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Hidden in plain sight

Optimising the allied health professions for better, more sustainable integrated care

NZIER report to Allied Health Aotearoa New Zealand (AHANZ)

29 April 2021

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Authorship

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The assistance of Sarah Spring and Kevin Tuaño is gratefully acknowledged.

Key points

The opportunity

The Review of Health and Disability System and the health transitions process provides an opportunity to design health services that make better use of allied health professions to achieve triple/quadruple aim health objectives for efficiency, quality, equity and sustainability in health and disability services.

Allied health practitioners represent a ready-workforce able to support a shift to more effective and more pro-active prevention, person-centred care, and collaborative, interdisciplinary team-based approaches that are most appropriate for people with complex health issues including long-term conditions.

With experience working in multi-disciplinary teams and across the secondary and primary care sectors, many allied health practitioners are also uniquely experienced in supporting patient transitions between settings of care, a critical strength that can support greater coordination and continuity in patient journeys.

The issues

The health system is under pressure due to both supply and demand factors:

- On the supply side, sitting at the centre of current models of care, the GP workforce is ageing and demonstrating a strong preference for part time work. Meanwhile, public hospital capacity constraints and a rising tide of acute demand displacing planned care are resulting in long waits for planned care that impact on people's quality of life, productivity and outcomes.
- On the demand side, the growing burden of disease, particularly non-communicable disease including musculoskeletal conditions, demands more GP time and contributes to both increased referrals to specialists and greater acute demand in tier 2 settings. An ageing population reinforces this trend.

As a result of the supply side constraints and demand pressures, there is evidence of unmet need growing. One solution identified to address unmet need by improving efficiency and patient-centredness has been to shift services from hospital settings into tier 1 settings. But with GPs as the primary providers of these services, this shift threatens to increase access barriers to primary care due to existing GP supply constraints. It also poses a threat to workforce sustainability and patient experience and safety as GP time pressures become acute and workloads become unsustainable.

Only by enabling other practitioners to share some of the growing burden of work currently being delivered by GPs, and contributing to reduced demand through more effective prevention, will the shift from tier 2 to tier 1 settings be able to occur without significant efficiency-equity trade-offs.

At the same time, increasing patient expectations of more person-centred care along with increasing recognition of the need for models of care based on the patient-centred medical home (PCMH) model point clearly in the direction of engaging allied health practitioners as integral members of publicly-funded integrated tier 1 services.

Critical barriers

Allied Health professionals' eagerness to work collectively is not currently matched by enabling system design features or primary care professional culture.

Most GP practices are small, GP-owned, with minimal nursing and administrative support paid on salary. Taking on an allied health professional within a primary care team represents a cost to the business that can't be recouped as no specific funding exists for this and co-payments, particularly in areas where significant allied health support is most needed, already present barriers to accessing care for many patients. Secondary care multi-disciplinary team meetings (MDTs) are recognised through specific purchase units (i.e. such as MDT meetings for cancer care), but the same recognition is not there for similar approaches in primary care or other instances where allied health input is needed.

While referrals to secondary care are relatively high in volume and supported by health pathways, referrals to allied health are minimal. Many GPs lack the ability to draw on allied health skillsets or lack familiarity with specific practitioners in their communities, resulting in reluctance to trust patient care to allied health. Lack of shared patient records and the cost of allied health care being prohibitive for low-income patients further contribute to GP reluctance to refer.

Current services have a long way to go to provide some version of the Patient Centred Medical Home (PCMH) model, a population needs-based interdisciplinary team model of care. The PCMH focusses on prevention and management of long-term conditions and mobilises a tailored team of medical and non-medical (including allied health) practitioners to plan, coordinate and provide services with the patient actively involved in team decision-making. The PCMH requires specific funding to reflect the added costs of team-based, coordinated care.

Changes are needed for sustainability

The objective of a more person-centred, integrated health and disability system capable of safely, efficiently, equitably and sustainably delivering the most effective response to population need is clear. To address the critical barriers and enable an optimal use of the allied health workforce to support this shift, we recommend the following changes to system, funding, culture and information:

System

- Adopt patient-centred medical homes (PCMH) as the ideal model of care for collaborative, interdisciplinary teams including allied health practitioners, to deliver maximum equity, quality and value particularly for patients with complex biopsychosocial factors and multimorbidity.
- Encourage more community governed models of tier 1 care delivery, with all staff paid on salary, to break down professional hierarchy.
- Improve referral flows with triage processes that could include specifically trained triage providers or extended scope first contact practitioners.

Funding

- Align payment to service models, including financial incentives for performance on quality and efficiency targets, and payments to cover the additional overhead and

labour costs associated with non-traditional staffing and coordination of collaborative care activities.

- Require tier 1 teams to demonstrate capacity and activity of collaborative interprofessional teams based on criteria that allow flexibility of team composition and structure to respond to local need in order to access specific payments.

Culture

- Shift culture in health provider organisations from the top as well by bringing professional groups together to agree on a national competency framework for collaborative practice and identify changes to education programmes to support the development of interprofessional collaboration competencies in the workforce.
- Improve referrals across networks of providers with allied health ambassadors working in practice teams as well as across practice teams to improve trust and communication.
- Identify and enable extended scope of practice for allied health practitioners, supported by nationally defined scopes of practice.
- Review the criteria for regulation under the HPCA Act to ensure that these are consistent and supportive of wider health and disability system objectives, not only to reduce patient risk, but improve outcomes, recognising the role that regulation plays in professional trust, professional hierarchy, and the development of new models of care.

Information

- Empower clinicians, allied health professionals and patients with better information and information technology to increase sharing, communication, trust, and choice.
- Reinstate New Zealand's reporting of OECD health accounts at a detailed level and develop consistent and complementary indicators to monitor the impacts of health and disability system investments.

The allied health workforce represents the health and disability system's greatest opportunity for transformational change. Failure to fully integrate the allied health workforce into tier 1 services and across tier 1 and 2 transitions will significantly constrain the system's ability to deliver the new models of care that promise quality, equity, efficiency and sustainability.

Contents

Figures

Tables

1 Background

New Zealand's health and disability system is currently heavily organised to treat illness and disease, typically with each condition treated separately, often by different specialist practitioners, and a focus on acute care. This episodic and fragmented approach that characterises the biomedical model of health care is appropriate in many instances where people experience specific illness of short duration with little to no interactions across their psychosocial conditions. But the ineffectiveness of this approach for the increasing number of patients with complex health, disability and psychosocial issues is now increasingly recognised.

Following the release of the report of the Health and Disability System Review 2020, the government has now announced major changes to the health and disability system. These changes, and the additional finer detail still to be determined, present an opportunity to align workforce use to the new models and settings of care to enable more sustainable resource consumption with a focus on maintaining health and wellbeing (as opposed to treating illness) and supporting the population's growing desire for choice, control, and independence. The role of allied health professionals in this shift is critical.

Allied Health Aotearoa New Zealand (AHANZ) commissioned NZIER to examine the evidence and identify the critical changes that are key to designing a system with fully integrated allied health services aligned with health system objectives.

2 Our approach

In this report, we consider:

- the drivers of change, including demand factors and supply factors, and the potential role of allied health in addressing these to restore much-needed balance to the health and disability system
- the triple aim objectives of equity, effectiveness and efficiency and the often added fourth objective of sustainability
- multiple dimensions of efficiency that require different types of reconfiguration
- recognised incentives and behaviours in ownership and funding models
- sound investment principles for system reconfiguration and human capital
- international evidence of what works.

Health system terminology varies across users and contexts. Throughout the report we make use of the following terms with these meanings:

- **Interprofessional practice:** A catch all term meaning a 'partnership between a team of health providers and a client in a participatory collaborative and coordinated approach to shared decision making around health and social issues' (CIHC, 2010).

  We use the term generally to represent the spectrum of care models from multi-disciplinary to transdisciplinary within a system that has mechanisms in place to

activate the appropriate team to meet patient needs and preferences, from traditional GP-nurse teams and variations of this such as GP-physiotherapist teams to chronic disease models and other team-based care involving combinations of health and other professionals (e.g. GP, counsellor, social worker, remedial massage therapist, dietitian, etc.).

Interprofessional practice can be coordinated within a primary care practice, a Health Care Home or similar, across a tier 1 network, or within a vertically integrated alliance of tier 1 and tier 2 providers.

Interprofessional practice is a professional behaviour that identifies and engages optimal use of each practitioner's skillset for each patient to provide comprehensive, coordinated, person and whānau-centred care. Interprofessional practice is flexible, adjusting the level of collaboration and the number of practitioners according to the complexity of needs and circumstances of the person receiving care. It requires effective communication, a clear understanding of roles and team dynamics, and effective leadership and conflict resolution skills. Interprofessional practice works best when practitioners learn from each other and improve their own practice with this acquired knowledge base, creating overlaps in skillsets that reduce fragmentation in professional services.

- **General practice:** Health and disability services provided by a team that includes a GP with the GP as lead care provider.
- **Tier 1 services:** "Tier 1 encompasses a broad range of services and other activities that take place in homes and communities, in marae and in schools, delivering most of the health services that most people need, most of the time. Tier 1 includes, but is not limited to self-care, mental health services, general practice, maternity services, Well Child / Tamariki Ora, outreach services, oral health, community pharmacy services, health coaching, medicines optimisation, district nursing, aged residential care, hauora Māori services, community paramedic services, school-based services, home-based care and support, rehabilitation and palliative care. It also includes laboratory and radiology services and other allied health care that takes place outside of hospital, such as podiatry, physiotherapy and dietetics, etc. Most kaupapa Māori services are in Tier 1." (Health and Disability System Review 2020)
- **Tier 2 services:** Health and disability services provided in a hospital setting or by specialists (including outpatient, inpatient, non-community mental health, and hospital-based diagnostics).
- **Integrated care:** Integrated health services that are managed and delivered in a way that ensures people receive a continuum of service and care from health promotion, disease prevention, diagnosis, treatment, disease-management, rehabilitation and palliative care services. Services are coordinated vertically (across tier 1 and tier 2 providers) *and horizontally* (between different tier 1 providers or between different tier 2 providers) according to their needs and throughout the life course.
- **Person-centred care:** Health and disability services that take a holistic approach to wellness incorporating a person's preferences, values and beliefs (Santana et al, 2018), concepts of whānau (family) and whānaungātanga or connectedness (Wepa, 2015). Person-centred care provides patients with significantly more control and choice than traditional models of care.

- **Outcomes:** Throughout the report, we make reference to impacts on outcomes. By outcomes, we mean not only the traditional clinically-defined measures of physical health, but also mental health as well as broader and more holistic outcomes such as wellbeing or wellness. In this context, health outcomes are consistent with the World Health Organization definition of health: "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization,

3 Allied Health and AHANZ

3.1 What is allied health

The allied health workforce includes a wide range of health professionals. Definitions vary across the literature and across countries, but the term is generally understood to refer to health professionals outside of the medical, nursing and midwifery, kaiawhina professions. The Ministry of Health also excludes dental professionals (Ministry of Health, n.d.), although dental and oral health therapists and dental hygienists are members of Allied Health Aotearoa New Zealand (AHANZ).

At over 30,000 members and representing New Zealand's second largest clinical workforce in District Health Boards (AHANZ website), allied health professionals work with people across a wide range of health care, community, home and residential settings.

The core skills of allied health professionals represent a major resource for the health system and are aligned with the objectives of the Health and Disability System Review to recommend how the system can be designed to:

- achieve better health and wellbeing outcomes for all
- ensure improvements in health outcomes of Māori
- ensure improvements in health outcomes of other population groups
- reduce barriers to access to health and disability services to achieve equitable outcomes for all parts of the population
- improve the quality, effectiveness, and efficiency of the health and disability system, including institutional, funding, and governance arrangements.

(Health and Disability System Review, 2019)

Ten allied health professions are regulated by the Health Practitioners Competence Assurance (HPCA) Act 2003:

- Chiropractic
- Dietetics
- Occupational therapy
- Optometry and optical dispensing
- Oral health
- Osteopathy

- Physiotherapy
- Podiatry
- Psychology
- Psychotherapy.

According to the Ministry of Health *"The Act incorporates the basic principles of ongoing competence and the separation of the registration process from the disciplinary process. the HPCA Act also continues provisions for the declaration of protected quality assurance activities that were previously contained in the Medical Practitioners Act 1995."*

The key provisions of the Act are:

- only health practitioners who are registered under the Act are able to use the titles protected by the Act or claim to be practising a profession regulated by the Act
- registered health practitioners are not permitted to practise outside their scopes of practice
- regulatory authorities are required to certify that a practitioner is competent to practise in their scope of practice when they issue an annual practising certificate
- certain activities can only be performed by registered health practitioners as specified in the Act.

Social Workers are regulated by the Social Workers Registration Act 2003, with registration becoming mandatory from 27 February 2021.

In total, there are over 15,000 allied health professionals registered under the Act.

The following AHANZ members are self-regulated:

- Acupuncture NZ
- Australian, New Zealand and Asian Creative Arts Therapies Association
- Clinical Exercise Physiology NZ
- Hospital Play Specialists Association Aotearoa NZ
- Massage NZ
- Music Therapy NZ
- Nutrition Society of NZ
- NZ and Australia Society of Renal Dialysis Practice Inc
- NZ Anaesthetic Technicians' Society
- NZ Association of Counsellors
- NZ Audiological Society
- NZ Institute of Medical Radiation Technology
- NZ Orthotics and Prosthetics Association
- NZ Register of Exercise Professionals
- NZ Orthoptic Society

- NZ Speech-Language Therapists' Association
- NZ Society of Diversional and Recreational Therapists
- Sport and Exercise Science NZ.

In addition to self-regulation by their own professional bodies. AHANZ membership requires that self-regulated professions:

- Have a relevant tertiary (or equivalent) qualification as defined in s12 (2) (a-e) of the HPCA Act 2003
- Have a recognised system for monitoring ongoing competence
- Abide by professional standards of practice
- Abide by a professional code of ethics
- Have direct contact with service users in fulfilling their role
- Abide by the Allied Health Aotearoa New Zealand Constitution
- Have a robust public complaints process.

AHANZ membership is voluntary. This means health practitioners without regulation can choose not to become members, which means they are not required to meet the association's professional standards. But in some circumstances, a third-party funding body, such as ACC, will require that health practitioners must be members of their professional association.

AHANZ estimates there are approximately 15,000 self-regulated health professionals.

3.2 Why does regulation matter?

One role of government in the health and disability system is described in economics as that of a "principal" in a trust-based "principal-agent" relationship, which is needed due to information asymmetry and uncertainty of outcomes which result in patients effectively delegating decision-making authority to doctors ("agents") and trusting that doctors will act in the patient's best interests. Economist Kenneth Arrow argued (Arrow, 1963) that trust is critical in this relationship, where doctors may experience some tension between their ethical principles with regards to the patient and their business objectives, and that governments play an important role in designing mechanisms to ensure that these "agents" do not abuse their positions of trust.

The HCPA Act provides for the protection of the public interest through ensuring that the public can find out from a trusted source what services a health practitioner is competent and entitled to provide, in order to know what services can be expected and that the practitioner has the competence to ensure quality and safety of care.

It stands to reason that a higher level of trust may be associated with regulation under the HPCA Act and some allied health professional groups have applied to become regulated under the Act to be able to offer patients better assurance of quality and safety. However, government has not always supported this, with the main reason for turning down such requests being the lack of risk posed to patients.

A focus on patient risk is appropriate for a health system in which patients have one-to-one interactions with practitioners. But a system that wants to support multi-disciplinary and

interprofessional teams needs to recognise that patients are not the only party affected by information gaps. Service commissioners, provider organisations, and other health professionals also lack information about the professional scopes and competence of the range of allied health practitioners. The resulting lack of professional trust may contribute to a perception of legal and reputational risks associated with greater integration of allied health services where the HCPA Act does not provide assurances.

A review of the criteria for regulation under the HPCA Act may be due to ensure criteria align with health and disability system objectives, not only to ensure safety but to improve access and outcomes. The government will want to weigh up the benefits of increased coverage of the HPCA Act against the potential for rent-seeking behaviour.

3.3 How does allied health relate to primary care?

Primary care is broadly defined as the services provided under the service schedules in the PHO Services Agreement. These include but are not limited to services to maintain health, restore health, and coordinate care.

Because general practitioners (GPs) are a first point of contact for a patient, and account for about 5.4 percent of Vote: Health (General Practice NZ 2020), general practitioners serve as source of referrals for allied health professionals in the current system.

General practice is the largest single vocational scope with 3,748 registered general practitioners in 2020 up from 2,446 in 2005. This is a 53 percent increase at a time the New Zealand population increased by 23 percent. This increase is somewhat offset by workloads trends. General practice workloads average 35.8 hours per week against an all-doctors average of 44.5 hours per week. General practice average hours worked per week has dropped from 42.2 hours in 2000 to 35.6 hours in 2019 (MCNZ, 2020).

The current model of primary care, based on profit-maximising unidisciplinary GP practices, typically offering 15-minute consultations does not support person-centred care for people with multiple long-term conditions, or even single conditions with complex biopsychosocial contributing factors.

Currently, 71 percent of GPs work in practices owned by one or more GPs, with 36 percent of GPs being owners or ownership partners. However, annual data and cohort data suggest a trend in the direction of less GP ownership, contract employment and part time, (RNZCGP, 2019), which may in fact represent both an opportunity and a necessity to better integrate general practice with other tier 1 services for a shift to more person-centred care.

3.4 Why is the allied health relationship with primary care so important?

As coordinators of care, and most people's first point of contact, apart from Accident Compensation Corporation (ACC) cases, general practitioners (GPs) in the current system are the gatekeepers to both allied health and specialist care. Some studies (see for example, Dennis et al. (2018)), however, suggest GPs are very unlikely to refer patients to allied health practitioners for new problems even when the problem is within the scope of the allied health practitioner.

Research (see for example, Supper et al. (2015)) on referral behaviour by GPs has identified that barriers to referrals and interprofessional practice include:

- perceived hierarchy (this is reinforced in New Zealand by the common model of GP practice ownership)
- lack of awareness and recognition of the roles of other health professionals, including allied health practitioners
- lack of trust and integration of professionals into the same team.

A RAND Corporation research report (Herman and Coulter, 2015) identifies three information barriers to integrated care including allied health practitioners:

- GPs often do not know when and to whom patients should be referred, how to identify a good practitioner, or what services allied health practitioners offer.
- Some allied health practitioners often do not know how to navigate the wider health system due to having worked and being trained to work alongside it rather than as an integrated part of it.
- Patients, who may in some circumstances be involved in their own health care decisions, may have little experience of allied health and receive limited advice about allied health services, resulting in inadequate knowledge to make a good decision regarding the role of allied health in their health and wellness plans.

A survey of GPs (Turner-Benny, McCann, and Benny 2014) revealed that there was confusion as to what constituted allied health and more than half of GPs surveyed were not aware of any allied health professions being regulated under the HPCA Act (2003).

But the current GP-gatekeeper model is not the only option. In a more patient-oriented and 'networked' health system where patients can go directly to allied health professionals, referrals could go in many directions, including from allied health practitioners to GPs. GPs would remain a key source of referrals because of their medical knowledge and role as care coordinators, but there are options to safely reduce GP control over access to allied health.

4 Drivers of change

The Drivers of change for tier 1 services are:

- Health disparities affecting Māori
- An ageing population
- Long term conditions driving the burden of disease
- Unsustainable pressure on GPs under current models of care and funding arrangements
- Unmet need
- Changing public expectations.

4.1 Health disparities for Māori need to be addressed

The Health and Disability System Review identified four major groups of concern for improving equity:

- Māori
- Pacific peoples
- People with disabilities
- Rural New Zealanders.

The WAI 2575 report of the Waitangi Tribunal argued that the Crown has failed to ensure equitable health outcomes for Māori, putting the Crown in breach of te Tiriti o Waitangi. The report also described Māori primary health organisations as having been *"underfunded from the outset"* due to funding arrangements that disadvantage primary health organisations that serve high-needs (often Māori) communities.

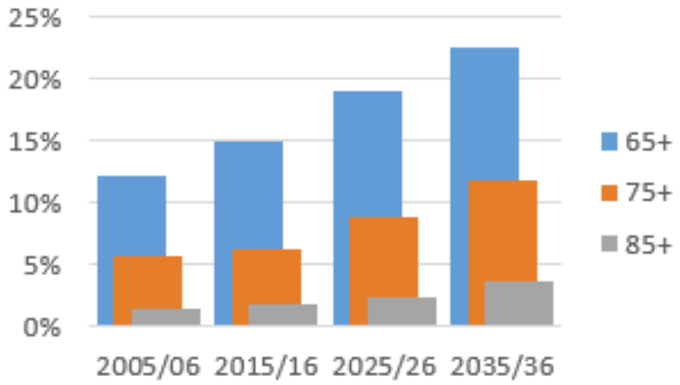
Improving equity of access and equity of outcomes should be a fundamental concern for the redesign of the health system.

4.2 An older population means more multi-morbidity and frailty

The Health and Disability System Review 2020 recognised the increasing pressures on the health and disability system owing to population ageing. In particular, it noted:

- a significant increase in the 'working age dependency ratio', from 55 dependents to 100 people of working age in 2018, to 65 dependents to 100 people of working age in 2038.
- increasing demand for health and disability services as use and complexity increases with age, and increasing prevalence of impairments and comorbidities.
- changes in the distribution of where people live and work with rural areas growing faster than urban areas (Health and Disability System Review 2020).

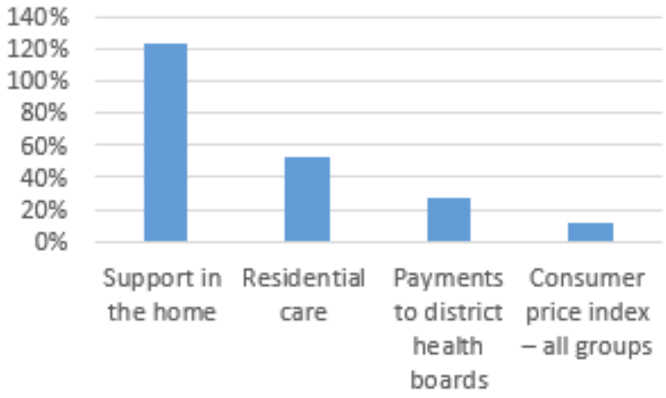
Figure 1 Percent of New Zealand population in older age groups



Source: Ministry of Health, 2018

Along with population ageing, expenditure related to the health and disability needs of an older population increase. Expenditure growth on home support and residential care is outstripping DHB funding increases and the consumer price index (CPI). Interventions to support people to live well for a greater proportion of their lives (compression of morbidity) is essential to health system sustainability.

Figure 2 Expenditure increases for older people outstrip health funding increases and the CPI



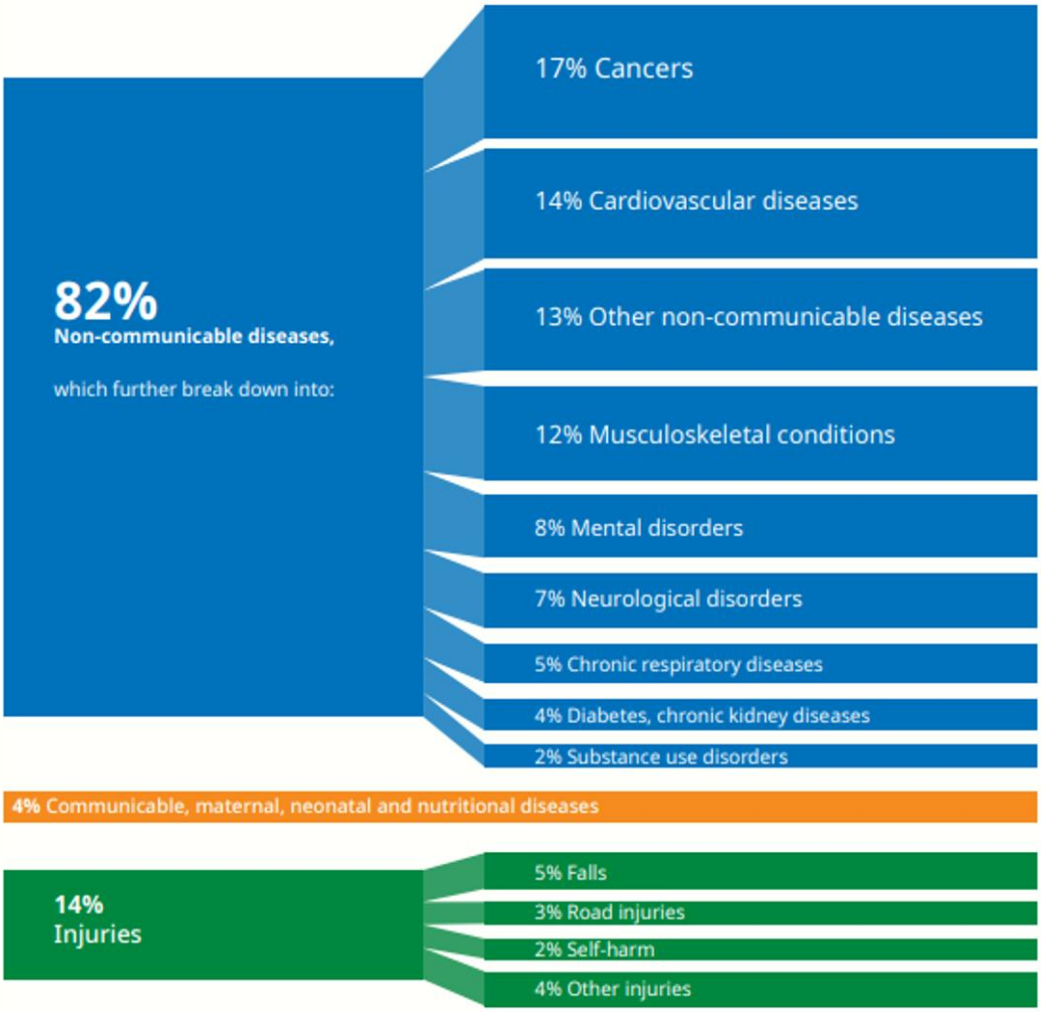
Source: Ministry of Health, 2018

4.3 Long term conditions drive the burden of disease

Increasing multi-morbidity, particularly involving long-term conditions is a reality for New Zealand that requires a focus across the spectrum of care. Most long-term conditions are preventable or could be managed with little need for specialist care and without many of the severe complications and early deaths that often transpire.

According to the Ministry of Health, 82 percent of disability-adjusted life years (DALYs) lost in New Zealand is now caused by non-communicable diseases, 14 percent is due to injuries (Ministry of Health 2020b).

Figure 3 DALYs lost annually by cause



Source: Ministry of Health, 2020

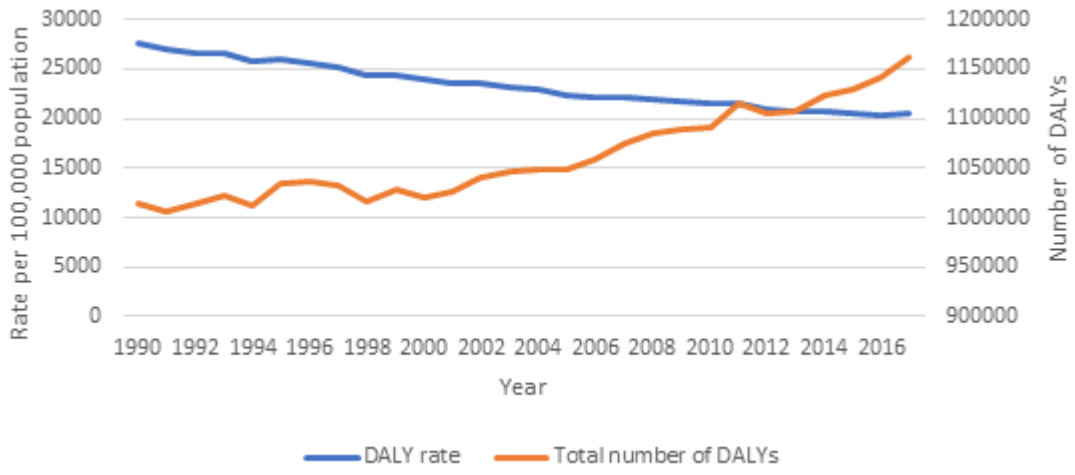
The shift to long term conditions as the major burden of disease is felt in primary care where long term conditions like arthritis and osteoarthritis, heart and circulatory conditions, asthma, long term injuries, mental health conditions, diabetes, and cancer drive people to seek frequent visits to primary care providers (National Health Performance Authority 2015).

The medical model of care for these patients often results in unnecessary hospitalisation, as noted by the National Health Committee in its report on low back pain (LBP). The NHC concluded that "*Patients with chronic LBP receive lower levels of manual therapies and allied care services when their care is funded through Vote: Health than through ACC. Specialised pain services appear to be generally underprovided and see patients late in their clinical course. Additionally, patients who have had surgery for LBP in the public health care system have low levels of access to specialised pain and physiotherapy services before and after their surgery*." (National Health Committee 2015).[1]

[1] The National Health Committee was disestablished in 2016, weakening New Zealand's capability for identifying safe, effective and efficient new approaches to patient care.

Despite good progress being made to lower DALY rates per 100,000 population, the burden of disease in the New Zealand has been increasing as the population ages with higher rates of chronic conditions and disability. This burden of disease wave is upon us and trending upwards bring increasing costs with it. For example, the cost of type 2 diabetes in New Zealand increased from $247 million in 2001 to $2.1 billion in 2021, and is expected to climb to $3.5 billion over the next 20 years (PWC 2008 and PWC 2021).

Figure 4 Age-standardised DALYs rate per 100,000 and total DALYs, 1990-2017

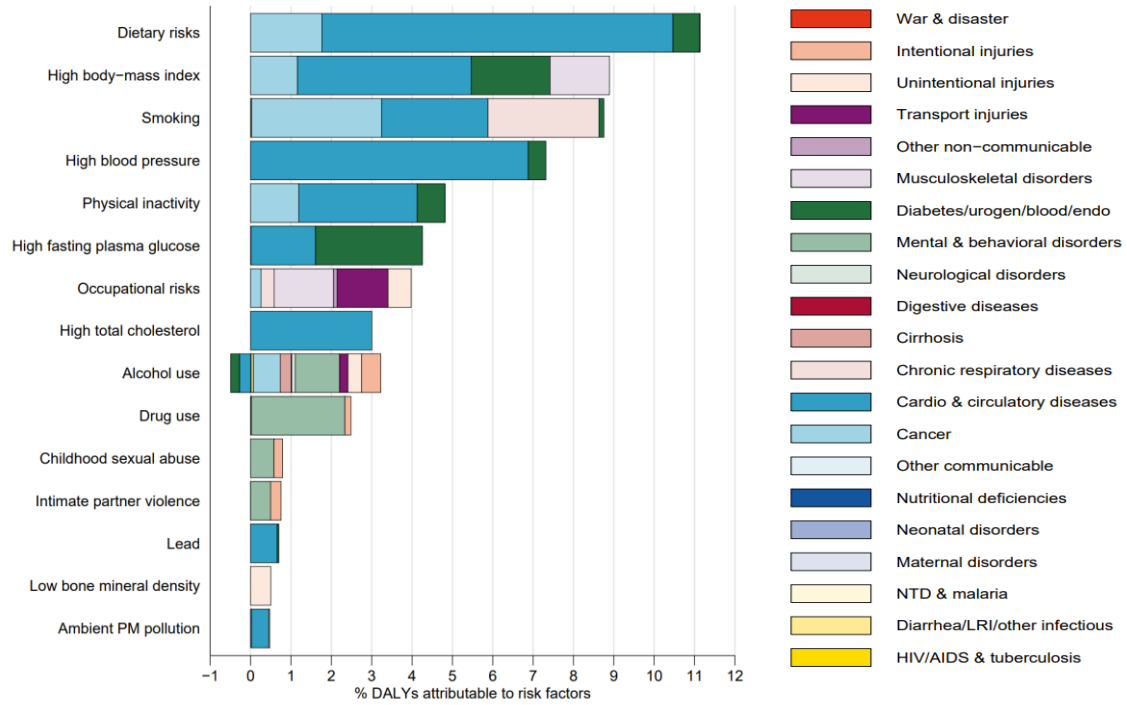


Source: Ministry of Health

Multimorbidity is common in New Zealand, with one in four New Zealanders living with multiple long-term conditions. People with multimorbidity are also heavy health system users and, consequently, heavy consumers of health system resources (Stanley et al. 2018).

Much of this is due to population ageing and represents a challenge in terms of how health services can support people through healthy ageing. But lifestyles also play an important role and increased prevalence of many long-term conditions reflects a lack of attention to prevention in light of modern lifestyles. Dietary risks are the single largest contributing risk factor to DALY loss in New Zealand, followed by high BMI, smoking, high blood pressure and physical inactivity (Institute for Health Metrics and Evaluation, 2019. See figure below).

Figure 5 Burden of disease attributable to 15 leading risk factors in 2010, expressed as a percentage of New Zealand DALYs



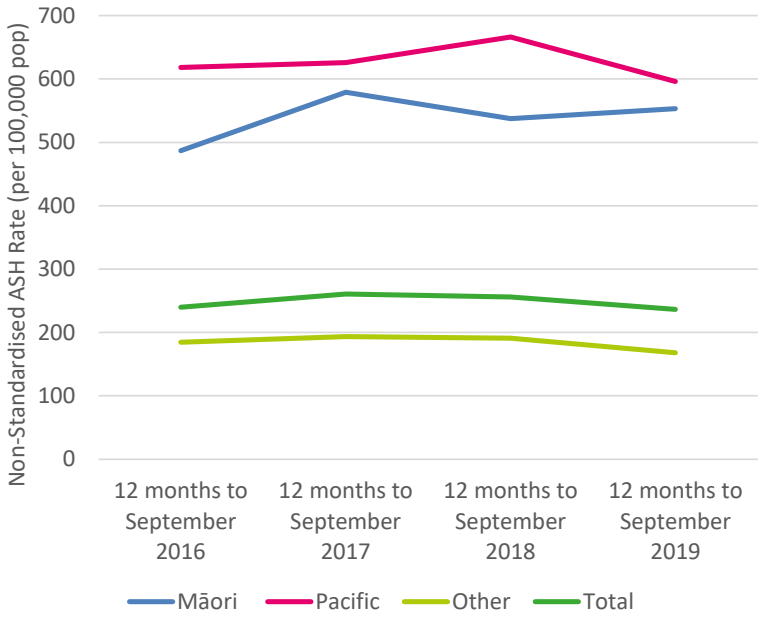
Source: Institute for Health Metrics and Evaluation, 2019.

4.4 Unacceptable volume of acute demand

Population ageing, rising prevalence of long-term conditions and multi-morbidity, limited primary prevention, ineffective management of long-term conditions, and primary care cost barriers are all contributing to high volumes of acute demand. This is seen in emergency departments throughout New Zealand, where ambulatory sensitive conditions continue to grow in volume, often leading to acute admission to inpatient care.

Figure 6 Ambulatory sensitive hospitalisation rate, by ethnicity

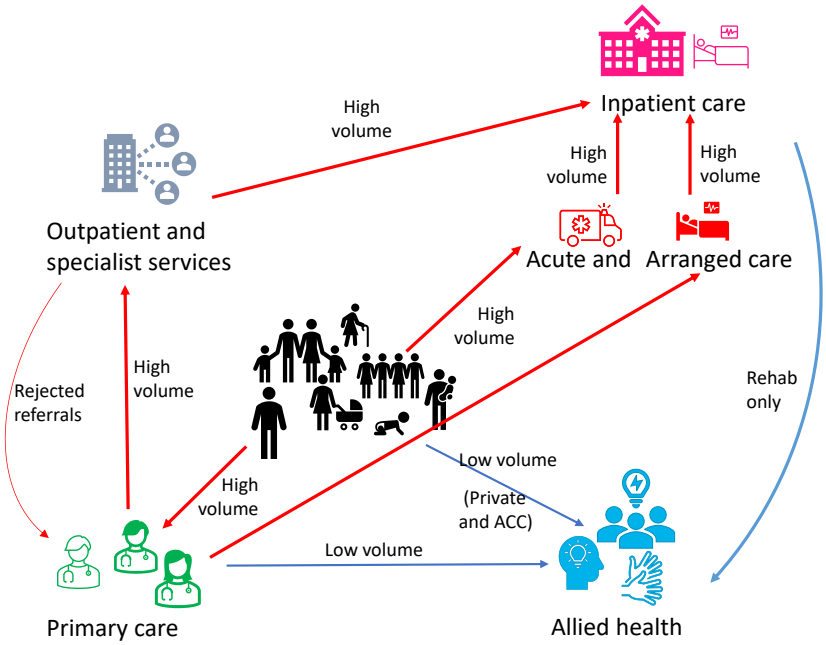
Non-standardised



Source: NZIER, Ministry of Health (2020a)

The high volume of demand, including acute demand flows to GPs as first point of contact and to after-hours and emergency departments, particularly for people who face access barriers to GP care (co-payments, open hours, etc) displaces other types of care including preventive care in GP practices and elective surgeries in hospitals.

Figure 7 Patient flows across tier 1 and tier 2 services



Source: NZIER

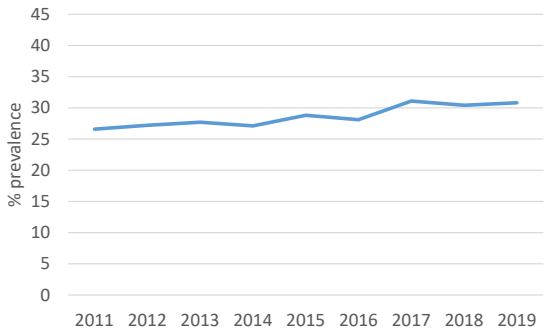
4.5 Unmet need is significant

Evidence of unmet need in New Zealand's primary care sector is available from a variety of sources using various measures:

- Nearly 30 percent of adults report experiencing one or more types of unmet need for primary care (New Zealand Health Survey 2016/17) – higher for Māori, Pacific and people living in highly deprived areas, and specific age groups.
- In the 2019 Health Quality and Safety Commission New Zealand (HQSC) national patient experience survey, 15 percent of respondents reported that they had at some time wanted health care from a GP or nurse and had not been able to access it (see figure below). This was higher for people aged 25-44 (23 percent) and even higher for people with a long-term condition (31 percent).
- 14 percent overall report that the unmet need is due to cost barriers, rising to 20 percent in the most deprived areas (New Zealand Health Survey 2016/17). Based on the 2018 and 2019 HQSC patient experience survey, cost is a barrier for 17 to 20 percent of the population (35 percent of 15–44-year-olds), with appointment costs and the cost of taking time off work being the most important cost elements.

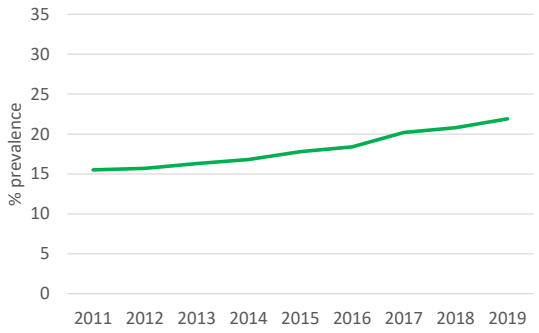
Figure 8 Measures of unmet need

Percentage of adults reporting unmet need for primary health care (2011-2019)



Source: NZIER based on NZHS data

Percentage of adults reporting inability to get a GP appointment within 24 hours

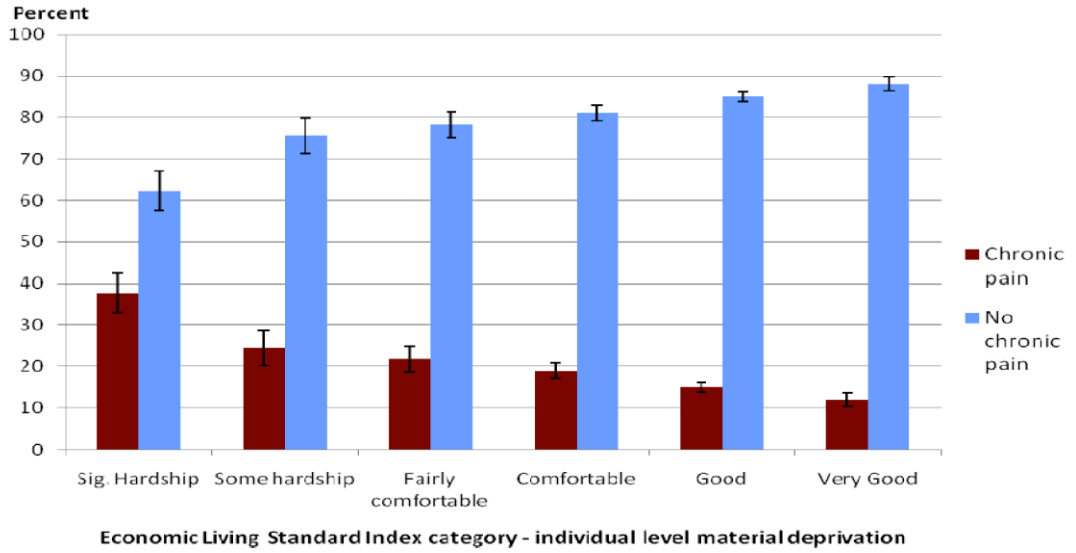


Source: NZIER based on NZHS data

- An international survey (Commonwealth Fund survey, 2016) suggests that the overall prevalence of cost barriers is around 18 percent in New Zealand, worse only in Switzerland (22 percent) and the United States (33 percent). In comparison, only seven percent of UK respondents experience cost as a barrier to care.
- Chronic pain, another long-term condition associated with ageing, affects more than one in six New Zealanders, with prevalence increasing to nearly 30 percent in older age groups and higher rates amongst those in lower socioeconomic groups (including individual and area level measures). Over a third of sufferers of chronic pain do not get any medical or non-medical treatment (Dominick, Blyth, and Nicholas 2011). Chronic pain is a complex biopsychosocial condition that often requires a team of professionals from multiple disciplines to address.
- A 2019 article in the New Zealand Medical Journal noted that one in five New Zealanders experience hearing loss and that the most common reason for people being unable to access hearing-related services and equipment is that they cannot

afford it. It also notes that the overwhelming majority of children and young people with hearing loss are from high deprivation areas. These issues are estimated to contribute to a $4 billion cost burden of hearing loss, including nearly $1 billion in financial costs and $3 billion is lost quality of life.

Figure 9 Prevalence of chronic pain by economic living standard in New Zealand



Source: Dominick, Blythe and Nicholas, 2011

Unmet need is both a cause and a consequence of system pressure. Unmet need in primary care leads to increased demand for specialist and hospital services and acute care. As the system focusses on meeting these needs for specialist and hospital care, funding for screening, prevention and management struggles to keep up. It is a vicious cycle that requires a significant force to reverse.

It is important to note that a visit to a GP can also represent a form of unmet need. Given that most people can only access allied health services privately, when people from disadvantaged households need the kind of services offered by allied health practitioners, they are most likely to seek them from a GP.

GPs have called on the government to shift the system to include more one-stop shops of more personalised health services in the community to address rising prevalence of long-term conditions, particularly in Māori and Pacific communities where multiple comorbidities and earlier onset of long term conditions are increasing (Daly 2020).

4.6 Public expectations are changing

Patient expectations have increased over time, with greater expectations of treatment and access to secondary care and medicines.

People want choice and control in tier 1 services:

- 18 percent of respondents to the HQSC patient experience survey 2019 said they were not as involved in decisions about their care and treatment as they wanted to be, increasing to 28 percent for Māori aged 15-44.

- 20 percent think their GP or nurse does not spend enough time with them (HQSC patient experience survey 2019)
- Concerns about continuity and coordination, communication about medication, particular needs of people with mental health conditions (HQSC)

4.7 The pressure on GPs is unsustainable and increasing

The GP workforce is the cornerstone of the primary care system in New Zealand. GPs are the first point of contact and manage patients from the worried well, to patients with multiple comorbidities and complex psychosocial risks.

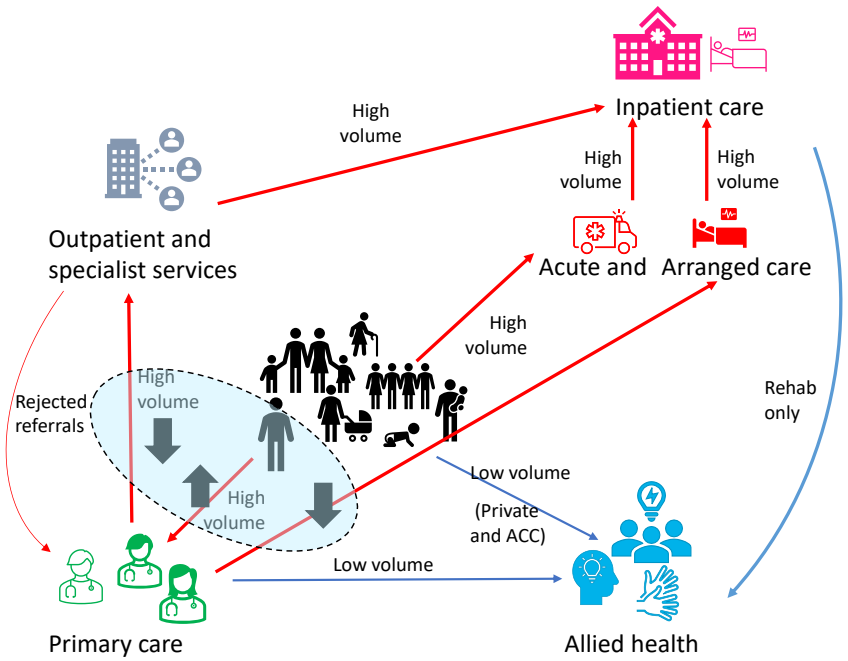
General practice is the largest single vocational scope with 3,748 registered general practitioners in 2020 up from 2,446 in 2005. This is a 53 percent increase at a time the New Zealand population increased by 23 percent. This increase is somewhat offset by workloads trends. General practice workloads average 35.8 hours per week against an all-doctors average of 44.5 hours per week. General practice average hours worked per week has dropped from 42.2hrs in 2000 to 35.6 in 2019 (MCNZ, 2020).

Demand pressures force the health system to find ways to think about how to deal with the constrained supply of GPs as more of the workforce head into retirement. One survey found that 47 percent of New Zealand's GPs indicated that they are planning to retire within the next ten years (Chisholm, 2019).

The College of General Practitioner's 2016 workforce survey revealed that the vast majority of GPs work in a GP-owned practice, with nearly 40 percent being owners or part-owners. But this model is under threat as the promise of ownership is losing its appeal for younger GPs who recognise that medical training may not provide the business ownership skills they would need (RNZCGP 2016).

Increasingly, due to the growing pressure of acute demand on hospitals, GPs are being asked to manage more and more complex patients and provide more complex care and procedures within vertically integrated care settings. These changes will increase flows into primary care and reduce the current main flow out (to outpatient and specialist services).

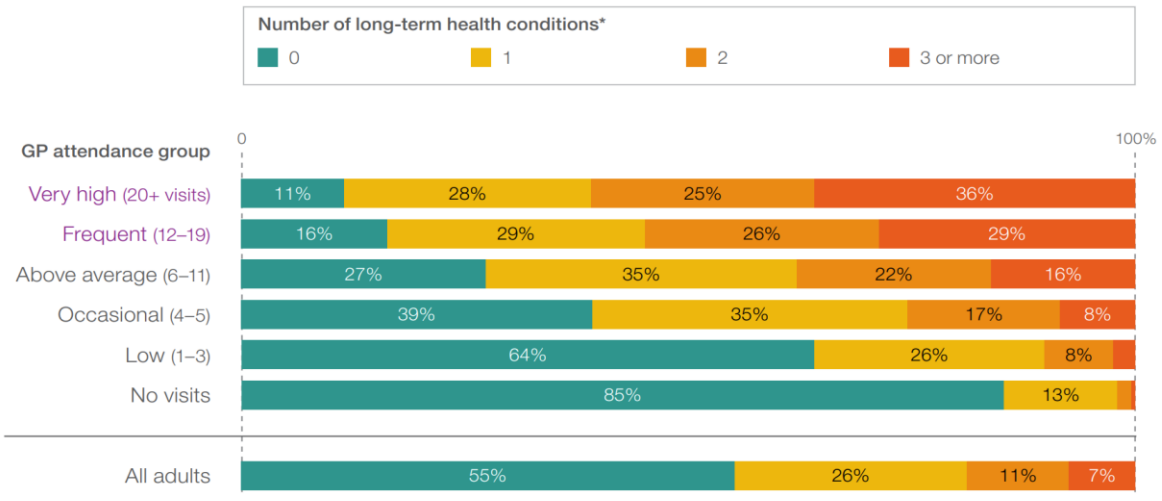
Figure 10 Increasing pressure on GPs from adjustments to patient flows



Source: NZIER

Long-term conditions now make up 80 percent of primary care presentations (Askerud et al. 2020). An Australian study of frequent GP attenders found that 89 percent of people who visited the GP 20 or more times per year had at least one long-term health condition, 61 percent had at least two and 36 percent had at least three. Additionally, 84 percent of people who visited the GP 12 to 19 times per year had at least one long-term health condition, 55 percent had at least two and 29 percent had at least three long-term health conditions (see figure below) (National Health Performance Authority 2015).

Figure 11 Number of long-term health conditions by GP attendance frequency (2012–13)



Source: National Health Performance Authority, 2015

This pattern of use is not only unsustainable from a GP workload perspective, it is also unsustainable from a health cost perspective: The same Australian study found that the average amount of federal expenditure on non-hospital Medicare services for very high GP attenders (20+ visits) was $3,202 per person and for frequent GP attenders (12–19 visits) it was $1,850. Those amounts represent six and three times the per-person expenditure for an occasional GP attender (4–5 visits) 12 and 7 times the expenditure for a low GP attender (1–3 visits). Finding cost-effective ways of reducing demand with better prevention and management of long term conditions, and less costly options for primary care visits is imperative.

Table 1 Non-hospital Medicare Benefits expenditure, by GP attendance, 2012–13
AUD

Visits to a GP	Number of Australians	Proportion of the population (%)	Total non-hospital Medicare expenditure† ($)	Share of non-hospital Medicare expenditure† (%)	Per person non-hospital Medicare expenditure† ($)
Very high (20+ visits)	882,892	**3.8**	2.8 billion	**17.7**	3,202
Frequent (12–19)	2,010,630	**8.7**	3.7 billion	**23.3**	1,850
Above average (6–11)	5,268,252	**22.8**	5.2 billion	**32.8**	993
Occasional (4–5)	3,650,221	**15.8**	2.0 billion	**12.6**	551
Low (1–3)	7,774,432	**33.6**	2.0 billion	**12.5**	257
Zero	3,548,854	**15.3**	0.2 billion	**1.0**	-
All Australians	**23,135,281**	**100.0**	**16.0 billion**	**100.0**	**690§**

Source: National Health Performance Authority, 2015

The need to address these problems through interprofessional practice has been recognised by funders whose expectations of primary care in this regard have increased. But collaborative care models require GPs to engage with a range of providers, and GPs lack the support they need to embed this way of working. While the benefits may outweigh the costs, there nonetheless are transaction costs for general practitioners to work differently. Primary mental health services, aged care facilities, referrals back from secondary care, for example, all put pressure on general practitioners as the central advocate and coordinator of care.

5 High level objectives for a fit-for-purpose health system

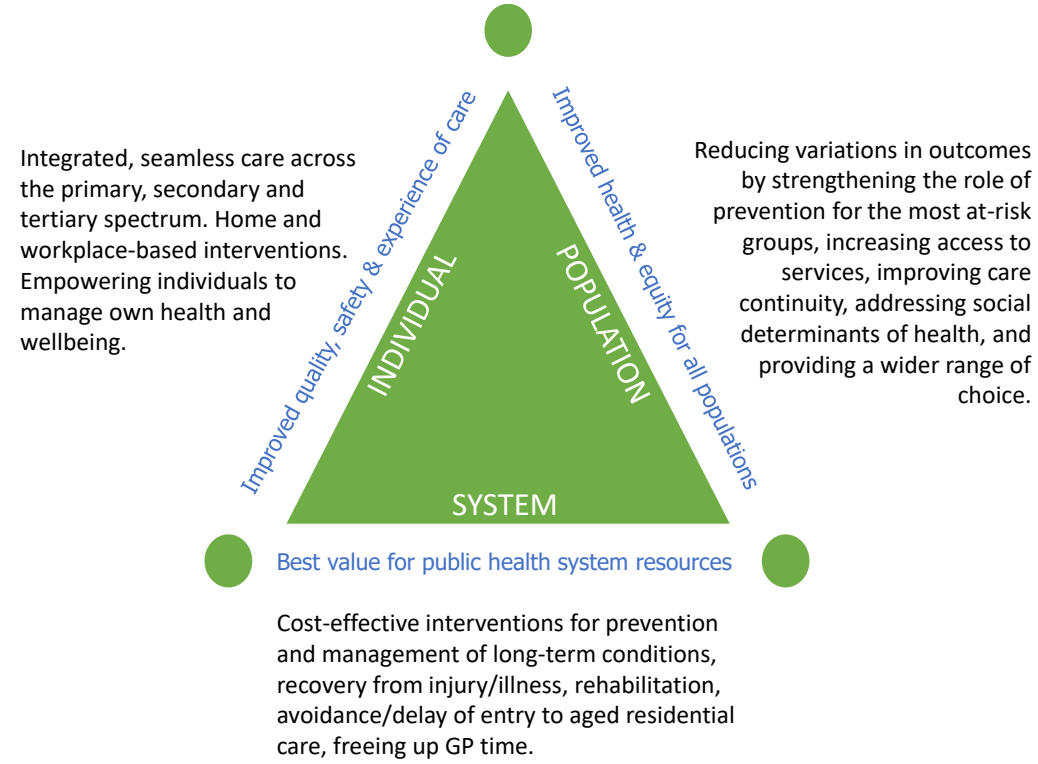
One of the most widely used sets of objectives for a fit for purpose public health system is the Triple Aim.

The Triple Aim, originally conceived as a guiding policy for health care in the United States, and later adopted by the HQSC, identifies the three fundamental aims of a publicly-funded health system:

- improved quality, safety and the patient's experience of care
- improved health and equity for all populations
- best value for public health system resources

Allied health services align well with the triple aim objectives and provide opportunities for improvement across all three dimensions.

Figure 12 Triple Aim 0bjectives and opportunities for Allied Health contribution



Source: NZIER, HQSC

5.1 Improved health and equity for all populations

The World Health Organization defines equity as the absence of avoidable or remediable differences between groups of people (Ministry of Health, 2021). Ensuring equity in health implies addressing two important dimensions of equity:

- differences in health outcomes
- differences in access to the resources that help people achieve health outcomes (Ministry of Health, 2021)

Equity is a critically important dimension of a fair and just society and is at the heart of Te Tiriti o Waitangi, but it is also intrinsically linked to other dimensions of the triple aim framework, for example:

- negative patient experiences of care can result in less engagement with services, which can lead to poorer health outcomes
- poorer health outcomes resulting from differences in access to critical resources (e.g. healthy housing and diet, preventive care) can lead to more use of some services, higher costs and worse outcomes.

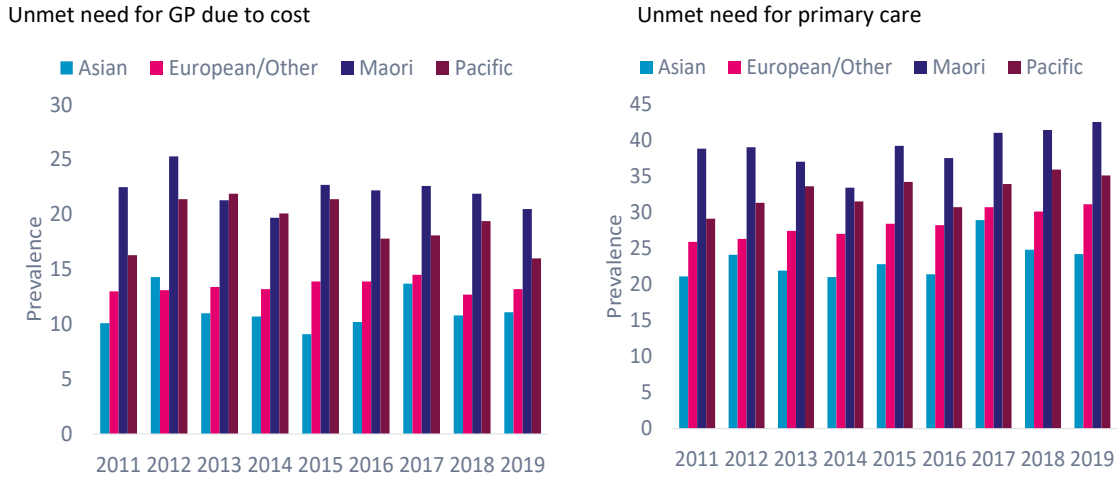
5.1.1 Allied health and the equity opportunity

Three important ways in which allied health professionals can improve equity are:

- Increased access to tier 1 services for Māori and Pacific people
- Increased access to tier 2 services for Māori and Pacific people
- Improved outcomes for Māori and Pacific people

The New Zealand Health Survey reveals that cost presents a more significant barrier to accessing GP care for Māori and Pacific people, with approximately one in five Māori adults and one in six Pacific adults reporting unmet need for GP services due to cost.

Figure 13 Unmet need for GP and primary care, by ethnicity

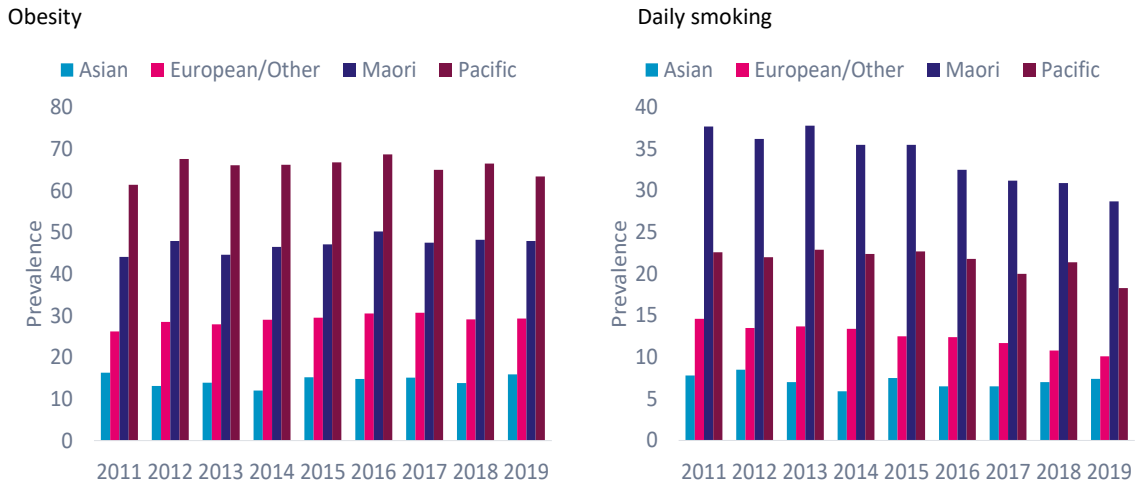


Source: NZIER, NZHS data

The rising prevalence of long-term conditions and multimorbidity for Māori and Pacific people is directly related to poor outcomes for these groups. Treatment of conditions and their complications is essential to prevent the worst outcomes, but equitable outcomes will not be achieved through secondary prevention alone. Without a greater focus on primary prevention, equity of outcomes will never be achieved.

Allied health professionals' approach to health and wellness is heavily focused on addressing risk factors of injury and illness through effective primary prevention. The most important risk factors for long term conditions are obesity and tobacco use, both of which are significantly more common in Māori and Pacific people. But if cost is a significant barrier for access to primary care, it is an even greater barrier to most allied health services which are less likely to be subsidised.

Figure 14 Prevalence of risk factors by ethnicity



Source: NZIER, NZHS data

One way that allied health professionals can help reduce access barriers and provide access to risk factor prevention and management is through outreach services.

Underserved areas can be cost-effectively addressed through mobile outreach programmes. Allied health practitioners working in a tier 1 interprofessional team could, along with nursing staff, visit underserved communities to provide health screening, initiate preventive care, assist in the management of chronic conditions, provide patient education, address social determinants of health and other risk factors, provide lifestyle advice and offer therapies that may otherwise not be accessed. Mobile outreach may provide a cost-effective way of reducing barriers to a range of tier 1 services for people living in rural or highly deprived areas, and for people with disabilities.

For example, a Canadian Rehabilitation Mobile Outreach team visited 14 rural communities in eastern and northern Ontario and was highly rated by patients who benefitted from services provided (Wilson et al. 2005). The team comprised 36 rural physicians and 62 allied health professionals.

Many mobile clinic models around the world have a strong focus on person-centred care with education and patient empowerment being key elements of their interactions with service users. These elements have been shown to help break down "*barriers resulting from poor patient-provider communication, mistrust, and sense of disempowerment among minority communities"* (Yu et al. 2017).

The Health and Disability System Review identified that the secondary workforce is under strain and noted the high proportion of budgets spent on medical consultant salaries. Allied health practitioners could provide a cost-effective and safe triage function to reduce the tier 2 demand burden with appropriate workforce substitution.

5.2 Improved quality, safety and the patient's experience of care

Quality can be broadly defined as providing the right services at the right time for the right person and achieving the best possible outcomes Quality care is delivered according to the best evidence of clinical effectiveness, as acknowledged by the widely used United States Institute of Medicine definition which states that quality is: "The degree to which health services for individuals and populations increase the likelihood of desired health outcomes

and are consistent with current professional knowledge" (United States Institute of Medicine, as cited in WHO, 2018).

Patient safety is simply defined by the World Health Organization as preventing and reducing risks, errors and harm to patients in the delivery of health services. The WHO argues that *"to ensure successful implementation of patient safety strategies; clear policies, leadership capacity, data to drive safety improvements, skilled health care professionals and effective involvement of patients in their care, are all needed"* (World Health Organization 2019).

5.2.1 Allied health and the quality, safety and experience opportunity

The right care at the right time, delivered in the right way for the right person is impossible to achieve if the public health system does not employ the right mix of professionals. Allied health professionals are highly trained, highly specialised practitioners who can offer safe and effective, evidence-based interventions for a wide range of conditions.

Chronic pain conditions are one example where allied health services may be key to both quality and safety improvements. The increased use of opioid analgesics in recent years in New Zealand has resulted in misuse and addiction and is a key quality and safety concern in the health and disability system (Bpac, n.d.).

Opioids are commonly prescribed for chronic pain conditions, with the most common being back and neck pain, osteoarthritis and extremity pains, shoulder pain, headache, orofacial pain, pelvic pain, and fibromyalgia or chronic widespread pain (Boudreau et al. 2009). These conditions are typically managed in primary care settings. Access to allied health care may in many cases provide effective management of pain without the need to resort to opioid use.

Allied health practitioners can support safer use of medication by working with patients, GPs and pharmacists to reduce unnecessary medication:

- Some US states have now recognised that the key to reducing opioid prescribing and addressing chronic pain is increased access to physiotherapy and osteopathic and chiropractic care (Bennett 2021).
- Numerous studies demonstrate that remedial massage therapy can reduce chronic pain and reduce opioid consumption. For example, a systematic review and meta-analysis (Furlan et al., 2012) found that acupuncture, massage, spinal manipulation, and mobilisation were significantly more efficacious than no treatment, placebo, physical therapy, or usual care in reducing pain.
- A 2019 meta-analysis of nonpharmacologic approaches to pain management showed that meditation, cognitive-behavioural therapy, hypnosis, and nonhypnotic therapeutic suggestion provided clinically significant benefits (Schwenk 2019).
- Polypharmacy in older people is a complex problem that is associated with hypoglycaemia, malnutrition, pneumonia, fractures, hospitalisation and death (Frazier 2005). While rates of polypharmacy have fallen somewhat since 2012, they remain high, particularly in people aged 85 and older, but Māori and Pacific people receive more medicines at a younger age (33 percent of Māori and 46 percent of Pacific people aged 65-74 were dispensed five or more long-term medicines in 2016, compared with 24 percent of European/other) (HQSC n.d.). Two major risk factors for

polypharmacy are multiple co-morbidities and medication non-adherence, both amenable to more pro-active allied health interventions.

Increased medication adherence support is also likely to improve quality of care: A New Zealand based study (Chepulis et al, 2020) on the barriers to self-management of type 2 diabetes revealed that those with poorly controlled diabetes had trouble remembering to take medication.

Quality and safety are intrinsically linked to equity, as shown by studies of low back pain (LBP) in indigenous and acculturated populations in high-income countries, which have found that medical interventions can have harmful effects and that more holistic, non-medical approaches provide better outcomes (Buchbinder et al., 2018).

The chronic care model (Wagner et al 1996) underpins best practice approaches to the delivery of health care for people with long-term conditions. In this model, six interdependent components support effective community-based care: community resources, health system support, self-management support, delivery system design, decision support and clinical information systems. In terms of experience of care, the patient is enabled to become an informed and active participant in the development and implementation of a personalised care plan, supported by a proactive primary care team. The inclusion of allied health professionals in these teams is recognised by the Ministry of Health which (Ministry of Health 2016b) specifically indicated that "nurses and general practitioners need to be part of a wider multidisciplinary team… (including) Māori providers, Pacific providers, community pharmacists, community mental health workers, allied health professionals and medical specialists" (Ministry of Health 2016b, 10).

Self-management and self-management support are core components of person- and whanau-centred care. Support for self-management is also one of the four components of the Chronic Care Model that is considered to be essential for high-quality care for people with chronic conditions (Wagner, 1998). Effective self-management reduces health system costs, frees up resources for other uses, and improves outcomes and patient experience.

Many long term conditions are not only amenable to self-management but there is a wealth of evidence that self-management is more likely to lead to improved outcomes provided patients are supported in their efforts. A major systematic review of self-management interventions for long term conditions with evidence from nearly 10,000 published studies found that self-management support interventions were most likely to result in improvements in patient-level outcomes (Reynolds et al. 2018).

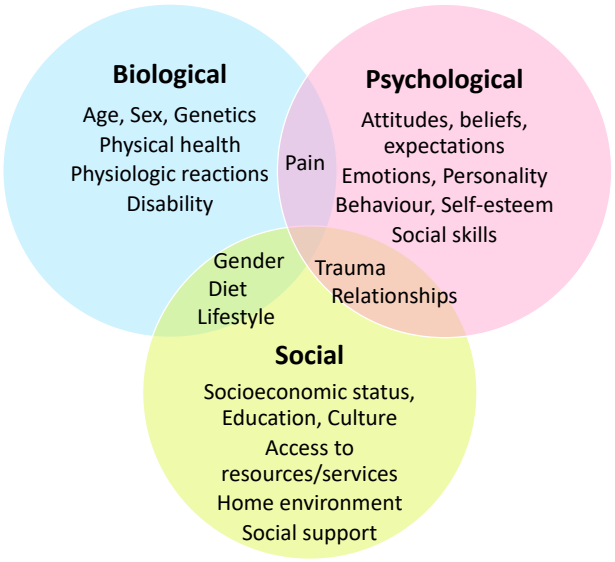
Delivering a biopsychosocial model of care

Many people with long-term conditions, disability or living with age-related functional decline experience challenges in day-to-day functioning, in maintaining social and economic participation, and consequently face a growing level of dependency and service use with impending threat of institutionalisation.

An appropriate model of care in such cases is based on the International Classification of Functioning, Disability and Health (ICF) and indicates that a biopsychosocial model of care will deliver best outcomes.

Figure 15 The biopsychosocial model of health

(selected dimensions)



Source: NZIER

Parkinson's disease presents one of the many examples of how a collaborative interprofesssional tier 1 team could work to provide safer, higher quality care with a better patient experience than traditionally organised primary and community services to deliver better outcomes for patients.

A person with Parkinson's disease experiences changes in mobility; has difficulties with showering and dressing, cooking and driving; experiences weight loss and chest infections; and can struggle with writing, speaking, and singing. Engaging the patient in a goal-setting exercise allows the individual to identify priorities for care based on what will have the greatest impact on their quality of life, taking into account their particular circumstances. For example, they may have goals to:

- maintain nutrition, and swallow safely
- reduce risk of falls and keep active
- be able to socialize and communicate with family and friends
- have options for transport and driving
- keep mentally well and have social connections and support.

These goals could be achieved with a broad interprofessional team offering occupational therapy, physiotherapy, speech and language therapy, dietetic services, and social work, with links to support groups in the community and potentially with access to interventions like music therapy and remedial massage therapy.

The biopsychosocial model can offer better quality, safety and patient experience for a wide range of chronic conditions, including diabetes an COPD, as well as functional disorders, including chronic pain, chronic fatigue, irritable bowel syndrome, and also complex multi-morbidity. The biopsychosocial model can also provide better alignment between the health and disability system and the Treasury's Living Standards Framework (see Figure 16 below).

Figure 16 The 12 domains of current wellbeing

Source: Treasury, 2019

Integration and navigation

Better integration and navigation are improvements that can deliver better outcomes and a better experience of care.

Some vertical integration – integration of tier 1 and tier 2 services – is already in existence with varying degrees of effectiveness. In some cases, vertical integration could still be improved. In addition, horizontal integration – integration of different tier 1 services, including allied health and other community-based services – is less common.

A common thread across tier 1 services and up to tier 2 services is Allied Health. Allied health practitioners often already work in settings that connect tiers vertically, for instance in DHB-funded community allied health teams where the focus is on post-discharge rehabilitation for stroke patients, post-operative patients, and older people. These roles provide significant potential for better integration both vertically and horizontally.

Patient navigators are trained, culturally sensitive health or social care workers who provide support and help families navigate through the various components of the health and social services systems. Where patient navigators exist, it is often a role played by nurses, social workers, or other allied health practitioners.

A scoping review (Peart et al, 2018) of studies on patient navigators found that these roles may help connect people needing tier 1 health services to appropriate providers and extend patient-centred care across different healthcare settings, suggesting that patient navigators may be particularly appropriate for network-based tier 1 services.

Allied health practitioners could extend their scope of practice to include patient navigation easily as they already have a strong understanding of the health system, are used to working in interprofessional teams and can work effectively with clinical staff.

5.3 Best value for public health system resources

Best value for public health system resources is what economists call efficiency. Efficiency is often understood as meaning minimising wasteful use of resources or even just cost cutting. But the concept of efficiency is reflected in multiple levels for health system decision-making due to three relevant types of efficiency: Technical efficiency, productive efficiency and allocative efficiency. These types of efficiency indicate that cost-cutting is not in itself a determinant of efficiency or value in a health system, and that waste minimisation is important but not sufficient.

Technical efficiency

Technical efficiency in health refers to the relationship between resources (capital and labour) and health outcomes for a given service or intervention. Technical efficiency is maximised when either the maximum possible improvement in outcome is obtained from a given set of resource inputs or when the resources inputs used for a given outcome are minimised without changing the intervention or service. Therefore, health care is technically inefficient if the same (or greater) outcome could be produced with less of at least one type of input.

In practice, technical efficiency in hospital-based care has often been the focus of health care efficiency improvements. Minimising hospital stays without associated worsening of outcomes, or fitting more operations into operating theatre sessions have been improvements in technical efficiency. Technical efficiency is simply about reducing waste.

Productive efficiency

But best value in a public health system demands more than simply reducing waste.

Productive efficiency in health refers to health care resources being put to the best possible use, producing as much benefit as they can in terms of a particular outcome. Productive efficiency requires assessment of the many ways in which a given input can be used and then choosing those uses that offer the best value.

Service reconfiguration to shift some services currently offered in tier 2 settings to tier 1 settings can be productively efficient: For example, specialist time is better spent performing complex procedures than minor procedures; GP time is better spent performing minor procedures than providing lifestyle advice; and allied health practitioners can safely take on the need for lifestyle advice.

Similarly, expanding scope of practice for allied health practitioners or supporting allied health practitioners to practise at the top of their scope would enable them to take on some of the work that is currently at the bottom of the GP or specialist scope of practice, enhancing productive efficiency in the system.

Productive efficiency allows a system to deliver more value at the same cost.

Allocative efficiency

Allocative efficiency in health encompasses the concept of productive efficiency, delivering the best value out of inputs, but broadens it to inform resource allocation decisions where

outcomes may differ and, by implication, so may the beneficiary. For example, choosing between spending on preventive care for working age people with pre-diabetes and spending on high cost interventions to marginally prolong life in elderly cancer patients – two different types of care for different population groups, with different outcome measures – can be an allocative efficiency question.

The concept of allocative efficiency takes account the productive efficiency with which resources are used to produce health outcomes from either diabetes preventive care or high cost cancer care as well as the distribution of outcomes in the community and the value society places on these: Allocative efficiency is achieved when community welfare is maximised (Drummond, 1991). Achieving allocative efficiency clearly requires that communities participate in decision-making.

5.3.1 Allied health and the value opportunity

Integrating the allied health workforce into a publicly funded health and disability system is an enabler of greater efficiency, including technical, productive and allocative efficiency because:

- Shifting services that can be safely provided in lower cost settings by lower cost providers can improve technical efficiency in both tier 2 and tier 1 settings, but to do this the capacity of tier 1 settings will need to be increased.
- Providing non-surgical interventions can reduce the cost of achieving good outcomes and improved wellbeing.
- Providing complementary care that enhances the effectiveness and cost-effectiveness of GP care.
- Enabling patients to access allied health practitioners with expertise in primary prevention and management of long-term conditions can improve outcomes and wellbeing while reducing demand for costly treatment of complications.

Allied health practitioner salaries are estimated to be approximately $90,000 or less in the New Zealand primary care context, offering significant potential for cost-effectively delivering both one-off interventions and more labour intensive care than under a GP (approximate salary $280,000) (GPNZ, 2019).

Some work undertaken by GPs, and in some cases, nurses, could be undertaken by Allied Health professionals with no compromise to patient safety or quality of care. Treatments for musculoskeletal issues and chronic pain, support for healthier lifestyles, well child checks could all be provided safely and effectively by Allied Health professionals at a lower cost than they are currently provided by GPs. This would free up GP time to take on some of the services that are currently provided by specialists in an outpatient setting but which could safely be delivered in a primary care setting, resulting in even greater savings.

Working with people to manage their diabetes and prevent complications is another example where there is real potential of system savings: The estimated cost of treating a diabetic foot wound in a hospital setting is approximately $30,000, leading to calls from researchers for the establishment of multidisciplinary diabetic foot teams (Joret et al. 2016). Such clinics have been shown to improve patient outcomes and reduce health system costs (Joret et al. 2019) and could be included in tier 1 services.

Outcomes in diabetes and many other conditions are often associated with medication adherence. A Cochrane review (Nieuwlaat et al. 2014) recommended further exploration of the role of allied health practitioners in delivering interventions to enhance medication adherence, including counselling. The review noted that doctors not only have limited time, but also have limited skills to counsel patients on medication adherence repeatedly. The review found that several complex interventions involving allied health practitioners were effective in increasing medication and again recommended further exploring the potential role of non-medical personnel in light of the importance of patients' social contexts in the management of long-term conditions. In this way, allied health practitioners offer a complementary service that improves the effectiveness of GP prescribing for long-term conditions.

Productive and allocative efficiencies resulting from increased use of allied health services, however, may take many years to be achieved. Allied health practitioners' focus on prevention means that many impacts will often not be observed for long periods of time and this has put allied health interventions at a disadvantage for cost-effectiveness evidence. The effectiveness of preventive care is notoriously difficult to evaluate when outcomes are long term and result from complex interplay of biopsychosocial factors as well as services and treatments over a long period of time. Long term follow-up in health research often means 12 months or more, not 12 years.

5.4 Provider experience – the critical fourth dimension

Many other health systems add a fourth aim to the standard triple aim framework and this is increasingly true in New Zealand as well (see for example, HQSC). Provider experience reflects the workload, work type, pressures, recognition, support and training needs that health professionals need to be able to continue in their roles, reduce absenteeism and burn-out, and support delivery of safe and effective care. Provider experience, along with efficiency, underpins the sustainability of the system.

In reconfiguring the health and disability system, there are significant risks that pressures on GPs and other professionals will result in detrimental provider experience that reduces the effectiveness of system changes. It is also imperative that changes made to reduce pressures, such as integrating the allied health workforce to help reduce GP workload, are supported by other measures to ensure new collaborative models of care are accompanied by positive and productive interprofessional relationships.

5.4.1 Allied health and the provider experience opportunity

The Health workforce is the foundation of the health system and the sustainability of the workforce underpins the sustainability of every part of the system.

Strained health systems in many countries have been relying on increasingly heavy workloads for health professionals to continue providing adequate care for increasing and ageing populations without commensurate funding increases for education, training, recruitment and staffing.

The levels of stress, mental health issues and burnout amongst health professionals have become major concerns. In New Zealand up to 10 percent of GPs have reported showing psychological symptoms of concern, 46 percent of GPs felt that their work had affected their physical health, and 57 percent indicate they often think about leaving general practice (Henning at al. 2009).

A UK study (Fisher et al., 2017) of GPs attitudes about workloads and stress found that GPs were becoming more open to:

- Patients taking greater responsibility for self-management (although this required education and GPs did not believe they should be responsible for this)
- Increased delegation of tasks that would allow better workload management
- Innovative use of allied health professionals
- Extended roles for non-clinical staff
- Telephone triage.

A New Zealand-based study (Darlow et al. 2014) of GP's underlying beliefs about low back pain (LBP) provides an example of the type of care that may be best delegated to allied health professionals. The study found that dealing with LBP was not seen as an enjoyable part of GPs' work and chronic LBP was seen as 'very hard work'.

In the UK, the professional workforce delivering primary care is currently being broadened, resulting in multiple primary care service models as alternatives to traditional GP-led care. These include "first contact practitioners" – typically physiotherapists with extended skill sets who can assess and provide management plans for patients with musculoskeletal conditions – as well as primary care nurse practitioners and physician associates who provide a first-contact service and triage (Babatunde et al. 2020).

Interprofessional practice can be challenging for practitioners who have not been trained for it. Many allied health professionals already work within interprofessional teams or in environments that require the skills and disciplines of interprofessional practice. Integrating allied health professionals into primary care teams could introduce interprofessional behaviours to improve the effectiveness of the primary care team. Allied health practitioners are often used to working across different locations and may be able to assist GP practices in connecting with other professionals across the health and social services.

6 Tier 1 design elements for maximising allied health impact

The New Zealand Health Strategy states that "*a great system will find a balance that matches the most important needs with the best use of skills and resources*" (Ministry of Health 2016a). This statement recognises that although there are multiple challenges in the redesign of a new health system, the health workforce and the way it is utilised is a core determinant of the strength of the system as a whole.

Current use of allied health is sub-optimal. The solution requires a fundamental shift in the way tier 1 services are organised and in the behaviours of the tier 1 workforce.

In designing tier 1 services to support interprofessional practice with increased allied health input, critical design elements include:

- The patient-centred medical home (PCMH)
- Practice ownership and governance models that support greater community participation and breakdown professional hierarchies
- Payment models that align with service models

- Referrals processes for direct access to a range of health professionals
- Workforce redesign, including extended scope
- Cost containment measures
- Culture shift
- Empowering with information.

6.1 The patient-centred medical home

The concept of PCMHs – originally coined medical homes – was introduced by the American Academy of Paediatrics in 1967 as a model of primary care for children with special health care needs. It aimed to provide coordinated multidisciplinary care to manage complex conditions and developmental problems. The model is based on the principle of providing care that is continuous, comprehensive, coordinated, compassionate, family centred, and culturally appropriate (Grant and Greene 2012).

This model has evolved internationally, including a variation in New Zealand, to become a common approach to care for people with long-term conditions with an emphasis on empowering patients to self-manage. US-based primary care initiatives under the patient-centred medical home model provide lessons for system design to support team-based tier 1 care.

The "enhanced medical home", a recent variation on patient-centred medical homes, was introduced in the United States as a model of care for medically underserved, high-risk populations. It uses electronic health records, facilitates access to specialty care, integrates allied health services (e.g., mental health and oral health care in the primary care setting), offers transportation, and employs staff for case management and care coordination. (Grant and Greene 2012).

PCMH models are an ideal for areas of high deprivation, where multi-morbidity and high prevalence of risk factors are observed. PCMHs provide a context in which allied health professionals can add significant value to tier 1 services due to the focus on proactive care for patients with complex needs, greater engagement with patients in planning their care, the interprofessional team approach, and the use of coordination and navigation to support patient journeys.

The staffing mix for the patient-centred medical home includes existing roles and professions as well as extended scope and new roles, many of which are allied health roles or able to be filled by allied health practitioners.

A staffing model proposed by General Practice New Zealand (GPNZ) identified that adapting successful US PCMH models to the New Zealand context, and depending upon whether a practice serves a high need area or not, a multi-disciplinary staffing model would require 32 to 42.6 FTE per 10,000 enrolled patients, including 7 to 9.5 roles for allied health practitioners or which could potentially be filled by allied health practitioners (including navigator and manager roles), respectively (see table below). These staffing ratios suggest that allied health professionals should amount to up to one third of staff in a PCMH model.

Table 2 Staffing requirements for a New Zealand PCMH model

	GP	Nurse Practitioner	Nurse	Reception/ administration	Behaviourist/ Counsellor
FTE per 10,000 high needs patients	7.9	4.0	6.0	6.7	3.5
FTE per 10,000 non-high needs patients	6.0	2.0	4.5	5.0	2.5
	Social worker/ Kaiawhina/ Navigator	**Health care assistant**	**Clinical pharmacist**	**Physiotherapist**	**Trainee doctor**
FTE per 10,000 high needs patients	2.5	4.0	1.0	1.0	1.0
FTE per 10,000 non-high needs patients	1.0	3.0	1.0	1.0	1.0
	Trainee nurse	**Trainee allied health**	**Student clinicians**	**Manager**	**Total team FTE**
FTE per 10,000 high needs patients	1.0	1.0	2.0	1.0	42.6
FTE per 10,000 non-high needs patients	1.0	1.0	2.0	1.0	32.0

Source: GPNZ, 2020

The staffing requirements of an effective PCMH imply significant costs. Patel et al. (2013) estimated that the incremental cost of additional staffing would be USD$4.68 (range USD$3.79-USD$6.43) per enrolled patient per month. That is, the annual cost of implementing a PCMH staffing model would be approximately NZ$87 per patient, or $870,000 for a practice serving 10,000 patients (inflated to 2021 and converted to NZ dollars at the USD/NZD exchange rate on 10 February 2021).

Evaluations of the PCMH model have revealed impacts that may mean the additional costs of PCMH-style staffing could be funded by health system savings from:

- Up to 29 percent fewer emergency department visits (Reid et al. 2010)
- Up to 18 percent fewer hospital admissions (Maeng et al. 2012)
- Up to 36 percent fewer readmissions (Maeng et al. 2012).

In areas where population and population need is too small or insufficiently concentrated to support a PCMH model, patients should still have access to the benefits of interprofessional collaborative tier 1 care teams. This can be made possible by requiring tier 1 providers to form alliances or networks. In these arrangements, multiple provider organisations are held jointly accountable for the health outcomes of an identified population. Some positive impacts have been observed in New Zealand (Gauld et al. 2019) and in the United Kingdom (Wrigley 2018), however experience with alliances and networks suggests they do not always lead to team-based care (Hutchison et al. 2011; Drew and Norton 2010) so additional design elements may be required.

Network-based teams require strong support as GP resistance, IT problems, and information governance challenges have been noted as significant barriers in many contexts.

6.2 Practice ownership and governance models

According to the RNZCGP GP Workforce Survey 2018, most (over 70 percent) GPs work in GP-owned practices, and community, trust, charity and iwi-owned practices are relatively rare.

Figure 17 Practice ownership in New Zealand

	Total GPs	Urban	Not clearly urban or rural	Rural
Unweighted base =	2773	2067	242	464
	%	%	%	%
Owned by one or more GPs who work in the practice	71	74	66	62
Community owned or owned by a trust or charity	7	6	4	12
Fully or partially corporate owned	9	9	7	9
Fully or partially owned by a PHO or a GP organisation	4	3	7	5
Fully or partially owned by a DHB	1	1	2	3
Fully or partially owned by an iwi	2	1	3	3
Owned by a university (student health)	1	2	0	0
Other	5	4	10	6
Total	100	100	100	100

Total may not sum to 100% due to rounding.

Source: RNZCGP, 2018

The significance of practice ownership on organisational behaviour should not be underestimated: "*Ownership confers governance responsibility (ultimate control) for an organisation, and accountability for its actions*" (Crampton 2005).

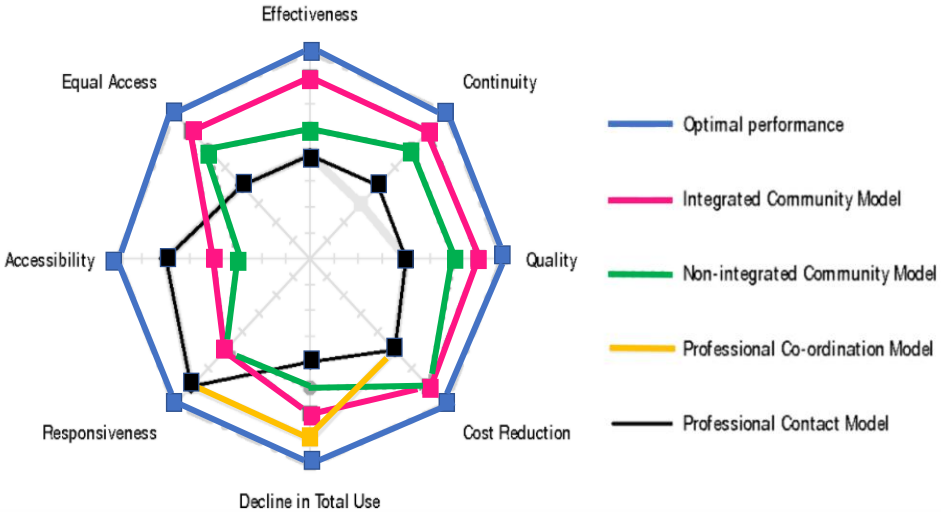
GP practices that are community-governed and not-for-profit may be better suited to delivering team-based care to patients with complex care needs, particularly in communities where complex care needs are common and co-exist with high-deprivation and minority populations.

Salaried practices, whether in high-needs areas or not, remove the direct employer/employee relationship between the GP-owner and any other staff. This factor has been identified as a barrier to effective teamwork (Pullon, McKinlay, and Dew 2009).

The Canadian EICP identified that community models of primary care, where services are planned and delivered under a governance authority that includes public representation and assumes responsibility for a population, can promote continuity and coordination of care amongst providers across a horizontally or vertically integrated network. This was in contrast to the 'professional model' where health professionals work in private practice with no formal care coordination or care continuity mechanisms.

A study of Canadian models found that community-type models offer improved equity of access, effectiveness, continuity, and quality, as well as cost reduction (Lamarche et al. 2003).

Figure 18 Comparison of community and professional models



Source: Lamarche et al., 2003

These findings are generally consistent with Gauld et al.'s (2019) analysis of the characteristics of New Zealand's GP practices by ownership type. Non-profit and government owned practices are more likely to remunerate by salary, or at least rely less on co-payments, while private, for profit GP practices derive more income from co-payments.

As shown in table below, while private non-profit practices and government-owned practices are more willing to cater to diversity and produce public and quasi-public goods, they are less responsive to increases in demand than private for-profit GP practices.

Table 3 Characteristics of New Zealand GP practices by ownership type

	Ownership		
Characteristic	**Private non-profit**	**Private for-profit****	**Government**
Direct accountability to government	+	+	+++
Willingness to cater to diversity	+++	+	++ / +++
Likelihood of producing public goods and quasi-public goods	+++	+	+++
Able to experiment with new policy options	+++	++	++
Likelihood of exploiting information asymmetries between patients and providers	+	+++	+
Likelihood of disguised profit distribution (disguised profit)	+++	+	+
Responsiveness to increases in demand	+	+++	++
Likelihood of blunting more extensive policy development	+++	+++	+

* + small ++ intermediate +++ large.
** Private for-profit ownership can be further divided into proprietary-style general practice to entrepreneurial investor-owned organisations (see below).

Source: Gauld et al., 2019

Based on the overall characteristics of GP practice ownership models, the primary strength of the private for-profit model is its responsiveness to increases in demand. However, if the GP workforce is severely constrained, this will only be possible when the practice can employ other health professionals to take on some of the workload.

Like many small businesses in New Zealand, however, a radical change in the business model is a difficult hurdle to overcome. Employing other health professionals and adopting team-based approaches can mean a need for investment in new capital, a greater need for management and administrative staff, and the cost of developing service models and processes to ensure quality and safety. It is also a significant risk: GP practice owners are likely to be conservative with regards to changes if they are not sure patients will like them. A cost without a reasonably well-assured increase in revenue is not an attractive option for a business owner.

Experience with different models in Canada (Lamarche et al. 2003) and in New Zealand (Crampton 2005) indicates that another way in which community-governed non-profits differ from for-profit providers is the engagement of meaningful community participation in governance. The current primary care system requires community participation in the governance of PHOs, but as PHOs have little control over the business decisions of for-profit providers, it is not clear that community participation at the PHO level impacts significantly on the behaviour of for-profit providers.

6.3 Payment models that align with service models

Alongside the PCMH model, new payment models have emerged that are better aligned to the model of care that a PCMH is designed to deliver. The blended payment model provides a combination of:

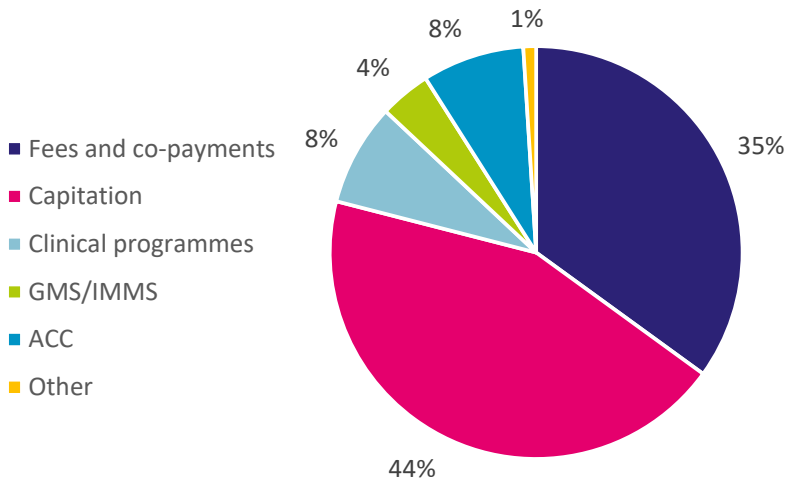
- fee-for-service payment to incentivise responsiveness for improved access to care

- financial incentives for performance on quality and efficiency targets, with an upfront component to help fund innovation and an ex-post component on achievement of targets
- a capitation-type payment to support population-based service planning and core care delivery
- a prospective, bundled structural practice fee to cover the additional overhead costs associated with non-traditional staffing and coordination of collaborative care activities
- a prospective, bundled care management and coordination fee to cover the labour costs of GP and non-GP clinical and administrative activities that exceed what is normally provided in a traditional, face-to-face primary care visit.

In New Zealand, these could be implemented with or without the fee-for-service payment, although a fee-for-service payment may be desirable to ensure responsiveness if patient co-payments were abolished. The advantages of fee-for-service remuneration – the standard remuneration model in Canadian professional care models – have been well documented and are well understood (see for example Love and Blick, 2014). In New Zealand, patient co-payments largely substitute for the fee-for-service remuneration that Canadian GPs receive, and these help to improve provider responsiveness and accessibility, although in areas where many patients are unable to afford co-payments, this incentive will break down without compensating effects.

The incentives created by fees are important considerations for any discussion of abolishing co-payments through increased capitation. Primary care providers receive roughly 35 percent of their income from fees and co-payments so the incentive effects of this type of payment are likely to be strong drivers of behaviour in the current system.

Figure 19 Primary care provider income breakdown



Source: Carter (2017)

Financial incentives for performance on quality and efficiency targets should be extended in New Zealand to include performance on equity targets.

Within provider organisations, more teamwork has been observed in not-for-profit community models where combinations of the following apply:

- health professionals are paid by salary
- incomes are interdependent (such as fixed shares of capitation funding)
- funding is linked *to the team as a whole* and accountability lines are minimised
- professional contracts specifically state expectations for team-based care, more team work is observed

(Wranik et al. 2017)

Processes must be established to identify and recognise the structural capability of tier 1 teams to determine whether access to payments designed for collaborative care should be granted. This can be challenging because there is no specific formula for collaborative care team composition (SCIE 2018). The mix of professions and disciplines in the overall team (within a practice or across a network) should reflect the needs of the population, while a specific patient's team should draw from the network to reflect the specific patient's needs and preferences. At the same time, teams should be small enough to allow members to know and trust each other and support good communication.

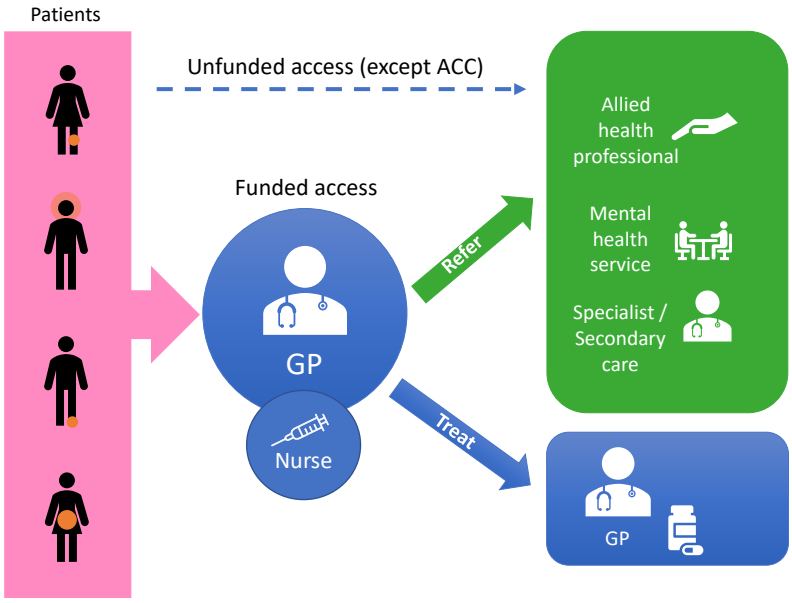
The American Academy of Family Physicians provides some guidance as to what features may be required to be demonstrated to evaluate tier 1 teams:

- Physician time dedicated to care management
- Nonphysician staff time dedicated to care management
- Patient education
- Use of advanced technology to support care management
- Medication management
- Population risk stratification and management
- Integrated, coordinated care across the health care system
- Patient-centred care planning.

6.4 Referrals processes for direct access to a range of health professionals

Currently the only way patients can access publicly funded allied health practitioners is through a GP referral (see Figure 20 below). But GPs often lack the knowledge of allied health practitioner's skillsets to know what kind of allied health professional is the right one, or to appropriately choose between treating patients themselves or referring on and between referring to a specialist or an allied health practitioner (as described in section 3.4).

Figure 20 Traditional GP-controlled access

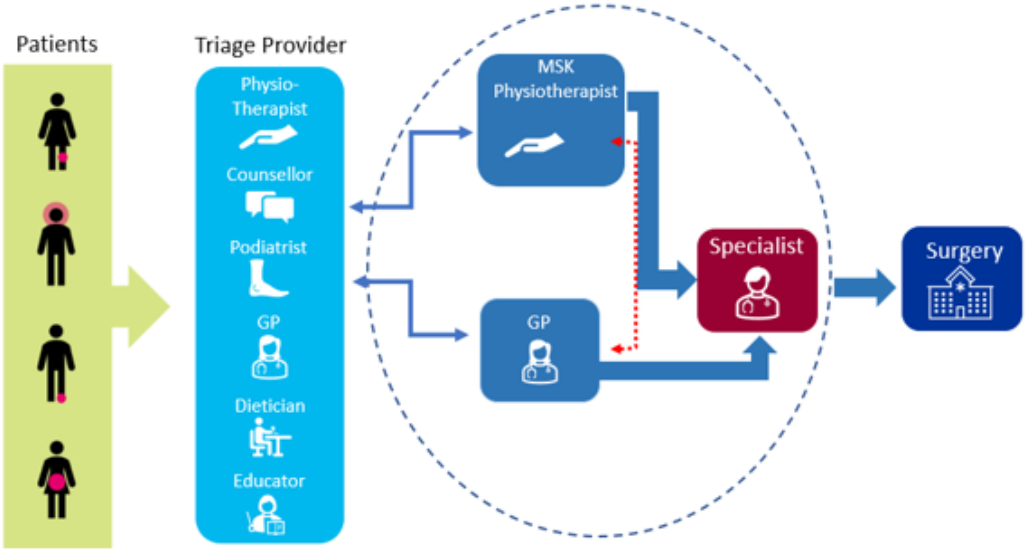


Source: NZIER: Bealing, 2020

On the other hand, patients often know what kind of care they want to receive and who they want to receive it from or could be advised or triaged without needing to access a GP.

Enabling patients to access allied health practitioners more directly, possibly with triage or advice, could reduce the burden on GPs while improving patient experience and outcomes. To the extent that GPs favour referrals to specialists where a referral to allied health may be more appropriate, this may also result in lower health system costs.

Figure 21 Triage system access to practitioners – osteoarthritis example



Source: AHANZ 2021, based on NZIER, 2019

There is a growing body of evidence suggesting that direct access to physiotherapy for musculoskeletal conditions leads to comparable clinical outcomes as GP care with lower healthcare consumption (Babatunde et al. 2020).

In England's National Health Service (NHS), a First Contact Practitioner Service is provided by a registered health professional who is the first point of contact for patients, providing new expertise and increased capacity to general practice, and providing patients with faster access to the right care. A First Contact Practitioner (FCP) is a qualified autonomous clinical practitioner who is able to assess, diagnose, treat and discharge a person without a medical referral, where appropriate (NHS England and NHS Improvement, 2019).

Patients are typically signposted by the GP receptionist, care navigator, online triage software, or they can self-refer through their registered practice. The goal of introducing FCP services is to reduce GP waiting times by ensuring patients are seen by the 'right person, first time' as well as promoting lifestyle changes and self-care which reduces the national burden of MSK health. The proposed benefits of implementing an FCP service model include:

- Reduced burden on GP services
- Reduced burden on secondary care services
- Financial savings for CCGs
- Freeing up of NHS resources, including staff, equipment, and space
- Reduced waiting times for orthopaedics, pain services, rheumatology, community physiotherapy and CMATS (Clinical Musculoskeletal Assessment and Treatment Services)
- Improved accuracy of secondary care referrals
- Developed conversion rate to surgery when referrals are required
- Better links with local voluntary sector and patient groups to ensure the continued support of individuals with MSK conditions
- Treatment timescales are quicker leading to improved patient outcomes
- Overall improvement of population health and patient care

(The Osteopathic Foundation 2020)

FCP services are also reported to deliver a return on investment of £0.81 to £2.37 for every £1 spent on implementing FCP services (Davies C, 2017); with some studies suggesting an even higher return according to Public Health England (2017).

6.5 Workforce redesign, including extended scope

Redesigning the health system based on traditional and narrow views of workforce roles and scope of practice will not support a shift to using the right skills to provide the right care at the right time and in the right place: *"We can design innovative new care models, but they simply won't become a reality unless we have a workforce with the right numbers, skills, values and behaviours to deliver it" (*NHS England, 2014, pp.29-30).

New ways of working may require:

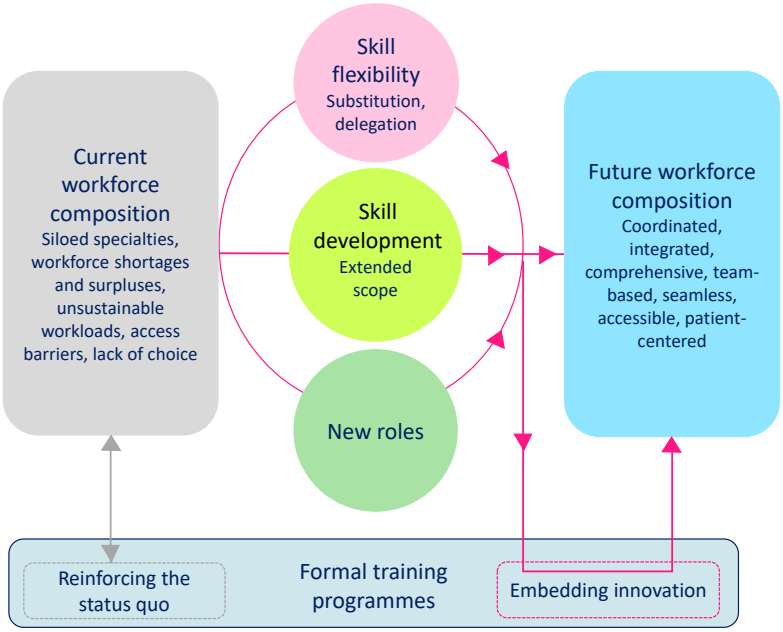
- A focus on scopes of practice and how to enable extended scope where needed
- A mix of skill levels to support different approaches to team-based care and different team compositions
- Management skills at the team level to make the most of complementarity, substitution, and supplementation of skills
- More collaborative/dynamic role boundaries
- Possible increased specialisation in some roles and increased generalisation in others
- Acceptance that some roles may overlap, potentially by deliberate design.

(NHS England 2014)

Traditional approaches to workforce planning have focused on increased workforce training. But this hinders innovation and a shift to team-based care for two reasons: Training programmes are unidisciplinary, and they tend to respond to current roles and system structure rather than introducing innovation in these areas.

An alternative approach to workforce planning is to focus on skill flexibility (identifying and describing the specific circumstances where one health professional may substitute for another, and enabling this to happen in practice), skill development (building on existing skills to enable extended scope of practice), and the development of new roles to meet the needs and preferences of the population. Once established, these can be reflected in training programmes.

Figure 22 Routes to workforce change for an improved health system



Source: NZIER, based on Imison, Castle-Clarke, and Watson (2016)

Nationally-defined scopes of practice for extended and new roles

Extending scope of practice and creating skill flexibility, means deliberately creating overlap between scopes of different professionals. With any overlap, which may be dealt with differently in practice from setting to setting, there is a real risk of creating role confusion which has the combined impact of professionals being unclear about responsibilities and also a lack of transferability between settings of care or even provider organisations in the same setting (Miller et al. 2015).

To reduce these risks, national organisations should agree on core skills and responsibilities and work towards developing a nationally defined scope of practice. But it is also important not to be too prescriptive as the workforce mix and population need varies geographically. A national approach should still allow room for local flexibility. This can be achieved by recommending and enabling potential optional adjustments to scopes of practice to allow provider organisations to safely tailor roles to respond better to local needs and make best use of available workforce.

Non-medical prescribing

One option for extended scope of practice is non-medical prescribing by allied health practitioners. Prescribing of medicines has historically been dominated by doctors in the NHS, but since 1994 government policy has allowed prescribing professionals to include nurses, pharmacists, podiatrists, radiographers, optometrists, dietitians and physiotherapists (i5 Health 2015; Latter et al. 2010).

In New Zealand, non-medical prescribing has followed a piecemeal approach rather than a coherent, system-approach to decision-making. For example:

- Dietitians' prescribing rights only apply to special foods and a limited range of nutrition-related medicines but not to commonly prescribed medicines used in the management of diabetes.
- Optometrists are authorised to prescribe medication for simple eye infections, but audiologists are authorised to do the same for simple ear infections.

Broader considerations of system integration and continuity of care need to be factored into decisions about non-medical prescribing, along with cost implications. In the UK, non-medical prescribing has been found to be safe and to offer value for money:

- A major study of non-medical prescribing by nurses and pharmacists (Latter et al. 2010) found that non-medical prescribing was safe and clinically appropriate. It was also associated with a high level of patient satisfaction.
- A UK-based clinical audit evaluating over 1000 non-medical prescribing events by allied health practitioners, found that that for patients seen by an allied health professional, 20 percent avoided the need for a GP visit and 11 percent avoided the need for a GP home visit. (The College of Podiatry, n.d.)
- An economic evaluation (i5 Health 2015) of non-medical prescribing in primary care settings found that it offers significant savings in both tier 1 and tier 2 services.

Allied health ambassadors

A RAND Corporation report (Herman and Coulter 2015) identified a potential solution to overcoming barriers to integration of primary care and allied health: the development of allied health "ambassadors". These extended scope practitioners would be developed with

shared clinical training, shadowing, rotations, and residency. Their strength would be in being able to negotiate between professions and "speak both languages" (Herman and Coulter 2015, 35). By co-locating these professionals with traditional primary care teams, a strong link between the primary care team and the wider allied health professions would be enabled.

Allied health ambassadors can strengthen network and alliance arrangements and increase referrals from practices to allied health professionals within and outside the network. These roles are well-suited to PCMH models and traditional practices alike, for example if each PCMH or traditional practice in a geographic area employed a different allied health professional from others within the same geographic area, and the allied health group meet regularly do discuss referrals, patients may gain access to a wider range of services.

6.6 Cost containment measures

Cost containment is essential to the third dimension of the triple aim, value. Without measures to ensure patients get what they need but do not consume services that will not provide any net benefit, any system redesign risks rapidly becoming unsustainable.

A critical point is that cost containment is a reason for redesigning tier 1 services to better utilise the allied health workforce to improve access and outcomes and reduce utilisation of tier 2 services, so it is not in itself a justification for protecting the status quo.

In any efficient tier 1 service context, there should be some element of risk stratified care management and coordination and this is likely to be the best approach to cost containment in a system with greater access to allied health care. Risk stratification is a systematic categorisation of patients according to diagnoses, history of utilisation, demographic and other factors, which may include both objective and subjective information. Health professionals can carry out risk stratification, often with the use of tools to ensure consistency, or risk stratification can be automated based on patient data with the option of manual override by health professionals. The objectives of risk stratification are:

- Identifying the resources needed to provide appropriate care
- Focussing efforts of the care team on risk reduction
- Being better able to anticipate needs for patients
- Managing populations pro-actively with information about risk levels and risk dynamics.

In practice, risk stratification allows the appropriate care plan, including the care team, to be identified.

Developing care pathways that map to risk stratification provide a tool that allows for cost containment and supports consistency across providers.

A systematic review (Schneider et al., 2017) of the use of risk stratification with care management found that controlled studies provide evidence that risk stratification tools to determine the components of a care management plan is associated with reductions in hospital readmissions, improved patient satisfaction and improved patient outcomes. It also identified that clinician engagement, equity safeguards, alignment of the wider health system and data management and integration were important success factors.

6.7 Culture shift

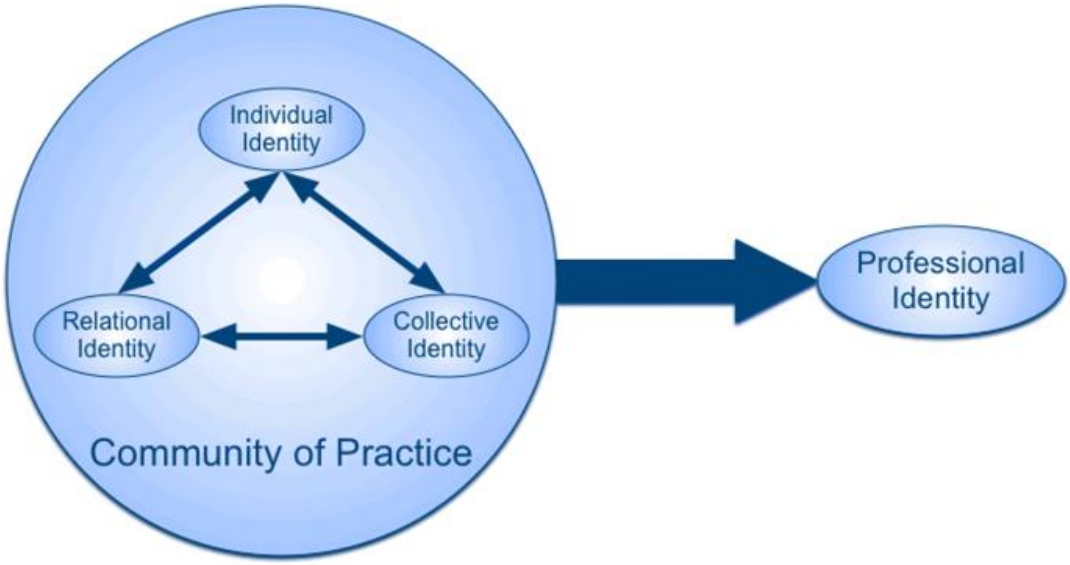
New Zealand's predominantly publicly-funded health system was created to prevent market failures which are common in private health care markets, particularly asymmetric information and the opportunism it fosters.

As a result, many parts of the health system operate as a bureaucracy: An organisation that uses employment relations instead of market transactions and unifies employees under a commonality of purpose (Ouchi, 1980). Professional groups have the power to create a sense of community and reduce any differences between individual goals (such as those of the GP-practice owner) and organisational goals (those of the broader health system).

Professional groups or "Clans" often exist in organisations where it is difficult to determine individual performance, but the performance of groups may be clearer (Ouchi, 1980). While free-riding may be expected in such situations, the clan minimises this behaviour with a heavy focus on socialisation to align individual values with organisational values. Hence "*Discipline is not achieved through contractualism or surveillance but through an extreme form of the belief that individual interests are best served by a complete immersion of each individual in the interests of the whole*" (Kanter, 1972).

Professional socialisation is the subject of a vast amount of published studies. The socialisation of health professionals begins with education programmes and continues through residency programmes, training and ongoing professional development, conferences, and professional body membership requirements. These are all aimed at shaping a set of identities (individual, relational, and collective) and their interactions within a community of practice to give rise to a common professional identity ((Chandran et al. 2019)) (see Figure below).

Figure 23 Elements of professional socialisation



Source: (Chandran et al. 2019)

Clans are well entrenched amongst health professionals in New Zealand and they may represent the most significant barrier to shift to multidisciplinary team-based care because the existing clans are strongly unidisciplinary.

In a report to the Ministry of Health in 2008(Workforce Taskforce 2008), the Workforce Taskforce identified the unidisciplinary training of health professionals as a barrier to effective teamwork: “It is not reasonable to expect graduates to automatically work as effective members of multidisciplinary teams when they have been trained in professional isolation”. The Taskforce recommended that the Medical Training board and other training providers in the health sector identify and include collaboration and teamwork capabilities to be included in curricula.

A New Zealand study (Pullon, McKinlay, and Dew 2009) of nurses’ and doctors’ attitudes to and experiences of teamwork in primary care identified barriers to teamwork as including:

- a lack of training to work effectively in teams
- inadequate funding of professional development
- unidisciplinary focus of professional development

Two major initiatives overseas provide examples of barriers to identified two examples of barriers to teamwork being addressed at the policy level ((Pullon, McKinlay, and Dew 2009)):

- The Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) initiative in Canada
- the UK Centre for the Advancement of Interprofessional Learning (CAIPE)

EICP initiative focused on identifying the conditions required for health professionals to work together efficiently and effectively to deliver the best health outcomes for individuals and their families. The initiative was spearheaded by a Steering Committee of 11 national health professional organizations. It brought together leaders, health professionals, and key stakeholders in Canada's primary health care system including physicians, nurses, social workers, physiotherapists, speech-language pathologists, audiologists, dietitians, psychologists, pharmacists, occupational therapists and a national coalition on preventative practices provided leadership and direction to the Initiative. The objective was to agree on and drive a change process designed to facilitate more interdisciplinary collaboration. The EICP initiative was funded by Health Canada’s Primary Health Care Transition Fund.

The UK’s CAIPE is an independent think tank established to work with statutory and independent, professional and regulatory bodies, assemble and disseminate information and research, and run conferences and workshops to promote and develop interprofessional education, collaborative practice and evidence and research facilitating the development of a workforce skills in collaborative approaches.

In terms of process, the Nuffield Trust (Imison, Castle-Clarke, and Watson 2016) recommends that reshaping the workforce should follow critical steps of:

- awareness raising with a focus on engagement
- service analysis with a focus on the potential to change (including analysis of demand and workforce data)
- task analysis with a focus on risk (identifying risks to patients in tier 1 care)
- identification of needed competencies with a focus on best practice (what are the competencies required?)

- identifying the systems required to support best practice with a focus on governance structures
- analysis of current training models and development needs; and, finally ensuring sustainability with a focus on embedding new processes and structures (see Figure below).

Initiatives like EICP and CAIPE can provide needed momentum and sustainability to this process (Imison, Castle-Clarke, and Watson 2016) .

Figure 24 Critical steps to reshape the workforce

Source: Nuffield Trust, 2017

If greater teamwork is central to new models of care then incentives need to support the desired practices. Meta-analysis of factors that contribute to greater teamwork indicates that incentives work best with:

- small teams
- when the team faces complex tasks
- when rewards are equitable and
- when they are perceived as fair (Garbers and Konradt, 2014)

Context is important so the culture of the organisation and the members in it are important. Incentives are not just financial because recognition, improved work conditions and other incentives matter.

A major contribution to collaborative, interdisciplinary team work in tier 1 settings would be the development of a national competency framework for collaborative practice.

The Canadian Interprofessional Health Collaborative (CIHC) developed a National Interprofessional Competency Framework (Figure below) to guide the creation of education

programmes for health professionals. The framework sets out six competency domains that require development and integration of attitudes, behaviours, values, and judgments necessary for collaborative practice ((Faculty of Medicine and Health Sciences, Office of Interprofessional Education n.d.). The six CIHC competency domains are:

- Role clarification
- Team functioning
- Interprofessional communication
- Patient/client/family/community-centred care
- Interprofessional conflict resolution
- Collaborative leadership

6.8 Empowering with information and technology

The role of information in changing behaviour is critical. As discussed in section 3.3, GPs referral behaviour is often based on a lack of information. A critical area where this lack of information may be justified by concerns about patient safety is the issue of professional responsibility and accountability. But Moffat et al. (2018) found that GP concerns that that patient safety could be compromised if medical issues were overlooked were unfounded in a trial involving direct access to physiotherapists and suggest that GPs may need to be better informed regarding the physiotherapists' training and the requirements of their professional registration. The same authors also suggested that if GPs were to gain experience of working with a physiotherapist, this may lead to greater confidence.

If concerns are about hidden medical issues that may not be identified by allied health practitioners, another commonly recommended improvement to primary care – immediate access to common diagnostics (GPNZ, 2019) – may also be an enabler of access to allied health. Extended scope allied health practitioners could order diagnostics to confirm treatment decisions where such concerns exist.

Technology is often treated as non-essential but 'nice to have' in health, but in this case it will be critical. It's no good having teams that are willing to work collaboratively for patient-centred care if they don't have the tools to do it.

There are three critical roles for technology in more integrated team-based tier 1 care:

- Sharing patient records across providers to avoid duplication and ensure providers have all relevant information to provide appropriate care
- Supporting patient choice and control
- Enabling better access to diagnostics in primary care
- Improving patient triage for safe direct access to non-medical professionals
- Enabling collection of data to allow monitoring and evaluation of new service delivery models and care pathways
- Overcoming information gaps that reinforce medical dominance

Generally, greater integration of allied health professionals in tier 1 services will require more information to both patients and other health professionals to indicate what each allied health profession can do and provide reassurance that allied health professionals are

qualified practitioners who provide evidence-based care within a team with appropriate team-based planning and decision-making.

6.9 Monitoring progress in tier 1 service development

In order to track progress of investment in tier one health services and new models of care, clear, consistent and comparable indicators for monitoring need to be established. Reinstating New Zealand's national health account reporting using the OECD framework would allow for historical and international comparisons on our investment across service types.

The OECD system of health accounts provides a systematic description of the health system from an expenditure perspective as well as describing health system inputs and other factors driving expenditure. The health accounts were developed to help improve decisions about the allocation of resources in health systems in alignment with health system objectives. They provide critical information for both accountability and planning purposes but New Zealand has not reported on the more detailed indicators of health expenditure since 2007.

A more complete assessment of the impact of health and disability system changes will require additional, more specific indicators to be developed. From an allied health perspective, it will be important to track service level data on access and service utilisation to see how evolving models of care impact on patients and population outcomes. This may involve:

- Additional workforce indicators for allied health workforces (aligned with the existing OECD workforce indicators which currently include physicians, nurses, midwives, caring personnel, dentists, pharmacists, and physiotherapists)
- Service utilisation indicators for allied health services (aligned with the existing OECD doctor consultations indicator)
- New indicators specific to the development of interdisciplinary practice to complement the existing OECD health care quality indicators.

7 Recommendations

Better integration of allied health in publicly-funded tier 1 settings represents the most significant opportunity for achieving the equity, quality and efficiency goals that are fundamental to a strong public health and disability system, while also offering a solution to workforce sustainability issues of poor experiences and professional burn-out.

Most critically, for the shift from tier 2 settings to tier 1 settings to be possible without exacerbating existing equity and access issues, greater integration of allied health professionals will free up capacity to ensure patients flow to the right providers, for the right services, at the right time.

To make this a reality, we recommend important changes to system, funding, culture and information:

System

- Adopt patient-centred medical homes (PCMH) as the ideal model of care for interprofessional practice including allied health practitioners, to deliver maximum equity, quality and value particularly for patients with complex biopsychosocial factors and multimorbidity.
- Encourage more community governed models of tier 1 care delivery, with all staff paid on salary, to break down professional hierarchy.
- Improve referral flows with triage processes that could include specifically trained triage providers or extended scope first contact practitioners.

Funding

- Align payment to service models, including financial incentives for performance on quality and efficiency targets, and payments to cover the additional overhead and labour costs associated with non-traditional staffing and coordination of collaborative care activities.
- Require tier 1 teams to demonstrate capacity and activity of collaborative interprofessional teams based on criteria that allow flexibility of team composition and structure to respond to local need in order to access specific payments.

Culture

- Shift culture in health provider organisations from the top as well by bringing professional groups together to agree on a national competency framework for collaborative practice and identify changes to education programmes to support the development of interprofessional collaboration competencies in the workforce.
- Improve referrals across networks of providers with allied health ambassadors working in practice teams as well as across practice teams to improve trust and communication.
- Identify and enable extended scope of practice for allied health practitioners, supported by nationally defined scopes of practice.
- Review the criteria for regulation under the HPCA Act to ensure that these are consistent and supportive of wider health and disability system objectives, not only to reduce patient risk, but improve outcomes, recognising the role that regulation plays in professional trust, professional hierarchy, and the development of new models of care.

Information

- Empower clinicians, allied health professionals and patients with better information and information technology to increase sharing, communication, trust, and choice.
- Reinstate New Zealand's reporting of OECD health accounts at a detailed level and develop consistent and complementary indicators to monitor the impacts of health and disability system investments.

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