Pinnacle Midlands Health Network

Section 5: Wrap up

Population health and wellbeing

Applying a population health lens. Where to from here?

September 2025

Pinnacle Incorporated
PO Box 983
Hamilton 3240

www.pinnacle.co.nz

Facebook
@PinnacleHealthNZ

Linkedin
pinnacle-health

Section 5: Wrap up

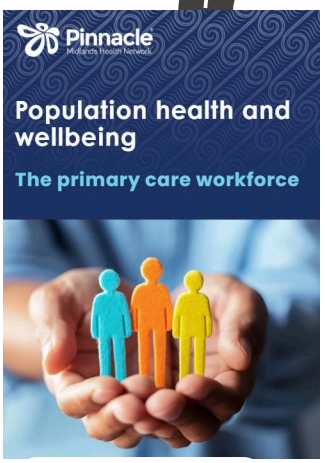
Contents page

Bringing it all together

Pinnacle's vision

Pinnacle's vision is to deliver equitable primary care that supports people to thrive by realising their health and wellbeing potential.

Out of Pinnacle's refreshed organisational strategy (2024) came the need to "create a population health and wellbeing plan connecting population growth changes to workforce needs and capabilities".

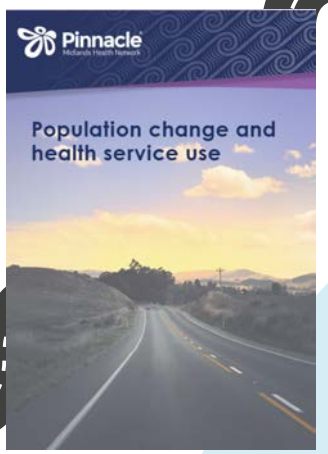


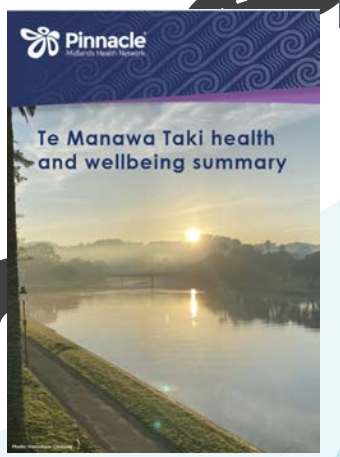
Our building block approach

Sections 1-4 have built to this final section on application of a population health lens, and how Pinnacle might connect population change to workforce.

A population health lens is an approach, it doesn't give neat answers to the complexity of change. Instead, it provides a way to bring information together and understand change.

The best way to use this information is for a range of people, with knowledge of different parts of the sector to discuss it, and how it might inform planning.





START

Section 4
The primary health care workforce

Section 3
Population and health service use: 2023-2043

Data for Lakes, Taranaki, Tairāwhiti and Waikato Districts.

Section 2
Understanding the social determinants of health (a summary of health and wellbeing information)

Information for Lakes, Taranaki, Tairāwhiti and Waikato Districts.

Section 1
Pinnacle's approach to population health, our framework, our commitment to Te Tiriti, the social determinants of health, our priorities and measuring those.

Sections 1 -3 have been combined for Te Manawa Taki, Waikato, Tairāwhiti, Lakes and Taranaki district reports

Connecting population changes to workforce need and capabilities

Contents page

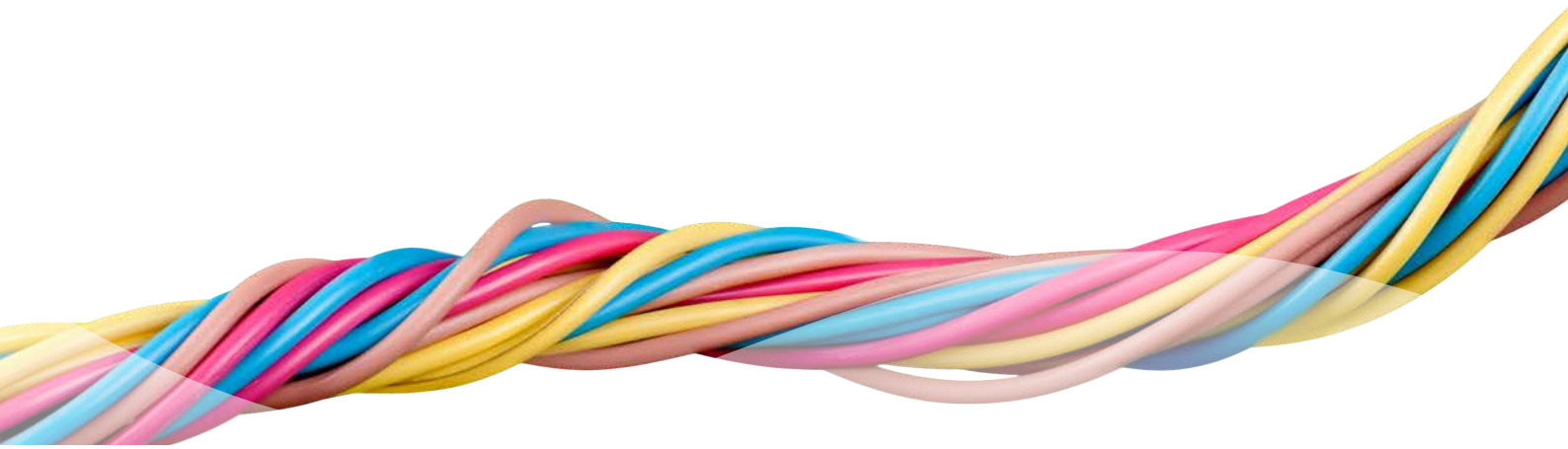
Health and wellbeing, population change, services and workforce links

Communities experience varying health and wellbeing outcomes, influenced by the social determinants of health such as housing, education and access to services. These factors differ between populations, contributing to unequal health outcomes. To improve outcomes, responses must be locally tailored and equity focused, recognising the needs and context of each community.

As populations grow and change over time, general practices experience increased patient enrolment, which places pressure on existing workforce capacity. At the same time, changing population structures, such as ageing populations and increasing numbers of people with complex health and social needs require a more diverse and flexible skill mix.

Demographic shifts highlight the need to expand and adapt the workforce, not only by increasing the number of GPs, NPs, nurses, allied health and support staff, but also by enhancing their capabilities through upskilling, team-based care models and the integration of digital tools. There is also opportunity to consider the best use of other skilled roles to support general practice (e.g. paramedics, district and public health nurses, counsellors, podiatrists).

This final section of our population health plan brings together information presented across all previous reports with an operational focus, using a population health lens.



1 The Pinnacle Network: Building on where we've come from

Contents page

Where we've come from, the issues & opportunities

1988
Predecessor to Pinnacle forms...

2002
Pinnacle Inc holds shares in Turanganui Health

2003
PHOs start (Lake Taupō, Waikato & Taranaki)

2006
Primary Health Care Ltd starts

2006 & 2009
Pinnacle workforce surveys

2007/08
Extended care team pilot starts

2011
Health Care Home

2014
indici collab. with Valentia Technologies

2022
Joint venture (JV) establishes Practice PLUS

2023
Workforce survey

2023
JV forms KA ORA TELECARE

2024
~ JV forms Fatu Lalaga GP Ltd
~ Pinnacle strategy refresh

2025
JV forms HealthAccelerator

2025
The Pinnacle network moves forward, with a history of innovation & collaboration

The story of current and future challenges

A growing & changing population

By 2043, about a quarter of us will be over 65, reshaping demand for health care

Health & wellbeing in our communities

Our district population is diverse, with different needs and aspirations with ongoing inequities.

We need to understand the social determinants of health and how we can best work with others to make the biggest impact.

More people with chronic conditions

More people are (and will be) living with 2+ long-term conditions. This increases pressure on care coordination, time, and continuity

More people will need palliative care

Most people want to die at home. Supporting this shift requires strong community and general practice teams.

Our young people still need the best start to life

Even as the population ages, younger people still need timely, accessible care to the full range of child & youth services.

Service use pressure increases

Primary care is already stretched. Demand is rising faster than the workforce can grow. This may mean worsening access to care and equity.

But we have a growing workforce gap

Many GPs and nurses are nearing retirement (we've known this for a long time). Without new ways of working, care gaps will widen. Meeting demand may require expanding and sustaining a more diverse, team-based primary care workforce.

What could a reimagined future look like for the Pinnacle network?

In the past we've developed new models of care, and collaborated with others to stand up new services to meet changing and/or growing need.

Local context is key. Front line teams, both those working in general practice and Pinnacle employed staff, know their communities and the partners they work with.

including...

- Primary Health Care Ltd
- Health care homes
- Extended care teams
- Marae clinics
- indici
- PracticePlus
- Ka ora telehealth
- Fatu Lalaga GP Ltd JV
- Point of care testing
- School nurses
- Outreach screening
- Outreach immunisation

Some difficult questions need discussion

How does the way we deliver care need to change?

Do we strengthen our current approach with new workforce roles in the community and digital supports? Or do we need to think of a different model for the future?

How do we ensure equity for Māori, rural residents and other groups are fully considered? Are we aligning with Pinnacle's commitment to Te Tiriti?

Are there things we should invest in immediately? Maybe some are longer term but can be identified and planned for now.

How can we use our population health lens to support our general practice network and sector partners?

Good ideas and collaboration need sustainable funding

2 Putting population growth insights into action

Contents page

How to link population & workforce planning

Linking population change and workforce planning involves understanding how shifts in demography, health needs, and service demand will impact the type, size, and distribution of the workforce required to meet future care needs.

Think about: Using population data to forecast demand

How?

- Regularly analyse population projections, including age structure, ethnicity and geographic distribution.
- Link population health needs to expected service use (e.g., more older adults mean increased demand for long-term condition management and palliative care services at home).
- Apply this data at a local level (e.g., by sub-district or district) to identify where workforce expansion or redesign is most urgent.

Sections 1 and 3 have background information. What more should Pinnacle be doing?

Think about: Developing district workforce plans

How?

- Align workforce planning with projected enrolment growth and health needs.
- Include not just headcount but scope of practice/skill mix (e.g., will you need increased roles for NPs, nurse prescribers, kaiāwhina and mental health workers?).
- Think about service use scenarios (e.g., high vs low growth) to understand different future scenarios. There might be more than one scenario playing out in your district.

The information in this plan can feed into this approach

Think about: Supporting role expansion and upskilling

How?

- Invest in training and support to extend capabilities, such as nurse prescribing, health coaching and care coordination.
- Could GPs and NPs have greater access to common diagnostics and point of care testing?
- How could you support Māori and Pacific workforce development to reflect community demographics and improve cultural responsiveness?

The network are doing some of this. What more should be done?

Think about: Enabling team-based models of care

Contents page

How?

- Continue the shift to multidisciplinary care teams to manage workload and meet complex needs.
- Consider equity - how to build it into each step of the service
- Look at how workforce roles (that you may not have) are working in other districts. Would they fill a gap for your population?
- What will ageing look like in your district? Who has the skills needed to provide care for those with multi-morbidities and end of life care (in the home)?
- Encourage task sharing across roles, supported by digital tools where appropriate.

Pinnacle & the network are doing some of this. How can we do better? What are the next steps?

Think about: Investing in data, systems and coordination

How?

- Improve workforce data collection at a practice and PHO level to track capacity, skills, and workload over time.
- Strengthen coordination across general practice, community providers, iwi and Māori health organisations.

Opportunity to do more in this space. What should be prioritised?

Think about: Aligning funding and policy settings

How?

- Advocate for flexible funding models that support innovation in workforce design, and respond to actual and projected population needs.
- Ensure workforce initiatives are integrated with broader health system reforms and local level service planning.

This is harder - we need funders to act. We can advocate strongly.

3 Population change and future workforce skill mix

Contents page

How to link population change, service use & workforce skill mix

Linking population change, service use, and workforce skill mix requires analysing how demographic shifts and evolving health needs drive demand for services, and aligning the workforce's size, roles, and competencies to meet that demand sustainably.

Think about population change. Who are the future population?

Consider

- **Growth**: Where is the population increasing, and how fast?
- **Ageing**: What are the trends in age structure (e.g. more over-65s or young families)?
- **Ethnic diversity**: How are Māori, Pacific, Asian and other populations changing in your region? There may be some important differences you need to be aware of.
- **Geographic distribution**: Are people moving to urban fringes, small towns, or remote areas?
- **Health equity and social determinants of health**: Are there populations with higher levels of unmet need, deprivation, or barriers to care?

Population trends drive service demand and shape the types of skills and care approaches needed.

Think about health service use. What kind of care will your future population need?

Consider

- **The burden of disease**: Rising prevalence of long-term conditions (e.g. diabetes, cardiovascular disease).
- **Complexity**: Increasing multimorbidity, mental health needs, and social care integration. Can you segment into patient groups?
- **Access patterns**: Changing patient expectations (e.g. after-hours, digital care, self-management). What about portals and apps?
- **Utilisation shifts**: Use of EDs, urgent care, pharmacy, and other access points like end-of-life care (including at home).
- **Preventive and proactive care**: Opportunities for earlier intervention and prevention, especially for Māori and high-need communities.

Changing service use patterns may require redesigned models of care, and reallocation of roles across the care team.

Think about workforce skill mix. Who should be doing what?

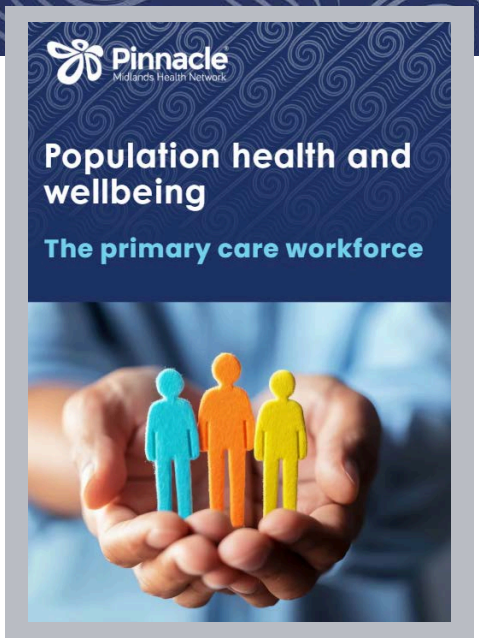
Consider

- **Scopes of practice:** Are all team members working to scope? Are there things only certain roles can do?
- **Team based care:** Moving to collaborative, interdisciplinary teams. Can practices work in clusters?
- **Using new technology:** such as wearable devices, monitors at home.
- **Cultural competency and equity focus:** A workforce that understands the communities it serves.
- **New and emerging roles:** Use of kaiāwhina, health coaches, community health workers, district nurses, outreach social workers etc.
- **Training and support:** Upskilling, mentoring and peer support, especially for rural practices

Skill mix needs to be data-informed, and future-facing, taking into account complexity, equity, and sustainability.

Contents page

4 The now and the future workforce: Towards 2043



We know the Network is facing significant workforce pressures that are expected to intensify. As the population grows and ages, demand for care will increase.

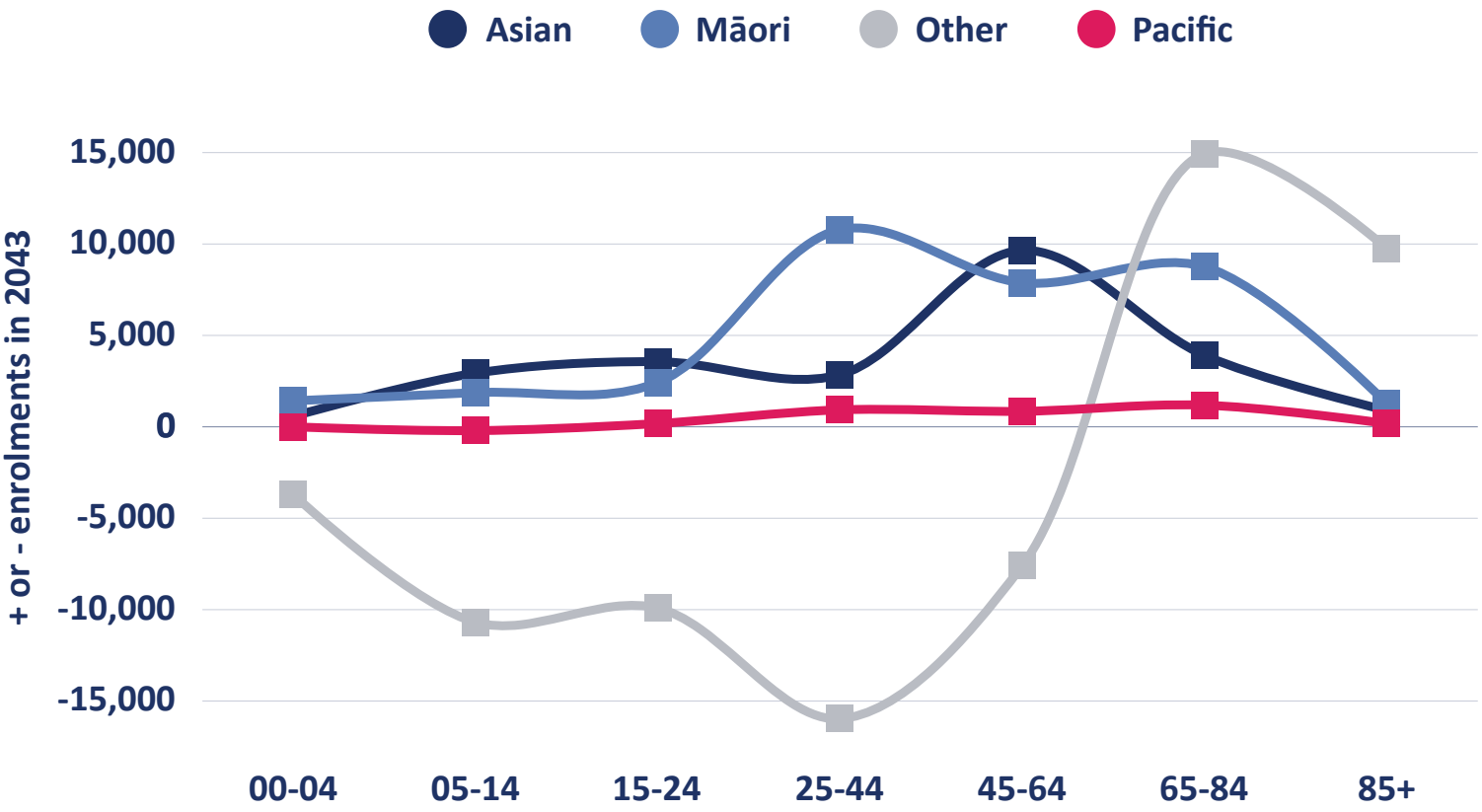
Section 3 recap

Projected medical consults for an ageing Network in 2043 (with an ageing GP and nursing workforce)

The Network will need to provide an additional 218,000 medical consults (if the 2023 rates remain). We know that growth and decline in both numbers of people enrolled and the number of medical consults are not uniformly spread by ethnicity and age.

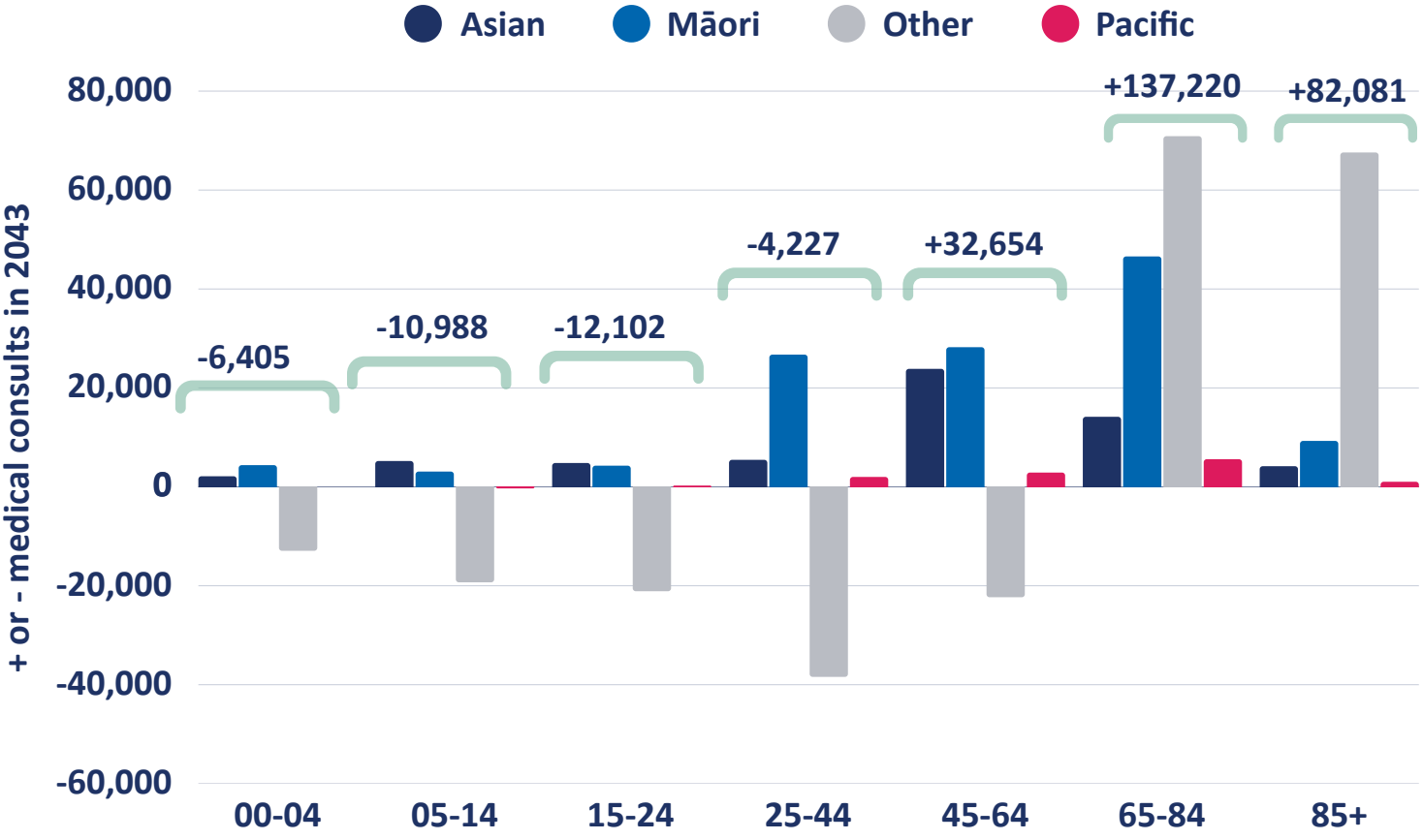
As the mainly Pākehā population drives the number of consults in the older age group, the Māori, Pacific and Asian population will be middle ageing, a time when preventative health care will come even more important. However, prevention and management (of chronic conditions) will also be critical for older aged people, for quality of life and to keep people out of secondary care if possible.

Projected enrolled population in 2043 (compared to 2023/24)



Projected medical consults in 2043 (compared to 2023/24)

Contents page



However, there will be demand in addition to the need for medical consults

The sector has to respond to future demand for palliative care services in the community

There is projected to be a shortage of trained palliative care staff, especially in rural areas. Because of this whānau and informal carers may shoulder a heavier burden of care, potentially with limited training or little respite care available in their community. Access changes may increase the potential for Māori, Pacific and rural residents to experience further unequal access to appropriate services.

The wide variety of other services provided by general practice will need to continue

The Network delivers a wide range of services beyond medical consults. These services all need to continue. Practices provide preventive care such as immunisation, screening programmes, minor surgery and cardiovascular risk assessments. They also deliver long-term condition management (e.g., diabetes, asthma, COPD, and mental health conditions).

Other services contribute to health and wellbeing, including license medicals, insurance and employment medicals, family planning, pregnancy care, smoking cessation, cosmetic, occupational and travel medicine.

Current workforce and future opportunities

Making the best use of each skill set in meeting future demand

Contents page

The model of care discussion involves consideration of each team members role and what they do best, that other roles cannot do.

As we know developing team based models can redistribute clinical and non-clinical tasks. What tasks can be safely substituted? Parts of the Network are already doing some of these things, including inbox management and use of extended care teams.

Current workforce roles and future potential

We can look at current workforce roles by Pinnacle district and consider the level of opportunity in the future for these roles. Table 1 summarises opportunities and gaps for 35 workforce roles. Within districts there will be smaller geographical areas where there is difference (e.g. Coromandel peninsula compared to Hamilton City).

Table 1 is provided with the aim of assisting discussion on the current state of the workforce, and the potential for change to meet future demand (there is no one right answer). This exercise could also be undertaken at the sub-district level.

Table key: Current opportunity state

Significant opportunity for expansion or change of current role now
The role is underutilised; scope exists for broader responsibilities, or extended practice.

Moderate opportunity for expansion of current role now
Some development underway or possible; role could be enhanced.

"Hard to say" level of opportunity
Needs further discussion on costs, availability and workforce task shifting or additional resources into preventative or early intervention roles.

Workforce role not currently in the Network
The role is currently not part of the Network. Model of care discussions could consider these roles in the context of each district.

Table key: Future potential to meet service demand (quantity of workforce)

If the role is not currently in the district, potential for the future as been left blank, to both keep the table from being cluttered and the discussion open about potential.

Significant potential for more people working in this role in the future (compared to now)

Moderate potential for more people working in this role in the future (compared to now)

Potentially the same, or less workforce needed (compared to now e.g. due to changing population numbers)

Table 1: Current state and potential future opportunities for 35 workforce roles

Pinnacle workforce role		Lakes	Tairāwhiti	Taranaki	Waikato
Specialist GP / GP					
Liasion Psychiatrist (hospital based)					
Nurse practitioner (NP)	Nursing roles and skills				
Nurse prescriber	Nursing roles and skills				
Practice nurse	Nursing roles and skills				
Specialist nursing roles (e.g. respiratory, diabetes)	Nursing roles and skills				
School-based nurses	Nursing roles and skills				
Nurse - immunisation outreach (and support)	Nursing roles and skills				
Nurse - mobile health / support to screening	Nursing roles and skills				
District nurse	Nursing roles and skills				
Public health nurse	Nursing roles and skills				
Physician associate					
Midwives (community)					
Pharmacist prescriber					
Clinical pharmacist					
Specialist diabetes dietician / dietician					
Extended care paramedic (in general practice)					
Paramedic (in ambulance crew/shift)					
Podiatrist					
Exercise consultant / physiologist					
Physiotherapist					
Social worker					
Rongoā Māori					
Care coordinator (clinical role)					
Care coordinator/programme support (non-clinical role)					
Primary mental health brief intervention clinician	Mental health skills				
Primary mental health clinician	Mental health skills				
Waiora manaaki / Health coach	Mental health skills				
Psychologist	Mental health skills				
Counsellor	Mental health skills				
Health improvement practitioner	Mental health skills				
Kaiāwhina					
Kai Manaaki					
Smoking cessation facilitator/support					

Contents page

5 Leveraging Pinnacle's Extended Care Team model

The Pinnacle model is an enabler towards a more sustainable model of primary care. The model, operating in Lakes, Taranaki and Tairāwhiti districts, has proven valuable in reducing pressure on general practice and improving access to holistic care.

Social return on investment (SROI)

The teams are dedicated to 'kia hauora te katoa, kia puaawai te katoa' (everyone healthy everyone thriving). They achieve this through providing interdisciplinary tailored health support and education which aims to help people better manage their health and wellbeing.

Pinnacle contracted ImpactLab to estimate the social value of the ECT work, to better understand the impact and how we might enhance the work. Social value is an estimate of the impact a programme achieves for the people it supports, measured in dollar terms. It is calculated using academic evidence, government population data and ECT programme data.

ImpactLab looked at data for people with pre-diabetes and diabetes who were supported between 1 July 2022- 30 June 2023. Excluded from the scope were external referrals and people who did not have pre-diabetes or diabetes.

SROI

$1:$6.80

For every $1 invested, an estimated $6.80 of social value is returned to Aotearoa.

SOCIAL VALUE

$9,816,518

The combined social value for all 1419 participants engaged was $9,816,518.

Key outcomes

- Improve physical health
- Reduce diabetes
- Improve mental health

ImpactLab estimated a total social value of $9,816,518; social value per person of $6,918, with an SROI of $1: $6.80. This means for every $1 invested, an estimated $6.80 of social value was returned. The majority of the value came from three outcomes: Improved physical health, reduce diabetes *(the health costs associated with type-2 diabetes)*, and improved mental health. There were important outcomes that couldn't be quantified, so the true social value is likely to be higher.

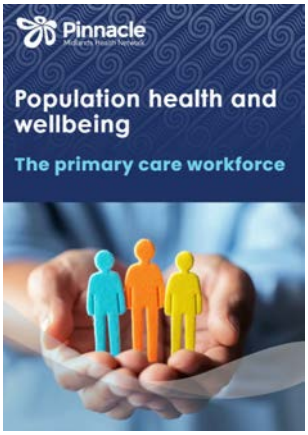
Outcomes that drive social value

The majority of the estimated value came from two outcomes; 'improve physical health' (51% or $4,978,096) and 'reduce diabetes' (42% or $4,072,514). Following those, 'improve mental health' contributed 6% ($571,357).

Monetary and intrinsic benefits

There are two types of social value estimated in the SROI: monetary and intrinsic. Monetary benefits (43%) are linked to government departments who may experience cost savings in the future because of improvements in people's lives. Intrinsic benefits (57%) reflect improvement in peoples' subjective wellbeing.

Comparison between the ECT model and the GPNZ enhanced model of primary care



In the primary care workforce report, we compared the GPNZ model to the on-the-ground extended care team working in the Pinnacle Lakes district.

This comparison is highlighting differences between the GPNZ model and the actual FTE data from Pinnacle in mid-2023, to support discussion.

There was a shortfall of 45 FTE compared to the GPNZ high need scenario and 29.4 FTE compared to the general scenario. Key differences include lower FTE in Lakes for GPs, NPs, behavioural health roles, social workers, clinical pharmacists, physiotherapists, HCAs, and trainees.

Lakes has higher FTE for nurses (excluding NPs) and admin roles. The ECT includes roles not found in the GPNZ model, such as dietitians, health coaches, exercise practitioners, and PHO support reflecting a decade of community-driven innovation. Some differences are due to the GPNZ model's assumption of routine integrated training, which is not standard and would require additional admin support.

Considerations in the light of model differences

Expanding the GP and NP workforce in a contracting market

Recruiting more GPs and NPs will be challenging amid global shortages and a shrinking pool of qualified professionals. Physician Assistants are not currently included in the GPNZ 2019 model and are not yet a regulated workforce in New Zealand (although the process has started).

System and funding constraints

- The general practice funding model is fragmented and outdated.
- Pay parity remains unresolved for practice nurses.
- Persistent unmet need, especially for Māori and Pacific populations, coincides with ongoing workforce shortages.
- Funding limitations are compounded by short-term funding cycles, which hinder innovation and model development.

Facility and infrastructure limitations

Practices may lack physical space. Co-location maybe important for team function and patient accessibility; offsite services may reduce uptake.

Service levels needed to achieve equity

Equity and population complexity will require higher service intensity, with social integration and tailored services being essential to shift headline health statistics.

Technology, telehealth and AI

Future models may incorporate telemedicine and AI to reduce demand on some workforce roles and improve efficiency. Technology has some potential to ease workforce pressure but will require investment and redesign of service delivery (and the potential is not uniform across workforce roles).

6 Front line programmes: How to take a population health approach

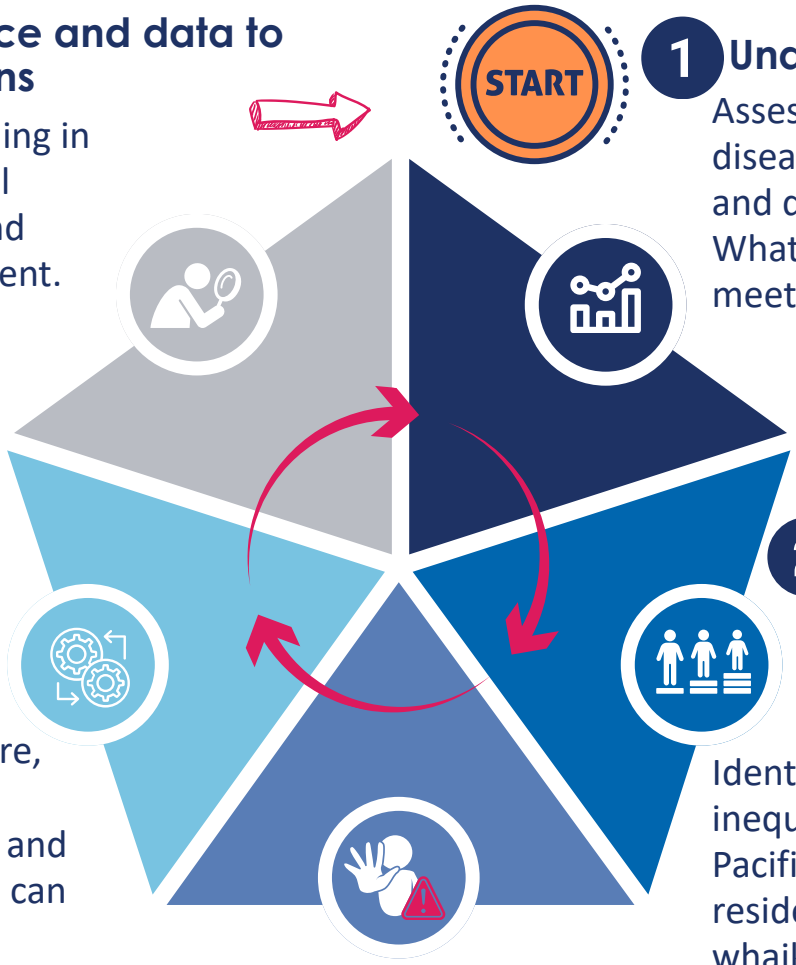
Contents page

What does this mean and how might you do it?

When planning for health services using a population health approach, it's essential to consider a broad and strategic set of factors. However, this can be difficult in practice.

In the preceding reports we've gone through Pinnacle's population health definition and priorities, gathered health status information, considered population change and service use as well as a myriad of workforce issues. We can take this information up a level and consider there to be five key parts to implementing a population health approach.

Five steps to taking a population health approach



1 Understanding need

Assess the demographics, disease burden, risk factors, and determinants of health. What are others doing to meet need?

2 Prioritising equity and addressing health inequity

Identify and address inequities (e.g., for Māori, Pacific peoples, rural residents and tāngata whaikaha).

3 Greater focus on prevention and early intervention

Plan services that go beyond treatment to include health promotion, disease prevention and early detection. Integrate lifestyle interventions, vaccination, screening, and management of modifiable risk factors.

4 Look for integration across the health system

Ensure coordination between primary care, hospital services, community services and social services. Who can we work with or support?

Collaborate with other sectors (e.g., housing, education) to address social determinants of health.

5 Using evidence and data to drive decisions

Ground service planning in robust evidence, local health intelligence and community engagement.

More on our 5 step process...

Contents page

1 Understanding need: Using data to inform service design

Central to a population health approach is the use of data to understand local health needs and service gaps. PHOs are well positioned to leverage enrolment data, clinical indicators and social determinants to plan tailored services. This approach fosters more targeted resource allocation and may reduce duplication.

2 Prioritising equity and addressing health inequity

A population health approach places equity at the centre of planning. This involves actively identifying which populations are experiencing the poorest outcomes, and prioritising investment and service delivery accordingly. For PHOs, this may mean funding models that support outreach, culturally safe care, and partnerships with iwi and community organisations.

3 A greater focus on prevention and early intervention (moving from reactive to proactive)

A population health approach enables planners and funders to move beyond reactive, illness focused care (which there will always need to be) and toward proactive service delivery that anticipates and addresses the needs of communities.

For PHOs and general practice, this means planning care that is not just responsive to those who present, but also actively identifies and reaches those with unmet or preventable needs. By segmenting populations and targeting interventions, particularly for high-need or underserved groups, we can better align resources to improve health outcomes and reduce downstream system pressures.

4 Looking for integration across the health system

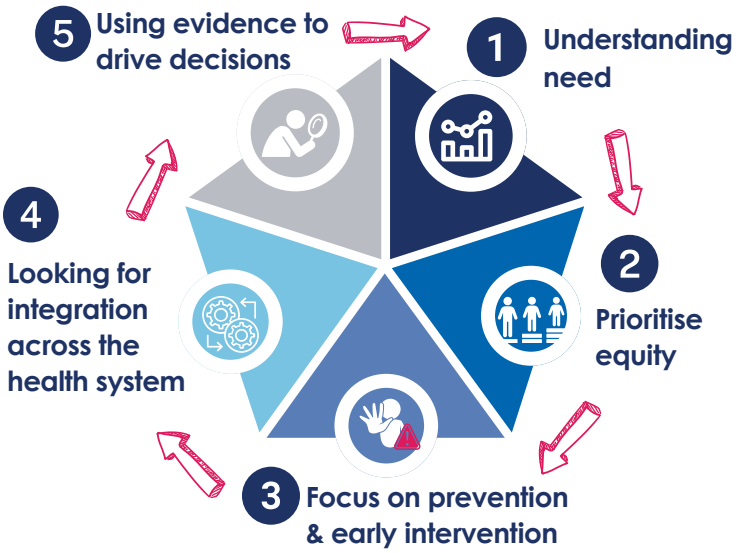
Population health approaches also emphasise the importance of coordinated, integrated care that spans the health and social system. General practice cannot achieve this alone. Strategic planning must facilitate multidisciplinary team based care and improve coordination with community providers. Funders play a critical role in enabling this through flexible contracting, shared accountability frameworks, and investment in local networks and alliances.

5 Using evidence and data to drive decisions (and improve existing services)

Decisions are strengthened by a population health approach and evidence informed planning. This ensures services are targeted to need, resources are used effectively, and care models respond to changing population trends and health inequities.

7 EXAMPLE

Planning a new service

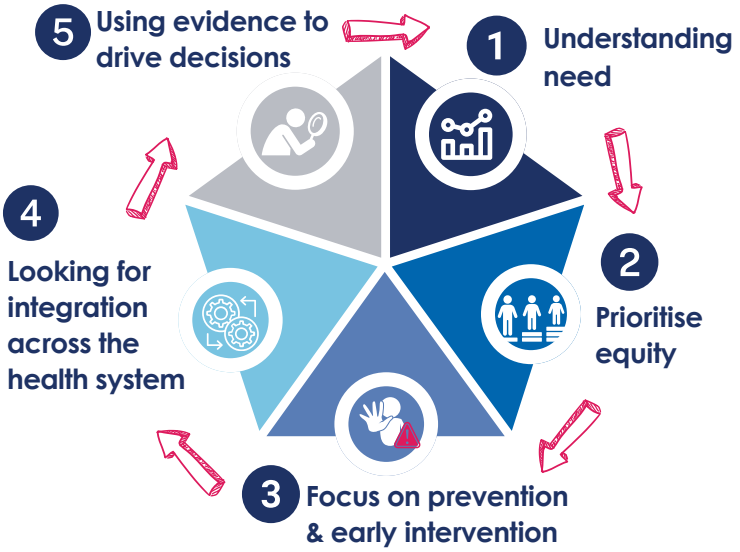


A new community diabetes service

Process	Description	Steps
Define population	• Identify the group affected by the issue. This could be geographic (e.g., residents of a region), demographic (e.g., Māori youth), or condition-specific (e.g., people with diabetes). • Use data to understand population size, structure, and characteristics (age, ethnicity, socioeconomic status, etc).	1 2
Assess need and equity issues	• Conduct a needs assessment using quantitative (e.g., health outcome data, service utilisation) and qualitative (e.g., community engagement, lived experience) methods. • Identify disparities in outcomes, access, and determinants of health. Pay attention to equity for Māori, Pacific peoples, and other priority populations.	2
Identify determinants and drivers	• Consider upstream (social, economic, environmental) and downstream (clinical, behavioural) factors. • Map out the causes and contributors to the issue using models like the social determinants of health.	2
Engage with other providers, stakeholders and the community	• Collaborate with iwi/Māori, Pacific communities, NGOs, clinicians, and government agencies. • Ensure co-design and community voice, particularly from groups experiencing inequities. • Build trust and long-term partnerships.	3 4
Set goals & outcomes	Reduce diabetes complications. Make goals measurable, with short term (e.g., increased screening) and long term (e.g., reduced disease incidence) indicators.	3
Design integrated Interventions - target multiple levels (individual, whānau, community, system)	Use a mix of: • Preventive strategies (e.g., immunisation, screening) • Health promotion (e.g., smoke-free campaigns) • Service redesign (e.g., whānau-centred models of care) • Policy or system changes (e.g., subsidies, regulation) Mobile clinics, kaiāwhina-led support, healthy kai policies, screening	3 4
Monitor, evaluate & adapt to improve the service	Track the agreed goals and outcomes (such as HbA1c control, ED presentations, patient satisfaction and whānau voice). Share results transparently and adjust strategies based on learning.	4 5

8 EXAMPLE

Reviewing an existing service



Primary options for acute care service

Process	Description	Steps
Gather evidence on existing services and assess current coverage	• Look at your reporting data for the last year or two. Which practices are using services? Are there practices that are not accessing services? • What qualitative conversations have you been having with providers (and funders) lately about any additional needs they see?	5 1
Assess coverage, need and equity issues	• Look at Ambulatory Sensitive Hospitalisation (ASH) data for each Pinnacle district. What are the top conditions by ethnicity and age group? • Using ASH findings, map that against your district services to ascertain alignment (in terms of services that you would consider ambulatory). • Identify disparities in outcomes, access. Pay attention to equity for priority populations.	1 2 3
Review your prevention and early intervention focus	• Think about current services that are particularly preventative or have a focus on prevention (or prevention of exacerbation). What is uptake like, is it what you would expect? • If services are under utilised, look at why that might be. Perhaps it needs tweaking? • Are there ASH conditions that are not adequately covered by the service that could be?	1 2 3
Engage with general practice and funders on your findings	• Engage with providers and funders on the results of your review process so far. Collaborate on what could be done about gaps and equity. What services need to be designed (or re-designed)? • What are your funding needs to improve services?	2 4 5
Design integrated Interventions	In collaboration you might decide on a mix of: • Service redesign or new services. • Policy or system changes (e.g., subsidies, funding).	3 4 5
Set goals & outcomes	• Set up your monitoring strategy. • Look at goals, can you have some measurable ones?	5
Continous monitoring, evaluating services and adjust as needed	• Track the agreed goals and outcomes, use regular monitoring to check coverage and equity. • Share results transparently and adjust strategies based on learning.	2 3 5

9 Technical information

Contents page

Population projections

Population projections inform policy planning and demographic analysis. The "medium series" is considered the most likely scenario among the projections. Key assumptions include:

- The total fertility rate is projected to gradually decline, reflecting trends observed in recent years.
- Life expectancy is expected to increase, leading to an ageing population over time.
- Net migration levels are assumed to stabilise, contributing to population growth.

Projected Trends:

- Growth: The total population is projected to continue growing, reaching higher levels over the projection period.
- Ageing: The proportion of the population aged 65 and over is expected to increase, reflecting longer life expectancies and lower birth rates.
- Regional variations: Population growth is anticipated to vary across different districts and regions, with some areas experiencing higher growth rates than others.

Data caveats to keep in mind

Projections are not predictions. They are conditional on assumptions that may or may not hold true. Projections can change significantly with new data or policy shifts (e.g. immigration settings, housing availability).

Assumption uncertainty

- Fertility, mortality, migration: These inputs are difficult to predict accurately over long horizons. Examples: Migration is especially volatile, influenced by economic cycles, border policies, or global crises. Life expectancy improvements may slow down or accelerate.
- What this means: They are conditional on assumptions that may or may not hold true.

Subnational volatility

- Projections for smaller areas have higher uncertainty. The reason is that small-area trends can be affected by local factors like economic development, housing, or climate events, which are not captured in national assumptions.

Use of medical consult data

Data related to medical consults has been used to establish annual average service use for enrolled patients in 2023/24, and for projections out to service use in 2043. It is important to note several things in relation to these data.

This data is captured in practice (and by Pinnacle) when an enrolled patient visits their general practice for a medical consult with a GP or nurse. Other types of services such as immunisations, WellChild checks, screenings and immunisation visits are not included.

Glossary of terms

Contents page

Term	Definition
Ageing (person)	An individual who is experiencing the natural process of growing older, typically characterized by gradual physical, cognitive, and social changes over time.
Ambulatory sensitive hospitalisaion (ASH)	Hospital admissions that could potentially have been avoided through timely and effective primary care or community-based services. These admissions often reflect access to, and quality of, primary health care.
Immigration	The process by which people move to a foreign country with the intention of living there permanently or for a long period.
Inter-regional migration	The movement of people from one region to another within the same country.
Life cycle (population)	The stages a population goes through over time, including birth, growth, reproduction, aging, and death, which together influence the size and structure of the population.
Linear change	A constant rate of change over time. In other words, a quantity increases or decreases by the same amount in each time period. This is typically represented by a straight line when graphed.
Natural increase	The growth in population size resulting from the difference between the number of births and the number of deaths, excluding migration.
Numerical ageing	The increase in the number of older people in a population over time, regardless of the proportion they represent. It focuses on the absolute count of elderly individuals rather than their share of the total population.
Per 1,000 people	A way to express how many units of something (e.g. doctors, nurses, or services) exist for every 1,000 people in a population. It standardizes the number, making it easier to compare across different population sizes.
Population projections	Estimates of future population size and structure based on current demographic data and assumptions about future trends in fertility, mortality, and migration. They help inform planning and policy decisions across sectors such as health, education, and infrastructure.
Primary care	The first point of contact in the healthcare system, providing accessible, comprehensive, and continuous care for individuals and families, including prevention, diagnosis, treatment, and management of common illnesses and health conditions.
Projections uncertainty	The range of possible variation in future estimates due to limitations in data, assumptions, and modeling methods. It reflects the fact that projections are not precise predictions but are subject to change based on unforeseen factors or changes in underlying trends.
Standardisation (of a population)	A statistical method used to adjust data so that populations with different age or demographic structures can be compared fairly. It removes the effects of differences in population composition, such as age or sex, allowing for meaningful comparisons of rates (e.g., disease, mortality, workforce) between groups or over time.
Structural ageing	The gradual increase in the proportion of older people within a population due to declining birth rates and increasing life expectancy. It changes the age composition of society, leading to a higher median age and potential impacts on the workforce, healthcare etc.

References

Contents page

Arkhipova-Jenkins I, Rajupet SR (2023). Population medicine, population health, and population health management: Strategies that meet society's health needs. *AJPM Focus*, Vol 8;3(1):100164. doi: 10.1016/j.focus.2023.100164.

Bradford L (2024). Your work counts. Presentation to GPNZ conference, June 2024. www.rnzcgp.org.nz

Cassie F. (2025). GP consults hit new low in 2023: NP and nurse consults on the rise. NZ Doctor | Rata Aotearoa, Friday 27 June.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2023). Iwi-Māori Partnership Board Health Profile: Tairāwhiti Toitū Te Ora. Volume One. Te Aka Whai Ora – Māori Health Authority; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2024). Iwi-Māori Partnership Board Health Profile: Tairāwhiti Toitū Te Ora. Volume Two. Te Aka Whai Ora – Māori Health Authority; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K. (2023). Iwi-Māori Partnership Board Health Profile: Te Punanga Ora. Vol. One. Te Aka Whai Ora; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2024). Iwi-Māori Partnership Board Health Profile: Te Punanga Ora. Volume Two. Te Aka Whai Ora; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2023). Iwi-Māori Partnership Board Health Profile: Te Tiratū. Volume One. Te Aka Whai Ora; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2024). Iwi-Māori Partnership Board Health Profile: Te Tiratū. Volume Two. Te Aka Whai Ora – Māori Health Authority; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2023). Iwi-Māori Partnership Board Health Profile: Te Taura Ora o Waiariki. Volume One. Te Aka Whai Ora; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2023). Iwi-Māori Partnership Board Health Profile: Tūwharetoa. Volume One. Te Aka Whai Ora; Auckland.

Curtis, E., Loring, B., Walker, R., Pearse, T., Gilbert-Perenise, S., Gray, G., Akuhata-Huntington, Z., Latham, K., Kiriona, K (2024). Iwi-Māori Partnership Board Health Profile: Tūwharetoa. Volume Two. Te Aka Whai Ora – Māori Health Authority; Auckland.

Dahlgren G, & Whitehead M. (1991). Policies and strategies to promote social equity in health. Stockholm: Institute for Futures Studies.

Dahlgren G, Whitehead M. (2021). The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows. *Public Health*. Vol.199:20-24. doi: 10.1016/j.puhe.2021.08.009.

Eastern Bay Primary Health Alliance. (2024). Why do GPs charge different amounts? https://ebpha.org.nz/why-do-gps-charge-different-amounts

Frogner B, Patterson DG, Skillman SM (2023). The workforce needed to address population health. *The Milbank Quarterly,* Vol. 101 (1):841-865.

General Practice New Zealand (2019). Workforce and resources for future general practice: Discussion paper. GPNZ, gpnz.org.nz/publications

General Practice New Zealand (2020). Addendum to workforce and resources for future general practice, July 2020 update. gpnz.org.nz

General Practice New Zealand (2023). Unlocking the potential of primary care: Briefing for incoming Ministers. https://www.nzdoctor.co.nz

General Practice New Zealand (2024). Securing sustainable general practice in Aotearoa. gpnz.org.nz

General Practice New Zealand (2025). Extended primary care teams: Current state, future opportunities. Auckland.

Gorman D., Horn M (2023). Lifeline for health: Meeting New Zealand's need for general practitioners. The New Zealand Initiative. www.nzinitiative.org.nz

Goodyear-Smith F., Stokes T (2024). The primary care workforce crisis: defining the problems and finding solutions. Journal of Primary Health Care, vol.16(2): 115-117., doi:10.1071/HC24078
Grimmond D, Martin G, Tu D (2021). GP future workforce requirements report. Allen + Clarke, Wellington.
Health and Disability System Review (2020). Health and Disability System Review – Final Report – Pūrongo Whakamutunga, Wellington.
Health New Zealand. 2023. Health Workforce Plan 2023-24. Wellington: Te Whatu Ora – Health New Zealand.
Health New Zealand (2024). Te Manawa Taki Regional Health and Wellbeing Plan 2024-2027 (draft).
Health New Zealand (2024b). Aotearoa New Zealand: Health Status Report 2023, released February 2024.
Health New Zealand (2025). Update for GPs and practice nurses in Lakes, Tairāwhiti , Taranaki and Waikato. Data supplied by the Analytics and Intelligence Team from personalised request.
Health New Zealand (2025). Primary Care update. Presentation from Collaborative Aotearoa Leads Hui, 13 June.
Hauora Taiwhenua Rural Health Network (2023). Briefing for the Incoming Ministers of the Coalition Government.
Hauora Taiwhenua, Te Mahere Rautaki | Strategic Plan, 2023-2026.
ImpactLab (2025). *GoodMeasure Report for Pinnacle Midlands Health Newtork*. Extended care teams: People with pre-diabetes and diabetes. Internal Pinnacle report.
Jeffreys M, Irurzun Lopez M, O'Loughlin C, Senior T, Cumming J. (2025). Primary health care utilisation in Aotearoa New Zealand: a descriptive study of trends from 2008 to 2023, *Journal of Primary Health Care*, volx:xx doi.org/10.1071/HC25035
McDonald J, Morris C, Officer TN., Cumming J, Kennedy J, Russell L, McKinlay E, Jeffreys M (2024) Practice pharmacists in the primary healthcare team in Aotearoa New Zealand: a national survey. *Journal of Primary Health Care* 16, 332-340.
Meier C. (2023). Are GPs really underfunded? Business Desk - Health. Dated 14 Feb 2023. Available https://businessdesk.co.nz/article/health/are-gps-really-underfunded?
Minister of Health (2023a). New Zealand Health Strategy. Wellington: Ministry of Health.
Minister of Health (2023b). Pae Tū: Hauora Māori Strategy. Wellington: Ministry of Health.
Minister of Health (2023c). Te Mana Ola: Pacific Health Strategy. Wellington: Ministry of Health.
Minister of Health (2023d). Provisional Health of Disabled People Strategy. Wellington: Ministry of Health.
Minister of Health (2023e). Women's Health Strategy. Wellington: Ministry of Health.
Minister of Health (2023f). Rural Health Strategy. Wellington: Ministry of Health.
Minister of Health (2024). Government Policy Statement on Health 2024-2027. Wellington: Ministry of Health.
Ministry of Health (Nd). Te Whare Tapa Whā model of Māori health. www.health.govt.nz
Ministry of Health (2024). Annual Data Explorer. https://minhealthnz.shinyapps.io
Ministry of Health (2024b). Tatau Kahukura: Māori Health Chart Book 2024. Wellington: Ministry of Health.
Ministry of Health (2025). Public Health Surveillance Strategy 2025-2030. Wellington: Ministry of Health.
Pegasus Health (2022). Equity and population health strategy, Kia atawhai ki te tangata 2022-2030. www.pegasus.health.nz
Pinnacle Group Ltd (2007). The general practice workforce in the Midland PHO Network, 2006. Hamilton.
Pinnacle Group Ltd (2007b). The impact of projected population changes on workload and workforce of the Midland PHO Network, workforce analysis vol.2. Hamilton.
Pinnacle Group Ltd (2010). Workforce trends – summary of results from the 2009 census of general practitioners, practice nurses and practice management staff in the Midland PHO Network, Hamilton.
Pinnacle Incorporated (2023). The Pinnacle general practice workforce survey, Hamilton.
Pinnacle Incorporated – Midlands Regional Health Network Charitable Trust (2023). Annual performance report 2022-2023, Hamilton.
Pinnacle Incorporated (2024). Pinnacle strategy refresh, July 2024 presentation. Internal document.

Pulotu-Endemann, FK. (2009). Fonofale – Model of health. From a workshop on Pacific models for health promotion, Massey University (Wellington), 7 September.
Pulotu-Endemann, FK. (2021). Fonofale Model Pacific health and Wellbeing. Ministry of Pacific peoples presentation, 5 May 2021. www.mpp.govt.nz
Practice Plus (2023). Year two reflections: Partnerships, equity and continuity. Support@practiceplus.nz
ProCare (2022). Population health strategy. www.procare.co.nz
Rochford T. (2000). Whare Tapa Wha: A Māori Model of a Unified Theory of Health. *The Journal of Primary Prevention.* doi.org/10.1023/B:JOPP.0000039938.39574.9E
Royal New Zealand College of General Practitioners (2023). Pharmacists in general practice | Ngā Kaitaka Rongoā i rō whare tākuta. Final report – 27 February. www.rnzcgp.org.nz
Royal Society Te Aparangi (2024). Fact Sheet - Alcohol causes cancer. www.royalsociety.org.nz
Solomon S. (2024). Healthcare in New Zealand: Why do GPs charge different amounts? https://www.nzherald.co.nz/nz/health-care-in-nz-why-do-gps-charge-different-amounts
Statistics NZ. Data Explorer - Census 2013, 2018, 2023, https://explore.data.stats.govt.nz
Stokes T, Goodyear-Smith F (2025). Equitable access to primary health care: better availability of GP appointments is only one piece of the jigsaw. *Journal of Primary Health Care,* Vol.17(1):1-3.
Tairāwhiti Toitū Te Ora. (2024). *Community Health Plan*, Sept 2024. https://toituteora.org.nz
Te Punanga Ora Iwi Māori Partnership Board (2024). Community Health Plan, 30 Sept.
Te Punanga Ora Iwi Māori Partnership Board (2024). Hauora Māori Priorities: Summary Report, 30 Sept.
Te Tiratū Iwi Māori Partnership Board (2024). *Community Health Plan*, 30 Sept.
Te Tiratū Iwi Māori Partnership Board (2024). Hauora Māori Priorities: Summary Report, 30 Sept.
Townshend, K. (2025). Patients will be cared for at home to meet new Nelson Hospital demand. The Press | Te Matatika, July 24th edition. https://www.thepress.co.nz/nz-news/360735033/patients-will-be-cared-home-meet-hospital-demand.
Tūwharetoa Iwi Māori Partnership Board (2024). *Community Health Plan*, 30 Sept 2024.
Tūwharetoa Iwi Māori Partnership Board (2024). *Hauora Māori Priorities: Summary Report*, 30 Sept.
Waikato-Tainui. (n.d.). Koiora: Health & Wellbeing Strategy. Waikato-Tainui. Retrieved July 23, 2025, from https://waikatotainui.com/hapori/health-wellbeing-koiora/
Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. (2016). *Achieving health equity: A guide for health care organizations.* IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement (www.ihi.org).
Yerramilli P, Chopra M, Ramanathan K. (2024) The cost of inaction on health equity and its social determinants. *BMJ Glob Health*. Vol. 8;9(Suppl 1):e012690. doi: 10.1136/bmjgh-2023-012690.