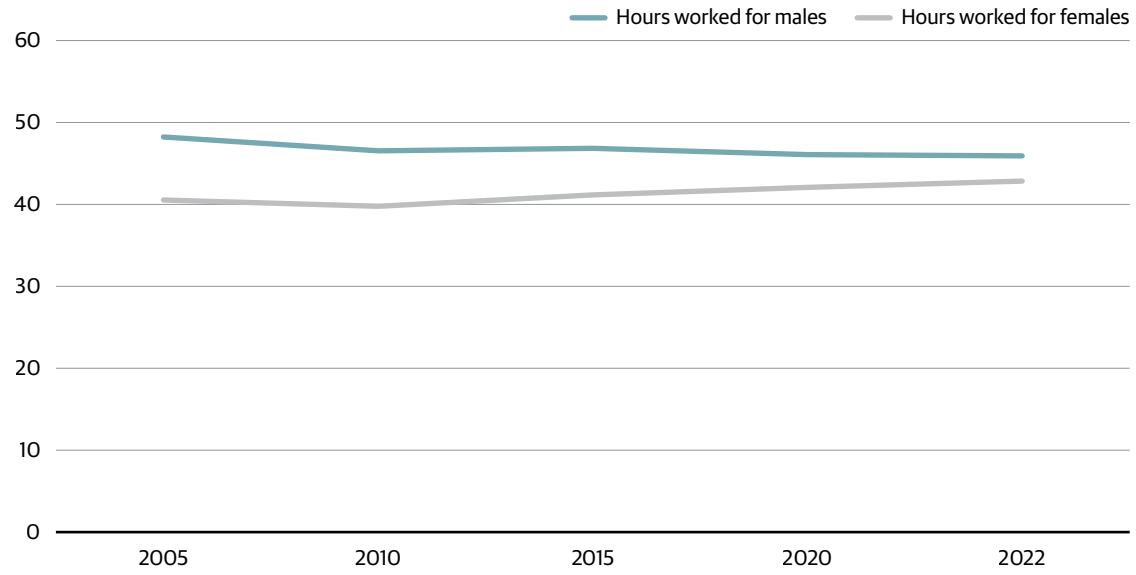
Impact of an accountability-free capitated funding system on GPs

A significant and likely cause of the reduced hours GPs work regularly and after-hours is the accountability-free primary care capitation funding system introduced in 2001.[31] Behavioural science predicts such a capitation will encourage providers to enrol more and more people with low health needs and then reduce the cost of servicing them (in part by not being available, especially in providing relatively expensive or inconvenient services like after-hours care).[32] This contrasts with a fee-for-service system where the incentive is to increase throughput by reducing contact time. Clearly, neither behaviour is desirable.

The last metanalysis of different GP funding schemes showed similar outcomes for patients whose GPs are salaried, funded on a capitated basis, or receive a fee-for-service – although the last option is associated with increased activity and cost.[33] The Australian National University has shown that the number of services delivered in a strictly fee-for-service environment is linearly related to the number of providers.[34] Michael Cullen, New Zealand's former Minister of Finance, told medical school representatives in 2006 that he was reluctant to increase the medical school student cap as limiting the number of practising doctors constrained cost. That of course would only make economic 'sense' if overseas-trained doctors were not imported to make up the numbers.

In contrast with any sole attribution of this reduction in GP workload to the capitated funding system, the workload of other medical workforce roles has reduced over the past 20 years. Common factors cited are the increasing proportion of female doctors (who report working fewer hours – see Figure 3) and generational effects. Hours worked tend to decline as doctors age and many new GPs start working part-time.

Figure 3: Hours worked per week for male and female doctors (2005–22)



Source: Medical Council of New Zealand (NZMC) Workforce Survey 2022.

However, the factors explaining fewer GP hours worked are not common to all doctors.

1. Fewer hours worked is also reported by doctors who work in hospitals and are not subject to capitation or fee-for-service effects. However, industrial awards have successively imposed constraints on their workload.[35] The reduced work hours are consistent with these constraints.
2. As cited, two potentially confounding factors are the proportion of females and the ageing of respective workforces. However, the increase in the proportion of females does not differ between GPs and all doctors, and the average age of GPs increased by two years as was seen for all doctors (2000–22).

Despite the gender and age commonality, the average hours worked by GPs have reduced far faster than for all doctors (see Figure 2).

From 2000 to 2022, GPs worked 7.3 fewer hours per week (from 42.2 to 34.9 hours), compared with 2.6 hours (from 47.1 to 44.5 hours) for all doctors.

Additionally, accountability-free capitation is likely to have a disproportionately large impact on the most costly or inconvenient services, like after-hours care, which is what we see.

> **Accountability-free capitation introduced a financial incentive to reduce the cost to serve patients and has likely contributed significantly to the fewer hours worked by GPs.**

Career choices of New Zealand medical graduates

Any consideration of the GP supply pipeline must include the career choices of the graduates of New Zealand's two medical schools. We need 317 more GPs to enter the workforce each year until 2033 to just maintain the current ratio of GPs to population – setting aside addressing existing maldistributions and unmet need.[36] Excluding overseas trained doctors, this target requires more than 50% of New Zealand's medical graduates becoming GPs. By contrast, the Medical Schools Outcome Database (MSOD) shows that only 10–15% of graduates intend to become GPs.[37]

Growing need for immigrant GPs

New Zealand consequently needs to recruit more than 200 medical graduates per annum from overseas as GPs every year for the next decade. The WHO said in 2008 that New Zealand is not particularly competitive in international medical graduates.[38] This is clear from anecdotal information from English-language testers, who say only few health workers intending to emigrate consider working in New Zealand. This is a roadblock to increasing GP numbers through overseas recruitment. Hiring migrant GPs is also unreliable and expensive given transport, language and technical competency assessment, registration, and enculturation processes.

Despite instruction on cultural awareness and responsivity to domestic allied health professions, nursing and medical students, the cultural competency of the New Zealand health workforce is being continually eroded by the relatively high level of dependence on migrant health workers (see Clinical Vignette 3). New Zealand is the most dependent among OECD nations in this context and has a very low long-term retention rate (e.g. only 20% of immigrant medical graduates).

This vignette shows how a doctor can be competent clinically but not culturally. The result can be considerable angst and distress, and non-compliance with the prescribed treatment. The psychiatrist here was not culturally competent by:

1. not understanding the mental health metaphor that applied to this *whānau*, and
2. not being aware that for many Māori, consent should be obtained from the *whānau* and is not an individual responsibility or gift.

The low level of interest among New Zealand medical graduates in becoming GPs is not surprising given that medical programmes in

Clinical Vignette 3: Close, but no cigar

A young Māori man working in a meat processing plant was referred by the company's occupational health doctor to a psychiatrist after his co-workers raised concerns about his behaviour, speech and difficulty following even simple instructions.

The psychiatrist who assessed the young man had trained overseas and had come to New Zealand about six months back. He diagnosed the young man as having a psychotic illness – schizophrenia – and prescribed antipsychotic medicine. The family of the young man were outraged and complained to the company and the Health and Disability Commissioner.

After meeting the family, company officials appointed a panel of medical experts (including Professor Des Gorman, this report's co-author) to examine the young man. He told us about thoughts he could not control and saying things but not in his words. We found him to be thought-disordered, unhappy, and confused – as diagnosed by the psychiatrist.

The panel of doctors, who had grown up in New Zealand and were well-versed in Māori custom, decided they needed to meet the young man's family. The family arrived *en masse*. They insisted that the young man was blessed with the spirit of his grandfather who had returned to be with his *whānau* or community. They found the mental illness (schizophrenia) diagnosis profoundly offensive.

The panel first acknowledged the young man as a *taonga* (a treasured person) with a great blessing but also said that he needed help. He was struggling to manage the blessing, making him ill. After a long discussion, the family agreed to him taking the same medicine prescribed by the physiatrist.

both Auckland and Otago universities are based on teaching hospitals. As such, hospital-based scopes of medical practice are promoted. Medical schools in Australia and Canada show increasing numbers of community-based careers such as becoming GPs if given appropriate 'immersion' as students.[39] Such 'immersions' are available at Auckland and Otago, but only to a minority of students and then only for a minor part of their education.[40] With the exception of EDs, teaching hospitals are increasingly becoming 'poor' places to teach clinical medicine, given that the patients are generally very old and have multiple well-defined comorbidities. By contrast, many patients presenting to GPs have undifferentiated problems such as breathlessness, confusion and pain. This 'patient cohort' can much better teach deductive reasoning, the keystone of diagnosis.

Selection systems for medical students have not proven to be particularly influential in desirable career uptakes, unless they are married to a suitable 'immersion' programme.[41] Affirmative selection processes exist for Māori, Pacifica and students of rural origin. To date, these processes have successfully increased the number of Māori and Pacifica medical graduates, but no data yet exists to show improvements in relative health status for affirmed communities, which is the only ethical basis for such a race-based affirmation.

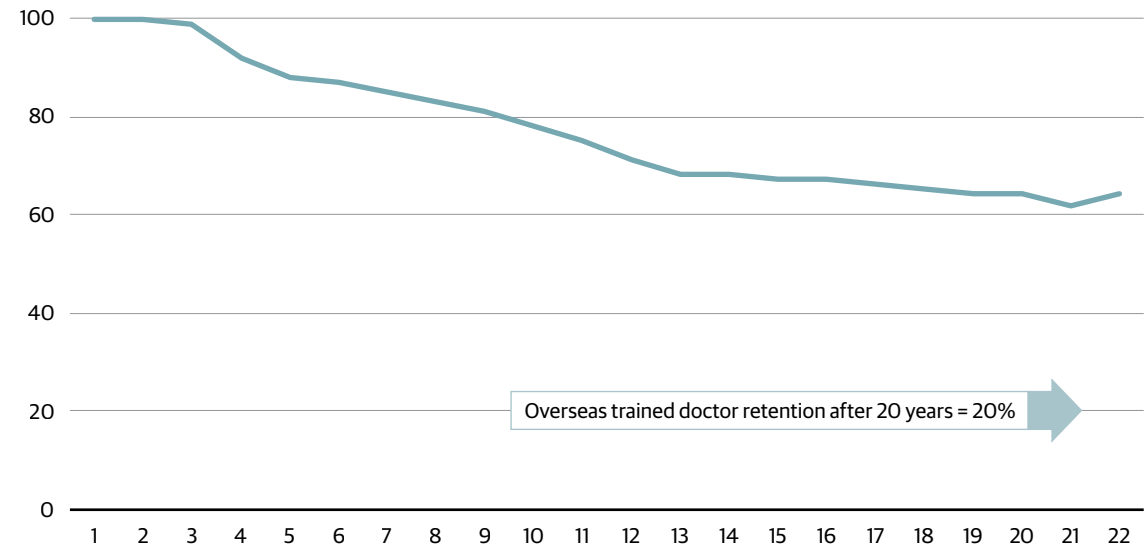
The long-standing and significant emigration of our medical graduates

The permanent or long-term emigration of medical graduates trained in New Zealand is significant (see Figure 4). NZMC data shows that in 20 years following graduation, 35% (historical mean) of medical school graduates leave New Zealand. Worse still, only about 20% of overseas-trained doctors are successfully retained in New Zealand in the long-term.

Most New Zealand-trained doctors practising in other countries are in Australia (2,187 in 2019).

Interestingly, Australian health services do not regard New Zealand graduates as immigrant medical graduates. In that context, the Australasian specialist colleges – which do not include general medical practice or public health – serve the Australian purpose very well.

Figure 4: Percentage of domestic medical graduates working in New Zealand 20 years after graduation



Source: Medical Council of New Zealand (NZMC) Workforce Survey 2022.

This exodus is seen both before and after specialist training; for example, NZMC data shows that within five years of qualifying as a specialist general surgeon, about a third of the surgeons leave New Zealand – they comprise a quarter of doctors whose primary medical qualification was obtained in New Zealand and half of those whose primary medical qualification was obtained overseas. This loss is commonly attributed to self-interest in the form of higher remuneration. But the absence of any career planning is probably a stronger factor. It is entirely by chance that a suitable job is available when a surgeon qualifies. Emigrating to a larger health economy is simply a way of obtaining suitable employment. In comparison, the military would never show such a *laisser-faire* attitude towards its highly trained personnel.

HWNZ did try to introduce a requirement for all doctors-in-training that were funded through the agency to have a career plan, but the support from the DHB's and specialist medical colleges was variable and generally weak.

> **NZMC surveys show a significant decrease in the ratio of GPs to population and a decline in hours worked by those GPs. If these trends continue, this decline in GP capacity is likely to get worse. A significant increase in the number of GP trainees is essential, and this needs to be married to career planning, including support for training in specialist areas.**

CHAPTER 5

Maximising the value of the GP community

Short-term strategies to fix GP shortfall

Responding to the health workforce shortfall in New Zealand must begin with retaining existing workers, and extending their roles, functions and work hours. But our health system does not have the required cooperation and collaboration to embark on such a response. Most reforms since 1938 have been by way of top-down edicts, which are resented and opposed by many in the health sector.[42] The four sections below offer ways to retain and extend the health workforce in the short-term and set the stage for long-term reforms.

Retention and extension of existing GP community

A colander is an apt metaphor for New Zealand's health workforce, and certainly for the medical profession. The only way to fill the colander and keep it full is to first plug the holes.

The necessary data to underpin a retention and extension strategy was gathered for nurses (in 2018 before the pandemic) by the University of Auckland.[43] About half the nurses surveyed said they intended to reduce their work hours; a quarter said they were either going to give up nursing or emigrate. One of the main reasons nurses cited for their decision was excess workloads arising from their patients being older and sicker. Other reasons were their perception of a reduced standard of nursing care, lack of autonomy and work-shift flexibility, and diminished personal and family wellbeing. Similar data is not available for GPs beyond the general observations in the Commonwealth Fund review in 2022 (which are consistent with the nurse survey findings in 2018).[44]

A smart recruitment strategy

Recruitment efforts must target vulnerable communities (e.g. those identified on databases held by English-language testing agencies of would-be migrants).[45] New Zealand recognises the qualifications and experience of doctors from countries with similar medical education systems, but some migrant doctors from other countries find it much harder to enter the medical workforce. Doctors who narrowly missed meeting immigration and registration standards should be recruited and employed through funded bridging programmes. The cost of such programmes must be evaluated against the counterfactual costs of GP unavailability (see Clinical Vignette 1).

Managing role-and-task substitution

The third element of the crisis response is carefully managed role-and-task substitution. As mentioned above, although many health system architects want doctors to "work at the top of the licence," we question the sustainability of this level of cognitive demand.[46]

HWNZ has rolled out two successful role-and-task substitution programmes: 1) just-in-time and trained-for-purpose, and micro-credentialled health workers in aged care;[47] and 2) specialist diabetes nurses who can prescribe.[48] The latter is a logical role substitution given the limited number of drugs used to manage diabetes. Diabetes management is a core nursing competency for registered nurses along with caring for wounds, nutrition and hydration, monitoring and observing patients, etc. Registered diabetes specialist nurses must complete a short, specific training course; nurse practitioners need longer training.

Barriers to high-health-needs people accessing healthcare

Barriers to accessing healthcare for people of high-health-needs can be found in childcare, transport, etc. The barriers this cohort face in accessing healthcare can be overcome almost immediately (see Clinical Vignette 4).

Clinical Vignette 4: I couldn't even if you paid me!

A young family have four children. The father works at a local hardware store. The mother stays at home to look after the children, all of whom attend preschool. Two of the children have recurrent upper respiratory tract infections and the oldest is at risk of contracting rheumatic fever. The father drives to work daily in the family's only car. They have no supportive family living nearby. The local general practice treats children for free.

The oldest child, John, developed a sore throat one day and it worsened quickly. The mother was unable to inform the father to come home with the car so they could go to the GP. Even if she took a taxi, there was no one to mind the other three children. John suffered all night.

The next morning, the father took the day off work to look after the three younger children while the mother took the sick child to the doctor. The delay had made his condition severe enough to require being admitted at Starship Children's Hospital.

Vignette 4 shows how unpredictable the social determinants of ill-health are. A simple solution in high-needs areas is for the general practice to establish a creche and childcare centre. Or the practice could tie up with nearby childcare providers. Transport to and from the practice could be provided on request for injured and ill 'patients.' The additional cost of these social services may seem extravagant, but it is insignificant compared to the counterfactual costs of the lifetime care needed for someone who has had rheumatic fever or renal disease.

Similar vulnerable barriers to access need to be quickly identified and remedied.

Long-term strategies to fix GP shortfall

Concurrent with the short-term responses, a long-term strategy will likely make New Zealand's primary and community care substantially more attractive and productive. Strengthening retention and expanding role-and-task substitution would be good first steps. Next, successful innovation, particularly in the health of the enrolled population, needs to be encouraged. We must face up to spending more on primary and community care but only if more funding will deliver better outcomes for patients and the community. Spending more money to get more of the same services delivered in the same way will not solve the flaws in general practice in New Zealand.

Innovation today tends to be sporadic and localised. It is striking, for example, how slow GPs have been to embrace video consultations. They were spurred into widespread uptake of such consultations only after Covid-19 hit our shores and cost GPs their fee-for-service revenue.

Current incentives for innovation are strikingly weak, particularly how GPs are remunerated: a combination of payment for a traditionally delivered consultation and for each enrolled patient. Financial incentives, therefore, focus innovation on reducing GP contact time (to increase throughput) and reducing the cost to serve the enrolled population. Sporadic efforts to increase payments have been poorly implemented and tend to focus on additional activities rather than results relevant to 'patients' and GPs. Little incentive exists for GPs to take on the cost

and inevitable financial risks associated with improving their practice to offer better healthcare to their enrolled populations. Any evident innovation comes from individual GPs' interests, inclinations, and professional commitment to patient care rather than financial incentives.

This situation persists largely because health is funded on an annual basis: Providers are compensated for the cost of delivering more of the existing set of services in the existing ways. Each year's operational health costs need to be contained within that year's operational budget. The benefits from reducing future costs, and the costs incurred outside of heath because of under-servicing and delayed treatment, are excluded. Indeed, no data is available on how better health outcomes affect employment, academic achievement, crime rates, and so on. Constraining cost growth is thus more about 'leaning' against increasing demand for existing services and pay claims from the existing workforce than reducing the longer-term costs of sickness.

Contrast this approach with that of the Accident Compensation Corporation (ACC), whose objective is to reduce future claims liability, i.e. the long-term cost of an injury, including the costs of work-related compensation. ACC has every incentive to invest in prevention, timely treatment, and effective rehabilitation so people can return to work quickly. In short, while public health funders focus on activity, ACC has a strong financial incentive to invest in discovering successful ways of achieving outcomes like injury prevention, returning injured people to work, or independence for the injured. Naturally, ACC wants to control the cost of producing these outcomes, but it is not living within an annual spending cap. By reducing its earnings-related compensation payments and future claims liability, ACC can spend more on diagnosis, treatment, and rehabilitation.

The pay-as-you-go annualised approach to health funding in New Zealand mirrors that in the UK. Both jurisdictions struggle to fund healthcare from general revenue as population demographics skew (i.e. the proportion of older people who consume a lot of healthcare but do not pay much in income-tax increases relative to younger people who do not consume much healthcare but pay both income and consumption taxes).[49] The result is a growing financial liability for future generations. By contrast, and more aligned with the ACC, Germany's social health insurance model (founded in 1883) is based on the moral principle of social solidarity (the Bismarck model).[50] More recently, such an insurance approach has been adopted by Switzerland, France and the Netherlands,[51] and by South Korea and Singapore (which have slightly older models).[52] None of these models are free of difficulties, but they do encourage long-term health investments and attention on the primary care workforce – and the role of the community.

- Health policy analysts in the UK are trying to identify international lessons to help reform their National Health Service.[53]
- Health insurance schemes in the US are outliers in this regard, although Medicare and Medicaid are like public health systems in other countries.

Funding health on ACC's fully forward-funded model or based on international social health insurance models would be a time-consuming and risky undertaking needing careful management. However, specific changes can be more easily implemented and can significantly increase the incentives for innovation in primary care without having to move to a fully forward-funded model. Either model can be used to justify more funding for primary care because both tie extra funds to providing better results for patients and the wider community.

Creating a contestable pot of "extra-capitated funding" will improve participation and independence for populations enrolled in primary care, especially those missing out.

Providers could bid for a share of that pot of money and central to their bids they will need to explain which innovations to their operating models have given them the confidence to deliver with their available workforce the promised improved outcomes in the areas of need.

Budgets for people with disabilities and chronic diseases

Individual budget holding should be extended to a wider group of people with long-term conditions. It is encouraging that several thousand New Zealanders with disabilities are already managing their budgets and employing their healthcare providers.[54] The system is 'protected' by tracking transactions in real time. The experience to date shows that people with disabilities invest wisely in their healthcare and often underspend their budgets to save money for future needs. This shifts the locus of responsibility from providers to the people. The innovative (and financial and outcome risk-taking) nature of the consequent health interventions is such that the 'health teams' will comprise only members who add value.[55] This is likely to reshape the 'distribution' of the New Zealand health workforce and free up GPs.[56]

Individual budget holdings should be extended to all New Zealanders with disabilities and chronic diseases, with a choice to opt out. The administrative versus service cost for these two groups would be relatively small.

A social investment approach to long-term conditions

An essential adjunct to a fully forward-funded system, and one that should be introduced now, is 'social investment.'[57] This also has actuarial roots and will help shape the future health workforce.[58] In social investment, a counterfactual of outcome and cost is generated for existing models of care. Alternative models are then proposed to add value by achieving:

1. the same outcomes at a reduced cost
2. a superior outcome at the same cost, or
3. a superior outcome at a reduced cost (preferable).[59]

A clear plan to deliver these savings is essential if the aim is to reduce costs.

These counterfactuals rely heavily on accurate databases regarding cost. Data for New Zealand is available in the Integrated Data Infrastructure (IDI).

The 'social investment' approach also derives from seeing ill health as determined largely socially,[60] and injuries and illnesses as having a broad social impact. For example, poor mental health outcomes have a much greater impact on education, child protection, social welfare, and the police and justice systems than they do on services funded through health budgets. Additionally, more effective outcomes in housing, education and employment can improve mental health outcomes in the community. Poor mental health conditions and ignorance of effective interventions have a relatively limited impact on health budgets – leading to the current inadequate investment in mental health services. The long-term nature of the return on investment for mental health interventions is also at odds with the ambitions of annualised activity-related health budgets.

Delayed identification and treatment of autism will largely affect the same social services.[61] While interventions should involve health workers such as Plunket nurses and dedicated therapists, the cost of these interventions should be borne by agencies benefitting the most. The Laura Fergusson Trust and Autism New Zealand are conducting an encouraging pilot programme.[62]

There are at least two ways of funding 'social investments.' The first is to top slice 'new money' allocated to the various ministries on a pro-rata

basis against anticipated returns. The second, and better option, is through social bonds.[63] Bond purchasers are guaranteed a return on their capital, but any profit will depend on the intervention delivering real cost savings. So, bond purchasers will ensure the proposed programme is not confounded by either endowment or confirmation biases (both highly influence the attitudes of the intervention architects).[64] Social bonds in New Zealand have a history of eliciting innovative and highly attractive responses. Private funders and providers are "up for it." In the process, this success revealed a lack of commercial experience amongst officials managing the process.

Lifting productivity in general medical practice

The bond between the newly centralised heath bureaucracies and primary and community providers needs to change. Every primary care service has the potential to increase and maximise its value.[65] Indeed, substantive improvements in health worker productivity will likely come from community-based providers rather than hospitals.[66] Generally, models of care in hospitals do not vary much between quaternary teaching hospitals such as Massachusetts General Hospital and regional/rural hospitals such as Whakatane Hospital. This is not to say economies of scale and scope are not possible in hospitals.[67] However, the plethora of diverse business and operating models in primary and community care underpins a significant opportunity for productivity gains.

No single solution exists for a country as diverse as New Zealand – instead, we need local solutions to meet local needs. A central agency should provide resources and support, and enable local solutions, as compared to a centralised command-and-control entity. Introduction will also be more effective if it is in the form of action research methodology, where the outcome is determined, and it involves changing whatever is necessary in the operating and business models to achieve that outcome.[68] The success and failure of different approaches is to be reported.

New operating and business models to reform general practice

The effect of different funding, remuneration and reward mechanisms and the impact on GP behaviour has already been discussed. There is a strong argument for capitated funding, but only where it leads to clear and explicit accountabilities. These accountabilities should be locally developed between providers, consumers, and funders.[69]

Numerous sustainable value-based primary care business and operating models exist overseas, many of which can be adapted for and transplanted into New Zealand. They include successfully dropping obligate face-to-face consultations at Kaiser Permanente;[70] the widespread uptake of 'Concierge Medicine' and 'Minute Clinics'; and primary care clinics led by nurse practitioners and physician assistants.[71] Massachusetts has greatly reduced cost and dramatically improved patient outcomes by applying an algorithm model to heart failure and hypertension involving pharmacists and care navigators.[72] This model uses fewer doctors compared to conventional models – and satisfies Michael Porter's most demanding definition of value.[73]

More artificial intelligence (AI) can be potentially used in general medicine and complement the work of GPs.[74] Despite initial enthusiasm about using AI mechanisms to identify the cause of their symptoms, the role of AI in general medicine is concentrated on high-end diagnostic imaging technology; and deep learning in public health. This is not to say people cannot access information about their health complaints – they can and do. Indeed, health information in 2023 is extensively democratised.[75] But this also presents a complex communication and management challenge for GPs.[76]

They now must 'manage' the information a patient has from the internet, their medical history and that of their family, sickness and illness beliefs, and coping strategies.[77] The complexity of this task is illustrated in Clinical Vignette 5.

Clinical Vignette 5: That's not what I said, but I guess that's what you heard

As a medical student (about 50 years ago), I examined a middle-aged woman admitted with atrial fibrillation and breathlessness. This arrhythmia was quickly brought under control. But the examination had also revealed a breast lump. A biopsy showed unusual and probably malignant cells indicative of breast cancer – in this case, a form of breast cancer with a variable but often good outcome.

My senior physician asked me to find out from the patient any relevant and useful information. I spent several hours talking to her about the nature of her cancer. By the end of the conversation, I was convinced that she had fully understood what I had told her.

The next day, the senior physician asked the patient what I had told her. She said I had told her she had six months to live. Before I could object, the senior physician squeezed my arm indicating I should keep quiet. Back in the corridor, he asked me what I had learnt from the experience – my reply was that as soon I gave her the diagnosis of breast cancer, she decided she had only six months to live, presumably because everyone she had known who had had breast cancer had died in a short time. Everything else I had said after that was simply noise.

He agreed and pointed out that patients do not come to us as blank sheets, but rather as people with lived and shared experiences that determine their illness perceptions and sickness beliefs. Further, understanding this was a cornerstone to being able to communicate effectively with people who have illnesses or illness concerns.

It is unlikely that AI will substantively reduce the need for GPs: complexity in primary care usually arises from the social context of people and their health problems.

For example, consider a 65-year-old woman who is dementing, and who is the sole carer of her 40-year-old son with Downs Syndrome who has never been institutionalised. This speaks to the value of providing more consistent "continuity of care," underpinning the unique service aspect of general practice.

> **The urgent lift in productivity in New Zealand's health care system will largely come from improving operating and business models in primary and community care. Introducing both individual budget holdings and social investment models can help realise the aim of a fully forward-funded health system – at least in part. More investment is needed to generate innovative practice in community settings.**

CHAPTER 6

Meeting the national need for GPs

To mark the 30th anniversary of The Edinburgh Declaration (1988),[78] the World Federation for Medical Education (the Federation) tasked one of this report's authors to review the extent to which the 10th recommendation of the Declaration had been satisfied:

> Ensure admission practices that match the numbers of students trained with national needs for doctors.

The review was published in the Federation's *Medical Education* journal in 2017.[79] The broad conclusion was that the national need for any form of doctor generally, let alone GPs, was unknown and almost unknowable – as it depended on how doctors are deployed and employed. Clinical Vignette 2 (see Chapter 2), cited in *Medical Education*, shows that context dictates the number of doctors required.

In today's medical ecosystem, stock-and-flow modelling shows a significant shortfall in GPs compared to both 20 years ago and projected need (see Chapter 4). This becomes more complex because a model of care can be reasonably equally addressed by a variety of solution sets of workforce, IT, and capital investment. For example, an ED's architectural layout partly determines the number of doctors needed to meet demand.[80] The number of GPs would be different in a setting with significant IT-based virtual consultations and/or extensive role substitution.

Estimating the number of doctors needed

The most common way of estimating workforce need is stock-and-flow modelling, which is based on historical data (e.g. workers entering and leaving the workforce, along with mean work commitments, etc.). Added to the problems inherent in forecasting based on historical data, stock-and-flow modelling requires models of care to remain constant. However, the history of medicine shows that models of care change unpredictably and sometimes significantly.[81] For example, the unexpected discovery that *Helicobacter Pylori* caused peptic ulcers completely disrupted an entire surgical discipline.[82]

For this reason, HWNZ developed a forecast planning method that explicitly recognised this uncertainty.[83] For each service area (e.g. mental health, rehabilitation, cardiology, neurology, respiratory medicine, gastroenterology, eye health, etc.), a series of clinical vignettes were created. Collectively, these vignettes represented the major clinical presentations seen in each service. A cohort of clinical experts were tasked with imagining how these clinical vignettes could be managed in the future. They were told not to constrain their 'options' because of existing limitations in technology or funding. A hypothetical target of meeting twice the current demand at no additional cost was imposed on some of these service reviews.

The experts generated multiple clinical scenarios for each service area. They first considered which scenarios could be managed with existing workforce, capital investment, and IT capability. They found that the system would be unable to adequately address any scenario other than the *status quo*. The conclusion was that the health system had placed "all its eggs in one (unstable) basket." The system was not agile.

Next, the experts viewed all the scenarios cross-sectionally to seek common trends or factors. Perhaps predictably, almost all scenarios relied on a strong primary care and community-based health workforce.

The initial 15 applications of this forecasting method were favourably reviewed for the International Health Workforce Collaboration and HWNZ by health workforce researchers at the North Carolina, Otago, and Melbourne universities.[84] Regrettably, this modelling was abandoned after HWNZ was wound up.

Increasing the number of medical students

Except for the US, which is an outlier, most OECD nations spend about US$4,000 per citizen *per annum* on healthcare.[85] The quality of healthcare varies considerably within and between countries. In Europe, health performance measures such as waiting times are not closely related to the number of doctors or capitated health budgets.[86] New Zealand ranks favourably against other OECD nations thanks to the high quality of its medical personnel.

It is thus paramount not to compromise the educational processes underpinning the competence of the New Zealand health workforce. For doctors, that means determining how many more students can be admitted *per annum* into medical education programmes without diminishing the quality of their clinical training. This has not yet been assessed formally. Informally, medical student caps at Auckland and Otago universities could be increased to a combined total of 600 each year.

Based on community embedded (i.e. immersion) medical programmes in some Australian medical schools, 200 extra medical students each year could be accommodated.[87] A four-year graduate-entry Doctor of Medicine degree is attractive in this context and has been taken up by most of Australia's leading medical schools (e.g. Melbourne and Sydney universities).

Even so, caution is needed in increasing the system's capacity to produce more GPs while maintaining quality: We might even have an oversupplied medical marketplace (and – heaven forbid – perhaps some unemployed doctors). In such a situation, GP services must not be purchased based on fees for those services given the linear relationship between the number of services and the number of providers.[88] Doctors would need to be guarded against recovering roles that have been successfully surrendered through role or task substitutions.

In the very unlikely case New Zealand did produce more doctors than needed, it could export doctors to countries of greater need and limited resources. This would certainly satisfy Richard Horton's exultations for developed nations to behave ethically regarding the global health workforce. Major exporters of health workers (e.g. Cuba and the Philippines) might even provide insights on monetising this possibility.

Finally, an oversupplied medical labour market would help "correct" existing maldistributions.[89]

> **Stock-and-flow modelling demonstrates a crisis in GP numbers, and HWNZ's scenario modelling suggests that the demand for GPs is only likely to increase.**

CHAPTER 7

Recommendations: Keeping the waka afloat and making landfall in Aotearoa

Community involvement in healthcare reform and response

'Recruiting' the community to participate in a healthcare reform and response programme requires addressing their "pain points" (i.e. long waiting times in EDs, delays in receiving first cancer treatments, difficulty accessing elective surgery, etc.).

Pare down the health bureaucracy

Satisfactorily addressing patient "pain points" will first require shifting resources to the frontline. This was successfully done in 2008.

The government is recommending a similar process but commandeered by the central health agencies themselves. But health bureaucracies have never effectively reduced their workforce. As mentioned earlier, "loss aversion" is so strong in humans that bureaucracies will almost certainly adopt a deconstructive approach (i.e. identify jobs they believe could be surrendered with no cost to themselves).[90] Instead, an independent group identifying essential roles constructively would give a much smaller but more effective net workforce (see Clinical Vignette 2).

A synergistic health ecosystem

1. A much closer liaison with private providers is urgently needed to adequately address outstanding hospital-based needs.[91] The current relationship with private providers is somewhat opportunistic and short-term (i.e. reliant on the serendipitous co-occurrence of an excess demand in the public system and spare capacity in the private system).
2. A long-term contracting approach can leverage off the ability and willingness of the private sector to invest in new technology, etc. and increase 'hospital-bed' capacity.
3. Introduce "rolling three-year" contracts for private providers so that they can provide 'valuable' services with guaranteed volumes and annual audits.[92]
4. In addition to purchasing services somewhat agnostically from whoever has the superior value proposition, private providers should be part of 'alliance contracting' arrangements.

This approach will inevitably but naïvely be accused of privatising healthcare by stealth. Since 1938, most healthcare in New Zealand has been delivered largely or exclusively by private providers such as GPs, pharmacists, dentists, physiotherapists, psychologists and counsellors, homeopaths, etc. In recent years, private facilities are also performing 'public' elective surgery and providing diagnostic services in radiology, radiation oncology, etc. using advanced technologies.

A crisis response to maintain and enhance GP services

As mentioned above, the colander is an apt metaphor for health services in New Zealand. Increasing the flow of water into a colander will not fill it up unless the holes are plugged.

1. Form a crisis response to plug the holes in GP practice in New Zealand today.

2. Focus on and invest in the retention and extension of existing GPs.
3. Establish a time-limited and explicitly tasked working party (not a consensus-driven committee), led by thought leaders in primary healthcare. This party would develop a suite of rewards and other privileges to retain GPs who intend to reduce their work hours or retire[93] and secure more work commitments from the GP community.

Such a process has been undertaken in Australia. To reduce overloading in local EDs, some GP practices agreed to increase after-hours care in return for payment and being able to advertise their newly acquired accredited status. They can now order CT, PET CT, and MRI scans (not within the usual purview of GPs) and place their patients directly on hospital waiting lists for surgery without those patients having to attend hospital outpatient clinics (again, outside the purview of GPs). To retain this status, accredited GPs are subject to ongoing audit.

Interestingly, although the higher revenue was clearly important for GPs wanting accreditation, the most influential factor was the status the privileges afforded. Accredited practices noticed increased 'patient' enrolments and attendances. Presumably, the public associated the advertised status with superior care availability.

Such rewards should not be treated as an extension of existing fees-for-service or capitation arrangements, which have reduced productivity since 2001.

Recruitment programme for overseas-trained doctors

1. Introduce a sophisticated and targeted recruitment programme for overseas-trained doctors who will take up GP careers and add to the pool of doctors in New Zealand.
2. Initiate a sophisticated and targeted recruitment programme for overseas-trained doctors to counter the time lag in producing new GPs.
3. New Zealand is not particularly competitive in recruiting would-be migrant health workers,[94] so we also need to develop funded bridging programmes for doctors (and nurses, etc.) who just missed meeting English language or registration requirements. Some English language testing agencies have a database of such would-be-immigrants.

Substitutions without compromising patient care

As part of this early crisis response, those role-and-task substitutions that are possible without compromising patient care need to be identified and facilitated by expanding existing successful role substitutions. We could also expand the concept of just-in-time trained-for-purpose and micro-credentialled health workers, who can be deployed reasonably quickly against need.

Accessible healthcare for high-health-needs people

1. Identify and eliminate barriers to high-health-needs people accessing healthcare. For example, flexible childcare services and transport options could be introduced.
2. Identify and overcome other specific barriers, particularly the local ones.
3. Consider simultaneously the cost of any solution against the counterfactual costs of business-as-usual. Clinical Vignettes 1 and 3 illustrate this argument well.

Reshape models of primary care

1. Develop a new suite of business and operating models in collaboration and cooperation with the primary care community and consumer groups to achieve long-term gains.

2. Align at the very least the objectives of this new suite with Michael Porter's most demanding value proposition – to achieve superior outcomes at reduced cost.[95]
3. Adopt a demanding framework like the one HWNZ used for some of its scenario modelling exercises.[96]
4. Ensure that novel operating and business models adequately address twice the health service demand at no additional cost.

Raise stature of primary care

1. Establish a contestable pot of "extra-capitated funding" to improve participation and independence for primary care enrolled populations, especially those missing out.
2. Allow providers to bid for a share of that money by explaining the improvements they have made to their operating models and how those changes can deliver better outcomes in the promised areas of need with their available workforce.

Social investment practice

Social investment practice needs to be launched as soon as possible and individual budget holdings should be extended to all people with disabilities, with an opt-out option, and to all people with chronic disease, again with the ability to opt out.

Recruit more medical students

1. Increase the number of medical students in New Zealand.
2. Increase the medical student caps at Auckland and Otago universities to 600 enrolments per year.
3. Introduce a community-embedded (i.e. immersion) four-year Doctor of Medicine degree with an annual enrolment of 200 students per year.

Career plans for medical students and graduates

1. A central workforce agency should create and maintain career plans for all medical students and graduates.
2. The same logic applies to other members of the health workforce with long training or re-training time (nurses, midwives, pharmacists, technicians, etc.).

Enable better business and operating models

1. Reform the existing health infrastructure as required and when necessary to enable desired business and operating models. The central health agencies involved are Health New Zealand (HNZ), the Māori Health Authority, and the Ministry of Health.
2. Introduce some form of central management in social investment and individual budget holdings, presumably the Treasury.
3. At the outset, the central health agencies will need to surrender their current 'whole of system' command-and-control functions and become:
   a. commissioners and auditors of national and regional services such as obstetrics, cardiology, and oncology, and
   b. enablers and supporters of new district and local commissioning entities who are responsible for discovering and implementing local solutions to meet local needs.
4. Community services should be developed and delivered as close as possible to the communities.
5. Central agencies can help local services if they:
   a. Maintain a library of successful domestic and international healthcare innovations
   b. Develop resources that can be deployed to assist local decision-makers, and
   c. Undertake both stock-and-flow modelling and resume scenario modelling to help inform healthcare planners, funders, and providers.

Endnotes

1 As the vignettes presented here are based on real cases but the details (including names) have been changed to prevent identification of individuals and cause breach of privacy.

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New Zealand's general medical practitioners (GPs) are facing a crisis, with a workforce shortage set to worsen over the next decade unless immediate action is taken to support workforce expansion and development.

The health of all New Zealanders and the delivery of top-tier healthcare heavily relies on community-based medical care, mainly provided by Specialist GPs and multi-disciplinary health care teams.

The introduction of an "accountability-free capitation" has seemingly driven a decline in the hours GPs work by creating a financial incentive to minimize patient service costs, and analyses indicate a significant decrease in the GP to population ratio, and a decline in GP work hours.

If current trends persist, this will likely exacerbate the GP capacity crisis. Remedies for this crisis first and foremost is to retain and extend the existing workforce and may include a significant increase in GP trainees and supportive career planning, alongside a reconsideration of operating and business models in primary and community care settings.

This report advocates for new investment in innovative community healthcare practices, individual budget holdings, and social investment approaches, and it underlines the urgent nature of this crisis, indicating an increasing demand for GPs in the future.

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